WITH EFFECT FROM 1ST JANUARY, 2020

Electrification products
Panel builder Price list (₹)

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ABB Ability™ Electrical distribution control system is the innovative cloud-computing platform designed to monitor, optimize, predict and control the electrical system.

ABB Ability™ Electrical distribution control system is built on a state-of-the-art cloud architecture for data collection, processing and storage.

This cloud architecture has been developed together with Microsoft in order to enhance performance and guarantee the highest reliability and security.

Architecture
Truly plug & play

Embedded solution with Ekip Com Hub
Emax 2, Ekip UP and TruONE equipped with the new Ekip Com Hub establishes the cloud connection for the whole switchboard.

This dedicated cartridge-type communication module just needs to be inserted into the terminal box and connected to the internet.

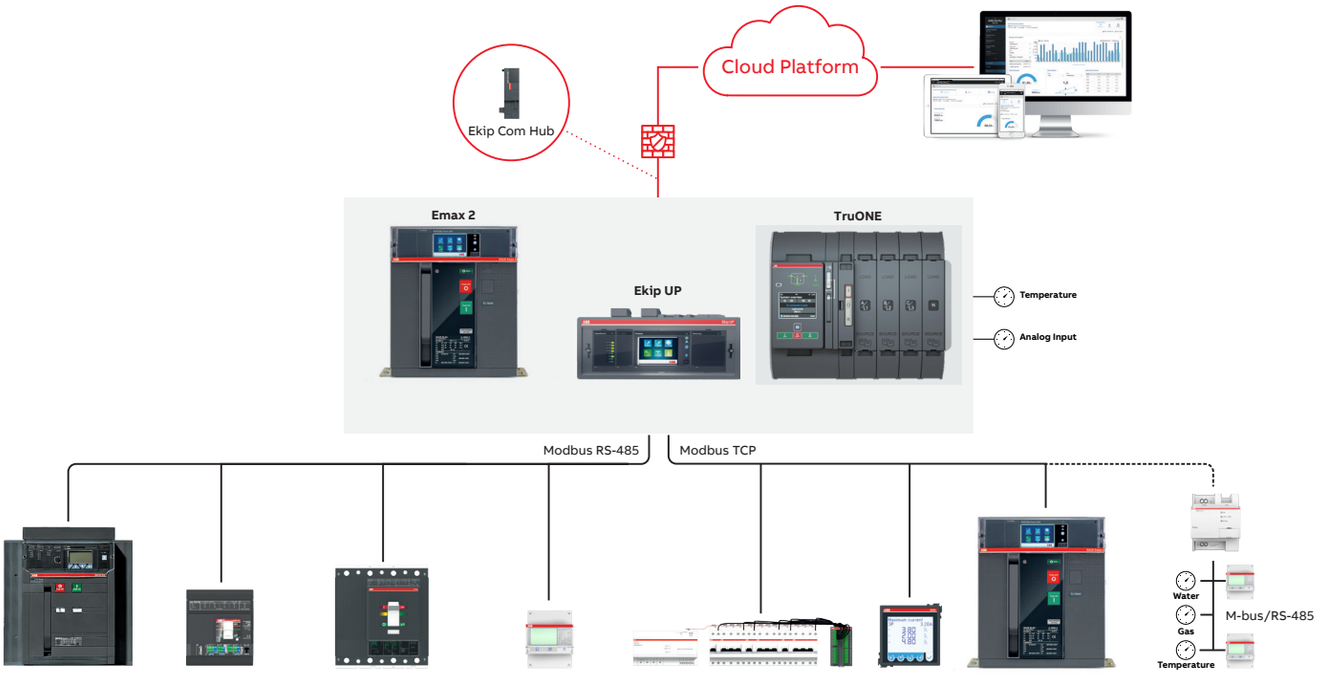


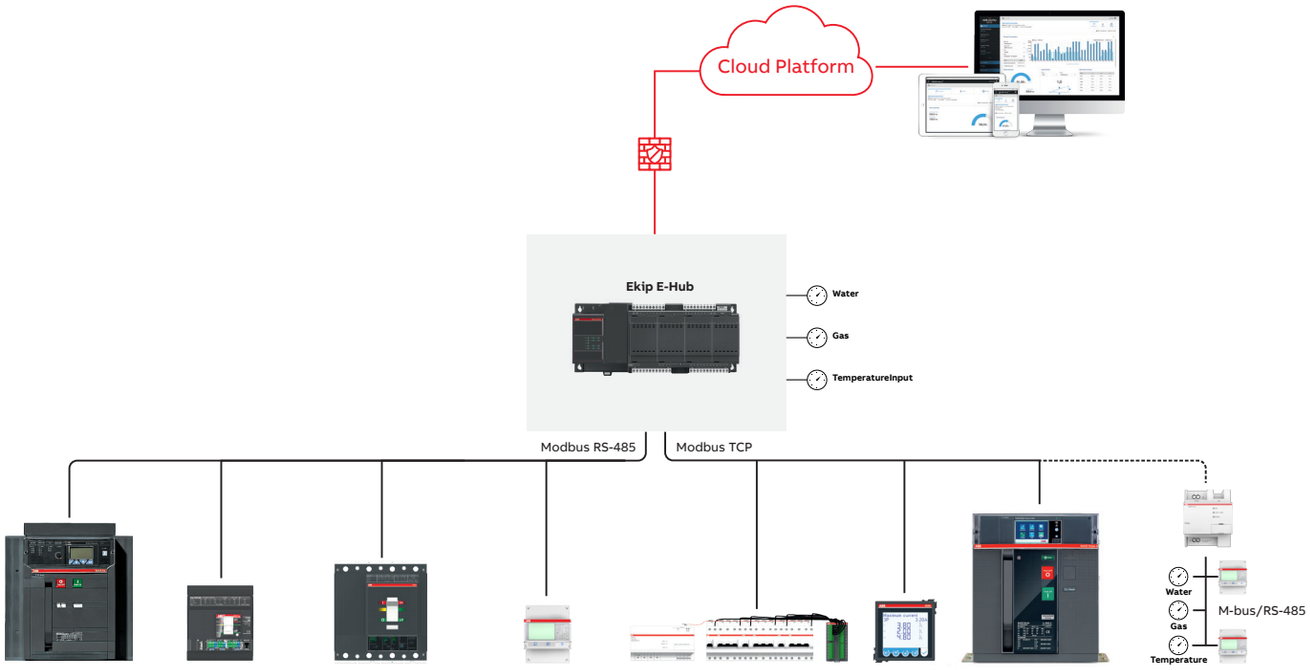
ABB showcases a further evolution in the low-voltage distribution business, setting a new benchmark in terms of simplicity and performance.

ABB Ability™ Electrical Distribution Control System enables the collection of relevant information from the ABB devices installed in the low-voltage power distribution system.

These devices can be connected, plug & play, to the cloud-computing platform by sharing data either with Emax 2 (equipped with Ekip Com Hub) or with Ekip E-Hub via Modbus RS-485, Modbus TCP and Ekip Link.

Family	Device	
Low voltage MCCB	Tmax XT	
	Tmax T	
Low voltage ACB	New Emax	
	Emax 2	
Digital units	Ekip UP	
Low voltage switches and fusegear	TruONE ATS	
	Slimline XR ITS 2.1	
Digital inputs interface	Ekip Signalling MODBUS TCP	
Sub-Metering	EQ Meters	
Power meters	M2M	
Branch monitoring	CMS700	
Medium voltage relays	REF 542 Plus	
And many others to come...		

External solution with Ekip E-Hub
The Ekip E-Hub module can be mounted on DIN rail to collect data throughout the system. Moreover, it is possible to connect sensors for environmental parameters (temperature, water, gas) via both analog and digital I/O. Modules for Wi-Fi or GPRS connection are provided as optional features.



INFORMATION										COMMUNICATION
State	Current	Voltages	Power	Energy	Power factor	Power quality	Maintenance & Diagnostics	Load management	Analog or pulse/ digital inputs	Protocol
•	•	•	•	•	•	•	•	•	•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•	•	•	•		•			Modbus RS485
•	•	•	•	•	•	•	•			Modbus RS485
•	•	•	•	•	•	•	•	•	•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•	•	•	•	•		•	•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•	•	•	•	•	•		•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•	•	•	•		•			Modbus RS485
•									•	Modbus TCP
	•	•	•	•	•					Modbus RS485
	•	•	•	•	•	•				Modbus RS485, Modbus TCP
	•	•	•	•						Modbus TCP
	•	•	•	•	•					Modbus TCP

* Provided the product with dedicated accessories for communication and metering functions ** only with Ekip E-Hub module

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ABB Ability Electrical Distribution Control System brings advantages to customers from the design to the operations stage.

The digital solution adds value to facilities, meeting customer demands and enabling them to comply with higher energy efficiency standards.

Real time analysis of valuable data from field devices enables customers to closely monitor the performance of multiple installations with a single supervision system.

Clear information about consumption and improvement opportunities makes cutting waste and improving energy efficiency simple. Customers also benefit from lower energy bills and reductions in unplanned downtime.

ABB's "plug and play" devices make installation quick and easy. Customers can make existing installations smart with no need to replace components. New and retrofitted solutions are up and running in no time, immediately starting to collect data.

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Global website for ABB Ability™ EDCS

Speed up your projects

- Increase the facility's value by 5%
- Reduce investment in supervision systems by 15%
- Achieve compliance or higher class of energy efficiency standards
- Faster payback

Easy to install

- Connect to the cloud in only 10 minutes
- Reduce cabling by 60% and connectivity components by 25%
- Upgrade in 1 day the existing installation
- Upgrade with zero component replacement and existing installation

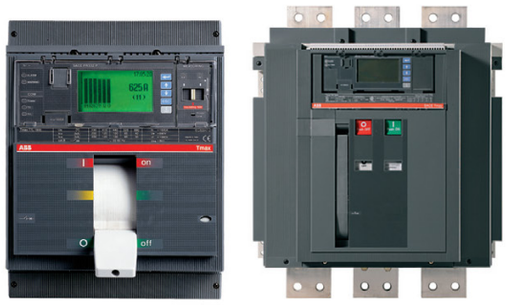
Energy efficiency

- Save up to 20% on maintenance costs
- Save up to 20% on energy bill
- Get proactive alerts and guarantee operations in 1 minute
- Remove energy inefficiency by up to 10%

ABB’s comprehensive range of breakers and switches

The range of ABB breakers and switches ranks amongst the most extensive on the market with a full range of innovative solutions for various applications, helping to optimise resources, reduce energy costs, boost productivity.

- Moulded case circuit breakers
- Air circuit breakers
- HRC fuse & fuse base
- Switch disconnector fuse
- Switch disconnectors
- Changeover switches - manual & motorized
- Auto transfer switches
- Cam switches
- Cable distribution cabinet - Kabeldon
- Fuse gear - easyline and inline (Fuse switch disconnector)
- Switch disconnector for DC and photovoltaic application
- MCCB for DC and photovoltaic application



Introducing new SACE Tmax XT
with cloud-connected moulded case circuit breakers.

SACE Tmax XT
Plant management of the future – SACE Tmax XT sets standards in modern plant and energy management. Access, monitor and control information remotely, anywhere, at any time. Improving efficiency and saving energy. **go.abb/xt**

ABB

ArTu. Born certified

Fully checked and certified (IEC 60439-1 and IEC 61439-1 and 2 Standard) by an external independent organisation (Acea Lovag), the ArTu switchgear is a synonym of safety and quality. The certification is the fruit of severe tests carried out on the whole configuration, consisting of metalwork structures, circuit-breakers and busbar system.

The ArTu K series switchgear is ideal for primary distribution switchgear (PowerCenter type) upto 6300A with air and moulded-case circuit-breakers and any internal segregations up to Form 4, and for floor-mounted secondary distribution switchgear with moulded-case and modular circuit-breakers. The switchgear has been tested for Internal Arc and Seismic.

The ArTu switchgear is noted for the following features:

- Integrated range of modular metalwork structures up to 6300 A with common accessories;
- Possibility of fulfilling all application requirements in terms of installation (floorstanding, Modular and corner versions) and degree of protection (IP31, IP41, IP54 & IP65)
- Maximum integration with modular apparatus and the moulded-case and air circuit-breakers, so that additional drilling or adaptationsare not required
- Minimum switchgear assembly time, thanks to the simplicity of the kits, standardization of the small assembly items, self-supporting elements and the presence of clear reference points for assembly of theplates and panels – Segregations in kits up to Form 4.

The use and installation of the kits according to the instructions provided means thatassembly and cabling times can be reduced to a minimum, for example thanks to the reference points for positioning the panels and plates, and that respect of the insulation distances and the rated characteristics of the circuit-breakers are guaranteed.

Emax - Low voltage air circuit breakers

- CT (Rogowski coil) range of 400 - 6300A (E1, E2, E3, E4 and E6) with breaking capacity range of 42-150KA
- Configured breakers are now available in E1, E2 and E3 frames
- SACE Emax circuit-breakers and their accessories conform to the international IEC 60947, EN 60947 CEI EN 60947 and IEC 61000 standards and comply with following EC directives “Low Voltage Directive” (LVD) no 73/23 EEC
- “Electromagnetic Compatibility Directive” (EMC) nr. 89/336 EEC
- Complete range of common accessories
- Double insulation
- Same height and depth for the whole range
- Protection releases provide complete set of standard protection function, advanced protection functions, measurement functions
- Optional modules (measurements, signalling, communication, wireless com) to upgrade the protection releases
- Neutral protection from OFF to 200%
- Interchangeability of releases
- Low voltage switch disconnectors upto 6300 amps and automatic circuit breakers upto 5000 amps in 1000V DC

Note : Prices on request

Extremely Simple Installation

Completely re-engineered protection releases

Fully Modular construction

Emax - Low voltage air circuit breakers

Configured breaker		Pole	PR121 LI	PR121 LSIG	PR122 LSIG
Frame	**Rating**				
E1 - 50KA -Withdrawable moving part - WMP	800A Manual	3P	1SDA055712R1	1SDA055714R1	1SDA055717R1
	1000A Manual		1SDA059214R1	1SDA059222R1	1SDA059234R1
	1250A Manual		1SDA055744R1	1SDA055746R1	1SDA055749R1
	1600A Manual		1SDA055776R1	1SDA055778R1	1SDA055781R1
E2 - 65KA -Withdrawable moving part - WMP	2000A Manual		1SDA055936R1	1SDA055938R1	1SDA055941R1
E3 - 65KA -Withdrawable moving part - WMP	2500A Manual		1SDA056128R1	1SDA056130R1	1SDA056133R1
	3200A Manual		1SDA056160R1	1SDA056162R1	1SDA056165R1
E4 - 75KA -Withdrawable moving part - WMP	4000A Manual		1SDA056800R1	1SDA056802R1	1SDA056805R1
E1 - Withdrawable fixed part - WFP - HR-HR	FIXED PART WFP HR-HR	3P	1SDA059666R1 ■		
E2 - Withdrawable fixed part - WFP - HR-HR			1SDA059667R1 ■		
E3 - Withdrawable fixed part - WFP - HR-HR			1SDA059669R1 ■		
E4 - Withdrawable fixed part - WFP - HR-HR			1SDA059670R1 ■		
E1 - 50KA -Withdrawable moving part - WMP	800A Manual	4P	1SDA055720R1	1SDA055722R1	1SDA055725R1
	1000A Manual		1SDA059216R1	1SDA059224R1	1SDA059236R1
	1250A Manual		1SDA055752R1	1SDA055754R1	1SDA055757R1
	1600A Manual		1SDA055784R1	1SDA055786R1	1SDA055789R1
E2S - 65KA -Withdrawable moving part - WMP	2000A Manual		1SDA055944R1	1SDA055946R1	1SDA055949R1
E3 - 65KA -Withdrawable moving part - WMP	2500A Manual		1SDA056136R1	1SDA056138R1	1SDA056141R1
	3200A Manual		1SDA056168R1	1SDA056170R1	1SDA056173R1
E4 - 75KA -Withdrawable moving part - WMP	4000A Manual		1SDA056808R1	1SDA056810R1	1SDA056813R1
E1 - Withdrawable fixed oart - WFP - HR-HR	FIXED PART WFP HR-HR	4P	1SDA059762R1 ■		
E2 - Withdrawable fixed part - WFP - HR-HR			1SDA059763R1 ■		
E2S - Withdrawable fixed part - WFP - HR-HR			1SDA059764R1 ■		
E3 - Withdrawable fixed part - WFP - HR-HR			1SDA059765R1 ■		
E4 - Withdrawable fixed part - WFP - HR-HR			1SDA059766R1 ■		

* All the configured breaker will have accessories fitted from the factory

Note:

1. Withdrawable fixed parts (WFP) and withdrawable moving parts (WMP) are to be ordered together for a draw out complete breaker.
2. To convert the breaker from manual operated (MDO or MF) to electrical operated (EDO or EF), order MDO/EDO conversion kit which comprises closing coil, opening coil and motor operator. Suitable operating voltage for the conversion kit has to be mentioned.
3. For other current rating and breaking capacity, ACB requirement, contact our nearest sales office.

Tmax moulded case circuit breakers

Tmax moulded-case circuit-breakers guarantee an extremely high performance level while being progressively smaller in size, simple to install and able to provide increasingly better safety guarantees for the operator. In addition to being ideal for the secondary distribution of alternate and direct current, they feature dedicated solutions for all application requirements.

Moulded-case circuit-breakers can be used in low voltage civil and industrial installations with 1 to 3200 A operating current. The Tmax family includes 9 circuit-breaker sizes in three- or four-pole versions:

- XT1, XT2, XT3 and XT4 up to 250A;
- T4, T5 and T6 up to 1000A;
- T7 and T8 up to 3200A.

The ultimate short-circuit breaking capacity (Icu) at 415V ranges from 18kA to 200kA, or up to 100kA for 690V. The following ranges are available:

- Circuit-breakers for AC and DC power distribution;
- Circuit-breakers for zone selectivity;
- Circuit-breakers for motor protection;
- Circuit-breakers for application up to 1150V AC and 1500V DC
- Switch-disconnectors.

Tmax circuit-breakers can be equipped with thermomagnetic, magnetic only or electronic trip units; all of which are interchangeable. Since assembly instructions are simple, trip units can quickly and easily be replaced; even in the field. All this makes the circuit-breakers very easy to operate with considerable savings due to rationalized stock management.

All Tmax circuit breakers can be enhanced with a vast range of standardized accessories. This convenience not only cuts down on inventory, but creates an extremely flexible and easily managed solution.

Tmax circuit breakers

Type	Iu (40° C) [A]	Ue [V]		Category	Release	Icu (380 - 415 V AC) [kA]									
		AC	DC			16	25	36	50	70	85	100	120	150	200
XT1	160	690	500	A	TMD/TMF MF/MA	B	C	N	S	H					
XT2	160	690	500	A	TMD/TMA MF/MA Ekip LS/I Ekip I Ekip LSI Ekip LIG Ekip LSIG Ekip M-I Ekip M-LIU Ekip M-LRIU Ekip N-LS/I			N	S	H			L	V	
XT3	250	690	500	A	MF/MA TMD TMG			N	S						
XT4	250	690	500	A	TMD/TMA MF/MA Ekip LS/I Ekip I Ekip LSI Ekip LIG Ekip LSIG Ekip E-LSIG Ekip M-LIU Ekip M-LRIU Ekip G-LS/I Ekip N-LS/I			N	S	H			L	V	
T5	400 630	690 1150	750 1000	B (400 A) A (630 A)	TMA (500 A) TMG (500 A) PR221DS PR222DS Ekip M Ekip E-LSIG			N	S	H			L		V
T6	630 800 1000	690 1150	750 1000	B (630A - 800 A) A (1000 A)	TMA (800 A) PR221DS PR222DS Ekip M			N	S	H		L		V	
T7	800 1000 1250 1600	690		B	PR231/P PR232/P PR331/ P PR332/P				S	H			L	V	

Trip Units

Thermal magnetic trip units

- MA - Magnetic only trip unit with adjustable magnetic thresholds for motor protection
- TMF - Fixed thermal and fixed magnetic for power distribution
- TMD - Adjustable thermal (70-100%of In) and fixed magnetic (10 x In) for power distribution
- TMA - Adjustable thermal (70-100% of In) and adjustable magnetic (5-10 of In) for power distribution
- TMG - Adjustable thermal (70-100% of In) and low fixed magnetic (3 x In) for generator protection

Microprocessor based electronic trip units

Ekip LS/I or Ekip LSI	L = 0.40 - 1 of In S = 1 - 10 of In I = 1 - 10 of In	Ekip LIG New	L = 0.40 - 1 of In I = 1 - 10 of In G = 0.2 - 1 of In	Ekip LSIG or Ekip E-LSIG	L = 0.4 - 1 of In S = 0.6 - 10 of In I = 1.5 - 12 of In G = 0.2 - 1 of In	Ekip M-LIU	L = 0.4 - 1 of In I = 6 - 13 of In U* = ON or OFF	Ekip M-LRIU	L = 0.4 - 1 of In R = 3 - 9 of In I = 6 - 13 of In G = 0.2 - 1 of In U* = ON or OFF

PR221	L = 0.40 - 1 of In S = 1 - 10 of In I = 1 - 10 of In	PR222	L = 0.4 - 1 of In S = 0.6 - 10 of In I = 1.5 - 12 of In G = 0.2 - 1 of In	PR231	L = 0.4 - 1 of In S = 1 - 10 of In I = 1 - 12 of In	PR331	L = 0.4 - 1 of In S = 0.6 - 10 of In I = 1.5 - 15 of In G = 0.2 - 1 of In

L = Overload S = Short circuit I = Instantaneous short circuit G = Earth fault

U = phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than 0.1xIn and at least a second one higher than 0.25xIn;

Ekip N-LS/I : Neutral can be set in the OFF or ON positions, at 100% or at 160% of the phases

Ekip G-LS/I : Neutral, in four-pole circuit-breakers, can be set in the OFF, ON positions at 50% or 100% of the phases;

Note: For detailed information about trip units, refer technical catalogue.

Tmax power distribution circuit breakers

XT1

Breaking capacity at 415VAC

	Icu	Ics (Icu)
B	18kA	100%
C	25kA	100%
N	36kA	100%

TMD

Frame	In (A)	Poles	B Ordering code	B L.P.(₹)	C Ordering code	C L.P.(₹)	N Ordering code	N L.P.(₹)
XT1 160	16	3	1SDA066799R1	6,790	1SDA080825R1 *	7,300	1SDA080827R1 *	9,840
	20		1SDA066800R1		1SDA080826R1 *		1SDA080828R1 *	
	25		1SDA066801R1		1SDA067391R1		1SDA080829R1	
	32		1SDA066802R1		1SDA067392R1		1SDA067411R1	
	40		1SDA066803R1 ■		1SDA067393R1 ■		1SDA067412R1 ■	
	50		1SDA066804R1 ■		1SDA067394R1 ■		1SDA067413R1 ■	
	63		1SDA066805R1 ■		1SDA067395R1 ■		1SDA067414R1 ■	
	80		1SDA066806R1 ■		1SDA067396R1 ■		1SDA067415R1 ■	
	100		1SDA066807R1 ■		1SDA067397R1 ■		1SDA067416R1 ■	
	125		1SDA066808R1 ■	9,600	1SDA067398R1 ■	11,240	1SDA067417R1 ■	11,360
	160		1SDA066809R1 ■	11,020	1SDA067399R1 ■	14,510	1SDA067418R1 ■	15,140
	16	4	1SDA066810R1	9,370	1SDA080840R1 *	10,580	1SDA080842R1 *	12,440
	20		1SDA066811R1		1SDA080841R1 *		1SDA080843R1 *	
	25		1SDA066812R1		1SDA067400R1		1SDA080844R1 ■	
	32		1SDA066813R1 ■		1SDA067401R1 ■		1SDA067419R1 ■	
	40		1SDA066814R1 ■		1SDA067402R1 ■		1SDA067420R1 ■	
	50		1SDA066815R1		1SDA067403R1 ■		1SDA067421R1	
	63		1SDA066816R1 ■		1SDA067404R1 ■		1SDA067422R1 ■	
	80		1SDA066817R1 ■		1SDA067405R1 ■		1SDA067423R1 ■	
	100		1SDA066818R1 ■		1SDA067406R1 ■		1SDA067424R1 ■	
	125		1SDA066888R1 ■	11,870	1SDA067409R1 ■	13,370	1SDA067427R1 ■	14,610
	160		1SDA066821R1 ■	15,140	1SDA067410R1 ■	17,320	1SDA067428R1 ■	18,400

***TMF trip unit**

■ Stock items

Tmax power distribution circuit breakers

XT1

Breaking capacity at 415VAC

	Icu	Ics (Icu)
S	50kA	75%
H	70kA	50%

TMD / TMF*

Frame	In (A)	Poles	S Ordering code	S L.P.(₹)	H Ordering code	H L.P.(₹)
XT1 160	16	3	1SDA080830R1*	10,820	1SDA080835R1*	12,990
	20		1SDA080831R1*		1SDA080836R1*	
	25		1SDA080832R1		1SDA080837R1	
	32		1SDA080833R1 ■		1SDA080838R1	
	40		1SDA080834R1 ■		1SDA080839R1	
	50		1SDA067431R1		1SDA067449R1	
	63		1SDA067432R1 ■		1SDA067450R1	
	80		1SDA067433R1 ■		1SDA067451R1	
	100		1SDA067434R1 ■		1SDA067452R1	
	125		1SDA067435R1 ■	14,060	1SDA067453R1	17,320
	160		1SDA067436R1 ■	17,320	1SDA067454R1	21,650
	16	4	1SDA080845R1*	15,690	1SDA080850R1*	17,860
	20		1SDA080846R1*		1SDA080851R1*	
	25		1SDA080847R1		1SDA080852R1	
	32		1SDA080848R1		1SDA080853R1	
	40		1SDA080849R1		1SDA080854R1	
	50		1SDA067439R1		1SDA067457R1	
	63		1SDA067440R1 ■		1SDA067458R1	
	80		1SDA067441R1		1SDA067459R1	
	100		1SDA067442R1 ■		1SDA067460R1	
	125		1SDA067445R1 ■	18,400	1SDA067463R1	20,560
	160		1SDA067446R1	20,560	1SDA067464R1	22,730

***TMF trip unit**

XT3

Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36kA	75%
S	50kA	50%

TMD

Frame	In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)
XT3 250	200	3	1SDA068058R1 ■	17,880	1SDA068220R1 ■	19,730
	250		1SDA068059R1 ■	20,510	1SDA068221R1 ■	23,970
	200	4	1SDA068069R1 ■	23,120	1SDA068231R1 ■	26,710
	250		1SDA068070R1 ■	26,290	1SDA068232R1 ■	28,290

■ Stock items

Tmax power distribution circuit breakers
Protection: TMD/TMA

XT2/XT4/T5/T6

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

TMD / TMA*

Frame	In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)	H Ordering code	H L.P.(₹)
XT2160	1.6	3	1SDA067000R1	12,560	1SDA067540R1	13,740	1SDA067584R1	19,040
	2		1SDA067001R1		1SDA067541R1		1SDA067585R1	
	2.5		1SDA067002R1		1SDA067542R1		1SDA067586R1	
	3.2		1SDA067003R1		1SDA067543R1		1SDA067587R1	
	4		1SDA067004R1		1SDA067544R1		1SDA067588R1	
	5		1SDA067005R1		1SDA067545R1		1SDA067589R1	
	6.3		1SDA067006R1		1SDA067546R1		1SDA067590R1	
	8		1SDA067007R1		1SDA067547R1		1SDA067591R1	
	10		1SDA067008R1		1SDA067548R1 ■		1SDA067592R1	
	12.5		1SDA067009R1		1SDA067549R1		1SDA067593R1	
	16		1SDA067010R1 ■	12,020	1SDA067550R1 ■	13,200	1SDA067594R1	18,500
	20		1SDA067011R1 ■		1SDA067551R1		1SDA067595R1	
	25		1SDA067012R1		1SDA067552R1 ■		1SDA067596R1	
	32		1SDA067013R1 ■		1SDA067553R1 ■		1SDA067597R1	
	40		1SDA067014R1 ■		1SDA067554R1 ■		1SDA067598R1	
	50		1SDA067015R1		1SDA067555R1 ■		1SDA067599R1	
	63		1SDA067016R1 ■		1SDA067556R1 ■		1SDA067600R1 ■	
	80		1SDA067017R1		1SDA067557R1 ■		1SDA067601R1	
	100		1SDA067018R1 ■		1SDA067558R1 ■		1SDA067602R1 ■	
	125		1SDA067019R1 ■	14,610	1SDA067559R1 ■	16,890	1SDA067603R1 ■	25,660
	160		1SDA067020R1 ■	17,860	1SDA067560R1 ■	20,890	1SDA067604R1	29,330
XT4 250	200		1SDA068090R1 ■	21,240	1SDA068310R1 ■	23,890	1SDA068343R1	30,260
	225		1SDA068091R1	23,890	1SDA068311R1	24,410	1SDA068344R1	31,860
	250		1SDA068092R1 ■	24,410	1SDA068312R1 ■	25,590	1SDA068345R1 ■	32,390
T5	320		1SDA054436R1 ■	29,790	1SDA054440R1 ■	32,740	1SDA054444R1 ■	40,670
	400		1SDA054437R1 ■		1SDA054441R1 ■		1SDA054445R1 ■	
	500		1SDA054456R1 ■	37,890	1SDA054461R1 ■	41,170	1SDA054465R1	52,500
T6	630		1SDA060202R1 ■	43,610	1SDA060204R1 ■	44,900	1SDA060206R1	53,470
	800		1SDA060214R1 ■	56,320	1SDA060216R1 ■	59,060	1SDA060218R1 ■	60,300

*** 40 A onwards**

■ Stock items

Tmax power distribution circuit breakers
Protection: TMA

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

TMD / TMA*

Frame	In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)	H Ordering code	H L.P.(₹)
XT2160	1.6	4	1SDA067021R1	16,670	1SDA067561R1	18,080	1SDA067605R1	23,270
	2		1SDA067022R1		1SDA067562R1		1SDA067606R1	
	2.5		1SDA067023R1		1SDA067563R1		1SDA067607R1	
	3.2		1SDA067024R1		1SDA067564R1		1SDA067608R1	
	4		1SDA067025R1		1SDA067565R1		1SDA067609R1	
	5		1SDA067026R1		1SDA067566R1		1SDA067610R1	
	6.3		1SDA067027R1		1SDA067567R1		1SDA067611R1	
	8		1SDA067028R1		1SDA067568R1		1SDA067612R1	
	10		1SDA067029R1		1SDA067569R1		1SDA067613R1	
	12.5		1SDA067030R1		1SDA067570R1		1SDA067614R1	
	16		1SDA067031R1	16,130	1SDA067571R1	17,530	1SDA067615R1	22,850
	20		1SDA067032R1		1SDA067572R1		1SDA067616R1	
	25		1SDA067033R1		1SDA067573R1		1SDA067617R1	
	32		1SDA067034R1		1SDA067574R1 ■		1SDA067618R1	
	40		1SDA067035R1		1SDA067575R1		1SDA067619R1	
	50		1SDA067036R1		1SDA067576R1		1SDA067620R1	
	63		1SDA067037R1 ■		1SDA067577R1 ■		1SDA067621R1	
	80		1SDA067038R1		1SDA067578R1		1SDA067622R1	
	100		1SDA067039R1 ■		1SDA067579R1 ■		1SDA067623R1	
	125		1SDA067042R1 ■	19,490	1SDA067582R1 ■	21,970	1SDA067626R1	28,140
	160		1SDA067043R1 ■	23,270	1SDA067583R1 ■	25,970	1SDA067627R1	34,410
XT4 250	200		1SDA068109R1 ■	28,680	1SDA068329R1 ■	32,390	1SDA068362R1	37,160
	225		1SDA068110R1	29,190	1SDA068330R1	32,920	1SDA068363R1	37,700
	250		1SDA068111R1 ■	29,730	1SDA068331R1 ■	33,450	1SDA068364R1	39,190
T5	320		1SDA054477R1 ■	36,090	1SDA054479R1 ■	39,890	1SDA054481R1	47,200
	400		1SDA054478R1 ■		1SDA054480R1 ■		1SDA054482R1 ■	
	500		1SDA054487R1 ■	48,510	1SDA054489R1 ■	53,120	1SDA054491R1 ■	63,740
T6	630		1SDA060210R1 ■	52,300	1SDA060211R1 ■	57,640	1SDA060212R1	66,510
	800		1SDA060222R1 ■	63,640	1SDA060223R1 ■	69,730	1SDA060224R1	72,440

*** 40 A onwards**

■ Stock items

Tmax power distribution circuit breakers
Protection: LS/I

XT2/XT4/T5/T6

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

Protection : LS/I

Frame	In (A)	Poles	N Ordering code	N L.P. (₹)	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
XT2 160	10	3	1SDA067054R1	19,800	1SDA067800R1	23,800	1SDA067857R1	26,630
	25		1SDA067055R1		1SDA067801R1		1SDA067858R1	
	63		1SDA067056R1	17,630	1SDA067802R1	21,650	1SDA067859R1	24,460
	100		1SDA067057R1		1SDA067803R1		1SDA067860R1	
	160		1SDA067058R1	21,970	1SDA067804R1	28,800	1SDA067861R1	33,110
XT4 250	250		1SDA068126R1	29,440	1SDA068475R1	34,640	1SDA068515R1	39,990
T5 400	400		1SDA054317R1	40,030	1SDA054333R1	41,870	1SDA054349R1	53,120
T5 630	630		1SDA054396R1	42,630	1SDA054404R1	44,520	1SDA054412R1	56,540
T6 800	800		1SDA060268R1	65,490	1SDA060278R1	72,610	1SDA060289R1	90,160
T6 1000*	1000		1SDA060537R1	1,00,770	1SDA060547R1	1,08,730	1SDA060561R1	1,29,940

Frame	In (A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
XT2 160	10	4	1SDA067090R1	25,120	1SDA067833R1	29,650	1SDA067890R1	33,230
	25		1SDA067091R1		1SDA067834R1		1SDA067891R1	
	63		1SDA067092R1	22,940	1SDA067835R1	27,480	1SDA067892R1	31,050
	100		1SDA067093R1		1SDA067836R1		1SDA067893R1	
	160		1SDA067095R1	30,950	1SDA067838R1	38,530	1SDA067895R1	41,780
XT4 250	250		1SDA068147R1	38,420	1SDA068495R1	42,910	1SDA068535R1	46,420
T5 400	400		1SDA054325R1	49,720	1SDA054341R1	56,810	1SDA054357R1	66,400
T5 630	630		1SDA054400R1	58,060	1SDA054408R1	63,220	1SDA054416R1	73,740
T6 800	800		1SDA060273R1	74,990	1SDA060283R1	91,490	1SDA060294R1	1,11,620
T6 1000*	1000		1SDA060542R1	1,45,840	1SDA060556R1	1,52,470	1SDA060566R1	1,85,620

Note: **XT2/XT4 with Ekip LS/I release ; T5-T6 with PR221 LS/I release**
*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB

■ Stock items

Tmax power distribution circuit breakers NEW

Protection: LIG

MCCBs with Overload, Short circuit and Earth Fault Protections XT2/XT4

Conventional Solution
MCCB with Overload (L) and Short-circuit protection (I)
External Earth Fault Module (G)
Power supply module
Shunt Release
Wire-harmness assembly

ABB Intelligent solution
MCCB with Ekip DIG LIG release - Integrated Overload(L), Short-circuit (I) and Earth Fault (G) protections

Ekip DIP LIG with XT2/XT4 MCCBs

Microprocessor based electronic trip units

Protection functions	Threshold
Overload "L" Protection	0.4...1 x In in steps of 0.04
Inst. Short-circuit "I" Protection	OFF - 1...10 x In
Earth Fault "G" Protection	OFF - 0.2 to 1 x In

Ekip LIG			N Version (Icu=Ics=36kA @ 415 V AC)		
Frame	**Poles**	**In (A)**	**Ordering Code**	**Description**	**L.P.(₹)**
XT2 160	3	63	1SDA100012R1 ■	XT2N 160 Ekip LIG In=63A 3p F F	26,640
		100	1SDA100013R1 ■	XT2N 160 Ekip LIG In=100A 3p F F	26,640
		160	1SDA100014R1 ■	XT2N 160 Ekip LIG In=160A 3p F F	31,100
XT4 250		250	1SDA100185R1 ■	XT4N 250 Ekip LIG In=250A 3p F F	32,720
XT2 160	4	63	1SDA100027R1 ■	XT2N 160 Ekip LIG In=63A 4p F F	34,630
		100	1SDA100028R1 ■	XT2N 160 Ekip LIG In=100A 4p F F	34,630
		160	1SDA100029R1 ■	XT2N 160 Ekip LIG In=160A 4p F F	40,430
XT4 250		250	1SDA100200R1 ■	XT4N 250 Ekip LIG In=250A 4p F F	42,530

Ekip LIG			S Version (Icu=Ics=50kA @ 415 V AC)		
Frame	**Poles**	**In (A)**	**Ordering Code**	**Description**	**L.P.(₹)**
XT2 160	3	63	1SDA100042R1 ■	XT2S 160 Ekip LIG In=63A 3p F F	28,090
		100	1SDA100043R1 ■	XT2S 160 Ekip LIG In=100A 3p F F	28,090
		160	1SDA100044R1 ■	XT2S 160 Ekip LIG In=160A 3p F F	33,210
XT4 250		250	1SDA100215R1 ■	XT4S 250 Ekip LIG In=250A 3p F F	34,610
XT2 160	4	63	1SDA100057R1 ■	XT2S 160 Ekip LIG In=63A 4p F F	36,510
		100	1SDA100058R1 ■	XT2S 160 Ekip LIG In=100A 4p F F	36,510
		160	1SDA100059R1 ■	XT2S 160 Ekip LIG In=160A 4p F F	43,170
XT4 250		250	1SDA100230R1 ■	XT4S 250 Ekip LIG In=250A 4p F F	44,990

■ Stock items

Tmax power distribution circuit breakers
Protection: LSIG

XT2/XT4/T5/T6

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

Ekip LSIG

Frame	In (A)	Poles	N Ordering code	N L.P. (₹)	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
XT2 160	10	3	1SDA067072R1	38,970	1SDA067815R1	41,660	1SDA067872R1	50,320
	25		1SDA067073R1		1SDA067816R1 ■		1SDA067873R1	
	63		1SDA067074R1 ■	36,800	1SDA067817R1 ■	39,510	1SDA067874R1	48,160
	100		1SDA067075R1 ■		1SDA067818R1 ■		1SDA067875R1	
	160		1SDA067076R1 ■	39,510	1SDA067819R1 ■	42,760	1SDA067876R1	51,420
XT4 250	250		1SDA068141R1 ■	41,130	1SDA068490R1 ■	43,840	1SDA068530R1 ■	53,580
XT2 160	10	4	1SDA067108R1	46,330	1SDA067851R1	49,560	1SDA067908R1	59,970
	25		1SDA067109R1		1SDA067852R1		1SDA067909R1	
	63		1SDA067110R1 ■	44,150	1SDA067853R1 ■	47,410	1SDA067910R1	57,800
	100		1SDA067111R1 ■		1SDA067854R1 ■		1SDA067911R1	
	160		1SDA067113R1 ■	47,410	1SDA067856R1 ■	51,310	1SDA067913R1	61,690
XT4 250	250		1SDA068162R1 ■	49,350	1SDA068510R1 ■	52,600	1SDA068550R1	64,290

PR222DS/P-LSIG

Frame	In (A)	Poles	N Ordering code	N L.P. (₹)	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
T5 400	400	3	1SDA054323R1 ■	59,450	1SDA054339R1 ■	61,980	1SDA054355R1	77,040
T5 630	630		1SDA054399R1 ■	63,220	1SDA054407R1 ■	65,770	1SDA054415R1 ■	79,690
T6 800	800		1SDA060271R1 ■	97,540	1SDA060281R1 ■	1,02,090	1SDA060292R1	1,13,680
T6 1000*	1000		1SDA060540R1	1,32,590	1SDA060554R1 ■	1,45,840	1SDA060564R1	1,79,000
T5 400	400	4	1SDA054331R1 ■	67,620	1SDA054347R1 ■	69,560	1SDA054363R1	86,330
T5 630	630		1SDA054403R1 ■	73,360	1SDA054411R1 ■	80,940	1SDA054419R1	1,08,900
T6 800	800		1SDA060276R1 ■	1,12,700	1SDA060286R1 ■	1,15,340	1SDA060297R1	1,33,790
T6 1000*	1000		1SDA060545R1 ■	1,76,360	1SDA060559R1	1,85,620	1SDA060569R1	2,25,400

Note: *Extended front (EF) terminals are supplied as standard in T6 1000A MCCB

■ Stock items

Tmax power distribution circuit breakers
For MODBUS communication

XT2/XT4/T5/T6

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

Ekip LSIG

Frame	In (A)	Poles	N Ordering code	N L.P. (₹)	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
XT2 160	10	3	1SDA067072R1	38,970	1SDA067815R1	41,660	1SDA067872R1	50,320
	25		1SDA067073R1		1SDA067816R1 ■		1SDA067873R1	
	63		1SDA067074R1 ■	36,800	1SDA067817R1 ■	39,510	1SDA067874R1	48,160
	100		1SDA067075R1 ■		1SDA067818R1 ■		1SDA067875R1	
	160		1SDA067076R1 ■	39,510	1SDA067819R1 ■	42,760	1SDA067876R1	51,420
XT4 250	250		1SDA068141R1 ■	41,130	1SDA068490R1 ■	43,840	1SDA068530R1 ■	53,580
XT2 160	10	4	1SDA067108R1	46,330	1SDA067851R1	49,560	1SDA067908R1	59,970
	25		1SDA067109R1		1SDA067852R1		1SDA067909R1	
	63		1SDA067110R1 ■	44,150	1SDA067853R1 ■	47,410	1SDA067910R1	57,800
	100		1SDA067111R1 ■		1SDA067854R1 ■		1SDA067911R1	
	160		1SDA067113R1 ■	47,410	1SDA067856R1 ■	51,310	1SDA067913R1	61,690
XT4 250	250		1SDA068162R1 ■	49,350	1SDA068510R1 ■	52,600	1SDA068550R1	64,290

Note : Consider ordering "Ekip Com" for MODBUS communication (Refer page no 45)

PR222DS/PD-LSIG

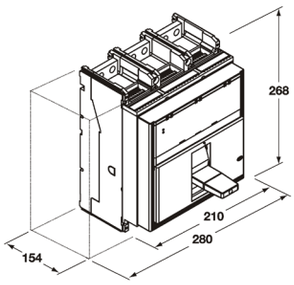
Frame	In (A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
T5 400	400	3	1SDA081522R1	86,730	1SDA081525R1 ■	89,250	1SDA081528R1	1,04,310
T5 630	630		1SDA081523R1	90,510	1SDA081526R1 ■	93,030	1SDA081529R1	1,06,960
T6 800	800		1SDA081540R1	1,24,040	1SDA081546R1	1,28,590	1SDA081552R1	1,40,180
T6 1000*	1000		1SDA081541R1	1,59,090	1SDA081547R1	1,72,340	1SDA081553R1	2,05,500
T5 400	400	4	1SDA081531R1	90,470	1SDA081534R1	96,840	1SDA081537R1	1,13,610
T5 630	630		1SDA081532R1	1,00,630	1SDA081535R1	1,08,220	1SDA081538R1	1,36,180
T6 800	800		1SDA081543R1	1,39,200	1SDA081549R1	1,41,850	1SDA081555R1	1,60,310
T6 1000*	1000		1SDA081544R1	2,02,860	1SDA081550R1	2,12,110	1SDA081556R1	2,49,710

Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG
*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB

■ Stock items

Tmax power distribution circuit breakers

T7



Breaking capacity at 415VAC

	Icu	Ics (Icu)
S	50kA	100%
H	70kA	100%

T7 1250/1600

PR231/P LS/I

In (A)	Poles	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
1250	3	1SDA062866R1	1,35,070	1SDA062898R1	1,83,270
1600	3	1SDA062994R1 ■	1,55,510	1SDA063026R1	2,01,340
1250	4	1SDA062874R1 ■	1,69,670	1SDA062906R1	2,18,950
1600	4	1SDA063002R1	1,86,740	1SDA063034R1	2,42,920

PR331/P LSIG

1250	3	1SDA062868R1 ■	1,78,730	1SDA062900R1	2,14,430
1600	3	1SDA062996R1	1,85,720	1SDA063028R1	2,34,970
1250	4	1SDA062876R1	1,98,510	1SDA062908R1	2,52,960
1600	4	1SDA063004R1	2,18,440	1SDA063036R1	2,73,500

PR332/P LSIG

1250	3	1SDA062871R1	1,80,460	1SDA062903R1	2,23,060
1600	3	1SDA062999R1	1,95,810	1SDA063031R1	2,41,810
1250	4	1SDA062879R1	2,05,980	1SDA062911R1	2,58,740
1600	4	1SDA063007R1	2,25,320	1SDA063039R1	2,84,260

T7 1250M/1600M

PR231/P LS/I

In (A)	Poles	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
1250	3	1SDA062882R1	1,55,510	1SDA062914R1	2,03,110
1600	3	1SDA063010R1	1,72,480	1SDA063042R1	2,27,090
1250	4	1SDA062890R1	1,73,420	1SDA062922R1	2,44,140
1600	4	1SDA063018R1	2,08,250	1SDA063050R1	2,71,550

PR331/P LSIG

1250	3	1SDA062884R1	1,81,550	1SDA062916R1	2,31,210
1600	3	1SDA063012R1	1,98,080	1SDA063044R1	2,52,280
1250	4	1SDA062892R1	2,11,050	1SDA062924R1	2,71,010
1600	4	1SDA063020R1	2,34,390	1SDA063052R1	2,98,540

PR332/P LSIG

1250	3	1SDA062887R1	1,92,890	1SDA062919R1	2,42,920
1600	3	1SDA063015R1	2,11,050	1SDA063047R1	2,65,760
1250	4	1SDA062895R1	2,24,120	1SDA062927R1	2,85,600
1600	4	1SDA063023R1	2,45,740	1SDA063055R1	3,12,030

Note : For Motorizable T7 M frame, order along with above code, motor operator, shunt opening coil & shunt closing coil of required voltage.

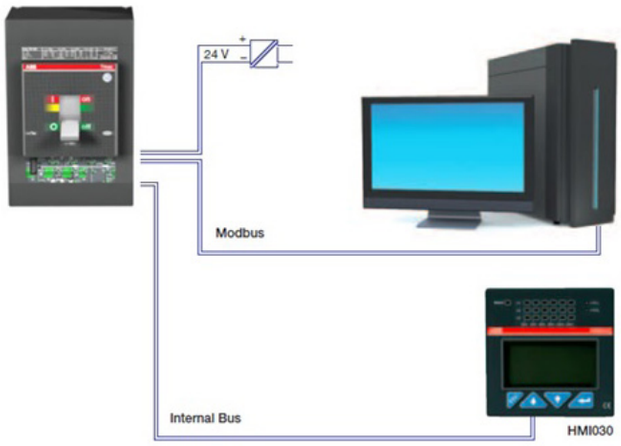
■ Stock items

Tmax power distribution circuit breakers

Ekip E-LSIG

Integrated solution for energy measurement

- Integrated Energy Metering
- Individual protection LEDs
- Internal Bus for HMI connectivity
- Advance measurements such as Power factor, Frequency, peak factor, Energy, Power Harmonic analysis and THD



XT4

			N		S		H	
Frame	**In (A)**	**Poles**	**Ordering code**	**L.P.(₹)**	**Ordering code**	**L.P.(₹)**	**Ordering code**	**L.P.(₹)**
XT4 160	40	3	1SDA069601R1	Upon request	1SDA069611R1	Upon request	1SDA069621R1	Upon request
	63		1SDA069602R1		1SDA069612R1		1SDA069622R1	
	100		1SDA069603R1		1SDA069613R1		1SDA069623R1	
	160		1SDA069604R1		1SDA069614R1		1SDA069624R1	
XT4 250	250		1SDA069605R1		1SDA069615R1		1SDA069625R1	
XT4 160	40	4	1SDA069606R1		1SDA069616R1		1SDA069626R1	
	63		1SDA069607R1		1SDA069617R1		1SDA069627R1	
	100		1SDA069608R1		1SDA069618R1		1SDA069628R1	
	160		1SDA069609R1		1SDA069619R1		1SDA069629R1	
XT4 250	250		1SDA069610R1		1SDA069620R1		1SDA069630R1	

T5

			N		S		H	
Frame	In (A)	Poles	**Ordering code**	**L.P.(₹)**	**Ordering code**	**L.P.(₹)**	**Ordering code**	**L.P.(₹)**
T5 400	320	3	1SDA081043R1	Upon request	1SDA081044R1	Upon request	1SDA081045R1	Upon request
	400		1SDA081048R1		1SDA081049R1		1SDA081050R1	
T5 630	630		1SDA081063R1		1SDA081064R1		1SDA081065R1	
T5 400	320	4	1SDA081053R1		1SDA081045R1		1SDA081055R1	
	400		1SDA081058R1		1SDA081059R1		1SDA081060R1	
T5 630	630		1SDA081068R1		1SDA081069R1		1SDA081070R1	

Tmax motor protection circuit breakers
Characteristics of circuit-breakers for protecting motors in three pole versions.

Tmax Motor Protection Trip units

➢ **Magnetic trip units:**

Frame	Protection	Range
XT2 160	MF (In≤12.5A)	14 x In
	MA (12.5A<In≤160)	6..14 x In
XT3 250	MA	6..12 x In
XT4 250	MA	5..10 x In

MF – Magnetic fix

MA- Magnetic Adjustable

➢ **Microprocessor trip units:**

o Only Short circuit protection release

XT2/XT4		T5/T6		T7/T7M	
Ekip M-I	I = 6 - 14 of In	**PR221 DS-I**	I = 1 - 10 of In	**PR231P-I**	I = 1 - 10 of In

o Advanced Motor protection release

XT2/XT4		XT2/XT4/T5/T6	
Ekip M-LIU	L = 0.4 - 1 of In	**Ekip M-LRIU**	L = 0.4 - 1 of In
	I = 6 - 13 of In		R = 3 - 9 of In
	U*=ON or OFF		I = 6 - 13 of In
			G = 0.2 - 1 of In
			U* = ON or OFF

L = Overload; R = Protection against rotor blockage; I = Instantaneous short circuit; G = Earth fault
U = phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than 0.1xIn and at least a second one higher than 0.25xIn.

Advantages of Ekip M-LRIU protection unit:

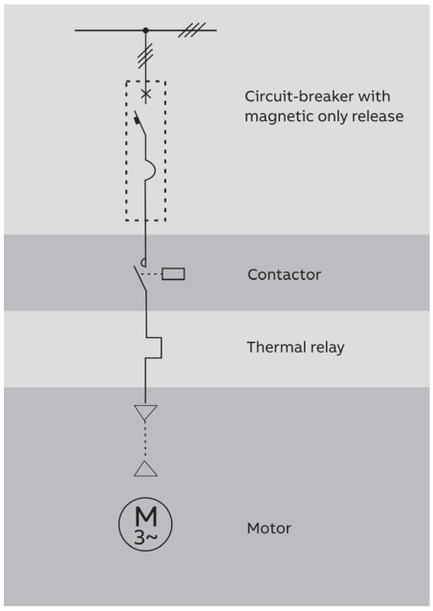
Duty mode setting (Normal/Heavy):

- Normal duty mode requires use of a circuit-breaker and a contactor. In the case of tripping, the Ekip M-LRIU release commands the opening of the contactor via PR212/CI;
- Heavy duty mode foresees circuit-breaker opening for all overcurrent conditions, and just the function of motor operation is entrusted to the contactor

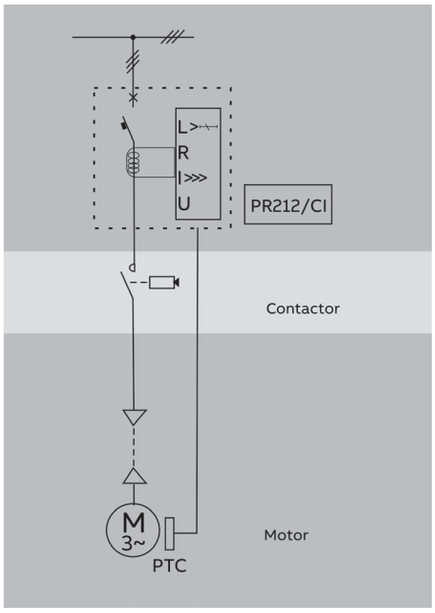
PTC protection setting:

- PTC: this protection, monitors the temperature inside the protected motor by means of a PTC sensor.

❖ ABB Solutions for Starting, switching and protection of three-phase asynchronous motors
  - o A traditional system
  - o A system of integrated protection



Traditional System



System of integrated protection

Tmax motor distribution circuit breakers
Protection: Magnetic Only

XT2/XT4

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

MF/MA*

In (A)	In (A)	Poles	N Ordering code	N L.P. (₹)	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
XT2 160	1	3	1SDA067044R1	13,370	1SDA067760R1	14,450	1SDA067770R1	15,870
	2		1SDA067045R1		1SDA067761R1		1SDA067771R1	
	4		1SDA067046R1		1SDA067762R1		1SDA067772R1	
	8.5		1SDA067047R1		1SDA067763R1 ■		1SDA067773R1	
	12.5		1SDA067048R1 ■		1SDA067764R1 ■		1SDA067774R1	
	20		1SDA067049R1 ■	13,160	1SDA067765R1 ■	14,240	1SDA067775R1	15,660
	32		1SDA067050R1 ■		1SDA067766R1 ■		1SDA067776R1	
	52		1SDA067051R1 ■		1SDA067767R1 ■		1SDA067777R1	
	80		1SDA067052R1 ■		1SDA067768R1 ■		1SDA067778R1	
	100		1SDA067053R1 ■		1SDA067769R1 ■		1SDA067779R1	
	160		1SDA076529R1	15,820	1SDA076530R1 ■	16,570	1SDA076535R1	21,760
XT4 250	200		1SDA068121R1	27,980	1SDA068440R1 ■	30,470	1SDA068450R1	36,570

* 20 amps onwards

XT3

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36KA	75%
S	50KA	50%

MA

Frame	In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)
XT3 250	100	3	1SDA068071R1	15,820	1SDA068279R1	16,460
	125		1SDA068072R1		1SDA068280R1	
	160		1SDA068073R1		1SDA068281R1	
	200		1SDA068074R1	18,150	1SDA068282R1 ■	18,680

■ Stock items

Tmax motor protection circuit breakers

Microprocessor based Short circuit protection MCCBs

XT2/XT4/T5/T6/T7/T7M

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%

Ekip M-I

In (A)	In (A)	Poles	N Ordering code	N L.P. (₹)	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
XT2 160	20	3	1SDA067086R1	17,680	1SDA067829R1	21,240	1SDA067886R1	22,420
	32		1SDA067087R1		1SDA067830R1		1SDA067887R1	
	52		1SDA067088R1		1SDA067831R1		1SDA067888R1	
	100		1SDA067089R1		1SDA067832R1		1SDA067889R1	
	160		1SDA067063R1	21,880	1SDA067809R1	28,680	1SDA067866R1	30,800
XT4 250	250		1SDA068131R1 ■	33,450	1SDA068480R1 ■	36,310	1SDA068520R1	43,010

T5
PR221 DS-I

In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)	H Ordering code	H L.P.(₹)
400	3	1SDA054319R1	38,520	1SDA054335R1 ■	42,220	1SDA054351R1	51,110
630		1SDA054397R1 ■	41,020	1SDA054405R1 ■	45,950	1SDA054413R1	54,410

T6 800
PR221 DS-I

In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)	H Ordering code	H L.P.(₹)
800	3	1SDA060269R1	66,340	1SDA060279R1	74,360	1SDA060290R1	91,040
1000		1SDA060538R1	1,01,750	1SDA060548R1	1,09,790	1SDA060562R1	1,39,940

T7 1250/1600
PR231/P I

In (A)	Poles	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
1250	3	1SDA062865R1	1,33,300	1SDA062897R1	1,89,160
1600	3	1SDA062993R1	1,60,350	1SDA063025R1	2,08,060

T7 1250M/1600M
PR231/P I

In (A)	Poles	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
1250	3	1SDA062881R1	1,64,840	1SDA062913R1	2,09,900
1600	3	1SDA063009R1	1,78,110	1SDA063041R1	2,34,820

■ Stock items

Tmax motor protection circuit breakers
Advanced Motor Protection MCCBs

XT2/XT4

Breaking capacity at 415VAC

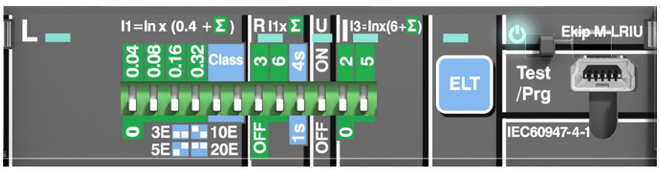
	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

Breaking Part

Frame	Poles	N Ordering code	N L.P. (₹)	S Ordering code	S L.P. (₹)	H Ordering code	H L.P. (₹)
XT2 160	3	1SDA068163R1	Upon request	1SDA068164R1	Upon request	1SDA068165R1	Upon request
XT4 160		1SDA068289R1		1SDA068290R1		1SDA068291R1	
XT4 250		1SDA068173R1		1SDA068174R1		1SDA068175R1	

Loose trip units
EKIP M-LIU

In (A)	In (A)	Poles	Ordering code	L.P. (₹)
XT2	25	3	1SDA067352R1	Upon request
	63		1SDA067353R1	
	100		1SDA067354R1	
	160		1SDA067355R1	



Ekip M-LRIU

In (A)	In (A)	Poles	Ordering code	L.P. (₹)
XT2	25	3	1SDA067357R1	Upon request
	63		1SDA067358R1	
	100		1SDA067359R1	
XT4	160		1SDA068036R1	
	200		1SDA068037R1	

T5/T6

Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

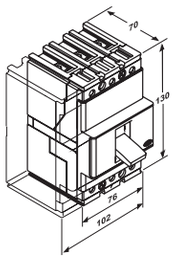
T5
Ekip M-LRIU

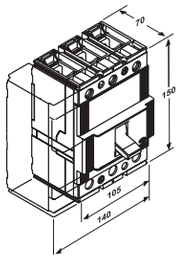
In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)
320	3	1SDA054551R1	62,060	1SDA054553R1	69,610
400	3	1SDA064157R1		1SDA064158R1	

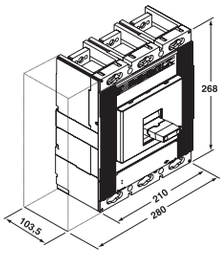
T6
Ekip M-LRIU

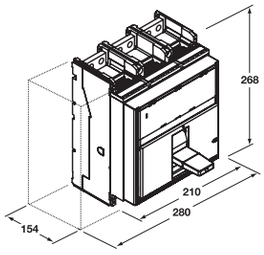
In (A)	Poles	N Ordering code	N L.P.(₹)	S Ordering code	S L.P.(₹)	Ordering code	H	L.P.(₹)
630	3	1SDA060311R1	87,270	1SDA060312R1	95,420	1SDA060313R1		1,10,810

Tmax switch disconnectors



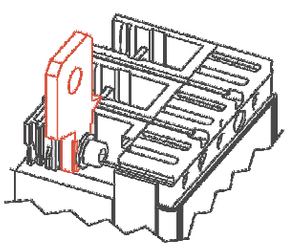






SD Frame	In(A)	Icw kA (1s)	Poles	Ordering Code	L.P.(₹)	Poles	Ordering Code	L.P.(₹)
XT1D	160	2	3	1SDA068208R1	8,760	4	1SDA068209R1	13,090
XT3D	250	3		1SDA068210R1	19,750		1SDA068211R1	23,650
XT4D	250	3.6		1SDA068212R1	22,370		1SDA068213R1	29,730
T5D	400	3.6		1SDA054599R1	29,090		1SDA054600R1	36,950
T5D	500	3.6		1SDA054601R1	35,420		1SDA054602R1	45,160
T6D	630	15		1SDA060343R1	40,080		1SDA060344R1	48,190
T6D	800	15		1SDA060345R1	44,270		1SDA060346R1	72,350
T6D	1000	15		1SDA060594R1	77,150		1SDA060595R1	96,380
T7D	1000	20		1SDA062032R1	87,580		1SDA062033R1	1,11,640
T7D	1250	20		1SDA062036R1	1,19,290		1SDA062037R1	1,46,730
T7D	1600	20		1SDA062040R1	1,24,300		1SDA062041R1	1,53,000
T7D M	1000	20		1SDA062034R1	1,08,130		1SDA062035R1	1,36,840
T7D M	1250	20		1SDA062038R1	1,36,780		1SDA062039R1	1,68,330
T7D M	1600	20		1SDA062042R1	1,50,570		1SDA062043R1	1,88,250

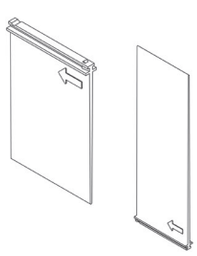
Tmax accessories



Accessories for T-Max MCCBs

Extended spreaded terminals - ES			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1	KIT ES XT1 6pcs	1SDA066891R1 ■	1,800
	KIT ES XT1 8pcs	1SDA066892R1 ■	2,440
XT2	KIT ES XT2 6pcs	1SDA066895R1 ■	2,460
	KIT ES XT2 8pcs	1SDA066896R1 ■	3,020
XT3	KIT ES XT3 6pcs	1SDA066899R1 ■	2,650
	KIT ES XT3 8pcs	1SDA066900R1 ■	3,400
XT4	KIT ES XT4 6pcs	1SDA066903R1 ■	3,070
	KIT ES XT4 8pcs	1SDA066904R1 ■	3,870
T5	Kit EST5 6pcs	1SDA055038R1 ■	4,400
	Kit EST5 8pcs	1SDA055039R1 ■	5,860

Note: Phase barrier supplied as standard with above copper spreaders.

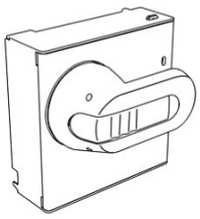


Separator - PB			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1-XT3	PB 100mm 4pcs XT1-XT3 3p	1SDA066676R1	710
	PB 200mm 4pcs XT1-XT3 3p	1SDA066678R1	900
	PB 100mm 6pcs XT1-XT3 4p	1SDA066681R1	1,070
	PB 200mm 6pcs XT1-XT3 4p	1SDA066683R1	1,350
XT2-XT4	PB 100mm 4pcs XT2-XT4 3p	1SDA066675R1	750
	PB 200mm 4pcs XT2-XT4 3p	1SDA066677R1 ■	1,150
	PB 100mm 6pcs XT2-XT4 4p	1SDA066680R1	1,150
	PB 200mm 6pcs XT2-XT4 4p	1SDA066682R1	1,730
T5	PB100 4 pcs - Low T4, T5	1SYN850207R0001	1,010
	PB100mm 4pcs T4-5-T7-A3 3P	1SDA054970R1	940
	PB 100mm 6pcs T4-5-T7-A3 3P	1SDA054971R1	1,380
	PB100 4 pcs - Low T4, T5	1SYN850207R0001	1,010
	PB100 6 pcs - Low T4, T5 - 400A	1SYN850210R0001 ■	1,450

Note: For T5 630A contact the nearest sales office

■ Stock items

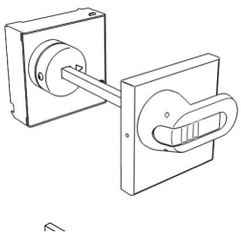
Tmax accessories



Rotary handle operating mechanism

Direct - RHD			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1...XT4	RHD XT1-XT3 F/P STANDARD DIRECT	1SDA066475R1 ■	1,690
	RHD XT2-XT4 F/P STANDARD DIRECT	1SDA069053R1 ■	2,020
	RHD XT2-XT4 W STANDARD DIRECT	1SDA066476R1	2,020
T5	RHD Normal for Fixed/Plug-in T4-T5	1SDA054926R1 ■	3,620
	RHD Normal for withdrawble T4-T5	1SDA054928R1	4,020
T6	RHD Normal for fixed T6	1SDA060405R1 ■	4,970
	RHD Normal for withdrawble T6	1SDA060407R1	6,270
T7	RHD Normal for Fixed/Plug-in T7	1SDA062120R1	6,460

Note:- F/P: Fixed/Plug-in ; W:Withdrawable

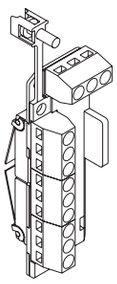


Transmitted - RHE			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
	RHE XT1-XT3 F/P STANDARD RETURNED(250mm)	1SDA082810R1 ■	1,580
XT1...XT4	RHE XT1-XT3 F/P STANDARD RETURNED (500mm)	1SDA066479R1	1,800
	RHE XT2-XT4 F/P STANDARD RETURNED (250mm)	1SDA082811R1 ■	2,100
	RHE XT2-XT4 F/P STANDARD RETURNED (500mm)	1SDA069055R1	2,320
	RHE XT2-XT4 W STANDARD RETURNED	1SDA066480R1 ■	2,320
	RHS L XT2-XT4 F/P STAND. SX LATERAL	1SDA069058R1	3,720
	RHS R XT2-XT4 F/P STAND. DX LATERAL	1SDA069060R1	3,660
T5	RHE Normal for Fixed/Plug-in T4-T5 250mm	1SDA070447R1 ■	3,390
	RHE Normal for Withdrawble T4-T5	1SDA054933R1 ■	6,180
T6	RHE Normal for Fixed T6	1SDA060409R1 ■	6,470
	RHE Normal for Withdrawble T6	1SDA060411R1	7,510
T7	RHE Normal for Fixed/Plug-in T7	1SDA062122R1 ■	7,850

Note:- F/P: Fixed/Plug-in ; W:Withdrawable

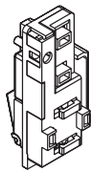
Electrical signals

Auxillary contact - AUX (Uncabled version)			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	AUX 1Q 250Vac/dc XT1...XT4	1SDA066422R1 ■	970
	AUX 1Q 24Vdc XT1...XT4	1SDA066423R1	1,510



Auxillary contact - AUX			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5..T6(1)	AUX 1Q 1SY 250V AC/DC T1...T6 (1)	1SDA051368R1 ■	1,680
	AUX 3Q 1SY 250V AC/DC T1...T6 (1)	1SDA051369R1	2,710
	AUX 3Q 1SY 24V DC T1...T6 (1)	1SDA054914R1	2,620
T5	AUX-SA 1 S51 T4-T5	1SDA055050R1	1,680
T7M	AUX 2Q 24V DC T7M-X1	1SDA062101R1	
	AUX 2Q 400V AC T7M-X1	1SDA062102R1	
T7M	AUX SA T7M-X1 S51 24VDC	1SDA066100R1	6,450
	AUX SA T7M-X1 S51 250VAC	1SDA063553R1	7,500
T7	AUX 1Q + 1SY 24V DC T7	1SDA062103R1	2,620
	AUX 1Q + 1SY 400V AC T7	1SDA062104R1 ■	

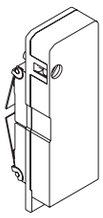
Note : Q=Changeover contact;SY= Trip indication contact
For T7 / T7M in Withdrable version sliding contact blocks for fixed and moving parts are necessary.



Cabled contact in electronic version			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5	AUX-E-C 1Q 1SY T4-T5	1SDA054916R1	5,540
T6	AUX-E-C 1Q 1SY T6	1SDA064161R1	6,460

■ Stock items

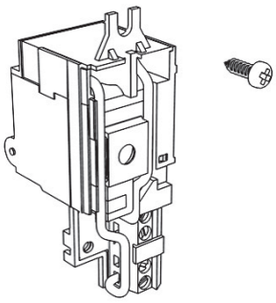
Tmax accessories



Auxilary contact cabled-version - AUX - C			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	AUX-C 1Q+1SY 250V AC/DC XT1..XT4 F/P	1SDA066431R1 ■	1,590
	AUX-C 2Q+1SY 250VAC/DC XT1..XT4 F/P	1SDA066433R1 ■	2,540
	AUX-C 3Q+1SY 250VAC/DC XT2..XT4 F/P	1SDA066434R1 ■	3,020
	AUX-C 3Q+2SY 250VAC/DC XT2-XT4 F/P	1SDA066436R1	3,720
	AUX-C 2Q+2SY+1S51 250VAC/DC XT2-XT4 F/P	1SDA066438R1	4,020
	AUX-C 2Q 400V AC XT2-XT4 F/P	1SDA066440R1	1,910
	AUX-C 1Q+1SY 400Vac XT2-XT4 F/P	1SDA066444R1	3,040
	AUX-C 1Q+1SY 24Vdc XT1..XT4 F/P	1SDA066446R1 ■	2,230
	AUX-C 3Q+1SY 24VDC XT2..XT4 F/P	1SDA066448R1	3,500
T5-T6	AUX-C 1Q 1SY 250V AC/DC C T4-T5-T6	1SDA054910R1	2,230
	AUX-C 1Q 1SY 400V AC C T4-T5-T6	1SDA054912R1	3,280
	AUX-C 2Q 400V AC C T4-T5-T6	1SDA054913R1	3,770
	AUX-C 3Q 1SY 24VDC C T4-T5-T6	1SDA054915R1	3,530
	AUX-C 3Q 1SY 250V AC/DC C T4-T5-T6	1SDA054911R1 ■	4,180

Note : Q=Changeover contact;SY= Trip indication contact ;F/P: Fixed/Plug-in ; W:Withdrawable

Opening release

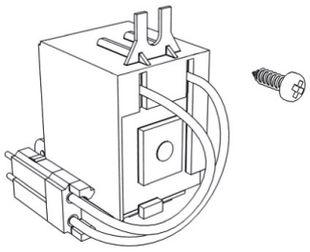


Shunt opening release - SOR (Un-cabled version - For Fixed and Plug-in circuit breakers)			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	SOR XT1..XT4 12 VDC	1SDA066313R1	2,230
	SOR XT1..XT4 24-30 V AC/DC	1SDA066314R1 ■	
	SOR XT1..XT4 48-60 V Ac/DC	1SDA066315R1	
	SOR XT1..XT4 110...127 V ac-110...125 V dc	1SDA066316R1	
	SOR XT1..XT4 220...240 V ac-220...250 V dc	1SDA066317R1 ■	
	SOR XT1..XT4 380-440 V ac	1SDA066318R1	
	SOR XT1..XT4 480-525 V ac	1SDA066319R1	
T5-T6	SOR 12V DC T4-T5-T6	1SDA054862R1	3,380
	SOR 24V AC/DC T4-T5-T6	1SDA054863R1	
	SOR 48...60V AC/DC T4-T5-T6	1SDA054864R1	
	SOR 110...120V AC-110...125V DC T4-T5-T6	1SDA054865R1 ■	
	SOR 220...240V AC-220...250V DC T4-T5-T6	1SDA054866R1	
	SOR 380...440V AC T4-T5-T6	1SDA054867R1	
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	
T7-T7M-X1	SOR 24V AC/DC T7-T7M-X1	1SDA062065R1	6,610
	SOR 30V AC/DC T7-T7M-X1	1SDA062066R1	
	SOR 48V AC/DC T7-T7M-X1	1SDA062067R1	
	SOR 60V AC/DC T7-T7M-X1	1SDA062068R1	
	SOR 110...120V AC/DC T7-T7M-X1	1SDA062069R1	
	SOR 120...127V AC/DC T7-T7M-X1	1SDA063547R1	
	SOR 220...240V AC/DC T7-T7M-X1	1SDA063548R1	
	SOR 240...250V AC/DC T7-T7M-X1	1SDA062070R1	
	SOR 380...400V AC T7-T7M-X1	1SDA062071R1	
	SOR 415...440V AC T7-T7M-X1	1SDA062072R1	

Note: For T7 / T7M in Withdrable version sliding contact blocks for fixed and moving parts are necessary.

■ Stock items

Tmax accessories



Shunt opening release - SOR - C (Cabled version)			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1...XT4	SOR-C XT1..XT4 F/P 12 Vdc	1SDA066321R1	3,400
	SOR-C XT1..XT4 F/P 24-30 Vac/dc	1SDA066322R1	
	SOR-C XT1..XT4 F/P 48-60 Vac/dc	1SDA066323R1	
	SOR-C XT1..XT4 F/P 110-127Vac-110-125Vdc	1SDA066324R1	
	SOR-C XT1..XT4 F/P 220-240Vac-220-250Vdc	1SDA066325R1	
	SOR-C XT1..XT4 F/P 380-440 Vac	1SDA066326R1	
	SOR-C XT1..XT4 F/P 480-525 Vac	1SDA066327R1	
	SOR-C XT2-XT4 W 12 Vdc	1SDA066328R1	3,980
	SOR-C XT2-XT4 W 24-30 Vac/dc	1SDA066329R1	
	SOR-C XT2-XT4 W 48-60 Vac/dc	1SDA066330R1	
	SOR-C XT2-XT4 W 110-127Vac-110-125Vdc	1SDA066331R1	
	SOR-C XT2-XT4 W 220-240Vac-220-250Vdc	1SDA066332R1	
	SOR-C XT2-XT4 W 380-440 Vac	1SDA066333R1	
	SOR-C XT2-XT4 W 480-525 Vac	1SDA066334R1	
T5-T6	SOR-C 12V DC T4-T5-T6	1SDA054869R1	5,960
	SOR-C 24V AC/DC T4-T5-T6	1SDA054870R1	
	SOR-C 48...60V AC/DC T4-T5-T6	1SDA054871R1	
	SOR-C 110...120V AC-110...125V DC T4-T5-T6	1SDA054872R1	
	SOR-C 220...240V AC-220...250V DC T4-T5-T6	1SDA054873R1 ■	
	SOR 380...440V AC T4-T5-T6	1SDA054875R1	5,960
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	3,380

Note:- F/P: Fixed/Plug-in ; W:Withdrawable

Test unit- SOR

Frame	Description	Ordering code	L.P. (₹)
T7-T7M-X1-E1/6	SOR test unit T7-T7M-X1-E1/6	1SDA050228R1	31,600

Under voltage release - UVR (Un-cabled version - For Fixed and Plug-in circuit breakers)			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	UVR XT1..XT4 24-30 VAC/DC	1SDA066389R1	4,190
	UVR XT1..XT4 48 VAC/DC	1SDA069064R1	
	UVR XT1..XT4 60 VAC/DC	1SDA066390R1	
	UVR XT1..XT4 110-127Vac-110-125Vdc	1SDA066391R1	
	UVR XT1..XT4 220-240Vac-220-250Vdc	1SDA066392R1 ■	
	UVR XT1..XT4 380-440 Vac	1SDA066393R1 ■	
	UVR XT1..XT4 480-525 Vac	1SDA066394R1	
T5-T6	UVR 24V AC/DC T4-T5-T6	1SDA054880R1	7,820
	UVR 48V AC/DC T4-T5-T6	1SDA054881R1	
	UVR 60V AC/DC T4-T5-T6	1SDA054882R1	
	UVR 110...120V AC-110...125V DC T4-T5-T6	1SDA054883R1 ■	
	UVR 220...240V AC-220...250V DC T4-T5-T6	1SDA054884R1 ■	
	UVR 380...440V AC T4-T5-T6	1SDA054885R1 ■	
	UVR 480...500V AC T4-T5-T6	1SDA054886R1	
T7-T7M	UVR 24V AC/DC T7-T7M-X1	1SDA062087R1	8,790
	UVR 30V AC/DC T7-T7M-X1	1SDA062088R1	
	UVR 48V AC/DC T7-T7M-X1	1SDA062089R1	
	UVR 60V AC/DC T7-T7M-X1	1SDA062090R1	
	UVR 110...120V AC/DC T7-T7M-X1	1SDA062091R1	
	UVR 120...127V AC/DC T7-T7M-X1	1SDA063551R1	
	UVR 220...240V AC/DC T7-T7M-X1	1SDA063552R1	
	UVR 240...250V AC/DC T7-T7M-X1	1SDA062092R1	
	UVR 380...400V AC T7-T7M-X1	1SDA062093R1	
	UVR 415...440V AC T7-T7M-X1	1SDA062094R1	

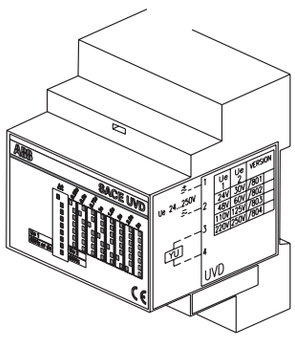
Note: For T7 TM in Withdrable version sliding contact blocks for fixed and moving parts are necessary.

■ Stock items

Tmax accessories

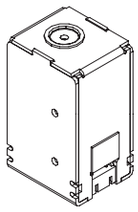
Under voltage release C - UVR - C (Cabled version)			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	UVR-C XT1..XT4 F/P 24-30 VAC/DC	1SDA066396R1	6,530
	UVR-C XT1..XT4 F/P 48 Vac/dc	1SDA069065R1	
	UVR-C XT1..XT4 F/P 60 Vac/dc	1SDA066397R1	
	UVR-C XT1..XT4 F/P 110-127Vac-110-125Vdc	1SDA066398R1	
	UVR-C XT1..XT4 F/P 220-240Vac-220-250Vdc	1SDA066399R1 ■	
	UVR-C XT1..XT4 F/P 380-440 Vac	1SDA066400R1	
	UVR-C XT1..XT4 F/P 480-525 Vac	1SDA066401R1	
	UVR-C XT2-XT4 W 24-30 Vac/dc	1SDA066403R1	7,070
	UVR-C XT2-XT4 W 48 Vac/dc	1SDA069066R1	
	UVR-C XT2-XT4 W 60 Vac/dc	1SDA066404R1	
	UVR-C XT2-XT4 W 110-127Vac-110-125Vdc	1SDA066405R1	
	UVR-C XT2-XT4 W 220-240Vac-220-250Vdc	1SDA066406R1	
	UVR-C XT2-XT4 W 380-440 Vac	1SDA066407R1	
	UVR-C XT2-XT4 W 480-525 Vac	1SDA066408R1	
T5-T6	UVR-C 24V AC/DC T4-T5-T6	1SDA054887R1	10,560
	UVR-C 48V AC/DC T4-T5-T6	1SDA054888R1	

Note:- F/P: Fixed/Plug-in ; W:Withdrawable



Time delay device for under voltage release- UVD			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	UVD T1...T6 - XT1…XT4 24...30 Vac/dc	1SDA051357R1	35,710
	UVD T1...T6 - XT1…XT4 48...60 Vac/dc	1SDA051358R1	
	UVD T1...T6 - XT1…XT4 110...125 Vac/dc	1SDA051360R1	
	UVD T1...T6 - XT1…XT4 220...250 Vac/dc	1SDA051361R1	
T5...T6	UVD 24...30V AC/DC T1...T6	1SDA051357R1	
	UVD 48...60V AC/DC T1...T6	1SDA051358R1	
	UVD 110...125V AC/DC T1...T6	1SDA051360R1	
	UVD 220...250V AC/DC T1...T6	1SDA051361R1	
T7-T7M	UVD 24/30V AC/DC E1/6 - T7-T7M-X1	1SDA038316R1	12,290
	UVD 48V AC/DC E1/6 - T7-T7M-X1	1SDA038317R1	
	UVD 60V AC/DC E1/6 - T7-T7M-X1	1SDA038318R1	
	UVD 110…125V AC/DC E1/6 - T7-T7M-X1	1SDA038319R1	
	UVD 220…250V AC/DC E1/6 - T7-T7M-X1	1SDA038320R1	12,520

Note: Order along with relative UV release



Shunt closing release

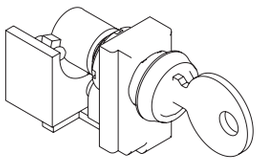
Frame	Description	Ordering code	L.P. (₹)
T7M	SCR 24V AC/DC T7M-X1	1SDA062076R1	8,360
	SCR 30V AC/DC T7M-X1	1SDA062077R1	
	SCR 48V AC/DC T7M-X1	1SDA062078R1	
	SCR 60V AC/DC T7M-X1	1SDA062079R1	
	SCR 110...120V AC/DC T7M-X1	1SDA062080R1	
	SCR 120...127V AC/DC T7M-X1	1SDA063549R1	
	SCR 220...240V AC/DC T7M-X1	1SDA063550R1	
	SCR 240...250V AC/DC T7M-X1	1SDA062081R1	
	SCR 380...400V AC T7M-X1	1SDA062082R1	
	SCR 415...440V AC T7M-X1	1SDA062083R1	

Note: For T7 M in withdrawable version sliding blocks for fixed and moving parts are necessary.

■ Stock items

Tmax accessories

Key lock



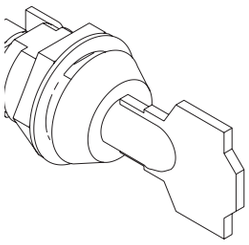
Key Lock - KLC			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
KLC for Manual Breaker			
XT1....XT4	KLC XT1 KEY LOCK RONIS ON CB DIFF.KEY	1SDA066593R1	2,020
	KLC XT1 KEY LOCK RONIS ON CB TYPE A	1SDA066594R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE B	1SDA066595R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE C	1SDA066596R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE D	1SDA066597R1	
	KLC XT1 KEY LOCK RONIS EQ.FEL.A OP/CL	1SDA066598R1	
	KLC XT2-XT4 KEY LOCK RONIS SE.OP.xC.BRE.	1SDA066599R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE A	1SDA066600R1 ■	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE B	1SDA066601R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE C	1SDA066602R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE D	1SDA066603R1	
	KLC XT2-XT4 KEY LOCK RONIS EQ.FE.A OP/CL	1SDA066604R1	
	KLC XT3 KEY LOCK RONIS SEV.OP. X C.BREA.	1SDA066605R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE A	1SDA066606R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE B	1SDA066607R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE C	1SDA066608R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE D	1SDA066609R1	
	KLC XT3 KEY LOCK RONIS EQ.FEL.A OP/CL	1SDA066610R1	
T7	KLC-D Key Lock - Different Key in Open Position T7	1SDA062134R1	3,520
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7	1SDA062135R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7	1SDA062136R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7	1SDA062137R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7	1SDA062138R1	
	KLC Arrangment for Ronis Key Lock T7	1SDA062139R1	
	KLC Arrangment for Profalux Key Lock T7	1SDA062140R1	
T7 M	KLC-D Different Key in open Position T7M	1SDA062141R1	3,730
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7M	1SDA062142R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7M	1SDA062143R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7M	1SDA062144R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7M	1SDA062145R1	
	KLC Same Key Ronis-Profalux T7M	1SDA062146R1	

Pad Lock - KLC			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
KLC for Manual breaker			
XT1....XT4	PLL XT1-XT3 REMOV.PADL.DEVICE OPEN PLUG	1SDA066588R1	1,480
	PLL XT1-XT3 PADLOCKS DEVICE OPEN	1SDA066589R1	
	PLL XT2-XT4 PADLOCKS DEVICE OPEN	1SDA066590R1	
	PLL XT1-XT3 PADLOCKS DEVICE OP/CL	1SDA066591R1	
	PLL XT2-XT4 PADLOCKS DEVICE OP/CL	1SDA066592R1	

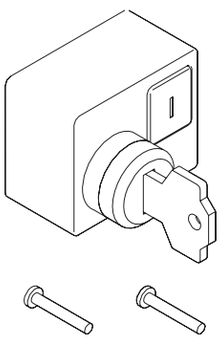
Key Lock for Rotary Handle - RHL			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	RHL XT1..XT4 KEY LOCK RONIS SEVERAL	1SDA066617R1 ■	1,590
	RHL XT1..XT4 KEY LOCK RONIS TYPE A	1SDA066618R1 ■	
	RHL XT1..XT4 KEY LOCK RONIS TYPE B	1SDA066619R1	
	RHL XT1..XT4 KEY LOCK RONIS TYPE C	1SDA066620R1	
	RHL XT1..XT4 KEY LOCK RONIS TYPE D	1SDA066621R1	
	RHL XT1..XT4 KEY LOCK RONIS SEVER. OP/CL	1SDA066622R1	
	RHL XT1..XT4 KEY LOCK RONIS SEVER. OP/CL	1SDA069182R1	
	MOL-D XT1-XT3 KEY LOCK RONIS DIFF. KEY	1SDA066623R1	

■ Stock items

Tmax accessories



Key Lock for Front/Rotary/Fixed Part- KLF			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5	KLF-D Lock for Front/Rotary Handle - Different Key in open Position T4-T5	1SDA054939R1	3,350
	KLF-S Block for Front/Rotary Handle - Same Key (N. 20005) T4-T5	1SDA054940R1 ■	
	KLF-S Block for Front/Rotary Handle - Same Key (N. 20006) T4-T5	1SDA054941R1	
	KLF-S Block for Front/Rotary Handle - Same Key (N. 20007) T4-T5	1SDA054942R1	
	KLF-S Block for Front/Rotary Handle - Same Key (N. 20008) T4-T5	1SDA054943R1	
T5-T6	KLF-D FP Different Key for Each Circuit Breaker T4-T5-T6	1SDA055230R1	3,170
	KLF-D FP Same Key for Different Groups of Circuit Breaker T4-T5-T6	1SDA055231R1	
	KLF-D Ronis Fixed Part- Lock Type Ronis T4-T5-T6	1SDA055233R1	
T6	KLF-D Different Key in open Position T6	1SDA060658R1	3,260
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T6	1SDA060659R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T6	1SDA060660R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T6	1SDA060661R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T6	1SDA060662R1	
T7	KLF-D Different Key in open Position T7	1SDA063555R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7	1SDA063556R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7	1SDA063557R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7	1SDA063558R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7	1SDA063559R1	
	KLF Arrangment for Ronis key lock T7	1SDA063560R1	
	KLF Arrangment for Profalux key lock T7	1SDA063561R1	



Key lock for motor operated- MOL

Frame	Description	Ordering code	L.P. (₹)
XT1-XT3	MOL-S XT1-XT3 KEY LOCK RONIS TYPE A	1SDA066624R1	3,390
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE B	1SDA066625R1	
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE C	1SDA066626R1	
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE D	1SDA066627R1	
XT2-XT4	MOL-D XT2-XT4 KEY LOCK RONIS DIFF. KEY	1SDA066629R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE A	1SDA066630R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE B	1SDA066631R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE C	1SDA066632R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE D	1SDA066633R1	
	MOL-M XT2-XT4KEY LOCK RONIS MAN. OPER.	1SDA066634R1	
T5	MOL-D - Same Key T4-T5	1SDA054904R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T4-T5	1SDA054905R1 ■	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T4-T5	1SDA054906R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T4-T5	1SDA054907R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T4-T5	1SDA054908R1	
T5-T6	MOL-M - Lock only on Manual Operation - Same Key T4-T5-T6	1SDA054909R1	
T6	MOL-D - Different Key T6	1SDA060611R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T6	1SDA060612R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T6	1SDA060613R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T6	1SDA060614R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T6	1SDA060615R1	

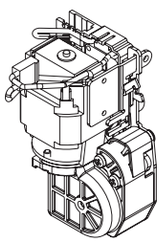
Motor operator with direct action - MOD			
Frame	**Description**	**Ordering code**	**L.P.(₹)**
XT1-XT3	MOD XT1-XT3 24 V dc	1SDA066457R1	22,300
	MOD XT1-XT3 48...60 V dc	1SDA066458R1	
	MOD XT1-XT3 110...125 V ac/dc	1SDA066459R1	19,120
	MOD XT1-XT3 220...250 V ac/dc	1SDA066460R1 ■	
	MOD XT1-XT3 380...440 V ac	1SDA066461R1	22,300
	MOD XT1-XT3 480...525 V ac	1SDA066462R1	

■ Stock items

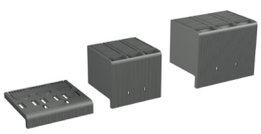
Tmax accessories

Stored Energy Motor Operator - MOE			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT2-XT4	MOE XT2-XT4 24 V dc	1SDA066463R1	29,520
	MOE XT2-XT4 48...60 V dc	1SDA066464R1	
	MOE XT2-XT4 110...125 V ac/dc	1SDA066465R1	22,540
	MOE XT2-XT4 220...250 V ac/dc	1SDA066466R1 ■	
	MOE XT2-XT4 380...440 V ac	1SDA066467R1	22,540
	MOE XT2-XT4 480...525 V ac	1SDA066468R1	
T5	MOE 24 V DC T4-T5	1SDA054894R1	41,225
	MOE 48...60 V DC T4-T5	1SDA054895R1	
	MOE 110...125 V AC / DC T4-T5	1SDA054896R1	34,070
	MOE 220...250 V AC / DC T4-T5	1SDA054897R1 ■	
	MOE 380 V AC T4-T5	1SDA054898R1	35,325
T6	MOE 24 V DC T6	1SDA060395R1	41,590
	MOE 48…60 V DC T6	1SDA060396R1	
	MOE 110…125 V AC/DC T6	1SDA060397R1	
	MOE 220…250 V AC/DC T6	1SDA060398R1 ■	
	MOE 380 V AC T6	1SDA060399R1	

Stored energy motor operator with electronics - MOE-E			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT2 - XT4	MOE-E XT2-XT4 24V dc X REM.CONTR.	1SDA066469R1	32,470
	MOE-E XT2-XT4 48...60V dc X REM.CONTR.	1SDA066470R1	
	MOE-E XT2-XT4 110..125V ac/d X REM.CONT.	1SDA066471R1	32,470
	MOE-E XT2-XT4 220..250V ac/dc X REM.CONT	1SDA066472R1	
	MOE-E XT2-XT4 380...440V ac X REM.CONTR	1SDA066473R1	
	MOE-E XT2-XT4 480..525V ac X REM.CONTR	1SDA066474R1	
T5	MOE-E 24 V DC T4-T5	1SDA054899R1	45,340
	MOE-E 48...60 V DC T4-T5	1SDA054900R1	
	MOE-E 110...125 V AC / DC T4-T5	1SDA054901R1	37,470
	MOE-E 220...250 V AC / DC T4-T5	1SDA054902R1 ■	
	MOE-E 380 V AC T4-T5	1SDA054903R1	38,850
T6	MOE-E 24 V DC T6	1SDA060400R1	54,050
	MOE-E 48…60 V DC T6	1SDA060401R1	
	MOE-E 110…125 V AC/DC T6	1SDA060402R1	
	MOE-E 220…250 V AC/DC T6	1SDA060403R1	
	MOE-E 380 V AC T6	1SDA060404R1	



Spring charging motor- M			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T7M	M 24...30V AC/DC T7M	1SDA062113R1	41,990
	M 48...60V AC/DC T7M	1SDA062114R1	44,220
	M 100...130V AC/DC T7M	1SDA062115R1	41,990
	M 220...250V AC/DC T7M	1SDA062116R1	
	M 380...415V AC T7M	1SDA062117R1	



High insulating terminal covers - HTC			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1...XT4	HTC XT1 3p TERMINAL COVERS HIGH 2pcs	1SDA066664R1	2,650
	HTC XT2 3p TERMINAL COVERS HIGH 2pcs	1SDA066666R1	3,020
	HTC XT3 3p TERMINAL COVERS HIGH 2pcs	1SDA066668R1	3,280
	HTC XT4 3p TERMINAL COVERS HIGH 2pcs	1SDA066670R1	3,660
	HTC XT1 4p TERMINAL COVERS HIGH 2pcs	1SDA066665R1	3,550
	HTC XT2 4p TERMINAL COVERS HIGH 2pcs	1SDA066667R1	4,020
	HTC XT3 4p TERMINAL COVERS HIGH 2pcs	1SDA066669R1	4,400
	HTC XT4 4p TERMINAL COVERS HIGH 2pcs	1SDA066671R1	4,880

■ Stock items

Tmax accessories

Low insulating terminal covers - LTC			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	LTC XT1 3p TERMINAL COVERS LOW 2pcs	1SDA066655R1	1,910
	LTC XT2 3p TERMINAL COVERS LOW 2pcs	1SDA066657R1	
	LTC XT3 3p TERMINAL COVERS LOW 2pcs	1SDA066660R1	2,020
	LTC XT4 3p TERMINAL COVERS LOW 2pcs	1SDA066662R1	
	LTC XT1 4p TERMINAL COVERS LOW 2pcs	1SDA066656R1	2,230
	LTC XT2 4p TERMINAL COVERS LOW 2pcs	1SDA066659R1	
	LTC XT3 4p TERMINAL COVERS LOW 2pcs	1SDA066661R1	2,490
	LTC XT4 4p TERMINAL COVERS LOW 2pcs	1SDA066663R1	2,860
T5	LTC 3p T5	1SDA054968R1	2,710
	LTC 4p T5	1SDA054969R1	3,570
T6	LTC 3p T6	1SDA014038R1	2,960
	LTC 4p T6	1SDA014039R1	3,950
T7-T7M	LTC 3p T7-T7M	1SDA063093R1	4,540
	LTC 4p T7-T7M	1SDA063094R1	5,830

Dialogue unit - PR 222/DS-PD			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5-T6	PR222DS/PD LSI T4-T5-T6	1SDA055066R1	28,210
	PR222DS/PD LSIG T4-T5-T6	1SDA055067R1	29,450

Note : Order X3 connector along with dialogue unit

Dialogue unit - Ekip E-LSIG			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5	DIALOG Ekip E-LSIG MOD.T5 (EXTR)	1SDA081094R1	24,410

X3 connector			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5-T6	X3 Connector for fixed circuit-breaker PR222DS or PR223DS	1SDA055059R1	3,720
	X3 Connector for plug-in/withdrawable circuit-breaker	1SDA055061R1	

X4 Connector			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5-T6	X4 Connector for fixed circuit-breaker	1SDA055060R1	3,720
	X4 Connector for plug-in/withdrawable circuit-breaker	1SDA055062R1	

Residual current devices			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1	RC Inst x XT1 3p F	1SDA067122R1	21,240
	RC Sel x XT1 3p F	1SDA067123R1	
	RC Sel 200 x XT1 4p F	1SDA067121R1	30,800
	RC Inst x XT1 4p F	1SDA067124R1	24,640
	RC Sel x XT1 4p F	1SDA067125R1	
XT2	RC Sel x XT2 4p F	1SDA067126R1	45,340
XT3	RC Inst x XT3 3p F	1SDA067127R1	53,200
	RC Sel x XT3 3p F	1SDA067128R1	59,140
	RC Inst x XT3 4p F	1SDA067129R1	57,240
	RC B Type x XT3 4p F	1SDA067132R1	89,090
	RC Sel x XT3 4p F	1SDA067130R1	63,020
T5	RC222/5 4p Fixed T5	1SDA054955R1	63,020

Automation transfer switch - ATS

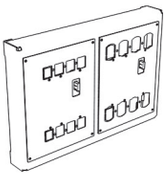
Automatic transfer switch			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT2-XT4/ T5-T7/ E1-E6	ATS021	1SDA065523R1	87,080
	ATS022	1SDA065524R1	95,580

Note : ATS will be used along with either two motorized ACB or MCCBs with required interlocking and changeover base plate as per the requirement.

Tmax accessories

Mechanical interlock between circuit breakers			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	MIR-HR XT1..XT4 MECH INTERLOCK HOR. 2 CB**	1SDA066637R1	14,340
	MIR-VR XT1..XT4 MECH INTERLOCK VER. 2 CB**	1SDA066638R1	
	MIR-P PLATE x XT1 F	1SDA066639R1	4,790
	MIR-P PLATE x XT2 F	1SDA066641R1	
	MIR-P PLATE x XT3 F	1SDA066643R1	
	MIR-P PLATE x XT4 F	1SDA066645R1	

Note : ** Following must be ordered to make the rear interlock.
1. A MIR-HR or MIR-VR
2. A plate MIR-P for each circuit breaker to be interlocked



Mechanical interlock between circuit breakers - MIR - to be used with copper spreaders only			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T5	MIR-HB Horizontal Interlock Frame Unit T4-T5	1SDA054946R1	10,800
	MIR-VB Vertical Interlock Frame Unit T4-T5	1SDA054947R1	
	MIR-P Plate for Interlock Type D T5 400 (F-P-W) or T5 630 (F)+T5 400 (F-P-W) or T5 630 (F)	1SDA054951R1	5,400
	MIR-P Plate for Interlock Type E T5 400 (F-P-W) or T5 630 (F) + T5 630 (P-W)	1SDA054952R1	
	MIR-P Plate for Interlock Type F T5 630 (P-W) + T5 630 (P-W)	1SDA054953R1	
T6	MIR-H Horizontal Mechanical Interlock T6	1SDA060685R1	17,110
	MIR-V Vertical Mechanical Interlock T6	1SDA060686R1	

Note: For interlocking in T4-T5, Order both frame and plate unit

Mechanical interlock with cables between 2 circuit breakers			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
T7-T7M	Cable Kit for InterlockT7-T7M	1SDA062127R1	7,120
	Cable Kit for InterlockT7-T7M with E1-6	1SDA064568R1	7,750
	Plate for Interlock T7-T7M Fixed	1SDA062129R1	28,370
	Plate for Interlock T7-T7M withdrawble	1SDA062131R1	30,350

Note: It is Necessary to order 2 plates and one kit of cables

Accessories for electronic trip units			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT2 - XT4	EKIP LED METER x LSI-LSIG-M/LRIU XT2-XT4	1SDA068660R1	10,820
	EKIP DISPLAY x LSI-LSIG-M/LRIU XT2-XT4	1SDA068659R1	12,750
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 F/P	1SDA068661R1	19,120
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 W	1SDA068662R1	
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 F/P	1SDA066980R1	3,930
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 W	1SDA066981R1	4,450
	EKIP multimeter display on front of the switch board	1SDA074192R1	Upon request
T4-T5-T6-T7-XT2-XT4/E1-E6	HMI030 interface on the front of switchgear	1SDA063143R1	35,670

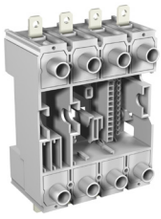
Note:- F/P: Fixed/Plug-in ; W:Withdrawable

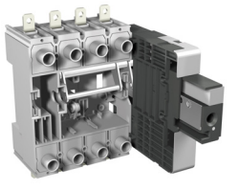
Test and configuration unit			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT2 - XT4	Ekip TT Trip test unit	1SDA066988R1	6,360

Bracket for fixing onto DIN rail			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1	KIT DIN50022 XT1 3p PLATE DIN	1SDA066652R1	1,590
	KIT DIN50022 XT1 4p PLATE DIN	1SDA066419R1	1,690
	KIT DIN50022 XT1+RC Sel 200 PLATE DIN	1SDA067134R1	1,860
	KIT DIN50022 XT1+RC PLATE DIN	1SDA067135R1	2,020
XT3	KIT DIN50022 XT3 3p PLATE DIN	1SDA066420R1	
	KIT DIN50022 XT3 4p PLATE DIN	1SDA066421R1	
	KIT DIN50022 XT3+RC PLATE DIN	1SDA067139R1	2,230
XT2	KIT DIN50022 XT2-XT4 PLATE DIN	1SDA066653R1	1,590

IP54 Protection for transmitted rotary handle			
Frame	**Description**	**Ordering code**	**L.P. (₹)**
XT1....XT4	IP54 Protection for transmitted rotary handle-RHE	1SDA066587R1	2,440

Tmax conversion kit





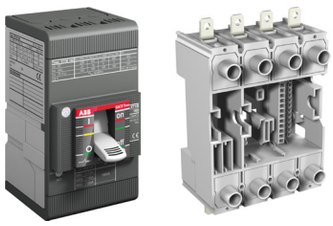
Plug-in and drawout conversion

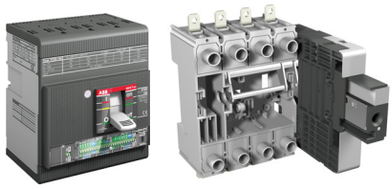
Frame	Pole	Type	Description	Ordering code	L.P. (₹)
XT1	3P	Plugin kit	KIT P MP XT1 3p	1SDA066276R1	4,310
			XT1 P FP 3p EF	1SDA068183R1	8,010
XT2			KIT P MP XT2 3p	1SDA066278R1	4,810
			XT2 P FP 3p EF	1SDA068187R1	8,760
XT3			KIT P MP XT3 3p	1SDA066280R1	6,010
			XT3 P FP 3p EF	1SDA068192R1	9,020
XT4			KIT P MP XT4 3p	1SDA066282R1	6,960
			XT4 P FP 3p EF	1SDA068196R1	9,670
T5			KIT MP T5 400 P 3p	1SDA054843R1	8,840
			T5 400 P FP 3p EF	1SDA054749R1	16,120
			KIT MP T5 630 P 3p	1SDA054847R1	10,190
			T5 630 P FP 3p EF	1SDA054762R1	18,200
XT2		Drawout kit	KIT W MP XT2 3p	1SDA066284R1	8,010
			XT2 W FP 3p EF	1SDA068200R1	18,040
XT4			KIT W MP XT4 3p	1SDA066286R1	9,150
			XT4 W FP 3p EF	1SDA068204R1	18,940
T5			KIT MP T5 400 W 3p	1SDA054845R1	13,620
			T5 400 W FP 3p EF	1SDA054755R1	28,600
			KIT MP T5 630 W 3p	1SDA054849R1	17,570
			T5 630 W FP 3p EF	1SDA054768R1	29,640
T6			KIT MP T6 630/800 W 3p	1SDA060390R1	20,040
			T6 W FP 3p EF	1SDA060384R1	42,320
T7			KIT MP T7-T7M-X1 W 3p	1SDA062162R1	32,660
			T7-X1 W FP 3p EF-EF	1SDA062045R1	68,850

Note:
The plug-in version must be composed as follows:
1) Fixed circuit-breaker
2) Conversion kit from fi xed into moving part of plug-in
3) Fixed part of plug-in
4) For T5 630 -circuit-breaker and switch-disconnector in Plug-in and withdrawable version In max = 570 A

Note:
The withdrawable version must be composed as follows:
1) Fixed circuit-breaker
2) Conversion kit from fixed into moving part of withdrawable
3) Fixed part of withdrawable
4) Front for lever operating mechanism or rotary handle or motor operator
5) Sliding contacts blocks if the circuit-breaker is automatic or fitted with electrical accessories (only for T7)
6) For T5 630 -circuit-breaker and switch-disconnector in Plug-in and withdrawable version In max = 570 A

Tmax conversion kit





Plug-in and drawout conversion

Frame	Pole	Type	Description	Ordering code	L.P. (₹)
XT1	4P	Plug-in kit	KIT P MP XT1 4p	1SDA066277R1	5,720
			XT1 P FP 4p EF	1SDA068185R1	10,920
XT2			KIT P MP XT2 4p	1SDA066279R1	6,270
			XT2 P FP 4p EF	1SDA068190R1	11,960
XT3			KIT P MP XT3 4p	1SDA066281R1	7,070
			XT3 P FP 4p EF	1SDA068194R1	12,580
XT4			KIT P MP XT4 4p	1SDA066283R1	9,220
			XT4 P FP 4p EF	1SDA068198R1	13,000
T5			KIT MP T5 400 P 4p	1SDA054844R1	11,960
			T5 400 P FP 4p EF	1SDA054752R1	19,240
			KIT MP T5 630 P 4p	1SDA054848R1	14,040
			T5 630 P FP 4p EF	1SDA054765R1	22,360
XT2		Drawout kit	KIT W MP XT2 4p	1SDA066285R1	10,920
			XT2 W FP 4p EF	1SDA068202R1	23,970
XT4			KIT W MP XT4 4p	1SDA066287R1	11,960
			XT4 W FP 4p EF	1SDA068206R1	25,340
T5			KIT MP T5 400 W 4p	1SDA054846R1	19,240
			T5 400 W FP 4p EF	1SDA054758R1	35,880
			KIT MP T5 630 W 4p	1SDA054850R1	21,320
			T5 630 W FP 4p EF	1SDA054771R1	44,200
T6			KIT MP T6 630/800 W 4p	1SDA060391R1	24,560
			T6 W FP 4p EF	1SDA060387R1	54,830
T7			KIT MP T7-T7M-X1 W 4p	1SDA062163R1	38,030
			T7-X1 W FP 4p EF-EF	1SDA062049R1	92,080

Accessories:

Frame / Type	Description	Ordering code	L.P. (₹)
Connector	Socket-plug panel connector with 3PINS (XT1...XT4)	1SDA066409R1	1,270
	Socket-plug panel connector with 6PINS (XT1...XT4)	1SDA066410R1	2,520
	Socket-plug panel connector with 9PINS (XT1...XT4)	1SDA066411R1	3,830
	Socket-plug panel connector with 15PINS (XT1...XT4)	1SDA066412R1	6,330
	Socket-plug connector of moving part 12PINS (XT2...XT4)	1SDA066413R1	6,840
	Socket-plug connector of fixed part 12PINS (XT2...XT4)	1SDA066414R1	
	Connector 4th pole SOR-PS-SOR (XT2...XT4)	1SDA066415R1	1,260
	Connector 4th pole UVR (XT2...XT4)	1SDA066418R1	1,150
	ADP 5pin SOR-C /UVR-C T4-T5-T6 P/W	1SDA055173R1	2,180
	ADP 6pin AUX -C T4-T5-T6 P/W	1SDA054922R1 ■	1,880
	ADP 10pin MOE AUE -C T4-T5-T6 P/W	1SDA054924R1	2,400
	ADP 12pin AUX -C T4-T5-T6 P/W	1SDA054923R1	3,080
MOT T7M	LEFT SLIDING CONTAC.MP C.BR.T7-T7M-X1	1SDA062164R1	5,100
	LEFT SLIDING CONTAC.FP C.BR.T7M-X1	1SDA062167R1	7,540
SOR/SCR/UVR/AUX - T7-T7M	RIGHT SLIDING CONTAC.MP C.BR.T7-T7M-X1	1SDA062166R1	5,100
	RIGHT SLIDING CONTAC.FP C.BR.T7M-X1	1SDA062169R1	7,540
Central Block for T7-T7M	Central block - MP T7 - T7M	1SDA062165R1	5,100
	Central block - FP T7 - T7M	1SDA062168R1	7,540

■ Stock items

Tmax PV: Photovoltaic range moulded case switch disconnector

Tmax PV is the latest T Generation product up to 1600 A/1100 V DC/1500V DC.

- IEC 60947-3 certification
- 6 different sizes: from the compact T1 (which can be mounted on DIN rail) to high-performance
- T7, available in the two versions, with lever operating mechanism and motor operator
- Rated insulation voltage up to 1150 V DC/1500V DC
- Advantages like
  - excellent performance-dimensions
  - vast and complete range of accessories for all requirements
  - Complete remote control with MOE options

Rated current In (A)	Rated voltage	Description	Version / Poles	Ordering code	L.P. (₹)
160	1100 V DC	T1D/PV 160 4p F FC Cu 1100V DC	Fixed / 4p	1SDA069816R1	Upon request
200		T3D/PV 200 4p F FC Cu 1100V DC	Fixed / 4p	1SDA069822R1	
250		T4D/PV 250 4p F F 1100V DC	Fixed / 4p	1SDA069823R1	
500		T5D /PV 500 4p F F 1100V DC	Fixed / 4p	1SDA069824R1	
800		T6D/PV 800 4p F F 1100V DC	Fixed / 4p	1SDA069825R1	
1250		T7D/PV 1250 4p F F 1100V DC	Fixed / 4p	1SDA069826R1	
1250M		T7D/PV 1250 4p F F M 1100V DC	Fixed / 4p	1SDA069827R1	
1600		T7D/PV 1600 4p F F 1100V DC	Fixed / 4p	1SDA069828R1	
1600M		T7D/PV 1600 4p F F M 1100V DC	Fixed / 4p	1SDA069829R1	

Rated current In (A)	Rated voltage	Description	Version / Poles	Ordering code	L.P. (₹)
250	1500V DC	T4D/PV-E 250 4p F F 1500V DC	Fixed / 4p	1SDA073559R1	Upon request
500		T5D/PV-E 500 4p F F 1500V DC	Fixed / 4p	1SDA076898R1	
1250		T7D/PV-E 1250 4p F F M 1500V DC	Fixed / 4p	1SDA073560R1	
1600		T7D/PV-E 1600 4p F F M 1500V DC	Fixed / 4p	1SDA073561R1	
250		KIT 2JUMPER U 2+2PS T4D/PV 250	Kit jumpers	1SDA070454R1	Upon request
500		KIT 2JUMPER U 2+2PS T5D/PV-E 500	Kit jumpers	1SDA076899R1	
1250		KIT JUMPER U 2+2PS T7D/PV 1250	Kit jumpers	1SDA070429R1	
1600		KIT JUMPER U 2+2PS T7D/PV 1600	Kit jumpers	1SDA070431R1	

*For information contact our nearest sales office

*Jumper kit is compulsory to order with 1500V DC version

FORMULA moulded case circuit breaker

New low voltage moulded case circuit breakers up to 630A

General characteristics

- Conforms to IEC 60947-2
- Fixed thermal magnetic release throughout the range
- Compact dimensions
- Common range of accessories
- Available in 1P, 2P, 3P & 4 pole versions
- Line-load reversibility
- Suitable for DC application till 250Vdc
- Operation voltage till 550VAC, insulation voltage of 690VAC and impulse voltage of 6KV

FORMULA A1

- Rated current, In 15...125A
- 1, 2, 3, 4 pole versions
- Icu = 10, 18, 25, 36KA

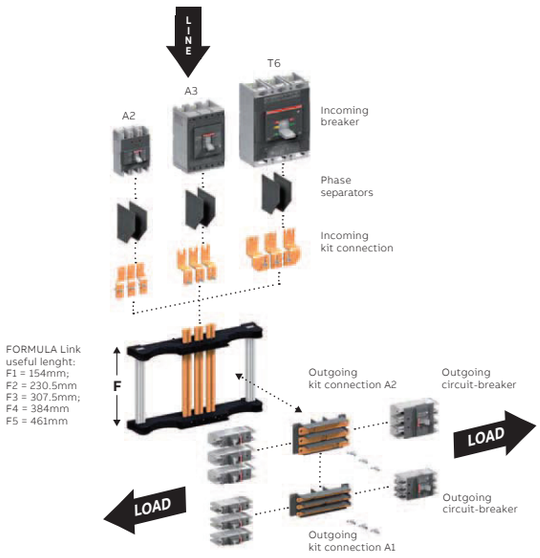
FORMULA A2

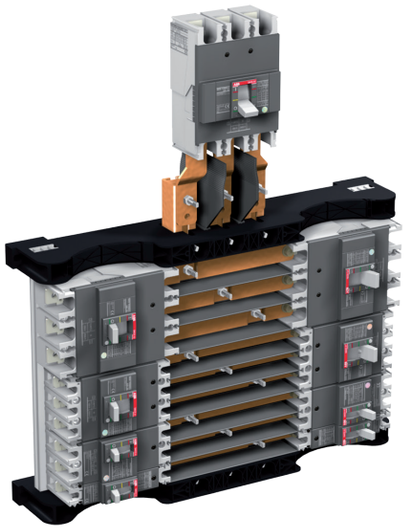
- Rated current, In 125...250A
- 1, 2, 3, 4 pole versions
- Icu = 18, 25, 36KA

FORMULA A3

- Rated current, In 320...630A
- 3, 4 pole versions
- Icu = 36, 50KA

FORMULA link system





- FORMULA link in accordance with IEC 60439 Standard
- FORMULA link is a component of a power distribution system which divides the main power supply over different users
- The FORMULA link is characterised on the supply side by a main circuit-breaker which protects the whole distribution system, and on the load side by smaller sized circuit-breakers, dedicated to the individual users
- FORMULA link assembly for total discrimination between upstream and downstream devices

FORMULA link - Electrical characteristics

FORMULA link frame	[A]	250	400	630/800
Incoming breaker		A2	A3	T6
Outgoing breaker		A1	A1-A2	A1-A2
Rated operational voltage 50/60 Hz	[V]	550AC	550AC	550AC
Rated insulation voltage	[V]	690AC	690AC	690AC
Rated short time withstand current (1s)	[KA]	30	40	40

FORMULA moulded case circuit breaker

Fixed thermal and fixed magnetic MCCB

A1 125 TMF

In(A)	Poles	A1A 125 Icu = 10KA Ordering code	L.P. (₹)	A 1B 125 Icu = 18KA Ordering code	L.P. (₹)	A 1C 125 Icu = 25KA Ordering code	L.P. (₹)	A 1N 125 Icu = 36KA Ordering code	L.P. (₹)
25	3	1SDA066512R1 ■	2,850	1SDA066699R1	3,830	1SDA066711R1	4,640	1SDA066723R1	5,470
32		1SDA068757R1 ■		1SDA068758R1 ■		1SDA068759R1 ■		1SDA068760R1	
40		1SDA066514R1 ■		1SDA066701R1		1SDA066713R1		1SDA066725R1	
50		1SDA066515R1 ■		1SDA066702R1		1SDA066714R1		1SDA066726R1	
63		1SDA068768R1 ■		1SDA068769R1 ■		1SDA068770R1 ■		1SDA068771R1 ■	
80		1SDA066518R1 ■		1SDA066705R1		1SDA066717R1 ■		1SDA066729R1	
100		1SDA066520R1 ■		1SDA066707R1 ■		1SDA066719R1 ■		1SDA066731R1 ■	
125		1SDA066521R1 ■	3,360	1SDA066708R1 ■	4,410	1SDA066720R1 ■	4,940	1SDA066732R1 ■	5,750
25	4	1SDA066526R1	3,830	1SDA066735R1	4,870	1SDA066747R1	5,980	1SDA066759R1	6,960
32		1SDA068761R1 ■		1SDA068762R1		1SDA068763R1 ■		1SDA068764R1	
40		1SDA066528R1		1SDA066737R1		1SDA066749R1		1SDA066761R1	
50		1SDA066529R1		1SDA066738R1		1SDA066750R1		1SDA066762R1	
63		1SDA068772R1 ■		1SDA068773R1 ■		1SDA068774R1 ■		1SDA068775R1 ■	
80		1SDA066532R1		1SDA066741R1		1SDA066753R1		1SDA066765R1	
100		1SDA066534R1 ■		1SDA066743R1 ■		1SDA066755R1 ■		1SDA066767R1 ■	
125		1SDA066535R1 ■	4,100	1SDA066744R1 ■	5,160	1SDA066756R1 ■	6,280	1SDA066768R1 ■	7,470

A2 250 TMF

In(A)	Poles	A2B 250 Icu = 18KA Ordering code	L.P. (₹)	A2C 250 Icu = 25KA Ordering code	L.P. (₹)	A2N 250 Icu = 36KA Ordering code	L.P. (₹)
160	3	1SDA066549R1 ■	7,720	1SDA066776R1 ■	8,240	1SDA066782R1 ■	8,750
200		1SDA066551R1 ■	9,040	1SDA066778R1 ■	9,720	1SDA066784R1 ■	11,070
250		1SDA066553R1 ■	9,720	1SDA066780R1 ■	10,400	1SDA066786R1 ■	12,430
160	4	1SDA066555R1 ■	10,040	1SDA066788R1 ■	10,710	1SDA066794R1 ■	11,380
200		1SDA066557R1 ■	11,510	1SDA066790R1 ■	12,430	1SDA066796R1 ■	14,280
250		1SDA066559R1 ■	12,560	1SDA066792R1 ■	14,280	1SDA066798R1 ■	15,770

A3 400 TMF

In(A)	Poles	A3N 400 Icu = 36KA Ordering code	L.P. (₹)	A3S 400 Icu = 50KA Ordering code	L.P. (₹)
320	3	1SDA066560R1	26,900	1SDA066562R1	29,300
400		1SDA066561R1		1SDA066563R1	
320	4	1SDA066568R1	34,830	1SDA066570R1	38,110
400		1SDA066569R1		1SDA066571R1	

A3 630 TMF

In(A)	Poles	A3N 630 Icu = 36KA Ordering code	L.P. (₹)	A3S 630 Icu = 50KA Ordering code	L.P. (₹)
500	3	1SDA066564R1	29,300	1SDA066565R1	31,690
630		1SDA066566R1	34,830	1SDA066567R1	38,880
500	4	1SDA066572R1	37,670	1SDA066573R1	40,350
630		1SDA066574R1	44,400	1SDA066575R1	50,820

Accessories

Terminals

Front extended spread terminal - ES	Poles	Ordering code	L.P. (₹) 6 pieces
A1	3P	1SDA082242R1 ■	480
A2		1SDA082247R1 ■	1,200

Terminals

Front extended spread terminal - ES	Poles	Ordering code	L.P. (₹) 8 pieces
A1	4	1SDA082243R1 ■	650
A2		1SDA082248R1 ■	1,350

	Description	A1-A2 Ordering code	L.P. (₹)
Rotary handle	RHD - Operating mechanism direct handle	1SDA066154R1 ■	1,290
	RHE - Operating mechanism transmitted handle	1SDA066158R1 ■	1,690
Shunt opening release – SOR-C Cabled version	SOR-C 220...240 VAC - 220...250 VDC	1SDA066137R1	2,100
	SOR-C 380...440 VAC	1SDA066138R1	1,940
Auxiliary contacts – AUX-C Cabled version	AUX-C 1Q + 1SY 250 VAC/DC	1SDA066149R1 ■	1,760
Undervoltage release – UVR-C Cabled version	UVR-C 220...240 VAC - 220...250 VDC	1SDA066146R1	4,010
	UVR-C 380...440 VAC	1SDA066147R1	

■ Stock items

Switches

ABB has a wide portfolio of low voltage switches. They are suitable for diverse applications, in motor control centers, in switch boards and as main switches in various equipments and machines. From single to 8 poles and combination switches for change-over, automatic transfer, bypass, reversing etc.

Switch disconnectors 16 – 4000 A
The switch disconnector is largely used as the main switch in low voltage switchgears for distribution of power, starting and stopping motors and isolating loads during maintenance.

The range from 16 to 125 Amps are either base plate or door mounted by snap-on or screw fitting front operated 3, 4, 6 and 8-pole are available as standard.

From 160 to 4000 Amps the switch disconnectors, also called load break switches, are designed as pole modules and they are available as 1, 2, 3 and 4-pole versions, front or side operated.

Switch disconnectors OTDC and OTDCP 10 – 1600 A
The OTDC range of switch-disconnectors is specially designed for DC applications. Thanks to a compact design, efficiency and reliability, OTDC switches bring photovoltaic installations to the next level.

Switch disconnector fuses 16 – 1250A
The switch disconnector fuse is used as the main switch in low voltage switchgears in industry for distributing power and protecting motors, cables and other devices against short circuits and over loads.

The switch disconnector fuses are available for all types of fuse links, DIN, BS, NFC, UL, CSA.

The range includes single pole to four pole versions, front-or side-operated. The pole module design enables location of the operating mechanism in any position together with the direction of the terminals giving flexibility to installation in different types of cubicle designs.

Change-over and transfer switches 16 – 3200 A
ABB's change-over and transfer switches are designed to transfer loads from one power source to another in a wide variety of applications.

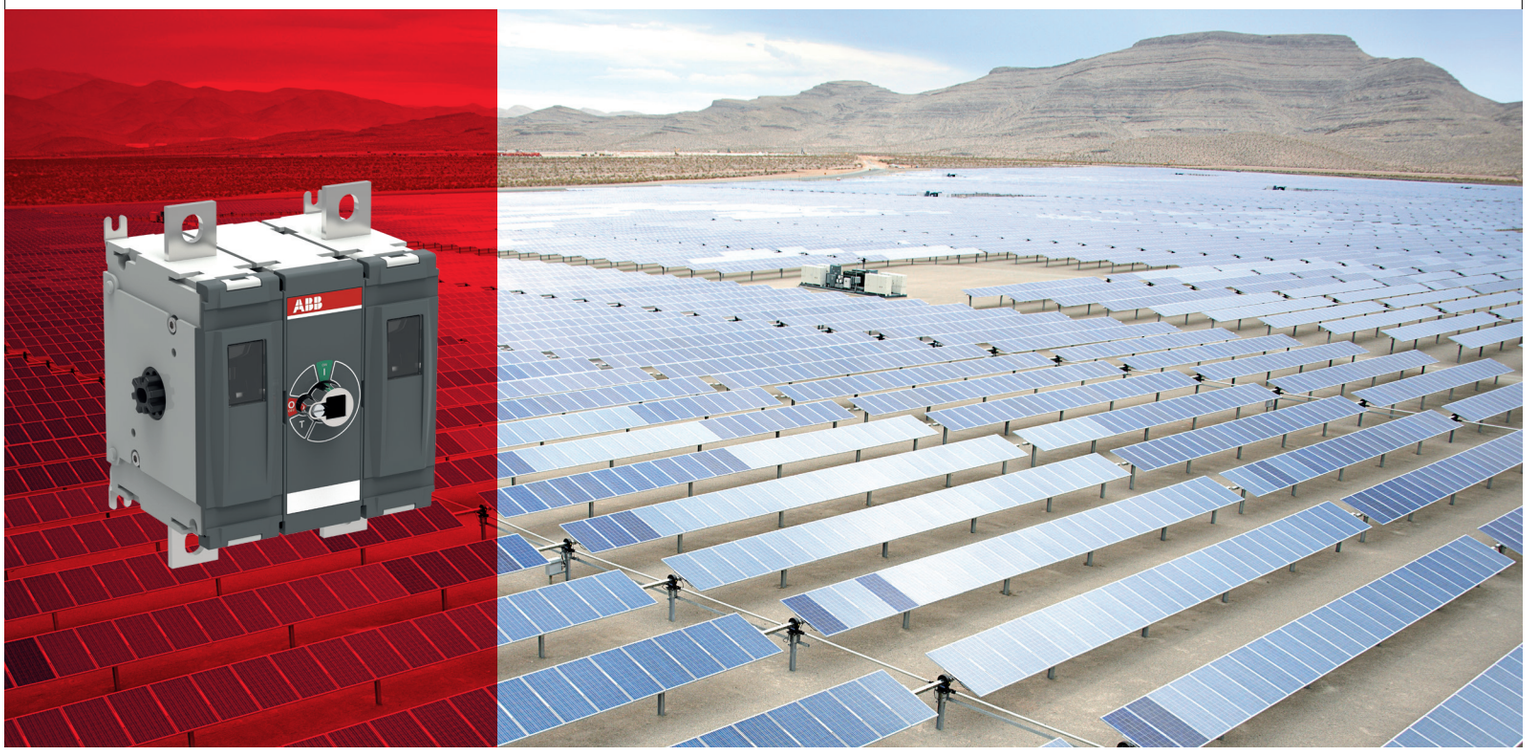
The range includes switches from 16 to 3200 Amperes, which can be operated manually, remotely by using a motor or automatically.

ABB's change-over and transfer switches are tested according to IEC 60947-6-1 and IEC 60947-3 standards. The switches have ratings in AC31 and AC33 utilization categories, up to 415 V. In motorized switches, the motor operators have a wide voltage operation range.

Enclosed switches 16 – 1600 A
The ABB enclosed switches are suitable for power distribution in factories and buildings, as local motor isolators and as main switches. Each incoming supply shall be provided with a hand operated main switch-disconnector according to the Machine Directive EN 60204 and isolate reliably the electrical equipment from the supply.
ABB enclosed switches are designed and tested to meet these requirements and complies with IEC 60 947-3.

The enclosed switches are easy to install and safe to use in industrial, public and residential environments. The indication of the handle is always reliable and lockable in the OFF-position with a standard padlock. ABB's long experience in switch disconnects guarantees a long and safe use

Cam switches 10 – 315 A
ABB's new OC, OM, ON and OL rotary cam switches offer a complete range of cam switches for control, instrumentation and motor starting applications, maximizing the benefits and optimizing your use of assets. The standard cam switches provide you with a variety of functionalities for the most common mounting types and applications with minimum footprint area.



Optimized two-poles 1500V DC switch disconnectors

Small sized and with increased efficiency and performance

A fully optimized range of two-pole DC switch-disconnectors for 1500V utility-scale photovoltaic power plants covering 315-800A current range. The new design offers both a size reduction and an increase in efficiency and performances, helping manufacturers to adapt quickly to the industry's rapid adoption of 1500V DC solutions. A switch range that allows manufacturers and utilities to improve their systems efficiency, lowering power losses and reducing the size of combiner boxes, enclosures and inverters. **https://go.abb/otdc**

DC switch disconnectors for PV application

OTDC 10...32A

- Modular design
- Simple and fast installation
- DIN rail or screw mounted
- Tunnel terminals for easy termination
- Shortcircuit bars are pre-installed as standard
- Maximum engergy efficiency
- Available in plastic enclosure

New

New

OTDC 100A....1600A

- ABB offers a compact DC switch range for single and multi circuit disconnecting
- Carefully designed arc plates and dual magnetic breaking, breaking power is optimized across the entire current range.
- As a result of symmetric pole design, the connections are independent of polarity. The user can make the connections in both ways.
- OTDC is the only DC switch in the market that has visible contacts.
- The mechanism can be located between the poles or on the side of the switch.
- Special four pole versions can be made for double circuit applications.
- The operation of the switch is not vulnerable to voltage peaks and it is independent of the user (quick make quick brake).
- The switches are available in direct mounting handle version as well as external door mounted handle version.
- The power losses are very low, results in high efficiency.

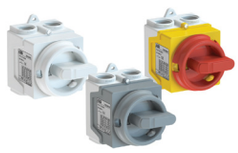
Rated current In (A)	Rated voltage	Description	Ordering code	L.P. (₹)
10	1000 V DC	OTDC16F2	1SCA121454R1001	Upon request
16		OTDC16F3	1SCA121457R1001	
25		OTDC25F3	1SCA121458R1001 ■	
32		OTDC32F3	1SCA121459R1001 ■	
100		OTDC100E11K	1SCA125821R1001	
160		OTDC160E11K	1SCA123745R1001	
200		OTDC200E11K-I	1SCA125626R1001 ■	
250		OTDC250E11K-I	1SCA125865R1001 ■	
315		OTDC315F11K	1SCA158258R1001	
400		OTDC400F11K	1SCA158266R1001	
500		OTDC500F11K	1SCA158274R1001	
630		OTDC630F22K	1SCA137209R1001	
800		OTDC800F11K	1SCA158854R1001	
1000		OTDC1000E22K	1SCA143710R1001	
1250		OTDC1250E22K	1SCA143716R1001	
1600		OTDC1600E22K	1SCA143719R1001	
315	1500 V DC	OTDC315FV11K	1SCA158260R1001	Upon request
400		OTDC400FV11K	1SCA158268R1001	
500		OTDC500FV11K	1SCA158276R1001	

Note: The above are direct mounted handle version, we also offer door mounted handle as suffix P version of same ratings.

Life Cycle Management (LCM) Status of OTDC switch-disconnector range OTDC315E... OTDC800E_ and OTDC250US_... OTDC600US_and related accesso-ries will change from Active to Classic on January 1st, 2019 and will be available till stock last, On January 1st 2020 the LCM status will change from Classic to Obsolute

■ Stock items *For information contact our nearest sales office

ONE20
Enclosed switches for residential and commercial installations



ONE20
Switches can be used as main switches or for local isolation in various applications, such as HVAC, residential water pumps and heat pumps or commercial lighting.

High quality
ABB is synonym of quality: each ONE20 switch is tested and approved at the factory. The enclosures are made of durable materials with high UV resistance, which makes it suitable for indoor or outdoor use.

Reduced installation time
Compression glands are included in the delivery. They can be easily installed on the threaded knock-out cable entry.

Simple and modern design
The enclosure is compact and has the same size for 2, 3 and 4 pole types. ONE20 is available in three colors.

Maximized safety
The handle can be padlocked in the OFF position with up to three padlocks and in ON position with one padlock.

Features
- Available in 2-, 3- and 4- pole versions
- Thermal current (Ith) 20A
- Color options: light grey, dark grey, red-yellow
- Weather proof enclosure due to high IP class (IP67) and
- UV resistant material

Enclosed switches ONE20

Poles	Description	Ordering code	L.P. (₹)
2	ONE20M2W	1SCA138456R1001	1,020
3	ONE20M3W	1SCA138457R1001	1,530
4	ONE20M4W	1SCA138459R1001	1,790
2	ONE20M2G	1SCA135532R1001	1,030
3	ONE20M3G	1SCA135535R1001	1,520
4	ONE20M4G	1SCA135538R1001	1,790
2	ONE20M2Y	1SCA135533R1001	1,030
3	ONE20M3Y	1SCA135536R1001	1,520
4	ONE20M4Y	1SCA135540R1001	1,790

Fusegear

Easyline - XLP

Fuse Switch Disconnector 1, 2, 3 & 4P for both AC and DC application 160...630A

All units are applicable for AC Voltage, and the 1-pole and 2-pole range are also rated for DC voltage.
In addition to be used as single apparatus, the 3-pole range from size 00 to size 3 (160A - 630A) are also designed to be used in distribution systems by use of a busbar adapter for easy installation. The Busbar adapters are available for 40mm, and 60mm distance in-between centre of the phases for each busbar systems. The whole EasyLine range got a sturdy, uniform design that is operator friendly and safe with IP 30 from front in closed position and IP 20 in open position. EasyLine Fuse Switch Disconnectors are developed and type tested according to IEC60947-3 and based on a long history, going back to 1958 when we successfully introduced the manually dependent operated LHB.

Features

- All the XLP cable terminals can be delivered with integrated bolts for cable lugs or with integrated bridge clamps (BC) for easy direct cable connection
- Typetested according to EN60947-3
- Easy to recycle/EN14001 standards
- Quick-make operation device
- Integrated IP20 cable termination
- IP30 degree of protection from the front
- Replacement compatible to similar types in the market
- Voltage measuring from the front
- V-0 plastic materials

Advantages

- Easy to install
- Easy to operate
- Sturdy design
- High personal safety
- Wide range of cable terminals and snap-on accessories
- Compact, add-on Electronic Fuse Monitoring (EFM)
- Busbar adapters

Applications

- UPS: Uninterruptible Power Supply, used for the power supply for computer/servers, storage devices, communication network systems, industry control systems, etc.
- Telecom power supplies
- General protection in smaller distribution panels using 1-pole or 2-pole configurations AC or DC

Fusegear - Fuse switch disconnector

Description	Ordering code	L.P. (₹)
XLP000-6CC	1SEP201428R0001	3,820
XLP00-6BC	1SEP101890R0002	4,910
XLP1-6BC	1SEP101891R0002	12,560
XLP2-6BC	1SEP101892R0002	19,650
XLP3-6BC	1SEP101975R0002	32,210

Fusegear

InLine II - ZLBM/ZHBM
Designed for the future

ABB is proud to introduce the latest technology of Fuse Switch Disconnectors to ensure the best stability and highest safety in the power distribution network.

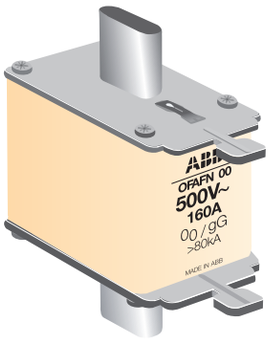
The new generation InLine II also offers the highest level of personal safety during operation and service.

Features
- Available as 160A, 250A, 400A, 630A, 800 and 1250A types in combination with NH/DIN HRC Fuse Links acc. to EN/IEC 60269
- Type tested in accordance to EN/IEC 60947-3
- 1 - pole and 3 - pole variants
- For vertical and horizontal installations
- Designed for 185mm busbar distance
- IP30 degree of protection from the front
  - Padlocking in open and closed position at the 3 - pole version
  - Padlocking in closed position at the 1 - pole version
- Park position with possible padlocking at the 1 - pole type
- Sealing solutions
- Wide range of accessories and cable terminal connections
- Compatible dimensions to equivalent products in the market

Advantages
- High level of personal safety by:
  - Safe and reliable operation ON/OFF
  - Safe and simple replacement of the NH fuse links
- Universal terminal bolts offering standing bolt or fixed nut for high flexibility of cable connections
- Variants with integrated V-clamps
- Available in two alternative depths (ZLBM/ZHBM), L-version (ZLBM) will save space in Cable Distribution Cabinets by offering reduced depth
- Easy installation of current transformers in the H-version (ZHBM)
- Variants with non corrosive steel materials (stainless steel)
- Designed for intelligent communication to support a high level of stability in the power distribution network

Applications
- Cable distribution cabinets (CDC)
- Low voltage distribution in compact secondary substations (CSS)
- Distribution boards for industry, housing and office buildings
- Installations

OFAF HRC fuse links and base, DIN-type



DIN -type fuse links, gG, 500 V, 80 kA

The ordering code includes one fuse link, the delivery batch is according to the column.

Fuse size	Rated current In (A)	Description	Delivery batch [pcs]	Ordering code	L.P. (₹)
000	2	OFAFN000GG2	6	1SCA107747R1001 ■	220
	6	OFAFN000GG6	6	1SCA107748R1001 ■	
	10	OFAFN000GG10	6	1SCA107749R1001 ■	
	16	OFAFN000GG16	6	1SCA107750R1001 ■	
	20	OFAFN000GG20	6	1SCA107751R1001 ■	
	25	OFAFN000GG25	6	1SCA107751R1002 ■	
	32	OFAFN000GG32	6	1SCA107752R1001 ■	
	63	OFAFN000GG63	6	1SCA107753R1001 ■	
00	6	OFAFN00GG6	6	1SCA107754R1001	510
	10	OFAFN00GG10	6	1SCA107755R1001	
	16	OFAFN00GG16	6	1SCA107756R1001	
	20	OFAFN00GG20	6	1SCA107757R1001	
	25	OFAFN00GG25	6	1SCA107758R1001	
	32	OFAFN00GG32	6	1SCA107759R1001 ■	
	50	OFAFN00GG50	6	1SCA107760R1001 ■	
	63	OFAFN00GG63	6	1SCA107761R1001 ■	
	80	OFAFN00GG80	6	1SCA107762R1001 ■	
	100	OFAFN00GG100	6	1SCA107763R1001 ■	
	125	OFAFN00GG125	6	1SCA107764R1001 ■	
	160	OFAFN00GG160	6	1SCA107765R1001 ■	
0	160	OFAF0H160	3	1SCA022627R3170	980
	200	OFAF0H200	3	1SCA022629R5140 ■	
1	32	OFAFN1GG32	6	1SCA107766R1001	730
	50	OFAFN1GG50	6	1SCA107767R1001	
	63	OFAFN1GG63	6	1SCA107768R1001	
	80	OFAFN1GG80	6	1SCA107769R1001	
	100	OFAFN1GG100	6	1SCA107770R1001	
	125	OFAFN1GG125	6	1SCA107771R1001	
	160	OFAFN1GG160	6	1SCA107772R1001 ■	
	200	OFAFN1GG200	3	1SCA107773R1001 ■	
	250	OFAFN1GG250	3	1SCA107774R1001 ■	
2	100	OFAFN2GG100	3	1SCA107775R1001	1,080
	125	OFAFN2GG125	3	1SCA107776R1001	
	250	OFAFN2GG250	3	1SCA107778R1001	
	315	OFAFN2GG315	3	1SCA107779R1001 ■	
	400	OFAFN2GG400	3	1SCA107780R1001 ■	
3	315	OFAFN3GG315	3	1SCA107781R1001	1,670
	500	OFAFN3GG500	3	1SCA107783R1001 ■	
	630	OFAFN3GG630	3	1SCA107784R1001 ■	
	800	OFAFN3GG800	3	1SCA107785R1001 ■	
4	1250	OFAF4H1250	1	1SCA022627R7830	Upon request
4a	1250	OFAF4AH1250	1	1SCA022637R4360	

Fuse size	Rated current In (A)	Description	Ordering code	L.P. (₹)
00	160	Fuse Base - Din type	1SCA833001R2001 ■	420
1	250		1SCA833001R2002 ■	850
2	400		1SCA833001R2003 ■	1,450
3	630		1SCA833001R2004 ■	1,930

■ Stock items

OFF HRC fuse links and base, BS-type

BS -type fuse links, gG, 415 V, 80 kA

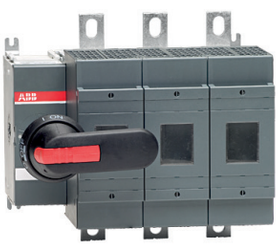
The type code includes one fuse link, but the delivery batch is according to the column.

Fuse size	Rated current In [A]	Description	Delivery batch [pcs]	Ordering code	L.P. (₹)
Offset blade tag fuse link					
F1	2	OFFNF1GG2	10	1SCA107786R1001 ■	70
	4	OFFNF1GG4	10	1SCA107787R1001 ■	
	6	OFFNF1GG6	10	1SCA107788R1001 ■	
	10	OFFNF1GG10	10	1SCA107789R1001 ■	
	16	OFFNF1GG16	10	1SCA107790R1001 ■	
	20	OFFNF1GG20	10	1SCA107791R1001 ■	
	25	OFFNF1GG25	10	1SCA107792R1001 ■	80
	32	OFFNF1GG32	10	1SCA107793R1001 ■	
Offset bolted tag fuse link					
A2	6	OFFNA2GG6	10	1SCA107795R1001	100
	10	OFFNA2GG10	10	1SCA107796R1001	
	16	OFFNA2GG16	10	1SCA107798R1001	
	20	OFFNA2GG20	10	1SCA107827R1001	
	25	OFFNA2GG25	10	1SCA107800R1001	
	32	OFFNA2GG32	10	1SCA107801R1001 ■	
A3	40	OFFNA3GG40	10	1SCA107803R1001 ■	130
	50	OFFNA3GG50	10	1SCA107804R1001	
	63	OFFNA3GG63	10	1SCA107805R1001 ■	
A4	50	OFFNA4GG50	10	1SCA107806R1001	280
	63	OFFNA4GG63	10	1SCA107807R1001	
	80	OFFNA4GG80	10	1SCA107808R1001	
	100	OFFNA4GG100	10	1SCA107809R1001 ■	
	125	OFFNA4GG125	10	1SCA107810R1001 ■	
Central bolted tag fuse link					
B1	50	OFFNB1GG50	10	1SCA107811R1001	330
	63	OFFNB1GG63	10	1SCA107812R1001	
	80	OFFNB1GG80	10	1SCA107813R1001	
	100	OFFNB1GG100	10	1SCA107814R1001	
B2	125	OFFNB2GG125	10	1SCA107816R1001	490
	160	OFFNB2GG160	5	1SCA107817R1001 ■	
	200	OFFNB2GG200	5	1SCA107818R1001 ■	510
B3	250	OFFNB3GG250	1	1SCA107819R1001 ■	710
	315	OFFNB3GG315	1	1SCA107820R1001	760
B4	400	OFFNB4GG400	1	1SCA107822R1001	1,250
C1	400	OFFNC1GG400	1	1SCA107823R1001	1,900
C2	500	OFFNC2GG500	1	1SCA107824R1001	2,140
C2	630	OFFNC2GG630	1	1SCA107825R1001	2,140
C3	800	OFFNC3GG800	1	1SCA107826R1001	2,710

Fuse size	Rated current In [A]	Description	Delivery batch [pcs]	Ordering code	L.P. (₹)
F1	20	Control Fuse Base	100	1SYN833001R2005 ■	150
	32		100	1SYN833001R2009 ■	180

■ Stock items

OESA/OS switch disconnector fuse, DIN-type



Notes:
4th pole of all SFU's are 100% rated and are in the switched neutral (SN) version.

Contact our nearest sales office
- For mechanism inbetween poles configuration
- For motorized switch disconnector fuse requirement
- For 4th pole with fuse protection
- For Switch disconnector fuse with direct mounting handle

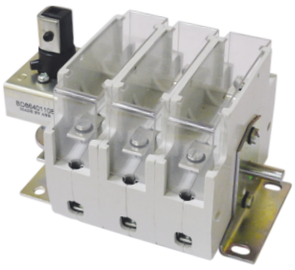
DIN type

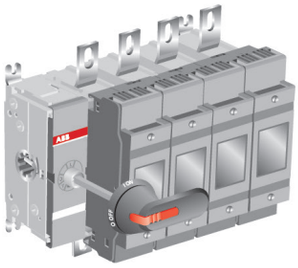
32 - 800A SDF supplied with shaft and handle, Mechanism at the end of the switch fuse

Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	L.P. (₹)
32	2	000/ 00	OESA0032D2	1SCA022108R4330	2,140
63			OESA0063D2	1SCA022080R5470	2,670
100		00	OESA00100D2	1SCA022080R5210	5,150
125			OESA125D2	1SYN833039R2012	6,880
160			OESA00160D2	1SCA022108R4500	7,350
200		0	OS200D02P	1SCA022759R9220	9,480
250		0-1	OS250D02P	1SCA022760R0170	11,800
315		0-2	OS315D02P	1SYN833040R2012	15,670
400			OS400D02P	1SCA022811R2740	17,600
630		3	OS630D02P	1SCA107745R1001	29,960
800			OS800D02P	1SCA022837R2650	34,010
1250		4	OS1250D02P	1SCA114051R1001	Upon request
32	3	000/ 00	OESA00-32	1SCA022058R7710 ■	2,350
63			OESA 00-63	1SCA022057R6850 ■	3,220
100		00	OESA00100	1SCA022025R7830 ■	6,200
125			OESA 00125	OESA00125 ■	8,310
160			OESA00-160	1SCA022077R8130 ■	8,900
200		0	OS200D03P	1SYN022709R9500 ■	11,460
250		0-1	OS250D03P	1SYN022719R0090	14,270
315		0-2	OS315D03P	1SYN953046P3001 ■	18,940
400			OS400D03P	1SYN022719R0250 ■	21,290
630		3	OS630D03P	1SYN022825R2830 ■	36,240
800			OS800D03P	1SYN022825R4880 ■	38,580
1250		4	OS1250D03P	1SCA105475R1001	Upon request
32	TPN	000/ 00	OESA0032N ■	OESA0032N	2,470
63			OESA0063N ■	OESA0063N	3,340
100		00	OESA00100N ■	OESA00100N	6,550
125			OESA00125N ■	OESA00125N	8,780
160			OESA00160N ■	OESA00160N	9,830
200		0	OS200D03N3P	1SYN022749R8710 ■	12,400
250		0-1	OS250D03N3P	1SYN022749R9430 ■	14,980
315		0-2	OS315D03N3P	1SYN953047P3001 ■	20,110
400			OS400D03N3P	1SYN022753R9320 ■	22,210
630		3	OS630D03N3P	1SYN100858R1001 ■	36,810
800			OS800D03N3P	1SYN100859R1001 ■	39,740
1250		4	OS1250D03N3P	1SCA107932R1001	Upon request
32	4 (Switched Neutral)	000/ 00	OESA 00-32A4	1SCA022067R7610	2,700
63			OESA 00-63A4	1SCA022057R7740 ■	3,510
100		00	OESA00100A4	1SCA022043R6760	6,800
125			OESA00125A4	OESA00125A4	9,350
160			OESA 00-160A4	1SCA022080R7840	10,520
200		0	OS200D04N2P	1SYN022709R9680	13,570
250		0-1	OS250D04N2P	1SYN022719R2380	15,900
315		0-2	OS315D04N2P	1SYN953048P3001 ■	22,800
400			OS400D04N2P	1SYN022719R2460 ■	24,550
630		3	OS630D04N2P	1SYN022825R4290 ■	39,290
800			OS800D04N2P	1SYN022825R5180 ■	44,600
1250		4	OS1250D04N2P	1SCA105248R1001	Upon request

■ Stock items

OESA/OS switch disconnector fuse, BS-type





Note:
4th pole of all SFU's are 100% rated and are in the switched neutral (SN) version.

Contact our nearest sales office
- For 1250A switch disconnector fuse requirement
- For mechanism in between poles configuration
- For motorized switch disconnector fuse requirement
- For 4th pole with fuse protection

BS

32 - 800A SDF supplied with shaft and handle

Mechanism at the end of the switch fuse

Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	L.P. (₹)
32	2	A2	OESA32G2	1SCA022108R6110	1,890
63		A3	OESA63G2	1SCA022108R6380	2,580
100		A4	OESA100G2	1SCA022087R7970	5,040
125			OESA125G2	1SYN833038R2012	6,390
160		B2	OESA160B2	1SCA022082R6550	6,970
200		B1-B2	OS200B02P	1SCA022769R7820	8,420
250		B1-B3	OS250B02P	1SCA022769R9440	10,730
315		B1-B4	OS315B02P	1SCA022817R3450	15,570
400			OS400B02P	1SCA022813R7220	15,850
630		C1-C2	OS630B02P	1SCA113529R1001	27,540
800		C1-C3	OS800B02P	1SCA022837R6480	32,880
1250		D1	OS1250B02P	1SCA114070R1001	Upon request
32	3	A2	OESA32G1	1SCA022057R1540	2,290
63		A3	OESA63G1	1SCA022057R0310 ■	3,110
100		A4	OESA100G1	1SCA022042R0920 ■	6,100
125			OESA125G1	OESA125G1	7,730
160		B2	OESA160B3	1SCA022076R9570	8,420
200		B1-B2	OS200B03P	1SYN022709R9330	10,180
250		B1-B3	OS250B03P	1SYN022750R6660	12,990
315		B1-B4	OS315B03P	1SYN022719R0680	18,830
400			OS400B03P	1SYN022719R0840	19,180
630		C1-C2	OS630B03P	1SYN022825R5850	33,320
800		C1-C3	OS800B03P	1SYN022825R7550	39,740
1250		D1	OS1250B03P	1SCA105250R1001	Upon request
32	TPN	A2	OESA32G1N ■	OESA32G1N ■	2,410
63		A3	OESA63G1N ■	OESA63G1N ■	3,220
100		A4	OESA100G1N ■	OESA100G1N ■	6,440
125			OESA125G1N ■	OESA125G1N ■	7,950
160		B2	OESA160B3N ■	OESA160B3N	8,670
200		B1-B2	OS200B03N3P	1SYN022750R0620 ■	10,890
250		B1-B3	OS250B03N3P	1SYN022750R8010 ■	14,040
315		B1-B4	OS315B03N3P	1SYN022753R8940	19,290
400			OS400B03N3P	1SYN022753R9160	20,240
630		C1-C2	OS630B03N3P	1SYN100860R1001	33,900
800		C1-C3	OS800B03N3P	1SYN100861R1001	37,980
1250		D1	OS1250B03N3P	1SCA107936R1001	Upon request
32	4 (Switched Neutral)	A2	OESA32G4	1SCA022059R9040	2,760
63		A3	OESA63G4	1SCA022057R1110	3,510
100		A4	OESA100G4	1SCA022043R7570	7,600
125			OESA125G4 ■	OESA125G4	9,350
160		B2	OESA160B4	1SCA022080R3690	10,520
200		B1-B2	OS200B04N2P	1SYN022709R9410	13,680
250		B1-B3	OS250B04N2P	1SYN022750R7800	16,140
315		B1-B4	OS315B04N2P	1SYN022719R2710	23,140
400			OS400B04N2P	1SYN022719R2890	23,380
630		C1-C2	OS630B04N2P	1SYN022825R6230	40,330
800		C1-C3	OS800B04N2P	1SYN022825R8010	46,170
1250		D1	OS1250B04N2P	1SCA105469R1001	Upon request

■ Stock items

Accessories for OESA/OS switch disconnector fuse, 32..800 A

Phase barriers

Frame	Pole	Height (mm)	Description	Ordering code	L.P. (₹)
OS200...400	3	100	PB100 low	1SDA054970R1 ■	930
	4	100	PB100 low	1SDA054971R1 ■	1,380

Auxiliary contacts

Frame	Contact function	Description	Ordering Code	L.P. (₹)
OESA 32...160	1NO+1NC	OESAZX 15	OESAZX 15	520
	2NO+2NC	OESAZX 16	OESAZX 16	1,000
OS200...800	1NO	OA1G10	1SCA022353R4970	550
	1NC	OA3G01	1SCA022456R7410	610
Screw mounting to the left side of the switch		OEA28	1SCA022714R8810 ■	710

Note: OEA 28 has to be order along with 200 & 250A TPN switch only

Fuse monitor

Frame	Rated voltage [Vac]	Description	Ordering code	L.P. (₹)
OS200...800	100…260	OFS260	1SCA022716R0180	7,400
	380…690	OFS690	1SCA022715R9920	7,590

Wrapped neutral link

Frame	Description	Ordering code	L.P. (₹)
OESA32…63	OESAZX87	OESAZX 87	470
OESA100	OESAZX 86/1	OESAZX 86/1	840
OESA125...160	OESAZX86	OESAZX 86	920
OS200...250	OXN250	1SCA022752R9950	4,210
OS315...400	OXN400	1SCA022770R3060	11,030
OS630...800	OXN800S	1SCA022831R4880	12,640

Handle adaptor

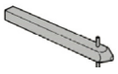
OHB145...OHB175	OHBZX200	1SCA125960R1001	1,310

Handles

Frame	Description	Ordering code	L.P. (₹)
OESA32...63	YASDB51	YASDB 51	770
OESA100...160	YASDB10	YASDB 10	1,150
OS200...250	OHB80J6	1SCA022381R0240 ■	1,580
OS315…400	OHB145J12	1SCA022381R2110	1,940
OS630...800	OHB175J12	1SCA022381R2450	2,290

Shaft

Frame	Description	Ordering code	L.P. (₹)
OESA/OS32...250	OXP6X210	1SCA022295R6080	400
OS315…400	OXP12X250	1SCA022325R6980	800
OS630...800	OXP12X280	1SCA022137R5140	1,030



Fuse covers for OESA switch disconnector fuse

Frame	Type	Description	Ordering code	L.P. (₹)
32...63	DIN	Fuse cover	1SYN833035R2012	70
32...63	BS		1SYN833036R2012	70
100...160	DIN		1SYN833037R2012	80

Note: Ordering code mentioned above for fuse cover is per piece

■ Stock items

OT switch disconnectors

Front operated switch-disconnectors with direct knob type handle

Rated current In [A]	Pole	Description	Ordering code	L.P.(₹)
16		OT16F3	1SCA104811R1001	1,150
25		OT25F3	1SCA104857R1001 ■	1,210
40		OT40F3	1SCA104902R1001	1,370
63	3	OT63F3	1SCA105332R1001	1,470
80		OT80F3	1SCA105798R1001	2,950
100		OT100F3	1SCA105004R1001	4,050
125		OT125F3	1SCA105033R1001	4,140

Accessories for OT 16..125 F

Selector handles for base and DIN-rail mounted switches

For shaft diameter 6 mm, door drilling 22.5 mm. Indication I-O and ON-OFF

IP65 handles, NEMA 1, 3R, 12

Padlockable with max. 3 padlocks with bail diameter 5...8 mm,
defeatable door interlock in ON-position, door interlocking in OFF-position when padlocked

Frame	Description	Ordering code	L.P. (₹)
OT16...125F- Black	OHBS2AJ	1SCA105213R1001	610
OT16...125F-Red-yellow	OHYS2AJ	1SCA105296R1001	730

Shafts

Suitable for all the switches in this section, OT16...125F

Frame	Description	Ordering code	L.P. (₹)
OT16...125F	OXS6X130	1SCA101655R1001 ■	420

Door mounted switch-disconnectors with snap on and screw type mounting
Handle for screw and snap on mouting to be ordered seperately

Rated current In [A]	Pole	Description	Ordering code	L.P. (₹)
16		OT16FT3	1SCA104838R1001 ■	1,270
25		OT25FT3	1SCA104884R1001	1,580
40		OT40FT3	1SCA104940R1001 ■	1,900
63	3	OT63FT3	1SCA105382R1001	2,630
80		OT80FT3	1SCA105431R1001	3,230
100		OT100FT3	1SCA105023R1001	5,400
125		OT125FT3	1SCA105060R1001	6,890

Accessories for OT 16..125 FT

Selector handles for door mounted switches

Indication I-O and ON-OFF. No separate shaft needed

Screw mounting, hole distance 36 mm

Padlockable with max. 3 padlocks, IP65, hole distance 36/48 mm, NEMA 1, 3R, 12

Frame	Description	Ordering code	L.P. (₹)
OT16...125FT- Black	OHBS2RJ	1SCA105232R1001	710
OT16...125FT- Red Yellow	OHYS2RJ	1SCA105323R1001	730

Note:
For any different arrangement kindly contact our nearest sales office.

■ Stock items

OT switch disconnectors

Contact our nearest sales office
- For Door mounted switch disconnector
- For different configuration of Shaft and Handle(selector type)
- For 6 & 8pole switch disconnector requirement
- 1 pole switch disconnector also availbale on request

Note:
Contact our nearest sales office
- For requirement of Motorized isolators
- For mechanism in between poles configuration
- For switch disconnector with direct mounted handle
- For Side operated switches

■ Stock items

Front operated switch-disconnectors

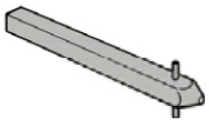
OT 16A-3150A switch disconnector supplied with extended shaft and IP 65 pistol type handle

Rated current In [A]	Poles	Description	Ordering code	L.P. (₹)
160	2	OT160EV02P	1SCA120508R1001	6,310
200		OT200E02P	1SCA022751R1400	6,710
250		OT250E02P	1SCA022735R2500	8,270
315		OT315E02P	1SCA022866R5590	9,520
400		OT400E02P	1SCA022741R7210	12,820
630		OT630E02P	1SCA022866R5670	16,080
800		OT800E02P	1SCA022835R4830	19,860
1000		OT1000E02P	1SCA105795R1001	41,330
1250		OT1250E02P	1SCA106136R1001	49,600
1600		OT1600E02P	1SCA106142R1001	66,130
2000		OT2000E02P	1SCA120025R1001	82,660
2500		OT2500E02P	1SCA113956R1001	1,03,330
3200		OT3200E02P	1SCA128581R1001	1,48,790
4000		OT4000E02P	1SCA128595R1001	1,73,600
16	3	OT16F3	1SYN104811R1001 ■	2,260
25		OT25F3	1SYN104857R1001 ■	2,290
40		OT40F3	1SYN104902R1001 ■	2,370
63		OT63F3	1SYN105332R1001 ■	2,400
80		OT80F3	1SYN105798R1001 ■	3,860
100		OT100F3	1SYN105004R1001 ■	5,150
125		OT125F3	1SYN105033R1001 ■	5,240
160		OT160G03P	1SCA135139R1001	6,660
16	4	OT16F4N2	1SYN104829R1001	2,440
25		OT25F4N2	1SYN104886R1001	2,530
40		OT40F4N2	1SYN104932R1001 ■	2,590
63		OT63F4N2	1SYN105365R1001	2,960
80		OT80F4N2	1SYN105413R1001 ■	5,070
100		OT100F4N2	1SYN105018R1001 ■	5,350
125		OT125F4N2	1SYN105051R1001 ■	5,520
160		OT160G04P	1SCA135140R1001	9,140
160	3	OT160EV03P	1SCA120514R1001 ■	6,990
200		OT200E03P	1SCA022712R0800 ■	7,820
250		OT250E03P	1SCA022710R0100 ■	9,640
315		OT315E03P	1SCA022718R8510 ■	10,570
400		OT400E03P	1SCA022718R8780 ■	14,250
630		OT630E03P	1SCA022718R8940 ■	17,650
800		OT800E03P	1SCA022718R9410 ■	22,050
1000		OT1000E03P	1SCA022860R5930 ■	43,170
1250		OT1250E03P	1SCA022860R6230 ■	55,120
1600		OT1600E03P	1SCA022860R6580 ■	73,480
2000		OT2000E03P	1SCA108036R1001	90,020
2500		OT2500E03P	1SCA104972R1001 ■	1,14,800
3200		OT3200E03P	1SCA128481R1001	1,65,330
4000		OT4000E03P	1SCA12484R1001	1,92,870
160	4	OT160EV04P	1SCA120521R1001 ■	9,640
200		OT200E04P	1SCA022713R4930 ■	9,850
250		OT250E04P	1SCA022710R0520 ■	11,020
315		OT315E04P	1SCA022719R1730 ■	11,950
400		OT400E04P	1SCA022719R1810 ■	15,350
630		OT630E04P	1SCA022719R2030 ■	20,960
800		OT800E04P	1SCA022719R2110 ■	25,260
1000		OT1000E04P	1SCA022860R6150	56,940
1250		OT1250E04P	1SCA022860R6310	71,640
1600		OT1600E04P	1SCA022860R6740	91,840
2000		OT2000E04P	1SCA108038R1001	1,08,390
2500		OT2500E04P	1SCA105140R1001	1,33,190
3200		OT3200E04P	1SCA128482R1001	1,79,110
4000		OT4000E04P	1SCA124856R1001	2,02,070

Accessories for OT switch disconnectors

Handles

Frame	Description	Ordering code	L.P. (₹)
OT16...125	OHB45J6	1SCA022380R8770 ■	940
OT160...250	OHB65J6	1SCA022380R9660 ■	1,270
OT315...400	OHB95J12	1SCA022381R0830	1,460
OT630...800	OHB125J12	1SCA022381R1560 ■	1,580
OT1000...4000	OHB274J12	1SCA115920R1001 ■	4,490



Shaft

Frame	Description	Ordering code	L.P. (₹)
OT16...125	OXP6X170	1SCA108224R1001 ■	340
OT160...250	OXP6X210	1SCA022295R6080	400
OT315...800	OXP12X185	1SCA022325R6710	640
OT1000...4000	OXP12X280	1SCA022137R5140	1,040

Auxilary contact

Frame	Contact function	Description	Ordering code	L.P. (₹)
OT16...4000	1NO	OA1G10	1SCA022353R4970 ■	550
OT16...125	1NC	OA1G01	1SCA022353R4890 ■	550
OT160EV...4000	1NC	OA3G01	1SCA022456R7410 ■	610

Phase barrier

Frame	Poles	Description	Ordering code	L.P. (₹)
OT160…OT800	3	PB100 low	1SDA054970R1	940
OT160…OT800	4	PB100 low	1SDA054971R1	1,380
OT1000…2500	3 & 4	OTB1600/6	1SCA100768R1001	4,050
OT3200...4000	3 & 4	OTB4000/6	1SCA129040R1001	4,100

Mechanical interlock mechanism

(Prevents one switch from closing to ON-position, if the other is not in OFF-position)

Frame	Shaft distance [mm]	Description	Ordering code	L.P. (₹)
OT16...125	100	OTZW24	1SCA022639R5610	2,050
OT160...250	190	OTZW10	1SCA022431R5280	2,500
OT315...400	250	OETLZW14	1SCA022077R3410	6,340
OT315...800	300	OETLZW3	1SCA022049R0380	6,610
OT315...4000	500	OETLZW15	1SCA022081R9340	7,350

Terminal shrouds snap-on mounting, transparent

For 3-pole switches

Frame	Description	Ordering code	L.P. (₹)
OT 16...40F3	OTS40T3	1SCA105317R1001	350
OT63...80F3	OTS63T3	1SCA022353R6750 ■	260
OT 100...125F3	OTS125T3	1SCA022379R968	530

Note:
for requirement of terminal shrouds for higher current rating contact our nearest sales office

■ Stock items

OT manual changeover switches

Manual changeover switches, I-O-II -operation

Supplied with extended shaft and IP 65 pistol type handle

Rated current In [A]	Poles	Description	Ordering code	L.P. (₹)
16	3	OT16F3C	1SYN104816R1001 ■	3,500
25		OT25F3C	1SYN104863R1001 ■	4,420
40		OT40F3C	1SYN104913R1001 ■	4,790
63		OT63F3C	1SYN105338R1001 ■	6,250
80		OT80F3C	1SYN105402R1001	6,880
100		OT100F3C	1SYN105008R1001 ■	9,200
125		OT125F3C	1SYN105037R1001 ■	9,640
16	4	OT16F4C	1SYN104831R1001	4,420
25		OT25F4C	1SYN104877R1001	4,590
40		OT40F4C	1SYN104934R1001 ■	5,070
63		OT63F4C	1SYN105369R1001 ■	7,080
80		OT80F4C	1SYN105418R1001 ■	7,440
100		OT100F4C	1SYN105019R1001	10,950
125		OT125F4C	1SYN105054R1001 ■	11,210
Supplied with bridging bars, extended shaft and IP 65 pistol type handle				
160	3	OT160E03CP	1SYN022772R6510 ■	13,320
200		OT200E03CP	1SYN022771R7520 ■	13,770
250		OT250E03CP	1SYN022771R3450 ■	16,550
315		OT315E03CP	1SYN022772R6780 ■	20,200
400		OT400E03CP	1SYN022771R8500 ■	23,880
630		OT630E03CP	1SYN022785R6050 ■	35,820
800		OT800E03CP	1SYN022785R6300	45,920
1000		OT1000E03CP	1SYN022872R1680 ■	1,23,990
1250		OT1250E03CP	1SYN022872R0790	1,37,760
1600		OT1600E03CP	1SYN022872R1840	1,69,910
2000		OT2000E03CP	1SYN103908R1001	2,57,170
2500		OT2500E03CP	1SYN105615R1001	2,80,130
3200		OT3200E03CP	1SYN129156R1001	4,04,110
160	4	OT160E04CP	1SYN022775R9440 ■	15,620
200		OT200E04CP	1SYN022771R7280 ■	16,080
250		OT250E04CP	1SYN022775R4640 ■	17,910
315		OT315E04CP	1SYN022775R7150 ■	21,870
400		OT400E04CP	1SYN022771R8680 ■	25,720
630		OT630E04CP	1SYN022785R6130 ■	44,090
800		OT800E04CP	1SYN022785R6210 ■	53,270
1000		OT1000E04CP	1SYN022872R1500	1,42,360
1250		OT1250E04CP	1SYN022872R1250	1,48,790
1600		OT1600E04CP	1SYN022872R2310	1,83,690
2000		OT2000E04CP	1SYN103912R1001	3,30,630
2500		OT2500E04CP	1SYN103906R1001	3,67,380
3200		OT3200E04CP	1SYN129158R1001	4,82,180

Note: Contact our nearest sales office
1. For 6 pole change over
2. For manual/motorized bypass switch
3. For manual closed transition
4. For wide phase manual change over

■ Stock items

OT motorized changeover switches

Changeover switches, motor operation, I-O-II -operation

Supplied with bridging bars and handle

Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
40	3	OTM40F3CMA230V	1SYN120096R1001	28,780
63		OTM63F3CMA230V	1SYN120095R1001	30,430
80		OTM80F3CMA230V	1SYN120093R1001	33,190
100		OTM100F3CMA230V	1SYN120071R1001	34,840
125		OTM125F3CMA230V	1SYN120070R1001	35,960
160		OTM160E3CM230C	1SYN022845R8610	44,520
200		OTM200E3CM230C	1SYN022845R8960	45,100
250		OTM250E3CM230C	1SYN022845R9260	55,640
315		OTM315E3CM230C	1SYN022847R1210	56,230
400		OTM400E3CM230C	1SYN022847R1630	67,660
630		OTM630E3CM230C	1SYN103567R1001	76,140
800		OTM800E3CM230C	1SYN103570R1001	1,13,180
1000		OTM1000E3CM230C	1SYN112677R1001	1,68,680
1250		OTM1250E3CM230C	1SYN112676R1001	1,85,090
1600		OTM1600E3CM230C	1SYN112678R1001	2,22,570
2000		OTM2000E3CM230C	1SYN112709R1001	3,75,150
2500		OTM2500E3CM230C	1SYN112710R1001	4,12,050
40	4	OTM40F4CMA230V	1SYN120102R1001	30,980
63		OTM63F4CMA230V	1SYN120101R1001 ■	32,640
80		OTM80F4CMA230V	1SYN120100R1001	34,300
100		OTM100F4CMA230V	1SYN120098R1001 ■	35,410
125		OTM125F4CMA230V	1SYN120097R1001 ■	37,630
160		OTM160E4CM230C	1SYN022848R1510 ■	45,700
200		OTM200E4CM230C	1SYN022846R1590 ■	45,930
250		OTM250E4CM230C	1SYN022846R1910 ■	56,230
315		OTM315E4CM230C	1SYN022847R2870 ■	57,400
400		OTM400E4CM230C	1SYN022847R3250 ■	72,050
630		OTM630E4CM230C	1SYN022873R1990 ■	77,890
800		OTM800E4CM230C	1SYN022872R8340 ■	1,17,130
1000		OTM1000E4CM230C	1SYN112703R1001	1,69,860
1250		OTM1250E4CM230C	1SYN112702R1001	1,86,270
1600		OTM1600E4CM230C	1SYN112704R1001	2,28,420
2000		OTM2000E4CM230C	1SYN112712R1001	4,05,880
2500		OTM2500E4CM230C	1SYN112713R1001	4,42,790

Note:
Motor voltage Ue 110-240 V AC/DC (OTM40...125A)
Motor voltage Ue 220-240 V AC (OTM160...2500A)0
OMD control units can be purchased separately for their motorized changeover switches in order to build an ATS by themselves. Contact nearest sales office for making selection

Contact our nearest sales office
- For motor voltage Ue 110...125 V AC/DC (160A-2500A)
- For motor voltage Ue = 48V DC (160A-2500A)

■ Stock items

Compact ATS NEW

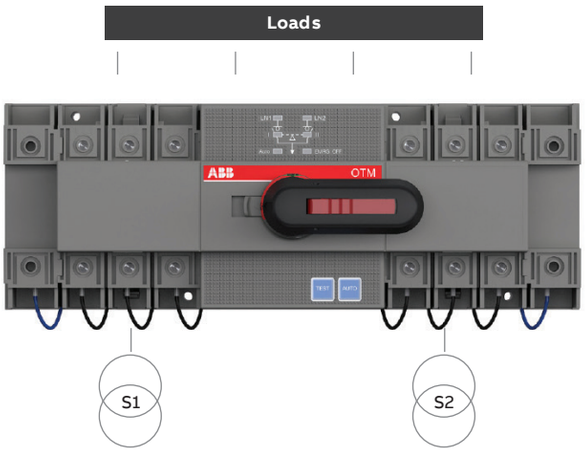
Automatic transfer switches, I - O - II operation

Supplied with bridging bars and direct mounted handle

Rated current In [A]	Pole	Description	Ordering code	L.P.(₹)
63	3	OTM63F3C20D400C	1SYN151423R1001	41,240
63		OTM63F3C21D400C	1SYN151423R1002	59,600
125		OTM125F3C20D400C	1SYN151423R1003	46,240
125		OTM125F3C21D400C	1SYN151423R1004	67,380

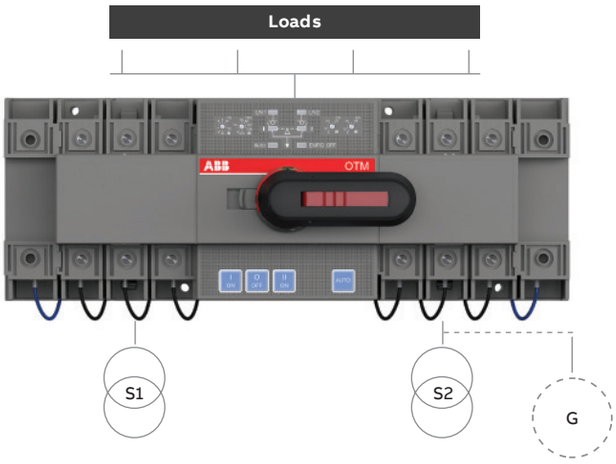
Rated current In [A]	Pole	Description	Ordering code	L.P.(₹)
40	4	OTM40F4C20D400C	1SYN151252R1001	41,020
40		OTM40F4C21D400C	1SYN151253R1001	62,310
40		OTM40F4CB21D400C	1SYN150580R1001	62,310
63		OTM63F4C20D400C	1SYN151254R1001	43,170
63		OTM63F4C21D400C	1SYN151255R1001	65,220
63		OTM63F4CB21D400C	1SYN150586R1001	65,220
125		OTM125F4C20D400C	1SYN151250R1001	50,860
125		OTM125F4C21D400C	1SYN151251R1001	73,680
125		OTM125F4CB21D230C	1SYN150574R1001	73,680

Note:
- For 2 pole requirement contact nearest sales office



OTM_C20D:

- For Network/Network application
- Fixed version with pre-defined delay times and voltage thresholds



OTM_C21D

- For Network/Network and Network/Genset applications
- Adjustable version with configurable transfer and back-switching delays Adjustable over and under-voltage thresholds

The world's first true ATS is here

Introducing TruONE.
A critical breakthrough for critical power

WHAT MAKES TRUONE® UNIQUE

- Overlapping neutral*
- One unit, One wire – just like an ATS should be
- Below 50 ms in-phase transfer
- Readily available emergency manual operation
- IEC/UL1008 approved
- Performance tested beyond standard requirements
- Variants with and without stable OFF-position
- ABB AbilityTM: EDCS for cloud-based services
- Ekip Com modules for uniform platform
- Configuration via Ekip Connect 3
- Predictive maintenance
- Modular structure to simplify service

*in UL version only

OT automatic transfer switches

Automatic transfer switches, I - O - II operation

Supplied with bridging bars and handle

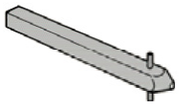
Automatic operation, equipped with OMD300 controller unit with integrated dual power supply				
Rated current In [A]	**Poles**	**Description**	**Ordering code**	**L.P.(₹)**
160	4	OTM160E4C3D230C	1SYN106305R1001 ■	1,04,320
200		OTM200E4C3D230C	1SYN106309R1001	1,07,830
250		OTM250E4C3D230C	1SYN106313R1001	1,11,340
315		OTM315E4C3D230C	1SYN106317R1001	1,16,620
400		OTM400E4C3D230C	1SYN106318R1001 ■	1,23,060
630		OTM630E4C3D230C	1SYN108726R1001	1,64,080
800		OTM800E4C3D230C	1SYN108728R1001	2,16,830
1000		OTM1000E4C3D230C	1SYN112852R1001	2,34,410
1250		OTM1250E4C3D230C	1SYN112851R1001	2,69,570
1600		OTM1600E4C3D230C	1SYN112848R1001	3,51,600

Automatic operation, equipped with OMD800 controller unit with display				
160	4	OTM160E4C8D230C	1SYN101020R1001	1,40,640
200		OTM200E4C8D230C	1SYN101021R1001	1,46,510
250		OTM250E4C8D230C	1SYN101022R1001	1,52,370
315		OTM315E4C8D230C	1SYN101063R1001	1,58,230
400		OTM400E4C8D230C	1SYN101064R1001	1,75,800
630		OTM630E4C8D230C	1SYN108453R1001	1,93,400
800		OTM800E4C8D230C	1SYN108455R1001	2,34,410
1000		OTM1000E4C8D230C	1SYN112861R1001	2,98,860
1250		OTM1250E4C8D230C	1SYN112864R1001	3,28,170
1600		OTM1600E4C8D230C	1SYN112867R1001	4,10,200

Note:
- Motor voltage Ue 220-240 V AC
- For 3 pole requirement contact the nearest sales office
- For OMD800, consider accessory ODPS for dual power supply

■ Stock items

Accessories for changeovers (manual, motorized, ATS)

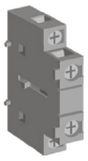


Shaft

Frame	Description	Ordering code	L.P. (₹)
OT16...125F_C	OXP6X170	1SCA108224R1001	340
OT160...250 _C	OXP6x161	1SCA022067R176 ■	340
OT315...400 _C	OXP12x166	1SCA022325R671	540
OT630...3200 _C	OXP12x185	1SCA022325R710 ■	640

Handle

Frame	Description	Ordering code	L.P. (₹)
OT16...125F_C	OHB45J6E311	1SCA022817R2130 ■	2,180
OT160...250 _C	OHB65J6E011	1SCA022383R2480 ■	2,420
OT315...400 _C	OHB95J12E011	1SCA022621R0760 ■	2,760
OT630...800 _C	OHB125J12E011	1SCA022589R3340 ■	3,060
OT1000...3200_C	OHB200J12PE011	1SCA022873R4230	6,700



Auxiliary contacts

Frame	Contact functions	Installation side	Description	Ordering code	L.P. (₹)
OT16...125F_C OTM40...125	1NO	Right	OA1G10	1SCA022353R497	550
	1NC	Right	OA8G01	1SCA022744R224 ■	980
	1NO	Left	OA7G10	1SCA022673R114 ■	870
	1NC	Left	OA1G01	1SCA022353R489	550
OT160...3200 OTM160...2500	1NO	Right	OA1G10	1SCA022353R4970	550
	1NC	Right	OA3G01	1SCA022456R7410	610

Phase barriers

3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

Frame	Poles	Description	Ordering code	L.P. (₹)
OT160...800 OTM160...800	3	PB100 low	1SDA054970R1	940
	4	PB100 low	1SDA054971R1	1,380

Basic ATS controller for motorised change over

Frame	Description	Ordering code	L.P. (₹)
40...2500A	ODPS230	1SCA122946R1001 ■	12,640

Note: Contact our nearest sales office for more information

■ Stock items

Enclosed switches

Wide range of enclosed heavy duty switches
From 16 to 1600 Amperes, 690 V

Enclosed switches are designed and used as main switches for applications, which need to be isolated from the network. The range includes front operated and side operated switch disconnectors, switch fuses and changeover switches enclosed in plastic, steel sheet or stainless steel sheet and aluminium enclosures. They are rated for utilization categories including disconnecting as well as making and breaking the load. In addition the switch fuses equipped with fuse links protects the application and the cables from overload currents and short circuits.

Plastic enclosures
The plastic enclosures are most suitable for locations with high chemical and moisture requirements.
In addition, they are light and easy to install and handle.

Steel sheet enclosures
The steel sheet enclosures are hot dip galvanized and the surface is polyester powder painted. The enclosures are durable and robust for various environments.

Stainless steel sheet enclosures
The stainless steel sheet enclosures are made of AISI 304 stainless steel. They are used particularly in the food and beverage industry and in locations where high hygienie is required. The smooth surface does not require any painting and is easy to clean.

Aluminum alloy enclosures
Aluminum enclosures have very good impact strength and protection against UV light. They are suitable both for indoor and outdoor use in medium to heavy-duty applications.

Safety for personnel – reliable position indication
- Padlocking in the OFF-position with one, three or six (with the shackle L6) padlocks against unintentional start-up The handle cannot be padlocked in the OFF-position if one of the contacts is not in the OFF position
- The cover cannot be removed if the handle is padlocked
- Door interlock in the ON-position
- Arc proof, short circuit durability function: Expander washers in aluminium enclosures with Ie > 160 A and door locking release in large metal sheet enclosures type MSC
- Door interlock defeatable with rectangular and pistol type handles

Kabeldon low voltage switchgear system

Kabeldon low voltage distribution system by ABB is used to build modern systems for various applications, from substations and cable distribution cabinets to distribution boards in industry.

Features of the Kabeldon IP-system are its simplicity and reliability. These are the most important factors when you want to achieve low operating costs and high delivery reliability in a distribution system.

- Busbars of continuously-extruded aluminium sections, insulated with a layer of polyamid.
- The busbar has a touch-proof contact slot. This ensures safety regardless of where on the busbar the switching device will be placed.
- Blade fuses in all of the fuse-switch disconnectors.
- The switching devices can be arranged in any order, regardless of rated current.
- All parts, busbars and devices, fulfil IP2X protection in accordance with IEC 60529*).
- Switching devices 100-1600 A.
- It is easy to add new switching devices to existing distribution boards.
- Switching devices are mounted on and connected to the busbar system in the same operation.
- Switching devices can be connected when the system is live.
- Always voltage-free (“dead”) when changing fuses.
- Busbars are available with rated currents from 400 to 1600 A.
- Switching devices, connectors and busbars combine to form a modular system. Each module is 12.5 mm. The modular system makes planning easier.
- The compact design of the switching devices makes them suitable for use in many different types of distribution boards.
- All switching devices have a utilisation category so that they can be used in cable distribution cabinets, substations and other distribution boards.

ABB’s comprehensive range of LV control products

The range of ABB control products ranks amongst the most extensive on the market with a full range of innovative solutions for Control & Protection, Motor Starting, Intelligent motor management, measurement and monitoring and safety applications.

The business unit is comprised of 3 main product families:
- Control & Protection
- Electronic Relays
- Safety products

Our products
Our products are already among the most extensive in the market and we are constantly adding new products in order to meet ever changing customer needs. Quality and reliability are built into every device to ensure total performance satisfaction, even in the most demanding applications.

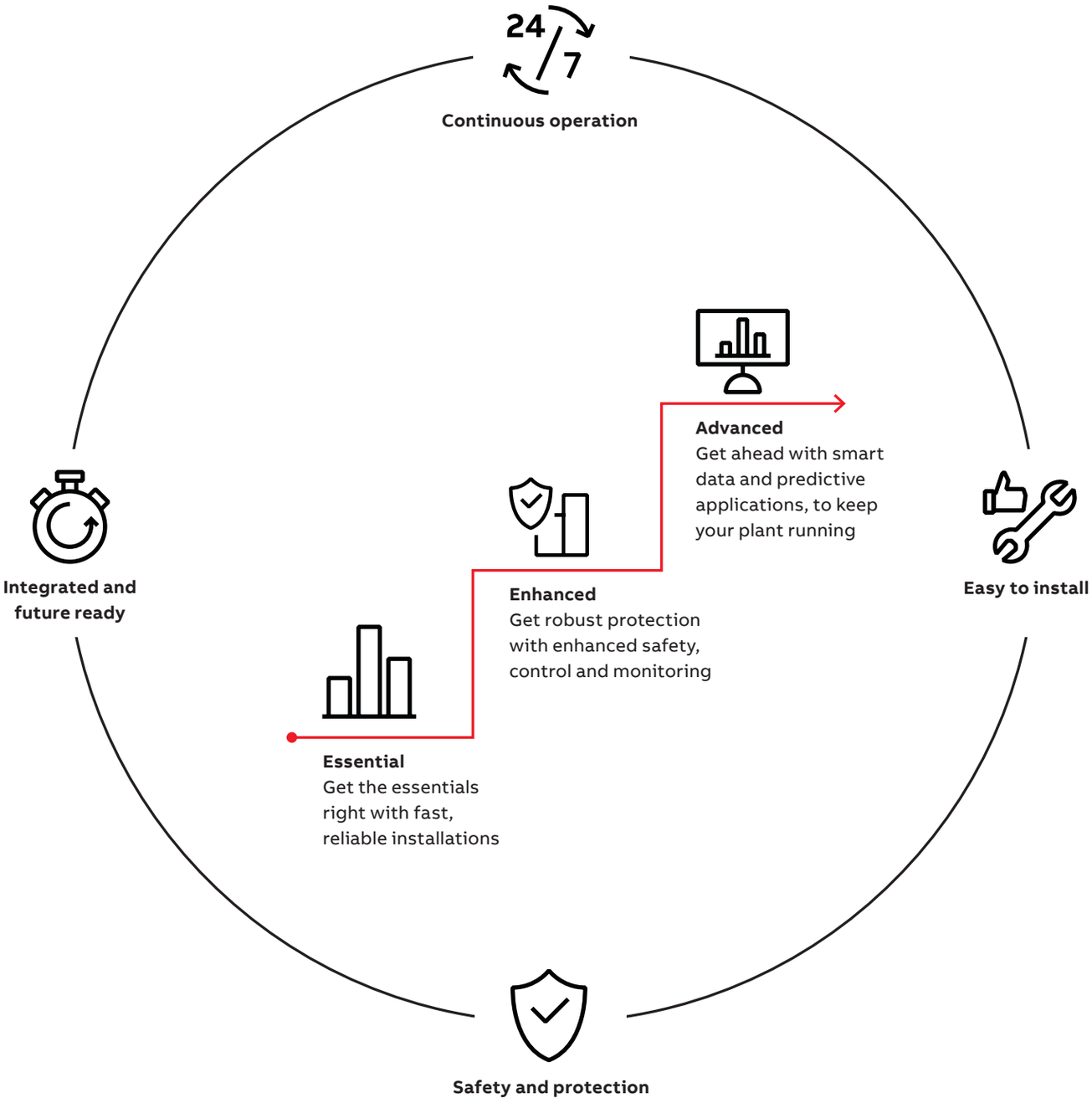
We offer a very modern and competitive range of contactors, starters, manual motor starters, a wide range of electronic relays and overload relays, together with an extended of pilot devices.

Our offering
- Contactors
- Manual motor starters
- Thermal overload relays
- Electronic overload relays
- Intelligent motor management systems
  – Universal motor controllers
  – Communication fieldbus plugs
- Electronic products and relays
  – Timers
  – Measuring and monitoring relays
  – Power supplies
  – Interface relays & optocouplers
- Jokab safety systems
- Pilot devices
- Arc guard systems

Motor starting and protection

Keep things moving with protection and control - at every level.

Our broad portfolio of motor starting and protection solutions are fully scalable, allowing you to keep things moving whatever the extent of your operations.



Advanced solutions

Get ahead with intelligent, predictive operations thanks to integrated data and advanced connectivity

Integrated and future ready

Data and precise measurements accessible via flexible communication options ensure reliable operations and efficient energy management. Adapt to future needs without big investments.

- The UMC100.3 is compatible with more communication protocols than any other motor controller. This allows you to have software that enables predictive maintenance and acts as an intelligent data hub
- The SACE Tmax XT range enables you to monitor and manage a wealth of information easily, no matter where you are and allows you to easily upgrade trip units to suit your changing needs

Continuous operation

Detect problems earlier and prevent plant stand-stills with integrated protection functions as well as extensive diagnostic and status information.

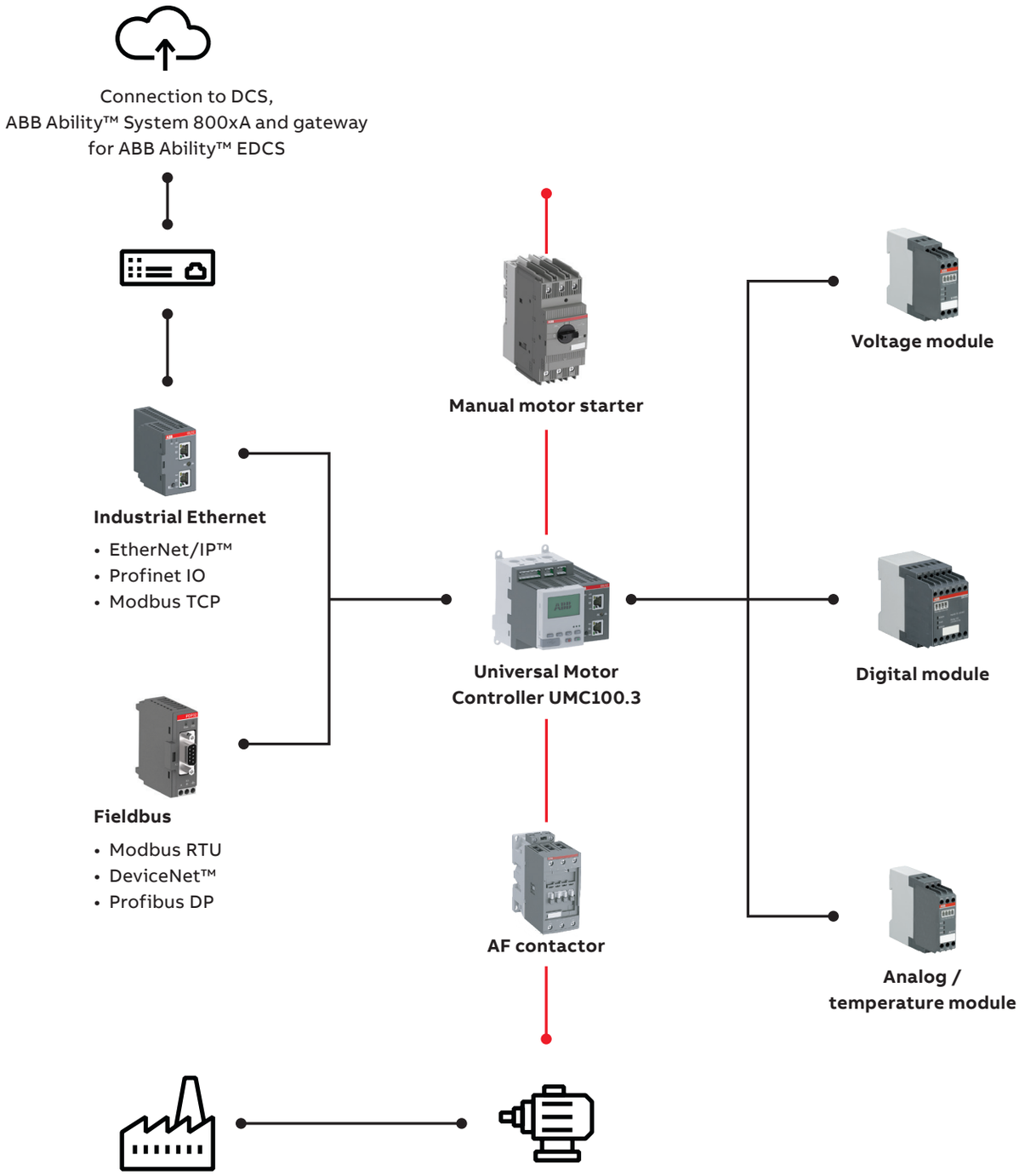
- Protect your motors at all times with the UMC100.3, even if your control or communication system (Ethernet or Fieldbus) breaks down
- With the SACE Tmax XT up to 30% more data is available on the cloud, making diagnosis and maintenance much easier
- Ensure continuity of service and equipment protection at all times with the advanced electronic trip unit and intelligent motor management systems

Speed up your project

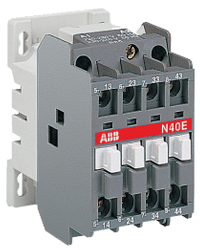
Design, commissioning and maintenance are easy, cutting costs and saving you time. Flexible design allows you to find a tailor made solution.

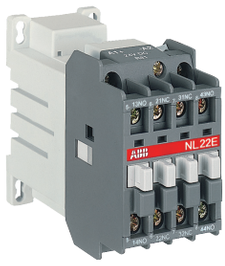
- With the UMC100.3, simple software configuration means that you're always in control. Parameters can be set via quality FDI-based software or directly using the operating panel
- With the SACE Tmax XT range, simplified installation of frames, integration of circuit breakers into a communication network, trip unit settings performed via front display and bluetooth and Ekip Mobile connectivity, can save you up to 40% time overall

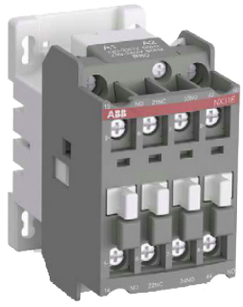
Advanced solutions
UMC100.3 application example



Auxiliary contactors







Standard control contactors

No: of contacts	Contact configuration NO	NC	Type code reference	Ordering code	L.P.(₹)	Type code reference	Ordering code	L.P.(₹)
4	2	2	N22E **	1SBH141001R□□22 ■	1,290	NL22E **	1SBH143001R□□22 ■	1,970
4	3	1	N31E **	1SBH141001R□□31 ■		NL31E **	1SBH143001R□□31 ■	
4	4	0	N40E **	1SBH141001R□□40 ■		NL40E **	1SBH143001R□□40 ■	

Refer coil voltage & codes mentioned below.

No: of contacts	Contact configuration NO	NC	Type code reference	Ordering code	L.P.(₹)
4	2	2	NX22E	1SBH901074R□□22 ■	1,050
4	3	1	NX31E	1SBH901074R□□31 ■	
4	4	0	NX40E	1SBH901074R□□40 ■	

Refer coil voltage & codes mentioned below.

No: of contacts	Contact configuration NO	NC	Type code reference	Ordering code	L.P.(₹)	Type code reference	Ordering code	L.P.(₹)
4	2	2	NF22E **	1SBH137001R□□22 ■	2,290	NFZ22E **	1SBH136001R□□22	2,880
4	3	1	NF31E **	1SBH137001R□□31 ■		NFZ31E **	1SBH136001R□□31	
4	4	0	NF40E **	1SBH137001R□□40 ■		NFZ40E **	1SBH136001R□□40	

Refer coil voltage & codes mentioned below.

#Allows direct control by PLC output ≥ 24 V DC 500 mA

Coil voltages and codes

N & NX range (AC operated)

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1 ■
110	110 ... 120	8 4 ■
220 ... 230	230 ... 240	8 0 ■
400 ... 415	415 ... 440	8 6 ■

NL (DC operated)

Voltage V DC	Code □□
24	8 1 ■
48	8 3 ■
110	8 6 ■
240	8 9 ■

NF range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
24...60	20...60	1 1 ■
48...130	48...130	1 2 ■
100...250	100...250	1 3 ■
250...500	250...500	1 4 ■

NFZ range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
-	12...20	2 0
24...60	20...60	2 1
48...130	48...130	2 2
100...250	100...250	2 3

■ Stock items

3 pole contactors: AX09...AX370 : AC operated

AX09

AX95

AX185

AX370

AX Contactor

AX contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC.
These contactors are of the block type design with:

- 3 main poles and built-in auxiliary contact
- Control circuit: AC operated
- Add-on auxiliary contact blocks for front or side mounting and a wide range of accessories

Contactors: 3-pole – AC operated

AC1 duty Amps	AC3 rating at 415V		Auxiliary contacts		Type code	Ordering code	L.P.(₹)
	Amps	kW					
22	9	4	1NO	-	AX09-30-10	1SBL901074R□□10 ■	960
22	9	4	-	1NC	AX09-30-01	1SBL901074R□□01 ■	960
25	12	5.5	1NO	-	AX12-30-10	1SBL911074R□□10 ■	1,080
25	12	5.5	-	1NC	AX12-30-01	1SBL911074R□□01 ■	1,080
27	18	9	1NO	-	AX18-30-10	1SBL921074R□□10 ■	1,170
27	18	9	-	1NC	AX18-30-01	1SBL921074R□□01 ■	1,170
32	25	11	1NO	-	AX25-30-10	1SBL931074R□□10 ■	1,690
32	25	11	-	1NC	AX25-30-01	1SBL931074R□□01 ■	1,690
55	32	15	1NO	-	AX32-30-10	1SBL281074R□□10 ■	3,490
55	32	15	-	1NC	AX32-30-01	1SBL281074R□□01 ■	3,490
60	40	18.5	1NO	-	AX40-30-10	1SBL321074R□□10 ■	5,430
60	40	18.5	-	1NC	AX40-30-01	1SBL321074R□□01 ■	5,430
100	50	25	1NO	1NC	AX50-30-11	1SBL351074R□□11 ■	6,820
115	65	30	1NO	1NC	AX65-30-11	1SBL371074R□□11 ■	9,210
125	80	37	1NO	1NC	AX80-30-11	1SBL411074R□□11 ■	11,370
145	96	45	1NO	1NC	AX95-30-11	1SFL431074R□□11 ■	13,190
160	115	55	1NO	1NC	AX115-30-11	1SFL981074R□□11 ■	16,370
190	150	75	1NO	1NC	AX150-30-11	1SFL991074R□□11 ■	21,900
250	185	90	1NO	1NC	AX185-30-11	1SFL491074R□□11 ■	25,690
275	205	110	1NO	1NC	AX205-30-11	1SFL501074R□□11 ■	30,920
400	265	132	1NO	1NC	AX260-30-11	1SFL547074R□□11 ■	37,180
500	305	160	1NO	1NC	AX300-30-11	1SFL587074R□□11 ■	44,790
600	370	200	1NO	1NC	AX370-30-11	1SFL607074R□□11 ■	55,360

Note: Complete the contactor code by replacing □□ with desired coil voltages as per above table.

Coil voltages and codes AX range

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1 ■
110	110	8 4 ■
220 ... 230	220 ... 230	8 0 ■
400 ... 415	400 ... 415	8 6 ■

■ Stock items

3 pole contactors: AC operated

Contactors: 3-pole – AC operated

AC1duty Amps	AC3 rating at 415V			Auxiliary contacts		Type code	Ordering code	L.P.(₹)
	Amps	hP	kW					
25	9	5.5	4	1NO	-	A09-30-10 **	1SBL141001R□□10 ■	1,120
25	9	5.5	4	-	1NC	A09-30-01 **	1SBL141001R□□01 ■	1,120
27	12	7.5	5.5	1NO	-	A12-30-10 **	1SBL161001R□□10 ■	1,270
27	12	7.5	5.5	-	1NC	A12-30-01 **	1SBL161001R□□01 ■	1,270
30	17	12.5	7.5	1NO	-	A16-30-10 **	1SBL181001R□□10 ■	1,460
30	17	12.5	7.5	-	1NC	A16-30-01 **	1SBL181001R□□01 ■	1,460
45	26	15	11	1NO	-	A26-30-10 **	1SBL241001R□□10 ■	2,090
45	26	15	11	-	1NC	A26-30-01 **	1SBL241001R□□01 ■	2,090
55	32	20	15	1NO	-	A30-30-10 **	1SBL281001R□□10 ■	4,020
55	32	20	15	-	1NC	A30-30-01 **	1SBL281001R□□01 ■	4,020
60	37	30	18.5	1NO	-	A40-30-10 **	1SBL321001R□□10 ■	6,430
60	37	30	18.5	-	1NC	A40-30-01 **	1SBL321001R□□01 ■	6,430
100	50	40	25	-	-	A50-30-00 **	1SBL351001R□□00 ■	7,280
115	65	50	37	-	-	A63-30-00 **	1SBL371001R□□00 ■	10,240
125	75	60	40	-	-	A75-30-00 **	1SBL411001R□□00 ■	12,860
145	96	70	55	1NO	1NC	A95-30-11**	1SFL431001R□□11 ■	16,320
160	110	75	59	1NO	1NC	A110-30-11**	1SFL451001R□□11 ■	19,840
250	145	100	75	1NO	1NC	A145-30-11**	1SFL471001R□□11 ■	26,270
275	185	115	90	1NO	1NC	A185-30-11**	1SFL491001R□□11 ■	32,460
350	205	150	110	1NO	1NC	AF205-30-11**	1SFL527002R□□11 ■	37,450
400	265	175	140	1NO	1NC	AF265-30-11**	1SFL547002R□□11 ■	42,630
500	305	215	160	1NO	1NC	AF305-30-11**	1SFL587002R□□11 ■	49,460
600	370	270	200	1NO	1NC	AF370-30-11**	1SFL607002R□□11 ■	63,040
600	400	300	220	1NO	1NC	AF400-30-11**	1SFL577001R□□11 ■	67,060
700	460	340	250	1NO	1NC	AF460-30-11**	1SFL597001R□□11 ■	84,110
800	580	470	355	1NO	1NC	AF580-30-11**	1SFL617001R□□11 ■	1,20,740
1050	750	570	425	1NO	1NC	AF750-30-11**	1SFL637001R□□11 ■	1,84,080
1260	-	-	-	1NO	1NC	AF1250-30-11**	1SFL647001R□□11	Upon request
1350	860	-	500	1NO	1NC	AF1350-30-11**	1SFL657001R□□11	
1650	1050	-	600	1NO	1NC	AF1650-30-11**	1SFL677001R□□11	
2050	-	-	-	1NO	1NC	AF2050-30-11**	1SFL707001R□□11	
2650	-	-	-	1NO	1NC	AF2650-30-11**	1SFL667001R□□11	
NEW 2850	-	-	-	1NO	1NC	AF2850-30-11**	1SFL687001R□□11	

Complete the contactor type code by replacing ** with desired coil voltage, AF contactors have advanced electronic coil interface with wideband AC/DC coil

Coil voltages and codes: A09 ... A185 range

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1■
110	110 ... 120	8 4■
220 ... 230	230 ... 240	8 0■
400 ... 415	415 ... 440	8 6■

New AF205...AF370 range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
24...60	20...60	1 1
48...130	48...130	1 2
100...250	100...250	1 3
250...500	250...500	1 4

AF400...AF1250 range (AC/DC operated)

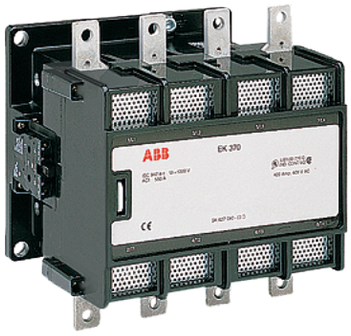
Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
-	24...60	6 8
48...130	48...130	6 9
100...250	100...250	7 0
250...500	250...500	7 1

AF1350...AF2850 range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	DC	□□
100...250	100...250	7 0

Note: For non-standard coil voltage, other than this contact us for price.

4 pole contactors: AC operated



Contactors: 4-pole (AC operated)

Rating at 415V AC1 Amps	Main contact arrangement		Auxiliary contacts		Type code reference	Ordering code	L.P.(₹)
25	4NO	-	-	-	A09-40-00 **	1SBL141201R□□00 ■	1,490
25	2NO	2NC	-	-	A09-22-00 **	1SBL141501R□□00 ■	1,760
30	4NO	-	-	-	A16-40-00 **	1SBL181201R□□00 ■	1,570
30	2NO	2NC	-	-	A16-22-00 **	1SBL181501R□□00 ■	1,860
45	4NO	-	-	-	A26-40-00 **	1SBL241201R□□00 ■	2,820
45	2NO	2NC	-	-	A26-22-00 **	1SBL241501R□□00 ■	3,530
70	4NO	-	-	-	A45-40-00**	1SBL331201R□□00 ■	7,410
70	2NO	2NC	-	-	A45-22-00**	1SBL331501R□□00	10,590
100	4NO	-	-	-	A50-40-00**	1SBL351201R□□00 ■	10,590
125	4NO	-	-	-	A75-40-00**	1SBL411201R□□00 ■	14,090
125	2NO	2NC	-	-	A75-22-00**	1SBL411501R□□00	16,140
160	4NO	-	-	-	AF116-40-00	1SFL427102R□□00	23,320
200	4NO	-	-	-	AF140-40-00	1SFL447102R□□00	28,970
275	4NO	-	-	-	AF190-40-00	1SFL487102R□□00 ■	42,830
350	4NO	-	-	-	AF205-40-00	1SFL527102R□□00 ■	50,130
400	4NO	-	-	-	AF265-40-00	1SFL547102R□□00 ■	60,120
500	4NO	-	-	-	AF305-40-00	1SFL587102R□□00 ■	73,350
525	4NO	-	-	-	AF370-40-00	1SFL607102R□□00 ■	81,840
800	4NO	-	1NO	1NC	EK550-40-11 **	SK827041 - □□ ■	1,30,710
1000	4NO	-	1NO	1NC	EK1000-40-11 **	SK827044 - □□	1,81,860

Complete the contactor type code by replacing ** with desired coil voltage

Coil voltages and codes: A09 ... A 75 range

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1
110	110 ... 120	8 4
220 ... 230	230 ... 240	8 0
400 ... 415	415 ... 440	8 6

Note: For non-standard coil voltage, other than this contact us for price.

Coil voltages and codes: New AF116 - AF370 (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
24...60	20...60	1 1
48...130	48...130	1 2
100...250	100...250	1 3
250...500	250...500	1 4

Coil voltages and codes: EK550 ... EK1000

Voltage	Voltage	Code
V - 50Hz	60Hz	□□
-	110	A E
110	120	A F
220 ... 230	*	A L ■
230 ... 240	-	A M
400 ... 415	-	A R

■ Stock items

3 pole contactors AL and TAL range: DC operated

AL contactors

AC 1 duty Amps	AC3 rating at 415V			Auxiliary contacts		Type code reference	Ordering code	L.P.(₹)
	Amps	hP	kW					
25	9	5	4	1NO	-	AL9-30-10	1SBL143001R□□10 ■	1,910
25	9	5	4	-	1NC	AL9-30-01	1SBL143001R□□01 ■	1,910
27	12	7.5	5.5	1NO	-	AL12-30-10	1SBL163001R□□10	2,080
27	12	7.5	5.5	-	1NC	AL12-30-01	1SBL163001R□□01	2,080
30	17	10	7.5	1NO	-	AL16-30-10	1SBL183001R□□10 ■	2,630
30	17	10	7.5	-	1NC	AL16-30-01	1SBL183001R□□01	2,630
45	26	20	11	1NO	-	AL26-30-10	1SBL243001R□□10 ■	3,420
45	26	20	11	-	1NC	AL26-30-01	1SBL243001R□□01	3,420
55	32	25	15	1NO	-	AL30-30-10	1SBL283001R□□10	7,110
55	32	25	15	-	1NC	AL30-30-01	1SBL283001R□□01	7,110
60	37	30	18.5	1NO	-	AL40-30-10	1SBL323001R□□10	8,610
60	37	30	18.5	-	1NC	AL40-30-01	1SBL323001R□□01	8,610

TAL contactors

AC 1 duty Amps	AC3 rating at 415V			Auxiliary contacts		Type code reference	Ordering code	L.P.(₹)
	Amps	hP	kW					
25	9	5	4	1NO	-	TAL9-30-10	1SBL143061R□□10 ■	2,250
25	9	5	4	-	1NC	TAL9-30-01	1SBL163061R□□10 ■	2,250
27	12	7.5	5.5	1NO	-	TAL12-30-10	1SBL163061R□□10	2,760
27	12	7.5	5.5	-	1NC	TAL12-30-01	1SBL163061R□□01	2,760
30	17	10	7.5	1NO	-	TAL16-30-10	1SBL183061R□□10 ■	2,950
30	17	10	7.5	-	1NC	TAL16-30-01	1SBL183061R□□01 ■	2,950
45	26	20	11	1NO	-	TAL26-30-10	1SBL243061R□□10 ■	4,030
45	26	20	11	-	1NC	TAL26-30-01	1SBL243061R□□01	4,030
55	32	25	15	1NO	-	TAL30-30-10	1SBL283061R□□10	7,930
55	32	25	15	-	1NC	TAL30-30-01	1SBL283061R□□01	7,930
60	37	30	18.5	1NO	-	TAL40-30-10	1SBL323061R□□10 ■	8,850
60	37	30	18.5	-	1NC	TAL40-30-01	1SBL323061R□□01	8,850

Coil voltages and codes: AL

Voltage	Code
⎣▪▪▪⎦ V DC	□□
24	8 1
110	8 6 ■
240	8 9

Other voltages: contact nearest ABB sales office.

Coil voltages and codes: TAL

Voltage	Code
⎣▪▪▪⎦ V DC	□□
77...143	6 2 ■

■ Stock items

Contactors for special application - capacitors switching

Contactors for capacitor switching: 3 pole – AC operated:

kVAR Rating at 415V	Auxiliary contacts	Type code reference	Ordering code	L.P.(₹)
Type UA..RA with in-built damping resistors:				
12.5	1NO	UA16-30-10RA **	1SBL181024R□□10 ■	2,800
22	1NO	UA26-30-10RA **	1SBL241024R□□10 ■	4,670
30	1NO	UA30-30-10RA**	1SBL281024R□□10 ■	5,350
40	--	UA50-30-00RA	1SBL351024R□□10 ■	14,790
50	--	UA63-30-00RA**	1SBL371024R□□00 ■	15,920
60	--	UA75-30-00RA**	1SBL411024R□□00 ■	17,410
70	--	UA95-30-00RA**	1SFL431024R□□00 ■	20,240
80	--	UA110-30-00RA**	1SFL451024R□□00 ■	23,070

Type UA..RA with in-built damping resistors
Complete the contactor type code by replacing ** with desired coil voltage.

Peak current Î ≤ 100 times the rms current

kVAR rating at 415V	Max peak current Î	Auxiliary contacts fitted		Type	Ordering code	L.P.(₹)
kvar	kA	NO	NC			
12.5	1.8	1	0	UA16-30-10	1SBL181022R□□10 ■	2,250
20	3	1	0	UA26-30-10	1SBL241022R□□10 ■	2,800
27.5	33.5	1	0	UA30-30-10	1SBL281022R□□10 ■	4,790
33	5	0	0	UA50-30-00	1SBL351022R□□00 ■	10,810
45	6.5	0	0	UA63-30-00	1SBL371022R□□00 ■	11,370
50	7.5	0	0	UA75-30-00	1SBL411022R□□00 ■	13,540
65	9.3	1	1	UA95-30-11	1SFL431022R□□11 ■	17,040
75	10.5	1	1	UA110-30-11	1SFL451022R□□11	21,330

Single step - Peak current Î ≤ 30 times the RMS current

kVAR Rating at 415V	Type code	Ordering code	L.P.(₹)
60	A95-30-11**	1SFL431001R□□11 ■	16,320
70	A110-30-11**	1SFL451001R□□11 ■	19,840
90	A145-30-11**	1SFL471001R□□11 ■	26,270
110	A185-30-11**	1SFL491001R□□11	32,460
130	AF205-30-11**	1SFL527002R□□11 ■	37,450
145	AF265-30-11**	1SFL547002R□□11 ■	42,630
165	AF305-30-11**	1SFL587002R□□11 ■	49,460
200	AF370-30-11**	1SFL607002R□□11	63,040
210	AF400-30-11**	1SFL577001R□□11 ■	67,060
240	AF460-30-11**	1SFL597001R□□11	84,110
285	AF580-30-11**	1SFL617001R□□11 ■	1,20,740
400	AF750-30-11**	1SFL637001R□□11 ■	1,84,080

Note: Refer page no 88 for selection of AF contactor coil voltage

Coil voltages and codes UA...RA & UA

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1 ■
110	110 ... 120	8 4 ■
220 ... 230	230 ... 240	8 0 ■
400 ... 415	415 ... 440	8 6 ■

■ Stock items

Contactors for DC circuit switching: AC/DC operated

Coil	Current ratings at 440V DC			Type code reference	Ordering code	L.P.(₹)
	DC-1	DC-3	DC-5			
AC	100A	85A	50A	GA75-10-11 **	1SBL411025R□□11	Upon request
DC	100A	85A	50A	GAE75-10-11 **	1SBL419025R□□11	

Complete the contactor type code by replacing ** with desired coil voltage

Coil	Current ratings at 1000V DC	Type code reference	Ordering code	L.P.(₹)
	DC-1 L/R 1 ms			
AC/DC	275A	GAF185-10-11	1SFL497025R□□11	Upon request
	450A	GAF300-10-11	1SFL557025R□□11	
	700A	GAF460-10-11	1SFL597025R□□11	
	1050A	GAF750-10-11	1SFL637025R□□11	
	1250A	GAF1250-10-11	1SFL647025R□□11	
	1650A	GAF1650-10-11	1SFL677025R□□11	
	2050A	GAF2050-10-11	1SFL707025R□□11	

For DC3, DC5 ratings refer technical catalog

Coil voltages and codes: GA 75

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1
110	110 ... 120	8 4
220 ... 230	230 ... 240	8 0
400 ... 415	415 ... 440	8 6

Coil voltages and codes: GAE 75

Voltage	Code
V d.c.	□□
12	8 0
24	8 2
42	8 1
110	8 6
240	8 9

Coil voltages and codes: GAF range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
-	24...60	6 8
48...130	48...130	6 9
100...250	100...250	7 0
250...500	250...500	7 1

Accessories for contactors

Auxiliary contact block

Description	Mounting on contactors	Contact configuration		Type code reference	Ordering code	L.P.(₹)
		NO	NC			
Front mounted single pole add-on blocks	A9....A110 AL9...AL40, TAL9...TAL40 N,NL &UA	1NO	-	CA5-10	1SBN010010R1010 ■	200
		-	1NC	CA5-01	1SBN010010R1001 ■	200
		4NO	-	CA 5-40 E	1SBN010040R1040	930
		3NO	1NC	CA 5-31 E	1SBN010040R1031	
		2NO	2NC	CA 5-22 E	1SBN010040R1022 ■	
			4NC	CA 5-04 E	1SBN010040R1004	
Side mounted 2 pole add-on blocks	A9....A75, AL9...AL40, TAL9...TAL40, N, NL & UA 16..75	1NO	1NC	CAL5-11	1SBN010020R1011 ■	680
	A95...A185, UA95...UA110, AF400...AF2050	1NO	1NC	CAL18-11	1SFN010720R1011 ■	760
	A145...A185 AF400...AF2050	1NO	1NC	CAL18-11B	1SFN010720R3311 ■	
	AF205...AF370	1NO	1NC	CAL19-11	1SFN010820R1011 ■	
		1NO	1NC	CAL 19-11B	1SFN010820R3311	

Auxiliary contact blocks for EK range of contactors:

Description	Mounting on contactors	Contact configuration		Type code reference	Ordering code	L.P.(₹)
		NO	NC			
Side mounting Two pole auxiliary contact blocks	EK110 . . . .EK1000	1NO	1NC	CAL16-11A	SK829002-A ■	770
		1NO	1NC	CAL16-11B	SK829002-B ■	
		1NO	1NC	CAL16-11C	SK829002-C	
		1NO	1NC	CAL16-11D	SK829002-D	

* Refer technical catalogue for proper selection.

■ Stock items

Accessories for contactors

Auxiliary contact block

Description	Mounting on contactors	Contact configuration		Type code reference	Ordering code	L.P.(₹)
		NO	NC			
Front mounted single pole add-on blocks	AX09...AX150, NX 4-pole	1NO	-	CA5X-10	1SBN019010R1010 ■	190
		-	1NC	CA5X-01	1SBN019010R1001 ■	190
Front mounted Four pole add-on blocks	AX09...AX150, NX 4-pole	2NO	2NC	CA5X-22E	1SBN019040R1022 ■	700
		3NO	1NC	CA5X-31E	1SBN019040R1031	
		4NO	-	CA5X-40E	1SBN019040R1040	
		-	4NC	CA5X-04E	1SBN019040R1004	
Side mounted 2 pole add-on blocks	AX09...AX80, NX 4-pole	1NO	1NC	CAL5X-11	1SBN019020R1011 ■	630
	AX95...AX205	1NO	1NC	CAL18X-11	1SFN019820R1011 ■	640
		1NO	1NC	CAL18X-11B	1SFN019820R3311 ■	640
	AX260...AX370	1NO	1NC	CAL19-11	1SFN010820R1011	760
		1NO	1NC	CAL19-11B	1SFN010820R3311	760

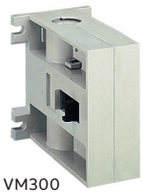
Surge suppressors

For contactor types	Voltage range	Type code reference	Ordering code	L.P.(₹)
AL9...AL40, TAL9..TAL40 NL	12...32 DC	RT5/32	1SBN050020R1000 ■	800
	25...65 DC	RT5/65	1SBN050020R1001	
	50...90 DC	RT5/90	1SBN050020R1002	
	77...150 DC	RT5/150	1SBN050020R1003 ■	
	150...264 DC	RT5/264	1SBN050020R1004	
A9...A110, AL9...AL40, TAL9...TAL40, N/NL AX09...AX150	24...50V AC/DC	RV5/50	1SBN050010R1000	800
	50...133V AC/DC	RV5/133	1SBN050010R1001	
	110...250V AC/DC	RV5/250	1SBN050010R1002	
	250...440V AC/DC	RV5/440	1SBN050010R1003	
A9....A40, N AX09...AX40	24...50V AC	RC5-1/50	1SBN050100R1000	800
	50...133V AC	RC5-1/133	1SBN050100R1001	
	110...250V AC	RC5-1/250	1SBN050100R1002 ■	
	250...440V AC	RC5-1/440	1SBN050100R1003 ■	
A45...A110 AX50...AX150	24...50V AC	RC5-2/50	1SBN050200R1000	800
	50...133V AC	RC5-2/133	1SBN050200R1001	
	110...250V AC	RC5-2/250	1SBN050200R1002 ■	1,110
	250...440V AC	RC5-2/440	1SBN050200R1003 ■	
A145...A185, AX185... AX205	250...440	RC5-3/440	1SFN050300R1003 ■	2,300
EK550.....EK1000	48...110V/AC	RC-EH 800/110	SK829007-C	3,400
	220...600V/AC	RC-EH 800/600	SK829007-D	

■ Stock items

Accessories for contactors

VM5-1



VM300

Mechanical interlocks

For contactor types	Description	Type code reference	Ordering code	L.P.(₹)
A9...A40, AL9...AL40 AX09...AX40	Horizontal Mechanical Interlock	VM5-1	1SBN030100R1000 ■	520
A9...A40, AL9...AL40 AX09...AX40	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE5-1	1SBN030110R1000 ■	790
A30...A110 AX50...AX115	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE5-2	1SBN030210R1000 ■	1,590
A95…A185, AX185…AX205	Horizontal with 2NC contacts	VM300H	1SFN034700R1000	3,340
EK110…EK150	Horizontal Mechanical Interlock	VH145	SK829071-A	4,430
EK175…EK210	Horizontal Mechanical Interlock	VH300	SK829071-B	5,160
AF116...AF146 and AF190. AF205	Horizontal Mechnical Interlock	VM140/190	1SFN034403R1000 ■	3,340
AF190, AF205 and AF265 ... AF370	Horizontal Mechnical Interlock	VM205/265	1SFN035203R1000 ■	3,340
AF116...AF370 AX260...AX370	Horizontal Mechnical Interlock	VM19	1SFN030300R1000	3,450

Note: Refer technical catalogue for proper selection.

Mechanical latching units description

For converting standard contactors into latched contactors. The WB75-A block contains a mechanical latching device with electromagnetic impulse unlatching (AC or DC) or manual unlatching.

Ordering details

For contactors	Rated control circuit voltage Uc		Type	Ordering code	L.P.(₹)
	V 50 Hz or DC	V 60 Hz			
N, NL, A9-A75	24	24...28	WB75-A	FPTN372726R1001	6,090
	220...230	220...255	WB75-A	FPTN372726R1006	6,090

■ Stock items

For contactors	Time delay range selected by switch	Delay type	Auxiliary contacts	Type	Ordering code	L.P.(₹)
Electronic timers						
A9...A75	0.1...1 s 1...10 s 10...100 s	ON-delay	1	TEF5 ON	1SBN020312R1000	6,340
		OFF-delay	1	TEF5 OFF	1SBN020314R1000	6,030

Contactors: Wide band AC/DC operated

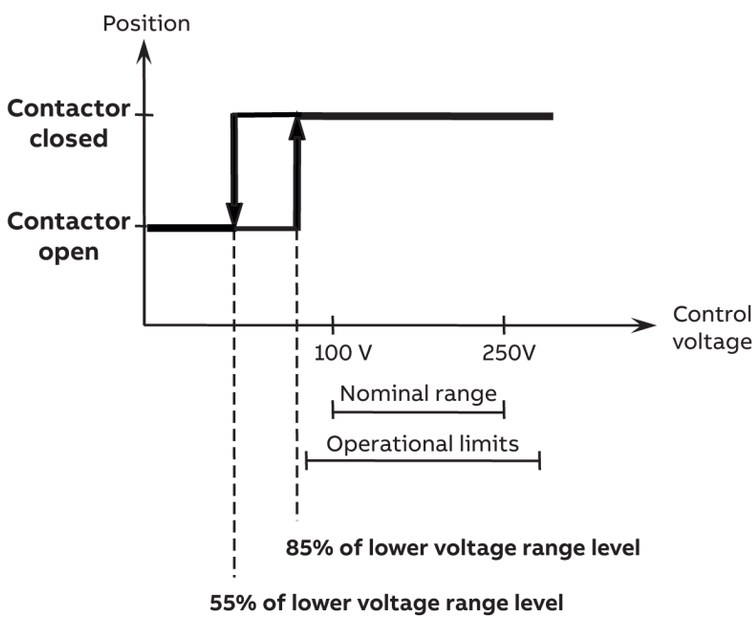
NF/AF contactors
Wide band AC/DC operated - with screw terminals

Description

- NF/AF contactor include an electronic coil interface accepting a wide control voltage Uc min. ... Uc max. only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC
- NF/AF contactor can manage large control voltage variations. One coil (e.g. 100...250 V 50/60 Hz - DC) can be used for different control voltages used worldwide without any coil change.
- NF...Z/AF...Z contactor equipped with a Z coil type allow direct control by 24 V DC 500 mA PLC-output and obtain a reduced holding coil consumption.
- NF/AF contactor have built-in surge protection and do not require additional surge suppressors.

Innovative solution from ABB

- Electronically controlled coil
- Distinct drop out- and pick up value
- 20ms sags and dip immunity
- Fulfills SEMI - F47- 0200 surge suppressors.
- Specification for processing equipment regarding voltage drop immunity.



3 pole contactors AF range: Wide band AC/DC operated

AF contactors are built in with:
- Universal coil operable on wide band AC / DC voltages
- Surge suppressors
- Low power consumption coil

AC1duty Amps	AC3 rating at 415V			Auxiliary	contacts	Type code	Ordering code	L.P.(₹)
	Amps	hP	kW					
25	9	5.5	4	1NO	-	AF09-30-10-□□	1SBL137001R□□10 ■	2,210
				-	1NC	AF09-30-01-□□	1SBL137001R□□01 ■	2,210
28	12	7.5	5.5	1NO	-	AF12-30-10-□□	1SBL157001R□□10 ■	2,380
				-	1NC	AF12-30-01-□□	1SBL157001R□□01	2,380
30	18	12.5	7.5	1NO	-	AF16-30-10-□□	1SBL177001R□□10 ■	2,990
				-	1NC	AF16-30-01-□□	1SBL177001R□□01 ■	2,990
45	26	15	11	-	-	AF26-30-00-□□	1SBL237001R□□00 ■	3,840
50	32	20	18	-	-	AF30-30-00-□□	1SBL277001R□□00 ■	8,080
50	38	25	18.5	-	-	AF38-30-00-□□	1SBL297001R□□00 ■	9,370
70	40	30	18.5	-	-	AF40-30-00-□□	1SBL347001R□□00 ■	10,350
100	53	40	22	-	-	AF52-30-00-□□	1SBL367001R□□00 ■	12,640
105	65	50	30	-	-	AF65-30-00-□□	1SBL387001R□□00 ■	14,790
125	80	60	37	-	-	AF80-30-00-□□	1SBL397001R□□00 ■	17,970
130	96	70	45	-	-	AF96-30-00-□□	1SBL407001R□□00 ■	21,590
160	116	75	55	1NO	1NC	AF116-30-11-□□	1SFL427001R□□11 ■	23,090
200	140	100	75	1NO	1NC	AF140-30-11-□□	1SFL447001R□□11 ■	29,280
225	146	100	75	1NO	1NC	AF146-30-11-□□	1SFL467001R□□11 ■	30,700
275	190	120	90	1NO	1NC	AF190-30-11-□□	1SFL487002R□□11 ■	36,360
350	205	150	110	1NO	1NC	AF205-30-11-□□	1SFL527002R□□11 ■	37,450
400	265	175	140	1NO	1NC	AF265-30-11-□□	1SFL547002R□□11 ■	42,630
500	305	215	160	1NO	1NC	AF305-30-11-□□	1SFL587002R□□11	49,460
600	370	270	200	1NO	1NC	AF370-30-11-□□	1SFL607002R□□11	63,040
600	400	300	220	1NO	1NC	AF400-30-11**	1SFL577001R□□11	67,060
700	460	340	250	1NO	1NC	AF460-30-11**	1SFL597001R□□11	84,110
800	580	470	355	1NO	1NC	AF580-30-11**	1SFL617001R□□11 ■	1,20,740
1050	750	570	425	1NO	1NC	AF750-30-11**	1SFL637001R□□11 ■	1,84,080
1260	-	-	-	1NO	1NC	AF1250-30-11**	1SFL647001R□□11	Upon request
1350	860	-	500	1NO	1NC	AF1350-30-11**	1SFL657001R□□11	
1650	1050	-	600	1NO	1NC	AF1650-30-11**	1SFL677001R□□11	
2050	-	-	-	1NO	1NC	AF2050-30-11**	1SFL707001R□□11	
2650	-	-	-	1NO	1NC	AF2650-30-11**	1SFL667001R□□11	
2850	-	-	-	1NO	1NC	AF2850-30-11**	1SFL687001R□□11	

Complete the contactor type code by replacing ** with desired coil voltage, AF contactors have advanced electronic coil interface with wideband AC/DC coil

Coil voltages and codes:

New AF09...AF370 range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
24...60	20...60	1 1 ■
48...130	48...130	1 2 ■
100...250	100...250	1 3 ■
250...500	250...500	1 4 ■

Note: For non-standard coil voltage, other than this contact us for price.

AF400...AF1250 range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
-	24...60	6 8
48...130	48...130	6 9
100...250	100...250	7 0 ■
250...500	250...500	7 1 ■

AF1350...AF2850 range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	DC	□□
100...250	100...250	7 0

■ Stock items

4 pole contactors: Wide band AC/DC operated

New AF Contactors: 4 pole – AC / DC Operated

Rating at 415V AC1 Amps	Main contact arrangement		Auxiliary contacts		Type code reference	Ordering code	L.P.(₹)
25	4NO	-	-	-	AF09-40-00-□□	1SBL137201R□□00 ■	2,630
	2NO	2NC	-	-	AF09-22-00-□□	1SBL137501R□□00	3,310
30	4NO	-	-	-	AF16-40-00-□□	1SBL177201R□□00	3,070
	2NO	2NC			AF16-22-00-□□	1SBL177501R□□00 ■	4,050
45	4NO	-	-	-	AF26-40-00-□□	1SBL237201R□□00	5,010
	2NO	2NC			AF26-22-00-□□	1SBL237501R□□00	6,190
55	4NO	-	-	-	AF38-40-00-□□	1SBL297201R□□00 ■	10,070
	2NO	2NC	-	-	AF38-22-00-□□	1SBL297501R□□00	12,480
70	4NO	-	-	-	AF40-40-00-□□	1SBL347201R□□00	16,260
	2NO	2NC	-	-	AF40-22-00-□□	1SBL347501R□□00	17,980
100	4NO	-	-	-	AF52-40-00-□□	1SBL367201R□□00 ■	16,720
125	4NO	-	-	-	AF80-40-00-□□	1SBL397201R□□00	20,330
	2NO	2NC	-	-	AF80-22-00-□□	1SBL397501R□□00	22,790
160	4NO	-	-	-	AF116-40-00-□□	1SFL427102R□□00 ■	23,320
200	4NO	-	-	-	AF140-40-00-□□	1SFL447102R□□00 ■	28,970
275	4NO	-	-	-	AF190-40-00-□□	1SFL487102R□□00 ■	42,830
350	4NO	-	-	-	AF205-40-00-□□	1SFL527102R□□00 ■	50,130
400	4NO	-	-	-	AF265-40-00-□□	1SFL547102R□□00 ■	60,120
500	4NO	-	-	-	AF305-40-00-□□	1SFL587102R□□00 ■	73,350
525	4NO	-	-	-	AF370-40-00-□□	1SFL607102R□□00 ■	81,840

Coil voltages and codes: New AF range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
24...60	20...60	1 1 ■
48...130	48...130	1 2 ■
100...250	100...250	1 3 ■
250...500	250...500	1 4 ■

Accessories for AF contactors

CA4-10

CAL4-11

CAL19-11

Auxiliary contact block

Description	Mounting on contactors	Contact configuration NO	Contact configuration NC	Type code reference	Ordering code	L.P.(₹)
Front mounted 1 pole add-on blocks	AF09....AF96 / NF	1NO	-	CA4-10	1SBN010110R1010 ■	240
		-	1NC	CA4-01	1SBN010110R1001 ■	240
Front mounted 4 pole add-on blocks	AF09....AF80 / NF	4NO	-	CA4-40E	1SBN010140R1040 ■	1,010
		3NO	1NC	CA4-31E	1SBN010140R1031	1,010
		2NO	2NC	CA4-22E	1SBN010140R1022 ■	1,010
		-	4NC	CA4-04E	1SBN010140R1004	1,010
Side mounted 2 pole add-on blocks	AF09....AF96 / NF	1NO	1NC	CAL4-11	1SBN010120R1011 ■	650
	AF96...AF370	1NO	1NC	CAL19-11	1SFN010820R1011 ■	760
		1NO	1NC	CAL19-11B	1SFN010820R3311 ■	760

* Refer technical catalogue for proper selection.

■ Stock items

Accessories for AF contactors

VEM4

VM19

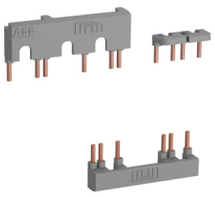
Mechanical interlocks

Description	For contactor types	Type Code reference	Ordering code	L.P.(₹)
Horizontal Mechnical Interlock	AF09...AF38	VM 4	1SBN030105T1000	640
Horizontal Mechnical & Electrical Interlock	AF09...AF38	VEM 4	1SBN030111R1000	1,130
Horizontal Mechnical Interlock	AF40...AF96	VM96-4	1SBN033405T1000	2,300
Horizontal Mechnical Interlock	AF116...AF146 and AF190. AF205	VM140/190	1SFN034403R1000	3,340
Horizontal Mechnical Interlock	AF190, AF205 and AF265 ... AF370	VM205/265	1SFN034403R1000	3,340
Horizontal Mechnical Interlock	AF116...AF370	VM19	1SFN030300R1000	3,450

Note: Refer technical catalogue for proper selection.

Ordering Details

For contactors	Rated control circuit voltage Uc	Type	Ordering code	L.P.(₹)
NF(Z),AF(Z)09....38,AF40...65	24V DC	WA4-10	1SBN040100R1010	2,490
NF(Z),AF(Z)09....38,AF40...65	24-60V50/60HZ-DC	WA4-11	1SBN040100R1011	2,490
NF(Z),AF(Z)09....38,AF40...65	48-130V50/60HZ-DC	WA4-12	1SBN040100R1012	2,490
NF(Z),AF(Z)09....38,AF40...65	100-250V50/60HZ-DC	WA4-13	1SBN040100R1013	2,490
NF(Z),AF(Z)09....38,AF40...65	250-500V50/60HZ-DC	WA4-14	1SBN040100R1014	2,490
AF80....96	24-60V50/60HZ-DC	WA4-96-11	1SBN040200R1011	2,490
AF80....96	48-130V50/60HZ-DC	WA4-96-12	1SBN040200R1012	2,490
AF80....96	100-250V50/60HZ-DC	WA4-96-13	1SBN040200R1013	2,490
AF80....96	250-500V50/60HZ-DC	WA4-96-14	1SBN040200R1014	2,490



Electronic timers

For contactor types	Time delay range selected by switch	Delay type	Auxiliary contacts	Type	Ordering code	L.P.(₹)
AF09 ... AF96	0.1...1 s 1...10 s 10...100 s	ON-delay	1NO + 1NC	TEF4-ON	1SBN020112R1000	6,280
		OFF-delay	1NO + 1NC	TEF4-OFF	1SBN020114R1000	5,970

Note: Rated control circuit voltage Uc 24...240 V 50/60 Hz or DC.

Connecting links with manual motor starters

For contactor types	Used with	Type	Ordering code	L.P.(₹)
AF09 ... AF16	MS116-0.16 ... MS116-25, MS132-0.16 ... MS132-25	BEA16-4	1SBN081306T1000	430
AF26 ... AF30	MS116-0.16 ... MS116-16, MS132-0.16 ... MS132-10	BEA26-4	1SBN082306T1000	500
	MS116-20 ... MS116-32, MS132-12 ... MS132-32	BEA38-4	1SBN082306T2000	540

Connection sets for reversing contactors

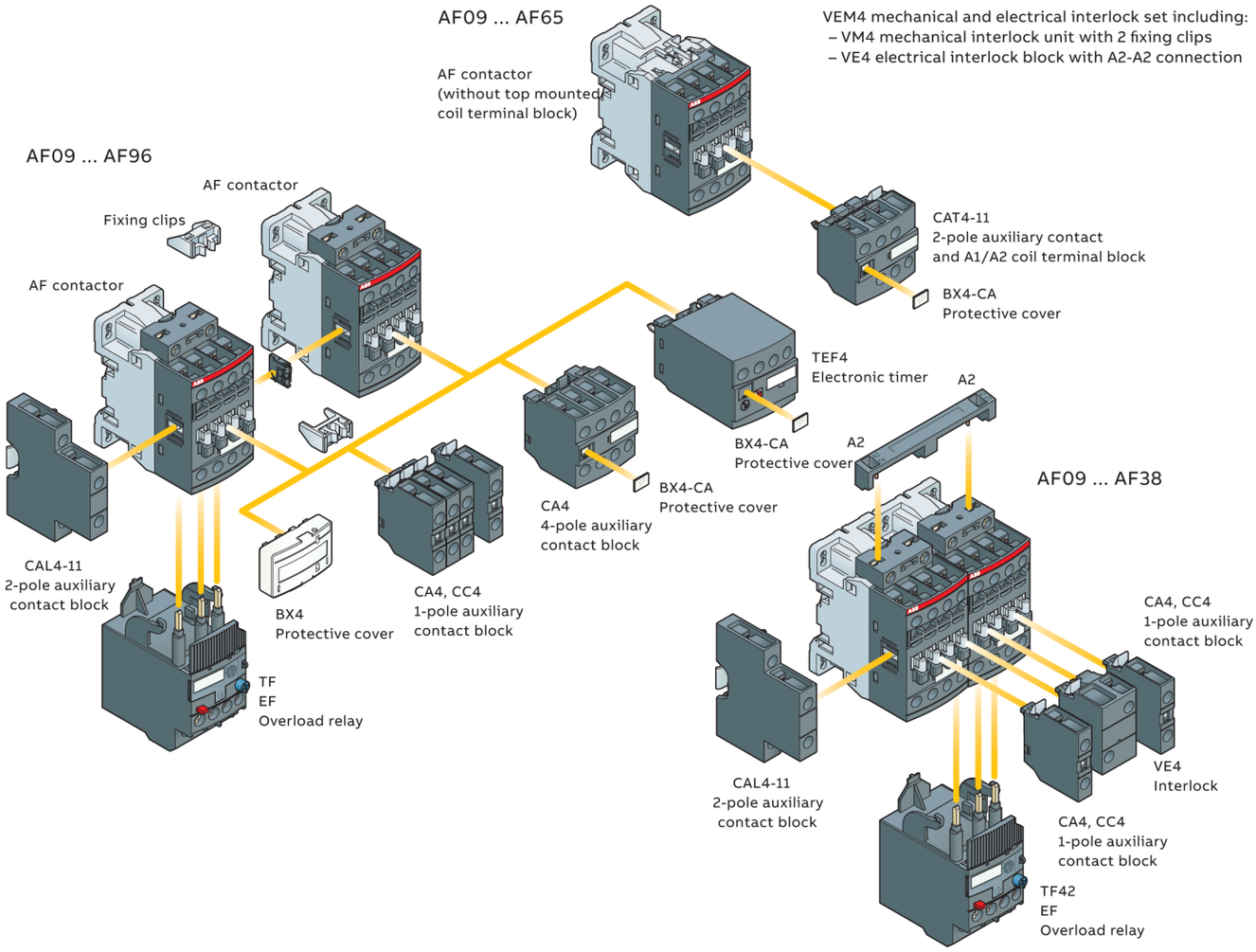
For contactor types	Type	Ordering code	L.P.(₹)
AF09 ... AF16	BER16-4	1SBN081311R1000	1,100
AF26 ... AF30	BER38-4	1SBN082311R1000	1,490
AF40 ... AF65	BER65-4	1SBN083411R1000	1,780
AF80 ... AF96	BER96-4	1SBN083911R1000	3,100

Connection sets for star-delta starting

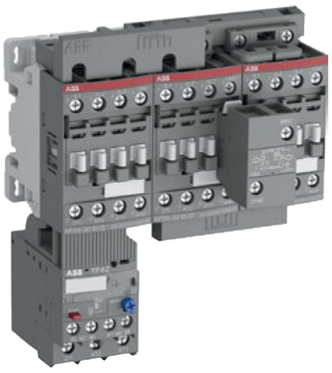
For contactor types	Type	Ordering code	L.P.(₹)
AF09 ... AF16	BEY16-4	1SBN081313R2000	1,490
AF26 ... AF30	BEY38-4	1SBN082713R2000	2,300
AF40 ... AF65	BEY65-4	1SBN083413R2000	2,950
AF80 ... AF96	BEY96-4	1SBN083913R2000	3,790

■ Stock items

Accessories for AF contactors



AF the premium range



The AF contactor is compact
The AF contactor is compact in size and has had its width reduced by up to 30% thanks to an 80% reduction of the coil's energy consumption.

The AF contactor is flexible
AF09...AF370 is perfect for motor starting applications and for solutions where space is limited. Interlocked reversing pairs require no spacing between contactors can fit more functiona meaning you lity into cabinets or other small enclosures.

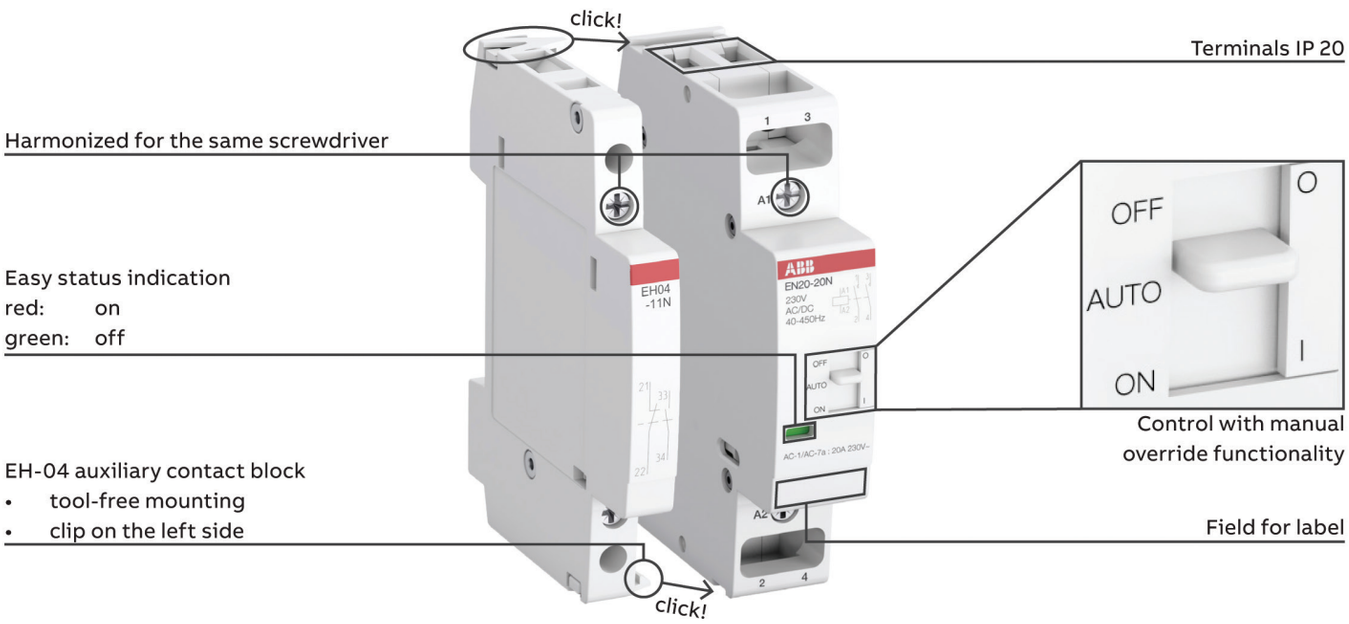
Powerful light switching made easy NEW

ESB and EN installation contactors

ABB's hum-free installation contactor designs offer a wide range of ratings from 16 A to 100 A. With an innovative AC/DC coil design that eliminates hum, a broad selection of common accessories as well as manual and automatic versions, ESB..N contactors cover all your needs in both domestic and residential applications. Find out more at **abb.com/lowvoltage**

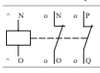
ESB and EN Installation contactors NEW

- Hum-free operation
- Tool-free to save time
- More choice, less inventory
- Comprehensive solution
- Optimum interface
- Easy to install
- Group mounting saves space
- Global availability
- Easy identification

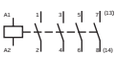
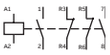
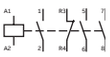
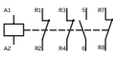


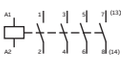
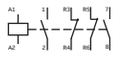
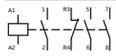
ESB and EN Installation contactors

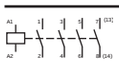
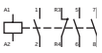
ABB's installation contactor range comes with a host of features to make installation and maintenance easier. A mechanical indicator shows the status in green or red color to make system diagnostics quicker. Some speciality types also feature a manual override functionality with a toggle switch providing independent control. Accessories such as auxiliaries, space holders, as well as safety covers can be mounted tool-free onto the contactor.

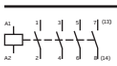
Main contacts	Width in number of modular spacings	Rated control circuit voltage[1] VAC / DC	Type	Ordering code	L.P.(₹)
	1	24	ESB16-20N-01	1SBE111111R0120	2,700
	1	230	ESB16-20N-06	1SBE111111R0620	2,700
	1	24	ESB16-02N-01	1SBE111111R0102	2,820
	1	230	ESB16-02N-06	1SBE111111R0602	2,820
	1	24	ESB16-11N-01	1SBE111111R0111	2,750
	1	230	ESB16-11N-06	1SBE111111R0611	2,750

Main contacts	Width in number of modular spacings	Rated control circuit voltage[1] VAC / DC	Type	Ordering code	L.P.(₹)
	1	24	ESB20-20N-01	1SBE121111R0120	2,990
	1	230	ESB20-20N-06	1SBE121111R0620	2,990
	1	24	ESB20-02N-01	1SBE121111R0102	3,120
	1	230	ESB20-02N-06	1SBE121111R0602	3,120
	1	24	ESB20-11N-01	1SBE121111R0111	3,020
	1	230	ESB20-11N-06	1SBE121111R0611	3,020

Main contacts	Width in number of modular spacings	Rated control circuit voltage [1] V AC / DC	Type	Ordering code	L.P.(₹)
	2	24	ESB25-40N-01	1SAE231111R0140	3,050
		230 ... 240	ESB25-40N-06	1SAE231111R0640	3,050
	2	24	ESB25-04N-01	1SAE231111R0104	3,150
		230 ... 240	ESB25-04N-06	1SAE231111R0604	3,150
	2	24	ESB25-22N-01	1SAE231111R0122	3,150
		230 ... 240	ESB25-22N-06	1SAE231111R0622	3,150
	2	24	ESB25-31N-01	1SAE231111R0131	3,150
		230 ... 240	ESB25-31N-06	1SAE231111R0631	3,150
	2	24	ESB25-13N-01	1SAE231111R0113	3,150
		230 ... 240	ESB25-13N-06	1SAE231111R0613	3,150

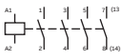
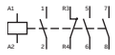
Main contacts	Width in number of modular spacings	Rated control circuit voltage [1] V AC / DC	Type	Ordering code	L.P.(₹)
	3	24	ESB40-40N-01	1SAE341111R0140	5,600
		230	ESB40-40N-06	1SAE341111R0640	5,600
	3	24	ESB40-22N-01	1SAE341111R0122	5,700
		230	ESB40-22N-06	1SAE341111R0622	5,700
	3	24	ESB40-31N-01	1SAE341111R0131	5,700
		230	ESB40-31N-06	1SAE341111R0631	5,700
	3	24	ESB40-30N-01	1SAE341111R0130	5,400
		230	ESB40-30N-06	1SAE341111R0630	5,400
	3	24	ESB40-20N-01	1SAE341111R0120	5,200
		230	ESB40-20N-06	1SAE341111R0620	5,200

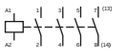
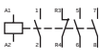
Main contacts	Width in number of modular spacings	Rated control circuit voltage [1] V AC / DC	Type	Ordering code	L.P.(₹)
	3	24	ESB63-40N-01	1SAE351111R0140	7,300
		230	ESB63-40N-06	1SAE351111R0640	7,300
	3	230	ESB63-31N-06	1SAE351111R0631	7,500
	3	230	ESB63-30N-06	1SAE351111R0630	7,100
	3	24	ESB63-20N-01	1SAE351111R0120	7,000
		230	ESB63-20N-06	1SAE351111R0620	7,000

Main contacts	Width in number of modular spacings	Rated control circuit voltage [1] V AC / DC	Type	Ordering code	L.P.(₹)
	6	24	ESB100-40N-01	1SAE661111R0140	24,950
		230	ESB100-40N-06	1SAE661111R0640	24,950
	3	24	ESB100-20N-01	1SAE361111R0120	23,900
		230	ESB100-20N-06	1SAE361111R0620	23,900

ESB and EN Installation contactors

Main contacts	Width in number of modular spacings	Rated control circuit voltage [1] V AC / DC	Type	Ordering code	L.P.(₹)
	1	24	EN20-20N-01	1SBE122111R0120	4,200
		230	EN20-20N-06	1SBE122111R0620	4,200

Main contacts	Width in number of modular spacings	Rated control circuit voltage [1] V AC / DC	Type	Ordering code	L.P.(₹)
	2	24	EN25- 40N- 01	1SAE232111R0140	12,550
		230 ... 240	EN25-40N-06	1SAE232111R0640	12,800
	2	24	EN25-31N-01	1SAE232111R0131	12,900
		230 ... 240	EN25-31N-06	1SAE232111R0631	12,900
	2	230 ... 240	EN25-30N-06	1SAE232111R0630	11,200

Main contacts	Width in number of modular spacings	Rated control circuit voltage [1] V AC / DC	Type	Ordering code	L.P.(₹)
	3	24	EN40-40N-01	1SAE342111R0140	12,850
		230	EN40-40N-06	1SAE342111R0640	12,850
	3	24	EN40-31N-01	1SAE342111R0131	12,950
		230	EN40-31N-06	1SAE342111R0631	12,950
	3	230	EN40-30N-06	1SAE342111R0630	11,500
	3	230	EN40-20N-06	1SAE342111R0620	11,200

Auxiliary contact blocks

Auxiliary contacts	Suitable for	Type	Ordering code	L.P.(₹)
Single packaging				
	ESB16..N, ESB20..N, ESB25..N, ESB40..N, ESB63..N, ESB100..N, EN20..N, EN25..N, EN40..N	EH04-11N	1SAE901901R1011	990
		EH04-20N	1SAE901901R1020	990

Distant piece

Suitable for	Type	Ordering code	L.P.(₹)
Single packaging			
ESB25..N, ESB40..N, ESB63..N, EN25..N, EN40..N, ESB100..N, EN100..N	ESB-DIS	GHE3201902R0001	190

Mini contactors

Mini contactors with screw connection:

AC1 duty Amps	AC3 rating at 415V Amps	hP	kW	Auxiliary contacts	
16A	9	5.5	4	1NO	-
16A	9	5.5	4	-	1NC
20A	12	7.5	5.5	1NO	-
20A	12	7.5	5.5	-	1NC

3 pole - AC operated

Type code reference	Ordering code	L.P.(₹)
B06-30-10 **	GJL1211001R□10□ ■	1,130
B06-30-01 **	GJL1211001R□01□ ■	
B07-30-10 **	GJL1311001R□10□■	1,230
B07-30-01 **	GJL1311001R□01□ ■	

3 pole - DC operated

Type code reference	Ordering code	L.P.(₹)
BC6-30-10 **	GJL1213001R□10□ ■	1,580
BC6-30-01 **	GJL1213001R□01□ ■	
BC7-30-10 **	GJL1313001R□10□ ■	1,710
BC7-30-01 **	GJL1313001R□01□ ■	

Complete the contactor type code by replacing ** with desired coil voltage

Mini reversing contactors with screw connection:

AC1 duty Amps	AC3 rating at 415V Amps	hP	kW	Auxiliary contacts	
16A	9	5.5	4	1NO	-
16A	9	5.5	4	-	1NC
20A	12	7.5	5.5	1NO	-
20A	12	7.5	5.5	-	1NC

3 pole - AC operated

Type code reference	Ordering code	L.P.(₹)
VB06-30-10 **	GJL1211901R□10 □	3,290
VB06-30-01 **	GJL1211901R□01 □	3,290
VB07-30-10 **	GJL1311901R□10 □	3,470
VB07-30-01 **	GJL1311901R□01 □	3,470

3 pole - DC operated

Type code reference	Ordering code	L.P.(₹)
VBC6-30-10 **	GJL1213901R□10□	3,500
VBC6-30-01 **	GJL1213901R□01□ ■	3,500
VBC7-30-10 **	GJL1313901R□10□	3,750
VBC7-30-01 **	GJL1313901R□01□	3,750

Complete the contactor type code by replacing ** with desired coil voltage

Mini contactors are also available in 4 pole (4NO / 2NO + 2NC)

Mini auxiliary contactor 4 pole with screw connection

Control circuit	Contact configuration NO	NC	Type code reference	Ordering code	L.P.(₹)
AC	2NO	2NC	K6-22Z**	GJH1211001R□22□	1,260
	3NO	1NC	K6-31Z **	GJH1211001R□31□ ■	
	4NO	-	K6-40E **	GJH1211001R□40□	
DC	2NO	2NC	KC6-22Z**	GJH1213001R□22□ ■	1,620
	3NO	1NC	KC6-31Z **	GJH1213001R□31□	
	4NO	-	KC6-40E **	GJH1213001R□40□	

Complete the contactor type code by replacing ** with desired coil voltage

Coil voltage for mini contactors

AC 50-60Hz	Code	DC DC V	Code
24	0 ... 1 ■	24	0 ... 1 ■
48	0 ... 3	110 ... 125	0 ... 4 ■
110 ... 127	8 ... 4 ■	220 ... 240	0 ... 5
220 ... 240	8 ... 0 ■		
380 ... 415	8 ... 5		

Auxiliary contact blocks for mini contactors Ordering details

For contactor types	Auxiliary contacts	Type	Ordering code	L.P.(₹)
Front mounted instantaneous auxiliary contact blocks				
B6-, B7-30-10, BC6-, BC7-30-10	1NO + 1NC	CAF6-11M	GJL1201330R0003	690
VB6, VB7, VBC6, VBC7, VB6A, VB7A	2NO	CAF6-20M	GJL1201330R0007	
VBC6A, VBC7A	2NC	CAF6-02M	GJL1201330R0011	
Side mounted instantaneous auxiliary contact block				
B6-, B7-30-10, BC6-, BC7-30-10	1NO + 1NC	CA6-11M	GJL1201317R0003	690

■ Stock items

Spares for contactors

Spare coils for A range

For contactor types	Type code reference	Ordering code	L.P.(₹)
N, A9.....A16, UA16..RA	ZA16 **	1SBN151410R□□06	820
A26..A40;UA26..UA30 RA	ZA40 **	1SBN152410R□□06	1,020
A45..A75;UA50..UA75 RA	ZA75 **	1SBN153510R□□06	3,190
A95..A110; UA95..UA110 RA	ZA110 **	1SFN154310R□□06	4,180
A145...A185	ZA185 **	1SFN154710R□□06	6,830
A210...A300	ZA300 **	1SFN155110R□□06	7,560

Spare coils for AF range

For contactor types	Type code reference	Ordering code	L.P.(₹)
AF45...AF75	ZAF75	1SBN153570R□□06	8,720
AF95...AF110	ZAF110	1SFN153370R□□06	11,710
AF145...AF185	ZAF185	1SFN154770R□□06	13,700
AF210,AF260 &AF300	ZAF300	1SFN155170R□□06	24,910
AF400...AF460	ZAF460**	1SFN155770R□□06	29,260
AF580...AF750**	ZAF750**	1SFN156170R□□06	37,970

Coil voltages & codes

N range, A09.....A300, UA....RA, AX09...AX205		
Voltage V-50 Hz	Voltage V-60 Hz	Code
24	24	81
110	110....120	84
220....230	230....240	80
400....415	415....440	86

AF45...AF300		
Voltage V-50/60 Hz	Voltage V..dc	Code
	20....60	72*
48....130	48....130	69
100....250	100....250	70

* For contactor AF95...AF300

AF400...AF750		
Voltage V-50/60 Hz	Voltage V..dc	Code
	24....60	68
48....130	48....130	69
100....250	100....250	70
250....500	250....500	71

Spare contact sets for 3 pole

Description	For contactor types	Type code reference	Ordering code	L.P.(₹)
Contact set for 3 -pole contactors consisting of 6 fixed contacts, 3 moving contacts, springs and the required screws.	A/AF/AE/TAE50	ZL 50	1SBN163503R1000 ■	4,400
	A/AF/AE/TAE63	ZL 63	1SBN163703R1000 ■	6,380
	A/AF/AE/TAE75	ZL 75	1SBN164103R1000 ■	8,000
	A/AF/AE/TAE95	ZL 95	1SFN164303R1000 ■	10,530
	A/AF/AE/TAE110	ZL 110	1SFN164503R1000 ■	11,530
	A/AF145	ZL 145	1SFN164703R1000 ■	14,620
	A/AF185	ZL 185	1SFN164903R1000 ■	18,360
	A/AF210	ZL 210	1SFN165103R1000 ■	23,650
	A/AF260	ZL 260	1SFN165303R1000 ■	28,630
	A/AF300	ZL 300	1SFN165503R1000 ■	34,240
	AF400	ZL 400	1SFN165703R1000 ■	38,570
	AF460	ZL 460	1SFN165903R1000 ■	47,580
	AF 580	ZL 580	1SFN166103R1000 ■	80,080
	AF 750	ZL 750	1SFN166303R1000 ■	1,00,540
	UA 50	ZLU 50	1SBN163502R1000	5,060
	UA 63	ZLU 63	1SBN163702R1000	7,050
	UA 75	ZLU 75	1SBN164102R1000	8,850

Spare contact sets for 3 pole for AX

For contactor types	Type code reference	Ordering code	L.P.(₹)
AX50	ZLX50	1SBN163506R1000	4,070
AX65	ZLX65	1SBN163706R1000	5,400
AX80	ZLX80	1SBN164106R1000	7,030
AX95	ZLX95	1SFN164306R1000	8,200
AX115	ZLX115	1SFN169806R1000	9,980
AX150	ZLX150	1SFN169906R1000	13,230
AX185	ZLX185	1SFN164906R1000	15,570
AX205	ZLX205	1SFN165006R1000	18,940

Spare coils for AX range

For contactor types	Type code reference	Ordering code	L.P.(₹)
AX25	ZAX25	1SBN158910R□□36	760
AX40	ZAX40	1SBN152810R□□36	1,000
AX80	ZAX80	1SBN153510R□□36	3,120
AX150	ZAX150	1SFN159910R□□36	4,740
AX205	ZAX205	1SFN155010R□□36	6,720

Complete the contactor type code by replacing□□ with desired coil voltage from above mentioned table

■ Stock items

DOL and star delta starters

Direct on line starter:

Rating at 415V 50Hz		Back - up Fuse rating (A)	Type code reference	Ordering code	L.P.(₹)
HP	kW				
0.25	0.18	4A	MA-0.25 **	1SYN140318R□□25	3,440
0.50	0.37	4A	MA-0.50 **	1SYN140318R□□05	3,440
0.75	0.52	6A	MA-0.75 **	1SYN140318R□□75	3,440
1.00	0.75	6A	MA-1.00 **	1SYN140318R□□10 ■	3,440
1.50	1.10	10A	MA-1.50 **	1SYN140318R□□15	3,440
2.00	1.50	10A	MA-2.00 **	1SYN140318R□□20 ■	3,440
3.00	2.20	16A	MA-3.00 **	1SYN140318R□□30 ■	3,440
5.00	3.70	25A	MA-5.00 **	1SYN140318R□□50 ■	3,440
7.50	5.50	32A	MA-7.50 **	1SYN16018R□□75 ■	3,440
10.00	7.50	32A	MA-10.00 **	1SYN180318R□□10 ■	3,720

Fully automatic Star Delta starter:

Rating at 415V 50Hz		Type code reference	Ordering code	L.P.(₹)
HP	kW			
12.5	12.5/9.3	SDA-12.5 **	1SYN184322R□□00 ■	12,830
15	15/11	SDA-15 **	1SYN242322R□□00 ■	13,950
20	20/15	SDA- 20 **	1SYN244322R□□00 ■	16,180
25	25/18.5	SDA-25 **	1SYN246322R□□00	16,850
30	30/22	SDA-30 **	1SYN282322R□□00	20,360
35	35/26	SDA-35 **	1SYN284322R□□00	22,590
40	40/30	SDA-40 **	1SYN322322R□□00	27,410
50	50/37	SDA-50 **	1SYN352342R□□00	32,910
60	60/45	SDA-60 **	1SYN372342R□□00	42,330
75	75/55	SDA-75 **	1SYN412342R□□00	49,630

Complete the starter type code by replacing the ** with the desired coil voltage.

Voltage	Code
⎣▪▪⎦	□□
220 ... 230 V coil	3 8
400 ... 415 V coil	8 6 ■

DOL Starter with IP65 enclosure

4KE 7.5KW 415V, IP65 compact plastic enclosure with double insulation

Description	Ordering code	L.P.(₹)
DRAS09-29P 4.0 kW 415V, 415V coil	1SBK104035R2900	6,140
DRAS12-29P 5.5 kW 415V, 415V coil	1SBK114035R2900	6,590
DRAS16-29P 7.5 kW 415V, 415V coil	1SBK124035R2900	8,860

Note: T16 OLR to be ordered separately. Plz refer page no. 106 for reference.

■ Stock items

Manual motor starter

With thermal and electromagnetic protection

MS116 Manual motor starters with short circuit, overload and phase loss protection

Rated power 415V KW	Ie current setting range Amp	S/C Icu breaking capacity kA	Type	Ordering code	L.P.(₹)
0.03	0.10 ... 0.16	50	MS116-0.16	1SAM250000R1001 ■	3,160
0.06	0.16 ... 0.25	50	MS116-0.25	1SAM250000R1002 ■	3,160
0.09	0.25 ... 0.40	50	MS116-0.4	1SAM250000R1003 ■	3,160
0.12	0.40 ... 0.63	50	MS116-0.63	1SAM250000R1004 ■	3,590
0.25	0.63 ... 1.00	50	MS116-1.0	1SAM250000R1005 ■	3,590
0.55	1.00 ... 1.60	50	MS116-1.6	1SAM250000R1006 ■	3,600
0.75	1.60 ... 2.50	50	MS116-2.5	1SAM250000R1007 ■	3,600
1.5	2.50 ... 4.00	50	MS116-4.0	1SAM250000R1008 ■	3,670
2.2	4.00 ... 6.30	50	MS116-6.3	1SAM250000R1009 ■	3,670
4.0	6.30 ... 10.0	50	MS116-10	1SAM250000R1010 ■	3,770
5.5	8.00 ... 12.0	25	MS116-12	1SAM250000R1012 ■	4,290
7.5	10.0 ... 16.0	16	MS116-16	1SAM250000R1011 ■	4,760
9.0	16.0 ... 20.0	15	MS116-20	1SAM250000R1013 ■	5,170
12.5	20.0 ... 25.0	15	MS116-25	1SAM250000R1014 ■	5,330
15.5	25.0 ... 32.0	10	MS116-32	1SAM250000R1015 ■	9,300

MS132 Manual motor starters with short circuit, overload and phase loss protection

0.03	0.10 ... 0.16	100	MS132-0.16	1SAM350000R1001	4,040
0.06	0.16 ... 0.25	100	MS132-0.25	1SAM350000R1002 ■	4,040
0.09	0.25 ... 0.40	100	MS132-0.4	1SAM350000R1003 ■	4,040
0.12	0.40 ... 0.63	100	MS132-0.63	1SAM350000R1004 ■	4,380
0.25	0.63 ... 1.00	100	MS132-1.0	1SAM350000R1005 ■	4,420
0.55	1.00 ... 1.60	100	MS132-1.6	1SAM350000R1006 ■	4,620
0.75	1.60 ... 2.50	100	MS132-2.5	1SAM350000R1007 ■	4,620
1.5	2.50 ... 4.00	100	MS132-4.0	1SAM350000R1008 ■	4,640
2.2	4.00 ... 6.30	100	MS132-6.3	1SAM350000R1009 ■	4,700
4.0	6.30 ... 10.0	100	MS132-10	1SAM350000R1010 ■	5,040
5.5	8.00 ... 12.0	100	MS132-12	1SAM350000R1012 ■	5,530
7.5	10.0 ... 16.0	100	MS132-16	1SAM350000R1011 ■	6,130
9.0	16.0 ... 20.0	100	MS132-20	1SAM350000R1013 ■	6,580
12.5	20.0 ... 25.0	50	MS132-25	1SAM350000R1014 ■	6,710
15.5	25.0 ... 32.0	50	MS132-32	1SAM350000R1015 ■	10,680

MS165 manual motor starters with short circuit, overload and phase loss protection

Ie current setting range Amp	S/C Icu breaking capacity kA	Type	Ordering code	L.P.(₹)
10 ... 16	100	MS165-16	1SAM451000R1011	11,460
14 ... 20	100	MS165-20	1SAM451000R1012	11,990
18 ... 25	100	MS165-25	1SAM451000R1013	12,290
23 ... 32	100	MS165-32	1SAM451000R1014 ■	13,170
30 ... 42	50	MS165-42	1SAM451000R1015 ■	13,170
40 ... 54	50	MS165-54	1SAM451000R1016 ■	16,000
52 ... 65	50	MS165-65	1SAM451000R1017 ■	17,030
62 ... 73	-	MS165-73	1SAM451000R1018	19,500
70 ... 80	-	MS165-80	1SAM451000R1019	21,400

MO132 Manual motor starters with short circuit protection only

0.03	0.16	100	MO132-0.16	1SAM360000R1001	3,920
0.06	0.25	100	MO132-0.25	1SAM360000R1002	3,920
0.09	0.40	100	MO132-0.4	1SAM360000R1003	3,920
0.12	0.63	100	MO132-0.63	1SAM360000R1004	4,190
0.25	1.0	100	MO132-1.0	1SAM360000R1005 ■	4,240
0.55	1.6	100	MO132-1.6	1SAM360000R1006 ■	4,240
0.75	2.5	100	MO132-2.5	1SAM360000R1007 ■	4,240
1.5	4.0	100	MO132-4.0	1SAM360000R1008 ■	4,290
2.2	6.3	100	MO132-6.3	1SAM360000R1009 ■	4,290
4.0	10	100	MO132-10	1SAM360000R1010 ■	4,450
5.5	12	100	MO132-12	1SAM360000R1012 ■	4,450
7.5	16	100	MO132-16	1SAM360000R1011 ■	4,450
9.0	20	100	MO132-20	1SAM360000R1013 ■	4,870
12.5	25	50	MO132-25	1SAM360000R1014 ■	5,040
15.5	32	50	MO132-32	1SAM360000R1015 ■	10,380

■ Stock items

Manual motor starter

MO132, MO165, MO495 and MO497 Manual motor starters

MO165 manual motor starters with short circuit protection only

Rated operational current Amp	S/C Icu breaking capacity kA	Type	Ordering code	L.P.(₹)
16	100	MO165-16	1SAM461000R1011	11,020
20	100	MO165-20	1SAM461000R1012	11,580
32	100	MO165-32	1SAM461000R1014 ■	11,810
42	50	MO165-42	1SAM461000R1015	12,170
54	50	MO165-54	1SAM461000R1016 ■	13,420
65	50	MO165-65	1SAM461000R1017	13,940
73	30	MO165-73	1SAM461000R1018	17,550
80	30	MO165-80	1SAM461000R1019	19,250

MS132-T circuit breakers for transformer protection

Description

MS132-T Circuit breakers for transformer protection are electro-mechanical protection devices specially designed to protect control transformers on the primary side.
The short-circuit current setting is fixed to 20 times the operating current to handle the high inrush current generated by transformers.

Ie current setting range Amp	S/C Icu breaking capacity kA	Type	Ordering code	L.P.(₹)
0.10 ... 0.16	100	MS132-0.16T	1SAM340000R1001	4,560
0.16 ... 0.25	100	MS132-0.25T	1SAM340000R1002	4,560
0.25 ... 0.40	100	MS132-0.4T	1SAM340000R1003	4,560
0.40 ... 0.63	100	MS132-0.63T	1SAM340000R1004	4,950
0.63 ... 1.00	100	MS132-1.0T	1SAM340000R1005	4,990
1.00 ... 1.60	100	MS132-1.6T	1SAM340000R1006	5,230
1.60 ... 2.50	100	MS132-2.5T	1SAM340000R1007	5,230
2.50 ... 4.00	100	MS132-4.0T	1SAM340000R1008 ■	5,250
4.00 ... 6.30	100	MS132-6.3T	1SAM340000R1009 ■	5,320
6.30 ... 10.0	100	MS132-10T	1SAM340000R1010 ■	5,690
8.00 ... 12.0	100	MS132-12T	1SAM340000R1012	6,280
10.0 ... 16.0	100	MS132-16T	1SAM340000R1011 ■	6,280
16.0 ... 20.0	100	MS132-20T	1SAM340000R1013	7,580
20.0 ... 25.0	50	MS132-25T	1SAM340000R1014	7,610

Description

Manual motor starters with short Circuit protection only

Rated power 415V KW	Ie current setting range Amp	S/C Icu breaking capacity kA	Type	Ordering code	Unit L.P.(₹)
MO495 Manual motor starters with short circuit protection only					
37	75	50	MO495-75	1SAM560000R1008	Upon request
45	90	50	MO495-90	1SAM560000R1009	
55	100	50	MO495-100	1SAM560000R1010	
MO497 Manual motor starters with short circuit protection only					
37	75	100	MO497-75	1SAM590000R1008	Upon request
45	90	100	MO497-90	1SAM590000R1009	
55	100	100	MO497-100	1SAM590000R1010	

■ Stock items

Manual motor starter

MS116, MS132, MO132, MS165, MO165, MS4xx, MO4xx

General accessories

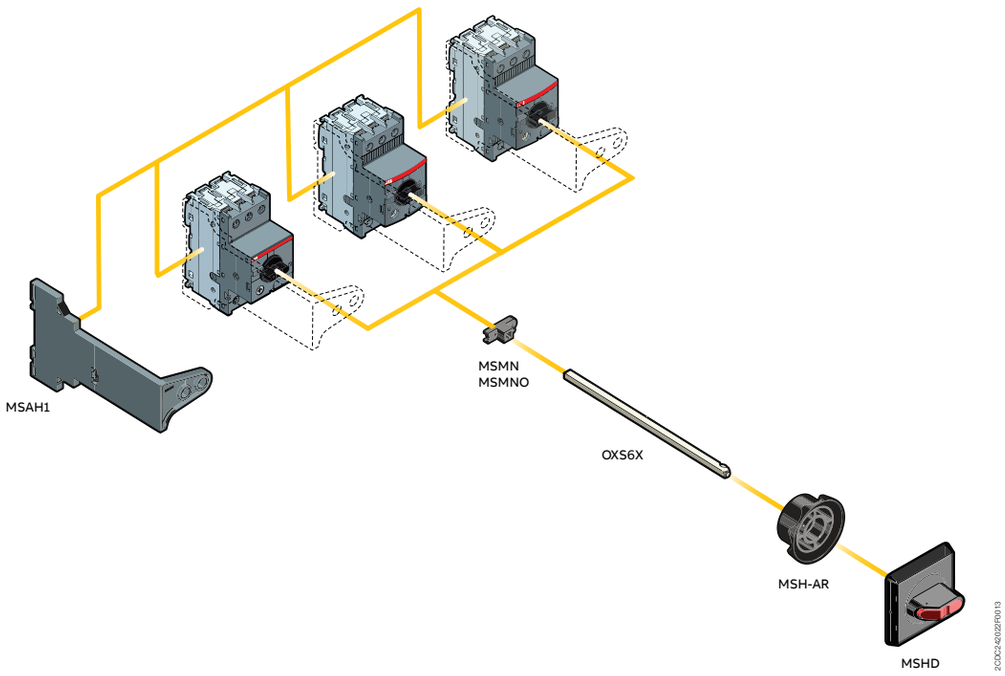
Description

With this solution of door coupling rotary mechanism it is possible to operate a Manual Motor Starter in the back of a switch cabinet from outside. The door coupling mechanism prevents opening of the door of a switch cabinet with the Manual Motor Starter in ON position. The complete mechanism includes handle, shaft, driver, shaft alignment ring and shaft supporter. All accessories fit for 6 mm shafts with a maximum length of 180 mm. The degree of protection for handles MSHD is IP64.

Ordering details

Frame	Description	Type	Ordering code	L.P.(₹)
MS116 MS132 MO132 MS165 MO165 MS4xx, MO4xx	SHAFT - Shaft diameter 6 mm. Shaft extension for door coupling driver	OXS6X130	1SCA101655R1001	420
	MSHD - Handle	MSHD-LB[1]	1SAM201920R1001 ■	1,280
		MSHD-LY[2]	1SAM201920R1002	1,280
		MSHD-LTB[3]	1SAM201920R1011 ■	1,280
		MSHD-LTY[3]	1SAM201920R1012	1,280
	MSMN- Driver	MSMN[4]	1SAM101923R0002 ■	190
		MSMNO[5]	1SAM101923R0012 ■	190
	MSH-AR Shaft alignment ring	MSH-AR	1SAM201920R1000 ■	210
MS116, MS132	MSAH1-Shaft supporter	MSAH1	1SAM201909R1021 ■	850

1) Black in colour
2) Yellow in colour
3) Indication I-O and ON-OFF+Trip indication
4) Positioning of ON indication dependent from mounting orientation of the MMS
5) Positioning of ON indication independent from mounting orientation of the MMS



■ Stock items

Manual motor starter

Accessories for MS116, MS132, MO132, MS132-T, MS165, MO165

AA1-24

Shunt trip

Suitable for	Rated voltage	Type	Ordering code	L.P.(₹)
MS116, MS132, MO132, MS132-T MS165 MO165	20 ... 24	AA1-24	1SAM201910R1001	3,280
	110	AA1-110	1SAM201910R1002 ■	3,280
	200-240	AA1-230	1SAM201910R1003 ■	3,280
	350-415	AA1-400	1SAM201910R1004	3,280

Undervoltage release

Rated voltage	Type	Ordering code	L.P.(₹)
24	UA1-24	1SAM201904R1001	2,690
110	UA1-110	1SAM201904R1004	2,690
230	UA1-230	1SAM201904R1005	2,690
415	UA1-415	1SAM201904R1007	2,690

HKF1-11

Auxiliary contacts – mountable on the front

Suitable for	Aux contacts	Type	Ordering code	L.P.(₹)
MS116, MS132, MO132, MS132-T MS165 MO165	1NO+1NC	HKF1-11	1SAM201901R1001 ■	680
	2 NO	HKF1-20	1SAM201901R1002 ■	680
	2NC	-	-	-
	1NO	HKF1-10	1SAM201901R1003 ■	420
	1NC	HKF1-01	1SAM201901R1004 ■	420

Auxiliary contacts – mountable on the right

Type	Ordering code	L.P.(₹)
HK1-11	1SAM201902R1001 ■	910
HK1-20	1SAM201902R1002 ■	910
HK1-02	1SAM201902R1003 ■	910

SK1-11

CK1-11

Suitable for	Aux contacts	Type	Ordering code	L.P.(₹)
MS116, MS132,	1NO+1NC	SK1-11**	1SAM201903R1001 ■	1,200
MO132, MS 165	2 NO	SK1-20**	1SAM201903R1002 ■	1,200
MO 165 MS132-T	2 NC	SK1-02**	1SAM201903R1003	1,200
MS132	1NO+1NC	CK1-11#	1SAM301901R1001 ■	1,680
MS132-T	2 NO	CK1-20#	1SAM301901R1002 ■	1,680
MS165	2 NC	CK1-02#	1SAM301901R1003	1,680

**for tripped alarm, max 2 piece
#for short-circuit alarm, max. 2 pieces

Manual motor starter

Accessories for MS4xx

Auxiliary contacts – mountable on the front

Suitable for	Aux contacts	Type	Ordering code	L.P.(₹)
MS49x, MO49x	1NO+1NC	HK4-11	1SAM401901R1001 ■	1,040

Auxiliary contacts – mountable on the right

Rated voltage	Type	Ordering code	L.P.(₹)
1NO+1NC	HKS4-11	1SAM401902R1001 ■	1,040
2 NO	HKS4-20	1SAM401902R1002 ■	1,040
2 NC	HKS4-02	1SAM401902R1003	1,040

HK4-11

Signaling contacts – mountable on the right*

Suitable for	Aux contacts	Type	Ordering code	L.P.(₹)
MS49x, MO49x	1NO+1NC	SK4-11	1SAM401904R1001 ■	1,880

*for tripped alarm, max 2 piece

SK4-11

AA4-24

Shunt trip units – mountable on the right

Suitable for	Rated voltage	Type	Ordering code	L.P.(₹)
MS49x, MO49x	20 ... 24	AA4-24	1SAM401907R1001	3,300
	110	AA4-110	1SAM401907R1002	3,650
	200-240	AA4-230	1SAM401907R1003	3,650
	350-415	AA4-400	1SAM401907R1004	3,650

Undervoltage release mountable on the right

Rated voltage	Type	Ordering code	L.P.(₹)
24	UA4-24	1SAM401905R1004	3,650
110	UA4-110	1SAM401905R1001	3,650
230	UA4-230	1SAM401905R1002	3,650
415	UA4-415	1SAM401905R1002	3,650

■ Stock items

Thermal overload relays

TA25, TA42 and TA75 relays

Relay range in Amps	Direct mounting on contactors	Type code reference	Ordering code	L.P.(₹)
0.1 ... 0.16	A9…A40 AX9...AX40 AL9..AL40 TAL9…TAL40	TA25DU 0.16M	1SAZ211201R2005 ■	1,510
0.16 ... 0.25		TA25DU 0.25M	1SAZ211201R2009 ■	1,510
0.25 ... 0.4		TA25DU 0.4M	1SAZ211201R2013 ■	1,510
0.4 ... 0.63		TA25DU 0.63M	1SAZ211201R2017 ■	1,510
0.63 ... 1.0		TA25DU 1.0M	1SAZ211201R2021 ■	1,510
1.0 ... 1.4		TA25DU 1.4M	1SAZ211201R2023 ■	1,510
1.3 ... 1.8		TA25DU 1.8M	1SAZ211201R2025 ■	1,510
1.7 ... 2.4		TA25DU 2.4M	1SAZ211201R2028 ■	1,510
2.2 ... 3.1		TA25DU 3.1M	1SAZ211201R2031 ■	1,510
2.8 ... 4.0		TA25DU 4.0M	1SAZ211201R2033 ■	1,510
3.5 ... 5.0		TA25DU 5.0M	1SAZ211201R2035 ■	1,510
4.5 ... 6.5		TA25DU 6.5M	1SAZ211201R2038 ■	1,510
6.0 ... 8.5		TA25DU 8.5M	1SAZ211201R2040 ■	1,510
7.5 ... 11.0		TA25DU 11M	1SAZ211201R2043 ■	1,510
10.0 ... 14.0		TA25DU 14M	1SAZ211201R2045 ■	1,510
13.0 ... 19.0		TA25DU 19M	1SAZ211201R2047 ■	1,870
18.0 ... 25.0		TA25DU 25M	1SAZ211201R2051 ■	1,870
24.0 ... 32.0		TA25DU 32M	1SAZ211201R2053 ■	2,610
TA42DU				
18.0 … 25.0	A30,A40, AX32...AX40 AL30,AL40, TAL30,TAL 40	TA42DU 25	1SAZ311201R2001 ■	3,100
22.0 … 32.0		TA42DU 32	1SAZ311201R2002 ■	3,370
29.0 … 42.0		TA42DU 42	1SAZ311201R2003 ■	3,410
TA75DU				
22 ... 32	A50...A75 AX50...AX80	TA75DU 32	1SAZ321201R2002 ■	3,900
29 ... 42		TA75DU 42	1SAZ321201R2003 ■	4,580
36 ... 52		TA75DU 52	1SAZ321201R2004 ■	4,580
45 ... 63		TA75DU 63	1SAZ321201R2005 ■	4,580
60 ... 80		TA75DU 80	1SAZ321201R2006 ■	4,910
TA80DU				
36 ... 52	A95...A110, AX95...AX150	TA80DU-52	1SAZ331201R1004 ■	5,530
45 ... 63		TA80DU-63	1SAZ331201R1005 ■	5,530
60 ... 80		TA80DU-80	1SAZ331201R1006 ■	5,940

TA25/TA42/TA75/TA80/TA110/TA200 are direct operated relays with trip class 10A

TA110DU				
66 ... 90	A95...A110, AX95...AX150	TA110DU-90	1SAZ411201R1001 ■	9,210
80 ... 110		TA110DU-110	1SAZ411201R1002 ■	10,070
TA200DU				
66 ... 90	A145...A185 AX185...AX205 AF190, AF205	TA200DU-90	1SAZ421201R1001 ■	10,600
80 ... 110		TA200DU-110	1SAZ421201R1002 ■	11,470
100 ... 135		TA200DU-135	1SAZ421201R1003 ■	12,240
110 ... 150		TA200DU-150	1SAZ421201R1004 ■	13,330
130 ... 175		TA200DU-175	1SAZ421201R1005 ■	13,880
150 ... 200		TA200DU-200	1SAZ421201R1006 ■	14,500

Accessories

Independent Mounting Kit	TA25DU0.16..25A	DB25/25	1SAZ201108R0001 ■	390
	TA25DU32	DB25/32	1SAZ201108R0002	810
	TA42DU,TA75DU, TA80DU	DB80	1SAZ301110R0001 ■	3,520
	TA110DU, TA200DU	DB200	1SAZ401110R0001 ■	3,640

■ Stock items

Thermal overload relays

TF42

T16 Relays

Relay range in Amps	Direct mounting on contactors	Type code reference	Ordering code	L.P.(₹)
0.10 ... 0.13	B6/BC6 B7/BC7 VB6/VBC6 VB7/VBC7 AS/ASL DOL starter IP65	T16-0.13	1SAZ711201R1005	Upon request
0.13 ... 0.17		T16-0.17	1SAZ711201R1008	
0.17 ... 0.23		T16-0.23	1SAZ711201R1009	
0.23 ... 0.31		T16-0.31	1SAZ711201R1013	
0.31 ... 0.41		T16-0.41	1SAZ711201R1014	
0.41 ... 0.55		T16-0.55	1SAZ711201R1017	
0.55 ... 0.74		T16-0.74	1SAZ711201R1021	
0.74 ... 1.00		T16-1.0	1SAZ711201R1023	
1.00 ... 1.30		T16-1.3	1SAZ711201R1025	
1.30 ... 1.70		T16-1.7	1SAZ711201R1028	
1.70 ... 2.30		T16-2.3	1SAZ711201R1031	
2.30 ... 3.10		T16-3.1	1SAZ711201R1033	
3.10 ... 4.20		T16-4.2	1SAZ711201R1035	
4.20 ... 5.70		T16-5.7	1SAZ711201R1038 ■	
5.70 ... 7.60		T16-7.6	1SAZ711201R1040	
7.60 ... 10.0		T16-10	1SAZ711201R1043	
10.0 ... 13.0		T16-13	1SAZ711201R1045	
13.0 ... 16.0		T16-16	1SAZ711201R1047	

TF42 Relays

Relay range in Amps	Direct mounting on contactors	Type code reference	Ordering code	L.P.(₹)
0.10 ... 0.13	AF09...AF38	TF42-0.13	1SAZ721201R1005	Upon request
0.13 ... 0.17		TF42-0.17	1SAZ721201R1008	
0.17 ... 0.23		TF42-0.23	1SAZ721201R1009	
0.23 ... 0.31		TF42-0.31	1SAZ721201R1013	
0.31 ... 0.41		TF42-0.41	1SAZ721201R1014	
0.41 ... 0.55		TF42-0.55	1SAZ721201R1017	
0.55 ... 0.74		TF42-0.74	1SAZ721201R1021	
0.74 ... 1.00		TF42-1.0	1SAZ721201R1023	
1.00 ... 1.30		TF42-1.3	1SAZ721201R1025	
1.30 ... 1.70		TF42-1.7	1SAZ721201R1028 ■	
1.70 ... 2.30		TF42-2.3	1SAZ721201R1031 ■	
2.30 ... 3.10		TF42-3.1	1SAZ721201R1033 ■	
3.10 ... 4.20		TF42-4.2	1SAZ721201R1035 ■	
4.20 ... 5.70		TF42-5.7	1SAZ721201R1038 ■	
5.70 ... 7.60		TF42-7.6	1SAZ721201R1040 ■	
7.60 ... 10.0		TF42-10	1SAZ721201R1043	
10.0 ... 13.0		TF42-13	1SAZ721201R1045 ■	
13.0 ... 16.0		TF42-16	1SAZ721201R1047 ■	
16.0 ... 20.0		TF42-20	1SAZ721201R1049	
20.0 ... 24.0		TF42-24	1SAZ721201R1051	
24.0 ... 29.0		TF42-29	1SAZ721201R1052	
29.0 ... 35.0		TF42-35	1SAZ721201R1053	
35.0 ... 38.0/40.0		TF42-38	1SAZ721201R1055	

■ Stock items

Thermal overload relays

TF42

TF65/TF96/TF140 Relay

Relay range in Amps	Direct mounting on contactors	Type code reference	Ordering code	L.P.(₹)
22.0...28.0	AF40, AF52, AF65	TF65-28	1SAZ811201R1001	Upon request
25.0...33.0		TF65-33	1SAZ811201R1002	
30.0...40.0		TF65-40	1SAZ811201R1003	
36.0...47.0		TF65-47	1SAZ811201R1004	
44.0...53.0		TF65-53	1SAZ811201R1005	
50.0...60.0		TF65-60	1SAZ811201R1006	
57.0...67.0		TF65-67	1SAZ811201R1007	
40.0...51.0	AF80, AF96	TF96-51	1SAZ911201R1001	
48.0...60.0		TF96-60	1SAZ911201R1002	
57.0...68.0		TF96-68	1SAZ911201R1003	
65.0...78.0		TF96-78	1SAZ911201R1004	
75.0...87.0		TF96-87	1SAZ911201R1005	
84.0...96.0		TF96-96	1SAZ911201R1006	
66...90	AF116, AF140	TF140DU-90	1SAZ431201R1001	
80...110		TF140DU-110	1SAZ431201R1002	
100...135		TF140DU-135	1SAZ431201R1003	
110...142		TF140DU-142	1SAZ431201R1004	

For AF190 and AF205 use TA200DU OLR

Description	Type	Ordering code	L.P.(₹)
Separate mounting kit	DB16E	1SAX101110R0001 ■	Upon request
Separate mounting kit	DB42	1SAZ701902R0001 ■	
Separate mounting kit for TF65	DB65	1SAZ801901R1001	
Separate mounting kit for TF96	DB96	1SAZ901901R1001	

Electronic overload relays and suitable contactors

Suitable for Contactor	A9 ... A16 TAL9...TAL16	A26 ... A40	A50 ... A75	A95, A110	AF190, AF205			
	AL9 ... AL16	AL30 ... AL40						
EOLR	E16DU	E45DU	E80DU	E140DU	EF205			
Suitable for Contactor	AF400,	AF580,	AF1350,		B6/BC6			
	AF460	AF750	AF1650		B7/BC7			
EOLR	EF460	EF750	E1250DU		E16DU, T16			
Suitable for Contactor	AF09 ... AF16	AF26, AF38	AF40, AF52, AF65	AF80, AF96	AF116, AF140, AF146	AF265, AF305, AF370	AF400, AF460,	AF580, AF750, AF1250
EOLR	EF19	EF45	EF65	EF96	EF146	EF370	EF460	EF750

■ Stock items

Electronic overload relays class 10, 20, 30

Electronic overload relays

Trip class 10, 20, 30 selectable

Setting range	Trip class	Type	Ordering code	L.P.(₹)
0.1... 0.32A	Selecatable 10E, 20E and 30E	E16DU 0.32	1SAX111001R1101	8,060
0.3 ... 1.0A		E16DU 1.0	1SAX111001R1102	8,060
0.8 ... 2.7A		E16DU 2.7	1SAX111001R1103 ■	8,060
1.9 ... 6.3A		E16DU 6.3	1SAX111001R1104 ■	8,900
5.7... 18.9A		E16DU 18.9	1SAX111001R1105 ■	8,900
9 ... 30A		E45DU 30	1SAX211001R1101 ■	11,460
15 ... 45A		E45DU 45	1SAX211001R1102 ■	12,480
27 ... 80A		E80DU 80	1SAX311001R1101 ■	16,390
50 ... 140A		E140DU 140	1SAX321001R1101 ■	19,740
63 ... 210A		EF205-210	1SAX531001R1101	27,680
115 ... 380A		EF370-380	1SAX611001R1101	31,080
150 ... 500A		EF460	1SAX721001R1101 ■	31,320
250 ... 800A		EF750	1SAX821001R1101	Upon request
375 ... 1250A		E1250DU 375 - 1250 A	1SFA739001R1000	Upon request
0.10…0.32A	Selecatable 10E, 20E and 30E	EF19-0.32	1SAX121001R1101	Upon request
0.30…1.00A		EF19-1.0	1SAX121001R1102	
0.80…2.70A		EF19-2.7	1SAX121001R1103 ■	
1.90…6.30A		EF19-6.3	1SAX121001R1104 ■	
5.70…18.9A		EF19-18.9	1SAX121001R1105 ■	
9.00…30.0A		EF45-30	1SAX221001R1101 ■	
15.0…45.0A		EF45-45	1SAX221001R1102 ■	
25…70A		EF65-70	1SAX331001R1101 ■	
36…100A		EF96-100	1SAX341001R1101 ■	
54…150A		EF146-150	1SAX351001R1101 ■	
63 ... 210A		EF205-210	1SAX531001R1101 ■	
115 ... 380A		EF370-380	1SAX611001R1101 ■	
150 ... 500A		EF460	1SAX721001R1101	
250 ... 800A		EF750	1SAX821001R1101	

Accessories

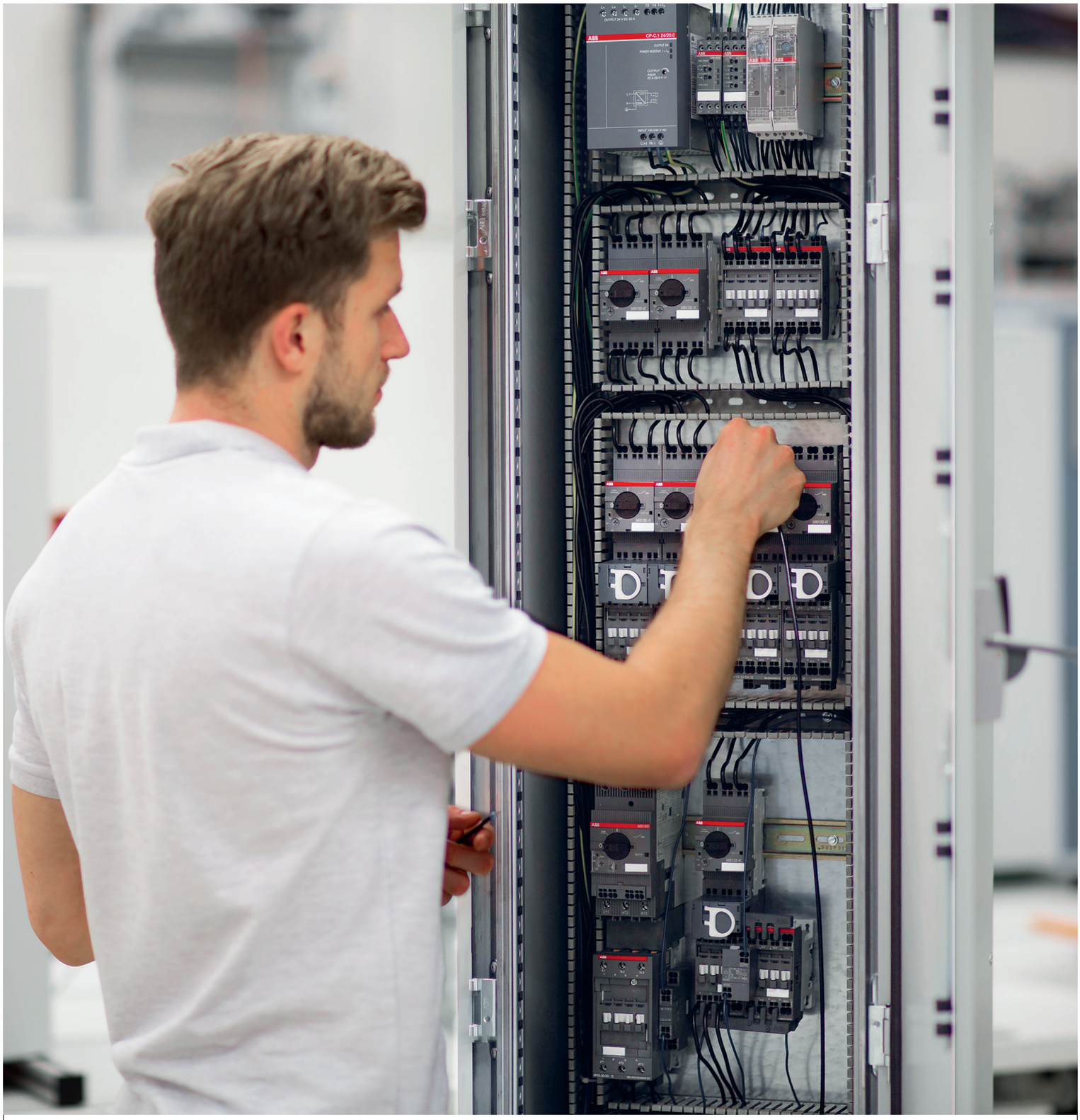
Description	Type	Ordering code	L.P.(₹)
Separate mounting kit	DB16E	1SAX101110R0001	2,530
Separate mounting kit - EF19	DB19EF	1SAX101910R1001 ■	2,560
Separate mounting kit - EF45	DB45EF	1SAX201910R0001 ■	4,090
Separate mounting kit	DB45E	1SAX201110R1001	4,090
Separate mounting kit	DB80E	1SAX301110R1001 ■	5,100
Separate mounting kit	DB140E	1SAX301110R1002	7,370

For suitable contactors refer page no. 97

■ Stock items

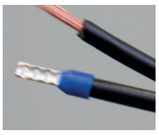
Just push it
Push-in Spring motor starting solution

- Faster than ever installation
- Easier than ever wiring
- Reliable as ever connections



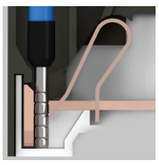
Push-in Spring motor starting solution
Complete range, complete efficiency

With the new Push-in Spring motor starting solution, one push is all you need for extremely fast wiring. No tool is required, so you can save up to 50% wiring time with Push-in Spring compared to conventional spring solutions. And the connections are just as reliable. So for speed, ease and reliability, just push it.

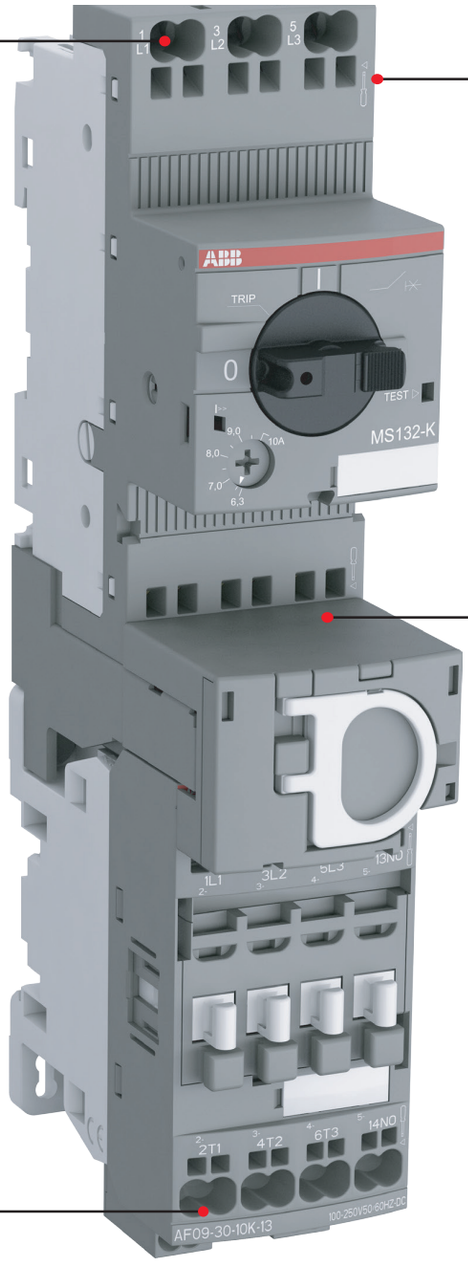


2-in-1
Benefit from both Push-in mode and Spring mode and use ferruled cables or cables without ferrules in the same terminal.

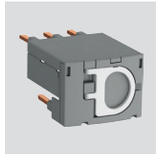
Compatible with screw range
Mount accessories for control circuits on the screw range up to 30 kW AC-3 400 V on manual motor starters and up to 45 kW AC-3 400 V, 130 A AC-1 on contactors.



Robust by design
Contact robustness by design, independent from operator.



Just one tool for everything
You only need a 3 mm screwdriver in Spring mode as well as for de-wiring the complete solution.



Tool-less connecting links
100% tool-less mounting and dismounting connecting links.

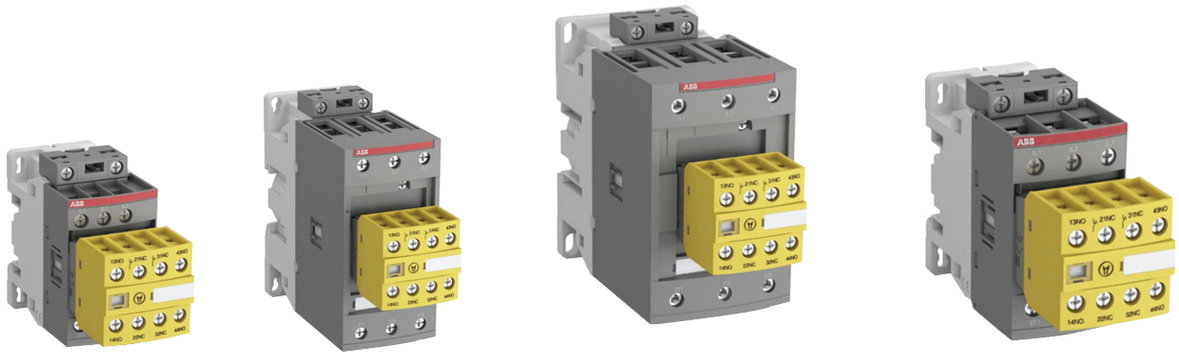
Higher connecting capacity
The solution ranges up to 18.5 kW 400 V AC-3 and 50 A AC-1 (25 hp 480 V and 45 A 600 V general use).

Note: Contact our nearest sales office for more information

AFS contactors with front-mounted auxiliary contact blocks

Dedicated for safety applications

ABB's complete range of safety components make protection systems easier to build. Designed for machine safety applications, AFS contactors come with fixed front auxiliary contact blocks, making them ideal for monitoring and controlling circuits. Mechanically linked and mirror contacts help make your system safer.



Safety and protection

Safety in all things
ABB's AFS contactors can be easily integrated in machine manufacturer's systems complying with main safety standards EN ISO 13849 and EN 62061 guaranteeing the safe use of your machinery and equipment.
The AFS contactor range is an integral part of ABB's comprehensive range of safety products.

Continuous operation

Secure uptime
The AFS contactor secures system uptime. It allows direct control by relay outputs of safety PLCs and safety relays to ensure the safety performance customers require.
A low energy auxiliary contact guarantees system status feedback.

Speed up your projects

Simplify design
Perfect design makes integration easier. ABB's distinctive yellow auxiliary contact block makes identifying the right product quicker. By reducing the contactor coil's power consumption, panels can also be made smaller and transformers more compact. In addition, all the safety data for the contactors are readily available using safety design tools.

Note: Contact our nearest sales office for more information

M mini contactors and contactor relays NEW

Reliability, always

The M contactors range is
a performance-dimension optimized solution for all the purposes.
Its high reliability, even in extreme conditions, combined to the small sizes and the safe connections lead to easy design and compact panels.

Space-saving

Small dimensions for big projects

The M range devices are a great solution when high performances are needed but the space is limited. The small dimensions of the products and the possibility to mount them side by side will maximize the cost efficiency of the cabinets without making compromises.

Reliability in extreme conditions

Made for all the applications

The technology used in the design of the contactors and the wide set of variants available guarantee reliability of operation with heavy working conditions as well. Instability of the network, high altitude and extreme temperatures will not be a limit anymore.

Optimum interface

Never without a solution

A wide set of coils is provided for matching all the requirements: pure AC or DC for very fast switching, with low energy consumption for direct control by PLC and with extended operating limits to face voltage fluctuations.
A complete offer for realizing your projects.

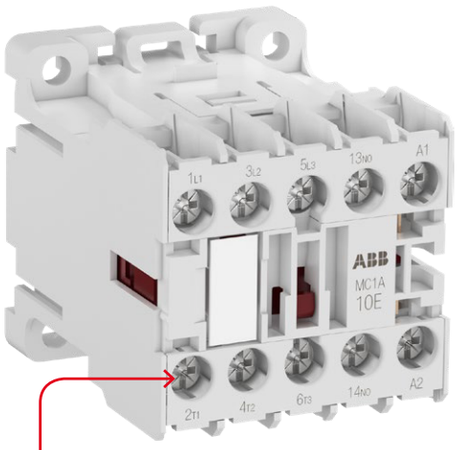
2CDC103063C0201

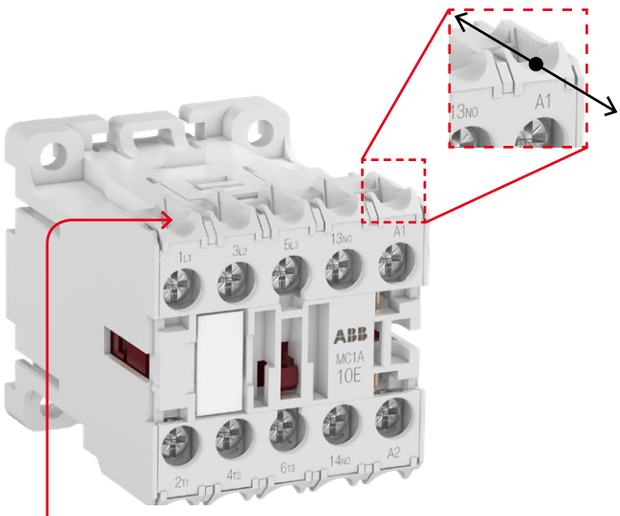
M mini contactors and contactor relays NEW

Efficient - High performances in small dimensions

AC
or
DC

Lugs easy connection





Screw

Screw terminals

The same screw is used for all the terminals and circuits of the device for an efficient and fast screwing. The connection is always stable, the range of usable wire dimensions wide and the maintenance easy.

Ring tongue ferrules

With specific screw terminal

A large set of contactors and contactor relays is equipped with specific screw terminals; these allow quick and simple installations using ring tongue ferrules. A must for applications with shocks and vibrations and when the solidity of the connection is a crucial factor.

Wide range of accessories

Up to 6 auxiliary contacts can be mounted on the devices, on the side or the front and with both the connection types. Electronic timers, surge suppressors and parallel connection links are also available in the assortment.

Assemble your reversing starter

Thanks to the mechanical interlock and the connection sets a compact reversing starter can be easily assembled for motor controlling in both directions. Auxiliary contact blocks can be installed on the front or on both sides of the reversing contactor.

Compact protection

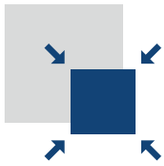
The M mini contactors are fully compatible with the T16 thermal overload relays for creating a very compact but still effective solution to defend your loads against current overloads and phase failures.

2CDC109063C0201

Electronic compact starters: HF range

A compact solution with great functionality

ABB's electronic compact starter, up to 3 kW / 400 V, is a 22.5 mm wide product. Even though its compact, it has, direct-on-line, reversed starting, motor overload protection, and emergency stop all included. It is well suited for paper machines, conveyors or machine tools.



Space saving

Up to 90% less space required
Decrease your cabinet size.
ABB's electronic compact starter is 22.5 mm wide while still containing motor starting functionalities and embedding motor protection and safety.

Safety and protection

Integrated safety function
Protect your personnel with emergency stop version complying with SIL3, PL e safety standards. Extend equipment life time and decrease maintenance cost as our starters service life is 10 times higher than electromechanical solutions.

Easy to install

Up to 75% reduced time in wiring
Wiring time upon installation is reduced to a minimum as motor protection, reversing function and emergency stop are already part of the product. Only one component to install reduces the risk of wiring errors.

Pilot devices

Pilot Devices Offering

ABB Pilot Devices offers both modular and compact range of pushbuttons. Both feature the same front-of-panel design and appear consistent when combined.

Modular range, features a wide range of operators that can be combined with high flexibility. The unique snap-on design promotes simple and fast assembly.

Compact range features an all-in-one construction and rugged design for added simplicity and ease of installation.

Modular range

Technical data compact range

Standard and approvals	
IEC / EN 60947-1	Low-voltage switchgear and controlgear - Part 1: General rules
IEC / EN 60947-5-1	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices
IEC / EN 60947-5-5	Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function
IEC / EN 60073	Basic and safety principles for man-machine
IEC / EN 60529	Degrees of protection provided by enclosures (IP Code)
EN 50013	Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number for particular control switches
DIN 40050-9	Road vechicles; degrees of protection (IP-code); protection against foreign objects; water and contact; electrical aquipment
UL 508	Industrial control equipment
CSA C22.2 No 14	Industrial control equipment

Environmental data		
Degrees of protection		
Pilot device:	**IEC/EN DIN**	**UL/CSA**
Pushbutton	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Selector switch	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Pilot light	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Emergency stops	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Terminals	IP20	

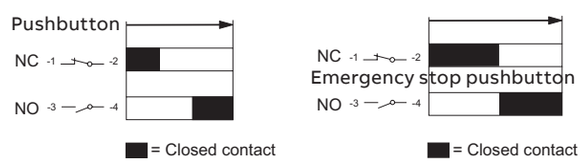
Temperature	
Ambient temperature during operation	-25 to +70 °C
Storage temperature	-40 to +85 °C

Technical data	
Cable connections	
Operator	**Cable terminal**
Pushbutton Selector switch Emergency stop	Plus-minus Pozidriv No. 2 Connectable area: min. 1 x 0.5 mm2/1 x AWG22 max. 2 x 1.5 mm2/2 x AWG14
Tightening torque	
Operators, M22	Min. 2 Nm / Max. 2.3 Nm
Pushbutton and selector switch	Cable terminals M3, 0.8 Nm
Pilot light	Cable terminals M3.5, 0.9 Nm
Emergency stop	Cable terminals M3, 0.8 Nm

Electrical data		
Electrical ratings		
Contacts		
Ratings as per IEC 60947-5-1		
Rated insulation volage, Ui		300 V
Rated thermal current, Ith		5 A
Rated operational current, Ie utilisation category AC-15	at: 240 V	1 A
Rated operational current, Ie utilzation category DC-13,	at: 24 V at: 125 V	0.3 A 0.2 A

Ratings as per UL, CSA, NEMA		**C300 AC**	**R300 DC**
Rated insulation voltage		250 V	250 V
Rated thermal current		2.5 A	1 A
Rated operational current	at: 120 V at: 125 V at: 240 V at: 250 V	1.5 A 0.75 A	 0.22 A 0.11 A

Short circuit protection	
Max. fuse at 1 kA	gG 10A
Make-and-break contacts	



LEDs (for both compact and modular)	
Service life for LED's means number of service hours until the brightness has been reduced down 50 %. Service life 50 000 h	
White LEDs	x=0.31 Y=3.2 means the position of color in the ICI Chromaticity Diagram
Over voltage on LEDs	10 % overvolatge is acceptable without affecting the service life
Voltage peaks on LEDs	Voltage peaks up to 1000 V Current peaks up to 500 mA during a few msec
Gloaming light	All integrated LEDs have a function built in to cut leakage currents

Mechanical data	
Mechanical life	
Pushbuttons, selector switches	500 000 operations
Emergency stop pushbutton	50 000 operations

Pilot devices
Compact range

Order example:
Ex 1: Type CP1-10 ■-10, to order color red replace ■ with R: CP1-10 R-10
Ex 2: Ordering code 1SFA619100R101 □ To order color red replace □ with 1: 1SFA619100R1011 ■

Color codes							
	Red ●	Green ●	Yellow ●	Blue ●	White ○	Black ●	Grey ●
Type ■	R	G	Y	L	W	B	U
Ordering code □	1	2	3	4	5	6	7

Non-illuminated flush Push-button with black plastic bezel

Non-illuminated flush pushbutton				
	Type	Pack size	Ordering code	L.P.(₹)
Momentary				
1 NO	CP1-10 □-10	1 X 10	1SFA619100R101 □	95
2 NO	CP1-10 □-20	1 X 10	1SFA619100R102 □	142
1 NC	CP1-10 □-01	1 X 10	1SFA619100R104 □	95
2 NC	CP1-10 □-02	1 X 10	1SFA619100R105 □	142
1 NO+1 NC	CP1-10 □-11	1 X 10	1SFA619100R107 □	
Maintained				
1 NO	CP2-10 □-10	1 X 10	1SFA619101R101 □	131
2 NO	CP2-10 □-20	1 X 10	1SFA619101R102 □	184
1 NC	CP2-10 □-01	1 X 10	1SFA619101R104 □	131
2 NC	CP2-10 □-02	1 X 10	1SFA619101R105 □	184
1 NO+1 NC	CP2-10 □-11	1 X 10	1SFA619101R107 □	

Non-illuminated extended Push-button with black plastic bezel

Non-illuminated extended pushbutton				
	Type	Pack size	Ordering code	L.P.(₹)
Momentary				
1 NO	CP3-10 ■-10	1 X 10	1SFA619102R101 □	131
2 NO	CP3-10 ■-20	1 X 10	1SFA619102R102 □	173
1 NC	CP3-10 ■-01	1 X 10	1SFA619102R104 □	131
2 NC	CP3-10 ■-02	1 X 10	1SFA619102R105 □	173
1 NO+1 NC	CP3-10 ■-11	1 X 10	1SFA619102R107 □	
Maintained				
1 NO	CP4-10 ■-10	1 X 10	1SFA619103R101 □	142
2 NO	CP4-10 ■-20	1 X 10	1SFA619103R102 □	173
1 NC	CP4-10 ■-01	1 X 10	1SFA619103R104 □	142
2 NC	CP4-10 ■-02	1 X 10	1SFA619103R105 □	173
1 NO+1 NC	CP4-10 ■-11	1 X 10	1SFA619103R107 □	

Pilot devices
Compact range

Color codes						
	Red ●	Green ●	Yellow ●	Blue ●	White ○	Amber ●
Type ■	R	G	Y	L	W	A
Ordering code □	1	2	3	4	5	9

Pilot Light with intergrated LED, with leakage current protection

Pilot Light with intergrated LED, with leakage current protection

Pilot Light with intergrated LED, with leakage current protection

Pilot light with integrated LED			
Type	**Pack size**	**Ordering code**	**L.P.(₹)**
24 V, AC/DC			
CL-502R	1 X 10	1SFA619402R5021 ■	152
CL-502G	1 X 10	1SFA619402R5022 ■	
CL-502Y	1 X 10	1SFA619402R5023 ■	
CL-502L	1 X 10	1SFA619402R5024 ■	294
CL-502W	1 X 10	1SFA619402R5025 ■	152
CL-502A	1 X 10	1SFA619402R5029 ■	
110-130 V, AC			
CL-513R	1 X 10	1SFA619402R5131 ■	152
CL-513G	1 X 10	1SFA619402R5132 ■	
CL-513Y	1 X 10	1SFA619402R5133 ■	
CL-513L	1 X 10	1SFA619402R5134 ■	294
CL-513W	1 X 10	1SFA619402R5135 ■	152
CL-513A	1 X 10	1SFA619402R5139 ■	
110-130 V, DC			
CL-515R	1 X 10	1SFA619402R5151 ■	152
CL-515G	1 X 10	1SFA619402R5152 ■	
CL-515Y	1 X 10	1SFA619402R5153 ■	
CL-515L	1 X 10	1SFA619402R5154 ■	294
CL-515W	1 X 10	1SFA619402R5155 ■	152
CL-515A	1 X 10	1SFA619402R5159 ■	
220 V, DC			
CL-520R	1 X 10	1SFA619402R5201 ■	152
CL-520G	1 X 10	1SFA619402R5202 ■	
CL-520Y	1 X 10	1SFA619402R5203 ■	
CL-520L	1 X 10	1SFA619402R5204 ■	294
CL-520W	1 X 10	1SFA619402R5205 ■	152
CL-520A	1 X 10	1SFA619402R5209 ■	
230 V, AC			
CL-523R	1 X 10	1SFA619402R5231 ■	152
CL-523G	1 X 10	1SFA619402R5232 ■	
CL-523Y	1 X 10	1SFA619402R5233	
CL-523L	1 X 10	1SFA619402R5234	294
CL-523W	1 X 10	1SFA619402R5235 ■	152
CL-523A	1 X 10	1SFA619402R5239	

Note:

48 V AC/DC, 60 V AC/DC, 380 V AC and 415 V AC Pilot devices are available with ABB range of Pilot lamps L.P.(₹)s will be available upon request

■ Stock items

Pilot devices
Compact range

Non-illuminated black selector switch with plastic bezel

Selector switch				
	Type	Pack size	Ordering code	L.P.(₹)
Maintained / Two-positions				
1 NO	C2SS1-10B-10	1 X 10	1SFA619200R1016	257
2 NO	C2SS1-10B-20	1 X 10	1SFA619200R1026	283
1 NC	C2SS1-10B-01	1 X 10	1SFA619200R1046	257
2 NC	C2SS1-10B-02	1 X 10	1SFA619200R1056	284
1 NO+1 NC	C2SS1-10B-11	1 X 10	1SFA619200R1076	
Maintained / Two-positions				
1 NO	C2SS2-10B-10	1 X 10	1SFA619201R1016	257
2 NO	C2SS2-10B-20	1 X 10	1SFA619201R1026	284
1 NC	C2SS2-10B-01	1 X 10	1SFA619201R1046	257
2 NC	C2SS2-10B-02	1 X 10	1SFA619201R1056	284
1 NO+1 NC	C2SS2-10B-11	1 X 10	1SFA619201R1076	
Momentary / Two-positions				
1 NO	C2SS3-10B-10	1 X 10	1SFA619202R1016	247
2 NO	C2SS3-10B-20	1 X 10	1SFA619202R1026	284
1 NC	C2SS3-10B-01	1 X 10	1SFA619202R1046	247
2 NC	C2SS3-10B-02	1 X 10	1SFA619202R1056	284
1 NO+1 NC	C2SS3-10B-11	1 X 10	1SFA619202R1076	
Maintained / Three-positions				
2 NO	C3SS1-10B-20	1 X 10	1SFA619210R1026	284
2 NC	C3SS1-10B-02	1 X 10	1SFA619210R1056	
1 NO+1 NC	C3SS1-10B-11	1 X 10	1SFA619210R1076	
Momentary / Three-positions				
2 NO	C3SS2-10B-20	1 X 10	1SFA619211R1026	284
2 NC	C3SS2-10B-02	1 X 10	1SFA619211R1056	
1 NO+1 NC	C3SS2-10B-11	1 X 10	1SFA619211R1076	
Momentary / Three-positions				
2 NO	C3SS3-10B-20	1 X 10	1SFA619212R1026	284
2 NC	C3SS3-10B-02	1 X 10	1SFA619212R1056	
1 NO+1 NC	C3SS3-10B-11		1SFA619212R1076	

Non-illuminated emergency stop pushbutton, 30 mm

Non-illuminated emergency stop pushbutton, 40 mm

Emergency stop pushbutton					
Description		Type	Pack size	Ordering code	L.P.(₹)
●		Twist release			
1 NC	Ø 30 mm	CE3T-10R-01	1	1SFA619500R1041 ■	184
2 NC	Ø 30 mm	CE3T-10R-02	1	1SFA619500R1051	247
1NO+1NC	Ø 30 mm	CE3T-10R-11	1	1SFA619500R1071	
		Pull release			
2 NC	Ø 30 mm	CE3P-10R-02	1	1SFA619501R1051	247
1NO+1NC	Ø 30 mm	CE3P-10R-11	1	1SFA619501R1071	
		Key release: Ronis 455, key code 71			
2 NC	Ø 30 mm	CE3K1-10R-02	1	1SFA619502R1051	714
1NO+1NC	Ø 30 mm	CE3K1-10R-11	1	1SFA619502R1071	
		Twist release			
1 NC	Ø 40 mm	CE4T-10R-01	1	1SFA619550R1041 ■	194
2 NC	Ø 40 mm	CE4T-10R-02	1	1SFA619550R1051 ■	247
1NO+1NC	Ø 40 mm	CE4T-10R-11	1	1SFA619550R1071 ■	
		Pull release			
2 NC	Ø 40 mm	CE4P-10R-02	1	1SFA619551R1051 ■	247
1NO+1NC	Ø 40 mm	CE4P-10R-11	1	1SFA619551R1071	
		Key release: Ronis 455, key code 71			
2 NC	Ø 40 mm	CE4K1-10R-02	1	1SFA619552R1051	777
1NO+1NC	Ø 40 mm	CE4K1-10R-11	1	1SFA619552R1071	

■ Stock items

Pilot devices
Compact range

Non-illuminated machine stop pushbutton, pull release, 30 mm

Non-illuminated machine stop pushbutton, push release, 30 mm

Machine stop					
Description		**Type**	**Pack size**	**Ordering code**	**L.P.(₹)**
●		Twist release			
1NO+1NC	Ø 30 mm	CE3T-10B-11	1	1SFA619500R1076	247
		Pull release			
1NO+1NC	Ø 30 mm	CE3P-10B-11	1	1SFA619501R1076	247
		Key release: Ronis 455, Key code 71			
1NO+1NC	Ø 30 mm	CE3K1-10B-11	1	1SFA619502R1076	714
		Twist release			
1NO+1NC	Ø 40 mm	CE4T-10B-11	1	1SFA619550R1076	247
		Pull release			
1NO+1NC	Ø 40 mm	CE4P-10B-11	1	1SFA619551R1076	247
		Key release: Ronis 455, Key code 71			
1NO+1NC	Ø 40 mm	CE4K1-10B-11	1	1SFA619552R1076	777

Buzzer						
Description	**Sound output**	**Rated current mA**	**Type**	**Pack size**	**Ordering code**	**L.P.(₹)**
Rated voltage 24 V, AC/DC						
● Black	Continuous	40	CB1-620B	1	1SFA619600R6206	1,181
● Black	Pulsation	48	CB1-630B	1	1SFA619600R6306	
Rated voltage 230 V, AC						
● Black	Continuous	40	CB1-623B	1	1SFA619600R6236	1,181
● Black	Pulsation	40	CB1-633B	1	1SFA619600R6336	
Rated voltage 110-130 V, DC						
● Black	Continuous	15	CB1-622B	1	1SFA619600R6226	1,181
● Black	Pulsation	15	CB1-632B	1	1SFA619600R6326	
Rated voltage 110-130 V, AC						
● Black	Continuous	40	CB1-621B	1	1SFA619600R6216	1,181
● Black	Pulsation	45	CB1-631B	1	1SFA619600R6316	

Assembled compact emergency stop enclosures				
Description	**Type**	**Pack size**	**Ordering code**	**L.P.(₹)**
1-seat plastic enclosure (yellow)				
■ □ Twist release. Red button 2 NC	CEPY1-1001	1	1SFA619821R1001	1,412
■ □ Pull release. Red button 2 NC	CEPY1-1002	1	1SFA619821R1002	
Emergency stop enclosure with shroud				
■ □ Twist release. Red button 2 NC	CEPY1-2002	1	1SFA619821R2002	1,701
■ □ Pull release. Red button 2 NC	CEPY1-2001	1	1SFA619821R2001	

Assembled compact emergency stop enclosures				
Description	**Type**	**Pack size**	**Ordering code**	**L.P.(₹)**
1-seat plastic enclosure with black mushroom pushbutton (dark grey)				
■ □ Twist release. Black button 1 NO + 1 NC	CEP1-1001	1	1SFA619811R1001	1,412
■ □ Pull release. Black button 1 NO + 1 NC	CEP1-1002	1	1SFA619811R1002	
Machine stop enclosure with shroud				
■ □ Twist release. Black button 1 NO + 1 NC	CEP1-2001	1	1SFA619811R2001	1,701
■ □ Pull release. Black button 1 NO + 1 NC	CEP1-2002	1	1SFA619811R2002	

Pilot devices
Technical data modular range

Standard and approvals	
IEC / EN 60947-1	Low-voltage switchgear and controlgear - Part 1: General rules
IEC / EN 60947-5-1	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices
IEC / EN 60947-5-5	Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function
IEC / EN 60073	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators
IEC / EN 60529	Degrees of protection provided by enclosures (IP Code)
EN 50013	Low-voltage switchgear and controlgear for industrial use - Termnal marking and distinctive number for particular control switches
UL 508	Industrial control equipment
CSA C22.2 No 14	Industrial control equipment

Environmental data		
Degrees of protection		
Operators	IEC/EN	UL/CSA
Pushbutton	IP 66	Type 1, 3R, 4, 4X, 12, 13
Double pushbutton	IP 66	Type 1, 3R, 4, 4X, 12, 13
Mushroom	IP 66	Type 1, 3R, 4, 4X, 12, 13
Emergency stop	IP 66	Type 1, 3R, 4, 4X, 12, 13
Selector switch	IP 66	Type 1, 3R, 4, 4X, 12, 13
Key operated selector switch	IP 66	Type 1, 3R, 4, 4X, 12
Toggle switch	IP 66	Type 1, 3R, 4, 4X, 12, 13
Extreme duty pushbutton	-	Type 1, 3R, 4, 4X
Reset button	IP 66	Type 1, 3R, 4, 4X, 12, 13
Joystick	IP 66, 67, 69K	Type 1, 4X (indoor), 12, 13
Pilot lights	IP 66	Type 1, 3R, 4, 4X, 12, 13
Buzzer	IP 65	Type 4X
Potentiometer	IP 66	Type 1, 3R, 4, 4X, 12, 13
Contact block and transformer block	IP 20	-
Plastic enclosures	IP 66	Type 1, 3R, 4, 4X, 12, 13
Metallic enclosures	IP 66, 67, 69K	-

Temperature	
Ambient temperature during operation	-25 to +70 °C
Storage temperature	-40 to +85 °C

Technical data	
Terminals	
Plus-minus Pozidriv No.2 screw with DIN-washer	
Connectable area	min. 1 x 0.5 mm2 AWG 20 max. 2 x 2.5 mm2/2 x AWG14

Tightening torque	
Operators, M22	Min. 2 Nm / Max. 2.3 Nm
Cable terminals	0.9 Nm
Recommended maximum number of blocks: 6	

Electrical data		
Standards contact blocks		
Mechanical endurance	10 million operations	
Self cleaning contacts of silver, NC contact with positive opening. At voltages and currents below 24 V and 5.6 mA we recommended our micro switch blocks or as an alternative, gold plated contacts.		

Ratings as per IEC 60947-5-1		
Rated insulation volage, Ui		690 V
Rated thermal current, Ith		10 A
Rated operational curent, Ie utilisation category AC 15,	at: 120 V at: 230 V at: 400 V at: 690 V	8 A 6 A 4 A 2 A
Rated operational curent, Ie utilisation category DC 13,	at: 24 V at:125 V at: 250 V	5 A 1.1 A 0.55 A

Ratings as per UL, CSA, NEMA	A600 AC		Q600 DC
Rated insulation voltage	600 V		600 V
Rated thermal current	10 A		2.5 A
Rated operational current	at: 120 V at: 240 V at: 480 V at: 600 V	6 A 3 A 1.5 A 1.2 A	at: 125 V at: 250 V at: 480 V at: 600 V	0.55 A 0.27 A 0.10 A 0.10 A

Contact resistance	< 25 mΩ	
Compulsory functiontest	at: 5V, 16 mA	
Micro switch block / ratings as per IEC 60947-5-1		
Rated insulation voltage, U_i		125 V
Rated thermal current, I_{th}		3 A
Rated operational current, I_e utilisation category AC 14,	at: 125 V	0.5 A
Rated operational current, I_e utilization category DC 13,	at: 24 V	0.3 A
Rated operational current, I_e utilization category DC 12,	at: 24 V	0.1 A
Minimum switching capacity	3 V DC	1 mA

Ratings as per UL 508		
	125 V AC	3 A
	60 V DC	0.2 A
	48 V DC	0.1 A

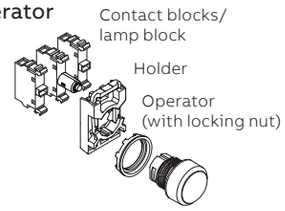
Short circuit protection	
Max. fuse at 1 kA	gG 16A
Note: LEDs see technical data compact range	

Mechanical data	
Mechanical life	
Pushbuttons, momentary mushroom	2 million operations
Selector switches. Present standard (no operation of center contact)	500 000 operations
With operation of center contact	250 000 operations
	150 000 operations
Maintained mushroom, pushbutton, key operated selector switch and double pushbutton	500 000 operations
Emergency stop	100 000 operations
Toggle switch	1 million operations

Pilot devices
Modular range

Modular product features
- Widest range of integrated LEDs on the market
- Parts of Range IP 66, 67, 69K All range & UL Type 1, 3R, 4, 4X, 12, 13
- Snap-on feature reduces installation time
- Quick release contact holder
- Several bezel colors
- Unique low energy solutions, including wiping action

How to order standard operators:
- Non- illuminated operator
+ holder
+ contact block(s)
- Illuminated operator
+ holder
+ contact block(s)
+ lamp block



*Only for illuminated operator

How to order Bezel:

Bezel options	Type	Ordering code
Black plastic	MPX-10X	1SFA611 10X R1XXX

Color codes							
	Red ●	Green ●	Yellow ●	Blue ●	White ○	Black ●	Grey ●
Type ■	R	G	Y	L	W	B	U
Ordering code ☐	1	2	3	4	5	6	7

Ordering example:

Ex 1: Type MP1-10■, to order color red replace ■ with R: MP1-10R

Ex 2: Ordering code 1SFA611100R1001 n, to order color red replace ☐ with 1: 1SFA619100R1001

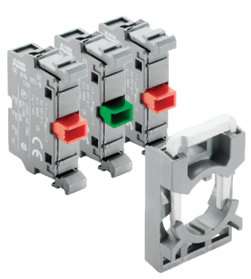
Operator : Flush button Non-illuminated push button				
	Type	Pack size	Ordering code	L.P.(₹)
Momentary	MP1-10 ■	1 X 10	1SFA611100R100 ☐	47
Maintained	MP2-10 ■	1 X 10	1SFA611101R100 ☐	74
Operator : Extended button Non-illuminated push button				
Momentary	MP3-10 ■	1 X 10	1SFA611102R100 ☐	74
Maintained	MP4-10 ■	1 X 10	1SFA611103R100 ☐	74

Color codes								
	Red ●	Green ●	Yellow ●	Blue ●	White ○	Black ●	Grey ●	Amber ●
Type ■	R	G	Y	L	W	B	U	AN
Ordering code ☐	1	2	3	4	5	6	7	9

	Type	Pack size	Ordering code	L.P.(₹)
Operator : Flush button illuminated push button				
Momentary	MP1-11■	1 X 10	1SFA611100R110 ☐	68
	MP1-11AN	1 X 10	1SIN611100R1109	63
Maintained	MP2-11■	1 X 10	1SFA611101R110 ☐	89
	MP2-11AN	1 X 10	1SIN611101R1109	
Operator : Extended button illuminated push button				
Momentary	MP3-11■	1 X 10	1SFA611102R110 ☐	89
	MP3-11AN	1 X 10	1SIN611102R1109	
Maintained	MP4-11■	1 X 10	1SFA611103R110 ☐	
	MP4-11AN	1 X 10	1SIN611103R1109	

Note:

1. Integrated LED block to be considered from MLBL range of suitable voltage from page no. 109



Blocks and holder

Separate holder				
Holders for three blocks	MCBH-00	1 X 10	1SFA611605R1100	16
Contact blocks only (without holder)				
1 NO	MCB-10	1 X 10	1SFA611610R1001 ■	58
1 NC	MCB-01	1 X 10	1SFA611610R1010 ■	58

■ Stock items

Pilot devices
Modular range

LED lamp block with built in leakage currage protection

Operator : Pilot lights				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● Red	ML1-100R	1 X 10	1SFA611400R1001 ■	53
● Green	ML1-100G	1 X 10	1SFA611400R1002 ■	
● Yellow	ML1-100Y	1 X 10	1SFA611400R1003 ■	
● Blue	ML1-100L	1 X 10	1SFA611400R1004	
○ White	ML1-100W	1 X 10	1SFA611400R1005	
● Amber	ML1-100AN	1 X 10	1SIN611400R1009	

Separate holder				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
Holders for three blocks	MCBH-00	1 X 10	1SFA611605R1100 ■	16

Lamp blocks with integraded LED				
Rated voltage 24 V, AC/DC				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● Red	MLBL-01R	1 X 10	1SFA611621R1011 ■	131
● Green	MLBL-01G	1 X 10	1SFA611621R1012 ■	
● Yellow	MLBL-01YN	1 X 10	1SIN611621R1013	
● Blue	MLBL-01L	1 X 10	1SFA611621R1014 ■	294
○ White	MLBL-01W	1 X 10	1SFA611621R1015 ■	131
● Amber	MLBL-01A	1 X 10	1SFA611621R1016	
Rated voltage 110-130 V, AC				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● Red	MLBL-04R	1 X 10	1SFA611621R1041	131
● Green	MLBL-04G	1 X 10	1SFA611621R1042	
● Yellow	MLBL-04YN	1 X 10	1SIN611621R1043	
● Blue	MLBL-04L	1 X 10	1SFA611621R1044	294
○ White	MLBL-04W	1 X 10	1SFA611621R1045	131
● Amber	MLBL-04A	1 X 10	1SFA611621R1046	
Rated voltage 110-130 V, DC				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● Red	MLBL-05R	1 X 10	1SFA611621R1051	131
● Green	MLBL-05G	1 X 10	1SFA611621R1052	
● Yellow	MLBL-05YN	1 X 10	1SIN611621R1053	
● Blue	MLBL-05L	1 X 10	1SFA611621R1054	294
○ White	MLBL-05W	1 X 10	1SFA611621R1055	131
● Amber	MLBL-05A	1 X 10	1SFA611621R1056	
Rated voltage 220 V, DC				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● Red	MLBL-06R	1 X 10	1SFA611621R1061	131
● Green	MLBL-06G	1 X 10	1SFA611621R1062	
● Yellow	MLBL-06YN	1 X 10	1SIN611621R1063	
● Blue	MLBL-06L	1 X 10	1SFA611621R1064	294
○ White	MLBL-06W	1 X 10	1SFA611621R1065	131
● Amber	MLBL-06A	1 X 10	1SFA611621R1066	
Rated voltage 230 V, AC				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● Red	MLBL-07R	1 X 10	1SFA611621R1071	131
● Green	MLBL-07G	1 X 10	1SFA611621R1072 ■	
● Yellow	MLBL-07YN	1 X 10	1SIN611621R1073	
● Blue	MLBL-07L	1 X 10	1SFA611621R1074 ■	294
○ White	MLBL-07W	1 X 10	1SFA611621R1075	131
● Amber	MLBL-07A	1 X 10	1SFA611621R1076	

Note: 48 V AC/DC, 60 V AC/DC, 380 V AC and 415 V AC L.P.(₹)s will be available upon request

■ Stock items

Pilot devices
Modular range

Operator : Emergency stop pushbutton				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
●	**Ø 30 mm / Non-illuminated**			
Twist release	MPET3-10R	1	1SFA611520R1001	367
Pull release	MPEP3-10R	1	1SFA611521R1001	
Key release code 71/Ronis 455	MPEK3-11R	1	1SFA611522R1101	767
Key release code 72/ Ronis 421	MPEK3-12R	1	1SFA611522R1201	
Key release code 73/ Ronis 3433-E	MPEK3-13R	1	1SFA611522R1301	
	Ø 40 mm / Non-illuminated			
Twist release	MPET4-10R	1	1SFA611523R1001	320
Pull release	MPEP4-10R	1	1SFA611524R1001	727
Key release code 71/Ronis 455	MPEK4-11R	1	1SFA611525R1101	
Key release code 72/ Ronis 421	MPEK4-12R	1	1SFA611525R1201	
Key release code 73/ Ronis 3433-E	MPEK4-13R	1	1SFA611525R1301	
	Ø 60 mm /Non-illuminated			
Twist release	MPMT4-10R	1	1SFA611513R1001	614
Pull release	MPMP4-10R	1	1SFA611514R1001	509
	Ø 40 mm / Illuminated			
Twist release	MPMT3-11R	1	1SFA611510R1101 ■	588
Pull release	MPMP3-11R	1	1SFA611511R1101	473
	Ø 60 mm / Illuminated			
Twist release	MPMT4-11R	1	1SFA611513R1101	803
Pull release	MPMP4-11R		1SFA611514R1101	646

Refer holder and contact block configuration for standard operator from page no. 108

Operator : Machine stop pushbutton				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
●	**Ø 30 mm**			
Twist release	MPET3-10B	1	1SFA611520R1006	368
Pull release	MPEP3-10B	1	1SFA611521R1006	
Key release	MPEK3-10B	1	1SFA611522R1106	767
	Ø 40 mm			
Twist release	MPET4-10B	1	1SFA611523R1006	368
Pull release	MPEP4-10B	1	1SFA611524R1006	
Key release	MPEK4-10B	1	1SFA611525R1061	767

Refer holder and contact block configuration for standard operator from page no. 108

Operator : Double pushbutton				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● **Upper** ● **Lower**	**Extended lower button / Non-illuminated**			
I / O	MPD13-11B	1	1SFA611142R1106	368
START / STOP	MPD15-11B	1	1SFA611144R1106	
● **Upper** ● **Lower**	**Extended lower button / Illuminated**			
I / O	MPD13-11C	1	1SFA611142R1108	546
START / STOP	MPD15-11C	1	1SFA611144R1108	
● **Upper** ● **Lower**	○ **Upper Extended lower button /** ● **Lower Non-illuminated**			
I / O	MPD17-11B	1	1SFA611146R1106	368

Refer holder and contact block configuration for standard operator

■ Stock items

Pilot devices
Modular range

Operator: non-illuminated black two-position selector switch

Type	Pack size	Ordering code	L.P.(₹)
Maintained / Short handle			
M2SS1-10B	1	1SFA611200R1006	247
Maintained / Short handle			
M2SS2-10B	1	1SFA611201R1006	247
Momentary / Short handle, spring return from C to B			
M2SS3-10B	1	1SFA611202R1006	257
Maintained / Long handle			
M2SS4-10B	1	1SFA611203R1006	756
Maintained / Long handle			
M2SS5-10B	1	1SFA611204R1006	756
Momentary / Long handle, spring return from C to B			
M2SS6-10B	1	1SFA611205R1006	777

Refer holder and contact block configuration for standard operator

Operator: non-illuminated black three-position selector switch

Type	Pack size	Ordering code	L.P.(₹)
Maintained / Short handle			
M3SS1-10B	1	1SFA611210R1006	247
Momentary / Short handle, spring return from A to B and C to B			
M3SS2-10B	1	1SFA611211R1006	257
Momentary / Short handle, spring return from C to B			
M3SS3-10B	1	1SFA611212R1006	257
Momentary / Short handle, spring return from A to B			
M2SS7-10B	1	1SFA611216R1006	257
Maintained / Long handle			
M3SS4-10B	1	1SFA611213R1006	756
Momentary / Long handle, spring return from A to B and C to B			
M3SS5-10B	1	1SFA611214R1006	777
Momentary / Long handle, spring return from C to B			
M3SS6-10B	1	1SFA611215R1006	981
Momentary / Long handle, spring return from A to B			
M2SS8-10B	1	1SFA611217R1006	704

Refer holder and contact block configuration for standard operator

Operator: non-illuminated black three-position selector switch with operation of center position

Type	Pack size	Ordering code	L.P.(₹)
Short handle			
M3SSC1-10B	1	1SFA611250R1006	273
M3SSC2-10B	1	1SFA611251R1006	
M3SSC3-10B	1	1SFA611252R1006	
M3SSC7-10B	1	1SFA611256R1006	
Long handle			
M3SSC4-10B	1	1SFA611253R1006	803
M3SSC5-10B	1	1SFA611254R1006	
M3SSC6-10B	1	1SFA611255R1006	
M3SSC8-10B	1	1SFA611258R1006	

Refer holder and contact block configuration for standard operator

■ Stock items

Pilot devices
Modular range

Operator : Key operated selector switch

	Type		Pack size	Ordering code	L.P.(₹)
●	Maintained / Two positions (The key can be removed in both position)				
71/Ronis 455	M2SSK1-101		1	1SFA611280R1001	588
72/Ronis 421	M2SSK1-102		1	1SFA611280R1002	
73/Ronis 3433-E	M2SSK1-103		1	1SFA611280R1003	
Random selection*)	M2SSK1-104		1	1SFA611280R1004	
	Maintained / Two positions (The key can be removed in position B only)				
71/Ronis 455	M2SSK2-101		1	1SFA611281R1001	588
72/Ronis 421	M2SSK2-102		1	1SFA611281R1002	
73/Ronis 3433-E	M2SSK2-103		1	1SFA611281R1003	
Random selection*)	M2SSK2-104		1	1SFA611281R1004	
	Momentary / Two positions, spring return from C to B (The key can be removed in position B only)				
71/Ronis 455	M2SSK3-101		1	1SFA611282R1001	646
72/Ronis 421	M2SSK3-102		1	1SFA611282R1002	
73/Ronis 3433-E	M2SSK3-103		1	1SFA611282R1003	
Random selection*)	M2SSK3-104		1	1SFA611282R1004	

Refer holder and contact block configuration for standard operator

Operator : Key operated selector switch

	Type		Pack size	Ordering code	L.P.(₹)
●	Maintained / Three positions (The key can be removed in both position)				
71/Ronis 455	M3SSK1-101		1	1SFA611283R1001	588
72/Ronis 421	M3SSK1-102		1	1SFA611283R1002	
73/Ronis 3433-E	M3SSK1-103		1	1SFA611283R1003	
Random selection*)	M3SSK1-104		1	1SFA611280R1004	
	Maintained / Three positions (The key can be removed in position B only)				
71/Ronis 455	M3SSK2-101		1	1SFA611284R1001	588
72/Ronis 421	M3SSK2-102		1	1SFA611284R1002	
73/Ronis 3433-E	M3SSK2-103		1	1SFA611284R1003	
Random selection*)	M3SSK2-104		1	1SFA611284R1004	
	Momentary / Three positions, spring return from C to B (The key can be removed in position B only)				
71/Ronis 455	M3SSK3-101		1	1SFA611285R1001	646
72/Ronis 421	M3SSK3-102		1	1SFA611285R1002	
73/Ronis 3433-E	M3SSK3-103		1	1SFA611285R1003	
Random selection*)	M3SSK3-104		1	1SFA611285R1004	

Refer holder and contact block configuration for standard operator

1)

2)

3)

Potentiometer

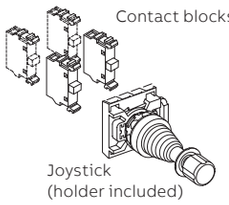
	Type	Pack size	Ordering code	L.P.(₹)
●	with resistor 5 kohm			
Black plastic	MT-105B	1	1SFA611410R1056	3,371
●	with resistor 10 kohm			
Black plastic	MT-110B	1	1SFA611410R1106	3,371
●	with resistor 50 kohm			
Black plastic	MT-150B	1	1SFA611410R1506	3,539

Toggle switch*

	Type	Pack size	Ordering code	L.P.(₹)
●	Maintained / Two-positions			
Black plastic	MTS1-10B	1	1SFA611300R1006	567
●	Momentory / Three-positions			
Black plastic	MTS2-10B	1	1SFA611301R1006	735
●	Maintained / Three-positions			
Black plastic	MTS3-10B	1	1SFA611302R1006	567

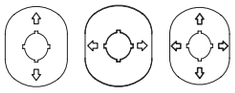
Pilot devices
Modular range

• Joystick **(holder included)**
+ contact blocks



Contact blocks

Joystick
(holder included)



Joystick				
●	**Type**	**Pack size**	**Ordering code**	**L.P.(₹)**
	Maintained			
2 - position	MJS1-60B	1	1SFA611701R6006	3,229
4 - position	MJS5-60B	1	1SFA611705R6006	3,549
	Spring return			
2 - position	MJS2-60B	1	1SFA611702R6006	3,229
4 - position	MJS6-60B	1	1SFA611706R6006	3,549
	Maintained / Latching function			
2 - position	MJS7-60B	1	1SFA611707R6006	3,549
4 - position	MJS11-60B	1	1SFA611711R6006	4,106
	Spring return / Latching function			
2 - position	MJS8-60B	1	1SFA611708R6006	3,549
4 - position	MJS12-60B	1	1SFA611712R6006	4,106

Legend plates for joystick				
2 - position	MA6-1240	1	1SFA611930R1240	273
2 - position	MA6-1241	1	1SFA611930R1241	
4 - position	MA6-1242	1	1SFA611930R1242	

Refer holder and contact block configuration for standard operator

Micro switch block

Micro switch blocks				
Description	**Type**	**Pack size**	**Ordering code**	**L.P.(₹)**
1 NO	MCBL-10	1	1SFA611612R1010	473
1 NC	MCBL-01	1	1SFA611612R1001	

Extreme duty pushbutton				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
●●●	For Ø 30 mm mounting hole			
	KP6-40 ■	1	1SFA616105R400 □	1,370

Refer contact block configuration for standard operator

Reset pushbutton				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
● ○	**With shaft**			
No text	KPR3-100 ■	1	1SFA616162R100 □	425
● ○	**Without shaft**			
No text	KPR1-100 ■	1	1SFA616160R100 □	320
● ○	**Accessories: Shaft (black)**			
No text	KA1-8046	1	1SFA616920R8046	131

Mounting tool

Protectice cover

30 mm adaptor

Membrane of silicon rubber

Accessories				
	Type	**Pack size**	**Ordering code**	**L.P.(₹)**
Mounting tool	MA1-8015	1	1SFA611920R8015	294
Membrane of silicone flush button	KA1-8052	1	1SFA611920R8052	184
Membrane of silicone extended button	KA1-8002	1	1SFA611920R8002	347
Locking nut	MA1-8019	1	1SFA611920R8019	226

*Spacer is needed when legendplates are not used in plastic enclosures

Pilot devices
Enclosures

Empty enclosures

Shroud

DIN-rail adaptor

Empty plastic enclosures for modular and compact range				
Description	**Type**	**Pack size**	**Ordering code**	**L.P.(₹)**
1-seat	MEPY1-0	1	1SFA611821R1000	1,680
1-seat	MEP1-0	1	1SFA611811R1000	1,649
2-seat	MEP2-0	1	1SFA611812R1000	1,523
3-seat	MEP3-0	1	1SFA611813R1000	2,158
4-seat	MEP4-0	1	1SFA611814R1000	2,930
6-seat	MEP6-0	1	1SFA611816R1000	4,463
Shroud for modular range push button operator				
Yellow	MA1-8053	1	1SFA611920R8053	473
Grey	MA1-8128	1	1SFA611920R8128	1,423
Empty enclosures for compact range				
Yellow/Light grey	CEPY1-0	1	1SFA619821R1000	1,433
Dark grey/Light grey	CEP1-0	1	1SFA619811R1000	1,171
Shroud for compact range push buttons				
Yellow	CA1-8053	1	1SFA619920R8053	294
Grey	CA1-8054	1	1SFA619920R8054	294
DIN-rail adaptor				
DIN-rail adaptor	MA1-8131	1	1SFA611920R8131	793

Signal towers and signal beacons*

* Price on request

Signal tower and beacons

KL70-401B

1SFC151507F0001

KL70-401Y

SFC151508F0001

KA4-102...

SFC151509F0001

Description					
Colors	● **Red**	● **Green**	● **Yellow**	● **Blue**	○ **Clear**
Replace ■ in type with	R	G	Y	B	C
Replace □ in Ordering code with	1	2	3	4	8

Description	Type	Ordering code	L.P.(₹)
Light element			
Available in red, green, yellow, blue and clear			
Permanent light, 12-240 V AC/DC For bulb BA 15d. Bulb not included	KL70-401 ■	1SFA616070R401 □	1,760
Blinking light, 24 V AC/DC with integrated LED	KL70-306 ■	1SFA616070R306 □	7,335
Flashing light, 24 V AC/DC with integrated xenon tube	KL70-203 ■	1SFA616070R203 □	10,158
Blinking light, 115 V AC with integrated LED	KL70-342 ■	1SFA616070R342 □	6,595
Flashing light, 115 V AC with integrated xenon tube	KL70-113 ■	1SFA616070R113 □	8,228
Blinking light, 230 V AC with integrated LED	KL70-352 ■	1SFA616070R352 □	7,335
Flashing light, 230 V AC with integrated xenon tube	KL70-123 ■	1SFA616070R123 □	7,875
LED permanent light, 24 V AC/DC with integrated LED	KL70-305 ■	1SFA616070R305 □	6,900
LED rotating light, 24 V AC/DC with integrated LED	KL70-307 ■	1SFA616070R307 □	15,500

Bulbs: Bulb Ba 15d, 42mm, max 7 W for permanent or blinking light			
24 V, 5 W, AC/DC	KA4-1021	1SFA616923R1028	138
115 V, 5 W, AC/DC	KA4-1118	1SFA616923R1118	210
230 V, 5 W, AC/DC	KA4-1148	1SFA616923R1148	220

LED bulbs Ba 15d, 40mA			
Available in red, green, yellow, blue and white			
24 V AC/DC	KA4-102 ■	1SFA616924R102 □	4,310

Audible modules buzzer element. 85 dB, continuous or pulsating tone, adjustable			
24 V AC/DC	KB70-3001	1SFA616071R3001	4,525
115 V AC	KB70-3101	1SFA616071R3101	5,165
115 V AC	KB70-1201	1SFA616071R1201	4,800

Signal towers

KT70-10...

1SFC151510F0001

KA70-1001

1SFC151511F0001

KA70-1034

1SFC151512F0001

Description	Type	Ordering code	LP
Siren element			
Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 115 V AC	KS70-1104	1SFA616073R1104	7,565
Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 230 V AC	KS70-1204	1SFA616073R1204	7,565
Multi function, 7 diff. Tones adjustable, volume adjustable, 100 dB, 24 V DC	KS70-2004	1SFA616073R2004	8,304
Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 24 V AC/DC	KS70-3004	1SFA616073R3004	6,390
Continuous tone alternating 108 dB, 24 V DC	KS70-2002	1SFA616073R2002	4,915

Terminal elements			
For tube mounting, including cap	KT70-1001	1SFA616075R1001	2,580
For bracket or base, including cap	KT70-1002	1SFA616075R1002	2,580

Special parts			
Contact box			
Cable exit at side	KA70-1001	1SFA616077R1001	540
Magnetic base	KA70-1002	1SFA616077R1002	3,365

Base with tube			
D=25 mm L=110 mm	KA70-1011	1SFA616077R1011	1,366

Base for tube			
D=25 mm, plastic	KA70-1012	1SFA616077R1012	655
D=25 mm, metal	KA70-1013	1SFA616077R1013	2,135

Tube, anodized aluminum			
D=25 mm L=250 mm	KA70-1021	1SFA616077R1021	1,098
D=25 mm L=400 mm	KA70-1022	1SFA616077R1022	1,323
D=25 mm L=800 mm	KA70-1023	1SFA616077R1023	2,645

Bracket			
1-sided mounting	KA70-1031	1SFA616077R1031	955
2-sided mounting	KA70-1032	1SFA616077R1032	955
For tube mounting	KA70-1033	1SFA616077R1033	1,010
For surface mounting	KA70-1034	1SFA616077R1034	1,010

Signal beacons

SFC151513F0001

KSB-401G

SFC151514F0001

KASB-100

Description					
Colors	● **Red**	● **Green**	● **Yellow**	● **Blue**	○ **Clear**
Replace ■ in type with	R	G	Y	B	C
Replace □ in Ordering code with	1	2	3	4	8

Light element: Available in red, green, yellow, blue and clear			
Permanent light, 12-240 V AC/DC. For Bulb BA 15dBulb not included	KSB-401 ■	1SFA616080R401 □	11,220
Flashing light, 24 V DC. With integrated xenon tube	KSB-203 ■	1SFA616080R203 □	11,270
Flashing light, 115 V AC. With integrated xenon tube	KSB-113 ■	1SFA616080R113 □	9,600
Flashing light, 230 V AC. With integrated xenon tube	KSB-123 ■	1SFA616080R123 □	9,600

Light element LED: Available in red, green and yellow			
LED permanent light, 24 V AC/DC. With integrated LED	KSB-305 ■	1SFA616080R305 □	12,428
LED blinking light, 24 V AC/DC. With integrated LED	KSB-306 ■	1SFA616080R306 □	12,428
LED rotation light, 24 V AC/DC. With integrated LED	KSB-307 ■	1SFA616080R307 □	11,220

Special parts			
Anti-twist device	KASB-100	1SFA616087R1000	428

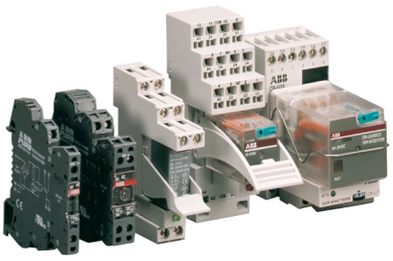
Bulbs for signal beacons max 10 W. For permanent light Bulb Ba 15d, 52mm			
12 V, 7 W, AC/DC	KA3-1018	1SFA616922R1018	162
24 V, 7 W, AC/DC	KA3-1028	1SFA616922R1028	221
115 V, 7 W, AC/DC	KA3-1118	1SFA616922R1118	258
220-260 V, 7-10 W, AC/DC	KA3-1148	1SFA616922R1118	266

Electronic products and relays
The product range

Time relays, CT range
Three ranges of electronic timers provide timing functions for all applications: the CT-D range with a width of just 17.5 mm; the CT-E and CT-C range, the ideal solution for serial applications; and the CT-S range that has two different types of connection terminals and is ideally suited for universal use. The CT range has a wide varity of timing functions (from ON or OFF delay to star-delta changeover). The time relays are available with output relays, solid-state outputs and precise direct time adjustment.

Measuring and monitoring relays, CM range
State-of-the-art monitors for single and three-phase systems. Monitoring of: voltage, current, frequency, power factor (motor load), thermistors, temperature, liquid level, insulation resistance, and grid feeding. ABB has one of the world's widest product ranges of measuring and monitoring relays. The CM range is a key product line of the EPR range.

Power supplies, CP range
Modern power supply units are a vital component in most areas of energy management and automation technology. As your global partner in this area, ABB pays close attention to corresponding requirements. Innovation is the key to the substantial enlargement of our power supply product range. ABB offers four different product lines for single and three-phase supplies, output voltages 5/12/24, and 48 VDC in plastic and metal enclosure, as well as various accessories.



Interface relays and optocouplers, CR range and R600
Interface relays and optocouplers are widely used in various industrial applications. As an interface, they link the controller, e.g. PLC (programmable logic controller), PC or field bus systems to the sensor/actuator level. Here, they have various functions: switching AC or DC loads with different resistive, inductive and capacitive parts, switching voltages from a few mV up to 250 V, switching currents from a few mA up to 16 A, amplification of weak control signals, electrical isolation of control and load circuits, and signal multiplying.

Logic relays, CL range
CL range logic relays are suitable for small and medium-sized control tasks and can substitute logic wiring quickly and easily. Three different ranges are available: stand alone, expandable and the display systems.

Time relays

CT-C, CT-S and CT-D

CT-C range
Ordering details

2CDC251030V0018

CT-MFC.12

2CDC251029V0018

CT-ERC.22

M Control input with voltage-related triggering

\- No triggering

Description

The CT-C range combines lower cost with higher value and performance in a slim 17.5 mm-wide housing. All relays have a wide time setting range from 0.05 seconds up to 100 hours. Combined with a wide voltage range they are the perfect choice for applications worldwide.

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Ordering details

Timing function	Rated control supply voltage	Time ranges	Control input	Output	Type	Order code	L.P.(₹)
Multi[1]	24-240 V AC 24-48 V DC	7 (0.05 s - 100 h)	M	1 c/o	CT-MFC.12	1SVR508020R0000	
Multi[1]	12-240 V AC/DC	7 (0.05 s - 100 h)	M	2 c/o	CT-MFC.21	1SVR508020R1100	
ON-delay	24-240 V AC 24-48 V DC	7 (0.05 s - 100 h)	-	1 c/o	CT-ERC.12	1SVR508100R0000	
			-	2 c/o	CT-ERC.22	1SVR508100R0100	
OFF-delay			M	1 c/o	CT-AHC.12	1SVR508110R0000	
			M	2 c/o	CT-AHC.22	1SVR508110R0100	Upon request
Impulse-ON			-	1 c/o	CT-VWC.12	1SVR508130R0000	
Pulse generator		2×7 (0.05 s - 100 h)	M		CT-TGC.12 [2]	1SVR508160R0000	
			M	2 c/o	CT-TGC.22 [2]	1SVR508160R0100	
Star-delta change-over		4 (0.05 s - 10 min)	-	2 n/o	CT-SDC.22 [3]	1SVR508211R0100	
			-		CT-SAC.22 [4]	1SVR508210R0100	

[1] Functions: ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Flasher starting with ON, Flasher starting with OFF, Pulse former
[2] ON and OFF times adjustable independently: 2 x 7 time ranges 0.05 s - 100 h
[3] Transition time 50 ms fixed
[4] Transition time adjustable

CT-C Range

Electronic products and relays
Electronic timer

ON-delay timers
CT-ERE : 1 c/o contact, 2 LEDs

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-ERE	24 V AC / DC, 220-240 V AC	0.1-10 s	1SVR550107R1100	1,640
		0.3-30 s	1SVR550107R4100 ■	
		3-300 s	1SVR550107R2100 ■	
		0.3-30 min	1SVR550107R5100 ■	
	110-130 V AC	0.1-10 s	1SVR550100R1100	
		0.3-30 s	1SVR550100R4100 ■	
		3-300 s	1SVR550100R2100	
		0.3-30 min	1SVR550100R5100	

OFF-delay timers
CT-AHE : 1 c/o contact, 2 LEDs

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-AHE	24 V AC/DC	0.1-10 s	1SVR550118R1100	1,700
		0.3-30 s	1SVR550118R4100	
		3-300 s	1SVR550118R2100	
	110-130 V AC	0.1-10 s	1SVR550110R1100	
		0.3-30 s	1SVR550110R4100 ■	
		3-300 s	1SVR550110R2100	
	220-240 V AC	0.1-10 s	1SVR550111R1100	
		0.3-30 s	1SVR550111R4100 ■	
		3-300 s	1SVR550111R2100 ■	

CT-ARE : without auxiliary voltage, 1 c/o contact, 1 LED

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-ARE	"24 V AC/DC, 220-240 V AC"	0.1-10 s	1SVR550127R1100	2,350
		0.3-30 s	1SVR550127R4100 ■	
	110-130 V AC	0.1-10 s	1SVR550120R1100	
		0.3-30 s	1SVR550120R4100 ■	

Multifunction timer
CT-MFE : 6 functions, 8 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-MFE	24-240 V AC/DC	0.05 s - 100 h	1SVR550029R8100 ■	3,090

Star Delta timers
CT-YDE : ON-delayed, OFF-delayed without auxiliary voltage, 1 c/o contact, 2 LEDs

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-YDE	24 V AC/DC,220 -240V AC	0.1-10 s	1SVR550207R1100	2,900
		0.3-30 s	1SVR550207R4100 ■	
		3-300 s	1SVR550207R2100 ■	
	110-130V AC	0.1-10 s	1SVR550200R1100	
		0.3-30 s	1SVR550200R4100	
		3-300 s	1SVR550200R2100	

■ Stock items

* Price valid upto June 2020

Electronic products and relays

Electronic timer

CT-SDE: ON-delayed with fixed transition time, 1 n/c contact, 1 n/o contact, internally wired, 2 LEDs

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT- SDE	24 V AC/DC,220 -240V AC	0.3-30 s	1SVR550217R4100 ■	1,890
	110-130V AC		1SVR550210R4100	
	380-415V AC		1SVR550212R4100 ■	

CT-VWE: Impulse-ON, 1 c/o contact

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-VWE	24 V AC/DC, 220-240 V AC	0.1-10 s	1SVR550137R1100	3,520
		0.3-30 s	1SVR550137R4100	
		3-300 s	1SVR550137R2100	
	110-130 V AC	0.1-10 s	1SVR550130R1100	
		0.3-30 s	1SVR550130R4100	
		3-300 s	1SVR550130R2100	

CT-AWE: Impulse-OFF, 1 c/o contact

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-AWE w/o Aux.	24 V AC/DC	0.05-1 s	1SVR550158R3100	4,600
	110-130 V AC		1SVR550150R3100	
	220-240 V AC		1SVR550151R3100	
CT-AWE with Aux.	24 V AC/DC	0.1-10 s	1SVR550148R1100	
		0.3-30 s	1SVR550148R4100	
		3-300 s	1SVR550148R2100	
	110-130 V AC	0.1-10 s	1SVR550140R1100	
		0.3-30 s	1SVR550140R4100	
		3-300 s	1SVR550140R2100	
	220-240 V AC	0.1-10 s	1SVR550141R1100	
		0.3-30 s	1SVR550141R4100	
		3-300 s	1SVR550141R2100	

CT-EBE: Flasher staring with OFF, 1 c/o contact

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)*
CT-EBE	24 V AC/DC, 220-240 V AC	0.1-10 s	1SVR550167R1100	3,520
	110-130 V AC		1SVR550160R1100	1,400

CT-MFS.21: ON-delay (accumulative), OFF-delay without aux., Symmetrical ON-delay and OFF-delay and Impulse-ON, ON/OFF function, pulse former, star-delta changeover with impluse, Flasher starting with OFF, Flasher starting with ON, impluse -OFF, 2 c/o

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)
CT-MFS.21S	24-240 V AC/DC	10 (0.05 s- 300 h)	1SVR730010R0200	4,920

CT-ERS.22: ON-delay (accumulative), 2 c/o

Type	Rated control supply voltage	Time range	Ordering code	L.P.(₹)
CT-ERS.22S	24-48 V DC, 24-240 V AC	10 (0.05 s- 300 h)	1SVR730100R3300	3,300

■ Stock items

* Price valid upto June 2020

Electronic products and relays
Measuring and monitoring relays

Single and three phase monitoring relays for phase failure detection

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
With neutral monitoring			
CM-PBE	3x380-440 V AC, 220-240 V AC	1SVR550881R9400	5,010
Without neutral monitoring			
CM-PBE	3x380-440 V AC	1SVR550882R9500	5,010

Single and three phase monitoring relays for over / undervoltage and phase failure detection

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
With neutral monitoring			
CM-PVE	3x320-460 V AC, 185-265 V AC	1SVR550870R9400 ■	5,010
Without neutral monitoring			
CM-PVE	3x320-460 V AC	1SVR550871R9500	5,010

Three phase monitoring relays for phase sequence monitoring and phase failure detection

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
CM-PFS.S	3x200-500 V AC	1SVR730824R9300	2,290

Three phase monitoring relays for over and undervoltage with adjustable threshold values

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
CM-PVS.31P	3x160-300 V AC	1SVR740794R1300	16,920
CM-PVS.31S		1SVR730794R1300	13,960
CM-PVS.41P	3x300-500 V AC	1SVR740794R3300	15,060
CM-PVS.41S		1SVR730794R3300	15,060

Three phase monitoring relays for phase unbalance

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
CM-PAS.31P	3x160-300 V AC	1SVR740774R1300	16,090
CM-PAS.31S		1SVR730774R1300	13,960
CM-PAS.41P	3x300-500 V AC	1SVR740774R3300	16,090
CM-PAS.41S		1SVR730774R3300	13,960

Multifunctional three phase monitoring relays (phase failure detection, phase sequence monitoring, overvoltage, undervoltage, phase unbalance)

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
With interrupted neutral monitoring			
CM-MPS.11P	3x90-170 V AC	1SVR740885R1300	16,750
CM-MPS.11S		1SVR730885R1300	15,620
CM-MPS.21P	3x180-280 V AC	1SVR740885R3300	16,180
CM-MPS.21S		1SVR730885R3300	15,360
Without interrupted neutral monitoring			
CM-MPS.41S	3x300-500 V AC	1SVR730884R3300 ■	6,400

■ Stock items

Electronic products and relays
Measuring and monitoring relays

Three phase monitoring relays

Multifunctional three phase monitoring relays, automatic phase sequence correction and separate monitoring of over and undervoltage (window monitoring) configurable

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
With interrupted neutral monitoring			
CM-MPS.23P	3x180-280 V AC	1SVR740885R4300	21,300
CM-MPS.23S		1SVR730885R4300	18,750
Without interrupted neutral monitoring			
CM-MPS.43P	3x300-500 V AC	1SVR740884R4300	20,540
CM-MPS.43S		1SVR730884R4300	17,010

Multifunctional three phase monitoring relays, automatic phase sequence correction and separate monitoring of over and undervoltage (window monitoring) configurable

Type	Rated control supply voltage = measuring voltage	Ordering code	L.P.(₹)
CM-MPN.52P	3x350-580 V AC	1SVR760487R8300	23,380
CM-MPN.52S		1SVR750487R8300	19,860
CM-MPN.62P	3x450-720 V AC	1SVR760488R8300	23,380
CM-MPN.62S		1SVR750488R8300	20,540
CM-MPN.72P	3x530-820 V AC	1SVR760489R8300	23,380
CM-MPN.72S		1SVR750489R8300 ■	20,540

Insulation monitors for unearthed supply systems

Type	Nominal voltage Un of the distribution system to be monitored	Rated control supply voltage	Ordering code	L.P.(₹)
CM-IWS.1P	0-250 V AC / 0-300 V DC	24-240 V AC/DC	1SVR740660R0100	26,800
CM-IWS.1S			1SVR730660R0100 ■	25,800
CM-IWS.2P	0-400 V AC	24-240 V AC/DC	1SVR740670R0200	23,750
CM-IWS.2S			1SVR730670R0200 ■	21,200
CM-IWN.1P	0-400 V AC / 0-600 V DC	24-240 V AC/DC	1SVR760660R0200	67,460
CM-IWN.1S			1SVR750660R0200	49,100
Coupling unit				
CM-IVN.S	Passive device, no control supply voltage needed	0-690 V AC / 0-1000 V DC	1SVR750669R9400 ■	25,680
CM-IVN.P			1SVR760669R9400	31,260

Thermistor motor protection relays

Type	Rated control supply voltage	Ordering code	L.P.(₹)
CM-MSE	24 V AC	1SVR550805R9300	5,580
	110-130 V AC	1SVR550800R9300 ■	4,240
	220-240 V AC	1SVR550801R9300 ■	5,580
CM-MSS.12S	24 V AC/DC	1SVR730700R0100	7,100
CM-MSS.12P	24 V AC/DC	1SVR740700R0100	7,490
CM-MSS.13S	110-130 V AC/220-240 V AC	1SVR730700R2100	6,690
CM-MSS.13P	110-130 V AC/220-240 V AC	1SVR740700R2100	7,490
CM-MSS.22S	24 V AC/DC	1SVR730700R0200	7,140
CM-MSS.22P	24 V AC/DC	1SVR740700R0200	8,200
CM-MSS.23S	110-130 V AC/220-240 V AC	1SVR730700R2200	7,140
CM-MSS.23P	110-130 V AC/220-240 V AC	1SVR740700R2200	8,200

■ Stock items

Electronic products and relays
Pluggable interface relays

CR-M

Ordering details - CR-M range without LED

Version	Outputs	Type	Ordering code	L.P.(₹)
12 V DC	2 c/o (SPDT)	CR-M012DC2	1SVR405611R4000	620
24 V DC		CR-M024DC2	1SVR405611R1000 ■	620
48 V DC		CR-M048DC2	1SVR405611R6000	620
60 V DC		CR-M060DC2	1SVR405611R4200	620
110 V DC		CR-M110DC2	1SVR405611R8000 ■	690
125 V DC		CR-M125DC2	1SVR405611R8200	680
220 V DC		CR-M220DC2	1SVR405611R9000	650
24 V AC		CR-M024AC2	1SVR405611R0000	650
48 V AC		CR-M048AC2	1SVR405611R5000	650
110 V AC		CR-M110AC2	1SVR405611R7000	650
120 V AC		CR-M120AC2	1SVR405611R2000	650
230 V AC		CR-M230AC2	1SVR405611R3000 ■	720
12 V DC	4 c/o (SPDT)	CR-M012DC4	1SVR405613R4000	620
24 V DC		CR-M024DC4	1SVR405613R1000 ■	620
48 V DC		CR-M048DC4	1SVR405613R6000	660
60 V DC		CR-M060DC4	1SVR405613R4200	630
110 V DC		CR-M110DC4	1SVR405613R8000 ■	720
125 V DC		CR-M125DC4	1SVR405613R8200 ■	730
220 V DC		CR-M220DC4	1SVR405613R9000 ■	760
24 V AC		CR-M024AC4	1SVR405613R0000	730
48 V AC		CR-M048AC4	1SVR405613R5000	680
110 V AC		CR-M110AC4	1SVR405613R7000 ■	730
120 V AC		CR-M120AC4	1SVR405613R2000	730
230 V AC		CR-M230AC4	1SVR405613R3000 ■	760

CR-M

Ordering details - CR-M range with LED

Version	Outputs	Type	Ordering code	L.P.(₹)
12 V DC	2 c/o (SPDT)	CR-M012DC2L	1SVR405611R4100	620
24 V DC		CR-M024DC2L	1SVR405611R1100 ■	640
48 V DC		CR-M048DC2L	1SVR405611R6100	650
60 V DC		CR-M060DC2L	1SVR405611R4300	650
110 V DC		CR-M110DC2L	1SVR405611R8100	730
125 V DC		CR-M125DC2L	1SVR405611R8300	730
220 V DC		CR-M220DC2L	1SVR405611R9100	750
24 V AC		CR-M024AC2L	1SVR405611R0100	720
48 V AC		CR-M048AC2L	1SVR405611R5100	660
110 V AC		CR-M110AC2L	1SVR405611R7100	720
120 V AC		CR-M120AC2L	1SVR405611R2100	730
230 V AC		CR-M230AC2L	1SVR405611R3100	760
12 V DC	4 c/o (SPDT)	CR-M012DC4L	1SVR405613R4100	770
24 V DC		CR-M024DC4L	1SVR405613R1100 ■	770
48 V DC		CR-M048DC4L	1SVR405613R6100	770
60 V DC		CR-M060DC4L	1SVR405613R4300	680
110 V DC		CR-M110DC4L	1SVR405613R8100 ■	860
125 V DC		CR-M125DC4L	1SVR405613R8300	860
220 V DC		CR-M220DC4L	1SVR405613R9100 ■	900
24 V AC		CR-M024AC4L	1SVR405613R0100	860
48 V AC		CR-M048AC4L	1SVR405613R5100	860
110 V AC		CR-M110AC4L	1SVR405613R7100	860
120 V AC		CR-M120AC4L	1SVR405613R2100	780
230 V AC		CR-M230AC4L	1SVR405613R3100 ■	900

CR-M4SS

Ordering details - CR-M range accessories

Version	Type	Ordering code	L.P.(₹)
Standard socket for 2 c/o	CR-M2SS	1SVR405651R1000 ■	390
Standard socket for 2/4 c/o	CR-M4SS	1SVR405651R3000 ■	420
Plastic holder	CR-MH	1SVR405659R1000 ■	50
Metal holder	CR-MH1	1SVR405659R1100 ■	40

■ Stock items

Electronic products and relays
Pluggable interface relays

CR-MX with Base and Holder

Ordering details - CR-M range with LED

Version	Outputs	Type	Ordering code	L.P.(₹)
12 V DC	2 c/o (SPDT), 250 V, 7 A	CR-MX012DC2L	1SVR405631R4100	260
24 V DC		CR-MX024DC2L	1SVR405631R1100 ■	280
48 V DC		CR-MX048DC2L	1SVR405631R6100	300
110 V DC		CR-MX110DC2L	1SVR405631R8100 ■	280
24 V AC		CR-MX024AC2L	1SVR405631R0100 ■	260
110 V AC		CR-MX110AC2L	1SVR405631R7100	260
230 V AC		CR-MX230AC2L	1SVR405631R3100 ■	300
12 V DC	4 c/o (SPDT), 250 V, 5 A	CR-MX012DC4L	1SVR405633R4100	300
24 V DC		CR-MX024DC4L	1SVR405633R1100 ■	320
48 V DC		CR-MX048DC4L	1SVR405633R6100	330
110 V DC		CR-MX110DC4L	1SVR405633R8100 ■	330
24 V AC		CR-MX024AC4L	1SVR405633R0100 ■	330
110 V AC		CR-MX110AC4L	1SVR405633R7100 ■	350
230 V AC		CR-MX230AC4L	1SVR405633R3100 ■	350

Accessories* - CR-MX range

Version	Type	Ordering code	L.P.(₹)
For 2 c/o (SPDT) contacts, black	CR-M2SFB	1SVR405651R1400 ■	140
For 2 or 4 c/o (SPDT) contacts, black	CR-M4SFB	1SVR405651R3400 ■	180
Metal holder	CR-MH1	1SVR405659R1100 ■	40

■ Stock items

Electronic products and relays
Power supplies

Overview
Modern power supply units are vital components in most areas of energy management and automation technology. ABB as your global partner in these areas pays the utmost attention to the resulting requirements. Innovation is the key to a substantial enlargement of our power supply product program:

CP-D
The CP-D range of power supply units in MDRC design (modular DIN rail components) fits into all domestic installation and distribution panels.

CP-E
The CP-E range offers enhanced functionality while the number of different types has been considerably reduced. Now all power supply units can be operated at an ambient temperature of up to +70 °C.

CP-T
The CP-T range of three-phase power supply units is ABB's youngest member of the power supply family.

CP-C.1
The CP-C.1 power supplies are ABB's high-performance and most advanced range. With excellent efficiency, high reliability and innovative functionality it is prepared for the most demanding industrial applications. These power supplies have up to 50 % integrated power reserve and operate at an efficiency of up to 94%. They are equipped with overheat protection and active power factor correction. Combined with a broad AC and DC input range and extensive worldwide approvals the CP-C.1 power supplies are the preferred choice for professional DC applications.

CP-E range

Rated I/P voltage	Rated O/P Voltage/Current	Type	Ordering code	L.P.(₹)
100-240 V AC	5 V DC / 3 A	CP-E 5/3.0	1SVR427033R3000	4,690
100-240 V AC	12 V DC / 2.5 A	CP-E 12/2.5	1SVR427032R1000 ■	4,860
115 / 230 V AC auto select	12 V DC / 10 A	CP-E 12/10.0	1SVR427035R1000 ■	8,930
100-240 V AC	24 V DC / 0.75 A	CP-E 24/0.75	1SVR427030R0000	3,570
100-240 V AC	24 V DC / 1.25 A	CP-E 24/1.25	1SVR427031R0000 ■	3,900
100-240 V AC	24 V DC / 2.5 A	CP-E 24/2.5	1SVR427032R0000 ■	4,020
115 / 230 V AC auto select	24 V DC / 5 A	CP-E 24/5.0	1SVR427034R0000 ■	7,240
115 / 230 V AC auto select	24 V DC / 10 A	CP-E 24/10.0	1SVR427035R0000 ■	10,600
115 / 230 V AC	24 V DC / 20 A	CP-E 24/20.0	1SVR427036R0000 ■	18,970
100-240 V AC	48 V DC / 0.625 A	CP-E 48/0.62	1SVR427030R2000	5,010
100-240 V AC	48 V DC / 1.25 A	CP-E 48/1.25	1SVR427031R2000	6,390
115 / 230 V AC auto select	48 V DC / 5 A	CP-E 48/5.0	1SVR427034R2000	12,930
115 / 230 V AC	48 V DC / 10 A	CP-E 48/10.0	1SVR427035R2000 ■	18,420

Note: Refer technical data sheet for DC voltage input range

CP-C.1

Input voltage range	Rated output Voltage/Current	Type	Ordering code	L.P.(₹)w
100-240 V AC, 90-300 V DC	24 V DC / 5 A	CP-C.1 24/5.0	1SVR360563R1001	Upon request
100-240 V AC, 90-300 V DC	24 V DC / 10 A	CP-C.1 24/10.0	1SVR360663R1001	
100-240 V AC, 90-300 V DC	24 V DC / 20 A	CP-C.1 24/20.0	1SVR360763R1001	

CP-T range

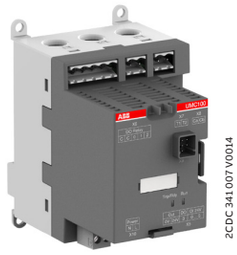
Rated I/P voltage	Rated O/P Voltage/Current	Type	Ordering code	L.P.(₹)w
340-575 V AC/ 480-820 V DC	24 V DC / 5 A	CP-T 24/5.0	1SVR427054R0000	12,900
340-575 V AC/ 480-820 V DC	24 V DC / 10 A	CP-T 24/10.0	1SVR427055R0000	16,420
340-575 V AC/ 480-820 V DC	24 V DC / 20 A	CP-T 24/20.0	1SVR427056R0000	20,370
340-575 V AC/ 480-820 V DC	24 V DC / 40 A	CP-T 24/40.0	1SVR427057R0000	30,140
340-575 V AC/ 480-820 V DC	48 V DC / 5 A	CP-T 48/5.0	1SVR427054R2000	17,850
340-575 V AC/ 480-820 V DC	48 V DC / 10 A	CP-T 48/10.0	1SVR427055R2000	24,400
340-575 V AC/ 480-820 V DC	48 V DC / 20 A	CP-T 48/20.0	1SVR427056R2000	35,700

■ Stock items

Intelligent motor management system - UMC100.3

Ordering details - Universal Motor Controller UMC100.3

UMC100.3 DC



UMC100.3 UC

UMC100-PAN

Description

Intelligent motor management system for single and three-phase motors with Ie = 0.24 - 63 A in one single device. Compact housing with integrated current transformer for cable cross section up to 25 mm² (max. Ø with Insulation 11 mm). Higher currents with additional external current transformer. Thermal overload protection according to EN/IEC 60947-4-1, selectable trip classes 5E, 10E, 20E, 30E, 40E. Some functions require an additional expansion module.

- Motor protection functions:
  Over-/underload, over-/undercurrent, over-/undervoltage, rotor blocking, phase failure/ imbalance/sequence Earth fault detection integrated or with external sensor CEM11
  Hot motor protection with thermistor or temperature measurement
- Motor control functions:
  Easily configurable motor control functions: direct, reverse, star-delta starter, pole-changing,overload relay, actuator mode, softstarter mode. Additionally free programmable application specific logic with function blocks
- Service and diagnostic data:
  Operating hours, number of motor starts and overload trips, energy, standstill and operation hours supervision, motor status, faults and warnings, fault history (16 events)
  Motor current, phase voltages, thermal load, power factor (cos), active power, apparent power, energy, total harmonic distortion (THD).
- Integrated I/Os:
  6 digital inputs, 1 PTC input, 4 digital outputs. Maximum number of I/Os with expansion modules:
  14 digital inputs, 1 PTC input, 9 digital outputs, 6 analogue inputs, 1 analogue output
- Communication interfaces for fieldbuses and ethernet networks, Interface for operator panel UMC100-PAN, bus interface for connection of expansion modules
- Versions for supply voltage 24 V DC and 110 – 240 V AC/DC and with ATEX approval

Ordering details

Designation	Supply voltage	Type	Ordering code	L.P.(₹)
Universal Motor Controller	24 V DC	UMC100.3 DC	1SAJ530000R0100	Upon request
Universal Motor Controller	110-240 V AC/DC	UMC100.3 UC	1SAJ530000R1100	
Universal Motor Controller, ATEX	24 V DC	UMC100.3 DC EX	1SAJ530000R0200	
Universal Motor Controller, ATEX	110-240 V AC/DC	UMC100.3 UC EX	1SAJ530000R1200	
Universal Motor Controller, DC, ATEX, Conformal Coating,	24 V DC	UMC100.3 DC EX	1SAJ530000R0210	
Universal Motor Controller, UC, ATEX, Conformal Coating	110-240 V AC/DC	UMC100.3 DC EX	1SAJ530000R1210	

Operating panel UMC100-PAN

Operator panel for Universal Motor Controller UMC100. Backlit graphical and multilingual fulltext display, LEDs for status. Assembly directly on UMC100 or on the control cabinet door via extension cable and door mounting set.

Functions:

- Monitoring: Shows motor status and diagnostics
- Operate: Start, stop, fault reset
- Parametrize: Setting and changing of motor and fieldbus parameters (password protection possible)
- Copy settings
- USB port for up/download of parameters and logic

Supports 8 languages: English, French, German, Italian, Spanish, Polish, Portuguese, Russian
Replaces all former UMC100 operator panels

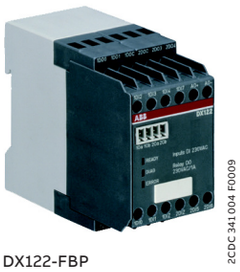
Ordering details

Designation	Type	Ordering code	L.P.(₹)
Operating panel	UMC100-PAN	1SAJ590000R0103	Upon request
0.7 m ext. cable with door mounting set	UMCPAN-CAB.070	1SAJ510003R0002	
1.5 m ext. cable with door mounting set	UMCPAN-CAB.150	1SAJ510004R0002	
3 m ext. cable with door mounting set	UMCPAN-CAB.300	1SAJ510002R0002	

Intelligent motor management system - UMC100.3

Ordering details - Expansion modules

DX111-FBP



DX122-FBP

VI150-FBP

VI155-FBP

Description

Up to 4 expansion-modules can be connected to one UMC100.3

- 1 digital expansion module DX111 or DX122
- 1 voltage expansion module VI150 or VI155
- 2 analog/temperature expansion modules AI111 possible)

Supply voltage is 24 V DC; the 110-240 V AC/DC version of the UMC100.3 provides the 24 V DC supply for expansion modules

DX111

I/O-expansion module with 8 digital inputs 24 V DC, 4 relay outputs, 1 analog output 0/4-20 mA or 0…10 V

DX122

I/O-expansion module with 8 digital inputs 110 / 230 V AC, 4 relay outputs, 1 analog output 0/4-0 mA or 0-10 V

VI15x

Voltage modules for the determination of phase voltages, power factor (cos □), apparent power, energy, total harmonic distortion (THD).
For use in grounded networks (VI150) or in all networks (VI155), 150-690 V AC

AI111

Analog / temperature expansion module, 3 inputs PT100, PT1000, KTY83, KTY84, NTC, 0–10 V, 0/4-20 mA
1 or 2 modules AI111 can be connected to an UMC100.3.

Ordering details

Designation	Type	Ordering code	L.P.(₹)
I/O module for UMC100, 24 V DC digital input	DX111	1SAJ611000R0101	Upon request
I/O module for UMC100, 110 – 230 V AC digital input	DX122	1SAJ622000R0101	
3 phase voltage module for grounded networks	VI150	1SAJ650000R0100	
3 phase voltage module for all networks	VI155	1SAJ655000R0100	
Analog/temperature module 3 analogue inputs	AI111	1SAJ613000R0101	
Connection cable UMC100 - I/O module, length 0.30 m	UMCIO-CAB.030	1SAJ691000R0001	
Connection cable IO-module - IO-module, length 0,30 m	IOIO-CAB.030	1SAJ692000R0001	
Terminal set for UMC100.3 DC (spare parts)	UMCTB	1SAJ929160R0001	
Terminal set for UMC100.3 UC (spare parts)	UMCTB	1SAJ929160R0002	

Fieldbus interfaces
Ordering details

PDP32.0

MRP31.0

DNP31.0

PDR31.0

Description
Fieldbus communication interfaces enable the UMC100.3 to communicate via fieldbus. The interfaces can be used in two ways:
- Mounted directly on an UMC100.3 – the interface is supplied from the UMC100.3 and no additional accessory is required
- Mounted separately on a SMK3.0 adapter in the cable chamber of an MCC, the interface plugged on SMK3.0 requires a 24 V DC supply. Ready-made cables for applications in withdrawable systems are available, as well as terminal blocks for other cables: CDP18.150: Cable for use inside the drawer CDP24.150: Cable from SMK3.0 to drawer outside

PDP32.0
- Communication interface for PROFIBUS DP; supports the protocols PROFIBUS DP/V0 and V1
- PNO-certified PROFIBUS slave
- Data transfer rate up to 12 Mbit/s
- Diagnostic LEDs
- Fieldbus connection via nine-pole Sub-D connector or terminal blocks
- GSD download from UMC100.3 webpage

MRP31.0
- Communication interface for Modbus RTU
- Data transfer rate up to 57.6 kbit/s
- Diagnostic LEDs
- Fieldbus connection via terminal blocks

DNP31.0
- Communication interface for DeviceNet
- ODVA-certified DeviceNet slave
- Data transfer rate up to 500 kbit/s
- Diagnostic LEDs
- Fieldbus connection via terminal blocks
- EDS download from UMC100.3 webpage

PDR31.0
- External active fieldbus termination for Profibus DP; the PDR31.0 needs to be mounted on a SMK3.0 adapter and supplied by 24 V DC

Description	Type	Order code	L.P. (₹)
Profibus DP communication interface	PDP32.0	1SAJ242000R0001	Upon request
Modbus RTU communication interface; terminal block for fieldbus connection included	MRP31.0	1SAJ251000R0001	
DeviceNet communication interface; terminal block for fieldbus connection included	DNP31.0	1SAJ231000R0001	
Profibus DP active bus termination	PDR31.0	1SAJ243000R0001	

Ethernet interfaces
Ordering details

MTQ22-FBP.0

PNQ22-FBP.0

EIU32.0

Description
Ethernet communication interfaces enable the UMC100.3 to communicate via an Ethernet network. There are two types of interfaces:

Interfaces for the connection of one to four Universal Motor Controllers UMC100.3:
- MTQ22-FBP.0 for Modbus TCP
- PNQ22-FBP.0 for Profinet IO

Interface for a single universal motor controller UMC100.3:
- EIU32.0 for EtherNet/IP™

MTQ22-FBP.0
- Protocol Modbus TCP
- For one to four UMC100.3
- Master supervision with timeout control for up to four masters
- Micro USB-port for configuration via PC (configuration software downloaded from UMC100.3 webpage)
- Integrated Ethernet switch
- Supports all network topologies
- Ring topology with redundancy (MRP protocol)
- Easy to use in withdrawable applications
- No special Ethernet connectors required in MCCs
- 24 V DC supply voltage
- DIN-rail mounting

PNQ22-FBP.0
- Protocol Profinet IO
- PNO-certified
- For one to four UMC100.3 devices
- Integrated Ethernet switch
- Supports all network topologies
- Ring topology with redundancy (MRP protocol)
- Easy to use in withdrawable applications
- No special Ethernet connectors required in MCCs
- Fully integrated into ABB 800xA
- Time-stamped events with ABB 800xA
- 24 V DC supply voltage
- DIN-rail mounting
- GSDML downloaded from UMC100.3 webpage

EIU32.0
- Protocol EtherNet/IP™
- ODVA-certified
- For one motor controller UMC100.3
- Mounting directly on an UMC100.3 (supplied by UMC100.3) or remotely on a SMK3.0 adapter (24 V DC supply required)
- Integrated Ethernet switch
- Supports all network topologies
- DLR (Device Level Ring) function for redundancy
- Easy to use in withdrawable applications
- No special Ethernet connectors required in MCCs
- EDS download from UMC100.3 webpage

Description	Type	Order code	L.P. (₹)
Ethernet Modbus TCP interface	MTQ22-FBP.0	1SAJ260000R0100	Upon request
Ethernet Profinet IO interface	PNQ22-FBP.0	1SAJ261000R0100	
EtherNet/IP™ interface	EIU32.0	1SAJ262000R0100	

Adapter and accessories
Ordering details

SMK3.0

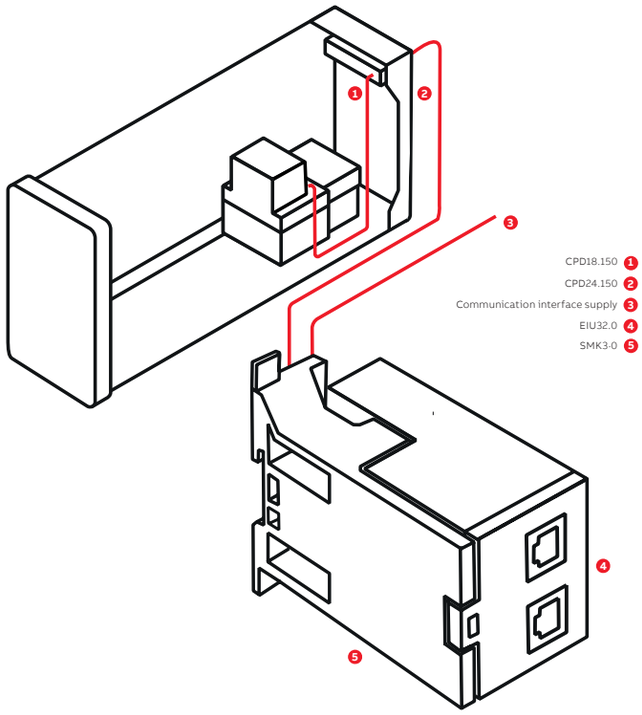
CDP18.150

PDP32.0 on SMK3.0

EIU32.0 on SMK3.0

Adapter and ready-made cables

Adapter SMK3.0 for external mounting of a fieldbus or EtherNet/IP™ interface EIU32.0 outside a drawer. SMK3.0 can be mounted on a DIN-rail or fixed by screws. 24 V DC supply is required. Ready-made cables for inside and outside the drawer, including a terminal block on one side and open end on the other. Terminal blocks are also separately available for making own cables.



Separate wiring of the EtherNet/IP™ communication interface EIU32.0

Description	Type	Order code	L.P. (₹)
Adapter for separate mounting of a communication interface; terminal block for 24 V DC supply included	SMK3.0	1SAJ929600R0001	Upon request
Cable for use inside drawer, length 1.5 m	CDP18.150	1SAJ929180R0015	
Cable from SMK3.0 to drawer's outside, length 1.5 m	CDP24.150	1SAJ929240R0015	
Terminal block 2-pole for SMK3.0 supply (spare parts)	SMK3-X2.10	1SAJ929610R0001	
Terminal block 5-pole for SMK3.0 comm. (spare parts)	SMK3-X1.10	1SAJ929620R0001	
Cable for inside and outside drawer, length 1.5 m	CDP18.150	1SAJ929180R0015	
Cable Ethernet interface - UMC100.3, length 1.5 m	CDP23.150	1SAJ929230R0015	
Cable Ethernet interface - UMC100.3, length 3 m	CDP23.300	1SAJ929230R0030	
Cable from SMK3.0 to drawer's outside, length 1.5 m	CDP24.150	1SAJ929240R0015	
Terminal blocks for MTQ22/PNQ22 X1...X4	ETHTB-FBP.4	1SAJ929200R0001	
Terminal blocks for MTQ22/PNQ22 X1...X4	ETHTB-FBP.50	1SAJ929200R0002	

Earth fault monitors, current transformers
Ordering details

CEM11-FBP.xxx

Earth fault monitors CEM11-FBP.xxx for use with the Universal Motor Controller UMC100.3
The CEM11-FBP.xxx device monitors if the sum of the currents flowing through it is zero (factorial addition). If the sum is zero, no residual current is present. If the residual current is above an adjusted threshold value, the output signal of the CEM11-FBP.xxx changes. It can be used in motor feeders to detect leakage currents, as well as ground faults, caused for example by insulation breakdowns.

- CEM11-FBP.xxx is connected to a digital input of the UMC100.3
- Earth fault current threshold can be set in eight steps with a screwdriver
- Test position for easy control of the wiring

CEM11-FBP.xxx is delivered with adapters for DIN-rail or wall mounting.
CEM-11.FBP.120 is for wall-mounting only.

CT4L185R/4, CT4L310R/4

Earth fault currents [mA]	Through-hole diameter	Type	Order code	L.P. (₹)
80[1], 300, 550, 750, 1000, 1200, 1500, 1700	20 mm	CEM11-FBP.20	1SAJ929200R0020	Upon request
100[1], 500, 1000, 1400, 2000, 2400, 3000, 3400	35 mm	CEM11-FBP.35	1SAJ929200R0035	
120[1], 1000, 2000, 2800, 4000, 4800, 6000, 6800	60 mm	CEM11-FBP.60	1SAJ929200R0060	
300[1], 2000, 4000, 5600, 8000, 9600, 12000, 13600	120 mm	CEM11-FBP.120	1SAJ929200R0120	

[1] Lower values have higher inaccuracy

CT5L500R/4, CT5L850R/4

Current transformers for use with the Universal Motor Controller UMC100.3
Linear type three-phase transformers, for use with the UMC100.3 and nominal motor currents >63 A. Terminal blocks for conductors Cu 2.5 mm² for wiring on the UMC100.3 side.

Description	Recommended current range	Type	Order code	L.P. (₹)
Current transformer	60...185 A AC	CT4L185R/4	1SAJ929500R0185	Upon request
Current transformer	180...310 A AC	CT4L310R/4	1SAJ929500R0310	
Current transformer	300...500 A AC	CT5L500R/4	1SAJ929501R0500	
Current transformer	500...850 A AC	CT5L850R/4	1SAJ929501R0850	

UMC100-FBP.0 and FBP system accessories are being phased out. Please contact your local ABB contact for spare parts or retrofit solutions.

Arc Guard System TVOC-2

Most short circuit faults in LV and MV switchgears are accompanied by an electric arc. An arc fault always leads to considerable damage to equipment and personnel unless it is distinguished very fast. The fault should be disconnected as fast as possible and in less than 0.1 s to avoid serious damages and give involved person a fair chance to survive the accident without severe damages. This is a demand found in the electrical safety rules in all CE countries, ref. IEC364-4-42.

The Arc Guard System TVOC-2 is an aid to quickly detect an arc fault and trip the incoming circuit-breaker. The main advantage with the Arc Guard System is that it can trip instantaneously, i.e. override other tripping functions.

Ordering details				
Description	**Rated supply voltage**	**Type**	**Ordering code**	**LP.(₹)**
Arc Monitor including one HMI and door mounting accessories	24...48V DC	TVOC-2-48	1SFA664001R1002	Upon request
	100...240V AC/ 100...250V DC	TVOC-2-240	1SFA664001R1001	
Arc Monitor including one COM Module and door mounting accessories	24...48V DC	TVOC-2-48-C	1SFA664001R1004	
	100...240V AC/ 100...250V DC	TVOC-2-240-C	1SFA664001R1003	

Accessories				
Extension-10 optical inputs		TVOC-2-E1	1SFA664002R1001	Upon request
Extension-10 optical inputs for cable TVOC-2-DP60 only		TVOC-2-E3	1SFA664002R3001	
HMI (Human machine interface)		TVOC-2-H1	1SFA664002R1005	
COM Module-with communication interface (Modbus RTU) and door mounting		TVOC-2-COM	1SFA664002R4001	

Detector				
Cable length	1 m	TVOC-2-DP1	1SFA664003R1010	Upon Request
Cable length	2 m	TVOC-2-DP2	1SFA664003R1020	
Cable length	4 m	TVOC-2-DP4	1SFA664003R1040	
Cable length	6 m	TVOC-2-DP6	1SFA664003R1060	
Cable length	8 m	TVOC-2-DP8	1SFA664003R1080	
Cable length	10 m	TVOC-2-DP10	1SFA664003R1100	
Cable length	15 m	TVOC-2-DP15	1SFA664003R1150	
Cable length	20 m	TVOC-2-DP20	1SFA664003R1200	
Cable length	25 m	TVOC-2-DP25	1SFA664003R1250	
Cable length	30 m	TVOC-2-DP30	1SFA664003R1300	
Cable length (1)	60 m	TVOC-2-DP60	1SFA664003R3600	

ABB jokab safety

Sentry safety relays

Description	Type	Ordering code	L.P.(₹)
24VDC , Safety/Expansion Relay,3 NO + 1 NC - No Time Delay	SENTRY BSR10	2TLA010040R0000	10,390
24VDC,Safety/Expansion Relay,4 NO - No Time Delay	SENTRY BSR11	2TLA010040R0200	10,390
24VDC,Safety/Expansion Relay,4 NO + 1 NC - No Time Delay	SENTRY BSR23	2TLA010041R0600	9,050
24VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay	SENTRY SSR10	2TLA010050R0000	12,760
85-265VAC/120-275VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay	SENTRY SR10M	2TLA010050R0100	16,140
24VDC,Safety Relay with Relay outputs3 NO + 1 NC - No Time Delay	SENTRY SSR20	2TLA010051R0000	14,010
85-265VAC/120-275VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay	SENTRY SR20M	2TLA010051R0100	17,900
24VDC,Safety Relay with Relay outputs,2 NO + 2 NO (delayed) - OFF-Delay - 0.5 second.	SENTRY SSR32	2TLA010052R0400	20,390
24VDC,Safety Relay with Relay outputs,2 NO + 2 NO (delayed) - OFF-Delay - 1.5 seconds.	SENTRY SSR42	2TLA010053R0400	20,390
24VDC,safety relay/safety timer with delayable relay outputs,3 NO + 1 NC - Multifunction - 0 ... 999 seconds.	SENTRY TSR10	2TLA010060R0000	16,380
24VDC,safety expansion timer with delayed relay outputs,3 NO + 1 NC - OFF-Delay - 0.5 and 1.5 seconds.	SENTRY TSR20	2TLA010061R0000	16,380
85-265VAC/120-275VDC,3 NO + 1 NC - OFF-Delay - 0.5 and 1.5 seconds	SENTRY SR20M	2TLA010061R0100	16,140
24VDC,universal safety relay/safety timer with delayable relay outputs,3 NO + 1 NC - Multifunction - 0 ... 999 seconds.	SENTRY USR10	2TLA010070R0000	19,450
24VDC,universal safety relay/safety timer with relay outputs, 2 NO + 2 delayable NO,2 NO + 2 NO (delayed) - Multifunction - 0 ... 999 seconds	SENTRY USR22	2TLA010070R0400	27,150
Terminal block for Sentry safety relays. One piece,Contact block	SENTRY S30A	2TLA010099R0000	1,120
Coding kit for terminal blocks for Sentry safety relays.Should be enough for one Sentry relay,Coding kit	SENTRY S30B	2TLA010099R0100	370

Programmable safety controller

Description	Type	Ordering code	L.P.(₹)
Pluto AS-i v2 Safety-PLC AS-i bus,Programmable	Pluto Safety PLC	2TLA020070R1100	81,950
Pluto B42 AS-i, Safety-PLC AS-i bus, 42	Pluto Safety PLC	2TLA020070R1400	1,13,995
Pluto B46 v2 Safety-PLC 24+16+4+2	Pluto Safety PLC	2TLA020070R1700	1,08,823
Pluto S46 v2 Safety PLC 24+16+4+2 No BUS	Pluto Safety PLC	2TLA020070R1800	92,435
Pluto A20 v2, Safety-PLC	Pluto Safety PLC	2TLA020070R4500	88,890
Pluto B20 v2, Safety-PLC	Pluto Safety PLC	2TLA020070R4600	81,650
Pluto S20 v2, Safety-PLC	Pluto Safety PLC	2TLA020070R4700	64,970
Pluto B22 Safety-PLC	Pluto Safety PLC	2TLA020070R4800	61,965
Pluto D20 Safety-PLC	Pluto Safety PLC	2TLA020070R6400	1,08,823
Pluto D20 Safety PLC, Harsh environment	Pluto Safety PLC	2TLA020070R6401	1,28,165
Pluto D45 Safety-PLC	Pluto Safety PLC	2TLA020070R6600	1,32,768
Pluto D45 Safety PLC, Harsh environment	Pluto Safety PLC	2TLA020070R6601	1,56,150
Pluto O2 Safety PLC output module with Pluto safety bus. Safety output module.	Pluto Safety PLC	2TLA020070R8500	56,020

Gateway for communication

Description	Type	Ordering code	L.P.(₹)
Gateway for 2-way communication between the Pluto bus and Profibus	GATE-P2	2TLA020071R8000	36,170
Gateway for 2-way communication between the Pluto bus and CANopen	GATE-C2	2TLA020071R8100	30,490
Gateway for 2-way communication between the Pluto bus and Devicenet	GATE-D2	2TLA020071R8200	36,170
Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol EtherNet I/P.	GATE-EIP	2TLA020071R9000	45,430
Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol EtherCAT.	GATE-EC	2TLA020071R9100	46,030
Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol SERCOS III.	GATE-S3	2TLA020071R9200	46,030
Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol PROFINET.	GATE-PN	2TLA020071R9300	46,030
Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol Modbus TCP.	GATE-MT	2TLA020071R9400	46,030

Electrical installation solutions for buildings

A world of advantages

Miniature circuit-breakers

1 S200 Series
Circuit breakers up to 63 A
S200, S200M and S200P:
For residential, commercial and industrial use up to 25 kA.
S200U, S200UP and SU200PR with certification acc. to:
Certification UL489/CSA 22.2 No. 5 (US and Canada).

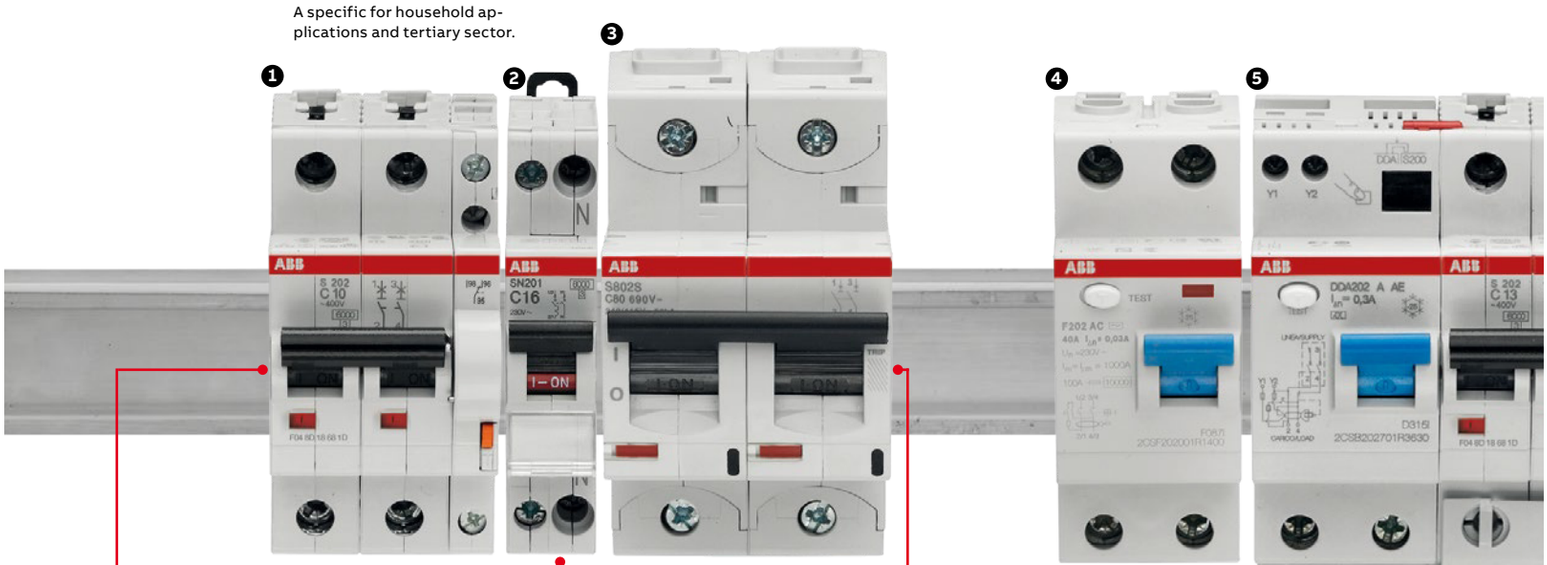
2 SN201 Series
SN201 series circuit breakers including one pole and neutral in one module width up to 40 A specific for household applications and tertiary sector.

3 S800 Series
S800 circuit breakers with high breaking capacity up to 125 A
S800B : 16 kA breaking capacity.
S800C : 25 kA breaking capacity.
S800N : 36 kA breaking capacity.
S800S : 50 kA breaking capacity.

Residual current protection

4 F200 Series
Residual current devices up to 125 A
F200: Residential, tertiary and industrial.

5 DDA200 and DDA800 Series
RCD blocks adaptable to the S200 and S800 circuit-breaker series up to 63 A and 100 A respectively.



Increased terminal opening for higher wire gauges up to 35 mm². For conductors with or without connector sleeves.
Fulfills still the requirements for protection degree IP20 (finger safe) acc. to IEC/EN 60529.
Integrated plate protecting flexible cables from damage and homogenous pressure in the terminal opening.

Switch with intermediate trip position (TRIP).
S800 circuit breakers differentiate manual actuation from over-current trip.

Terminal on the front face for fail-safe function.

Multiple certification marks visible on the upper and lower face of the S200 circuit breakers.
Laser marking for reliable readability. Real contact position indication, directly connected to the moving contact, for more comfort and safety. Individual identification code for each MCB on the front.

Label-holder built into SN200 circuit breakers.
Easy identification of protected circuits.
One pole plus neutral in a width of just 17.6 mm.

The green/red switch colour clearly indicates the connected/disconnected status.

Failsafe bi-directional cylinder-lift terminal at top and bottom (available for the entire System pro M compact® range). Ideal for connection of cables and busbars simultaneously.

Electrical installation solutions for buildings
A world of advantages

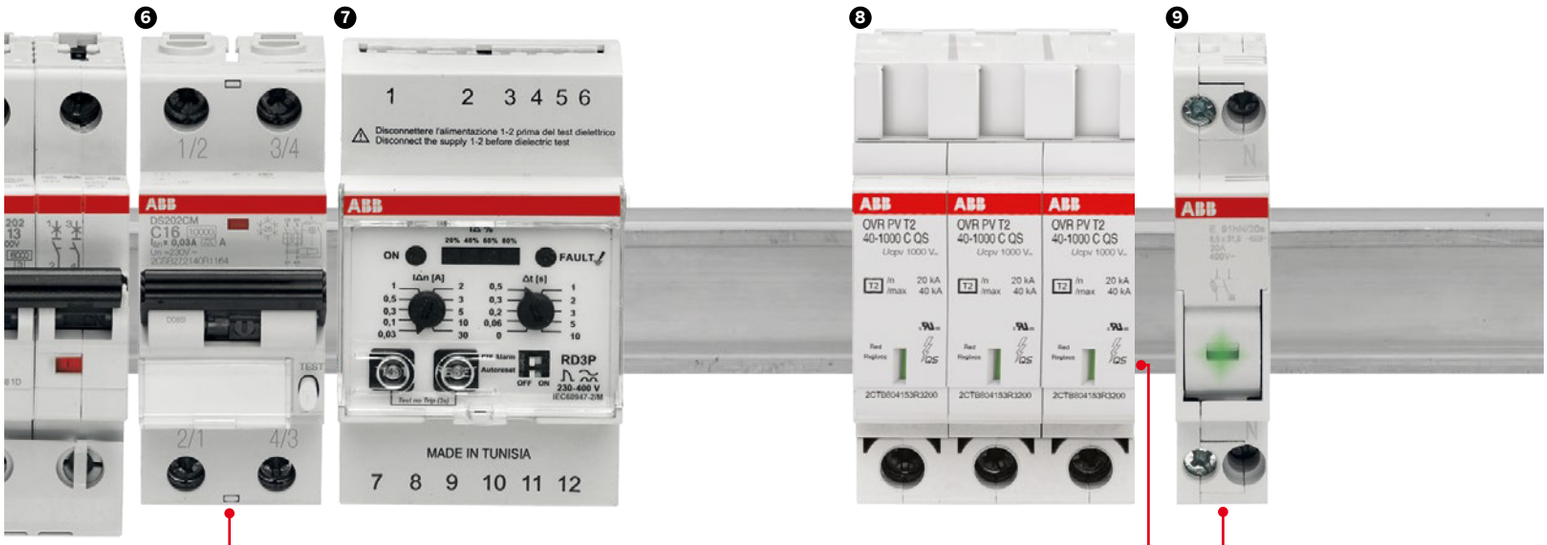
Other protection devices

6 DS200 Series
Overcurrent and residual current protection in a single device, just two modules width. Suitable for residential, tertiary and industrial applications.

7 RD3 residual current relays
Residual current relays with the possibility to set sensitivity and intervention time. Ideal to obtain time and sensitivity combinations and to achieve selectivity with other residual current devices.

8 OVR series surge protective devices
Protection of electrical equipment against surges caused by lightning or other grid disruptions.

9 E90 fuseholders and fuse disconnectors
E90: Disconnector series up to 32 A.
E90h: Compact series up to 32 A.
E90 50/125: Series up to 125 A.



Displays the cause of the trip of the DS200 residual current breaker.
Blue (residual currentl trip) or black (over-current trip indications).

Includes RFID label. Prevents forgeries through the inclusion of a serial number in compliance with the ISO/IEC FCD 15693-3 standard.

Contact position indicator visible on the front of the DS200 residual current breaker.

Visual indicator of the remaining life of the OVR surge protective device. Option to include remote signalling contacts of the OVR status.

Blown fuse indicator light on the front part of the E90 fuseholder.

Electrical installation solutions for buildings
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Command and control

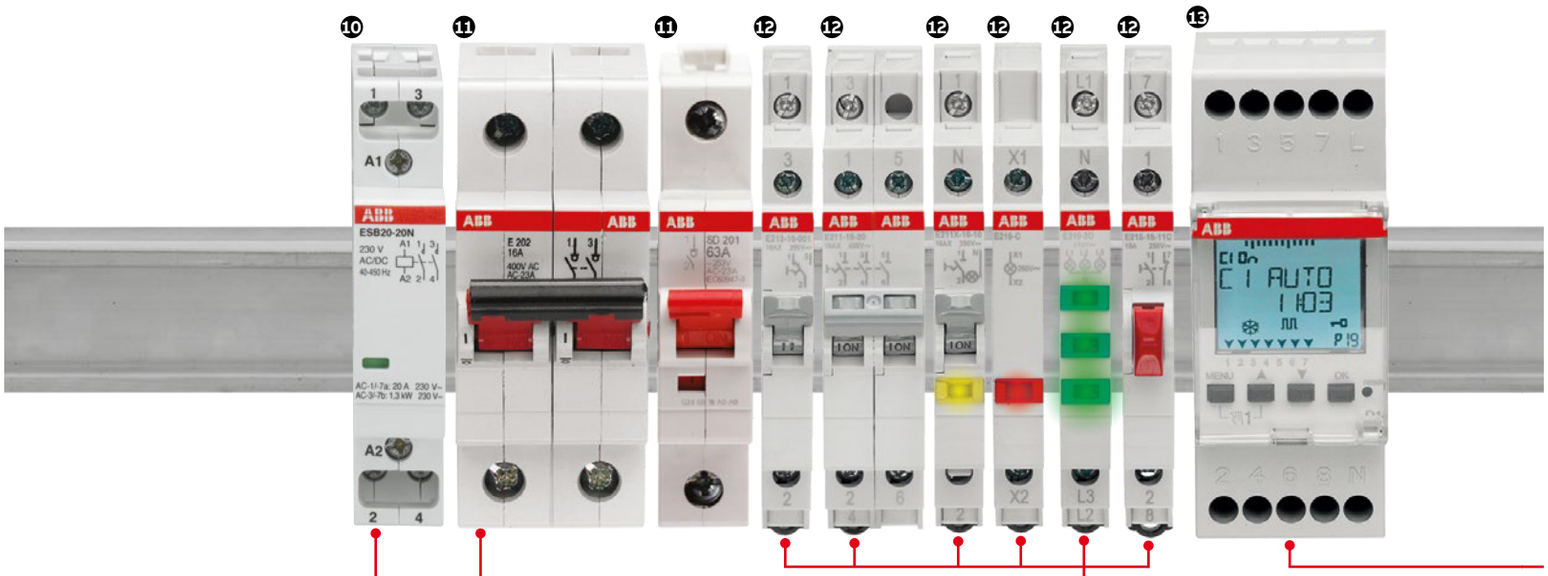
10 Contactors, latching relays and installation relays
ESB/EN..N series installation contactors.
E297 series installation relays.
E290 and E260 series latching relays.

11 Switch disconnectors
E200 series
switch disconnectors
From 1 to 4 poles.
Up to 125 A.

SD200 switch disconnectors
From 1 to 4 poles.
Up to 63 A.
Fully compatible with
MCB accessories.

12 E210 series on-off switches, push buttons and indicator lamps
E211 and E218 series on-off switches.
E213 series change over switches.
E214 series group switches.
E215 and E217 series push buttons.
E219 series single, double and triple indicator lights.

13 D-Line digital and AT analogue time switches
D1 and D2 weekly digital time switches.
D365 yearly digital time switches.
AT analogue time switches.



Currents up to 125 A.
From 1 to 4 poles.
Option to include an add-on of up to 3 auxiliary contacts.

Multiple command and control functions in the ultra-compact design (9 mm width) of the E210 series.

Hum-free operation.
Variety of control voltages.
Multiple combinations of NO and NC contacts.
Function modes selector:
Automatic/Connected/Disconnected (EN series).

Up to 3 E219 LED indicator lights in a width of just 9 mm. LED indicators guarantee an optimal illumination with very low consumption.

Electrical installation solutions for buildings

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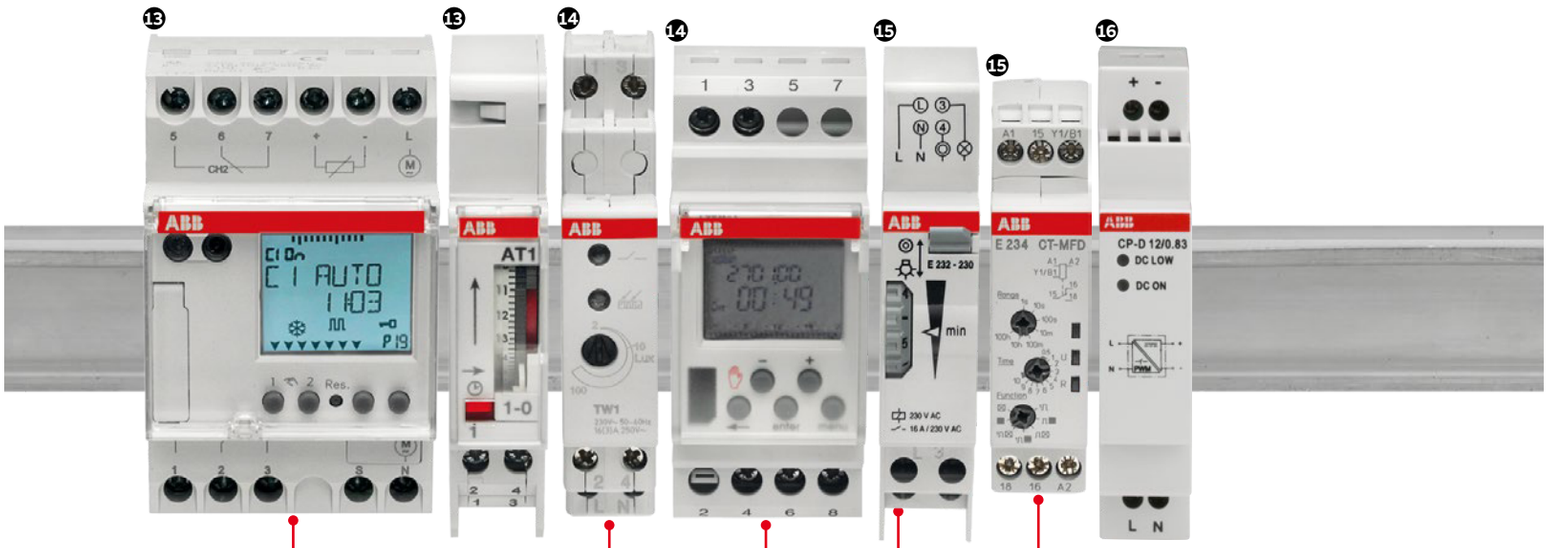
14 TWA astronomical switches and TW twilight switches
TWA astronomical switches to activate lighting systems according to the rising and setting of the sun.
TW twilight switches to control lighting devices according to the level of the ambient light.

15 E234 series electronic timers and E232 series staircase switches
Wide range of E234.
E232 staircase timers for household applications.

16 CP-D primary switch mode power supplies
Optimized for world-wide applications with a wide AC and DC supply range and continuously adjustable output voltage. Additional redundancy unit CP-RUD available.



D-Line series weekly and annual digital time switches.
Multiple communication options.
Wide range of programs: standard, cyclic, casual and holiday.
White backlit LCD display.

Connection and disconnection time delays.
Continuous and impulse signals among multiple options.

Easy to program.
Ideal for public lighting, stores lighting, monuments, etc.

Miniature Circuit Breaker SB200 M

The details make the difference

Technical Features

General data	
Standards	IEC/IS 60898-1, IEC/IS 60947-2
Poles	B: 1P, 1P+N, 2P C: 1P, 2P, 3P, 4P, 1P+N, 3P+N D: 1P, 2P, 3P, 4P
Rated short-circuit capacity (Icn)	10 kA
Rated ultimate short-circuit breaking capacity Icu (acc.to IEC 60947-2)	15 kA
Tripping characteristics	B, C, D
Reference temperature for tripping characteristics	30°C
Energy limiting class (B-,C- Curve)	3
Rated voltage Ue	1P : 240/415 V AC 1P + N : 240 V AC 2...4P : 415 V AC 3P + N : 415 V AC
Rated current In	B: 6, 10, 16, 20, 25, 32, 40 A C&D: 0,5, 1, 1,6, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63 A
Rated frequency	50 Hz
Max. Power frequency recovery voltage (Umax)	1P: 264 V AC; 60V DC; 1P+N:264 V AC; 2...4P : 457 V AC; 2P: 120V DC; 3P+N: 457 V AC
Min. operating voltage	12 V AC
Rated insulation voltage Ui acc. to IEC/EN 60664-1	250 V AC (phase to ground) , 440 V AC (phase to phase)
Rated impulse withstand voltage Uimp. (1.2/50µs)	4 kV (test voltage 6.2kV at sea level, 5kV at 2.000m)
Dielectric test voltage	2 kV (50 / 60Hz, 1 min.)
Overvoltage category	III
Pollution degree	2
Electrical endurance	In < 32A: 20.000 ops.(AC), In ≥ 32A: 10.000 ops.(AC); 1.000 ops. (DC); 1 cycle (2s - ON, 13s - OFF, In ≤ 32A), 1 cycle (2s - ON, 28s - OFF, In >32A)

MCB SB200 M
B characteristic

SB201 M B 16

SB200 M B characteristic
Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.
Applications: residential, commercial and industrial.
Standard: IEC/IS 60898-1, IEC/IS 60947-2
Icn=10 kA

SB201 M B

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
1P	6	SB201 M-B6	1SYS271012R0065 ■	12	265
	10	SB201 M-B10	1SYS271012R0105 ■	12	265
	16	SB201 M-B16	1SYS271012R0165 ■	12	265
	20	SB201 M-B20	1SYS271012R0205 ■	12	265
	25	SB201 M-B25	1SYS271012R0255 ■	12	265
	32	SB201 M-B32	1SYS271012R0325 ■	12	265
	40	SB201 M-B40	1SYS271012R0405 ■	12	530

SB201 M B NA

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
1P+N	6	SB201 M-B6 NA	1SYS271112R0065 ■	6	755
	10	SB201 M-B10 NA	1SYS271112R0105 ■	6	755
	16	SB201 M-B16 NA	1SYS271112R0165 ■	6	755
	20	SB201 M-B20 NA	1SYS271112R0205 ■	6	755
	25	SB201 M-B25 NA	1SYS271112R0255 ■	6	755
	32	SB201 M-B32 NA	1SYS271112R0325 ■	6	755
	40	SB201 M-B40 NA	1SYS271112R0405 ■	6	1,225

SB202 M B

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
2P	6	SB202 M-B6	1SYS272012R0065 ■	6	710
	10	SB202 M-B10	1SYS272012R0105 ■	6	710
	16	SB202 M-B16	1SYS272012R0165 ■	6	710
	20	SB202 M-B20	1SYS272012R0205 ■	6	710
	25	SB202 M-B25	1SYS272012R0255 ■	6	710
	32	SB202 M-B32	1SYS272012R0325 ■	6	710
	40	SB202 M-B40	1SYS272012R0405 ■	6	1,190

■ Stock items

MCB SB200 M
C characteristic

SB201 M C 16

SB202 M C 16

SB200 M C characteristic
Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.
Applications: residential, commercial and industrial.
Standard: IEC/IS 60898-1, IEC/IS 60947-2
Icn=10 kA

SB201 M C

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
1P	0.5	SB201 M-C0.5	1SYS271012R0984	12	440
	1	SB201 M-C1	1SYS271012R0014	12	440
	1.6	SB201 M-C1.6	1SYS271012R0974	12	440
	2	SB201 M-C2	1SYS271012R0024	12	385
	3	SB201 M-C3	1SYS271012R0034	12	385
	4	SB201 M-C4	1SYS271012R0044	12	385
	6	SB201 M-C6	1SYS271012R0064 ■	12	265
	10	SB201 M-C10	1SYS271012R0104 ■	12	265
	16	SB201 M-C16	1SYS271012R0164 ■	12	265
	20	SB201 M-C20	1SYS271012R0204 ■	12	265
	25	SB201 M-C25	1SYS271012R0254 ■	12	265
	32	SB201 M-C32	1SYS271012R0324 ■	12	265
	40	SB201 M-C40	1SYS271012R0404	12	530
	50	SB201 M-C50	1SYS271012R0504	12	530
	63	SB201 M-C63	1SYS271012R0634	12	530

SB201 M C NA

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
1P+N	0.5	SB201 M-C0.5 NA	1SYS271112R0984	6	1,250
	1	SB201 M-C1 NA	1SYS271112R0014	6	1,250
	1.6	SB201 M-C1.6 NA	1SYS271112R0974	6	1,250
	2	SB201 M-C2 NA	1SYS271112R0024	6	1,090
	3	SB201 M-C3 NA	1SYS271112R0034	6	1,090
	4	SB201 M-C4 NA	1SYS271112R0044	6	1,090
	6	SB201 M-C6 NA	1SYS271112R0064 ■	6	755
	10	SB201 M-C10 NA	1SYS271112R0104 ■	6	755
	16	SB201 M-C16 NA	1SYS271112R0164 ■	6	755
	20	SB201 M-C20 NA	1SYS271112R0204 ■	6	755
	25	SB201 M-C25 NA	1SYS271112R0254 ■	6	755
	32	SB201 M-C32 NA	1SYS271112R0324 ■	6	755
	40	SB201 M-C40 NA	1SYS271112R0404 ■	6	1,225
	50	SB201 M-C50 NA	1SYS271112R0504 ■	6	1,225
	63	SB201 M-C63 NA	1SYS271112R0634 ■	6	1,225

SB202 M C

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
2P	0.5	SB202 M-C0.5	1SYS272012R0984	6	1,160
	1	SB202 M-C1	1SYS272012R0014	6	1,160
	1.6	SB202 M-C1.6	1SYS272012R0974	6	1,160
	2	SB202 M-C2	1SYS272012R0024	6	1,050
	3	SB202 M-C3	1SYS272012R0034	6	1,050
	4	SB202 M-C4	1SYS272012R0044	6	1,050
	6	SB202 M-C6	1SYS272012R0064 ■	6	750
	10	SB202 M-C10	1SYS272012R0104 ■	6	750
	16	SB202 M-C16	1SYS272012R0164 ■	6	750
	20	SB202 M-C20	1SYS272012R0204 ■	6	750
	25	SB202 M-C25	1SYS272012R0254 ■	6	750
	32	SB202 M-C32	1SYS272012R0324 ■	6	750
	40	SB202 M-C40	1SYS272012R0404 ■	6	1,190
	50	SB202 M-C50	1SYS272012R0504 ■	6	1,190
	63	SB202 M-C63	1SYS272012R0634 ■	6	1,190

SB203 M C

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
3P	0.5	SB203 M-C0.5	1SYS273012R0984	4	1,720
	1	SB203 M-C1	1SYS273012R0014	4	1,720
	1.6	SB203 M-C1.6	1SYS273012R0974	4	1,720
	2	SB203 M-C2	1SYS273012R0024	4	1,580
	3	SB203 M-C3	1SYS273012R0034	4	1,580
	4	SB203 M-C4	1SYS273012R0044	4	1,580
	6	SB203 M-C6	1SYS273012R0064 ■	4	1,185
	10	SB203 M-C10	1SYS273012R0104 ■	4	1,185
	16	SB203 M-C16	1SYS273012R0164 ■	4	1,185
	20	SB203 M-C20	1SYS273012R0204 ■	4	1,185
	25	SB203 M-C25	1SYS273012R0254 ■	4	1,185
	32	SB203 M-C32	1SYS273012R0324 ■	4	1,185
	40	SB203 M-C40	1SYS273012R0404 ■	4	1,805
	50	SB203 M-C50	1SYS273012R0504 ■	4	1,805
	63	SB203 M-C63	1SYS273012R0634 ■	4	1,805

■ Stock items

MCB SB200 M
C characteristic

SB204 M C 16

SB203M C NA

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
3P+N	0.5	SB203 M-C0.5 NA	1SYS273112R0984	3	2,545
	1	SB203 M-C1 NA	1SYS273112R0014	3	2,545
	1.6	SB203 M-C1.6 NA	1SYS273112R0974	3	2,545
	2	SB203 M-C2 NA	1SYS273112R0024	3	2,230
	3	SB203 M-C3 NA	1SYS273112R0034	3	2,230
	4	SB203 M-C4 NA	1SYS273112R0044	3	2,230
	6	SB203 M-C6 NA	1SYS273112R0064 ■	3	1,610
	10	SB203 M-C10 NA	1SYS273112R0104 ■	3	1,610
	16	SB203 M-C16 NA	1SYS273112R0164 ■	3	1,610
	20	SB203 M-C20 NA	1SYS273112R0204 ■	3	1,610
	25	SB203 M-C25 NA	1SYS273112R0254 ■	3	1,610
	32	SB203 M-C32 NA	1SYS273112R0324 ■	3	1,610
	40	SB203 M-C40 NA	1SYS273112R0404 ■	3	2,280
	50	SB203 M-C50 NA	1SYS273112R0504 ■	3	2,280
	63	SB203 M-C63 NA	1SYS273112R0634 ■	3	2,280

SB204 M C

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
4P	0.5	SB204 M-C0.5	1SYS274012R0984	3	2,415
	1	SB204 M-C1	1SYS274012R0014	3	2,415
	1.6	SB204 M-C1.6	1SYS274012R0974	3	2,415
	2	SB204 M-C2	1SYS274012R0024	3	2,110
	3	SB204 M-C3	1SYS274012R0034	3	2,110
	4	SB204 M-C4	1SYS274012R0044	3	2,110
	6	SB204 M-C6	1SYS274012R0064 ■	3	1,530
	10	SB204 M-C10	1SYS274012R0104 ■	3	1,530
	16	SB204 M-C16	1SYS274012R0164 ■	3	1,530
	20	SB204 M-C20	1SYS274012R0204 ■	3	1,530
	25	SB204 M-C25	1SYS274012R0254 ■	3	1,530
	32	SB204 M-C32	1SYS274012R0324 ■	3	1,530
	40	SB204 M-C40	1SYS274012R0404 ■	3	2,340
	50	SB204 M-C50	1SYS274012R0504 ■	3	2,340
	63	SB204 M-C63	1SYS274012R0634 ■	3	2,340

■ Stock items

MCB SB200 M
D characteristic

SB202 M D 16

SB203 M D 16

SB200 M D characteristic
Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.
Applications: residential, commercial and industrial.
Standard: IEC/IS 60898-1, IEC/IS 60947-2
Icn=10 kA

SB201 M D

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
1P	0.5	SB201 M-D0,5	1SYS271012R0981	12	500
	1	SB201 M-D1	1SYS271012R0011	12	500
	1.6	SB201 M-D1,6	1SYS271012R0971	12	500
	2	SB201 M-D2	1SYS271012R0021	12	435
	3	SB201 M-D3	1SYS271012R0031	12	435
	4	SB201 M-D4	1SYS271012R0041	12	435
	6	SB201 M-D6	1SYS271012R0061	12	315
	10	SB201 M-D10	1SYS271012R0101	12	315
	16	SB201 M-D16	1SYS271012R0161	12	315
	20	SB201 M-D20	1SYS271012R0201	12	315
	25	SB201 M-D25	1SYS271012R0251	12	315
	32	SB201 M-D32	1SYS271012R0321	12	315
	40	SB201 M-D40	1SYS271012R0401	12	595
	50	SB201 M-D50	1SYS271012R0501	12	595
	63	SB201 M-D63	1SYS271012R0631	12	595

SB202 M D

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
2P	0.5	SB202 M-D0.5	1SYS272012R0981	6	1,375
	1	SB202 M-D1	1SYS272012R0011	6	1,375
	1.6	SB202 M-D1.6	1SYS272012R0971	6	1,375
	2	SB202 M-D2	1SYS272012R0021	6	1,200
	3	SB202 M-D3	1SYS272012R0031	6	1,200
	4	SB202 M-D4	1SYS272012R0041	6	1,200
	6	SB202 M-D6	1SYS272012R0061	6	855
	10	SB202 M-D10	1SYS272012R0101	6	855
	16	SB202 M-D16	1SYS272012R0161	6	855
	20	SB202 M-D20	1SYS272012R0201	6	855
	25	SB202 M-D25	1SYS272012R0251	6	855
	32	SB202 M-D32	1SYS272012R0321	6	855
	40	SB202 M-D40	1SYS272012R0401	6	1,410
	50	SB202 M-D50	1SYS272012R0501	6	1,410
	63	SB202 M-D63	1SYS272012R0631	6	1,410

SB203 M D

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
3P	0.5	SB203 M-D0.5	1SYS273012R0981	4	2,050
	1	SB203 M-D1	1SYS273012R0011	4	2,050
	1.6	SB203 M-D1.6	1SYS273012R0971	4	2,050
	2	SB203 M-D2	1SYS273012R0021	4	1,790
	3	SB203 M-D3	1SYS273012R0031	4	1,790
	4	SB203 M-D4	1SYS273012R0041	4	1,790
	6	SB203 M-D6	1SYS273012R0061	4	1,350
	10	SB203 M-D10	1SYS273012R0101	4	1,350
	16	SB203 M-D16	1SYS273012R0161	4	1,350
	20	SB203 M-D20	1SYS273012R0201	4	1,350
	25	SB203 M-D25	1SYS273012R0251	4	1,350
	32	SB203 M-D32	1SYS273012R0321	4	1,350
	40	SB203 M-D40	1SYS273012R0401	4	2,130
	50	SB203 M-D50	1SYS273012R0501	4	2,130
	63	SB203 M-D63	1SYS273012R0631	4	2,130

SB204 M D

Number of poles	Rated current In A	Order details		Std pack	Unit MRP ₹
		Type code	Order code		
4P	0.5	SB204 M-D0.5	1SYS274012R0981	3	2,235
	1	SB204 M-D1	1SYS274012R0011	3	2,235
	1.6	SB204 M-D1.6	1SYS274012R0971	3	2,235
	2	SB204 M-D2	1SYS274012R0021	3	2,350
	3	SB204 M-D3	1SYS274012R0031	3	2,350
	4	SB204 M-D4	1SYS274012R0041	3	2,350
	6	SB204 M-D6	1SYS274012R0061	3	1,870
	10	SB204 M-D10	1SYS274012R0101	3	1,870
	16	SB204 M-D16	1SYS274012R0161	3	1,870
	20	SB204 M-D20	1SYS274012R0201	3	1,870
	25	SB204 M-D25	1SYS274012R0251	3	1,870
	32	SB204 M-D32	1SYS274012R0321	3	1,870
	40	SB204 M-D40	1SYS274012R0401	3	2,465
	50	SB204 M-D50	1SYS274012R0501	3	2,465
	63	SB204 M-D63	1SYS274012R0631	3	2,465

■ Stock items

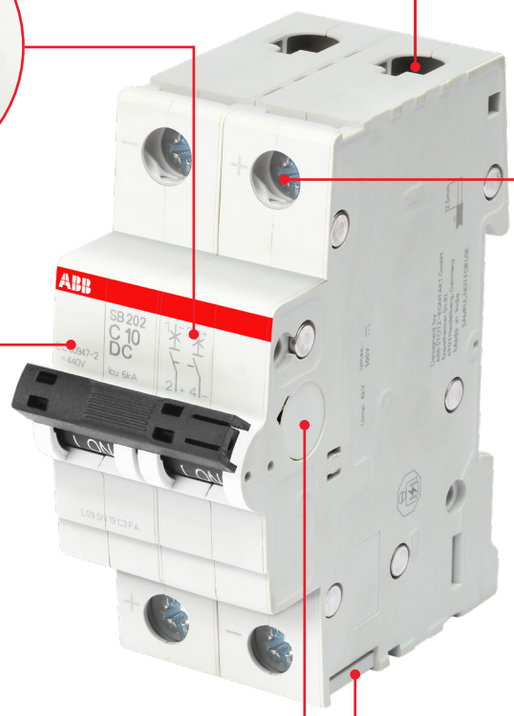
Miniature Circuit Breaker SB200 DC

Right product for right application

The range impresses with its performance, approvals and high in-built short-circuit breaking capacity for DC application. Can be used in SP version at 250V DC and DP version upto 500V DC.

IP20 - finger safety.

Polarity marking.



Captive screws: don't lose what's important for you.

Approvals and standard.

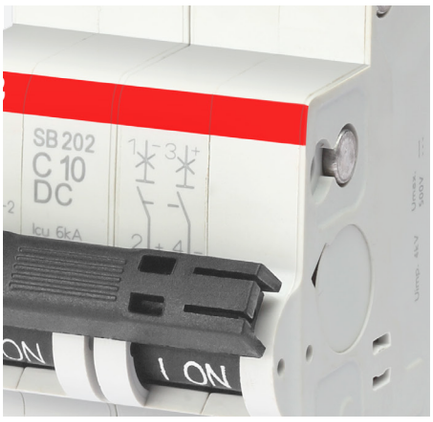
Whatever your application need is – applicable with a wide range of accessories.

State-of-the-art design (Aesthetics & Ergonomics)
Elegant in appearance and the knob designed for easy operation.

Laser marking
All printings of the SB200 MCBs, like the approvals on the product identification, are printed by a laser. The laser printing ensures a friction, scratch and solvent resistant marking on the MCBs. Easy identification of the products in case of maintenance or replacement, due to safe laser printing.

Housing cover with fire retardant material
High performance 100% recyclable plastic material with fire retardant, high melting point, low water absorption & high dielectric strength properties. ABB is taking care of the environment... with the latest generation of thermoplastics, it is possible to recycle the MCBs – especially the thermoplastic housing material can be re-used. SB200 is 100% free of halogens.

IP20 protection
IP 20 - finger safe terminals. The System pro M compact® MCBs are equipped with 25 mm² cylinder lift twin terminals, a well-proven and reliable technology - designed for sophisticated industrial use. The cross wiring can easily be done by inserting the System pro M compact® busbars into the rear terminal part and then the incoming wires into the front part of the terminal.



Labelling area
Provision for providing label enables easy identification and polarity marking of circuit during installation, operation & maintenance.

Accessories mountable
Wide range of add-on accessories having 30 different types of accessories. Max. possibility of mounting: 4 different accessories on the right side and 1 on the left side ensures highest flexibility of functions. Universal contact, motorised unique accessory like mechanical tripping devices available only with ABB.

MCB SB200 DC
C characteristic

SB200 DC characteristic
Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.
Applications: residential, commercial and industrial.
Standard: IS/IEC 60947-2
Icn=6 kA

SB201 C 6 DC

SB201 DC C

Number of poles	Rated current In A	Order details		Standard pack	L.P.(₹)
		Type code	Order code		
1P	1.6	SB201-C1.6DC	1SYS251067R0974	12	785
	2	SB201-C2DC	1SYS251067R0024	12	785
	3	SB201-C3DC	1SYS251067R0034	12	785
	4	SB201-C4DC	1SYS251067R0044	12	785
	6	SB201-C6DC	1SYS251067R0064	12	645
	10	SB201-C10DC	1SYS251067R0104	12	645
	16	SB201-C16DC	1SYS251067R0164	12	645
	20	SB201-C20DC	1SYS251067R0204	12	645
	25	SB201-C25DC	1SYS251067R0254	12	645
	32	SB201-C32DC	1SYS251067R0324	12	645
	40	SB201-C40DC	1SYS251067R0404	12	820
	50	SB201-C50DC	1SYS251067R0504	12	820
	63	SB201-C63DC	1SYS251067R0634	12	820

SB202 C 10 DC

SB202 DC

Number of poles	Rated current In A	Order details		Standard pack	L.P.(₹)
		Type code	Order code		
2P	1.6	SB202-C1.6DC	1SYS252067R0974	6	1,665
	2	SB202-C2DC	1SYS252067R0024	6	1,665
	3	SB202-C3DC	1SYS252067R0034	6	1,665
	4	SB202-C4DC	1SYS252067R0044	6	1,665
	6	SB202-C6DC	1SYS252067R0064	6	1,340
	10	SB202-C10DC	1SYS252067R0104	6	1,340
	16	SB202-C16DC	1SYS252067R0164	6	1,340
	20	SB202-C20DC	1SYS252067R0204	6	1,340
	25	SB202-C25DC	1SYS252067R0254	6	1,340
	32	SB202-C32DC	1SYS252067R0324	6	1,340
	40	SB202-C40DC	1SYS252067R0404	6	1,815
	50	SB202-C50DC	1SYS252067R0504	6	1,815
	63	SB202-C63DC	1SYS252067R0634	6	1,815

G 3/8"
www.piab.com

Miniature Circuit Breaker (MCB)

S200 series - 80, 100A

S201C

Features

- Breaking capacity - 6kA
- Tripping characteristics - C curve
- Suitable for -25..... +55 °C ambient temperatures
- Standards : Conforms to IEC60898, IEC60947-2

Description	Current rating (A)	Pack unit (Pc)	Ordering code	L.P.(₹)
Single pole				
S201-C80	80	1	2CDS251001R0804	2,435
S201-C100	100	1	2CDS251001R0824	2,845
Single pole & neutral				
S201-C80NA	80	1	2CDS251103R0804	5,090
S201-C100NA	100	1	2CDS251103R0824	6,075
Double pole				
S202-C80	80	1	2CDS252001R0804	4,770
S202-C100	100	1	2CDS252001R0824	5,510
Triple pole				
S203-C80	80	1	2CDS253001R0804	6,945
S203-C100	100	1	2CDS253001R0824	8,400
Triple pole & neutral				
S203-C80NA	80	1	2CDS253103R0804	10,440
S203-C100NA	100	1	2CDS253103R0824	12,445
Four pole				
S204-C80	80	1	2CDS254001R0804	9,750
S204-C100	100	1	2CDS254001R0824	10,545

High performance MCB

S800 series 80 to 125A

S202M-C DC

Features

- Complies to standards IEC 60947-2 & EN 60898-1
- Compact size: One size up to 125A
- Compact performance:
  Selective and back-up characteristics
- Does not let go: The interchangeable terminal adapter.
  Cage terminals or ring lugs
- On the safe side: Operating status display.
- Simple and flexible: Accessories fitted by the customer
- Identical accessories for a broad range of applications

The S800 range

- S800S (50kA) upto 125A
- S800N (36kA) upto 125A
- S800C (25kA) upto 125A
- S800B (16kA) upto 125A
- S800PV-SP (upto 1500V DC & upto 125A)
- S800PV-M-H (upto 1500V DC & upto 125A)

S800B - 'C' Curve 16 kA as per IEC 60947-2

Single pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	L.P.(₹)
S801B-C32	32	1	2CCS811001R0324	2,420
S801B-C40	40	1	2CCS811001R0404	2,420
S801B-C50	50	1	2CCS811001R0504	2,545
S801B-C63	63	1	2CCS811001R0634	2,545
S801B-C80	80	1	2CCS811001R0804	2,970
S801B-C100	100	1	2CCS811001R0824	3,125
S801B-C125	125	1	2CCS811001R0844	3,285

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	L.P.(₹)
S802B-C32	32	1	2CCS812001R0324	5,090
S802B-C40	40	1	2CCS812001R0404	5,090
S802B-C50	50	1	2CCS812001R0504	5,340
S802B-C63	63	1	2CCS812001R0634	5,340
S802B-C80	80	1	2CCS812001R0804	6,150
S802B-C100	100	1	2CCS812001R0824	6,570
S802B-C125	125	1	2CCS812001R0844	6,890

Triple pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	L.P.(₹)
S803B-C32	32	1	2CCS813001R0324	7,740
S803B-C40	40	1	2CCS813001R0404	7,740
S803B-C50	50	1	2CCS813001R0504	8,140
S803B-C63	63	1	2CCS813001R0634	8,140
S803B-C80	80	1	2CCS813001R0804	9,500
S803B-C100	100	1	2CCS813001R0824	10,005
S803B-C125	125	1	2CCS813001R0844	10,515

Four pole

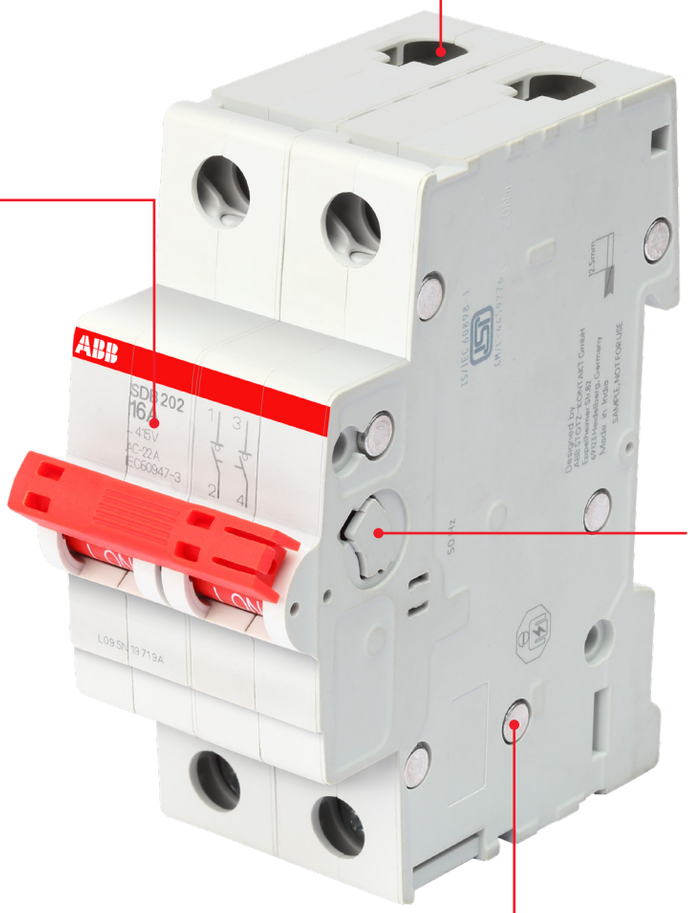
Description	Current rating (A)	Pack unit (Pc)	Ordering code	L.P.(₹)
S804B-C32	32	1	2CCS814001R0324	10,410
S804B-C40	40	1	2CCS814001R0404	10,410
S804B-C50	50	1	2CCS814001R0504	10,940
S804B-C63	63	1	2CCS814001R0634	10,940
S804B-C80	80	1	2CCS814001R0804	12,760
S804B-C100	100	1	2CCS814001R0824	13,440
S804B-C125	125	1	2CCS814001R0844	14,130

Switch Disconnector SDB200

The details make the difference

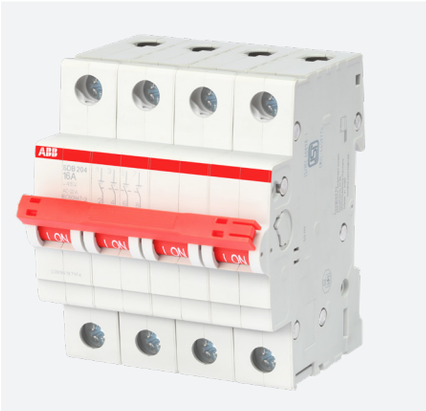
IP20 - finger safety.

Easy product coding – easy identification: basic technical information already integrated into the name.



Fully compatible with all System pro M devices and accessories.

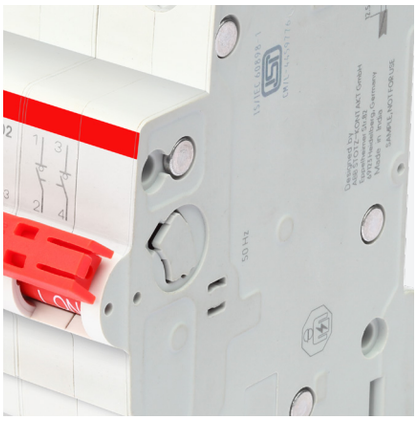
Patented housing design: Environment-friendly and performance-optimized.



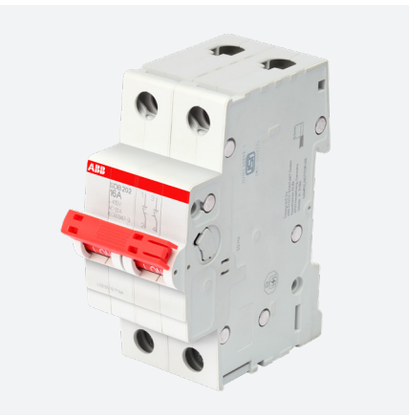
Patented Housing Design
By using state-of-the-art housing material, ABB is taking care of the environment. With the latest generation of halogen-free thermoplastics for SDB200, it is possible to recycle the switch disconnectors completely without environmental pollution. The material works for the stability.

Highest performance
With a rated voltage of 253/440 V AC, a rated conditional short-circuit current of 25 kA, terminals with protection from misconnection, a “Real CPI” switching position display, as well as full compatibility with all MCB accessories, the SDB200 is unique in its field of application. SDB200 complies with IEC/EN 60947-3.

IP20 protection
IP 20 - finger safe terminals.
The System pro M compact® MCBs are equipped with 25 mm² cylinder lift twin terminals, a well-proven and reliable technology - designed for sophisticated industrial use. The cross wiring can be easily done by inserting the System pro M compact® busbars into the rear terminal part and then the incoming wires into the front part of the terminal.



Laser printing
All labels on the SDB200, as the approvals on the dome, technical details and the product identification, are printed by a laser. The laser printing ensures a friction, scratch and solvent resistant marking on the switch disconnectors for easy identification in case of maintenance or replacement. For control and acceptance procedure, it is important to see all markings also in the mounted position.

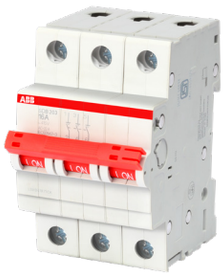


ISI and CE marking
In addition to the International standards and markings IEC, the product is certified as per latest Indian Standards (ISI)

Wide range of accessories
SDB200 is fully compatible to the complete range of System pro M compact accessories like:

- Auxiliary contacts, to be mounted on the left side, the right side or bottom fitting
- Shunt trips
- Undervoltage release
- Motor operating devices

Switch Disconnector
SDB200



SDB203 16 A

SDB202

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
2P	40	SDB202/40	1SYD272115R0040 ■	6	820
	63	SDB202/63	1SYD272115R0063 ■	6	1,085

SDB203

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
3P	40	SDB203/40	1SYD273115R0040 ■	4	1,405
	63	SDB203/63	1SYD273115R0063 ■	4	1,640

SDB204

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
4P	40	SDB204/40	1SYD274115R0040 ■	3	1,740
	63	SDB204/63	1SYD274115R0063 ■	3	1,925

Note: Standard packing quantity for SDB switch Disconnector: DP-6 Nos, TP-4 Nos, FP-3 Nos.

E200

E201

E200

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
Double pole					
2P	80	E202/80r	2CDE282001R0080	1	955
	100	E202/100r	2CDE282001R0100	1	1,500
	125	E202/125r	2CDE282001R0125	1	1,550
Triple pole					
3P	80	E203/80r	2CDE283001R0080	1	1,600
	100	E203/100r	2CDE283001R0100	1	1,750
	125	E203/125r	2CDE283001R0125	1	1,960
Four pole					
4P	80	E204/80r	2CDE284001R0080	1	1,800
	100	E204/100r	2CDE284001R0100	1	1,910
	125	E204/125r	2CDE284001R0125	1	2,130

Change over switch

E213

Description	Ordering code	LP (₹)
E213-16-002, double pole change over switch, 16 A (I-II)	2CCA703045R0001	2,175
E213-25-002, double pole change over switch, 25 A (I-II)	2CCA703046R0001	2,705
E214-16-202, group switch, 16 A (I-0-II)	2CCA703030R0001	2,455
E214-25-202, group switch, 25 A (I-0-II)	2CCA703031R0001	2,740

■ Stock items

Residual Current Circuit Breaker FB200

A range designed to ensure efficiency and protection

Bi-directional cylindrical terminal ensures higher safety of connecting operations, making them easier.

Test push-button to verify the correct functioning of the device.

Information on the device is laser printed to make it clearly visible and long lasting.

Laser-marked order code on the front to make easier future orders.

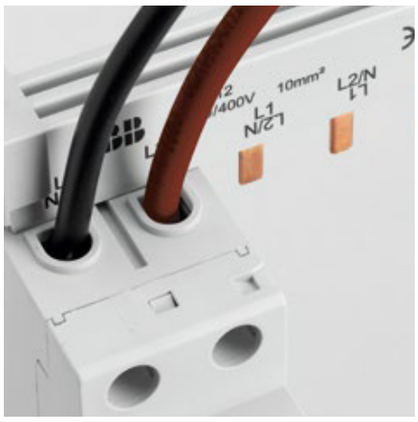
ISI and CE marking
In addition to the International standards and markings IEC, the product is certified as per latest Indian Standards (ISI).

High performance
- Rated breaking capacity and rated residual breaking capacity laser printed on the device: Im=IΔm= 1000 mA
- Co-ordination with a 63 A rated current with conditional short-circuit capacity Inc=10000 A.

Accessories mountable
Wide range of add-on accessories having 30 different types of accessories. Max. possibility of Mounting: 4 different accessories on the right side and 1 on the left side ensures highest flexibility of functions. Universal contact, motorised unique accessory like mechanical tripping devices available only with ABB.

Termination
The availability of two terminals offers different connection solutions, thanks to the possibility to connect two independent cables in the same device: the second terminal can be used for an auxiliary circuit or for the supply of devices with small section cables without connecting them together with the main circuit.

Auto reclosing
The FB200 can be coupled with the auto reclosing unit F2C-ARH in order to ensure continuity of service for the whole installation of your home, avoiding lack of supply.



Dual termination
Two terminals are available, the fore one for cables up to 25 mm², the back one for cables up to 10 mm² or for busbars.

■ Stock items

RCCB FB200 and F200 Higher rating

AC type

FB202 AC

FB200 AC and F200 type Function: protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct contacts (with IΔn=30 mA).

Application: residential, commercial, industrial.
Standard: IEC/EN 61008-1; IEC/EN 61008-2-1
Marking: according to EN 61008-1; EN 61008-2-1

FB202 and F202 AC

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
2P	25	FB202 AC-25/0.03	1SYF202015R1250 ■	1	2,705
	25	FB202 AC-25/0.1	1SYF202015R2250 ■	1	2,825
	25	FB202 AC-25/0.3	1SYF202015R3250	1	2,845
	40	FB202 AC-40/0.03	1SYF202015R1400 ■	1	3,095
	40	FB202 AC-40/0.1	1SYF202015R2400 ■	1	3,245
	40	FB202 AC-40/0.3	1SYF202015R3400	1	3,340
	63	FB202 AC-63/0.03	1SYF202015R1630 ■	1	3,660
	63	FB202 AC-63/0.1	1SYF202015R2630 ■	1	3,785
	63	FB202 AC-63/0.3	1SYF202015R3630	1	3,850
	80	F202 AC-80/0,03	2CSF202005R1800	1	9,525
	80	F202 AC-80/0,1	2CSF202005R2800	1	9,445
	80	F202 AC-80/0,3	2CSF202005R3800	1	9,445
	100	F202 AC-100/0,03	2CSF202005R1900	1	8,530
	100	F202 AC-100/0,1	2CSF202005R2900	1	8,925
	100	F202 AC-100/0,3	2CSF202005R3900	1	9,675

FB204 AC

FB204 and F204 AC

Number of poles	Rated current In A	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
4P	25	FB204 AC-25/0.03	1SYF204015R1250	1	3,590
	25	FB204 AC-25/0.1	1SYF204015R2250	1	3,755
	25	FB204 AC-25/0.3	1SYF204015R3250	1	3,900
	40	FB204 AC-40/0.03	1SYF204015R1400 ■	1	3,660
	40	FB204 AC-40/0.1	1SYF204015R2400 ■	1	3,685
	40	FB204 AC-40/0.3	1SYF204015R3400 ■	1	3,925
	63	FB204 AC-63/0.03	1SYF204015R1630 ■	1	4,150
	63	FB204 AC-63/0.1	1SYF204015R2630 ■	1	4,450
	63	FB204 AC-63/0.3	1SYF204015R3630 ■	1	4,495
	80	F204 AC-80/0,03	2CSF204005R1800	1	10,095
	80	F204 AC-80/0,1	2CSF204005R2800	1	10,550
	80	F204 AC-80/0,3	2CSF204005R3800	1	10,660
	100	F204 AC-100/0,03	2CSF204005R1900	1	10,265
	100	F204 AC-100/0,1	2CSF204005R2900	1	11,415
	100	F204 AC-100/0,3	2CSF204005R3900	1	11,135
	125	F204 AC-125/0,03	2CSF204001R1950	1	14,565
	125	F204 AC-125/0,1	2CSF204001R2950	1	17,150
	125	F204 AC-125/0,3	2CSF204001R3950	1	37,100

■ Stock items

Residual current circuit breaker with overcurrent protection

RCBO - DS200M series

DS201M 1P+N

Features

- Complies to standard to IEC/EN 61009
- DS201 available in 4.5kA,6kA & 10kA breaking capacity
- Available in AC, A and APR types to meet all protection needs
- B and C characteristics with rated current up to 40 A available on all the versions
- Contact position indicator (CPI) to indicate the exact information of the circuit-breaker status
- Equipped with an RFID tag according to standard ISO/IEC FCD 15693-3 to authenticate the product
- Bi-directional cylinder-lift terminals for easier parallel feed
- Flag indicators - Differential trip indicator - blue
- Contact position indicator - green / red

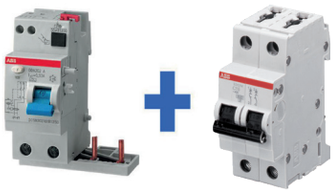
RCBO 10kA AC Type - DS200M

Description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	LP (₹)
DS201 M C6 AC30	6	30	1	2CSR275040R1064	3,960
DS201 M C10 AC30	10	30	1	2CSR275040R1104	3,960
DS201 M C16 AC30	16	30	1	2CSR275040R1164	3,960
DS201 M C20 AC30	20	30	1	2CSR275040R1204	3,960
DS201 M C25 AC30	25	30	1	2CSR275040R1254 ■	3,960
DS201 M C32 AC30	32	30	1	2CSR275040R1324	4,300
DS201 M C40 AC30	40	30	1	2CSR275040R1404 ■	5,100
DS201 M C6 AC100	6	100	1	2CSR275040R2064	4,450
DS201 M C10 AC100	10	100	1	2CSR275040R2104	4,450
DS201 M C16 AC100	16	100	1	2CSR275040R2164	4,450
DS201 M C20 AC100	20	100	1	2CSR275040R2204	4,450
DS201 M C25 AC100	25	100	1	2CSR275040R2254 ■	4,450
DS201 M C32 AC100	32	100	1	2CSR275040R2324	4,600
DS201 M C40 AC100	40	100	1	2CSR275040R2404 ■	5,400
DS201 M C6 AC300	6	300	1	2CSR275040R3064	4,300
DS201 M C10 AC300	10	300	1	2CSR275040R3104	4,300
DS201 M C16 AC300	16	300	1	2CSR275040R3164	4,300
DS201 M C20 AC300	20	300	1	2CSR275040R3204	4,300
DS201 M C25 AC300	25	300	1	2CSR275040R3254	4,300
DS201 M C32 AC300	32	300	1	2CSR275040R3324	4,450
DS201 M C40 AC300	40	300	1	2CSR275040R3404	5,250

■ Stock items

Residual current circuit breaker with overcurrent protection

RCD blocks - DDA200 + S200 M series (RCBO combination's)



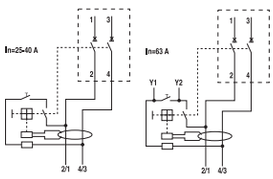
DDA200 S200 M

DDA - 200 AC type

Function: RCD-block for assembly on site with MCBs S 200M series. Protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts.

Standard: IEC/EN 61009 Ann. G

DDA202 AC

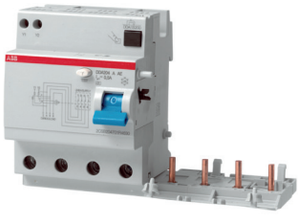


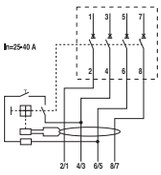
DDA 200 AC

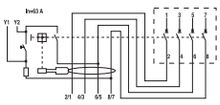
Two pole

Description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	LP (₹)
DDA202 AC-63/0.03*	63	30	1	2CSB202001R1630 ■	3,195
DDA202 AC-63/0.1*	63	100	1	2CSB202001R2630 ■	3,890
DDA202 AC-63/0.3*	63	300	1	2CSB202001R3630	3,905

* Consider S200 M double pole MCBs.



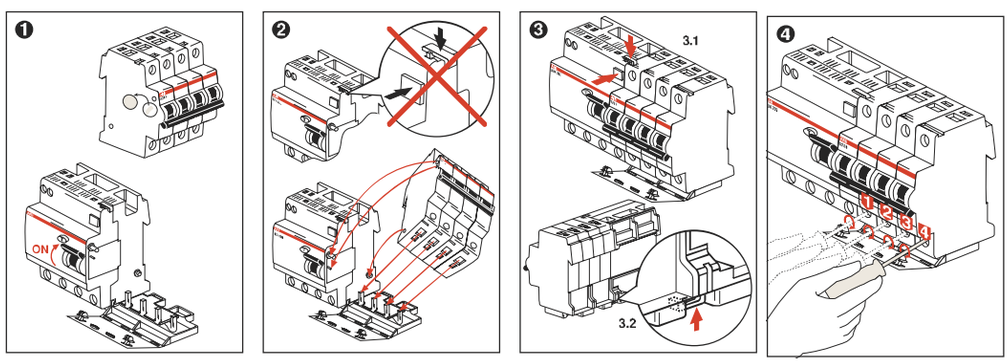


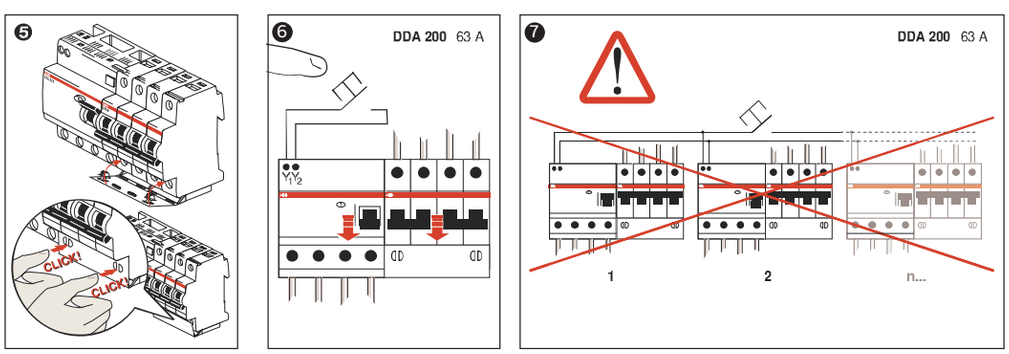


Four pole

Description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	LP (₹)
DDA204 AC-25/0.03	25	30	1	2CSB204001R1250	2,995
DDA204 AC-40/0.03	40	30	1	2CSB204001R1400 ■	3,110
DDA204 AC-63/0.03	63	30	1	2CSB204001R1630 ■	3,290
DDA204 AC-25/0.1	25	100	1	2CSB204001R2250	3,335
DDA204 AC-40/0.1	40	100	1	2CSB204001R2400 ■	3,540
DDA204 AC-63/0.1	63	100	1	2CSB204001R2630 ■	4,235
DDA204 AC-25/0.3	25	300	1	2CSB204001R3250	3,420
DDA204 AC-40/0.3	40	300	1	2CSB204001R3400 ■	3,675
DDA204 AC-63/0.3	63	300	1	2CSB204001R3630 ■	4,300

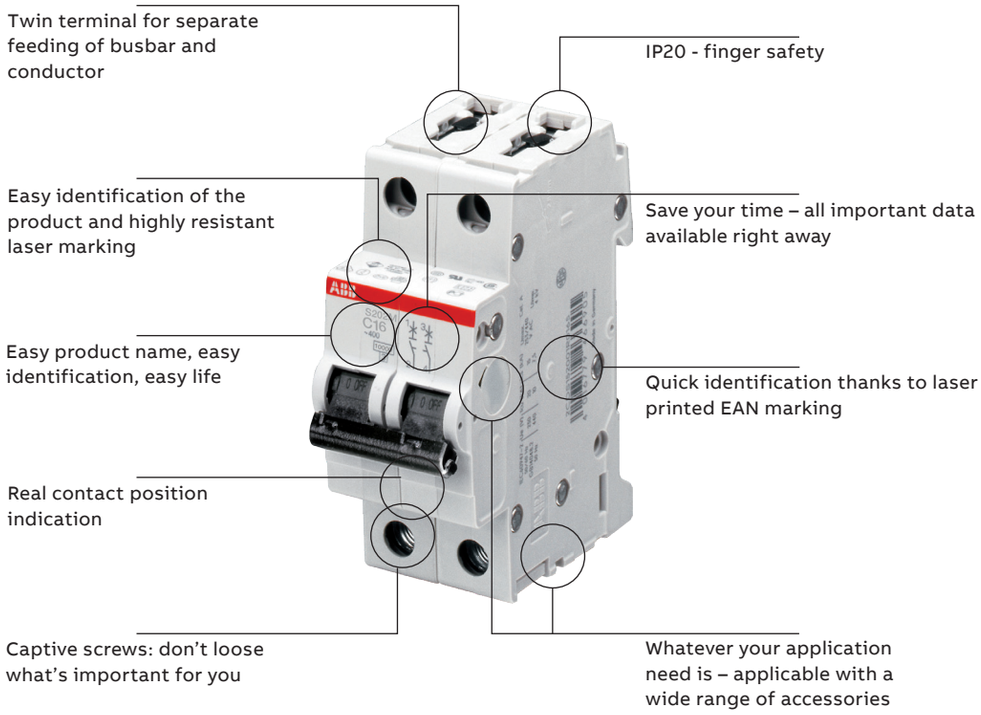
* Consider S200 M four pole MCBs.





■ Stock items

Miniature circuit breaker (MCB)
S200M series



Technical Features

Electrical data	S200 M	
Standards	IEC 60947-2, IS/IEC-60898-1	
Poles	1P, 2P, 3P, 4P, 1P +N, 3P +N	
Tripping characteristics	B, C, D	
Rated current	0.5A - 63 A	
Rated voltage	1P : 230 / 400 V AC 1P + N : 230 V AC 2…4P : 400 V AC 3P + N : 400 V AC	1P : 60 V DC 2P : 120 V DC
Insulation voltage	250 V AC (Phase to ground) 500 V AC (Phase to phase)	
Max operating voltage	1P: 253 V AC 2…4P : 440 V AC	
Min operating voltage	12 V AC	
Rated frequency	50/60 Hz	
Rated short circuit capacity	10kA	
Energy limiting class (B, C upto 40 A)	3	
Over voltage category	III	
Pollution degree	2	
Rated impulse withstand voltage	4kV (Test Voltage 6.2kV at Sea Level, 5kV at 2,000 m)	
Dielectric test voltage	2kV (50/60 Hz, 1 min)	
Accessories mountable	Yes	
Cross-section of conductor (top / bottom)	35 mm^2	
Terminal	Fail safe bi-directional cylinder - lift terminal	
Contact position indication	Marking on toggle (1 ON / 0 OFF), Real CPI (red ON / green OFF)	
Real contact position indication	Red ON / green OFF	

S200M - MCBs, C characteristics - 10 kA

S202M-C

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit MRP (₹)
S202M-C 6	6	6	2CDS272001R0064 ■	915
S202M-C 10	10	6	2CDS272001R0104 ■	
S202M-C 16	16	6	2CDS272001R0164 ■	
S202M-C 20	20	6	2CDS272001R0204 ■	
S202M-C 25	25	6	2CDS272001R0254 ■	
S202M-C 32	32	6	2CDS272001R0324 ■	
S202M-C 40	40	6	2CDS272001R0404 ■	1,420
S202M-C 50	50	6	2CDS272001R0504	
S202M-C 63	63	6	2CDS272001R0634	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

S204M-C

Four pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit MRP (₹)
S204M-C 6	6	3	2CDS274001R0064 ■	1,825
S204M-C 10	10	3	2CDS274001R0104 ■	
S204M-C 16	16	3	2CDS274001R0164 ■	
S204M-C 20	20	3	2CDS274001R0204 ■	
S204M-C 25	25	3	2CDS274001R0254 ■	
S204M-C 32	32	3	2CDS274001R0324 ■	
S204M-C 40	40	3	2CDS274001R0404 ■	2,740
S204M-C 50	50	3	2CDS274001R0504	
S204M-C 63	63	3	2CDS274001R0634 ■	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

S200M - MCBs, D characteristics - 10 kA

S202M-D

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit MRP (₹)
S202M-D 6	6	6	2CDS272001R0061	950
S202M-D 10	10	6	2CDS272001R0101	
S202M-D 16	16	6	2CDS272001R0161	
S202M-D 20	20	6	2CDS272001R0201	
S202M-D 25	25	6	2CDS272001R0251	
S202M-D 32	32	6	2CDS272001R0321	
S202M-D 40	40	6	2CDS272001R0401	1,650
S202M-D 50	50	6	2CDS272001R0501	
S202M-D 63	63	6	2CDS272001R0631	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

S204M-D

Four pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit MRP (₹)
S204M-D 6	6	3	2CDS274001R0061	2,095
S204M-D 10	10	3	2CDS274001R0101	
S204M-D 16	16	3	2CDS274001R0161	
S204M-D 20	20	3	2CDS274001R0201	
S204M-D 25	25	3	2CDS274001R0251	
S204M-D 32	32	3	2CDS274001R0321	
S204M-D 40	40	3	2CDS274001R0401	3,120
S204M-D 50	50	3	2CDS274001R0501	
S204M-D 63	63	3	2CDS274001R0631	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

■ Stock items

Solution for unwanted tripping - AP-R type (high immunity)
RCCB / RCBO

The ABB range of AP-R anti-disturbance residual current circuit-breakers and blocks was designed to overcome the problem of unwanted tripping due to overvoltages of atmospheric or operation origin.

The electronic circuit in these devices can distinguish between temporary leakage caused by disturbances on the mains and permanent leakage due to actual faults, only breaking the circuit in the latter case.

AP-R residual current circuit-breakers and blocks have a slight delay into the tripping time, but this does not compromise the safety limits set by the Standards in force (release time at 2 IΔn=150 ms).

Compared with standard type breakers, AP-R residual current breakers are therefore characterised, for any given sensibility, by:
- Higher residual trip current
- Tripping time delay
- Better resistance to overvoltages, harmonics and impulse disturbances.

Guaranteeing conventional residual current protection, their installation in the electrical circuit therefore allows any unwanted tripping to be avoided in domestic and industrial systems in which service continuity is essential.

This delay makes the AP-R residual current devices especially suited for installations involving motor starters/variable speed drives, fluorescent lamps or IT/electronic equipment.

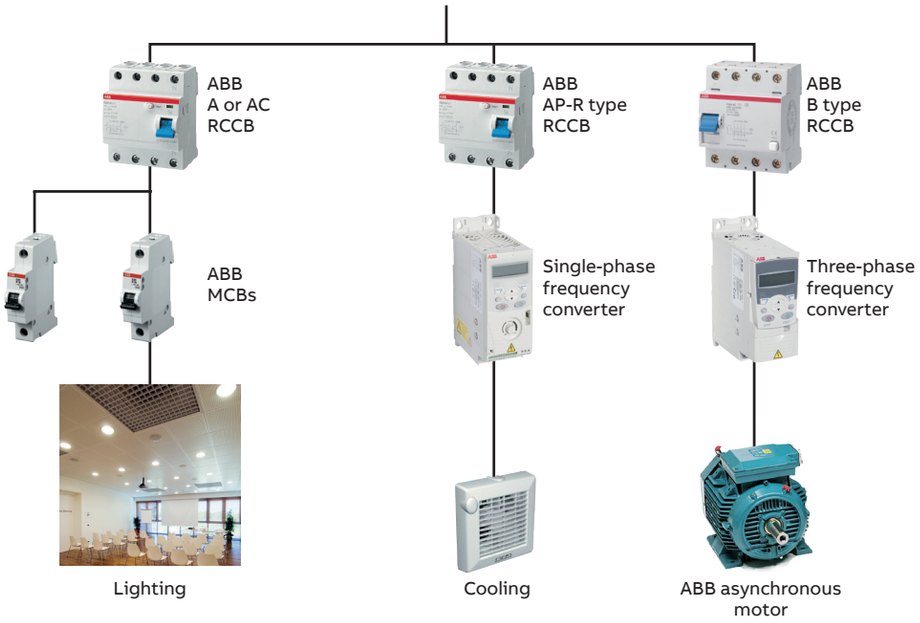
The use of multiple electronic reactors for the supply of fluorescent lamps instead generates permanent leakage currents and inrush currents that can cause nuisance tripping of a standard residual current circuit breaker.

IT system loads and other electronic equipment (e.g. dimmers, computers, inverters) with capacitive input filters connected between the phases and ground can also generate permanent earth leakage currents whose sum may provoke the nuisance tripping of a standard residual current circuit breaker. For these situations, the AP-R breakers allow a greater number of devices to be connected to the installation.

Frequency converters include a rectifier section and an inverter section.

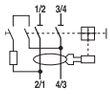
In case of fault within a single-phase frequency converter AP-R type RCDs provide complete protection, because an earth fault occurring downstream the inverter, produces an earth fault current with multi-frequency shape with high amount of harmonics.

While, in case of fault within a three-phase frequency converter, B type RCDs ensure complete protection because in case of insulation fault between the rectifier and the inverter or downstream the inverter we can have a smooth DC earth fault current.

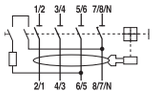


RCCB - F200 series: AP-R (high immunity)

F202A



F204A



Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing the best compromise between safety and continuity in the service, thanks to the resistance to unwanted trippings; protection against indirect contacts and additional protection against direct (IΔn=30 mA) contacts.

Application: residential, commercial, industrial. Standard: IEC/EN 61008

Surge current resistance (wave 8/20)=3000 A Marking: according to EN 61008

RCCB - F200 series

Description	Current rating (A)	Residual rated current (mA)	Packing	Ordering code	LP (₹)
Two pole					
F202 A-25/0.03 AP-R	25	30	1	2CSF202401R1250	5,980
F202 A-40/0.03 AP-R	40	30	1	2CSF202401R1400	6,295
F202 A-63/0.03 AP-R	63	30	1	2CSF202401R1630	7,600
F202 A-80/0.03 AP-R	80	30	1	2CSF202401R1800	10,530
F202 A-100/0.03 AP-R	100	30	1	2CSF202401R1900	11,790
Four pole					
F204 A-25/0.03 AP-R	25	30	1	2CSF204401R1250	7,350
F204 A-40/0.03 AP-R	40	30	1	2CSF204401R1400	7,560
F204 A-63/0.03 AP-R	63	30	1	2CSF204401R1630	8,580
F204 A-80/0.03 AP-R	80	30	1	2CSF204401R1800	12,880
F204 A-100/0.03 AP-R	100	30	1	2CSF204401R1900	14,190
F204 A-125/0.03 AP-R	125	30	1	2CSF204401R1950	17,065

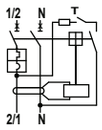
RCBO - DS200 series APR type (high immunity)

Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing an optimal compromise between safety and continuity of service, thanks to the resistance to unwanted tripping; protection against indirect contact and additional protection against direct (IΔn=30 mA) contact; protection and isolation of resistive and inductive loads.

Application: residential, commercial, industrial. Standard: IEC/EN 61009

Icn=10 kA

DS201M APR-1P+N

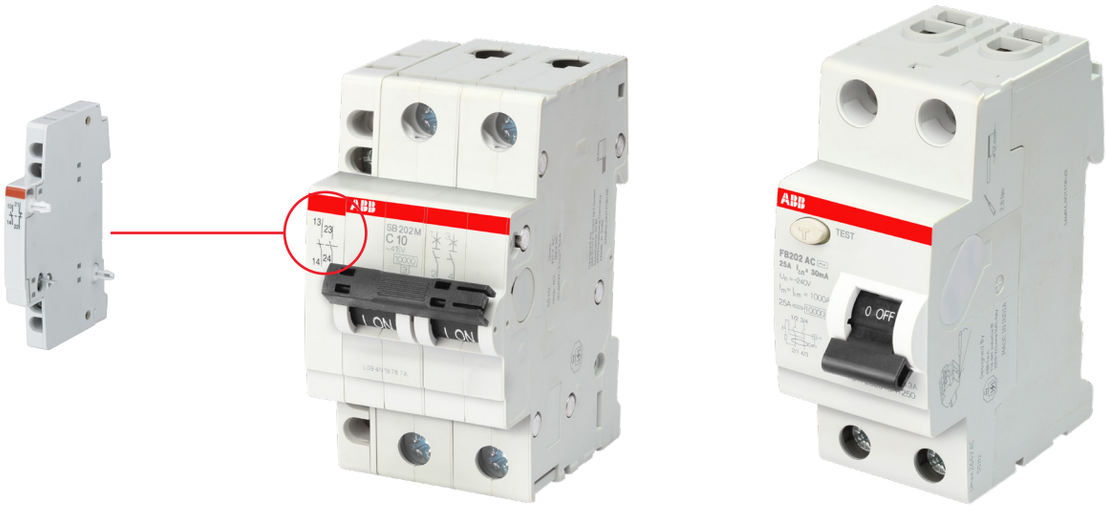


RCBO - DS200 series APR type

Description	Current rating (A)	Residual rated current (mA)	Packing	Ordering code	Unit MRP (₹)
DS201 M C6 APR30	6	30	1	2CSR275440R1064	6,825
DS201 M C10 APR30	10	30	1	2CSR275440R1104	6,825
DS201 M C16 APR30	16	30	1	2CSR275440R1164	6,825
DS201 M C20 APR30	20	30	1	2CSR275440R1204	6,825
DS201 M C25 APR30	25	30	1	2CSR275440R1254	6,825
DS201 M C32 APR30	32	30	1	2CSR275440R1324	7,055
DS201 M C40 APR30	40	30	1	2CSR275440R1404	7,200
DS201 M C6 APR100	6	100	1	2CSR275440R2064	8,615
DS201 M C10 APR100	10	100	1	2CSR275440R2104	8,615
DS201 M C16 APR100	16	100	1	2CSR275440R2164	8,615
DS201 M C20 APR100	20	100	1	2CSR275440R2204	8,615
DS201 M C25 APR100	25	100	1	2CSR275440R2254	8,615
DS201 M C32 APR100	32	100	1	2CSR275440R2324	9,725
DS201 M C40 APR100	40	100	1	2CSR275440R2404	9,920
DS201 M C6 APR300	6	300	1	2CSR275440R3064	8,445
DS201 M C10 APR300	10	300	1	2CSR275440R3104	8,445
DS201 M C16 APR300	16	300	1	2CSR275440R3164	8,445
DS201 M C20 APR300	20	300	1	2CSR275440R3204	8,445
DS201 M C25 APR300	25	300	1	2CSR275440R3254	8,445
DS201 M C32 APR300	32	300	1	2CSR275440R3324	9,535
DS201 M C40 APR300	40	300	1	2CSR275440R3404	9,725

System pro *M*

Accessories SB200 M, S200 M, FB200 M, F200 M, SDB200, DS200 and DDA200



Thanks to the variety of control and monitoring accessories which enable you to build different monitory control logics of the protection devices.

—
S2C-H6-...
Auxiliary contact

—
S2C-S/H6R
Signal/auxiliary contacts

—
S2C-A
Shunt trip

—
S2C-UA
Under voltage release

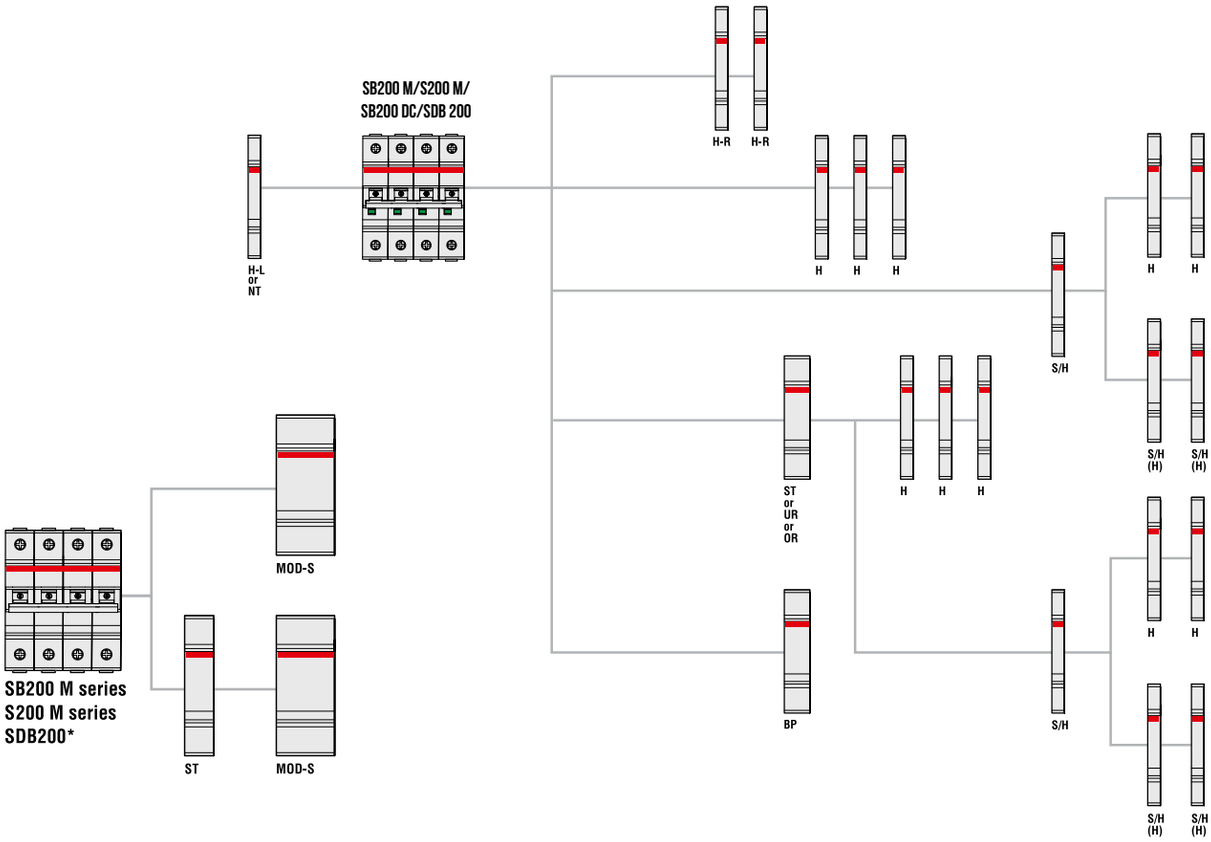
—
S2C-OVP
Over voltage release

—
S2C-CM4
Motor operating device

—
S2C-BP
Mechanical tripping device

System pro *M*

Accessories for SB200 M/SB200 DC/SDB200/S200 M

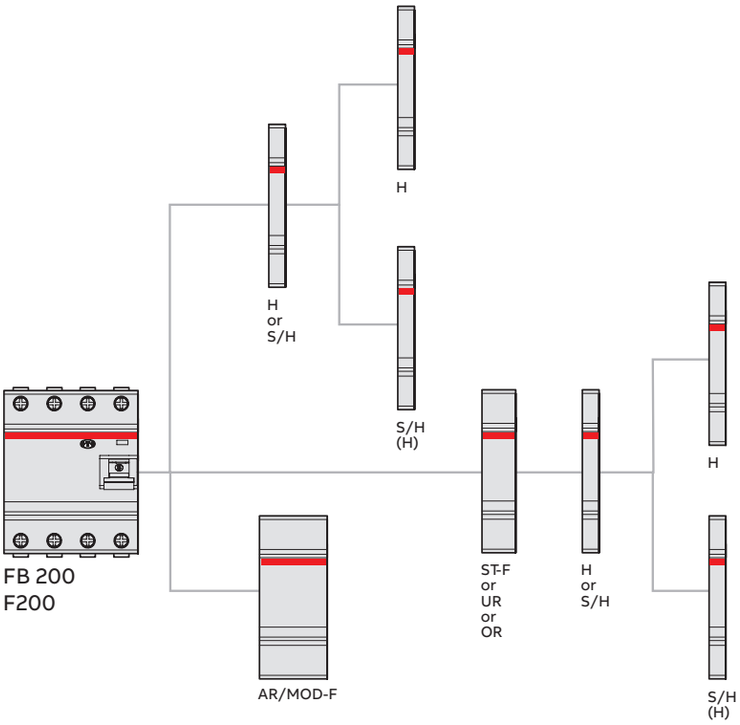


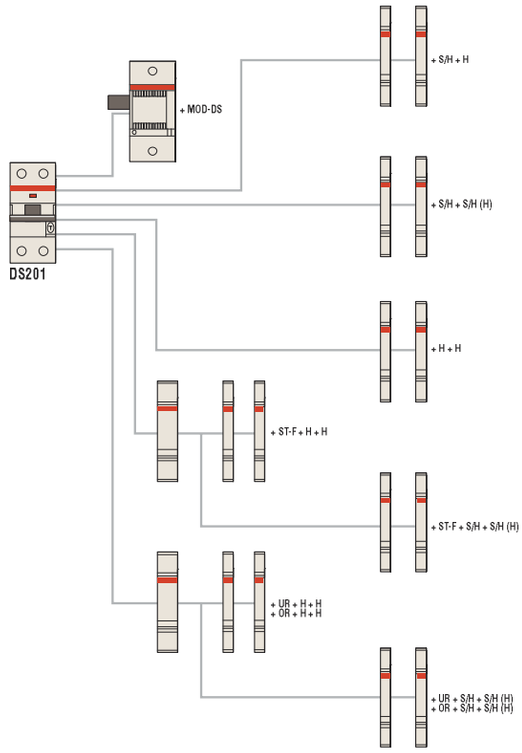
* SB200 M/S200 M/SB200 M DC series MCBs and SDB200 switch disconnectors up to 3P or 2P+ST can be coupled with MOD-S

H	Auxiliary contact	S2C-H6R
H-R	Auxiliary contact	S2C-H6-...R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
ST	Shunt trip for SB200 MCB	S2C-A...
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
ST-L	Shunt trip for SB200 MCBs to be mounted on the left	S2C-A...L
H-L	Auxiliary contact for SB200 MCBs to be mounted on the left	S2C-H...L
BP	Mechanical tripping device	S2C-BP
NT	Switched neutral	S2C-Nt

System pro *M*

Accessories for FB200 and F200 M and DS201 M





H	Auxiliary contact	S2C-H6R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
AR	Auto reclosing unit	F2C-ARI
MOD-F	Motor operating device	F2C-CM
ST-F	Shunt trip for FB200 RCCB	F2C-A

H	Auxiliary contact	S2C-H6R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
ST-F	Shunt trip for DS201 RCCB	F2C-A
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
MOD-DS	Motor operating device	DS2C-CM

Accessories
for SB200 M, SB200 DC, switch disconnector SDB200, RCBO DS201 M and E200.

SA 1

SA 2

Locking device for MCBs and switches
Prevents unauthorised or dangerous operation of the operating lever. An adaptor makes it possible to block the operating lever whether switched ON or OFF. The lever is blocked with a padlock having a cross bar section of 3 or, as the case may be, 6 mm max. For multipole devices, one lock may be fitted per pole.

The lock adaptor can be used for all MCBs of the SB200 M, SB200 DC, switch disconnector SDB200, RCBO DS201 M and E200.

Description	Bbn 4016779 EAN	Order details		Standard pack	Unit MRP ₹
		Type code	Order code		
Locking Device	58760 5	SA 1	GJF1101903R0001	10	490
LOCK ADAPTOR	58790 2	SA 1E	GJF1101903R0004	10	485
Padlock with 2 keys	58770 4	SA 2	GJF1101903R0002	10	1,565
PADLOCK	96940 1	SA2	GJF1109999R0001	10	1,185
Locking Device, Set	58780 3	SA3	GJF1101903R0003	10	1,485

Auxiliary elements for
MCBs SB200 M, SB200 DC, switch disconnector SDB200, RCCB-FB200 and RCBO-DS201 M

2CSC400465F0201

S2C-S/H6R

2CSC400465F0201

S2C-H6-...

Signal/auxiliary contacts
Signal contacts indicate if a device trips due to a failure (overcurrent/short-circuit for MCBs and RCBOs; earth fault for RCCBs and RCBOs).Auxiliary contacts indicate the position of the contacts, independent if a failure occurred or the device was operated manually.

S2C-S/H6R:
Choice through a selector between signal and auxiliary contact.

S2C-H6R and S2C-HxxR:
Auxiliary contacts with contact configuration according to the following table. All right-side mounted contacts are suitable for MCBs, RCDs, switch disconnectors SDB200 according the "Selection tables" which are displayed at the beginning of chapter 4.

S2C-HxxL:
Auxiliary contacts with contact configuration according to the following table. These contacts are left-side mounted and fit to SB200 MCBs and switch disconnectors SDB200 according to the "Selection tables". Especially when using a motor operating device this is a possibility to add a contact as the right side mounted ones do not fit within this combination.

Description	Bbn 4016779	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Signal contact/ auxiliary switch 1CO	563819	S2C-S/H6R	2CDS200922R0001	1	1,395
Auxiliary contact 1CO	563826	S2C-H6R	2CDS200912R0001	1	780
Auxiliary contact 1NO/1NC	697941	S2C-H6-11R	2CDS200946R0001	1	790
Auxiliary contact 2NO	697958	S2C-H6-20R	2CDS200946R0002	1	800
Auxiliary contact 2NC	697965	S2C-H6-02R	2CDS200946R0003	1	800

Auxiliary contacts mounting on the left side

Description	Bbn 4016779	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Auxiliary contact 1 NO/1NC	648820	S2C-H11L	2CDS200936R0001	1	905
Auxiliary contact 2 NO	648837	S2C-H20L	2CDS200936R0002	1	885
Auxiliary contact 2 NC	648844	S2C-H02L	2CDS200936R0003	1	885

Auxiliary elements for
MCBs SB200 M, SB200 M DC, switch disconnector SDB200 and RCBO DS201 M

S2C-A

Shunt trips
Function: remote opening of the device when a voltage is applied. Suitable for MCBs SB200 series, RCBOs DS201 series, SDB200 switch disconnectors series.

Shunt trips use a coil like MCBs for tripping. To trip a shunt, it is necessary to choose the right voltage and make sure the corresponding Ibmax (as mentioned in the table above) is provided by the power supply used. If the power supply can provide higher currents the shunt trip will reduce the current to Ibmax due to its internal resistance.

As soon as the shunt trips, the contact inside is open – the electrical circuit is disconnected even if the shunt trip is still powered on. The free-tripping mechanism of the shunt trip allows a restart of the MCB only after the shunt trip gets no external release signal anymore.

Auxiliary contacts mounting on the left side

Rated voltage	Bbn 4016779	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
AC/DC 12…60 V	570992	S2C-A1	2CDS200909R0001 ■	1	3,490
AC 110…415 V/DC110…250 V	571005	S2C-A2	2CDS200909R0002 ■	1	

Auxiliary elements for
RCCB FB200 and F200

F2C-A

Shunt trips
Function: remote opening of the device when a voltage is applied. Suitable for RCCBs FB200, F200 series and RCBOs DS201.

Auxiliary contacts mounting on the left side

Rated voltage	Bbn 8012542	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
AC/DC 12...60V	974901	F2C-A1	2CSS200933R0011	1	4,250
AC 110...415V / DC 110...250V	975007	F2C-A2	2CSS200933R0012	1	

■ Stock items

Auxiliary elements for
MCBs SB200 M, SB200 DC, switch disconnector SDB200 and RCBO DS201 M

2CSC400325F0201

S2C-UA

Undervoltage releases
Function: protection of the load in the event of a voltage drop (between 70% and 35% of its rated value); positive safety (devices tripping when the voltage is disconnected) emergency stop by means of a button. Suitable for MCBs SB200 series, RCCBs FB200 series and RCBOs DS201, SDB200 switch disconnectors series.

Rated voltage	Bbn 8012542	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
12V DC	839705	S2C-UA 12 DC	2CSS200911R0001	1	4,475
24V AC	839804	S2C-UA 24 AC	2CSS200911R0002	1	
24V DC	896401	S2C-UA 24 DC	2CSS200911R0007	1	
48V AC	839903	S2C-UA 48 AC	2CSS200911R0003	1	
48V DC	896500	S2C-UA 48 DC	2CSS200911R0008	1	
110V AC	840008	S2C-UA 110 AC	2CSS200911R0004 ■	1	
110V DC	896609	S2C-UA 110 DC	2CSS200911R0009	1	
230V AC	840107	S2C-UA 230 AC	2CSS200911R0005 ■	1	
230V DC	896708	S2C-UA 230 DC	2CSS200911R0010	1	
400V AC	840206	S2C-UA 400 AC	2CSS200911R0006	1	

Overvoltage release
Function: monitoring voltage between the neutral and phase; when an overvoltage reaches the threshold value, the OVP device causes the tripping of the associated MCB or RCCB. Suitable for MCBs of the SB200 series up to 63 A, and RCCBs of the FB200 series up to 100 A and RCBOs DS201, Suitable for SDB200 switch disconnectors series.

Description	Bbn 8012542	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Overvoltage release (max. tripping voltage AC: 275V)	748137	S2C-OVP1	2CSS200910R0005	1/5	5,335
Overvoltage release (max. tripping voltage AC: 290V)	952039	S2C-OVP2	2CSS200993R0005	1/5	

2CSC400055F0201

S2C-Nt

Hand operated neutral left side mounted		
	S2C-Nt	
Rated current	A	max. 40
Terminal	mm^2	10; cage terminal
Tightening torque	Nm	1.2
Dimensions (H x D x W)	mm	85 x 69 x 8.8

Hand operated neutral
The hand operated neutral has to be mounted to the left side of the MCB and be snapped onto the DIN rail. It is used for measuring duties where the neutral conductor must be in the open position. Due to the special design of the handle - when switching ON the MCB – the neutral will make before the MCB is closed. Suitable for SDB200 switch disconnector series. The S2C - Nt is not to switch with a tool (screwdriver).

Description	Bbn 4016779	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Max 40A	647625	S2C-Nt	2CDS200918R0001	1	800

■ Stock items

Accessories

Rotary operating mechanism for SB200 M

S2C-DH

Rotary operating mechanism (usable just with S200 devices)

For the actuation of 2-, 3- or 4pole miniature circuit-breakers in closed distribution boards for driveaxles of 5 or 6 mm2 (square)

Description	Bbn 4012233	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Rotary operating mechanism	57960 5	S2C-DH	GHS2001901R0003	1	Upon request

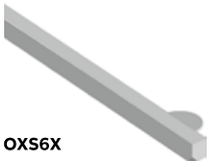
Note: S2C-DH cannot be used on DS200

OH

Handles

Handle IP 65, 65 x 65 mm, padlockable with max. 3 padlocks (bail diameter 5 - 8 mm), door interlock in ON-position, adjustable*

Color	Suitable for switches	Bbn 4012233	Order details		Standard pack	Unit MRP ₹
		EAN	Type code	Order code		
Black	OT16...40F	40978 8	OHBS2AJ	1SCA105213R1001	1	Upon request
Yellow-red	OT16...40F	41226 9	OHYS2AJ	1SCA105296R1001	1	
Silver	OT16...40F	41199 6	OHSS2AJ	1SCA105278R1001	1	
Grey	OT16...40F	41186 6	OHGS2AJ	1SCA105265R1001	1	



OXS6X

Handle IP 65, 65 x 65 mm, padlockable with max. 3 padlocks (bail diameter 5 - 8 mm), door interlock in ON-position

Color	Suitable for switches	Bbn 4012233	Order details		Standard pack	Unit MRP ₹
		EAN	Type code	Order code		
Black	OT16...40F	41140 8	OHBS2AJ1	1SCA105215R1001	1	Upon request
Yellow-red	OT16...40F	41227 6	OHYS2AJ1	1SCA105297R1001	1	
Silver	OT16...40F	41210 8	OHSS2AJ1	1SCA105279R1001	1	
Grey	OT16...40F	41187 3	OHGS2AJ1	1SCA105266R1001	1	

* OH_2_J enables selection of MCB behavior when opening panel door (remain switched on or switch off).
OH_2_J1 will cause MCB to switch off when opening panel door.

Axle extension

Type and order numbers are for one piece. For selector type handles. Shaft diameter 6 mm.

Lenght	Suitable for switches	Bbn 4012233	Order details		Standard pack	Unit MRP ₹
		EAN	Type code	Order code		
85	OT16...40F	36571 8	OXS6X85	1SCA101647R1001	10	Upon request
105	OT16...40F	42411 8	OXS6X105	1SCA108043R1001	10	
120	OT16...40F	36578 7	OXS6X120	1SCA101654R1001	10	
130	OT16...40F	36577 0	OXS6X130	1SCA101655R1001	10	
160	OT16...40F	36580 0	OXS6X160	1SCA101656R1001	10	
180	OT16...40F	36583 1	OXS6X180	1SCA101659R1001	10	
250	OT16...40F	36584 8	OXS6X250	1SCA101660R1001	10	
330	OT16...40F	36585 5	OXS6X330	1SCA101661R1001	10	

Auxiliary elements for
MCBs SB200 M, SB200 DC, switch disconnector SDB200, RCCB FB200, F200 and RCBO DS201 M

F2C-ARI

Motor operating devices
Function: S2C-CM, F2C-CM and DS2C-CM allow the remote control (opening or closing) of the coupled device. Suitable for SB200 series MCBs and SDB200 switch disconnectors, FB200 RCCBs and RCBOs DS201.

Description	Bbn 8012542	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Motor operating device for 1P S200 series MCBs and SD200 switch disconnectors	026259	S2C-CM1	2CSS201997R0013	1	Upon request
Motor operating device for 2P and 3P S200 series MCBs and SD200 switch disconnectors	026358	S2C-CM2/3	2CSS203997R0013	1	
Motor operating device for 4P S200P MCBs	026457	S2C-CM4	2CSS204997R0013	1	
Motor operating device for 2P and 4P F200 RCCBs	026556	F2C-CM	2CSF200997R0013	1	
Motor operating device for 1P+N and 2P DS201, DS202C RCBOs	135951	DS2C-CM	2CSR201997R0013	1	
Motor operating device for F200 125A RCCB	020721	F2-125A-24V-CM4	2CSF200997R1214	1	
Motor operating device for F200 125A RCCB	600626	F2-125A-230V-CM4	2CSF200997R1205	1	

Auto-reclosing units
Function: F2C-ARI and F2C-ARI30 allow the auto-reclosing of the coupled device in case of unwanted tripping. Suitable for F 200 RCCBs up to 100 A.

Description	Bbn 8012542	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Auto-reclosing unit for 2P and 4P F200 RCCBs	026655	F2C-ARI	2CSF200996R0013	1	Upon request
Auto-reclosing unit for 2P and 4P F200 RCCBs (30”)	064350	F2C-ARI30	2CSF200995R0013	1	

Auxiliary elements for
RCCB FB200 and F200

F2C-ARH

Home automatic resetting unit (for domestic and similar applications)
Function: it recloses the associated residual current device, only after having checked that there are no effective faults in the system protected by the RCCB.
Suitable for 2-pole RCCB series with 30 mA or 100 mA sensitivities, max 63 A

Description	Bbn 8012542	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Home automatic resetting unit (30 mA)	732433	F2C-ARH	2CSF200992R0005	1	Upon request
Home automatic resetting unit (100 mA)	658535	F2C-ARH100	2CSF200990R0005	1	

F2C-ARH-T

Home automatic resetting unit with autotest (for domestic and similar applications)
Function: it recloses the associated residual current device, only after having checked that there are no effective faults in the system protected by RCCB.
Suitable for 2-pole RCCB series with 30 mA or 100 mA sensitivities, max 63 A.
F2C-ARH-T allows the RCCB automatic test every six months.

Description	Bbn 8012542	Order details		Standard pack	Unit MRP ₹
	EAN	Type code	Order code		
Home automatic resetting unit (30 mA) with RCCB autotest	733232	F2C-ARH-T	2CSF200991R0005	1	Upon request
Home automatic resetting unit (100 mA) with RCCB autotest	593836	F2C-ARH-T100	2CSF200989R0005	1	

Auxiliary elements for
MCBs S800 series

S800-AUX

Auxiliary contact

Description	Order details	Packing	Ordering code	LP (₹)
Auxiliary contact	S800-AUX	1	2CCS800900R0011	2,730

S800-AUX/ALT

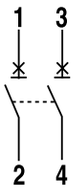
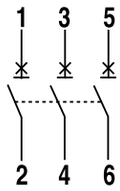
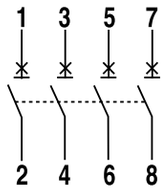
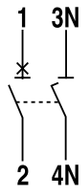
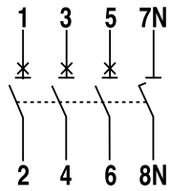
Combined auxiliary and signal contact

Description	Order details	Packing	Ordering Code	L.P.(₹)
Auxiliary/signal contact	S800-AUX/ALT	1	2CCS800900R0021	3,260

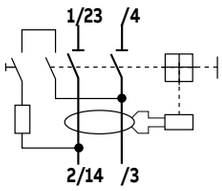
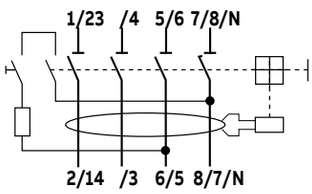
■ Stock items

Wiring diagram
System Pro *M*

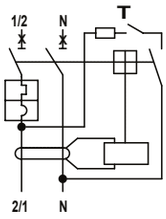
MCBs

SB201 M	SB202 M	SB203 M	SB204 M	SB201 M NA	SB203 M NA
					

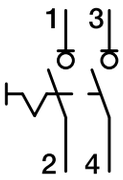
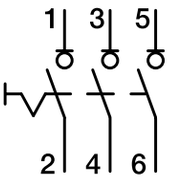
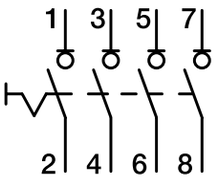
RCCBs

FB202	FB204
	

RCBOs

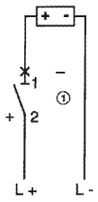
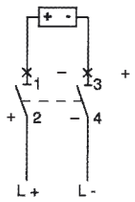
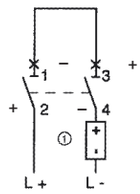
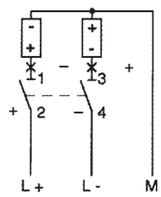
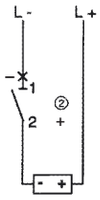
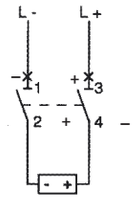
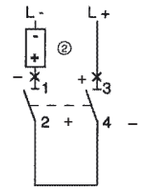
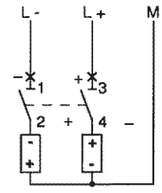
DS201 M


Switch disconnector

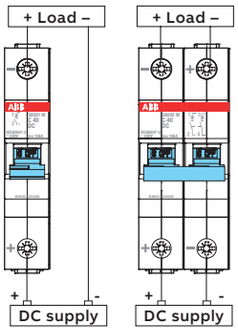
SDB202	SDB203	SDB204
		

Wiring diagram
SB200 DC

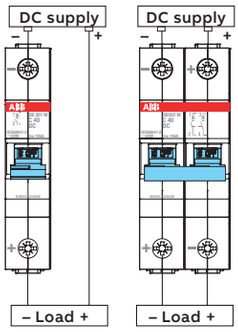
Example for permissible voltages between the conductors depending on the number of poles and circuit layout:

voltage between conductors	U_n	250 V-	500 V-	500 V-	500 V-
voltage between conductors and earth	U_n	250 V-	250 V-	500 V-	250 V-
MCB		1-pole SB200 DC	2-pole SB200 DC	2-pole SB200 DC	2-pole SB200 DC
supply from below					
supply from above					

Supply and load connections

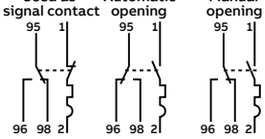
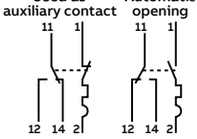
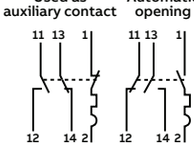
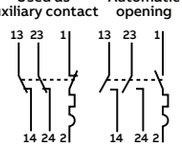


When supply is given at lower terminals



When supply is given at upper terminals

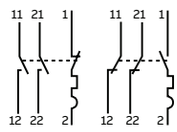
Auxiliary elements

S2C-S/H6R	S2C-H6R	S2C-H-11R	S2C-H6-20R
Used as signal contact / Automatic opening / Manual opening	Used as auxiliary contact / Automatic opening	Used as auxiliary contact / Automatic opening	Used as auxiliary contact / Automatic opening
			

Auxiliary elements

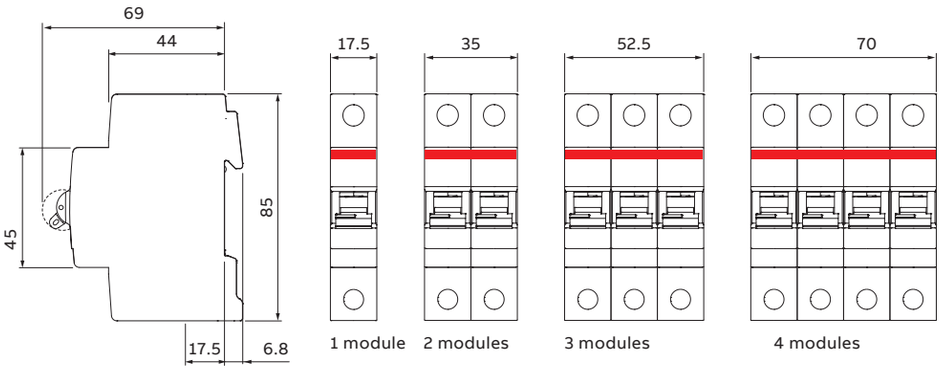
S2C-H6-02R

Opening

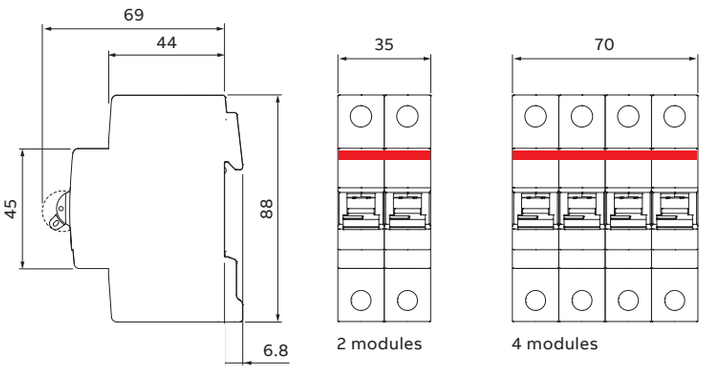


Overall dimensions
System Pro *M*

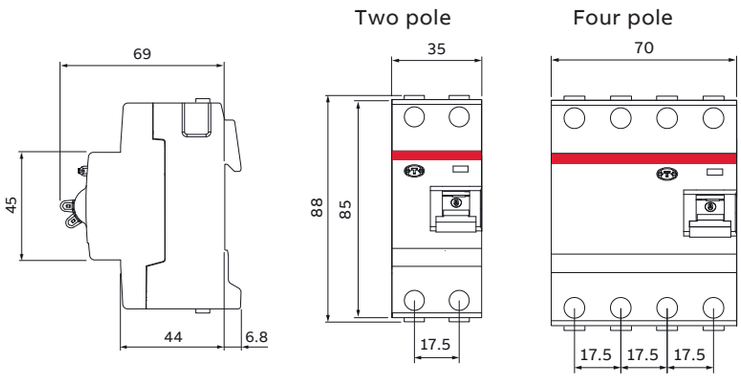
MCB SB200 M and Switch disconnector SDB200



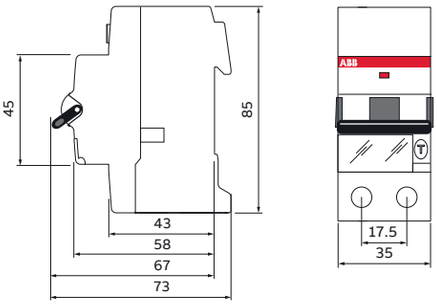
MCB SB200 DC



RCCB FB200

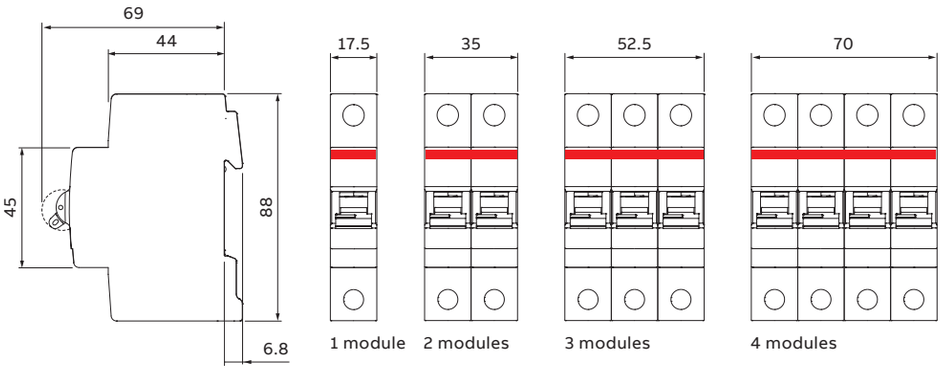


RCBO DS201 M

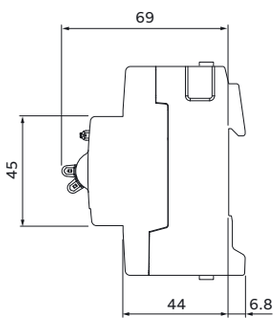


Overall dimensions

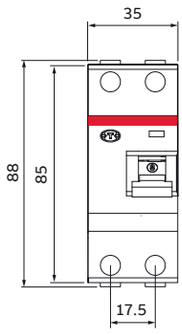
MCB - (S200 M and S200)



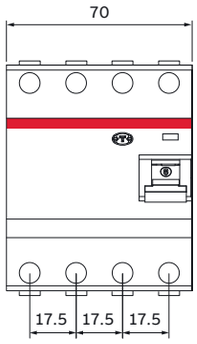
RCCB - (F200)



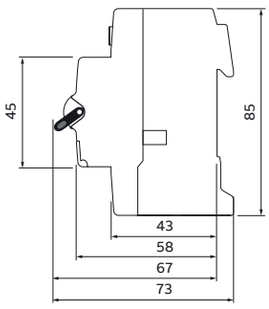
Two pole

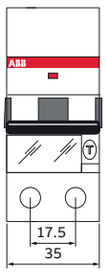


Four pole



RCBO (DS200)



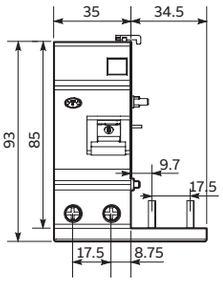


DDA 200

Two pole

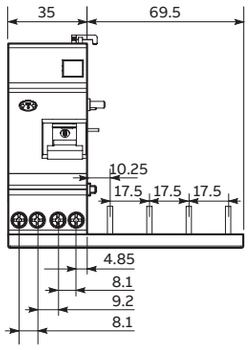
In=25-63 A

DDA 202



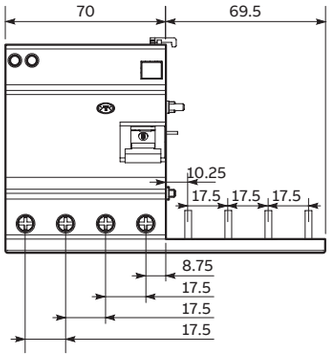
Four pole

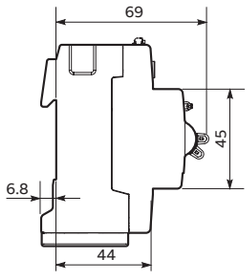
In=25-40 A



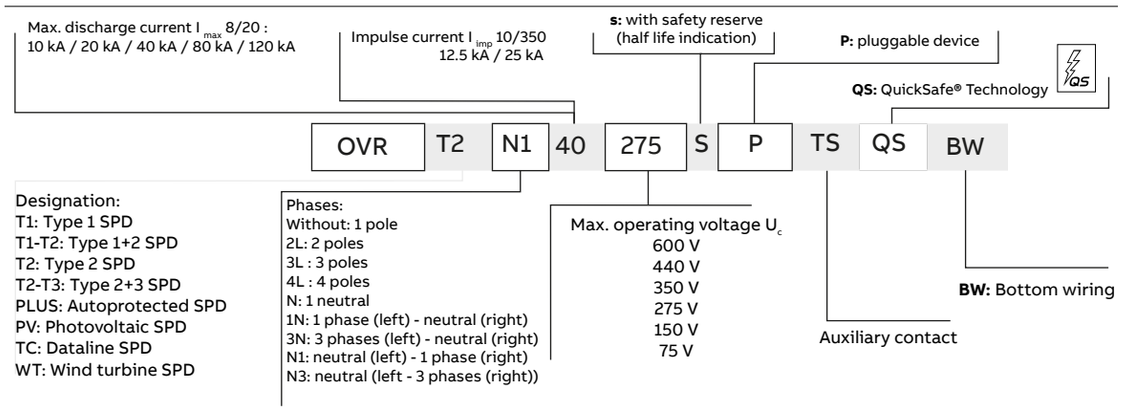
Four pole

In=63 A





Surge protection devices - The new OVR QuickSafe®



Type 1 - Spark gap type

Type 1 SPDs can be installed at the entrance in the main switch board for protection of electrical installation and equipments against direct lightning surges.

OVR Type 1

Three pole + Neutral

Description	Max. continuous operating voltage Uc (V)	"I imp in kA (10/350us wave)"	"I max in kA (8/20us wave)"	Pole	No of modules	Ordering code	L.P.(₹)
OVR T1 3N 25 255-7 (TT)	255	25	-	3+1	5	2CTB815101R8800	32,335
OVR T1 3N 25 255 (TT)	255	25	-	3+1	8	2CTB815101R1600	64,635
OVR T1 3N 25 255 TS (TT)	255	25	-	3+1	8	2CTB815101R0700	65,025

Type 1+2 - Metal Oxide Varistor

Type 1+2 surge protective devices are designed to discharge high current surges without any destruction of the installation. These surge protective devices are characterized by their capacity to withstand impulse current with 10/350 µs wave form which simulate natural lightning current.

OVR Type 1

Three pole + Neutral

Description	Max. continuous operating voltage Uc (V)	"I imp in kA (10/350us wave)"	"I max in kA (8/20us wave)"	Pole	No of modules	Ordering code	L.P.(₹)
OVR T1-T2 3N 12.5-275s P QS	275	12.5	80	3+1	4	2CTB815710R1900	20,855
OVR T1-T2 3N 12.5-275s P TS QS	275	12.5	80	3+1	4	2CTB815710R0700	23,990
OVR T1-T2 3N 12.5-440s P QS	440	12.5	80	3+1	4	2CTB815710R4800	25,030
OVR T1-T2 3N 12.5-440s P TS QS	440	12.5	80	3+1	4	2CTB815710R3600	28,780

Type 2 - Metal oxide varistor

Type 2 SPDs can be installed at the sub-distribution switch board for protection of electrical installation and equipments against indirect lightning and switching surges.

OVR Type 2

Single pole

Description	Max. continuous operating voltage Uc (V)	I max in kA (8/20us wave)	No of Modules	Ordering code	L.P.(₹)
OVR T2 40-275 P QS	275	40	1	2CTB803871R2300	3,535
OVR T2 40-275s P QS	275	40	1	2CTB815704R1200	5,220
OVR T2 40-275 P TS QS	275	40	1	2CTB803871R1700	4,500
OVR T2 40-440 P QS	440	40	1	2CTB803871R1200	3,605
OVR T2 40-440s P QS	440	40	1	2CTB815704R4100	4,960
OVR T2 80-275s P QS	275	80	1	2CTB815708R1200	5,400
OVR T2 80-275s P TS QS	275	80	1	2CTB815708R0000	6,650
OVR T2 80-440s P QS	440	80	1	2CTB815708R4100	4,885
OVR T2 80-440s P TS QS	440	80	1	2CTB815708R2900	6,125

Surge protection devices (OVR)

OVR Type 2

Single pole + neutral

Description	Max. continuous operating voltage U_c (V)	I max in kA (8/20us wave)	No of Modules	Ordering code	L.P.(₹)
OVR T2 1N 40-275 P QS	275	40	2	2CTB803972R1100	7,520
OVR T2 1N 40-275s P QS	275	40	2	2CTB815704R1400	9,475
OVR T2 1N 40-275 P TS QS	275	40	2	2CTB803972R0500	8,535
OVR T2 1N 40-275s P TS QS	275	40	2	2CTB815704R0200	10,370
OVR T2 1N 40-350 P QS	350	40	2	2CTB803982R1100	8,120
OVR T2 1N 40-350 P TS QS	350	40	2	2CTB803982R0500	9,215
OVR T2 1N 80-275s P QS	275	80	2	2CTB815708R1400	9,980
OVR T2 1N 80-275s P TS QS	275	80	2	2CTB815708R0200	11,015

OVR Type 2

Three pole + Neutral

Description	Max. continuous operating voltage U_c (V)	I max in kA (8/20us wave)	No of modules	Ordering code	LP (₹)
OVR T2 3N 40-275 P QS	275	40	4	2CTB803973R1100	12,845
OVR T2 3N 40-275s P QS	275	40	4	2CTB815704R2000	18,305
OVR T2 3N 40-275 P TS QS	275	40	4	2CTB803973R0500	16,355
OVR T2 3N 40-275s P TS QS	275	40	4	2CTB815704R0800	21,455
OVR T2 3N 40-350 P QS	350	40	4	2CTB803983R1100	13,875
OVR T2 3N 40-350 P TS QS	350	40	4	2CTB803983R0500	20,825
OVR T2 3N 40-440 P QS	440	40	4	2CTB803973R1400	13,230
OVR T2 3N 40-440 P TS QS	440	40	4	2CTB803973R1500	16,555
OVR T2 3N 40-440s P TS QS	440	40	4	2CTB815704R3700	38,620
OVR T2 3N 80-275s P QS	275	80	4	2CTB815708R2000	19,135
OVR T2 3N 80-275s P TS QS	275	80	4	2CTB815708R0800	22,795
OVR T2 3N 80-440s P QS	440	80	4	2CTB815708R4900	16,700
OVR T2 3N 80-440s P TS QS	440	80	4	2CTB815708R3700	20,155

OVR PV

Surge arrester for photovoltiac applications

Description	Max. continuous operating voltage U_c (V)	I max in kA (8/20us wave)	No. of modules	Ordering code	LP (₹)
OVR PV T2 40-1000 P QS	1100	40	3	2CTB804153R2400	4,705
OVR PV T2 40-1000 P TS QS	1100	40	3	2CTB804153R2500	5,950

OVR SL

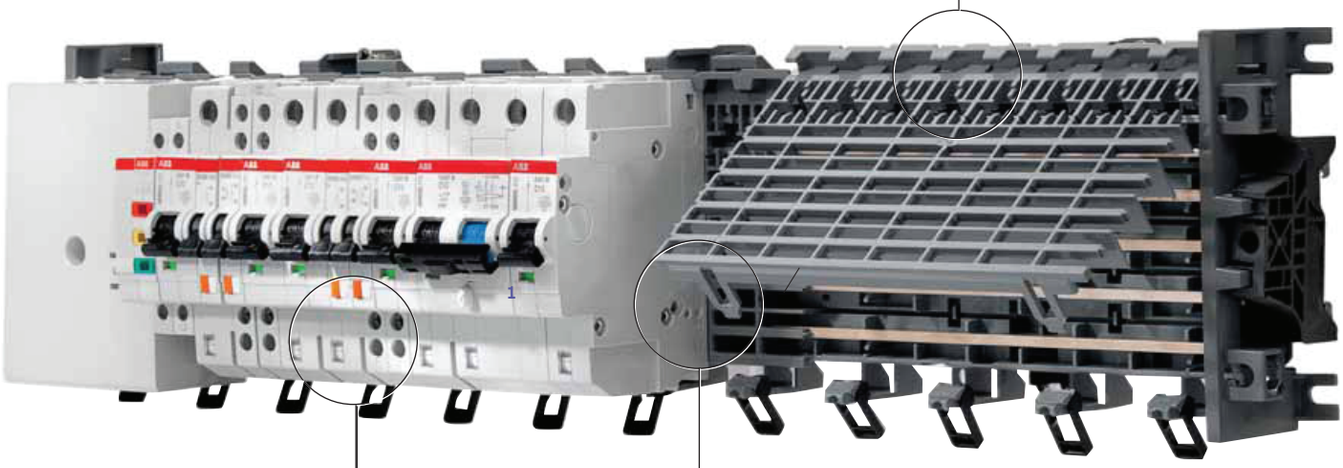
Surge arrester for data line protection (Pluggable)

Description	Max. continuous operating voltage U_c (V)	I max in kA (8/20us wave)	Width	Ordering code	LP (₹)
OVR SL06	7.79 V	10 kA	7mm	7TCA085400R0360	9,385
OVR SL15	16.7 V	10 kA	7mm	7TCA085400R0361	7,870
OVR SL30	36.7 V	10 kA	7mm	7TCA085400R0363	8,250
OVR SL50	56.7 V	10 kA	7mm	7TCA085400R0364	8,075
OVR SLTN	296 V	10 kA	7mm	7TCA085400R0323	6,380

SMISSLINE TP plug-in system

Changes are never been easier

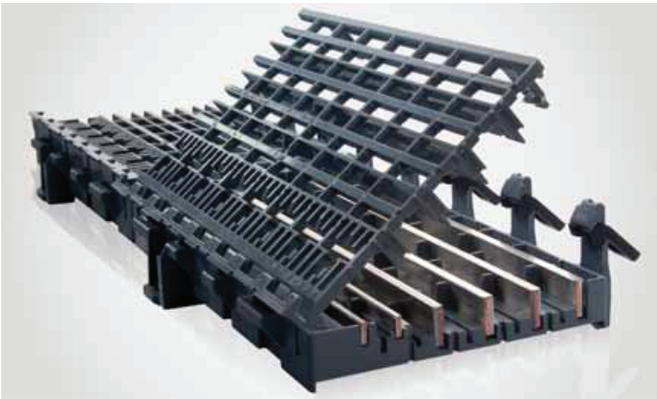
SMISSLINE TP ensures that load-free devices and components can be snapped on and off under voltage without the need for additional personal protective equipment to guard against electrical hazards.

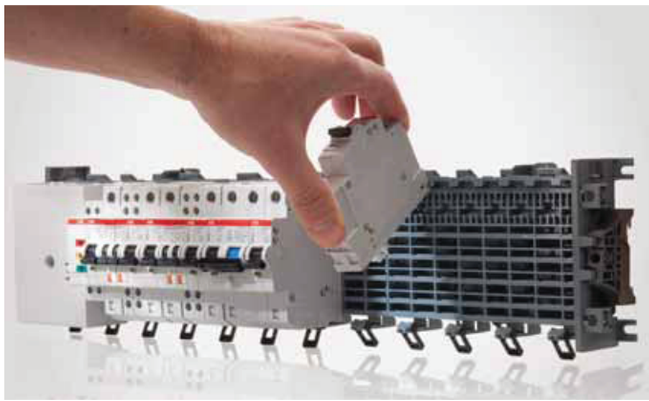


It opens up to a completely new prospects for you when it comes to installation, operation and flexibility.

The world's first pluggable socket system.

SMISSLINE TP plug-in system
Changes have never been easier



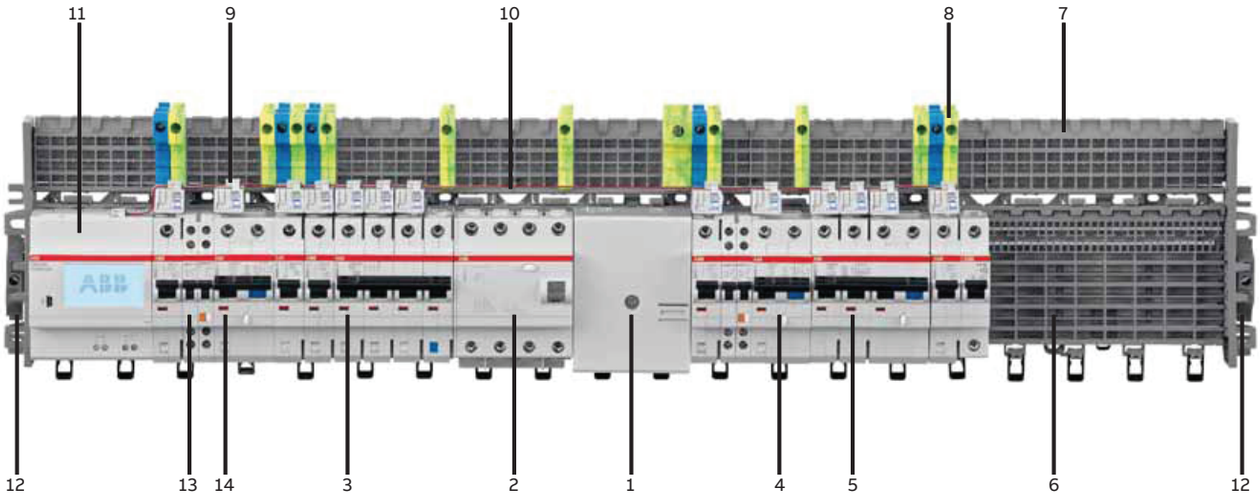


Even safer: protection against electrical hazards
We have upgraded our unique SMISSLINE socket system even further through the addition of a pioneering innovation. With the new SMISSLINE TP system, components can now be plugged in or unplugged load-free without any risk from electrical current running through the body.

The SMISSLINE TP pluggable socket system is completely fingersafe (IP2XB) – when devices are plugged in and unplugged, the system is always touch-proof. This means that SMISSLINE TP prevents any danger to personnel from switching arcs or accidental arcing.

Even more flexible: make additions and changes during on-going operation
Pluggable devices can be added and changed quickly, safely and simply during on-going operation. And this can be done without any need for personal protective equipment.

This means that you benefit from more flexibility, savings on installation and maintenance – and improved safety. SMISSLINE TP provides greater availability and operating safety than conventional systems.



1 Supply terminal
2 Surge arrester OVR404
3 Miniature circuit breaker S403NP
4 RCBO FS401
5 RCBO FS403
6 Socket IP20
7 Additonal socket IP20
8 Terminals
9 Sensor for current measurement system
10 Cabel Bus system CMS
11 Control unit CMS
12 Socket end piece
13 Auxillary contact
14 Signal contact

ELR, Earth leakage relay - (DIN & Front panel mountable)

Front panel residual current relays are electronic devices used in combination with an external toroidal transformer. They are according to the protection standard IEC/EN 60947-2 Annex-M. The sensitivity can be set from 0.03 A to 30 A, while the tripping time from 0 to 5 seconds. Residual current relays are available in versions 48x48 mm, 72x72 mm, and 96x96 mm.
The Fail Safe function is available for versions ELR48P, ELR72P and ELR96P: the contacts switch when there is no auxiliary power.
The ELR96PF version is equipped with Fail Safe function, fault memory LED, and a frequency filter, that ensure continuity of service in the presence of harmonics.
ELR96PD has (in addition to these functions) a digital display for an instantaneous view of the residual current IΔn.

Description	Operating voltage	Pack	Ordering code	L.P.(₹)
ELR48P	110 V a.c./d.c. - 230 V a.c.	1	2CSG252211R1202	Upon request
ELR48V24P	24-48 V a.c./d.c.	1	2CSG452211R1202	
ELR72	110 V a.c./d.c. - 230 V a.c.	1	2CSG252120R1202	
ELR72V24	24-48 V a.c./d.c.	1	2CSG452120R1202	
ELR72P	110-230-400 V a.c.	1	2CSG152424R1202	
ELR72V24P	24-48 V a.c./d.c.	1	2CSG452424R1202	
ELR96	110-230-400 V a.c.	1	2CSG152130R1202	
ELR96V24	24-48 V a.c./d.c.	1	2CSG452130R1202	
ELR96P	110-230-400 V a.c.	1	2CSG152434R1202	
ELR96V24P	24-48 V a.c./d.c.	1	2CSG452434R1202	
ELR96PF	110-230-400 V a.c.	1	2CSG152435R1202	
ELR96PD	110-230-400 V a.c.	1	2CSG152436R1202	

RD3, residual current relays - (DIN rail mountable)

The RD3 family of electronic residual current relays provides residual current protection and monitoring functions according to IEC/EN 60947-2:2006 annex M and can be used in conjunction with all S 200 automatic devices and Tmax range moulded case devices up to T5, for industrial installations.

The RD3 residual current relays can provide status indications through two output contacts.

Description	Operating voltage	Pack	Ordering code	LP (₹)
RD3-48	12-48 a.c./d.c.	1	2CSJ201001R0001	Upon request
RD3	230-400 a.c.	1	2CSJ201001R0002	
RD3M-48	12-48 a.c./d.c.	1	2CSJ202001R0001	
RD3M	230-400 a.c.	1	2CSJ202001R0002	
RD3P-48	12-48 a.c./d.c.	1	2CSJ203001R0001	
RD3P	230-400 a.c.	1	2CSJ203001R0002	

Toroidal transformers

Description	Toriod useful diameter (mm)	Min. measureable current (mA)	Max. rated current [1] (A)	Max. capacity [2] (A)	Pack	Ordering code	L.P.(₹)
TRM	29 (modular version)	30	65	160	1	2CSM029000R1211	Upon request
TR1	35	30	75	250	1	2CSG035100R1211	
TR2	60	30	85	400	1	2CSG060100R1211	
TR3	80	100	160	800	1	2CSG080100R1211	
TR4	110	100	250	1,250	1	2CSG110100R1211	
TR4/A	110 (openable version)	300	250	1,250	1	2CSG110200R1211	
TR160	160	300	400	2,000	1	2CSG160100R1211	
TR160A	160 (openable version)	500	400	2,000	1	2CSG160200R1211	
TR5	210	300	630	3,200	1	2CSG210100R1211	
TR5/A	210 (openable version)	500	630	3,200	1	2CSG210200R1211	

[1] Shows toroidal transformers selection for use with ELR according to IEC/EN 60947-2 Annex M in combination with MCBs S200 range and MCCBs Tmax range upto T5

[2] Shows the technical features of the toroidal transformers

Measurement devices NEW

M1M 10 and M1M 12

Intuitive visualization
Clear and simple reading of the measurement data for all 3 phases on the wide LED displays.

Compact design
Only 52mm inside the switchboard to ensure optimized logistics and reduced footprint in the panel

Electrical system monitoring
Complete electrical parameters measurement, from simple VAF (voltage, current, frequency) to power and energy monitoring

Easy to use
Simple front keypad to navigate in setup and menus.

Remote measurement
Availability of RS485 interface with the support of communication protocol Modbus RTU facilitating the communication and connection of the device with remote locations.

M1M 10 and M1M 12
Technical features

			M1M 10 M1M 12
Auxiliary power supply	Auxiliary Power Supply range		80V to 300 V AC or DC
	Frequency	Hz	50 - 60
	Burden		5VA Max
	Installation category		CAT III
	Protection fuse		200mA
Measurement accuracy	Voltage		±1,0%
	Current		±1,0%
	Active Power (M1M 12)		±1,0%
	Active Energy (M1M 12)		±1,0%
Voltage measurement inputs	Measurement range	[V]	40-300V AC (p-n)
	Measurement category		CAT III
	Rated frequency	[Hz]	50 - 60Hz
	Max. VT Primary	[V]	999 Kv
	Burden	[VA]	0.2VA Max. per phase
Current measurement inputs	CT secondary		1A or 5A
	Measurement range		50mA - 6A[1]
	Max. CT Primary	[A]	99 kA.
	Burden	[VA]	0.2VA Max. per phase
User Interface	Access to device		2 pushbuttons
	Display type		LED display
	LED Digit height	[mm]	10
Communication protocol (M1M 12 Modbus)	RS-485		
	Protocol		Modbus RTU
	Communication interface		RS485 with optical isolation
	Baud rate		2400 bps to 19200 bps
	Parity number		Odd, Even, None
	Stop bit		1,2
	Address		1-247
Mechanical characteristics	Overall dimensions	[mm]	96 x 96 x 58 (52mm depth inside the switchboard)
	IP degree of protection (IEC 60529)		IP51
	Weight	[kg]	0,300
Climatic conditions	Operating temperature		-10°C to +60°C[2]
	Storage temperature		-25°C to +70°C
	Relative humidity		5% to 95% non condensing
	Pollution degree		2
	Altitude		Below 2000ms
Standards	Electrical safety		IEC 61010-1
	EMC		IEC 61000 4-2,4-3,4-6,4-8,4-4,4-11; CISPR-22

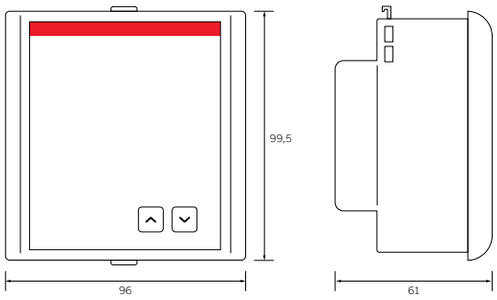
[1] Below 250mA, additional error of 0.1% of full scale.
[2] Below 10°C, mean temperature coefficient is 0.15%/K

M1M 10 and M1M 12

Technical features and Ordering codes

		M1M 10	M1M 12
Measured parameter	TRMS Voltage	■	■
	TRMS Current	■	■
	Frequency	■	■
	Power Factor		■
	Active Power		■
	Active Energy		■
	On Hours	■	■
	Load Hours		■
Communication interface	Serial port		RS-485
	Protocol		Modbus RTU

Overall dimentions
All measurements in mm



Ordering codes

M1M 10

M1M 10

M1M 10 is a VAF meter for basic electrical system monitoring, providing the measurement of the main single-phase and three-phase electrical parameters and allowing easy replacement of different analogue meters.

Communication protocol and interface	Bbn 8012542 EAN	Order details		Pack unit pc.	L.P.(₹)
		Type code	Order code		
-	350811	M1M 10	1SYG235081R4051 ■	1	2,300

M1M 12

M1M 12

M1M 12 is a multi-function meter, providing what is needed to monitor the electrical system and allowing statistical metering of active energy consumption.
M1M 12 product range includes option with built-in communication protocol (Modbus RTU) through RS485 communication port, allowing easy integration with Modbus supervision systems.

Communication protocol and interface	Bbn 8012542 EAN	Order details		Pack unit pc.	L.P.(₹)
		Type code	Order code		
-	075912	M1M 12	1SYG207591R4051 ■	1	7,400
Modbus RTU RS485	075813	M1M 12 Modbus	1SYG207581R4051 ■	1	8,200

Measurement devices
M4M Network Analyzers

Full Connectivity
Cloud-based power monitoring

Connectivity-based solutions increase awareness of resources and process behaviors: asset management can then be optimized through the control and monitoring of operations and costs.

M4M network analyzers ranges allow full connectivity and easy integration of submetering and power quality monitoring features, thanks to a complete set of communication protocols, matching high-accuracy standard requirements.

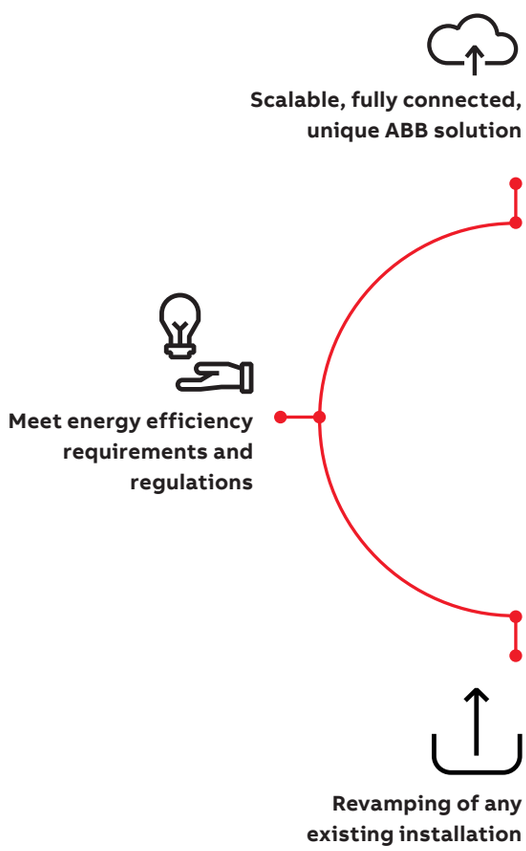
M4M exploits the scalability of the ABB solution, from stand-alone visualization and commissioning via HMI or EPiC mobile APP and desktop software, to monitoring, optimization and control of the complete electrical system via ABB Ability™.

At ABB we leverage internet of things' devices to drive digital transformation of buildings, by providing a scalable portfolio for energy and asset management.

Propose a single solution to optimize costs and energy needs thanks to M4M which is automatically integrated in ABB Ability™ EDCS cloud-computing platform, enabling real-time monitoring widgets, historical trend analysis and power quality reporting.

Propose projects compliant with energy efficiency regulations. High-accuracy network analyzers class 0,5 according to IEC 61557-12, connecting to the cloud complete set of electrical parameters and power quality KPIs: from THD to individual harmonics.

Rogowski coil acceptance to integrate measurement functionalities and power quality analysis in any existing installation, easily transmitted to the cloud also in brownfield projects.



Explore the new ranges NEW

M4M network analyzers are available in two different versions which ensure all power monitoring needs, from basic to more complete power quality analysis.

EQUIPPED WITH GRAPHIC COLOR DISPLAY AND 5 PUSHBUTTONS KEYBOARD, M4M 20 RANGE ALLOWS COMPLETE MONITORING AND BASIC POWER QUALITY ANALYSIS.

EQUIPPED WITH TOUCHSCREEN COLOR DISPLAY, M4M 30 RANGE ALLOWS COMPLETE POWER QUALITY ANALYSIS AND ENERGY EFFICIENCY EVALUATIONS.

Graphic color display
M4M 20 and M4M 30 are equipped with a graphic color display and common app-based menu for an intuitive visualization.

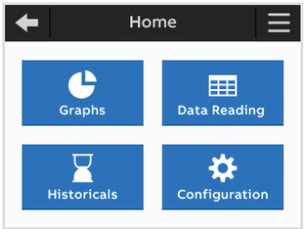
Bluetooth-enabled
All M4M network analyzers are equipped with Bluetooth module for smart commissioning via mobile app.

Full communication
A complete set of embedded communication protocols, including Modbus RTU, Modbus TCP/IP, Profibus DP-V0 and BACnet/IP

Input/Output
Control on the system thanks to I/O options including digital outputs, programmable I/O or programmable analogue outputs.

Datalogger
Data logging features are available, from complete notification logs to flash memory and RTC for 1-year data logging of trends.

Rogowski version
M4M Rogowski versions are compatible with ABB's R4M Rogowski coils for easy retrofit in existing installations.



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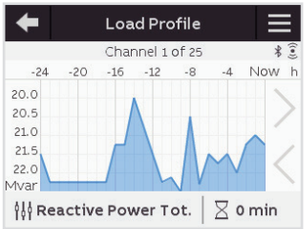

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02

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03

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01 M4M Homepage

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02 Trending graphs of load profiles

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03 R4M Rogowski coils

M4M 20 and M4M 30
Technical data

	M4M 20	M4M 30
Real-time		
TRMS current	•	•
TRMS voltage	•	•
Frequency	•	•
Active, Reactive and Apparent Power	•	•
Power Factor	•	•
Operating timer, countdown timer	•	•
Energy		
Active, Reactive and Apparent Energy	•	•
4 quadrants Energy (Import/Export)	•	•
Tariffs	/	•
Power Quality		
THD (I, VLN, VLL)	•	•
Individual Harmonics	/	40th
Unbalances (I, VLN, VLL)	/	•
Neutral current	Calculated	Measured
Phasors (I, VLN)	/	•
Waveforms (I, VLN, VLL)	/	•
Data recording and logs		
Single alarms	25	25
Warnings, alarms and errors logs	•	•
Complex alarms with logics	/	4
Demand values (average)	Basic	Advanced
Min/Max Demand values	Basic	Advanced
Energy Trending logs	/	•
RTC	/	•
HMI	**Graphic color**	**Graphic color touchscreen**
Graphs visualization	Basic	Advanced
Notifications	•	•
Homepage and favourite page	•	•
Password protection	•	•
Connectivity		
Automatic integration in ABB Ability™ EDCS	•	•
Bluetooth Low Energy	•	•
Communication Protocols	Modbus RTU, Modbus TCP/ IP, Profibus DP-V0, BACnet/IP	Modbus RTU, Modbus TCP/ IP, Profibus DP-V0, BACnet/IP
RJ45 Daisy Chain (Ethernet version)	/	•

M4M 20 and M4M 30
Ordering codes

M4M 20

4M 20 is ABB's network analyzer range that provides complete and accurate electrical parameters monitoring and basic power quality analysis.

Equipped with graphic color display for advanced visualization of the measured parameters and Bluetooth module for smart commissioning.

		Bbn	Order details		Pack	
Communication protocol	**I/O**	**8012542 EAN**	**Type code**	**Order code**	**unit pc.**	**L.P.(₹)**
BLE	2 Digital out.	511519	M4M 20	2CSG251151R4051	1	Upon request
BLE, Modbus RTU	2 Digital out.	511410	M4M 20 Modbus	2CSG251141R4051	1	
BLE, Modbus TCP/IP	2 Digital out.	044710	M4M 20 Ethernet	2CSG204471R4051	1	
BLE, Profibus DP-V0	2 Digital out.	511311	M4M 20 Profibus	2CSG251131R4051	1	
BLE, BACnet/IP	2 Digital out.	368311	M4M 20 Bacnet	2CSG236831R4051	1	
BLE, Modbus RTU	2 Progr. I/O, 2 Digital out., 2 Analogue out.	511618	M4M 20 I/O	2CSG251161R4051	1	

M4M 20 - ROGOWSKI VERSION

M4M 20 is also available as compatible with ABB's R4M Rogowski coils for current measurement, increasing the flexibility of network analyzers offer and allowing retrofit in any existing installations.

M4M 20 Rogowski together with R4M Rogowski coils ensures the integration of basic power quality metering in any existing system with 0 downtime.

		Bbn	Order details		Pack	
Communication protocol	**I/O**	**8012542 EAN**	**Type code**	**Order code**	**unit pc.**	**L.P.(₹)**
BLE, Modbus RTU	2 Digital Outputs	070818	M4M 20 Rogowski	2CSG207081R4051	1	Upon request

M4M 20 and M4M 30
Ordering codes

M4M 30

M4M 30 is ABB's network analyzer range that allows complete power quality analysis and energy efficiency evaluations.

Equipped with touchscreen color display for simplified access to the device and with Bluetooth module for smart commissioning.

		Bbn	Order details		Pack	
Communication protocol	**I/O**	**8012542 EAN**	**Type code**	**Order code**	**unit pc.**	**L.P.(₹)**
BLE, Modbus RTU	4 Progr. I/O	747611	M4M 30 Modbus	2CSG274761R4051	1	Upon request
BLE, Modbus TCP/IP	4 Progr. I/O	746812	M4M 30 Ethernet	2CSG274681R4051	1	
BLE, Profibus DP-V0	4 Progr. I/O	367918	M4M 30 Profibus	2CSG236791R4051	1	
BLE, BACnet/IP	4 Progr. I/O	024514	M4M 30	Bacnet	1	
BLE, Modbus RTU	6 Progr. I/O, 2 Analogue out.	024712	M4M 30 I/O	2CSG202471R4051	1	

M4M 30 - ROGOWSKI VERSION

M4M 30 is also available as compatible with ABB's R4M Rogowski coils for current measurement, increasing the flexibility of network analyzers and allowing retrofit in any existing installations.

M4M 30 Rogowski together with R4M coils ensure integration of complete PQ analysis in any existing system with 0 downtime.

		Bbn	Order details		Pack	
Communication protocol	**I/O**	**8012542 EAN**	**Type code**	**Order code**	**unit pc.**	**L.P.(₹)**
BLE, Modbus RTU	4 Prog. I/O	024613	M4M 30 Rogowski	2CSG202461R4051	1	Upon request

R4M ROGOWSKI COILS

R4M Rogowski coils are flexible current transformer based on Rogowski technology, ideal to retrofit existing installa-tions up to 12kA. Available in two different sizes (80mm or 200mm diameters), R4M coils are directly equipped with pre-wired removable terminals that perfectly fit M4M 20 Rogowski (3 Rogowski coil inputs) and M4M 30 Rogowski (4 Rogowski coil inputs), with no need for external integrators.

	Bbn	Order details		Pack	
Diameter (mm)	**8012542 EAN**	**Type code**	**Order code**	**unit pc.**	**L.P.(₹)**
80	021605	R4M-80	2CSG202160R1101	1	Upon request
200	021506	R4M-200	2CSG202150R1101	1	

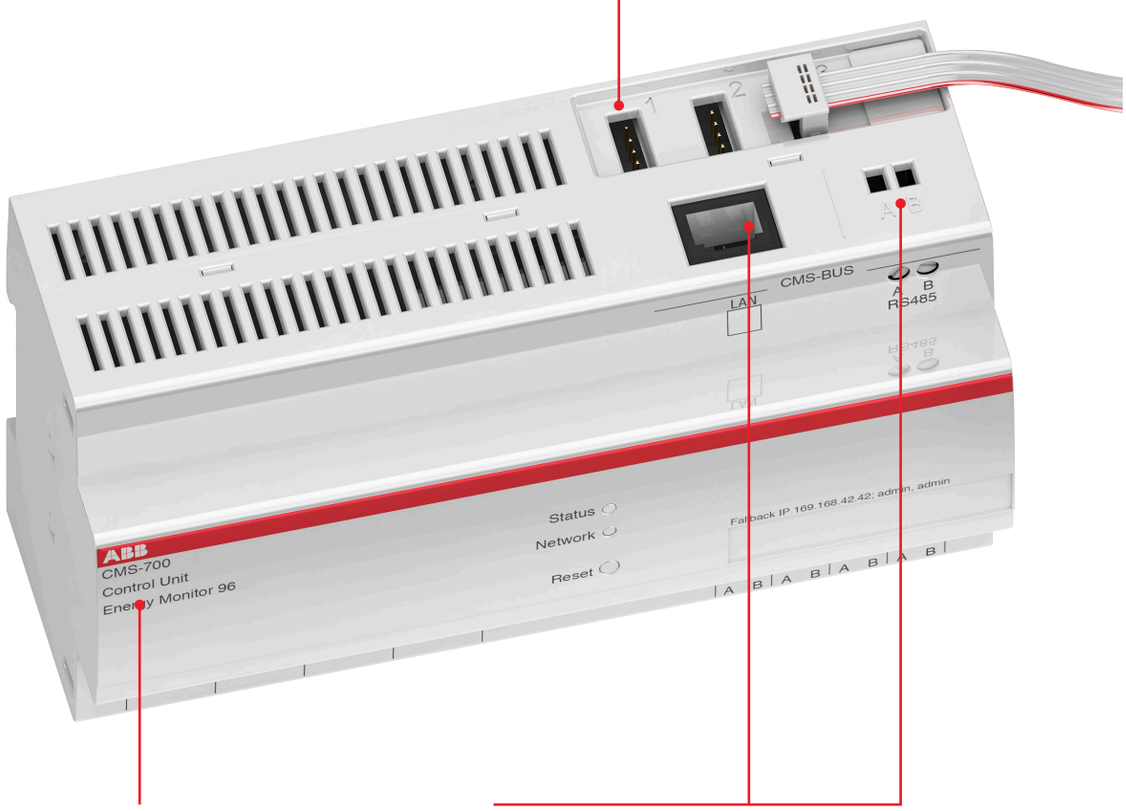
Measurement devices
Circuit Monitoring System

The quality of a Circuit Monitoring System is dependent on the strengths of the individual components and how well they interact. ABB's CMS sets the bar particularly high. Regardless of whether we're talking compactness, technology, measurement results, user friendliness or flexibility, every component and every feature of this CMS has been fully optimized in terms of practicality and functionality.

Example illustration:
Control Unit CMS-700 in combination with CMS open-core sensors

CMS-700

CMS bus interface
A bus interface allows up to 32 sensors to be connected to the Control Unit.



Control Units
The Control Unit is a kind of computing and communication center that, depending on the equipment connected to it, evaluates the different data picked up by the sensors and makes it available via the built-in interfaces.

You have a choice of three different units depending on your applications:
CMS-600 and CMS-700.

Serial interfaces
Depending on the unit, numerous interfaces and protocols are available to ensure smooth network implementation: RS485 (Modbus RTU), LAN (TCP/IP and Modbus TCP), SNMP v1/v2 and encrypted v3.

Thanks to the built-in web server, an internet browser or a free Android or iOS app can be used to visualize the values measured. What's more, the measured values can also be exported to CSV files.

Integrate however you want, thanks to multiple mounting options.
Depending on the application, choose between up to four different mounting options to make integrating the CMS sensors in your installation as simple and as uncomplicated as possible.

Universally usable sensor designs

Mounting on a DIN rail
CMS-120DR, CMS-100DR, and CMS-200DR series sensors can be mounted on all DIN rails with the aid of a DIN rail mounting.

Cable tie mounting
If space is at a real premium, CMS-120CA, CMS-100CA, and CMS-200CA series sensors can be secured directly to the cable(s) to be measured by means of cable ties.

Tangible value addition for you ABB circuit monitoring pays off two-fold

Early warning system (predictive maintenance) for increasing the availability of critical consumers
Continuous monitoring of the current flow at the circuit breaker makes it possible to detect overloaded lines before they lead to a service interruption. Apart from this, monitoring individual circuits indicates whether the loads are in the desired operating mode or not. In this way, system deviations can be ascertained instantaneously. What's more, the CMS can be used to detect unbalanced loads before they result in failure of the neutral conductor and consequently load failure.

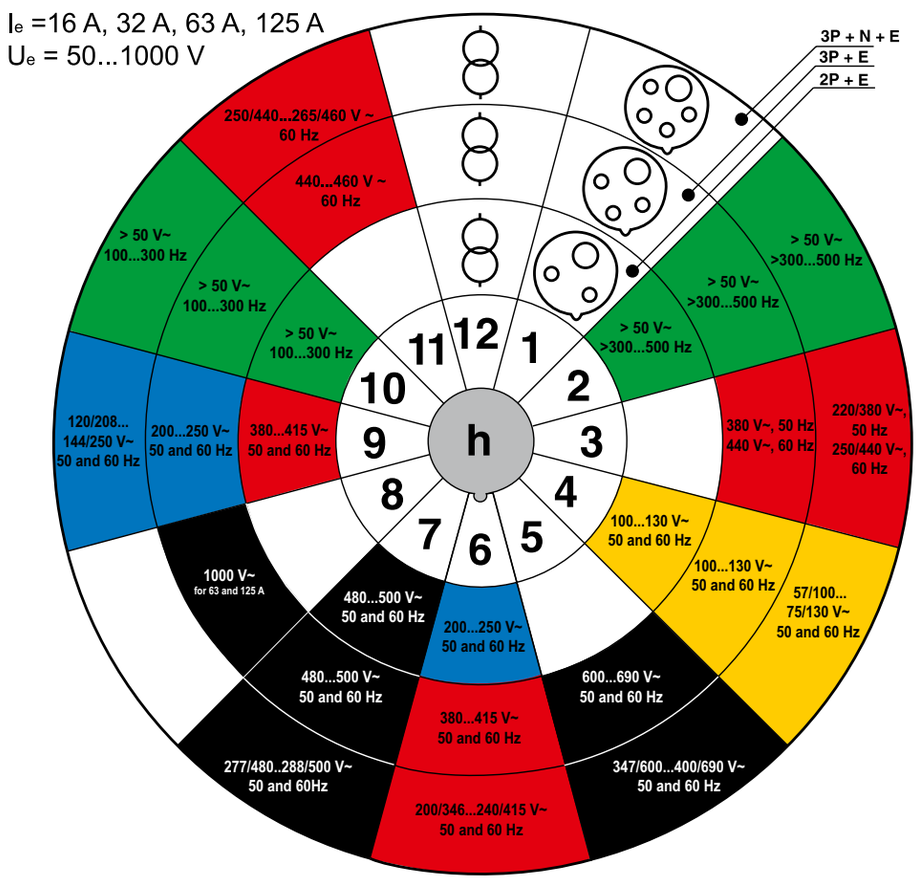
Cost analysis to reduce and assign energy costs
The cost of energy will rise continuously. In order to cut costs, you first have to know where they arise. The Control Unit helps illustrate and analyze the instantaneous energy consumption levels. Furthermore, the calculated active energy can be used to roughly allocate the costs at the output level.

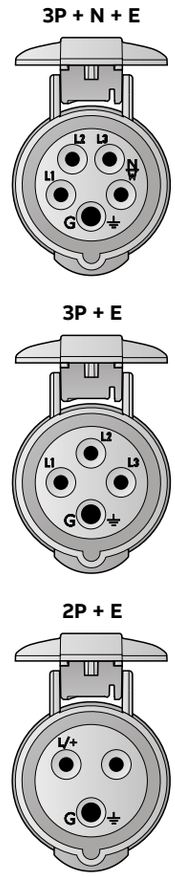
Wiring accessories
Industrial plugs and sockets

Reliable, durable and safe. Perfect for your application

These products are used for connection of equipment in all kind of applications where it needs to be possible to connect and disconnect. ABB industrial plugs and sockets are chosen when safety, reliability and durability is requested.

IEC 60309-2 "clock"





Standard voltages - Color codes according to IEC60309-1, -2

Position of earthing sleeve according to IEC 60309-2 (clock)	2P+E	3P+E	3P+N+E
1	☐ Optional voltage (not stated below)	☐ Optional voltage (not stated below)	☐ Optional voltage (not stated below)
2	■ >300...500 V~ >50 Hz	■ >300...500 V~ >50 Hz	■ >300...500 V~ >50 Hz
3	☐ Not used	■ 380 V~ 50 Hz, 440 V 60 Hz	■ 220/380 V~ 50 Hz, 250/440 V 60 Hz
4	■ 100...130 V~ 50 and 60 Hz	■ 100...130 V~ 50 and 60 Hz	■ 57/100...75/130 V~ 50 and 60 Hz
5	☐ Not used	■ 600...690 V~ 50 and 60 Hz	■ 347/600...400/690 V~ 50 and 60 Hz
6	■ 200...250 V~ 50 and 60 Hz	■ 380...415 V~ 50 and 60 Hz	■ 200/346...240/415 V~ 50 and 60 Hz
7	■ 480...500 V~ 50 and 60 Hz	■ 480...500 V~ 50 and 60 Hz	■ 277/480...288/500 V~ 50 and 60 Hz
8	☐ Not used	■ 1000 V~ (for 63 A and 125 A)	☐ Not used
9	■ 380...415 V~ 50 and 60 Hz	■ 200...250 V~ 50 and 60 Hz	■ 120/208...144/250 V~ 50 and 60 Hz
10	■ 100...300 V~ >50 Hz	■ 100...300 V~ >50 Hz	■ 100...300 V~ >50 Hz
11 Mainly for marine installations	☐ Not used	■ 440...460 V~ 60 Hz	■ 250/440...265/460 V~ 60 Hz
12 Supply from isolating transformer	☐ Supply from isolating transformer	☐ Supply from isolating transformer	☐ Supply from isolating transformer

Wiring accessories
Industrial plugs and sockets

IP44 (2P+E)

IP44 (3P+E)

IP67 (3P+N+E)

Plugs

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	LP (₹)
3 (2P+E)	IP44	Blue	200...250	16	216-P6-I	2CMA100202R1000	415
		Blue	200...250	32	232-P6-I	2CMA100204R1000	595
		Blue	200...250	63	263P6	2CMA166742R1000	2,700
	IP67	Blue	200...250	16	216P6W	2CMA166460R1000	1,430
		Blue	200...250	32	232P6W	2CMA166722R1000	1,770
		Blue	200...250	63	263P6W	2CMA166776R1000	4,090
		Blue	200...250	125	2125P6W	2CMA166810R1000	11,135
4 (3P+E)	IP44	Red	380...415	16	316-P6	2CMA193506R1000	620
		Red	380...415	32	332-P6	2CMA193515R1000	760
		Red	380...415	63	363P6	2CMA166752R1000	3,020
	IP67	Red	380...415	16	316P6W	2CMA166476R1000	1,545
		Red	380...415	32	332P6W	2CMA166738R1000	2,015
		Red	380...415	63	363P6W	2CMA166786R1000	4,325
		Red	380...415	125	3125P6W	2CMA166816R1000	11,535
5 (3P+N+E)	IP44	Red	346...415	16	416-P6-I	2CMA100203R1000	650
		Red	346...415	32	432-P6-I	2CMA100205R1000	785
		Red	346...415	63	463P6	2CMA166764R1000	3,245
	IP67	Red	346...415	16	416P6W	2CMA166494R1000	1,500
		Red	346...415	32	432P6W	2CMA166524R1000	2,230
		Red	346...415	63	463P6W	2CMA166798R1000	4,380
		Red	346...415	125	4125P6W	2CMA166828R1000	11,590

IP44 (2P+E)

IP67 (3P+E)

IP67 (3P+N+E)

Connectors

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	LP (₹)
3 (2P+E)	IP44	Blue	200...250	16	216-C6-I	2CMA100206R1000	690
		Blue	200...250	32	232-C6-I	2CMA100208R1000	840
		Blue	200...250	63	263C6	2CMA166840R1000	3,485
	IP67	Blue	200...250	16	216C6W	2CMA166538R1000	1,680
		Blue	200...250	32	232C6W	2CMA166584R1000	2,140
		Blue	200...250	63	263C6W	2CMA166874R1000	4,690
		Blue	200...250	125	2125C6W	2CMA166918R1000	12,020
4 (3P+E)	IP44	Red	380...415	16	316-C6	2CMA193523R1000	785
		Red	380...415	32	332-C6	2CMA193529R1000	1,095
		Red	380...415	63	363C6	2CMA166850R1000	3,605
	IP67	Red	380...415	16	316C6W	2CMA166554R1000	2,000
		Red	380...415	32	332C6W	2CMA166604R1000	2,305
		Red	380...415	63	363C6W	2CMA166894R1000	5,355
		Red	380...415	125	3125C6W	2CMA166924R1000	13,905
5 (3P+N+E)	IP44	Red	346...415	16	416-C6-I	2CMA100207R1000	815
		Red	346...415	32	432-C6-I	2CMA100209R1000	1,135
		Red	346...415	63	463C6	2CMA166862R1000	3,790
	IP67	Red	346...415	16	416C6W	2CMA166572R1000	2,060
		Red	346...415	32	432C6W	2CMA166618R1000	2,650
		Red	346...415	63	463C6W	2CMA166906R1000	5,520
		Red	346...415	125	4125C6W	2CMA166936R1000	15,030

Wiring accessories
Industrial plugs and sockets

IP44 (2P+E)

IP67 (2P+E)

IP44 (3P+E)

IP67 (3P+E)

IP44 (3P+N+E)

IP67 (3P+N+E)

Panel mounted socket - Unified angled flange

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	LP (₹)
3 (2P+E)	IP44	Blue	200...250	16	216RAU6-I	2CMA100218R1000	650
		Blue	200...250	32	232RAU6-I	2CMA100220R1000	730
		Blue	200...250	63	263RAU6	2CMA167408R1000	2,895
	IP67	Blue	200...250	16	216RAU6W	2CMA166996R1000	1,360
		Blue	200...250	32	232RAU6W	2CMA166948R1000	1,655
		Blue	200...250	63	263RAU6W	2CMA167442R1000	3,040
4 (3P+E)	IP44	Red	380...415	16	316RAU6	2CMA193226R1000	730
		Red	380...415	32	332RAU6	2CMA193274R1000	960
		Red	380...415	63	363RAU6	2CMA167418R1000	3,180
	IP67	Red	380...415	16	316RAU6W	2CMA167012R1000	1,465
		Red	380...415	32	332RAU6W	2CMA166964R1000	1,905
		Red	380...415	63	363RAU6W	2CMA167452R1000	3,280
5 (3P+N+E)	IP44	Red	346...415	16	416RAU6-I	2CMA100219R1000	785
		Red	346...415	32	432RAU6-I	2CMA100221R1000	980
		Red	346...415	63	463RAU6	2CMA167430R1000	3,220
	IP67	Red	346...415	16	416RAU6W	2CMA167030R1000	1,705
		Red	346...415	32	432RAU6W	2CMA166982R1000	2,020
		Red	346...415	63	463RAU6W	2CMA167464R1000	3,525

IP44 (2P+E)

IP67 (2P+E)

IP44 (3P+E)

IP67 (3P+E)

IP44 (3P+N+E)

IP67 (3P+N+E)

Panel mounted sockets - Unified straight Flange

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	LP (₹)
3 (2P+E)	IP44	Blue	200...250	16	216RU6-I	2CMA100210R1000	620
		Blue	200...250	32	232RU6-I	2CMA100212R1000	695
		Blue	200...250	63	263RU6	2CMA167510R1000	2,895
	IP67	Blue	200...250	63	263RU6W	2CMA167374R1000	3,795
		Blue	200...250	125	2125RU6W	2CMA167133R1000	11,690
4 (3P+E)	IP44	Red	380...415	16	316RU6	2CMA193178R1000	675
		Red	380...415	32	332RU6	2CMA193250R1000	805
		Red	380...415	63	363RU6	2CMA167520R1000	2,990
	IP67	Red	380...415	63	363RU6W	2CMA167384R1000	3,800
		Red	380...415	125	3125RU6W	2CMA167136R1000	11,825
5 (3P+N+E)	IP44	Red	346...415	16	416RU6-I	2CMA100211R1000	690
		Red	346...415	32	432RU6-I	2CMA100213R1000	835
		Red	346...415	63	463RU6	2CMA167532R1000	3,220
	IP67	Red	346...415	63	463RU6W	2CMA167396R1000	3,810
		Red	346...415	125	4125RU6W	2CMA167142R1000	11,865

Wiring accessories
Industrial plugs and sockets

IP44 (2P+E)

IP67 (2P+E)

IP44 (3P+E)

IP67 (3P+E)

IP44 (3P+N+E)

IP67 (3P+N+E) 125

Surface Sockets Outlet

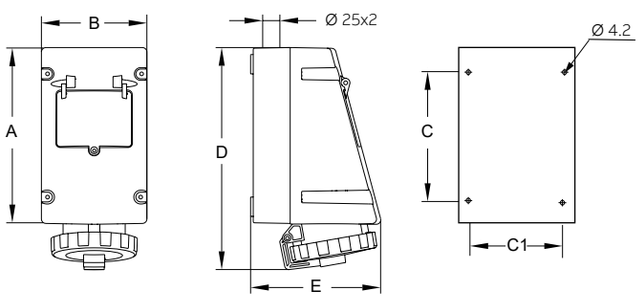
Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	LP (₹)
3 (2P+E)	IP44	Blue	200...250	16	216RS6	2CMA193098R1000	735
		Blue	200...250	32	232RS6	2CMA193122R1000	1,005
		Blue	200...250	63	263RS6	2CMA167476R1000	3,515
	IP67	Blue	200...250	16	216RS6W	2CMA167149R1000	1,615
		Blue	200...250	32	232RS6W	2CMA167172R1000	2,300
		Blue	200...250	63	263RS6W	2CMA167306R1000	4,835
		Blue	200...250	125	2125RS6W	2CMA167246R1000	12,980
4 (3P+E)	IP44	Red	380...415	16	316RS6	2CMA193106R1000	790
		Red	380...415	32	332RS6	2CMA193130R1000	1,100
		Red	380...415	63	363RS6	2CMA167498R1000	3,810
	IP67	Red	380...415	16	316RS6W	2CMA167157R1000	1,955
		Red	380...415	32	332RS6W	2CMA167180R1000	2,470
		Red	380...415	63	363RS6W	2CMA167316R1000	4,945
		Red	380...415	125	3125RS6W	2CMA167252R1000	13,700
5 (3P+N+E)	IP44	Red	346...415	16	416RS6	2CMA193115R1000	850
		Red	346...415	32	432RS6	2CMA193139R1000	1,135
		Red	346...415	63	463RS6	2CMA167484R1000	3,995
	IP67	Red	346...415	16	416RS6W	2CMA167166R1000	2,095
		Red	346...415	32	432RS6W	2CMA167189R1000	2,730
		Red	346...415	63	463RS6W	2CMA167328R1000	5,090
		Red	346...415	125	4125RS6W	2CMA167264R1000	13,905

Surface socket outlet with protection

Housing in plastic (PBT). Cable entry with knock-outs 2 x Ø 25 mm.
Cable area 1.5...4 mm2. Delivered without MCB/RCD. Space for 4 modules.

IP67 (2P+E)

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	LP (₹)
3 (2P+E)	IP67	Blue	200...250	16	216RP6WP	2CMA164572R1000	7,460
		Blue	200...250	32	232RP6WP	2CMA164602R1000	8,580
5 (4P+E)		Red	346...415	16	416RP6WP	2CMA164589R1000	8,290
		Red	346...415	32	432RP6WP	2CMA164619R1000	8,755



Type	A	B	C	C1	D	E
216RP...W...416RP...W	199.5	120	170	90	253	149
232RP...W...432RP...W	199.5	120	170	90	253	149

Wiring accessories
Industrial plugs and sockets

IP44 (2P+E)

IP67 (2P+E)

IP44 (3P+E)

IP67 (3P+E)

IP44 (3P+N+E)

IP67 (3P+N+E)

Switched interlocked socket outlet - horizontal thermoplastic
Housing in plastic (PBT). Cable entry with knock-outs Ø 25 mm/M25. Cable area 1.5...4 mm²

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	LP (₹)
3 (2P+E)	IP44	Blue	200...250	16	216MHS6	2CMA167623R1000	6,655
		Blue	200...250	32	232MHS6	2CMA167669R1000	8,115
		Blue	200...250	63	263MHS6	2CMA167715R1000	14,115
	IP67	Blue	200...250	16	216MHS6W	2CMA167801R1000	6,655
		Blue	200...250	32	232MHS6W	2CMA167848R1000	8,930
		Blue	200...250	63	263MHS6W	2CMA167894R1000	16,235
4 (3P+E)	IP44	Red	380...415	16	316MHS6	2CMA167631R1000	7,415
		Red	380...415	32	332MHS6	2CMA167677R1000	8,390
		Red	380...415	63	363MHS6	2CMA167721R1000	17,710
	IP67	Red	380...415	16	316MHS6W	2CMA167809R1000	8,025
		Red	380...415	32	332MHS6W	2CMA167856R1000	9,885
		Red	380...415	63	363MHS6W	2CMA167899R1000	19,170
5 (3P+N+E)	IP44	Red	346...415	16	416MHS6	2CMA167640R1000	7,845
		Red	346...415	32	432MHS6	2CMA167686R1000	9,020
		Red	346...415	63	463MHS6	2CMA167727R1000	17,925
	IP67	Red	346...415	16	416MHS6W	2CMA167818R1000	8,625
		Red	346...415	32	432MHS6W	2CMA167865R1000	9,925
		Red	346...415	63	463MHS6W	2CMA167905R1000	19,330

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Notes:

a) Price indicated in the price list are Ex-works, Maneja, Vadodara, Gujarat, India, inclusive of packing and forwarding. Freight & insurance charges are extra as applicable. The prices are exclusive of GST or any other taxes/duties which shall be charged at the rate prevailing at the time of supply.

b) Refer standard delivery time document from factory for PO total lot quantity. New delivery times shall be communicated, if PO total quantity exceeds lot sizes. The delivery times indicated are Ex-works and excluding transportation time.

c) We may also be able to offer priority deliveries. Check with your local ABB office.

d) You can check delivery time from factory @ https://abb.sharepoint.com/sites/MVP-EXT/Delivery_time_info/SitePages/Vadodara.aspx.

e) Delivery time quoted are applicable from the date of receipt of a technically and commercially clear order.

f) Prices “upon request” for numerical relays shall be provided as per the configuration requirement. Contact with your local ABB office.

g) Combiflex accessories like sockets, crimping tool etc. need to be ordered separately for all the combiflex mounted electromechanical relays. Check with your local ABB office for necessary price offers.

h) The price List is subject to “ABB General Terms and Conditions” of sale. The prices are subject to revision without prior notice.

i) ABB reserve the right to make technical changes or modify the contents of this document without prior notice.

j) ABB assumes no responsibility for any potential errors or possible lack of information in this document.

k) Visit “http://new.abb.com/medium-voltage/distribution-automation” for catalogues.

l) All postal/couriers should be addressed to :
ABB India Limited
Distribution Automation
Maneja Works, Vadodara-390 013
Gujarat, India

m) All e-mails related to marketing & sales queries should be sent to :
in-da.sales@abb.com

Section I: Auxiliary relays, tripping relays and timers

Type	Technical description	Auxiliary voltage	Type of mounting	Contact configurations	Typical applications	List Price (INR)
Auxiliary relays						
CV2DJ	Single element auxiliary relay, self reset contacts with operation indicator	24/30/48/110/220/250 V DC	Flush mounting	2NO+0NC/ 1NO+1NC	Contact multiplication, signalling	1,990
CV2AJ	Single element auxiliary relay, self reset contacts with operation indicator	110/240 V AC	Flush mounting	2NO+0NC/ 1NO+1NC	Contact multiplication, signalling	2,430
CV2D2J	Two element auxiliary relay, self reset contacts with operation indicator	24/30/48/110/220/250 V DC	Flush mounting	4NO+0NC/ 2NO+2NC/ 3NO+1NC	Contact multiplication, signalling	2,755
CV2A2J	Two element auxiliary relay, self reset contacts with operation indicator	110/240 V AC	Flush mounting	4NO+0NC/ 2NO+2NC/ 3NO+1NC	Contact multiplication, signalling	3,200
P8nCH2J	Single element auxiliary relay, self reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	3,685
P8nCH2J	Single element auxiliary relay, self reset contacts without operation indicator	110/240 V AC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	4,120
P8nAHX	Single element auxiliary relay, self reset contacts without operation indicator	24/30/48/110/125//220/250 V DC	Plug-in base mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	4,070
RXP8n	Single element auxiliary relay, self reset contacts without operation indicator	24/30/48/110/220/250 V DC	Combiflex mounting*	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	3,335
Supervision relays						
PN8nCH2J	No volt relay with reverse flag, self reset contacts	24/30/48/110/220 V DC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	DC supply supervision	3,665
PN8nCH2J	No volt relay with reverse flag, self reset contacts	110/240 V AC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	AC supply supervision	3,990
TCS	Trip circuit supervision relay	24/30/48 V DC 110-125/220-250 V DC/AC	Flush mounting	1NO+1NC+2C/O	Trip circuit supervision	4,375
RXTCS	Trip circuit supervision relay	24/30/48 V DC 110-125/220-250 V DC/AC	Combiflex mounting*	1NO+1NC+2C/O	Trip circuit supervision	4,450
UVT92M	Fuse failure relay	110V AC, 50 Hz, 30/110/220 V DC	Flush mounting		Fuse failure supervision	9,015

*Combiflex accessories need to be ordered separately. Check with your local ABB office.

Section II: Electro-mechanical high speed tripping relays, bi-stable relays and static relays

Type	Technical description	Auxiliary voltage	Type of mounting	Contact configurations	Typical applications	List Price (INR)
High speed tripping relays						
PQ5nCH2J	High speed tripping relay, hand reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Flush mounting	4NO+0NC/ 3NO+1NC	Low burden tripping	3,345
PQ5nCH2J	High speed tripping relay, hand reset contacts with operation indicator	110/240 V AC	Flush mounting	4NO+0NC/ 3NO+1NC	Low burden tripping	3,780
PQ8nCH2J	High speed tripping relay, hand reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Low burden tripping	4,000
PQ8nCH2J	High speed tripping relay, hand reset contacts with operation indicator	110/240 V AC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Low burden tripping	4,325
PQ8nC2JW	High speed high burden tripping relay, hand reset contacts with operation indicator	24-30/48/110-125//220-250 V DC	Flush mounting	6NO+0NC/ 5NO+1NC/ 4NO+2NC	High burden tripping	4,000
RXPQ8n	High speed tripping relay, hand reset contacts with operation indicator	24/30/48/110/220/250 V DC	Combiflex mounting*	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Low burden tripping	3,385
PSU14n-2X	High speed tripping relay, electrically reset contacts, with operation indicator	110/220 V DC	Plug-in base mounting	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	High burden tripping	11,900
RXPSU14n	High speed tripping relay, electrically reset contacts with operation indicator	110/220 V DC	Combiflex mounting*	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	High burden tripping	11,900
PSU6n-X	High speed trip relay without operation indicator	110/220 V DC	Plug-in base mounting	6NO+0NC 5NO+1NC 4NO+2NC 3NO+3NC	High burden tripping	7,215
RXPSU6n	High speed trip relay without operation indicator	110/220 V DC	Combiflex mounting*	6NO+0NC 5NO+1NC 4NO+2NC 3NO+3NC	High burden tripping	7,215
PSU14nCJW	High speed high burden tripping relay, hand/ electrical reset contacts with operation indicator	110/220 V DC	Flush Mounting	14NO+0NC 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	High burden tripping	12,840
PSU6nCJW	High speed high burden tripping relay, hand/ electrical reset contacts with operation indicator	110/220 V DC	Flush Mounting	6NO+0NC 5NO+1NC/ 4NO+2NC/ 3NO+3NC	High burden tripping	7,785

Section II: Electro-mechanical high speed tripping relays, bi-stable relays and static relays

Type	Technical description	Auxiliary voltage	Type of mounting	Contact configurations	Typical applications	List Price (INR)
Bi-stable relays						
PSU6n-X	Bistable relay, electrically reset contacts without operation indicator	24/30/48/110/125//220/250 V DC	Plug-in base mounting	6NO+0NC/ 5NO+1NC/ 4NO+2NC/ 3NO+3NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	6,555
PSU14n-2X	Bistable relay, electrically reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Plug-in base mounting	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	10,815
RXPSU6n	Bistable relay, electrically reset contacts without operation indicator	24/30/48/110/125//220/250 V DC	Combiflex mounting*	6NO+0NC/ 5NO+1NC/ 4NO+2NC/ 3NO+3NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	6,555
RXPSU14n	Bistable relay, electrically reset contacts, with operation Indicator	24/30/48/110/125//220/250 V DC	Combiflex mounting*	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	10,815
Static protection relay						
IRXm	Circulating current relay	24/30/48 V DC 110-125/220-250 V DC	Flush mounting	2NO+1NC	Restricted earth fault protection for generators and transfomers, high impedance differential protection for motors, generators	7,550
VHXM22A	Under relay without time delay	63.5/110/240 V AC, 40-80%, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Under voltage protection/ Residual (dead bus) monitoring	8,350
VHXM22B	Under voltage relay with variable time delay	63.5/110/240 V AC, 40-80%, 0.1-1.0 sec/0.5-5.0 sec/1-10 sec, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Under voltage protection	12,245
VHXM23A	Over voltage relay without time delay	63.5/110/240 V AC, 80-140%, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Over voltage relay	8,350
VHXM23B	Over voltage relay with variable time delay	63.5/110/240 V AC, 80-140%, 0.1-1.0 sec/0.5-5.0 sec/1-10 sec, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Over voltage relay	12,245

*Combiflex accessories need to be ordered seperately. Check with your local ABB office.

Section III: Numerical protection and control relays

Type	Product description	L.P.(₹)
Relion® 605 series		
REF601	Numerical feeder protection and control relay	Upon request
REJ601	Numerical feeder protection relay	
REM601	Numerical motor protection and control / Motor protection relay	
REJ603	Numerical self-powered feeder protection relay	
Relion® 611 series		
REF611	Numerical feeder protection and control relay	Upon request
REM611	Numerical motor protection and control relay	
REB611	Numerical busbar and multipurpose differential protection and control relay	
REU611	Numerical voltage protection and control relay	
Relion® 615 series		
REF615	Numerical feeder protection and control relay	Upon request
REM615	Numerical motor protection and control relay	
RED615	Numerical line differential protection and control relay	
RET615	Numerical transformer protection and control relay	
REV615	Numerical capacitor bank protection and control relay	
REU615	Numerical voltage protection and control relay	
REC615	Grid automation, numerical remote monitoring and control relay	
RER615	Grid automation, numerical recloser protection and control relay	
REG615	Numerical generator protection and control relay	
Relion® 620 series		
REF620	Numerical feeder protection and control relay	Upon request
RET620	Numerical transformer protection and control relay	
REM620	Numerical motor protection and control relay	
Relion® 630 series		
REF630	Numerical feeder protection and control relay	Upon request
RET630	Numerical transformer protection and control relay	
REG630	Numerical generator protection and control	
REM630	Numerical motor protection and control	
Relion® 640 series		
REX640	All-in-one protection for advanced power generation and distribution applications	Upon request

Visit “http://new.abb.com/medium-voltage/distribution-automation” for catalogues.
Prices “Upon request” for Numerical relays shall be provided as per the configuration requirement.

Section IV: Grid automation, FBT, arc protection, load shedding, engineering tools and miscellaneous items

Type	Product description	LP (₹)
RIO600	Remote I/O unit	
	Power supply module	Upon request
	Communication module	
	Digital input module with 8 inputs	
	Digital output module with 4 outputs	
	RTD/mA input module with 4 inputs	
	Analog output module with 4 outputs	
COM600	Grid automation controller	
PML630	Power management/Compact load-shedding solution	
REK510	Current injection device for rotor earth fault protection	
PCM600	Protection and control IED manager	
REA10	Arc fault protection system	
SUE3000	High speed transfer device (Fast bus transfer)	
RTU	RTU560/RTU511	
ARC600	Wireless controller for RMU/Feeder automation	
ARG600	Wireless gateway for connection over cellular network	
ARR600	Wireless I/O gateway for connection over cellular network	
ARM600 (M2M)	Communication server manages all arctic product family	

Visit “http://new.abb.com/medium-voltage/distribution-automation” for catalogues.
Prices “Upon request” for numerical relays shall be provided as per the configuration requirement.

Type 2 co-ordination
MS132/MS165 DOL-NS-IE1/IE2/IE3

SCPD type : MMS
Rated voltage : 400/415 V.
Short circuit current: 50 kA
Starting type : DOL-NS
Co-ordination type: IEC Type 2
Overload relay: embedded
Frequency: 50-60 Hz

Motor			Manual motor starter		Contactor
Rated power	Rated current		Instantaneous tripping current	Current setting range	
[kW]	[A]	Type	[A]	[A]	Type
0.06	0.2	MS132-0,25	2.44	0.16 - 0.25	A9
0.09	0.3	MS132-0,40	3.9	0.25 - 0.40	A9
0.12	0.44	MS132-0,63	6.14	0.40 - 0.63	A9
0.18	0.6	MS132-0,63	6.14	0.40 - 0.63	A9
0.25	0.85	MS132-1,0	11.5	0.63 - 1.00	A9
0.37	1.1	MS132-1,6	18.4	1.00 - 1.60	A9
0.55	1.5	MS132-1,6	18.4	1.00 - 1.60	A9
0.75	1.9	MS132-2,5	28.75	1.60 - 2.50	A9
1.1	2.7	MS132-4,0	50	2.50 - 4.00	A16
1.5	3.6	MS132-4,0	50	2.50 - 4.00	A16
2.2	4.9	MS132-6,3	78.75	4.00 - 6.30	A26
3	6.5	MS132-10	150	6.30 - 10.00	A26
4	8.5	MS132-10	150	6.30 - 10.00	A26
5.5	11.5	MS132-12	180	8.00 - 12.00	A26
7.5	15.5	MS132-16	240	10.00 - 16.00	A30
11	22	MS132-25	375	20.00 - 25.00	A30
15	29	MS132-32	480	25.00 - 32.00	A30
18.5	35	MS165-42	630	30.00 - 42.00	A63
22	41	MS165-54	810	40.00 - 54.00	A63
25	46.6	MS165-54	810	40.00-54.00	A75
30	45.5	MS165-65	975	52.00-65.00	A75

Type 2 co-ordination
MS132/MS165 SD-NS-IE1/IE2/IE3

Co-ordination type: IEC Type 2
SCPD type: MMS
Rated voltage : 400/415 V
Short circuit current: 50 kA.
Starting type : SD-NS
Overload relay: Embedded
Frequency : 50-60 Hz

Rated power	Rated current		Instantaneous tripping current	Current setting range			
[kW]	[A]	Type	[A]	[A]	Line	Delta	Star
0.06	0.20	MS132-0,25	3.13	0.16 - 0.25	A9	A9	A9
0.09	0.30	MS132-0,40	5.0	0.25 - 0.40	A9	A9	A9
0.12	0.44	MS132-0,63	7.88	0.40 - 0.63	A9	A9	A9
0.18	0.60	MS132-0.63	7.88	0.40 - 0.63	A9	A9	A9
0.25	0.85	MS132-1,00	12.5	0.63 - 1.00	A9	A9	A9
0.37	1.10	MS132-1,60	20.0	1.00 - 1.60	A9	A9	A9
0.55	1.50	MS132-1,60	20.0	1.00 - 1.60	A9	A9	A9
0.75	1.90	MS132-2,50	31.25	1.60 - 2.50	A9	A9	A9
1.1	2.70	MS132-4,00	50	2.50 - 4.00	A26	A26	A26
1.5	3.60	MS132-4,00	50	2.50 - 4.00	A26	A26	A26
2.2	4.90	MS132-6,30	78.75	4.00 - 6.30	A26	A26	A26
3.0	6.5	MS132-10.00	150	6.30-10.00	A26	A26	A26
4.0	8.5	MS132-10.00	150	6.30-10.00	A26	A26	A26
5.5	11.5	MS132-16.00	240	10.00-16.00	A26	A26	A26
7.5	18.5	MS132-20.00	300	16.00-20.00	A30	A26	A26
11.0	22.0	MS132- 25.00	375	20.00-25.00	A30	A26	A26
15.0	29.0	MS132- 32.00	480	25.00-32.00	A30	A26	A26
15.0	29.0	MS165 -32.00	480	23.00-32.00	A40	A40	A40
18.5	35.0	MS165 -42.00	630	30.00-42.00	A40	A40	A40
22.0	41.0	MS165 -54.00	810	40.00-54.00	A50	A40	A40
25.0	46.6	MS165 -54.00	810	40.00-54.00	A63	A40	A40
30.0	55.0	MS165 -65.00	975	52.00-65.00	A63	A40	A40

Type 2 co-ordination
MCCB DOL-NS

SCPD type: MCCB
Rated voltage: 400/415 V
Short circuit current: 50 kA
Starting type: DOL-NS
Coordination type: IEC Type 2 / IE1 /IE2
Overload relay: TOL
Frequency: 50-60 Hz

Motor		Moulded case circuit breakers		Contactor	Overload relay	
Rated power	Rated current		Instantaneous tripping current			Current setting range
[kW]	[A]	Type	[A]	Type	Type	[A]
0.37	1.1	XT2S160 MF 2	28	A9	TA25DU1.4	1 - 1.4
0.55	1.5	XT2S160 MF 2	28	A9	TA25DU1.8	1.3 - 1.8
0.75	1.9	XT2S160 MF 2	28	A9	TA25DU2.4	1.7 - 2.4
1.1	2.7	XT2S160 MF 4	56	A9	TA25DU4	2.8 - 4
1.5	3.6	XT2S160 MF 4	56	A16	TA25DU5	3.5 - 5
2.2	4.9	XT2S160 MF 8.5	120	A26	TA25DU6.5	4.5 - 6.5
3	6.5	XT2S160 MF 8.5	120	A26	TA25DU8.5	6 - 8.5
4	8.5	XT2S160 MF 12.5	175	A30	TA25DU11	7.5 - 11
5.5	11.5	XT2S160 MF 12.5	175	A30	TA25DU14	10 - 14
7.5	15.5	XT2S160 MA 20	210	A30	TA25DU19	13 - 19
11	22	XT2S160 MA 32	288	A30	TA42DU25	18 - 25
15	29	XT2S160 MA 52	392	A50	TA75DU42	29 - 42
18.5	35	XT2S160 MA 52	469	A50	TA75DU52	36 - 52
22	41	XT2S160 MA 52	547	A50	TA75DU52	36 - 52
30	55	XT2S160 MA 80	840	A63	TA75DU80	60 - 80
37	66	XT2S160 MA 80	960	A75	TA75DU80	60 - 80
45	80	XT2S160 MA 100	1200	A95	TA110DU110	80 - 110
55	97	XT3S250 MA 160	1440	A110	TA110DU110	80 - 110
75	132	XT3S250 MA 200	1800	A145	TA200DU175	130 - 175
90	160	XT3S250 MA 200	2400	A185	TA200DU200	150 - 200
110	193	T5S400 PR221-I In320	2720	AF205	EF205-210	63 - 210
132	230	T5S400 PR221-I In400	3200	AF265	EF370-380	115 - 380
160	280	T5S400 PR221-I In400	4000	AF305	EF370-380	115 - 380
200	350	T5S630 PR221-I In630	5040	AF370	EF370-380	115 - 380
250	430	T6S630 PR221-I In630	6300	AF460	EF460-500	150 - 500
290	520	T6S800 PR221-I In800	8000	AF580	EF750-800	250 - 800
315	540	T6S800 PR221-I In800	8000	AF580	EF750-800	250 - 800
355	610	T6S800 PR221-I In800	8000	AF750	EF750-800	250 - 800

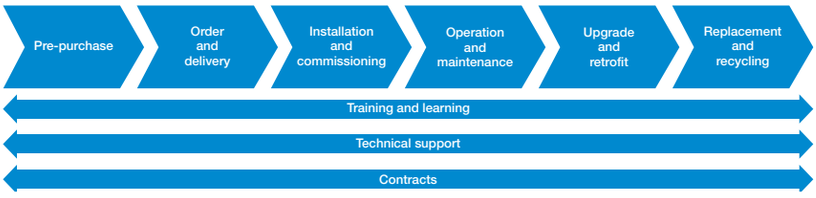
Type 2 co-ordination
MCCB SD-NS

SCPD type: MCCB
Rated voltage: 400/415 V
Short circuit current: 50 kA
Starting type: SD-NS
Coordination type: IEC Type 2 / IE1 /IE2
Overload relay: TOL
Frequency: 50-60 Hz

Motor		MCCB		Contactor			Thermal release	
Pe [kW]	Ie [A]	Type	Im [A]	Line type	Delta type	Star type	Type	[A]
18.5	35	XT2S160 MA52	469	A50	A50	A26	TA75DU25	18-25
22	41	XT2S160 MA52	547	A50	A50	A26	TA75DU32	22-32
30	55	XT2S160 MA80	720	A63	A63	A30	TA75DU42	29-42
37	66	XT2S160 MA80	840	A75	A75	A30	TA75DU52	36-52
45	80	XT2S160 MA100	1050	A75	A75	A30	TA75DU63	45-63
55	97	XT2S160 MA100	1200	A75	A75	A40	TA75DU63	45-63
75	132	XT3S250 MA160	1700	A95	A95	A75	TA110DU90	66-90
90	160	XT3S250 MA200	2000	A110	A110	A95	TA110DU110	80-110
110	195	XT3S250 MA200	2400	A145	A145	A95	TA200DU135	100-135
132	232	T5S400 PR221-I In320	2880	A145	A145	A110	EF205-210	60-200
160	282	T5S400 PR221-I In400	3600	A185	A185	A145	EF205-210	60-200
200	350	T5S630 PR221-I In630	5040	AF265	AF265	AF190	EF370-380	115-380
250	430	T6S630 PR221-I In630	6300	AF265	AF265	AF190	EF370-380	115-380
290	520	T6S630 PR221-I In630	8000	AF580	AF580	AF400	EF750-800	250-800
315	540	T6S800 PR221-I In800	8000	AF580	AF580	AF400	EF750-800	250-800
355	610	T6S800 PR221-I In800	8000	AF580	AF580	AF400	EF750-800	250-800

Service portfolio

Low voltage products division delivers a vast range of services to cover the whole product lifecycle. The services offered by ABB's low voltage products and systems span the entire value chain, from the moment a customer makes the first enquiry to disposal and recycling of the product. Throughout the value chain, ABB provides training, technical support and customized contracts. All of this is supported by one of the most extensive country sales and service network.



Installation and commissioning
ABB provides comprehensive installation and commissioning services to achieve a problem-free start up, by following installation and commissioning procedures. The use of service personnel from ABB LP service ensures that the switchgear is installed in a safe and correct way.

Operation and maintenance
ABB can guide the customer through a fast and efficient fault finding procedure as well as analyze the operation of the product and the customer's process. From site surveys to preventive, predictive maintenance and reconditioning, ABB has all the options covered to keep its customers' processes operational.

Upgrade and retrofits
Upgrades
An existing ABB product can often be upgraded to the latest software or hardware to improve the performance of the application. Existing processes can be economically modernized by upgrading with the latest technology.

Retrofits
Replacing old LV Switchgear of any make with ABB's latest versions can be done using the ABB special conversion kits which enable quick installation without structural modifications to the original compartment. In addition complete "turnkey" solutions are available. Specific conversion kits have been developed in order to replace old components with new ones that can be found in the latest switchgears.

Replacement and Recycling
ABB can advise on the best replacement products while ensuring that the existing products are disposed of in a way that meets all local regulations.

Entire value chain services
The main services available throughout the entire value chain include:

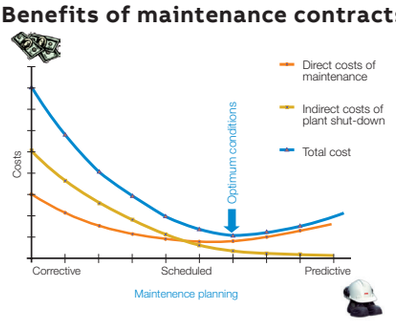
Training and learning – Hands on
ABB LP service carries out training programs. Those trainings can be either general or bespoke and have the aim of providing the personnel in charge of management/maintenance with the necessary know-how to achieve an excellent level of operating ability in certain situations. The manager of an electrical site can find it convenient to have certain maintenance capabilities available within his own team.
The courses mainly cover:
- Operating equipment
- Maintenance principles
- Repairs for small faults

Technical support
At each stage of the value chain, an ABB expert is available to offer advice to keep the customer's process or plant operational.

Spare parts
Availability of original spare parts is essential for fast and efficient maintenance activities. This becomes even more critical when the product was produced some years ago and has components in it which are no longer in production.
ABB LP service is the only one able to supply original and guaranteed spare parts. These can be easily selected and ordered through the authorized channel.

Maintenance contracts
In addition to the corrective maintenance of a faulty unit, which includes any type of emergency intervention, there is a complete preventive maintenance service package, ensuring those who manage the plant gain considerable advantages in terms of reliability, safety and reduction of costs. Also customized contracts can be devised between the customer and ABB. Depending on the severity of the intervention needed, it can often be done on-site by our skilled and experienced engineers and is a faster way of resolution.
ABB LP service has an effective service network across the country and dedicated service workshops. For all your service requirements , contact our nearest Sales office.

Benefits of maintenance contracts



General conditions of sale

General terms and conditions of sale:

- All prices mentioned in this price list are in Indian Rupees (INR) and this supersedes all previous price lists
- Prices are based on Ex-work basis
- Maximum retail prices (MRPs) mentioned in the publication are maximum recommended selling prices
- List prices (LPs) mentioned are exclusive of all taxes
- Prices are subject to revision without prior notice

Terms of delivery: Ex- work, Nelamangala or any other ABB warehouse in India

Standard delivery terms
Ex-stock or 30 working days

Address of Nelamangala warehouse
ABB INDIA LIMITED
#126, Hanchipura Village, Kasaba Hobli
Nelamangala Taluk, Bangalore-562 123
Tel: +91 80 2770 0081
Tel: +91 80 2770 0082
Tel: +91 80 2770 0083

Address of Works
Nelamangala
Survey No: 88/3, 88/4, Basavanhalli, Kasaba Hobli,
Nelamangala Taluk, Bangalore - 562 123
Karnataka, India
Tel: +91 80 2294 6618
Tel: +91 80 2294 6619
Fax: +91 80 2294 9999

Peenya
Plot no. 5 & 6, II Phase,
Peenya Industrial Area, Bangalore - 560 058
Karnataka, India
Tel: +91 80 22949354/9585
Fax: +91 80 22949389

Vadodara
Maneja Works, Maneja,
Vadodara - 390 013
Gujarat, India
E-mail: in-da.sales@abb.com
Tollfree No: 1800-4200-707

Warranty policy
ABB guarantees the supply according to the law. Upon expiration, the warranty expires even if the devices have not been operated for any reason. In the case of faults, as long as this does not depend on assembly errors by the customer or third parties, on incorrect use of the materials, lack of or incorrect maintenance, normal wear and tear, faults caused by inexperience or negligence by the purchaser or by transport, by the improper storage of the materials, or failure by the customer to adopt measures to reduce eventual dysfunction, overload with respect to the contractual limits, by unauthorized intervention, by tampering or action effected by the customer, to force majeure, ABB will, throughout the warranty period, repair or replace any defective part of supply free of charge, in the shortest possible time, at its premises. Where the repair cannot be executed at ABB premises, except as otherwise agreed, all the supplementary or relevant expenses shall be borne by the customer.

Repair or replacement will be executed only if the customer has performed all its obligations to that date. The customer may not suspend performance of the obligations in any case in which this warranty is invoked. The term for the repair or replacement of the faulty supply will be agreed by ABB and the customer. The shipment of any supply claimed to be faulty by the customer to ABB and subsequently by ABB to the customer, shall be at the risk and under the responsibility of the customer, who shall arrange adequate insurance coverage. The supply repaired or replaced is shipped at the expense and risk of the customer. Any dispute about a shipment has no effect on the remainder of the supply. The products replaced by ABB become the property of ABB.

General conditions of sale

Any claim regarding the supply, machinery, plant or components not compliant with the specifications or the contractual documentation must be raised in writing, within a maximum term of 8 days from delivery, when the time limit for action expires. In the case of systems, this term is 60 days from execution of the disputed service when the time limit for action expires.

In the case of latent defects, the terms indicated above run from the date of discovery. Once the warranty period has expired claims are not accepted,even for latent defect. Where the claim is timely and justified, ABB's obligation is limited to replacement of the goods found not in compliance or repetition of execution of the non-compliant service, excluding all rights to the Customer to seek termination of the contract and/or compensation of damages.

With reference to the provision of spare parts, ABB reserves the right to provide materials either from the original supplier or from equivalent supplier.

Warranty period:

1. **Breakers & switches:** The warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.
2. **Control products:** The warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.
3. **Enclosures & Din Rail components:** The warranty period is 5 years from the date of ABB's invoice if the components are used in ABB's enclosure. If non- ABB enclosure is used, Warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.

4a. **Wiring accessories:** 10 years of warranty. The company at its discretion will repair or replace products if they have any manufacturing defect within 10 years from date of purchases for switches (without LED Lamp) and power sockets. For other ABB wiring accessories, the warranty will be for 2 years. ABB mounting boxes are not covered under warranty. Warranty for all the products will not be valid: If devices are not used with original ABB mounting boxes. If devices are altered, dismantled, rectified or tampered. Warranty states company’s entire liability. This does not extend to cover consequential losses or damage or installation cost arising from defective products. Since product improvement is a continuous process, the data furnished in this brochure may undergo revision. For the latest information, you may contact our nearest sales office.

4b. **Plug & sockets:** The warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.

Liability clause:
The manufacturer shall not be liable for any consequential loss, injury or damages attributable to defect or failure of its products.

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ABB India Helpline.
Technical telephone support for customers
and channel partners.
Toll free: (BSNL) +91 1800 420 07 07.

website: new.abb.com/low-voltage

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