

WITH EFFECT FROM 10TH JANUARY, 2018

Electrification products

Panel builder price list (₹)



Electrification products

ABB is a global leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. ABB in India serves customers in process, manufacturing and consumer industries, utilities, the oil & gas sector and infrastructure markets through a wide manufacturing and marketing network.

ABB offers a full range of low- and medium-voltage solutions to connect, protect, control and measure a wide range of electrical systems for all major industries, including the residential sector.

The business improves the reliability and efficiency of electrical installations through modular substation packages, distribution automation products, switchgear, circuit breakers, measuring and sensing devices, control products, wiring accessories, and enclosures and

cabling systems, including KNX systems designed to integrate and automate a building's lighting, ventilation, heating, security and data communication networks.

ABB's product range serves the diverse needs of customers, offering value-for-money and high levels of quality and reliability. These products are backed by the technological expertise of ABB's centres of excellence across the globe, each of which excel in a specific range of low voltage products.

ABB's electrification products offering in India are designed, manufactured and tested in-house in conformance with requirements of the ISO 9000 series. These products conform to the latest IEC standards, EN specifications, national standards such as IS, BS, VDE, etc., in addition to the "CE" mark.



Electrification products

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.

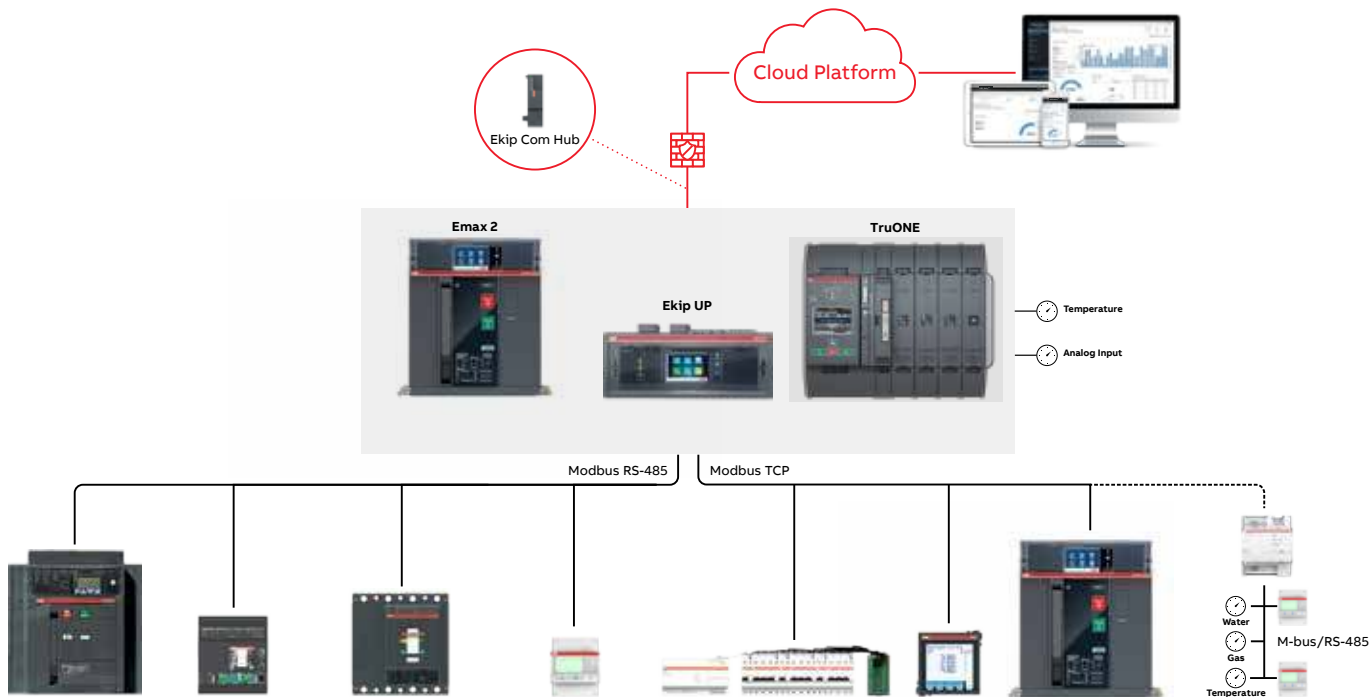


ABB showcases a further evolution in the low-voltage distribution business, setting a new benchmark in terms of simplicity and performance.

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

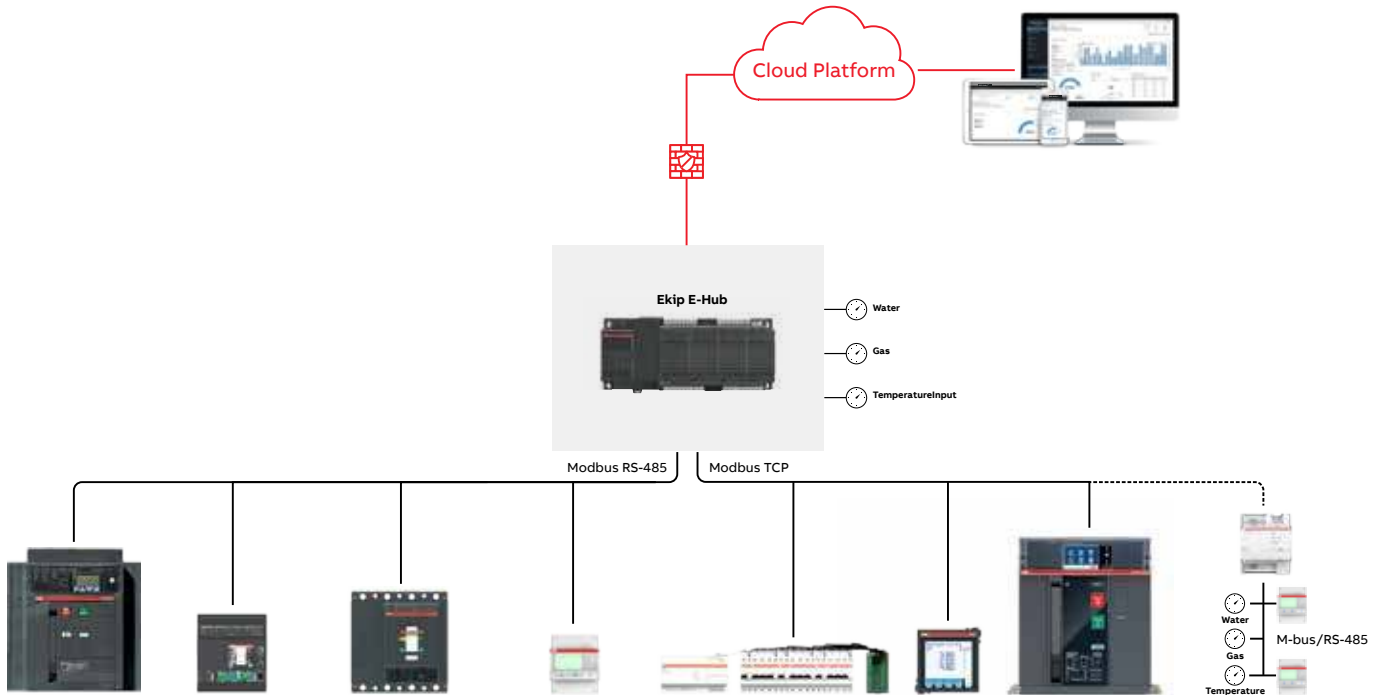
These devices can be connected, plug & play, to the cloud-computing platform by sharing data either with Emax 2 (equipped with Ekip Com Hub) or with Ekip E-Hub via Modbus RS-485, Modbus TCP and Ekip Link.

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											

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

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.



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%



Global website for
ABB Ability™ EDCS



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 disconnecter fuse
- Switch disconnectors
- Changeover switches - manual & motorized
- Auto transfer switches
- Cam switches
- Cable distribution cabinet - Kabeldon
- Fuse gear - easyline and inline (Fuse switch disconnecter)
- Switch disconnecter for DC and photovoltaic application
- MCCB for DC and photovoltaic application



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 adaptations are 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 the plates and panels – Segregations in kits up to Form 4.

The use and installation of the kits according to the instructions provided means that assembly 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.



...it should be
monitorable from
anywhere. }

{ To keep a system
under control...

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



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			B		C		N	
Frame	In (A)	Poles	Ordering code	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)
XT1 160	16	3	1SDA066799R1	6,410	1SDA080825R1 *	6,890	1SDA080827R1 *	9,290
	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 ■	9,060	1SDA067398R1 ■	10,610	1SDA067417R1 ■	10,720
	160		1SDA066809R1 ■	10,400	1SDA067399R1 ■	13,690	1SDA067418R1 ■	14,290
	16	4	1SDA066810R1	8,840	1SDA080840R1 *	9,990	1SDA080842R1 *	11,740
	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 ■	11,200	1SDA067409R1 ■	12,620	1SDA067427R1 ■	13,790
	160		1SDA066821R1 ■	14,290	1SDA067410R1 ■	16,340	1SDA067428R1 ■	17,360

*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
XT1 160	16	3
	20	
	25	
	32	
	40	
	50	
	63	
	80	
	100	
	125	
	160	
	16	4
	20	
	25	
	32	
	40	
	50	
	63	
	80	
	100	
	125	
	160	

*TMF trip unit

S

Ordering code	Unit L.P.(₹)
1SDA080830R1*	10,210
1SDA080831R1*	
1SDA080832R1	
1SDA080833R1 ■	
1SDA080834R1 ■	
1SDA067431R1	
1SDA067432R1 ■	
1SDA067433R1 ■	
1SDA067434R1 ■	
1SDA067435R1 ■	13,270
1SDA067436R1 ■	16,340
1SDA080845R1*	14,810
1SDA080846R1*	
1SDA080847R1	
1SDA080848R1	
1SDA080849R1	
1SDA067439R1	
1SDA067440R1 ■	
1SDA067441R1	
1SDA067442R1 ■	
1SDA067445R1 ■	17,360
1SDA067446R1	19,400

H

Ordering code	Unit L.P.(₹)
1SDA080835R1*	12,260
1SDA080836R1*	
1SDA080837R1	
1SDA080838R1	
1SDA080839R1	
1SDA067449R1	
1SDA067450R1	
1SDA067451R1	
1SDA067452R1	
1SDA067453R1	16,340
1SDA067454R1	20,430
1SDA080850R1*	16,850
1SDA080851R1*	
1SDA080852R1	
1SDA080853R1	
1SDA080854R1	
1SDA067457R1	
1SDA067458R1	
1SDA067459R1	
1SDA067460R1	
1SDA067463R1	19,400
1SDA067464R1	21,450

XT3

Breaking capacity at 415VAC

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

TMD

Frame	In (A)	Poles
XT3 250	200	3
	250	
	200	4
	250	

N

Ordering code	Unit L.P.(₹)
1SDA068058R1 ■	16,870
1SDA068059R1 ■	19,350
1SDA068069R1 ■	21,820
1SDA068070R1 ■	24,810

S

Ordering code	Unit L.P.(₹)
1SDA068220R1 ■	18,620
1SDA068221R1 ■	22,620
1SDA068231R1 ■	25,200
1SDA068232R1 ■	26,690

■ 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*

			N		S		H	
Frame	In (A)	Poles	Ordering code	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)
XT2160	1.6	3	1SDA067000R1	11,850	1SDA067540R1	12,970	1SDA067584R1	17,970
	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 ■	11,340	1SDA067550R1 ■	12,460	1SDA067594R1	17,460
	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 ■	
XT4 250	125	3	1SDA067019R1 ■	13,790	1SDA067559R1 ■	15,940	1SDA067603R1 ■	24,210
	160		1SDA067020R1 ■	16,850	1SDA067560R1 ■	19,710	1SDA067604R1	27,670
	200		1SDA068090R1 ■	20,430	1SDA068310R1 ■	22,980	1SDA068343R1	29,100
	225		1SDA068091R1	22,980	1SDA068311R1	23,480	1SDA068344R1	30,640
	250		1SDA068092R1 ■	23,480	1SDA068312R1 ■	24,610	1SDA068345R1 ■	31,150
T5	320	3	1SDA054436R1 ■	29,210	1SDA054440R1 ■	30,890	1SDA054444R1 ■	38,370
	400		1SDA054437R1 ■		1SDA054441R1 ■		1SDA054445R1 ■	
	500		1SDA054456R1 ■	35,750	1SDA054461R1 ■	38,840	1SDA054465R1	49,530
T6	630	3	1SDA060202R1 ■	41,150	1SDA060204R1 ■	42,360	1SDA060206R1	50,450
	800		1SDA060214R1 ■	53,140	1SDA060216R1 ■	55,720	1SDA060218R1 ■	56,890

* 40 A onwards

■ Stock items

Tmax power distribution circuit breakers

Protection: TMA

XT2/XT4/T5/T6



Breaking capacity at 415VAC

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



TMD / TMA*

			N		S		H	
Frame	In (A)	Poles	Ordering code	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)
XT2160	1.6	4	1SDA067021R1	15,730	1SDA067561R1	17,060	1SDA067605R1	21,960
	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	15,220	1SDA067571R1	16,540	1SDA067615R1	21,560
	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	
XT4 250	125	4	1SDA067042R1 ■	18,390	1SDA067582R1 ■	20,730	1SDA067626R1	26,550
	160		1SDA067043R1 ■	21,960	1SDA067583R1 ■	24,500	1SDA067627R1	32,470
	200		1SDA068109R1 ■	27,580	1SDA068329R1 ■	31,150	1SDA068362R1	35,740
	225		1SDA068110R1	28,070	1SDA068330R1	31,660	1SDA068363R1	36,250
T5	250	4	1SDA068111R1 ■	28,590	1SDA068331R1 ■	32,170	1SDA068364R1	37,690
	320		1SDA054477R1 ■	35,390	1SDA054479R1 ■	37,640	1SDA054481R1	44,530
	400		1SDA054478R1 ■		1SDA054480R1 ■		1SDA054482R1 ■	
T6	500	4	1SDA054487R1 ■	45,770	1SDA054489R1 ■	50,120	1SDA054491R1 ■	60,140
	630		1SDA060210R1 ■	49,340	1SDA060211R1 ■	54,380	1SDA060212R1	62,750
	800		1SDA060222R1 ■	60,040	1SDA060223R1 ■	65,790	1SDA060224R1	68,340

* 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

			N		S		H	
Frame	In (A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
XT2 160	10	3	1SDA067054R1	18,680	1SDA067800R1	22,460	1SDA067857R1	25,130
	25		1SDA067055R1		1SDA067801R1		1SDA067858R1	
	63		1SDA067056R1	16,640	1SDA067802R1	20,430	1SDA067859R1	23,080
	100		1SDA067057R1		1SDA067803R1		1SDA067860R1	
	160		1SDA067058R1		1SDA067804R1		1SDA067861R1	
XT4 250	250	4	1SDA068126R1	27,780	1SDA068475R1	32,680	1SDA068515R1	37,730
T5 400	400		1SDA054317R1	37,770	1SDA054333R1	39,500	1SDA054349R1	50,120
T5 630	630		1SDA054396R1	40,220	1SDA054404R1	42,000	1SDA054412R1	53,340
T6 800	800		1SDA060268R1	61,790	1SDA060278R1	68,500	1SDA060289R1	85,060
T6 1000*	1000		1SDA060537R1	95,070	1SDA060547R1	1,02,580	1SDA060561R1	1,22,590

Frame	In (A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
XT2 160	10	4	1SDA067090R1	23,700	1SDA067833R1	27,980	1SDA067890R1	31,350
	25		1SDA067091R1		1SDA067834R1		1SDA067891R1	
	63		1SDA067092R1	21,650	1SDA067835R1	25,930	1SDA067892R1	29,300
	100		1SDA067093R1		1SDA067836R1		1SDA067893R1	
	160		1SDA067095R1		1SDA067838R1		1SDA067895R1	
XT4 250	250	4	1SDA068147R1	36,250	1SDA068495R1	40,490	1SDA068535R1	43,800
T5 400	400		1SDA054325R1	46,910	1SDA054341R1	53,600	1SDA054357R1	62,650
T5 630	630		1SDA054400R1	54,780	1SDA054408R1	59,650	1SDA054416R1	69,570
T6 800	800		1SDA060273R1	70,750	1SDA060283R1	86,320	1SDA060294R1	1,05,310
T6 1000*	1000		1SDA060542R1	1,37,590	1SDA060556R1	1,43,840	1SDA060566R1	1,75,120

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

Protection: LSIG

XT2/XT4/T5/T6



Breaking capacity at 415VAC

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



Ekip LSIG

			N		S		H	
Frame	In (A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
XT2 160	10	3	1SDA067072R1	36,770	1SDA067815R1	39,310	1SDA067872R1	47,480
	25		1SDA067073R1		1SDA067816R1 ■		1SDA067873R1	
	63		1SDA067074R1 ■	34,720	1SDA067817R1 ■	37,280	1SDA067874R1	45,440
	100		1SDA067075R1 ■		1SDA067818R1 ■		1SDA067875R1	
	160		1SDA067076R1 ■	37,280	1SDA067819R1 ■	40,340	1SDA067876R1	48,510
XT4 250	250		1SDA068141R1 ■	38,810	1SDA068490R1 ■	41,360	1SDA068530R1 ■	50,550
XT2 160	10	4	1SDA067108R1	43,710	1SDA067851R1	46,760	1SDA067908R1	56,580
	25		1SDA067109R1		1SDA067852R1		1SDA067909R1	
	63		1SDA067110R1 ■	41,660	1SDA067853R1 ■	44,730	1SDA067910R1	54,530
	100		1SDA067111R1 ■		1SDA067854R1 ■		1SDA067911R1	
	160		1SDA067113R1 ■	44,730	1SDA067856R1 ■	48,410	1SDA067913R1	58,200
XT4 250	250		1SDA068162R1 ■	46,560	1SDA068510R1 ■	49,630	1SDA068550R1	60,660

PR222DS/P-LSIG

			N		S		H	
Frame	In (A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
T5 400	400	3	1SDA054323R1 ■	56,090	1SDA054339R1 ■	58,480	1SDA054355R1	72,680
T5 630	630		1SDA054399R1 ■	59,650	1SDA054407R1 ■	62,050	1SDA054415R1 ■	75,180
T6 800	800		1SDA060271R1 ■	92,020	1SDA060281R1 ■	96,320	1SDA060292R1	1,07,250
T6 1000*	1000		1SDA060540R1	1,25,090	1SDA060554R1 ■	1,37,590	1SDA060564R1	1,68,870
T5 400	400	4	1SDA054331R1 ■	63,800	1SDA054347R1 ■	65,630	1SDA054363R1	81,450
T5 630	630		1SDA054403R1 ■	69,210	1SDA054411R1 ■	76,360	1SDA054419R1	1,02,740
T6 800	800		1SDA060276R1 ■	1,06,330	1SDA060286R1 ■	1,08,820	1SDA060297R1	1,26,220
T6 1000*	1000		1SDA060545R1 ■	1,66,380	1SDA060559R1	1,75,120	1SDA060569R1	2,12,650

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

			N		S		H	
Frame	In (A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
XT2 160	10	3	1SDA067072R1	36,770	1SDA067815R1	39,310	1SDA067872R1	47,480
	25		1SDA067073R1		1SDA067816R1 ■		1SDA067873R1	
	63		1SDA067074R1 ■	34,720	1SDA067817R1 ■	37,280	1SDA067874R1	45,440
	100		1SDA067075R1 ■		1SDA067818R1 ■		1SDA067875R1	
	160		1SDA067076R1 ■		1SDA067819R1 ■		1SDA067876R1	
XT4 250	250	4	1SDA068141R1 ■	38,810	1SDA068490R1 ■	41,360	1SDA068530R1 ■	50,550
XT2 160	10		1SDA067108R1	43,710	1SDA067851R1	46,760	1SDA067908R1	56,580
	25		1SDA067109R1		1SDA067852R1		1SDA067909R1	
	63		1SDA067110R1 ■	41,660	1SDA067853R1 ■	44,730	1SDA067910R1	54,530
	100		1SDA067111R1 ■		1SDA067854R1 ■		1SDA067911R1	
XT4 250	160		1SDA067113R1 ■	44,730	1SDA067856R1 ■	48,410	1SDA067913R1	58,200
	250		1SDA068162R1 ■	46,560	1SDA068510R1 ■	49,630	1SDA068550R1	60,660

Note : Consider ordering "Ekip Com" for MODBUS communication (Refer page no 43)

PR222DS/PD-LSIG

Frame	In (A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
T5 400	400	3	1SDA081522R1	81,830	1SDA081525R1 ■	84,200	1SDA081528R1	98,410
T5 630	630		1SDA081523R1	85,390	1SDA081526R1 ■	87,770	1SDA081529R1	1,00,910
T6 800	800		1SDA081540R1	1,17,020	1SDA081546R1	1,21,320	1SDA081552R1	1,32,250
T6 1000*	1000		1SDA081541R1	1,50,090	1SDA081547R1	1,62,590	1SDA081553R1	1,93,870
T5 400	400	4	1SDA081531R1	85,350	1SDA081534R1	91,360	1SDA081537R1	1,07,180
T5 630	630		1SDA081532R1	94,940	1SDA081535R1	1,02,100	1SDA081538R1	1,28,480
T6 800	800		1SDA081543R1	1,31,330	1SDA081549R1	1,33,830	1SDA081555R1	1,51,240
T6 1000*	1000		1SDA081544R1	1,91,380	1SDA081550R1	2,00,110	1SDA081556R1	2,35,580

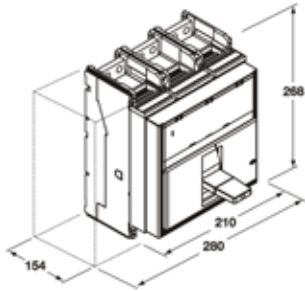
Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG

*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 PR331/P LSIG

In (A)	Poles
1250	3
1600	
1250	4
1600	

S	
Ordering code	Unit L.P. (₹)
1SDA062866R1	1,31,140
1SDA062994R1 ■	1,50,990
1SDA062874R1 ■	1,64,730
1SDA063002R1	1,81,310

H	
Ordering code	Unit L.P. (₹)
1SDA062898R1	1,77,940
1SDA063026R1	1,95,480
1SDA062906R1	2,12,580
1SDA063034R1	2,35,850

1250	3
1600	
1250	4
1600	

1SDA062868R1 ■	1,68,620
1SDA062996R1	1,75,210
1SDA062876R1	1,87,280
1SDA063004R1	2,06,080

1SDA062900R1	2,02,300
1SDA063028R1	2,21,670
1SDA062908R1	2,38,650
1SDA063036R1	2,58,020

PR332/P LSIG

1250	3
1600	
1250	4
1600	

1SDA062871R1	1,75,210
1SDA062999R1	1,90,110
1SDA062879R1	1,99,990
1SDA063007R1	2,18,760

1SDA062903R1	2,16,570
1SDA063031R1	2,34,770
1SDA062911R1	2,51,210
1SDA063039R1	2,75,990

T7 1250M/1600M PR231/P LS/I

In (A)	Poles
1250	3
1600	
1250	4
1600	

S	
Ordering code	Unit L.P. (₹)
1SDA062882R1	1,50,990
1SDA063010R1	1,67,460
1SDA062890R1	1,68,370
1SDA063018R1	2,02,190

H	
Ordering code	Unit L.P. (₹)
1SDA062914R1	1,97,200
1SDA063042R1	2,20,480
1SDA062922R1	2,37,030
1SDA063050R1	2,63,650

PR331/P LSIG

1250	3
1600	
1250	4
1600	

1SDA062884R1	1,76,270
1SDA063012R1	1,92,320
1SDA062892R1	2,04,910
1SDA063020R1	2,27,570

1SDA062916R1	2,24,480
1SDA063044R1	2,44,940
1SDA062924R1	2,63,120
1SDA063052R1	2,89,850

PR332/P LSIG

1250	3
1600	
1250	4
1600	

1SDA062887R1	1,87,280
1SDA063015R1	2,04,910
1SDA062895R1	2,17,600
1SDA063023R1	2,38,590

1SDA062919R1	2,35,850
1SDA063047R1	2,58,020
1SDA062927R1	2,77,290
1SDA063055R1	3,02,950

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

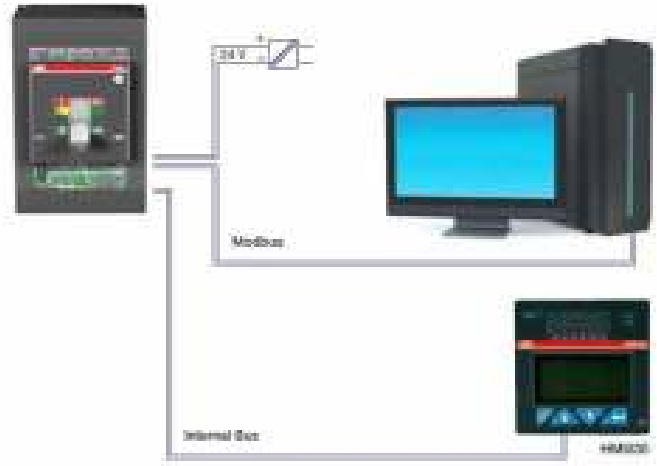
■ Stock items

Tmax power distribution circuit breakers

Ekip E-LSIG

New 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	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)	Ordering code	Unit 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	Upon request	1SDA069616R1	Upon request	1SDA069626R1	Upon request
	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	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)	Ordering code	Unit 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	Upon request	1SDA081045R1	Upon request	1SDA081055R1	Upon request
	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 ($I_n \leq 12.5A$)	14 x I_n
	MA ($12.5A < I_n \leq 160$)	6..14 x I_n
XT3 250	MA	6..12 x I_n
XT4 250	MA	5..10 x I_n

MF – Magnetic fix

MA- Magnetic Adjustable

> Microprocessor trip units:

o Only Short circuit protection release

XT2/XT4		T5/T6		T7/T7M	
Ekip M-I	$I = 6 - 14 \text{ of } I_n$	PR221 DS-I	$I = 1 - 10 \text{ of } I_n$	PR231P-I	$I = 1 - 10 \text{ of } I_n$

o Advanced Motor protection release

XT2/XT4		XT2/XT4/T5/T6	
Ekip M-LIU	L = 0.4 - 1 of I_n	Ekip M-LRIU	L = 0.4 - 1 of I_n
	I = 6 - 13 of I_n		R = 3 - 9 of I_n
	U*=ON or OFF		I = 6 - 13 of I_n
			G = 0.2 - 1 of I_n
			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 $0.1I_n$ and at least a second one higher than $0.25I_n$.



Tmax motor protection circuit breakers

Advantages of Ekip M-LRIU protection unit:

Duty mode setting (Normal/Heavy):

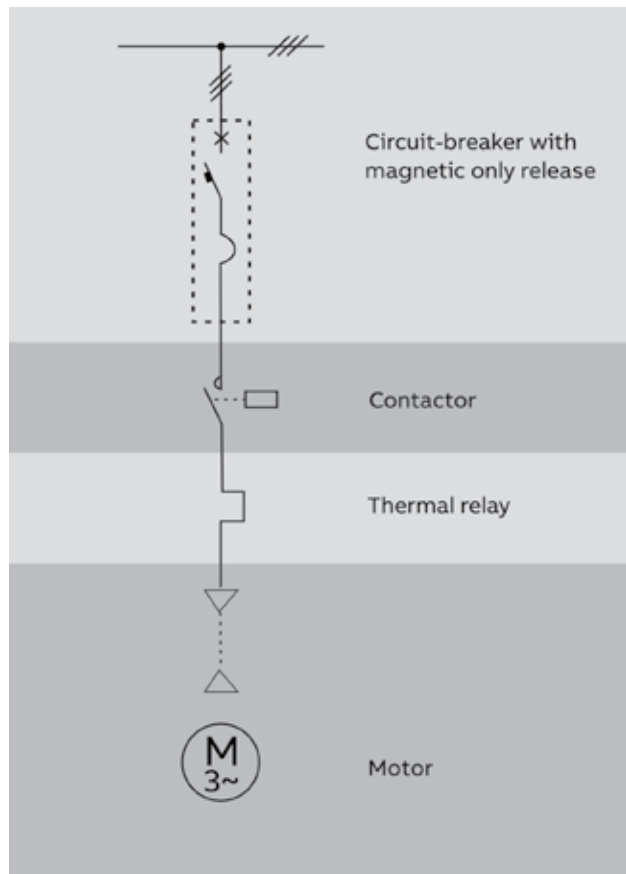
- Normal duty mode requires use of a circuit-breaker and a contactor. In the case of tripping, the Ekip M-LRIU release commands the opening of the contactor via PR212/CI;
- Heavy duty mode foresees circuit-breaker opening for all overcurrent conditions, and just the function of motor operation is entrusted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

PTC protection setting:

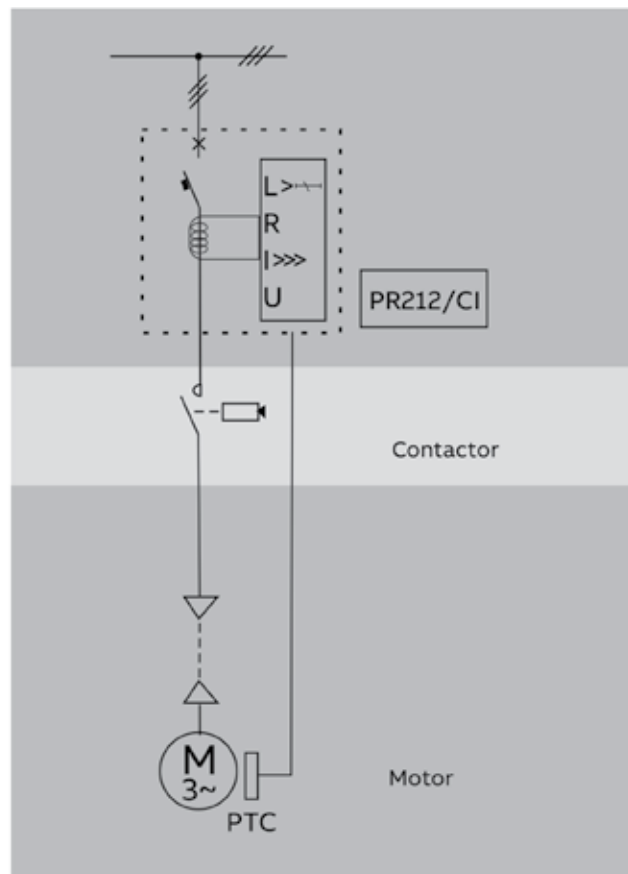
- PTC: this protection, monitors the temperature inside the protected motor by means of a PTC sensor.

❖ 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*

			N		S		H	
In (A)	In (A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
XT2 160	1	3	1SDA067044R1	12,860	1SDA067760R1	13,900	1SDA067770R1	15,260
	2		1SDA067045R1		1SDA067761R1		1SDA067771R1	
	4		1SDA067046R1		1SDA067762R1		1SDA067772R1	
	8.5		1SDA067047R1		1SDA067763R1 ■		1SDA067773R1	
	12.5		1SDA067048R1 ■		1SDA067764R1 ■		1SDA067774R1	
	20		1SDA067049R1 ■	12,660	1SDA067765R1 ■	13,700	1SDA067775R1	15,060
	32		1SDA067050R1 ■		1SDA067766R1 ■		1SDA067776R1	
	52		1SDA067051R1 ■		1SDA067767R1 ■		1SDA067777R1	
	80		1SDA067052R1 ■		1SDA067768R1 ■		1SDA067778R1	
	100		1SDA067053R1 ■		1SDA067769R1 ■		1SDA067779R1	
XT4 250	160		1SDA076529R1	15,220	1SDA076530R1 ■	15,940	1SDA076535R1	20,930
	200		1SDA068121R1	26,910	1SDA068440R1 ■	29,300	1SDA068450R1	35,170

* 20 amps onwards

XT3



Breaking capacity at 415VAC

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

MA

			N		S	
Frame	In (A)	Poles	Ordering code	Unit L.P.(₹)	Ordering code	Unit L.P.(₹)
XT3 250	100	3	1SDA068071R1	15,220	1SDA068279R1	15,830
	125		1SDA068072R1		1SDA068280R1	
	160		1SDA068073R1		1SDA068281R1	
	200		1SDA068074R1	17,460	1SDA068282R1 ■	17,970

■ 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
	20	
	32	
XT2 160	52	3
	100	
	160	
XT4 250	250	

N	
Ordering code	Unit L.P. (₹)
1SDA067086R1	
1SDA067087R1	
1SDA067088R1	17,000
1SDA067089R1	
1SDA067063R1	21,040
1SDA068131R1 ■	32,170

S	
Ordering code	Unit L.P. (₹)
1SDA067829R1	
1SDA067830R1	
1SDA067831R1	20,430
1SDA067832R1	
1SDA067809R1	27,580
1SDA068480R1 ■	34,920

H	
Ordering code	Unit L.P. (₹)
1SDA067886R1	
1SDA067887R1	
1SDA067888R1	21,560
1SDA067889R1	
1SDA067866R1	29,620
1SDA068520R1	41,360

T5

PR221 DS-I

In (A)	Poles
400	
630	3

N	
Ordering code	Unit L.P. (₹)
1SDA054319R1	37,040
1SDA054397R1 ■	39,450

S	
Ordering code	Unit L.P. (₹)
1SDA054335R1 ■	40,600
1SDA054405R1 ■	44,190

H	
Ordering code	Unit L.P. (₹)
1SDA054351R1	49,150
1SDA054413R1	52,320

T6 800

PR221 DS-I

In (A)	Poles
800	
1000	3

N	
Ordering code	Unit L.P. (₹)
1SDA060269R1	63,790
1SDA060538R1	97,840

S	
Ordering code	Unit L.P. (₹)
1SDA060279R1	71,500
1SDA060548R1	1,05,570

H	
Ordering code	Unit L.P. (₹)
1SDA060290R1	87,540
1SDA060562R1	1,34,560



T7 1250/1600

PR231/P I

In (A)	Poles
1250	3
1600	3

S	
Ordering code	Unit L.P. (₹)
1SDA062865R1	1,28,180
1SDA062993R1	1,54,190

H	
Ordering code	Unit L.P. (₹)
1SDA062897R1	1,81,890
1SDA063025R1	2,00,060

T7 1250M/1600M

PR231/P I

In (A)	Poles
1250	3
1600	3

S	
Ordering code	Unit L.P. (₹)
1SDA062881R1	1,58,500
1SDA063009R1	1,71,260

H	
Ordering code	Unit L.P. (₹)
1SDA062913R1	2,01,830
1SDA063041R1	2,25,790

■ 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
XT2 160	3
XT4 160	
XT4 250	

N	
Ordering code	Unit L.P. (₹)
1SDA068163R1	Upon request
1SDA068289R1	
1SDA068173R1	

S	
Ordering code	Unit L.P. (₹)
1SDA068164R1	Upon request
1SDA068290R1	
1SDA068174R1	

H	
Ordering code	Unit L.P. (₹)
1SDA068165R1	Upon request
1SDA068291R1	
1SDA068175R1	

Loose trip units

EKIP M-LIU

In (A)	In (A)	Poles
XT2	25	3
	63	
	100	
	160	

Ordering code	Unit L.P. (₹)
1SDA067352R1	Upon request
1SDA067353R1	
1SDA067354R1	
1SDA067355R1	



Ekip M-LRIU

In (A)	In (A)	Poles
XT2	25	3
	63	
	100	
XT4	160	3
	200	

Ordering code	Unit L.P. (₹)
1SDA067357R1	Upon request
1SDA067358R1	
1SDA067359R1	
1SDA068036R1	
1SDA068037R1	

Tmax motor protection circuit breakers

Advanced Motor Protection MCCBs

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
320	3
400	3

N

Ordering code	Unit L.P.(₹)
1SDA054551R1	59,680
1SDA064157R1	

S

Ordering code	Unit L.P.(₹)
1SDA054553R1	66,940
1SDA064158R1	

T6 Ekip M-LRIU

In (A)	Poles
630	3

N

Ordering code	Unit L.P.(₹)
1SDA060311R1	83,920

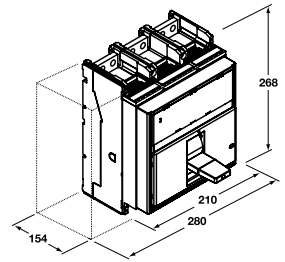
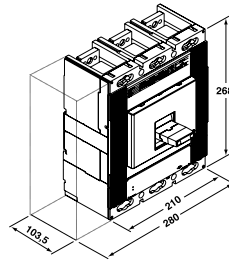
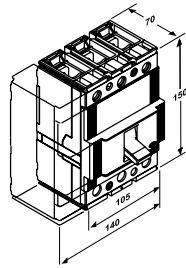
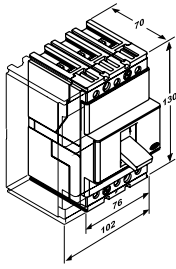
S

Ordering code	Unit L.P.(₹)
1SDA060312R1	91,750

H

Ordering code	Unit L.P.(₹)
1SDA060313R1	1,06,550

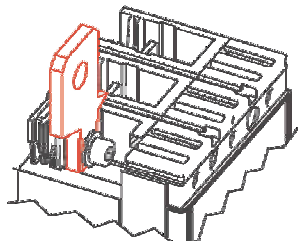
Tmax switch disconnectors



SD Frame	In(A)	Icw kA (1s)	Poles	Ordering Code	Unit L.P.(₹)
XT1D	160	2	3	1SDA068208R1	8,270
XT3D	250	3		1SDA068210R1	18,640
XT4D	250	3.6		1SDA068212R1	21,110
T5D	400	3.6		1SDA054599R1	27,450
T5D	500	3.6		1SDA054601R1	33,420
T6D	630	15		1SDA060343R1	37,820
T6D	630	15		1SDA060345R1	41,770
T6D	800	15		1SDA060594R1	72,790
T7D	1000	20		1SDA062032R1	82,630
T7D	1250	20		1SDA062036R1	1,12,540
T7D	1600	20		1SDA062040R1	1,17,270
T7D M	1000	20		1SDA062034R1	1,02,010
T7D M	1250	20		1SDA062038R1	1,29,040
T7D M	1600	20		1SDA062042R1	1,42,050

SD Frame	In(A)	Icw kA (1s)	Poles	Ordering Code	Unit L.P.(₹)
XT1D	160	2	4	1SDA068209R1	12,350
XT3D	250	3		1SDA068211R1	22,320
XT4D	250	3.6		1SDA068213R1	28,050
T5D	400	3.6		1SDA054600R1	34,860
T5D	500	3.6		1SDA054602R1	42,610
T6D	630	15		1SDA060344R1	45,470
T6D	630	15		1SDA060346R1	68,260
T6D	800	15		1SDA060595R1	90,930
T7D	1000	20		1SDA062033R1	1,05,330
T7D	1250	20		1SDA062037R1	1,38,430
T7D	1600	20		1SDA062041R1	1,44,340
T7D M	1000	20		1SDA062035R1	1,29,100
T7D M	1250	20		1SDA062039R1	1,58,810
T7D M	1600	20		1SDA062043R1	1,77,600

Tmax accessories



Accessories for T-Max MCCBs

Extended spreaded terminals - ES

Frame	Description	Ordering code	Unit L.P. (₹)
XT1	KIT ES XT1 6pcs	1SDA066891R1 ■	1,740
	KIT ES XT1 8pcs	1SDA066892R1 ■	2,350
XT2	KIT ES XT2 6pcs	1SDA066895R1 ■	2,370
	KIT ES XT2 8pcs	1SDA066896R1 ■	2,910
XT3	KIT ES XT3 6pcs	1SDA066899R1 ■	2,550
	KIT ES XT3 8pcs	1SDA066900R1 ■	3,270
XT4	KIT ES XT4 6pcs	1SDA066903R1 ■	2,960
	KIT ES XT4 8pcs	1SDA066904R1 ■	3,730
T5	Kit EST5 6pcs	1SDA055038R1 ■	4,240
	Kit EST5 8pcs	1SDA055039R1 ■	5,640

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



Separator - PB

Frame	Description	Ordering code	Unit L.P. (₹)
XT1-XT3	PB 100mm 4pcs XT1-XT3 3p	1SDA066676R1	690
	PB 200mm 4pcs XT1-XT3 3p	1SDA066678R1	870
	PB 100mm 6pcs XT1-XT3 4p	1SDA066681R1	1,030
	PB 200mm 6pcs XT1-XT3 4p	1SDA066683R1	1,300
XT2-XT4	PB 100mm 4pcs XT2-XT4 3p	1SDA066675R1	730
	PB 200mm 4pcs XT2-XT4 3p	1SDA066677R1 ■	1,110
	PB 100mm 6pcs XT2-XT4 4p	1SDA066680R1	1,110
	PB 200mm 6pcs XT2-XT4 4p	1SDA066682R1	1,670
T5	PB100 4 pcs - Low T4, T5	1SYN850207R0001	980
	PB100mm 4pcs T4-5-T7-A3 3P	1SDA054970R1	910
	PB 100mm 6pcs T4-5-T7-A3 3P	1SDA054971R1	1,330
	PB100 4 pcs - Low T4, T5	1SYN850207R0001	980
	PB100 6 pcs - Low T4, T5 - 400A	1SYN850210R0001 ■	1,400

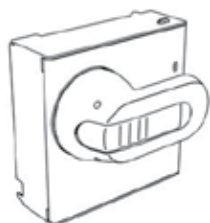
Note: For T5 630A contact the nearest sales office

Rotary handle operating mechanism

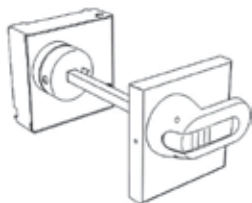
Direct - RHD

Frame	Description	Ordering code	Unit L.P. (₹)
XT1...XT4	RHD XT1-XT3 F/P STANDARD DIRECT	1SDA066475R1 ■	1,630
	RHD XT2-XT4 F/P STANDARD DIRECT	1SDA069053R1 ■	1,950
	RHD XT2-XT4 W STANDARD DIRECT	1SDA066476R1	1,950
T5	RHD Normal for Fixed/Plug-in T4-T5	1SDA054926R1 ■	3,490
	RHD Normal for withdrawble T4-T5	1SDA054928R1	3,870
T6	RHD Normal for fixed T6	1SDA060405R1 ■	4,780
	RHD Normal for withdrawble T6	1SDA060407R1	6,030
T7	RHD Normal for Fixed/Plug-in T7	1SDA062120R1	6,220

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



Tmax accessories



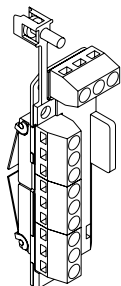
Transmitted - RHE			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1...XT4	RHE XT1-XT3 F/P STANDARD RETURNED(250mm)	1SDA082810R1 ■	1,520
	RHE XT1-XT3 F/P STANDARD RETURNED (500mm)	1SDA066479R1	1,740
	RHE XT2-XT4 F/P STANDARD RETURNED (250mm)	1SDA082811R1 ■	2,020
	RHE XT2-XT4 F/P STANDARD RETURNED (500mm)	1SDA069055R1	2,240
	RHE XT2-XT4 W STANDARD RETURNED	1SDA066480R1 ■	2,240
	RHS L XT2-XT4 F/P STAND. SX LATERAL	1SDA069058R1	3,580
	RHS R XT2-XT4 F/P STAND. DX LATERAL	1SDA069060R1	3,520
T5	RHE Normal for Fixed/Plug-in T4-T5 250mm	1SDA070447R1 ■	3,260
	RHE Normal for Withdrawable T4-T5	1SDA054933R1 ■	5,950
T6	RHE Normal for Fixed T6	1SDA060409R1 ■	6,230
	RHE Normal for Withdrawable T6	1SDA060411R1	7,230
T7	RHE Normal for Fixed/Plug-in T7	1SDA062122R1 ■	7,550

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



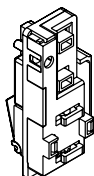
Electrical signals

Auxiliary contact - AUX (Uncabled version)			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1....XT4	AUX 1Q 250Vac/dc XT1...XT4	1SDA066422R1 ■	920
	AUX 1Q 24Vdc XT1...XT4	1SDA066423R1	1,430



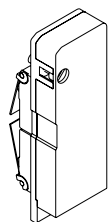
Auxiliary contact - AUX			
Frame	Description	Ordering code	Unit L.P. (₹)
T5..T6(1)	AUX 1Q 1SY 250V AC/DC T1...T6 (1)	1SDA051368R1 ■	1,620
	AUX 3Q 1SY 250V AC/DC T1...T6 (1)	1SDA051369R1	2,610
	AUX 3Q 1SY 24V DC T1...T6 (1)	1SDA054914R1	2,520
T5	AUX-SA 1 S51 T4-T5	1SDA055050R1	
T7M	AUX 2Q 24V DC T7M-X1	1SDA062101R1	1,620
	AUX 2Q 400V AC T7M-X1	1SDA062102R1	
T7M	AUX SA T7M-X1 S51 24VDC	1SDA066100R1	6,210
	AUX SA T7M-X1 S51 250VAC	1SDA063553R1	7,220
T7	AUX 1Q + 1SY 24V DC T7	1SDA062103R1	
	AUX 1Q + 1SY 400V AC T7	1SDA062104R1 ■	2,520

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



Cabled contact in electronic version			
Frame	Description	Ordering code	Unit L.P. (₹)
T5	AUX-E-C 1Q 1SY T4-T5	1SDA054916R1	5,330
T6	AUX-E-C 1Q 1SY T6	1SDA064161R1	6,220

Tmax accessories



Auxiliary contact cabled-version - AUX - C			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1.....XT4	AUX-C 1Q+1SY 250V AC/DC XT1..XT4 F/P	1SDA066431R1 ■	1,530
	AUX-C 2Q+1SY 250VAC/DC XT1..XT4 F/P	1SDA066433R1 ■	2,450
	AUX-C 3Q+1SY 250VAC/DC XT2..XT4 F/P	1SDA066434R1 ■	2,910
	AUX-C 3Q+2SY 250VAC/DC XT2-XT4 F/P	1SDA066436R1	3,580
	AUX-C 2Q+2SY+1S51 250VAC/DC XT2-XT4 F/P	1SDA066438R1	3,870
	AUX-C 2Q 400V AC XT2-XT4 F/P	1SDA066440R1	1,840
	AUX-C 1Q+1SY 400Vac XT2-XT4 F/P	1SDA066444R1	2,930
	AUX-C 1Q+1SY 24Vdc XT1..XT4 F/P	1SDA066446R1 ■	2,150
T5-T6	AUX-C 3Q+1SY 24VDC XT2..XT4 F/P	1SDA066448R1	3,370
	AUX-C 1Q 1SY 250V AC/DC C T4-T5-T6	1SDA054910R1	2,150
	AUX-C 1Q 1SY 400V AC C T4-T5-T6	1SDA054912R1	3,160
	AUX-C 2Q 400V AC C T4-T5-T6	1SDA054913R1	3,630
	AUX-C 3Q 1SY 24VDC C T4-T5-T6	1SDA054915R1	3,400
	AUX-C 3Q 1SY 250V AC/DC C T4-T5-T6	1SDA054911R1 ■	4,020

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

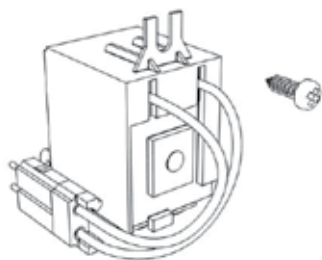
Opening release

Shunt opening release - SOR (Un-cabled version - For Fixed and Plug-in circuit breakers)			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1.....XT4	SOR XT1..XT4 12 VDC	1SDA066313R1	2,150
	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	3,250
	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	6,360
	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 Withdrawable 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	Unit L.P. (₹)
XT1...XT4	SOR-C XT1...XT4 F/P 12 Vdc	1SDA066321R1	3,270
	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	3,830
	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	5,740
	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	
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	

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

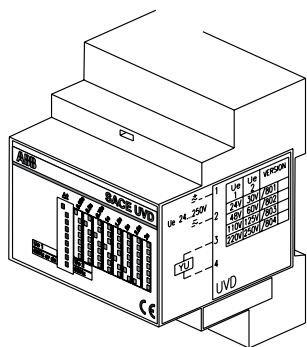
Test unit- SOR

Frame	Description	Ordering code	Unit L.P. (₹)
T7-T7M-X1-E1/6	SOR test unit T7-T7M-X1-E1/6	1SDA050228R1	29,820

Under voltage release - UVR (Un-cabled version - For Fixed and Plug-in circuit breakers)			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1...XT4	UVR XT1...XT4 24-30 VAC/DC	1SDA066389R1	4,030
	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	7,520
	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	8,460
	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 Withdrawable version sliding contact blocks for fixed and moving parts are necessary.

Tmax accessories

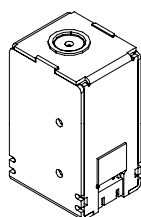


Under voltage release C - UVR - C (Cabled version)			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1....XT4	UVR-C XT1...XT4 F/P 24-30 VAC/DC	1SDA066396R1	6,280
	UVR-C XT1...XT4 F/P 48 Vac/dc	1SDA069065R1	
	UVR-C XT1...XT4 F/P 60 Vac/dc	1SDA066397R1	
	UVR-C XT1...XT4 F/P 110-127Vac-110-125Vdc	1SDA066398R1	
	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	6,800
	UVR-C XT2-XT4 W 24-30 Vac/dc	1SDA066403R1	
	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	10,160
	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	Unit L.P. (₹)
XT1....XT4	UVD T1...T6 - XT1...XT4 24...30 Vac/dc	1SDA051357R1	34,340
	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	34,340
	UVD 48...60V AC/DC T1...T6	1SDA051358R1	
	UVD 110...125V AC/DC T1...T6	1SDA051360R1	
T7-T7M	UVD 220...250V AC/DC T1...T6	1SDA051361R1	11,820
	UVD 24/30V AC/DC E1/6 - T7-T7M-X1	1SDA038316R1	
	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	

Note: Order along with relative UV release



Shunt closing release

Frame	Description	Ordering code	Unit L.P. (₹)
T7M	SCR 24V AC/DC T7M-X1	1SDA062076R1	8,040
	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.

Tmax accessories

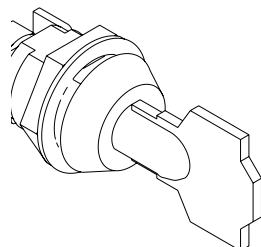
Key lock

Key Lock - KLC			
Frame	Description	Ordering code	Unit L.P.(₹)
KLC for Manual Breaker			
XT1.... XT4	KLC XT1 KEY LOCK RONIS ON CB DIFF.KEY	1SDA066593R1	1,950
	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	3,390
	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	
T7 M	KLC Arrangment for Profalux Key Lock T7	1SDA062140R1	3,590
	KLC-D Different Key in open Position T7M	1SDA062141R1	
	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	

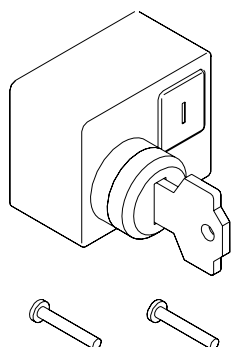
Pad Lock - KLC			
Frame	Description	Ordering code	Unit L.P.(₹)
KLC for Manual breaker			
XT1.... XT4	PLL XT1-XT3 REMOV.PADL.DEVICE OPEN PLUG	1SDA066588R1	1,430
	PLL XT1-XT3 PADLOCKS DEVICE OPEN	1SDA066589R1	
	PLL XT2-XT4 PADLOCKS DEVICE OPEN	1SDA066590R1	
	PLL XT1-XT3 PADLOCKS DEVICE OP/CL	1SDA066591R1	
	PLL XT2-XT4 PADLOCKS DEVICE OP/CL	1SDA066592R1	

Key Lock for Rotary Handle - RHL			
Frame	Description	Ordering code	Unit L.P.(₹)
XT1.... XT4	RHL XT1..XT4 KEY LOCK RONIS SEVERAL	1SDA066617R1 ■	1,530
	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	

Tmax accessories



Key Lock for Front/Rotary/Fixed Part- KLF			
Frame	Description	Ordering code	Unit L.P. (₹)
T5	KLF-D Lock for Front/Rotary Handle - Different Key in open Position T4-T5	1SDA054939R1	3,230
	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	
T5-T6	KLF-S Block for Front/Rotary Handle - Same Key (N. 20008) T4-T5	1SDA054943R1	3,050
	KLF-D FP Different Key for Each Circuit Breaker T4-T5-T6	1SDA055230R1	
	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	3,140
	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	3,140
	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 Arrangement for Ronis key lock T7	1SDA063560R1	
	KLF Arrangement for Profalux key lock T7	1SDA063561R1	



Key lock for motor operated- MOL

Frame	Description	Ordering code	Unit L.P. (₹)
XT1-XT3	MOL-S XT1-XT3 KEY LOCK RONIS TYPE A	1SDA066624R1	3,260
	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-XT4 KEY 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	
	MOL-D - Different Key T6	1SDA060611R1	
T6	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	Unit L.P. (₹)
XT1-XT3	MOD XT1-XT3 24 V dc	1SDA066457R1	21,450
	MOD XT1-XT3 48...60 V dc	1SDA066458R1	
	MOD XT1-XT3 110...125 V ac/dc	1SDA066459R1	18,390
	MOD XT1-XT3 220...250 V ac/dc	1SDA066460R1 ■	
	MOD XT1-XT3 380...440 V ac	1SDA066461R1	21,450
	MOD XT1-XT3 480...525 V ac	1SDA066462R1	

■ Stock items

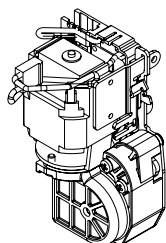
Tmax accessories



Stored Energy Motor Operator - MOE			
Frame	Description	Ordering code	Unit L.P. (₹)
XT2-XT4	MOE XT2-XT4 24 V dc	1SDA066463R1	31,660
	MOE XT2-XT4 48...60 V dc	1SDA066464R1	
	MOE XT2-XT4 110...125 V ac/dc	1SDA066465R1	27,580
	MOE XT2-XT4 220...250 V ac/dc	1SDA066466R1 ■	
	MOE XT2-XT4 380...440 V ac	1SDA066467R1	31,660
	MOE XT2-XT4 480...525 V ac	1SDA066468R1	
T5	MOE 24 V DC T4-T5	1SDA054894R1	32,430
	MOE 48...60 V DC T4-T5	1SDA054895R1	
	MOE 110...125 V AC / DC T4-T5	1SDA054896R1	
	MOE 220...250 V AC / DC T4-T5	1SDA054897R1 ■	
	MOE 380 V AC T4-T5	1SDA054898R1	
T6	MOE 24 V DC T6	1SDA060395R1	40,380
	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	Unit L.P. (₹)
XT2 - XT4	MOE-E XT2-XT4 24V dc X REM.CONTR.	1SDA066469R1	33,190
	MOE-E XT2-XT4 48...60V dc X REM.CONTR.	1SDA066470R1	
	MOE-E XT2-XT4 110...125V ac/d X REM.CONTR.	1SDA066471R1	
	MOE-E XT2-XT4 220...250V ac/dc X REM.CONTR	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	42,520
	MOE-E 48...60 V DC T4-T5	1SDA054900R1	
	MOE-E 110...125 V AC / DC T4-T5	1SDA054901R1	
	MOE-E 220...250 V AC / DC T4-T5	1SDA054902R1 ■	
	MOE-E 380 V AC T4-T5	1SDA054903R1	
T6	MOE-E 24 V DC T6	1SDA060400R1	52,480
	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	Unit L.P. (₹)
T7M	M 24...30V AC/DC T7M	1SDA062113R1	40,380
	M 48...60V AC/DC T7M	1SDA062114R1	42,520
	M 100...130V AC/DC T7M	1SDA062115R1	40,380
	M 220...250V AC/DC T7M	1SDA062116R1	
	M 380...415V AC T7M	1SDA062117R1	



High insulating terminal covers - HTC			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1...XT4	HTC XT1 3p TERMINAL COVERS HIGH 2pcs	1SDA066664R1	2,550
	HTC XT2 3p TERMINAL COVERS HIGH 2pcs	1SDA066666R1	2,910
	HTC XT3 3p TERMINAL COVERS HIGH 2pcs	1SDA066668R1	3,160
	HTC XT4 3p TERMINAL COVERS HIGH 2pcs	1SDA066670R1	3,520
	HTC XT1 4p TERMINAL COVERS HIGH 2pcs	1SDA066665R1	3,420
	HTC XT2 4p TERMINAL COVERS HIGH 2pcs	1SDA066667R1	3,870
	HTC XT3 4p TERMINAL COVERS HIGH 2pcs	1SDA066669R1	4,240
	HTC XT4 4p TERMINAL COVERS HIGH 2pcs	1SDA066671R1	4,700

■ Stock items

Tmax accessories



Low insulating terminal covers - LTC			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1....XT4	LTC XT1 3p TERMINAL COVERS LOW 2pcs	1SDA066655R1	1,840
	LTC XT2 3p TERMINAL COVERS LOW 2pcs	1SDA066657R1	
	LTC XT3 3p TERMINAL COVERS LOW 2pcs	1SDA066660R1	1,950
	LTC XT4 3p TERMINAL COVERS LOW 2pcs	1SDA066662R1	
	LTC XT1 4p TERMINAL COVERS LOW 2pcs	1SDA066656R1	2,150
	LTC XT2 4p TERMINAL COVERS LOW 2pcs	1SDA066659R1	
	LTC XT3 4p TERMINAL COVERS LOW 2pcs	1SDA066661R1	2,400
	LTC XT4 4p TERMINAL COVERS LOW 2pcs	1SDA066663R1	2,750
T5	LTC 3p T5	1SDA054968R1	2,610
	LTC 4p T5	1SDA054969R1	3,440
T6	LTC 3p T6	1SDA014038R1	2,850
	LTC 4p T6	1SDA014039R1	3,800
T7-T7M	LTC 3p T7-T7M	1SDA063093R1	4,370
	LTC 4p T7-T7M	1SDA063094R1	5,610

Dialogue unit - PR 222/DS-PD			
Frame	Description	Ordering code	Unit L.P. (₹)
T5-T6	PR222DS/PD LSI T4-T5-T6	1SDA055066R1	27,130
	PR222DS/PD LSIG T4-T5-T6	1SDA055067R1	28,320

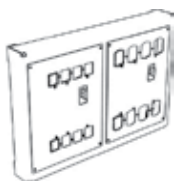
Note : Order X3 connector along with dialogue unit

Dialogue unit - Ekip E-LSIG			
Frame	Description	Ordering code	Unit L.P. (₹)
T5	DIALOG Ekip E-LSIG MOD.T5 (EXTR)	1SDA081094R1	23,480

X3 connector			
Frame	Description	Ordering code	Unit L.P. (₹)
T5-T6	X3 Connector for fixed circuit-breaker PR222DS or PR223DS	1SDA055059R1	3,580
	X3 Connector for plug-in/withdrawable circuit-breaker	1SDA055061R1	

X4 Connector			
Frame	Description	Ordering code	Unit L.P. (₹)
T5-T6	X4 Connector for fixed circuit-breaker	1SDA055060R1	3,580
	X4 Connector for plug-in/withdrawable circuit-breaker	1SDA055062R1	

Tmax accessories



Residual current devices			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1	RC Inst x XT1 3p F	1SDA067122R1	20,430
	RC Sel x XT1 3p F	1SDA067123R1	
	RC Sel 200 x XT1 4p F	1SDA067121R1	29,620
	RC Inst x XT1 4p F	1SDA067124R1	23,700
	RC Sel x XT1 4p F	1SDA067125R1	
XT2	RC Sel x XT2 4p F	1SDA067126R1	43,600
	RC Inst x XT3 3p F	1SDA067127R1	51,160
XT3	RC Sel x XT3 3p F	1SDA067128R1	56,870
	RC Inst x XT3 4p F	1SDA067129R1	55,040
	RC B Type x XT3 4p F	1SDA067132R1	85,670
	RC Sel x XT3 4p F	1SDA067130R1	60,600
T5	RC222/5 4p Fixed T5	1SDA054955R1	50,240

Automation transfer switch - ATS

Automatic transfer switch			
Frame	Description	Ordering code	Unit L.P. (₹)
XT2-XT4/ T5-T7/ E1-E6	ATS021	1SDA065523R1	83,740
	ATS022	1SDA065524R1	91,910

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

Mechanical interlock between circuit breakers			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1....XT4	MIR-HR XT1...XT4 MECH INTERLOCK HOR. 2 CB**	1SDA066637R1	13,790
	MIR-VR XT1...XT4 MECH INTERLOCK VER. 2 CB**	1SDA066638R1	
	MIR-P PLATE x XT1 F	1SDA066639R1	4,610
	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	Unit L.P. (₹)
T5	MIR-HB Horizontal Interlock Frame Unit T4-T5	1SDA054946R1	10,390
	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	5,200
	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	16,460
	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	Unit L.P. (₹)
T7-T7M	Cable Kit for Interlock T7-T7M	1SDA062127R1	6,850
	Cable Kit for Interlock T7-T7M with E1-6	1SDA064568R1	7,460
	Plate for Interlock T7-T7M Fixed	1SDA062129R1	27,280
	Plate for Interlock T7-T7M withdrawble	1SDA062131R1	29,190

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

Tmax accessories



Accessories for electronic trip units			
Frame	Description	Ordering code	Unit L.P. (₹)
XT2 - XT4	EKIP LED METER x LSI-LSIG-M/LRIU XT2-XT4	1SDA068660R1	10,410
	EKIP DISPLAY x LSI-LSIG-M/LRIU XT2-XT4	1SDA068659R1	12,260
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 F/P	1SDA068661R1	18,390
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 W	1SDA068662R1	
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 F/P	1SDA066980R1	3,780
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 W	1SDA066981R1	4,280
	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	33,660

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



Test and configuration unit			
Frame	Description	Ordering code	Unit L.P. (₹)
XT2 - XT4	Ekip TT Trip test unit	1SDA066988R1	6,120



Bracket for fixing onto DIN rail			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1	KIT DIN50022 XT1 3p PLATE DIN	1SDA066652R1	1,530
	KIT DIN50022 XT1 4p PLATE DIN	1SDA066419R1	1,630
	KIT DIN50022 XT1+RC Sel 200 PLATE DIN	1SDA067134R1	1,790
	KIT DIN50022 XT1+RC PLATE DIN	1SDA067135R1	1,950
XT3	KIT DIN50022 XT3 3p PLATE DIN	1SDA066420R1	
	KIT DIN50022 XT3 4p PLATE DIN	1SDA066421R1	
	KIT DIN50022 XT3+RC PLATE DIN	1SDA067139R1	2,150
XT2	KIT DIN50022 XT2-XT4 PLATE DIN	1SDA066653R1	1,530



IP54 Protection for transmitted rotary handle			
Frame	Description	Ordering code	Unit L.P. (₹)
XT1....XT4	IP54 Protection for transmitted rotary handle-RHE	1SDA066587R1	2,350

Tmax conversion kit



Plug-in and drawout conversion

Frame	Pole	Type	Description	Ordering code	Unit L.P. (₹)
XT1			KIT P MP XT1 3p	1SDA066276R1	4,150
			XT1 P FP 3p EF	1SDA068183R1	7,710
XT2			KIT P MP XT2 3p	1SDA066278R1	4,630
			XT2 P FP 3p EF	1SDA068187R1	8,430
XT3			KIT P MP XT3 3p	1SDA066280R1	5,780
			XT3 P FP 3p EF	1SDA068192R1	8,680
XT4		Plugin kit	KIT P MP XT4 3p	1SDA066282R1	6,700
			XT4 P FP 3p EF	1SDA068196R1	9,300
T5	3P		KIT MP T5 400 P 3p	1SDA054843R1	8,500
			T5 400 P FP 3p EF	1SDA054749R1	15,500
			KIT MP T5 630 P 3p	1SDA054847R1	9,800
			T5 630 P FP 3p EF	1SDA054762R1	17,500
XT2			KIT W MP XT2 3p	1SDA066284R1	7,710
			XT2 W FP 3p EF	1SDA068200R1	17,350
XT4			KIT W MP XT4 3p	1SDA066286R1	8,800
			XT4 W FP 3p EF	1SDA068204R1	18,220
T5		Drawout kit	KIT MP T5 400 W 3p	1SDA054845R1	13,100
			T5 400 W FP 3p EF	1SDA054755R1	27,500
			KIT MP T5 630 W 3p	1SDA054849R1	16,900
			T5 630 W FP 3p EF	1SDA054768R1	28,500
T6			KIT MP T6 630/800 W 3p	1SDA060390R1	19,270
			T6 W FP 3p EF	1SDA060384R1	40,700
T7			KIT MP T7-T7M-X1 W 3p	1SDA062162R1	31,410
			T7-X1 W FP 3p EF-EF	1SDA062045R1	66,210

Note:

The plug-in version must be composed as follows:

- 1) Fixed circuit-breaker
- 2) Conversion kit from fixed 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	Unit L.P. (₹)
XT1			KIT P MP XT1 4p	1SDA066277R1	5,500
			XT1 P FP 4p EF	1SDA068185R1	10,500
XT2			KIT P MP XT2 4p	1SDA066279R1	6,030
			XT2 P FP 4p EF	1SDA068190R1	11,500
XT3			KIT P MP XT3 4p	1SDA066281R1	6800
			XT3 P FP 4p EF	1SDA068194R1	12,,100
XT4		Plug-in kit	KIT P MP XT4 4p	1SDA066283R1	8,870
			XT4 P FP 4p EF	1SDA068198R1	12,500
T5	4P		KIT MP T5 400 P 4p	1SDA054844R1	11,500
			T5 400 P FP 4p EF	1SDA054752R1	18,500
			KIT MP T5 630 P 4p	1SDA054848R1	13,500
			T5 630 P FP 4p EF	1SDA054765R1	21,500
XT2			KIT W MP XT2 4p	1SDA066285R1	10,500
			XT2 W FP 4p EF	1SDA068202R1	23,050
XT4			KIT W MP XT4 4p	1SDA066287R1	11,500
			XT4 W FP 4p EF	1SDA068206R1	24,370
T5		Drawout kit	KIT MP T5 400 W 4p	1SDA054846R1	18,500
			T5 400 W FP 4p EF	1SDA054758R1	34,500
			KIT MP T5 630 W 4p	1SDA054850R1	20,500
			T5 630 W FP 4p EF	1SDA054771R1	42,500
T6			KIT MP T6 630/800 W 4p	1SDA060391R1	23,620
			T6 W FP 4p EF	1SDA060387R1	52,730
T7			KIT MP T7-T7M-X1 W 4p	1SDA062163R1	36,570
			T7-X1 W FP 4p EF-EF	1SDA062049R1	88,540

Accessories:

Frame / Type	Description	Ordering code	Unit 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 disconnecter



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	Unit 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	Unit 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

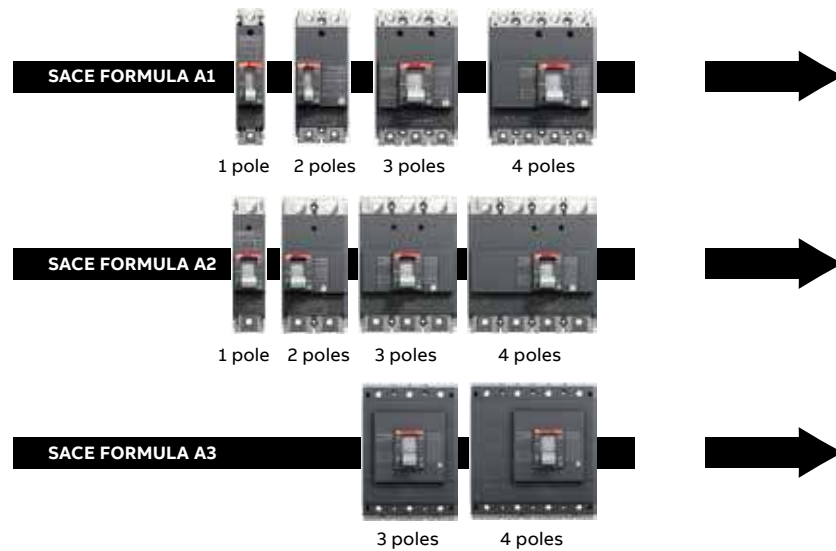
*Jumper kit is compulsory to order with 1500V DC version

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, I_n 15...125A
- 1, 2, 3, 4 pole versions
- I_{cu} = 10, 18, 25, 36KA

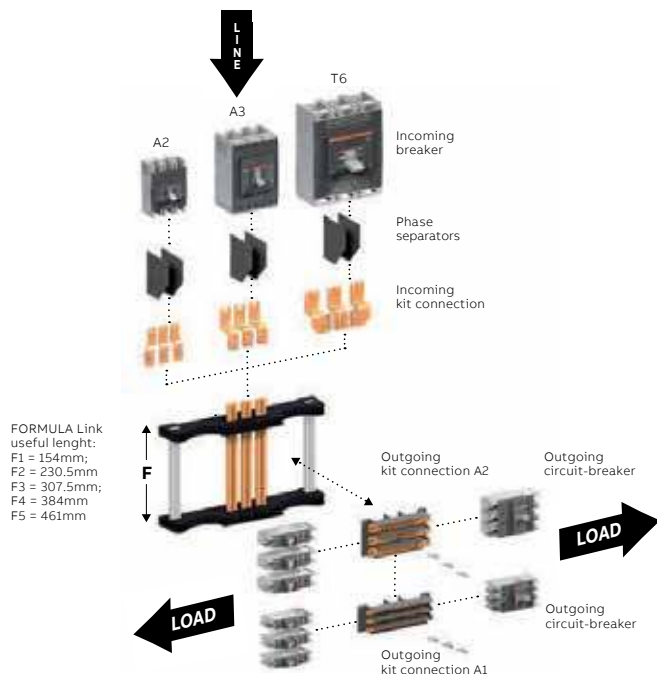
FORMULA A2

- Rated current, I_n 125...250A
- 1, 2, 3, 4 pole versions
- I_{cu} = 18, 25, 36KA

FORMULA A3

- Rated current, I_n 320...630A
- 3, 4 pole versions
- I_{cu} = 36, 50KA

FORMULA link system



FORMULA moulded case circuit breaker

- 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



Fixed thermal and fixed magnetic MCCB

A1 125

TMF		A1A 125 Icu = 10KA		A 1B 125 Icu = 18KA		A 1C 125 Icu = 25KA		A 1N 125 Icu = 36KA	
In(A)	Poles	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)	Ordering code	Unit L.P. (₹)
25		1SDA066512R1 ■		1SDA066699R1		1SDA066711R1		1SDA066723R1	
32		1SDA068757R1 ■		1SDA068758R1 ■		1SDA068759R1 ■		1SDA068760R1	
40		1SDA066514R1 ■		1SDA066701R1		1SDA066713R1		1SDA066725R1	
50		1SDA066515R1 ■	2,770	1SDA066702R1	3,720	1SDA066714R1	4,510	1SDA066726R1	5,320
63		1SDA068768R1 ■		1SDA068769R1 ■		1SDA068770R1 ■		1SDA068771R1 ■	
80		1SDA066518R1 ■		1SDA066705R1		1SDA066717R1 ■		1SDA066729R1	
100		1SDA066520R1 ■		1SDA066707R1 ■		1SDA066719R1 ■		1SDA066731R1 ■	
125		1SDA066521R1 ■	3,270	1SDA066708R1 ■	4,290	1SDA066720R1 ■	4,800	1SDA066732R1 ■	5,590
25		1SDA066526R1		1SDA066735R1		1SDA066747R1		1SDA066759R1	
32		1SDA068761R1 ■		1SDA068762R1		1SDA068763R1 ■		1SDA068764R1	
40		1SDA066528R1		1SDA066737R1		1SDA066749R1		1SDA066761R1	
50		1SDA066529R1	3,720	1SDA066738R1	4,730	1SDA066750R1	5,810	1SDA066762R1	6,760
63		1SDA068772R1 ■		1SDA068773R1 ■		1SDA068774R1 ■		1SDA068775R1 ■	
80		1SDA066532R1		1SDA066741R1		1SDA066753R1		1SDA066765R1	
100		1SDA066534R1 ■		1SDA066743R1 ■		1SDA066755R1 ■		1SDA066767R1 ■	
125		1SDA066535R1 ■	3,990	1SDA066744R1 ■	5,010	1SDA066756R1 ■	6,100	1SDA066768R1 ■	7,260

FORMULA moulded case circuit breaker

A2 250 TMF

In(A)	Poles
160	3
200	
250	
160	4
200	
250	

A2B 250 Icu = 18KA	
Ordering code	Unit L.P. (₹)
1SDA066549R1 ■	7,500
1SDA066551R1 ■	8,780
1SDA066553R1 ■	9,440
1SDA066555R1 ■	9,750
1SDA066557R1 ■	11,180
1SDA066559R1 ■	12,200

A2C 250 Icu = 25KA	
Ordering code	Unit L.P. (₹)
1SDA066776R1 ■	8,000
1SDA066778R1 ■	9,440
1SDA066780R1 ■	10,100
1SDA066788R1 ■	10,400
1SDA066790R1 ■	12,070
1SDA066792R1 ■	13,870

A2N 250 Icu = 36KA	
Ordering code	Unit L.P. (₹)
1SDA066782R1 ■	8,500
1SDA066784R1 ■	10,750
1SDA066786R1 ■	12,070
1SDA066794R1 ■	11,050
1SDA066796R1 ■	13,870
1SDA066798R1 ■	15,320

A3 400 TMF

In(A)	Poles
320	3
400	
320	4
400	

A3N 400 Icu = 36KA	
Ordering code	Unit L.P. (₹)
1SDA066560R1	26,120
1SDA066561R1	
1SDA066568R1	33,820
1SDA066569R1	

A3S 400 Icu = 50KA	
Ordering code	Unit L.P. (₹)
1SDA066562R1	28,450
1SDA066563R1	
1SDA066570R1	37,000
1SDA066571R1	

A3 630 TMF

In(A)	Poles
500	3
630	
500	4
630	

A3N 630 Icu = 36KA	
Ordering code	Unit L.P. (₹)
1SDA066564R1	28,450
1SDA066566R1	33,820
1SDA066572R1	36,580
1SDA066574R1	43,110

A3S 630 Icu = 50KA	
Ordering code	Unit L.P. (₹)
1SDA066565R1	30,770
1SDA066567R1	37,750
1SDA066573R1	39,180
1SDA066575R1	49,340

Accessories

Terminals			
Front extended spread terminal - ES	Poles	Ordering code	Unit L.P. (₹) 6 pieces
A1	3P	1SDA082242R1 ■	470
A2		1SDA082247R1 ■	1,170

Terminals			
Front extended spread terminal - ES	Poles	Ordering code	Unit L.P. (₹) 8 pieces
A1	4	1SDA082243R1 ■	640
A2		1SDA082248R1 ■	1,320

	Description	A1-A2	
		Ordering code	Unit L.P. (₹)
Rotary handle	RHD - Operating mechanism direct handle	1SDA066154R1 ■	1,260
	RHE - Operating mechanism transmitted handle	1SDA066158R1 ■	1,650
Shunt opening release – SOR-C Cabled version	SOR-C 220...240 VAC - 220...250 VDC	1SDA066137R1	2,040
	SOR-C 380...440 VAC	1SDA066138R1	1,890
Auxiliary contacts – AUX-C Cabled version	AUX-C 1Q + 1SY 250 VAC/DC	1SDA066149R1 ■	1,710
Undervoltage release – UVR-C Cabled version	UVR-C 220...240 VAC - 220...250 VDC	1SDA066146R1	3,900
	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.



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 energy efficiency
- Available in plastic enclosure

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 break).
- 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.

New



Rated current In (A)	Rated voltage	Description	Ordering code	Unit L.P. (₹)
10	1000 V DC	OTDC16F2	1SCA121454R1001	Upon request
16		OTDC16F3	1SCA121457R1001	
25		OTDC25F3	1SCA121458R1001 ■	
32		OTDC32F3	1SCA121459R1001 ■	
100		OTDC100E11K	1SCA127730R1001	
160		OTDC160E11K	1SCA127736R1001	
200		OTDC200E11K-I	1SCA145988R1001 ■	
250		OTDC250E11K-I	1SCA145994R1001 ■	
315		OTDC315F11K	1SCA158258R1001	
400		OTDC400F11K	1SCA158266R1001	
500		OTDC500F11K	1SCA158274R1001	
630		OTDC630F22K	1SCA137209R1001	
800		OTDC800EPP22K	1SCA137212R1001	
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 accessories 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 Obsolete

■ Stock items *For information contact our nearest sales office



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>



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	Unit L.P. (₹)
2	ONE20M2W	1SCA138456R1001	990
3	ONE20M3W	1SCA138457R1001	1,480
4	ONE20M4W	1SCA138459R1001	1,740
2	ONE20M2G	1SCA135532R1001	1,000
3	ONE20M3G	1SCA135535R1001	1,480
4	ONE20M4G	1SCA135538R1001	1,740
2	ONE20M2Y	1SCA135533R1001	1,000
3	ONE20M3Y	1SCA135536R1001	1,480
4	ONE20M4Y	1SCA135540R1001	1,740

Fusegear

Easyline - XLP

Fuse Switch Disconnecter 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 Disconnecters 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 disconnecter

Description	Ordering code	Unit L.P. (₹)
XLP000-6CC	1SEP201428R0001	3,710
XLP00-6BC	1SEP101890R0002	4,770
XLP1-6BC	1SEP101891R0002	12,190
XLP2-6BC	1SEP101892R0002	19,080
XLP3-6BC	1SEP101975R0002	31,270

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

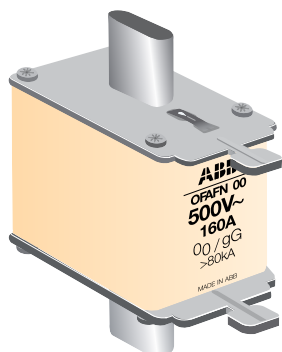
Applications

- 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	Unit L.P. (₹)
000	2	OFAFN000GG2	6	1SCA107747R1001 ■	210
	6	OFAFN000GG6	6	1SCA107748R1001 ■	
	10	OFAFN000GG10	6	1SCA107749R1001 ■	
	16	OFAFN000GG16	6	1SCA107750R1001 ■	
	20	OFAFN000GG20	6	1SCA107751R1001 ■	
	25	OFAFN000GG25	6	1SCA107751R1002 ■	
	32	OFAFN000GG32	6	1SCA107752R1001 ■	
00	63	OFAFN000GG63	6	1SCA107753R1001 ■	490
	6	OFAFN00GG6	6	1SCA107754R1001	
	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	950
	200	OFAF0H200	3	1SCA022629R5140 ■	
	32	OFAFN1GG32	6	1SCA107766R1001	
1	50	OFAFN1GG50	6	1SCA107767R1001	710
	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	1,050
	125	OFAFN2GG125	3	1SCA107776R1001	
	250	OFAFN2GG250	3	1SCA107778R1001	
	315	OFAFN2GG315	3	1SCA107779R1001 ■	
	400	OFAFN2GG400	3	1SCA107780R1001 ■	
3	315	OFAFN3GG315	3	1SCA107781R1001	1,620
	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	Unit L.P. (₹)
00	160	Fuse Base - Din type	1SCA833001R2001 ■	400
1	250		1SCA833001R2002 ■	810
2	400		1SCA833001R2003 ■	1,380
3	630		1SCA833001R2004 ■	1,840

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	Unit 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 ■	80
	25	OFFNF1GG25	10	1SCA107792R1001 ■	
	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	
A3	32	OFFNA2GG32	10	1SCA107801R1001 ■	130
	40	OFFNA3GG40	10	1SCA107803R1001 ■	
	50	OFFNA3GG50	10	1SCA107804R1001	
A4	63	OFFNA3GG63	10	1SCA107805R1001 ■	270
	50	OFFNA4GG50	10	1SCA107806R1001	
	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	320
	63	OFFNB1GG63	10	1SCA107812R1001	
	80	OFFNB1GG80	10	1SCA107813R1001	
	100	OFFNB1GG100	10	1SCA107814R1001	
B2	125	OFFNB2GG125	10	1SCA107816R1001	480
	160	OFFNB2GG160	5	1SCA107817R1001 ■	
	200	OFFNB2GG200	5	1SCA107818R1001 ■	
B3	250	OFFNB3GG250	1	1SCA107819R1001 ■	690
	315	OFFNB3GG315	1	1SCA107820R1001	740
B4	400	OFFNB4GG400	1	1SCA107822R1001	1,210
C1	400	OFFNC1GG400	1	1SCA107823R1001	1,840
C2	500	OFFNC2GG500	1	1SCA107824R1001	2,080
C2	630	OFFNC2GG630	1	1SCA107825R1001	2,080
C3	800	OFFNC3GG800	1	1SCA107826R1001	2,630



Fuse size	Rated current In [A]	Description	Delivery batch [pcs]	Ordering code	Unit L.P. (₹)
F1	20	Control Fuse	100	1SYN833001R2005 ■	140
	32	Base	100	1SYN833001R2009 ■	170

■ Stock items

OESA/OS switch disconnecter fuse, DIN-type

DIN type

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



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 disconnecter fuse requirement
- For 4th pole with fuse protection
- For Switch disconnecter fuse with direct mounting handle

Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	Unit L.P. (₹)
32	2	000/ 00	OESA0032D2	1SCA022108R4330	2,080
63			OESA0063D2	1SCA022080R5470	2,590
100		00	OESA00100D2	1SCA022080R5210	5,000
125			OESA125D2	1SYN833039R2012	6,680
160		0	OESA00160D2	1SCA022108R4500	7,140
200			OS200D02P	1SCA022759R9220	9,200
250		0-1	OS250D02P	1SCA022760R0170	11,450
315		0-2	OS315D02P	1SYN833040R2012	15,210
400			OS400D02P	1SCA022811R2740	17,090
630		3	OS630D02P	1SCA107745R1001	29,090
800			OS800D02P	1SCA022837R2650	33,020
1250		4	OS1250D02P	1SCA114051R1001	Upon request
32	3	000/ 00	OESA00-32	1SCA022058R7710 ■	2,280
63			OESA 00-63	1SCA022057R6850 ■	3,130
100		00	OESA00100	1SCA022025R7830 ■	6,020
125			OESA 00125	OESA00125 ■	8,070
160		0	OESA00-160	1SCA022077R8130 ■	8,640
200			OS200D03P	1SYN022709R9500 ■	11,130
250		0-1	OS250D03P	1SYN022719R0090	13,850
315		0-2	OS315D03P	1SYN953046P3001 ■	18,390
400			OS400D03P	1SYN022719R0250 ■	20,670
630		3	OS630D03P	1SYN022825R2830 ■	35,180
800			OS800D03P	1SYN022825R4880 ■	37,450
1250		4	OS1250D03P	1SCA105475R1001	Upon request
32	TPN	000/ 00	OESA0032N ■	OESA0032N	2,400
63			OESA0063N ■	OESA0063N	3,240
100		00	OESA00100N ■	OESA00100N	6,360
125			OESA00125N ■	OESA00125N	8,520
160		0	OESA00160N ■	OESA00160N	9,540
200			OS200D03N3P	1SYN022749R8710 ■	12,040
250		0-1	OS250D03N3P	1SYN022749R9430 ■	14,540
315		0-2	OS315D03N3P	1SYN953047P3001 ■	19,520
400			OS400D03N3P	1SYN022753R9320 ■	21,560
630		3	OS630D03N3P	1SYN100858R1001 ■	35,740
800			OS800D03N3P	1SYN100859R1001 ■	38,580
1250		4	OS1250D03N3P	1SCA107932R1001	Upon request
32	4 (Switched Neutral)	000/ 00	OESA 00-32A4	1SCA022067R7610	2,620
63			OESA 00-63A4	1SCA022057R7740 ■	3,410
100		00	OESA00100A4	1SCA022043R6760	6,600
125			OESA00125A4	OESA00125A4	9,080
160		0	OESA 00-160A4	1SCA022080R7840	10,210
200			OS200D04N2P	1SYN022709R9680	13,170
250		0-1	OS250D04N2P	1SYN022719R2380	15,440
315		0-2	OS315D04N2P	1SYN953048P3001 ■	22,130
400			OS400D04N2P	1SYN022719R2460 ■	23,830
630		3	OS630D04N2P	1SYN022825R4290 ■	38,140
800			OS800D04N2P	1SYN022825R5180 ■	43,300
1250		4	OS1250D04N2P	1SCA105248R1001	Upon request

■ Stock items

OESA/OS switch disconnecter fuse, BS-type

BS

32 - 800A SDF supplied with shaft and handle

Mechanism at the end of the switch fuse



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

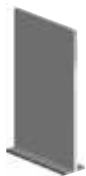
Contact our nearest sales office

- For 1250A switch disconnecter fuse requirement
- For mechanism in between poles configuration
- For motorized switch disconnecter fuse requirement
- For 4th pole with fuse protection

Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	Unit L.P. (₹)
32	2	A2	OESA32G2	1SCA022108R6110	1,840
63		A3	OESA63G2	1SCA022108R6380	2,510
100		A4	OESA100G2	1SCA022087R7970	4,890
125			OESA125G2	1SYN833038R2012	6,200
160		B2	OESA160B2	1SCA022082R6550	6,770
200		B1-B2	OS200B02P	1SCA022769R7820	8,170
250		B1-B3	OS250B02P	1SCA022769R9440	10,420
315		B1-B4	OS315B02P	1SCA022817R3450	15,120
400			OS400B02P	1SCA022813R7220	15,390
630		C1-C2	OS630B02P	1SCA113529R1001	26,740
800		C1-C3	OS800B02P	1SCA022837R6480	31,920
1250		D1	OS1250B02P	1SCA114070R1001	Upon request
32	3	A2	OESA32G1	1SCA022057R1540	2,220
63		A3	OESA63G1	1SCA022057R0310 ■	3,020
100		A4	OESA100G1	1SCA022042R0920 ■	5,920
125			OESA125G1	OESA125G1	7,500
160		B2	OESA160B3	1SCA022076R9570	8,170
200		B1-B2	OS200B03P	1SYN022709R9330	9,880
250		B1-B3	OS250B03P	1SYN022750R6660	12,610
315		B1-B4	OS315B03P	1SYN022719R0680	18,280
400			OS400B03P	1SYN022719R0840	18,620
630		C1-C2	OS630B03P	1SYN022825R5850	32,350
800		C1-C3	OS800B03P	1SYN022825R7550	38,580
1250		D1	OS1250B03P	1SCA105250R1001	Upon request
32	TPN	A2	OESA32G1N ■	OESA32G1N ‡	2,340
63		A3	OESA63G1N ■	OESA63G1N ‡	3,130
100		A4	OESA100G1N ■	OESA100G1N ‡	6,250
125			OESA125G1N ■	OESA125G1N ‡	7,720
160		B2	OESA160B3N ■	OESA160B3N	8,420
200		B1-B2	OS200B03N3P	YN022750R0620 ‡	10,570
250		B1-B3	OS250B03N3P	1SYN022750R8010 ‡	13,630
315		B1-B4	OS315B03N3P	1SYN022753R8940	18,730
400			OS400B03N3P	1SYN022753R9160	19,650
630		C1-C2	OS630B03N3P	1SYN100860R1001	32,910
800		C1-C3	OS800B03N3P	1SYN100861R1001	36,870
1250		D1	OS1250B03N3P	1SCA107936R1001	Upon request
32	4 (Switched Neutral)	A2	OESA32G4	1SCA022059R9040	2,680
63		A3	OESA63G4	1SCA022057R1110	3,410
100		A4	OESA100G4	1SCA022043R7570	7,380
125			OESA125G4 ■	OESA125G4	9,080
160		B2	OESA160B4	1SCA022080R3690	10,210
200		B1-B2	OS200B04N2P	1SYN022709R9410	13,280
250		B1-B3	OS250B04N2P	1SYN022750R7800	15,670
315		B1-B4	OS315B04N2P	1SYN022719R2710	22,470
400			OS400B04N2P	1SYN022719R2890	22,700
630		C1-C2	OS630B04N2P	1SYN022825R6230	39,150
800		C1-C3	OS800B04N2P	1SYN022825R8010	44,830
1250		D1	OS1250B04N2P	1SCA105469R1001	Upon request

■ Stock items

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



Phase barriers

Frame	Pole	Height (mm)	Description	Ordering code	Unit L.P. (₹)
OS200...400	3	100	PB100 low	1SDA054970R1 ■	910
	4	100	PB100 low	1SDA054971R1 ■	1,330



Auxiliary contacts

Frame	Contact function	Description	Ordering Code	Unit L.P. (₹)
OESA 32...160	1NO+1NC	OESAZX 15	OESAZX 15	510
	2NO+2NC	OESAZX 16	OESAZX 16	980
OS200...800	1NO	OA1G10	1SCA022353R4970	530
	1NC	OA3G01	1SCA022456R7410	590
Screw mounting to the left side of the switch		OEA28	1SCA022714R8810 ■	700

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



Fuse monitor

Frame	Rated voltage [Vac]	Description	Ordering code	Unit L.P. (₹)
OS200...800	100...260	OFS260	1SCA022716R0180	7,260
	380...690	OFS690	1SCA022715R9920	7,440



Wrapped neutral link

Frame	Description	Ordering code	Unit L.P. (₹)
OESA32...63	OESAZX87	OESAZX 87	460
OESA100	OESAZX 86/1	OESAZX 86/1	820
OESA125...160	OESAZX86	OESAZX 86	900
OS200...250	OXN250	1SCA022752R9950	4,130
OS315...400	OXN400	1SCA022770R3060	10,810
OS630...800	OXN800S	1SCA022831R4880	12,390

Handle adaptor

OHB145...OHB175	OHBZX200	1SCA125960R1001	1,310
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Handles

Frame	Description	Ordering code	Unit L.P. (₹)
OESA32...63	YASDB51	YASDB 51	750
OESA100...160	YASDB10	YASDB 10	1,130
OS200...250	OHB80J6	1SCA022381R0240 ■	1,550
OS315...400	OHB145J12	1SCA022381R2110	1,900
OS630...800	OHB175J12	1SCA022381R2450	2,250



Shaft

Frame	Description	Ordering code	Unit L.P. (₹)
OESA/OS32...250	EXP6X210	1SCA022295R6080	390
OS315...400	EXP12X250	1SCA022325R6980	780
OS630...800	EXP12X280	1SCA022137R5140	1,010



Fuse covers for OESA switch disconnecter fuse

Frame	Type	Description	Ordering code	Unit 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

OT switch disconnectors



Front operated switch-disconnectors with direct knob type handle

Rated current In [A]	Pole	Description	Ordering code	Unit L.P.(₹)
16	3	OT16F3	1SCA104811R1001	1,120
25		OT25F3	1SCA104857R1001 ■	1,170
40		OT40F3	1SCA104902R1001	1,330
63		OT63F3	1SCA105332R1001	1,430
80		OT80F3	1SCA105798R1001	2,860
100		OT100F3	1SCA105004R1001	3,930
125		OT125F3	1SCA105033R1001	4,020

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	Unit L.P. (₹)
OT16...125F- Black	OHBS2AJ	1SCA105213R1001	590
OT16...125F-Red-yellow	OHYS2AJ	1SCA105296R1001	710

Shafts

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

Frame	Description	Ordering code	Unit L.P. (₹)
OT16...125F	OX56X130	1SCA101655R1001 ■	400

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	Unit L.P. (₹)
16	3	OT16FT3	1SCA104838R1001 ■	1,230
25		OT25FT3	1SCA104884R1001	1,530
40		OT40FT3	1SCA104940R1001 ■	1,840
63		OT63FT3	1SCA105382R1001	2,550
80		OT80FT3	1SCA105431R1001	3,140
100		OT100FT3	1SCA105023R1001	5,240
125		OT125FT3	1SCA105060R1001	6,690

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	Unit L.P. (₹)
OT16...125FT- Black	OHBS2RJ	1SCA105232R1001	690
OT16...125FT- Red Yellow	OHYS2RJ	1SCA105323R1001	710

Note:

For any different arrangement kindly contact our nearest sales office.

OT switch disconnectors

Front operated switch-disconnectors

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



- 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 available 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

Rated current In [A]	Poles	Description	Ordering code	Unit L.P. (₹)
160	2	OT160EV02P	1SCA120508R1001	6,130
200		OT200E02P	1SCA022751R1400	6,510
250		OT250E02P	1SCA022735R2500	8,030
315		OT315E02P	1SCA022866R5590	9,240
400		OT400E02P	1SCA022741R7210	12,450
630		OT630E02P	1SCA022866R5670	15,610
800		OT800E02P	1SCA022835R4830	19,280
1000		OT1000E02P	1SCA105795R1001	40,130
1250		OT1250E02P	1SCA106136R1001	48,160
1600		OT1600E02P	1SCA106142R1001	64,200
2000	3	OT2000E02P	1SCA120025R1001	80,250
2500		OT2500E02P	1SCA113956R1001	1,00,320
3200		OT3200E02P	1SCA128581R1001	1,44,460
4000		OT4000E02P	1SCA128595R1001	1,68,540
16		OT16F3	1SYN104811R1001 ■	2,190
25		OT25F3	1SYN104857R1001 ■	2,220
40		OT40F3	1SYN104902R1001 ■	2,300
63		OT63F3	1SYN105332R1001 ■	2,330
80		OT80F3	1SYN105798R1001 ■	3,750
100		OT100F3	1SYN105004R1001 ■	5,000
125	4	OT125F3	1SYN105033R1001 ■	5,090
160		OT160G03P	1SCA135139R1001	6,470
16		OT16F4N2	1SYN104829R1001	2,370
25		OT25F4N2	1SYN104886R1001	2,460
40		OT40F4N2	1SYN104932R1001 ■	2,510
63		OT63F4N2	1SYN105365R1001	2,870
80		OT80F4N2	1SYN105413R1001 ■	4,920
100		OT100F4N2	1SYN105018R1001 ■	5,190
125		OT125F4N2	1SYN105051R1001 ■	5,360
160		OT160G04P	1SCA135140R1001	8,870
160	3	OT160EV03P	1SCA120514R1001 ■	6,790
200		OT200E03P	1SCA022712R0800 ■	7,590
250		OT250E03P	1SCA022710R0100 ■	9,360
315		OT315E03P	1SCA022718R8510 ■	10,260
400		OT400E03P	1SCA022718R8780 ■	13,830
630		OT630E03P	1SCA022718R8940 ■	17,140
800		OT800E03P	1SCA022718R9410 ■	21,410
1000		OT1000E03P	1SCA022860R5930 ■	41,910
1250		OT1250E03P	1SCA022860R6230 ■	53,510
1600		OT1600E03P	1SCA022860R6580 ■	71,340
2000	4	OT2000E03P	1SCA108036R1001	87,400
2500		OT2500E03P	1SCA104972R1001 ■	1,11,460
3200		OT3200E03P	1SCA128481R1001	1,60,510
4000		OT4000E03P	1SCA12484R1001	1,87,250
160		OT160EV04P	1SCA120521R1001 ■	9,360
200		OT200E04P	1SCA022713R4930 ■	9,560
250		OT250E04P	1SCA022710R0520 ■	10,700
315		OT315E04P	1SCA022719R1730 ■	11,600
400		OT400E04P	1SCA022719R1810 ■	14,900
630		OT630E04P	1SCA022719R2030 ■	20,350
800	4	OT800E04P	1SCA022719R2110 ■	24,520
1000		OT1000E04P	1SCA022860R6150	55,280
1250		OT1250E04P	1SCA022860R6310	69,550
1600		OT1600E04P	1SCA022860R6740	89,170
2000		OT2000E04P	1SCA108038R1001	1,05,230
2500		OT2500E04P	1SCA105140R1001	1,29,310
3200		OT3200E04P	1SCA128482R1001	1,73,890
4000		OT4000E04P	1SCA124856R1001	1,96,180

Accessories for OT switch disconnectors



Handles

Frame	Description	Ordering code	Unit L.P. (₹)
OT16...125	OHB45J6	1SCA022380R8770 ■	910
OT160...250	OHB65J6	1SCA022380R9660 ■	1,230
OT315...400	OHB95J12	1SCA022381R0830	1,420
OT630...800	OHB125J12	1SCA022381R1560 ■	1,530
OT1000...4000	OHB274J12	1SCA115920R1001 ■	4,360



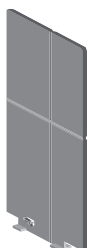
Shaft

Frame	Description	Ordering code	Unit L.P. (₹)
OT16...125	EXP6X170	1SCA108224R1001 ■	330
OT160...250	EXP6X210	1SCA022295R6080	390
OT315...800	EXP12X185	1SCA022325R6710	620
OT1000...4000	EXP12X280	1SCA022137R5140	1,010



Auxiliary contact

Frame	Contact function	Description	Ordering code	Unit L.P. (₹)
OT16...4000	1NO	OA1G10	1SCA022353R4970 ■	530
OT16...125	1NC	OA1G01	1SCA022353R4890 ■	530
OT160EV...4000	1NC	OA3G01	1SCA022456R7410 ■	590



Phase barrier

Frame	Poles	Description	Ordering code	Unit L.P. (₹)
OT160...OT800	3	PB100 low	1SDA054970R1	910
OT160...OT800	4	PB100 low	1SDA054971R1	1,330
OT1000...2500	3 & 4	OTB1600/6	1SCA100768R1001	3,930
OT3200...4000	3 & 4	OTB4000/6	1SCA129040R1001	3,980



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	Unit L.P. (₹)
OT16...125	100	OTZW24	1SCA022639R5610	1,990
OT160...250	190	OTZW10	1SCA022431R5280	2,420
OT315...400	250	OETLZW14	1SCA022077R3410	6,150
OT315...800	300	OETLZW3	1SCA022049R0380	6,420
OT315...4000	500	OETLZW15	1SCA022081R9340	7,140



Terminal shrouds snap-on mounting, transparent

For 3-pole switches

Frame	Description	Ordering code	Unit L.P. (₹)
OT 16...40F3	OTS40T3	1SCA105317R1001	340
OT63...80F3	OTS63T3	1SCA022353R6750 ■	250
OT 100...125F3	OTS125T3	1SCA022379R968	510

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

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	Unit L.P. (₹)
16	3	OT16F3C	1SYN104816R1001 ■	3,400
25		OT25F3C	1SYN104863R1001 ■	4,290
40		OT40F3C	1SYN104913R1001 ■	4,650
63		OT63F3C	1SYN105338R1001 ■	6,070
80		OT80F3C	1SYN105402R1001	6,680
100		OT100F3C	1SYN105008R1001 ■	8,930
125		OT125F3C	1SYN105037R1001 ■	9,360
16	4	OT16F4C	1SYN104831R1001	4,290
25		OT25F4C	1SYN104877R1001	4,460
40		OT40F4C	1SYN104934R1001 ■	4,920
63		OT63F4C	1SYN105369R1001 ■	6,870
80		OT80F4C	1SYN105418R1001 ■	7,220
100		OT100F4C	1SYN105019R1001	10,630
125		OT125F4C	1SYN105054R1001 ■	10,880
Supplied with bridging bars, extended shaft and IP 65 pistol type handle				
160	3	OT160E03CP	1SYN022772R6510 ■	12,930
200		OT200E03CP	1SYN022771R7520 ■	13,370
250		OT250E03CP	1SYN022771R3450 ■	16,070
315		OT315E03CP	1SYN022772R6780 ■	19,610
400		OT400E03CP	1SYN022771R8500 ■	23,180
630		OT630E03CP	1SYN022785R6050 ■	34,780
800		OT800E03CP	1SYN022785R6300	44,580
1000		OT1000E03CP	1SYN022872R1680 ■	1,20,380
1250		OT1250E03CP	1SYN022872R0790	1,33,750
1600		OT1600E03CP	1SYN022872R1840	1,64,960
2000	4	OT2000E03CP	1SYN103908R1001	2,49,680
2500		OT2500E03CP	1SYN105615R1001	2,71,970
3200		OT3200E03CP	1SYN129156R1001	3,92,340
160		OT160E04CP	1SYN022775R9440 ■	15,160
200		OT200E04CP	1SYN022771R7280 ■	15,610
250		OT250E04CP	1SYN022775R4640 ■	17,390
315		OT315E04CP	1SYN022775R7150 ■	21,230
400		OT400E04CP	1SYN022771R8680 ■	24,970
630		OT630E04CP	1SYN022785R6130 ■	42,810
800		OT800E04CP	1SYN022785R6210 ■	51,720
1000		OT1000E04CP	1SYN022872R1500	1,38,210
1250		OT1250E04CP	1SYN022872R1250	1,44,460
1600		OT1600E04CP	1SYN022872R2310	1,78,340
2000		OT2000E04CP	1SYN103912R1001	3,21,000
2500		OT2500E04CP	1SYN103906R1001	3,56,680
3200		OT3200E04CP	1SYN129158R1001	4,68,140

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

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	Unit L.P.(₹)
40	3	OTM40F3CMA230V	1SYN120096R1001	27,940
63		OTM63F3CMA230V	1SYN120095R1001	29,540
80		OTM80F3CMA230V	1SYN120093R1001	32,220
100		OTM100F3CMA230V	1SYN120071R1001	33,830
125		OTM125F3CMA230V	1SYN120070R1001	34,910
160		OTM160E3CM230C	1SYN022845R8610	43,220
200		OTM200E3CM230C	1SYN022845R8960	43,790
250		OTM250E3CM230C	1SYN022845R9260	54,020
315		OTM315E3CM230C	1SYN022847R1210	54,590
400		OTM400E3CM230C	1SYN022847R1630	65,690
630		OTM630E3CM230C	1SYN103567R1001	73,920
800		OTM800E3CM230C	1SYN103570R1001	1,09,880
1000		OTM1000E3CM230C	1SYN112677R1001	1,63,770
1250		OTM1250E3CM230C	1SYN112676R1001	1,79,700
1600		OTM1600E3CM230C	1SYN112678R1001	2,16,090
2000		OTM2000E3CM230C	1SYN112709R1001	3,64,220
2500		OTM2500E3CM230C	1SYN112710R1001	4,00,050
40	4	OTM40F4CMA230V	1SYN120102R1001	30,080
63		OTM63F4CMA230V	1SYN120101R1001 ■	31,690
80		OTM80F4CMA230V	1SYN120100R1001	33,300
100		OTM100F4CMA230V	1SYN120098R1001 ■	34,380
125		OTM125F4CMA230V	1SYN120097R1001 ■	36,530
160		OTM160E4CM230C	1SYN022848R1510 ■	44,370
200		OTM200E4CM230C	1SYN022846R1590 ■	44,590
250		OTM250E4CM230C	1SYN022846R1910 ■	54,590
315		OTM315E4CM230C	1SYN022847R2870 ■	55,730
400		OTM400E4CM230C	1SYN022847R3250 ■	69,950
630		OTM630E4CM230C	1SYN022873R1990 ■	75,620
800		OTM800E4CM230C	1SYN022872R8340 ■	1,13,720
1000		OTM1000E4CM230C	1SYN112703R1001	1,64,910
1250		OTM1250E4CM230C	1SYN112702R1001	1,80,840
1600		OTM1600E4CM230C	1SYN112704R1001	2,21,770
2000		OTM2000E4CM230C	1SYN112712R1001	3,94,060
2500		OTM2500E4CM230C	1SYN112713R1001	4,29,890

Note:

Motor voltage Ue 110-240 V AC/DC (OTM40...125A)

Motor voltage Ue 220-240 V AC (OTM160...2500A)

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)

Compact ATS

NEW

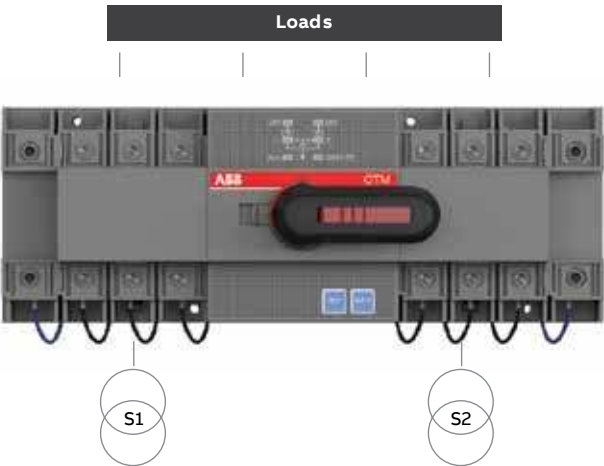
Automatic transfer switches, I - O - II operation
Supplied with bridging bars and direct mounted handle



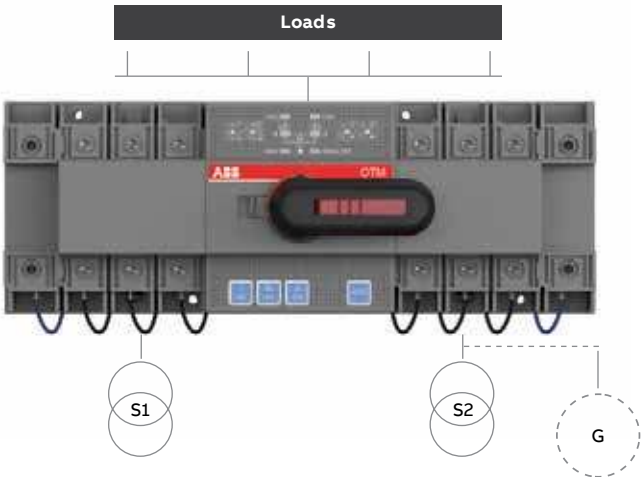
Rated current In [A]	Pole	Description	Ordering code	Unit L.P.(₹)
63	3	OTM63F3C20D400C	1SYN151423R1001	40,040
63		OTM63F3C21D400C	1SYN151424R1001	57,860
125		OTM125F3C20D400C	1SYN151419R1001	44,890
125		OTM125F3C21D400C	1SYN151420R1001	65,420

Rated current In [A]	Pole	Description	Ordering code	Unit L.P.(₹)
40	4	OTM40F4C20D400C	1SYN151252R1001	39,820
40		OTM40F4C21D400C	1SYN151253R1001	60,490
40		OTM40F4CB21D400C	1SYN150580R1001	60,490
63		OTM63F4C20D400C	1SYN151254R1001	41,910
63		OTM63F4C21D400C	1SYN151255R1001	63,320
63		OTM63F4CB21D400C	1SYN150586R1001	63,320
125		OTM125F4C20D400C	1SYN151250R1001	49,380
125		OTM125F4C21D400C	1SYN151251R1001	71,530
125		OTM125F4CB21D230C	1SYN150574R1001	71,530

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 Ability™: 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	Unit L.P.(₹)
160	4	OTM160E4C3D230C	1SYN106305R1001 ■	99,350
200		OTM200E4C3D230C	1SYN106309R1001	1,02,690
250		OTM250E4C3D230C	1SYN106313R1001	1,06,040
315		OTM315E4C3D230C	1SYN106317R1001	1,11,070
400		OTM400E4C3D230C	1SYN106318R1001 ■	1,17,200
630		OTM630E4C3D230C	1SYN108726R1001	1,56,270
800		OTM800E4C3D230C	1SYN108728R1001	2,06,500
1000		OTM1000E4C3D230C	1SYN112852R1001	2,23,250
1250		OTM1250E4C3D230C	1SYN112851R1001	2,56,730
1600		OTM1600E4C3D230C	1SYN112848R1001	3,34,860



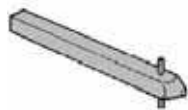
Automatic operation, equipped with OMD800 controller unit with display				
Rated current In [A]	Poles	Description	Ordering code	Unit L.P.(₹)
160	4	OTM160E4C8D230C	1SYN101020R1001	1,33,940
200		OTM200E4C8D230C	1SYN101021R1001	1,39,530
250		OTM250E4C8D230C	1SYN101022R1001	1,45,110
315		OTM315E4C8D230C	1SYN101063R1001	1,50,690
400		OTM400E4C8D230C	1SYN101064R1001	1,67,430
630		OTM630E4C8D230C	1SYN108453R1001	1,84,190
800		OTM800E4C8D230C	1SYN108455R1001	2,23,250
1000		OTM1000E4C8D230C	1SYN112861R1001	2,84,630
1250		OTM1250E4C8D230C	1SYN112864R1001	3,12,540
1600		OTM1600E4C8D230C	1SYN112867R1001	3,90,670

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

Accessories for changeovers (manual, motorized, ATS)

Shaft



Frame	Description	Ordering code	Unit L.P. (₹)
OT16...125F_C	EXP6X170	1SCA108224R1001	330
OT160...250_C	EXP6x161	1SCA022067R176 ■	330
OT315...400_C	EXP12x166	1SCA022325R671	520
OT630...3200_C	EXP12x185	1SCA022325R710 ■	620

Handle



Frame	Description	Ordering code	Unit L.P. (₹)
OT16...125F_C	OHB45J6E311	1SCA022817R2130 ■	2,120
OT160...250_C	OHB65J6E011	1SCA022383R2480 ■	2,350
OT315...400_C	OHB95J12E011	1SCA022621R0760 ■	2,680
OT630...800_C	OHB125J12E011	1SCA022589R3340 ■	2,970
OT1000...3200_C	OHB200J12PE011	1SCA022873R4230	6,500

Auxiliary contacts



Frame	Contact functions	Installation side	Description	Ordering code	Unit L.P. (₹)
OT16...125F_C OTM40...125	1NO	Right	OA1G10	1SCA022353R497	530
	1NC	Right	OA8G01	1SCA022744R224 ■	950
	1NO	Left	OA7G10	1SCA022673R114 ■	840
	1NC	Left	OA1G01	1SCA022353R489	530
OT160...3200 OTM160...2500	1NO	Right	OA1G10	1SCA022353R4970	530
	1NC	Right	OA3G01	1SCA022456R7410	590

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	Unit L.P. (₹)
OT160...800 OTM160...800	3	PB100 low	1SDA054970R1	910
	4	PB100 low	1SDA054971R1	1,330

Basic ATS controller for motorised change over



Frame	Description	Ordering code	Unit L.P. (₹)
40...2500A	ODPS230	1SCA122946R1001 ■	12,270

Note: Contact our nearest sales office for more information

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 hygiene

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 $I_e > 160\text{ A}$ 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.

Note : For more details contact the nearest sales office.

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



Auxiliary contactors



Standard control contactors

No. of contacts	Contact configuration		Type code reference	Ordering code	Unit L.P.(₹)	Type code reference	Ordering code	Unit L.P.(₹)
	NO	NC						
4	2	2	N22E **	1SBH141001R□□22 ■	1,220	NL22E **	1SBH143001R□□22 ■	1,860
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		Type code reference	Ordering code	Unit L.P.(₹)
	NO	NC			
4	2	2	NX22E	1SBH901074R□□22 ■	990
4	3	1	NX31E	1SBH901074R□□31 ■	
4	4	0	NX40E	1SBH901074R□□40 ■	

Refer coil voltage & codes mentioned below.

No. of contacts	Contact configuration		Type code reference	Ordering code	Unit L.P.(₹)	Type code reference	Ordering code	Unit L.P.(₹)
	NO	NC						
4	2	2	NF22E **	1SBH137001R□□22 ■	2,160	NFZ22E **	1SBH136001R□□22	2,690
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 ■

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 ■

NL (DC operated)

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

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	Unit L.P.(₹)
	Amps	kW					
22	9	4	1NO	-	AX09-30-10	1SBL901074R□□10 ■	910
22	9	4	-	1NC	AX09-30-01	1SBL901074R□□01 ■	910
25	12	5.5	1NO	-	AX12-30-10	1SBL911074R□□10 ■	1,020
25	12	5.5	-	1NC	AX12-30-01	1SBL911074R□□01 ■	1,020
27	18	9	1NO	-	AX18-30-10	1SBL921074R□□10 ■	1,110
27	18	9	-	1NC	AX18-30-01	1SBL921074R□□01 ■	1,110
32	25	11	1NO	-	AX25-30-10	1SBL931074R□□10 ■	1,590
32	25	11	-	1NC	AX25-30-01	1SBL931074R□□01 ■	1,590
55	32	15	1NO	-	AX32-30-10	1SBL281074R□□10 ■	3,290
55	32	15	-	1NC	AX32-30-01	1SBL281074R□□01 ■	3,290
60	40	18.5	1NO	-	AX40-30-10	1SBL321074R□□10 ■	5,120
60	40	18.5	-	1NC	AX40-30-01	1SBL321074R□□01 ■	5,120
100	50	25	1NO	1NC	AX50-30-11	1SBL351074R□□11 ■	6,430
115	65	30	1NO	1NC	AX65-30-11	1SBL371074R□□11 ■	8,690
125	80	37	1NO	1NC	AX80-30-11	1SBL411074R□□11 ■	10,730
145	96	45	1NO	1NC	AX95-30-11	1SFL431074R□□11 ■	12,440
160	115	55	1NO	1NC	AX115-30-11	1SFL981074R□□11 ■	15,440
190	150	75	1NO	1NC	AX150-30-11	1SFL991074R□□11 ■	20,660
250	185	90	1NO	1NC	AX185-30-11	1SFL491074R□□11 ■	24,240
275	205	110	1NO	1NC	AX205-30-11	1SFL501074R□□11 ■	29,170
400	265	132	1NO	1NC	AX260-30-11	1SFL547074R□□11 ■	35,080
500	305	160	1NO	1NC	AX300-30-11	1SFL587074R□□11 ■	42,250
600	370	200	1NO	1NC	AX370-30-11	1SFL607074R□□11 ■	52,230

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 ■

3 pole contactors: AC operated



Contactors: 3-pole – AC operated

AC1 duty Amps	AC3 rating at 415V			Auxiliary contacts		Type code	Ordering code	Unit L.P.(₹)
	Amps	hP	kW					
25	9	5.5	4	1NO	-	A09-30-10 **	1SBL141001R□□10 ■	1,060
25	9	5.5	4	-	1NC	A09-30-01 **	1SBL141001R□□01 ■	1,060
27	12	7.5	5.5	1NO	-	A12-30-10 **	1SBL161001R□□10 ■	1,200
27	12	7.5	5.5	-	1NC	A12-30-01 **	1SBL161001R□□01 ■	1,200
30	17	12.5	7.5	1NO	-	A16-30-10 **	1SBL181001R□□10 ■	1,380
30	17	12.5	7.5	-	1NC	A16-30-01 **	1SBL181001R□□01 ■	1,380
45	26	15	11	1NO	-	A26-30-10 **	1SBL241001R□□10 ■	1,970
45	26	15	11	-	1NC	A26-30-01 **	1SBL241001R□□01 ■	1,970
55	32	20	15	1NO	-	A30-30-10 **	1SBL281001R□□10 ■	3,790
55	32	20	15	-	1NC	A30-30-01 **	1SBL281001R□□01 ■	3,790
60	37	30	18.5	1NO	-	A40-30-10 **	1SBL321001R□□10 ■	6,070
60	37	30	18.5	-	1NC	A40-30-01 **	1SBL321001R□□01 ■	6,070
100	50	40	25	-	-	A50-30-00 **	1SBL351001R□□00 ■	6,870
115	65	50	37	-	-	A63-30-00 **	1SBL371001R□□00 ■	9,660
125	75	60	40	-	-	A75-30-00 **	1SBL411001R□□00 ■	12,130
145	96	70	55	1NO	1NC	A95-30-11**	1SFL431001R□□11 ■	15,400
160	110	75	59	1NO	1NC	A110-30-11**	1SFL451001R□□11 ■	18,720
250	145	100	75	1NO	1NC	A145-30-11**	1SFL471001R□□11 ■	24,780
275	185	115	90	1NO	1NC	A185-30-11**	1SFL491001R□□11 ■	30,620
350	205	150	110	1NO	1NC	AF205-30-11**	1SFL527002R□□11 ■	35,330
400	265	175	140	1NO	1NC	AF265-30-11**	1SFL547002R□□11 ■	40,220
500	305	215	160	1NO	1NC	AF305-30-11**	1SFL587002R□□11 ■	46,660
600	370	270	200	1NO	1NC	AF370-30-11**	1SFL607002R□□11 ■	59,470
600	400	300	220	1NO	1NC	AF400-30-11**	1SFL577001R□□11 ■	63,260
700	460	340	250	1NO	1NC	AF460-30-11**	1SFL597001R□□11 ■	79,350
800	580	470	355	1NO	1NC	AF580-30-11**	1SFL617001R□□11 ■	1,13,910
1050	750	570	425	1NO	1NC	AF750-30-11**	1SFL637001R□□11 ■	1,73,660
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: 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	Unit L.P.(₹)
25	4NO	-	-	-	A09-40-00 **	1SBL141201R□□00 ■	1,410
25	2NO	2NC	-	-	A09-22-00 **	1SBL141501R□□00 ■	1,660
30	4NO	-	-	-	A16-40-00 **	1SBL181201R□□00 ■	1,480
30	2NO	2NC	-	-	A16-22-00 **	1SBL181501R□□00 ■	1,750
45	4NO	-	-	-	A26-40-00 **	1SBL241201R□□00 ■	2,660
45	2NO	2NC	-	-	A26-22-00 **	1SBL241501R□□00 ■	3,330
70	4NO	-	-	-	A45-40-00**	1SBL331201R□□00 ■	6,990
70	2NO	2NC	-	-	A45-22-00**	1SBL331501R□□00 ■	9,990
100	4NO	-	-	-	A50-40-00**	1SBL351201R□□00 ■	9,990
125	4NO	-	-	-	A75-40-00**	1SBL351201R□□00 ■	13,290
125	2NO	2NC	-	-	A75-22-00**	1SBL411501R□□00 ■	15,230
160	4NO	-	-	-	AF116-40-00	1SFL427102R□□00 ■	22,000
200	4NO	-	-	-	AF140-40-00	1SFL447102R□□00 ■	26,820
275	4NO	-	-	-	AF190-40-00	1SFL487102R□□00 ■	39,660
350	4NO	-	-	-	AF205-40-00	1SFL527102R□□00 ■	47,290
400	4NO	-	-	-	AF265-40-00	1SFL547102R□□00 ■	56,190
500	4NO	-	-	-	AF305-40-00	1SFL587102R□□00 ■	69,200
525	4NO	-	-	-	AF370-40-00	1SFL607102R□□00 ■	77,210
800	4NO	-	1NO	1NC	EK550-40-11 **	SK827041 - □□ ■	1,23,310
1000	4NO	-	1NO	1NC	EK1000-40-11 **	SK827044 - □□	1,71,570

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	Unit L.P.(₹)
	Amps	hP	kW					
25	9	5	4	1NO	-	AL9-30-10	1SBL143001R□□10 ■	1,800
25	9	5	4	-	1NC	AL9-30-01	1SBL143001R□□01 ■	1,800
27	12	7.5	5.5	1NO	-	AL12-30-10	1SBL163001R□□10	1,960
27	12	7.5	5.5	-	1NC	AL12-30-01	1SBL163001R□□01	1,960
30	17	10	7.5	1NO	-	AL16-30-10	1SBL183001R□□10 ■	2,480
30	17	10	7.5	-	1NC	AL16-30-01	1SBL183001R□□01	2,480
45	26	20	11	1NO	-	AL26-30-10	1SBL243001R□□10 ■	3,230
45	26	20	11	-	1NC	AL26-30-01	1SBL243001R□□01	3,230
55	32	25	15	1NO	-	AL30-30-10	1SBL283001R□□10	6,710
55	32	25	15	-	1NC	AL30-30-01	1SBL283001R□□01	6,710
60	37	30	18.5	1NO	-	AL40-30-10	1SBL323001R□□10	8,120
60	37	30	18.5	-	1NC	AL40-30-01	1SBL323001R□□01	8,120

TAL contactors



AC 1 duty Amps	AC3 rating at 415V			Auxiliary contacts		Type code reference	Ordering code	Unit L.P.(₹)
	Amps	hP	kW					
25	9	5	4	1NO	-	TAL9-30-10	1SBL143061R□□10 ■	2,120
25	9	5	4	-	1NC	TAL9-30-01	1SBL163061R□□10 ■	2,120
27	12	7.5	5.5	1NO	-	TAL12-30-10	1SBL163061R□□10	2,600
27	12	7.5	5.5	-	1NC	TAL12-30-01	1SBL163061R□□01	2,600
30	17	10	7.5	1NO	-	TAL16-30-10	1SBL183061R□□10 ■	2,780
30	17	10	7.5	-	1NC	TAL16-30-01	1SBL183061R□□01 ■	2,780
45	26	20	11	1NO	-	TAL26-30-10	1SBL243061R□□10 ■	3,800
45	26	20	11	-	1NC	TAL26-30-01	1SBL243061R□□01	3,800
55	32	25	15	1NO	-	TAL30-30-10	1SBL283061R□□10	7,480
55	32	25	15	-	1NC	TAL30-30-01	1SBL283061R□□01	7,480
60	37	30	18.5	1NO	-	TAL40-30-10	1SBL323061R□□10 ■	8,350
60	37	30	18.5	-	1NC	TAL40-30-01	1SBL323061R□□01	8,350

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	□□
25...45	5 2
77...143	6 2 ■
90...150	6 6
152...264	6 8

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	Unit L.P.(₹)
Type UA..RA with in-built damping resistors:				
12.5	1NO	UA16-30-10RA **	1SBL181024R□□10 ■	2,640
22	1NO	UA26-30-10RA **	1SBL241024R□□10 ■	4,410
30	1NO	UA30-30-10RA**	1SBL281024R□□10 ■	5,050
40	--	UA50-30-00RA	1SBL281024R□□10 ■	13,950
50	--	UA63-30-00RA**	1SBL371024R□□00 ■	15,020
60	--	UA75-30-00RA**	1SBL411024R□□00 ■	16,420
70	--	UA95-30-00RA**	1SFL431024R□□00 ■	19,090
80	--	UA110-30-00RA**	1SFL451024R□□00 ■	21,760

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

Peak current $\hat{I} \leq 100$ times the rms current

kVAR rating at 415V	Max peak current $\hat{I}$	Auxiliary contacts fitted		Type	Ordering code	Unit L.P.(₹)
kvar	kA	NO	NC			
12.5	1.8	1	0	UA16-30-10	1SBL181022R□□10 ■	2,120
20	3	1	0	UA26-30-10	1SBL241022R□□10 ■	2,640
27.5	33.5	1	0	UA30-30-10	1SBL281022R□□10 ■	4,520
33	5	0	0	UA50-30-00	1SBL351022R□□00 ■	10,200
45	6.5	0	0	UA63-30-00	1SBL371022R□□00 ■	10,730
50	7.5	0	0	UA75-30-00	1SBL411022R□□00 ■	12,770
65	9.3	1	1	UA95-30-11	1SFL431022R□□11 ■	16,080
75	10.5	1	1	UA110-30-11	1SFL451022R□□11 ■	20,120

Single step - Peak current $\hat{I} \leq 30$ times the RMS current

kVAR Rating at 415V	Type code	Ordering code	Unit L.P.(₹)
60	A95-30-11**	1SFL431001R□□11 ■	15,400
70	A110-30-11**	1SFL451001R□□11 ■	18,720
90	A145-30-11**	1SFL471001R□□11 ■	24,780
110	A185-30-11**	1SFL491001R□□11 ■	30,620
130	AF205-30-11**	1SFL527002R□□11 ■	35,330
145	AF265-30-11**	1SFL547002R□□11 ■	40,220
165	AF305-30-11**	1SFL587002R□□11 ■	46,660
200	AF370-30-11**	1SFL607002R□□11 ■	59,470
210	AF400-30-11**	1SFL577001R□□11 ■	63,260
240	AF460-30-11**	1SFL597001R□□11 ■	79,350
285	AF580-30-11**	1SFL617001R□□11 ■	1,13,910
400	AF750-30-11**	1SFL637001R□□11 ■	1,73,660

Note: Refer page no 74 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 ■

Contactors for DC circuit switching: AC/DC operated

Coil	Current ratings at 440V DC			Type code reference	Ordering code	Unit 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	Unit 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
 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	Unit L.P.(₹)
		NO	NC			
Front mounted single pole add-on blocks	A9....A110 AL9...AL40, TAL9...TAL40 N,NL &UA	1NO	-	CA5-10	1SBN010010R1010 ■	190
		-	1NC	CA5-01	1SBN010010R1001 ■	190
		4NO	-	CA 5-40 E	1SBN010040R1040	870
		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 ■	640
	A95...A185, UA95...UA110, AF400...AF2050	1NO	1NC	CAL18-11	1SFN010720R1011 ■	710
	A145...A185 AF400...AF2050	1NO	1NC	CAL18-11B	1SFN010720R3311 ■	
	AF205...AF370	1NO	1NC	CAL19-11	1SFN010820R1011 ■	
			1NO	1NC	CAL 19-11B	

Auxiliary contact blocks for EK range of contactors:

Description	Mounting on contactors	Contact configuration		Type code reference	Ordering code	Unit L.P.(₹)
		NO	NC			
Side mounting Two pole auxiliary contact blocks	EK110 ... EK1000	1NO	1NC	CAL16-11A	SK829002-A ■	720
		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	Unit L.P.(₹)
		NO	NC			
Front mounted single pole add-on blocks	AX09...AX150, NX 4-pole	1NO	-	CA5X-10	1SBN019010R1010 ■	180
		-	1NC	CA5X-01	1SBN019010R1001 ■	180
Front mounted Four pole add-on blocks	AX09...AX150, NX 4-pole	2NO	2NC	CA5X-22E	1SBN019040R1022 ■	650
		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 ■	590
	AX95...AX205	1NO	1NC	CAL18X-11	1SBN019820R1011 ■	600
		1NO	1NC	CAL18X-11B	1SBN019820R3311 ■	600
	AX260...AX370	1NO	1NC	CAL19-11	1SBN010820R1011	710
		1NO	1NC	CAL19-11B	1SBN010820R3311	710

Surge suppressors



For contactor types	Voltage range	Type code reference	Ordering code	Unit L.P.(₹)
AL9...AL40, TAL9...TAL40 NL	12...32 DC	RT5/32	1SBN050020R1000 ■	750
	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	750
	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	750
	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	780
	50...133V AC	RC5-2/133	1SBN050200R1001	
	110...250V AC	RC5-2/250	1SBN050200R1002 ■	
	250...440V AC	RC5-2/440	1SBN050200R1003 ■	
A145...A185, AX185...AX205	250...440	RC5-3/440	1SBN050300R1003 ■	2,150
EK550.....EK1000	48...110V/AC	RC-EH 800/110	SK829007-C	3,180
	220...600V/AC	RC-EH 800/600	SK829007-D	

Accessories for contactors



VM5-1



VM300

Mechanical interlocks

For contactor types	Description	Type code reference	Ordering code	Unit L.P.(₹)
A9...A40, AL9...AL40 AX09...AX40	Horizontal Mechanical Interlock	VM5-1	1SBN030100R1000 ■	500
A9...A40, AL9...AL40 AX09...AX40	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE5-1	1SBN030110R1000 ■	740
A30...A110 AX50...AX115	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE5-2	1SBN030210R1000 ■	1,490
A95...A185, AX185...AX205	Horizontal with 2NC contacts	VM300H	1SFN034700R1000	3,120
EK110...EK150	Horizontal Mechanical Interlock	VH145	SK829071-A	4,140
EK175...EK210	Horizontal Mechanical Interlock	VH300	SK829071-B	4,820
AF116...AF146 and AF190, AF205	Horizontal Mechanical Interlock	VM140/190	1SFN034403R1000 ■	3,120
AF190, AF205 and AF265 ... AF370	Horizontal Mechanical Interlock	VM205/265	1SFN035203R1000 ■	3,120
AF116...AF370 AX260...AX370	Horizontal Mechanical Interlock	VM19	1SFN030300R1000	3,220

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	Unit L.P.(₹)
	V 50 Hz or DC	V 60 Hz			
N, NL, A9-A75	24	24...28	WB75-A	FPTN372726R1001	5,690
	220...230	220...255	WB75-A	FPTN372726R1006	5,690

For contactors	Time delay range selected by switch	Delay type	Auxiliary contacts	Type	Ordering code	Unit L.P.(₹)
Electronic timers						
A9...A75	0.1...1 s	ON-delay	1	TEF5 ON	1SBN020312R1000	5,870
	1...10 s	OFF-delay	1	TEF5 OFF	1SBN020314R1000	5,580
	10...100 s					

Contactors: Wide band AC/DC operated

NF/AF contactors

Wide band AC/DC operated - with screw terminals

Description

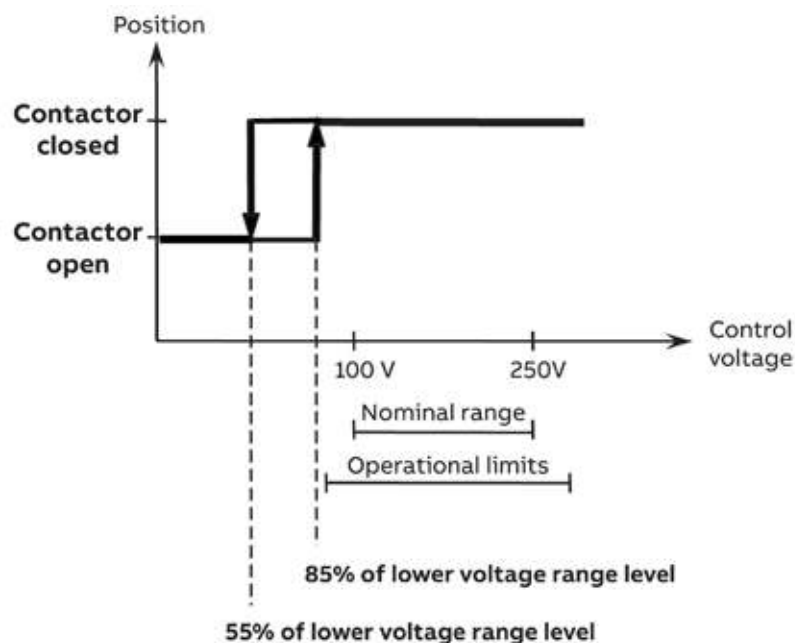
- NF/AF contactor include an electronic coil interface accepting a wide control voltage U_c min. ... U_c max. only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC
- NF/AF contactor can manage large control voltage variations. One coil (e.g. 100...250 V 50/60 Hz - DC) can 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.

Control contactors : Wide band AC/DC operated with low power consumption & in built surge suppressor for ordering code refer page no. 71



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	Unit L.P.(₹)
	Amps	hP	kW					
25	9	5.5	4	1NO	-	AF09-30-10-□□	1SBL137001R□□10 ■	2,070
				-	1NC	AF09-30-01-□□	1SBL137001R□□01 ■	2,070
28	12	7.5	5.5	1NO	-	AF12-30-10-□□	1SBL157001R□□10 ■	2,220
				-	1NC	AF12-30-01-□□	1SBL157001R□□01	2,220
30	18	12.5	7.5	1NO	-	AF16-30-10-□□	1SBL177001R□□10 ■	2,790
				-	1NC	AF16-30-01-□□	1SBL177001R□□01 ■	2,790
45	26	15	11	-	-	AF26-30-00-□□	1SBL237001R□□00 ■	3,590
50	32	20	18	-	-	AF30-30-00-□□	1SBL277001R□□00 ■	7,550
50	38	25	18.5	-	-	AF38-30-00-□□	1SBL297001R□□00 ■	8,840
70	40	30	18.5	-	-	AF40-30-00-□□	1SBL347001R□□00 ■	9,760
100	53	40	22	-	-	AF52-30-00-□□	1SBL367001R□□00 ■	11,920
105	65	50	30	-	-	AF65-30-00-□□	1SBL387001R□□00 ■	13,950
125	80	60	37	-	-	AF80-30-00-□□	1SBL397001R□□00 ■	16,950
130	96	70	45	-	-	AF96-30-00-□□	1SBL407001R□□00 ■	20,370
160	116	75	55	1NO	1NC	AF116-30-11-□□	1SFL427001R□□11 ■	21,780
200	140	100	75	1NO	1NC	AF140-30-11-□□	1SFL447001R□□11 ■	27,620
225	146	100	75	1NO	1NC	AF146-30-11-□□	1SFL467001R□□11 ■	28,960
275	490	120	90	1NO	1NC	AF190-30-11-□□	1SFL487002R□□11 ■	34,300
350	205	150	110	1NO	1NC	AF205-30-11-□□	1SFL527002R□□11 ■	35,330
400	265	175	140	1NO	1NC	AF265-30-11-□□	1SFL547002R□□11 ■	40,220
500	305	215	160	1NO	1NC	AF305-30-11-□□	1SFL587002R□□11	46,660
600	370	270	200	1NO	1NC	AF370-30-11-□□	1SFL607002R□□11	59,470
600	400	300	220	1NO	1NC	AF400-30-11**	1SFL577001R□□11	63,260
700	460	340	250	1NO	1NC	AF460-30-11**	1SFL597001R□□11	79,350
800	580	470	355	1NO	1NC	AF580-30-11**	1SFL617001R□□11 ■	1,13,910
1050	750	570	425	1NO	1NC	AF750-30-11**	1SFL637001R□□11 ■	1,73,660
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 ■

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: 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	Unit L.P.(₹)
25	4NO	-	AF09-40-00-□□	1SBL137201R□□00 ■	2,480
	2NO	2NC	AF09-22-00-□□	1SBL137501R□□00	3,120
30	4NO	-	AF16-40-00-□□	1SBL177201R□□00	2,900
	2NO	2NC	AF16-22-00-□□	1SBL177501R□□00 ■	3,820
45	4NO	-	AF26-40-00-□□	1SBL237201R□□00	4,730
	2NO	2NC	AF26-22-00-□□	1SBL237501R□□00	5,840
55	4NO	-	AF38-40-00-□□	1SBL297201R□□00 ■	9,500
	2NO	2NC	AF38-22-00-□□	1SBL297501R□□00	11,770
70	4NO	-	AF40-40-00-□□	1SBL347201R□□00	15,340
	2NO	2NC	AF40-22-00-□□	1SBL347501R□□00	16,960
100	4NO	-	AF52-40-00-□□	1SBL367201R□□00 ■	15,770
125	4NO	-	AF80-40-00-□□	1SBL397201R□□00	19,180
	2NO	2NC	AF80-22-00-□□	1SBL397501R□□00	21,500
160	4NO	-	AF116-40-00-□□	1SFL427102R□□00 ■	22,000
200	4NO	-	AF140-40-00-□□	1SFL447102R□□00 ■	26,820
275	4NO	-	AF190-40-00-□□	1SFL487102R□□00 ■	39,660
350	4NO	-	AF205-40-00-□□	1SFL527102R□□00 ■	47,290
400	4NO	-	AF265-40-00-□□	1SFL547102R□□00 ■	56,190
500	4NO	-	AF305-40-00-□□	1SFL587102R□□00 ■	69,200
525	4NO	-	AF370-40-00-□□	1SFL607102R□□00 ■	77,210

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

Auxiliary contact block

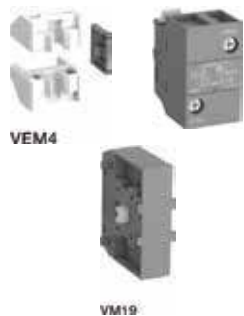


Description	Mounting on contactors	Contact configuration		Type code reference	Ordering code	Unit L.P.(₹)
		NO	NC			
Front mounted 1 pole add-on blocks	AF09....AF96 / NF	1NO	-	CA4-10	1SBN010110R1010 ■	220
		-	1NC	CA4-01	1SBN010110R1001 ■	220
Front mounted 4 pole add-on blocks	AF09....AF80 / NF	4NO	-	CA4-40E	1SBN010140R1040 ■	940
		3NO	1NC	CA4-31E	1SBN010140R1031	940
		2NO	2NC	CA4-22E	1SBN010140R1022 ■	940
		-	4NC	CA4-04E	1SBN010140R1004	940
Side mounted 2 pole add-on blocks	AF09....AF96 / NF	1NO	1NC	CAL4-11	1SBN010120R1011 ■	610
	AF96....AF370	1NO	1NC	CAL19-11	1SFN010820R1011 ■	710
		1NO	1NC	CAL19-11B	1SFN010820R3311 ■	710

* Refer technical catalogue for proper selection.

■ Stock items

Accessories for AF contactors



Mechanical interlocks

Description	For contactor types	Type Code reference	Ordering code	Unit L.P.(₹)
Horizontal Mechanical Interlock	AF09...AF38	VM 4	1SBN030105T1000	600
Horizontal Mechanical & Electrical Interlock	AF09...AF38	VEM 4	1SBN030111R1000	1,060
Horizontal Mechanical Interlock	AF40...AF96	VM96-4	1SBN033405T1000	2,150
Horizontal Mechanical Interlock	AF116...AF146 and AF190. AF205	VM140/190	1SFN034403R1000	3,120
Horizontal Mechanical Interlock	AF190, AF205 and AF265 ... AF370	VM205/265	1SFN034403R1000	3,120
Horizontal Mechanical Interlock	AF116...AF370	VM19	1SFN030300R1000 ■	3,220

Note: Refer technical catalogue for proper selection.

Ordering Details

For contactors	Rated control circuit voltage Uc	Type	Ordering code	Unit L.P.(₹)
NF(Z),AF(Z)09....38,AF40...65	24V DC	WA4-10	1SBN040100R1010	2,330
NF(Z),AF(Z)09....38,AF40...65	24-60V50/60HZ-DC	WA4-11	1SBN040100R1011	2,330
NF(Z),AF(Z)09....38,AF40...65	48-130V50/60HZ-DC	WA4-12	1SBN040100R1012	2,330
NF(Z),AF(Z)09....38,AF40...65	100-250V50/60HZ-DC	WA4-13	1SBN040100R1013	2,330
NF(Z),AF(Z)09....38,AF40...65	250-500V50/60HZ-DC	WA4-14	1SBN040100R1014	2,330
AF80....96	24-60V50/60HZ-DC	WA4-96-11	1SBN040200R1011	2,330
AF80....96	48-130V50/60HZ-DC	WA4-96-12	1SBN040200R1012	2,330
AF80....96	100-250V50/60HZ-DC	WA4-96-13	1SBN040200R1013	2,330
AF80....96	250-500V50/60HZ-DC	WA4-96-14	1SBN040200R1014	2,330



Electronic timers

For contactor types	Time delay range selected by switch	Delay type	Auxiliary contacts	Type	Ordering code	Unit L.P.(₹)
AF09 ... AF96	0.1...1 s 1...10 s 10...100 s	ON-delay	1NO + 1NC	TEF4-ON	1SBN020112R1000	5,870
		OFF-delay	1NO + 1NC	TEF4-OFF	1SBN020114R1000	5,580

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	Unit L.P.(₹)
AF09 ... AF16	MS116-0.16 ... MS116-25, MS132-0.16 ... MS132-25	BEA16-4	1SBN081306T1000	400
AF26 ... AF30	MS116-0.16 ... MS116-16, MS132-0.16 ... MS132-10	BEA26-4	1SBN082306T1000	470
	MS116-20 ... MS116-32, MS132-12 ... MS132-32	BEA38-4	1SBN082306T2000 ■	500

Connection sets for reversing contactors

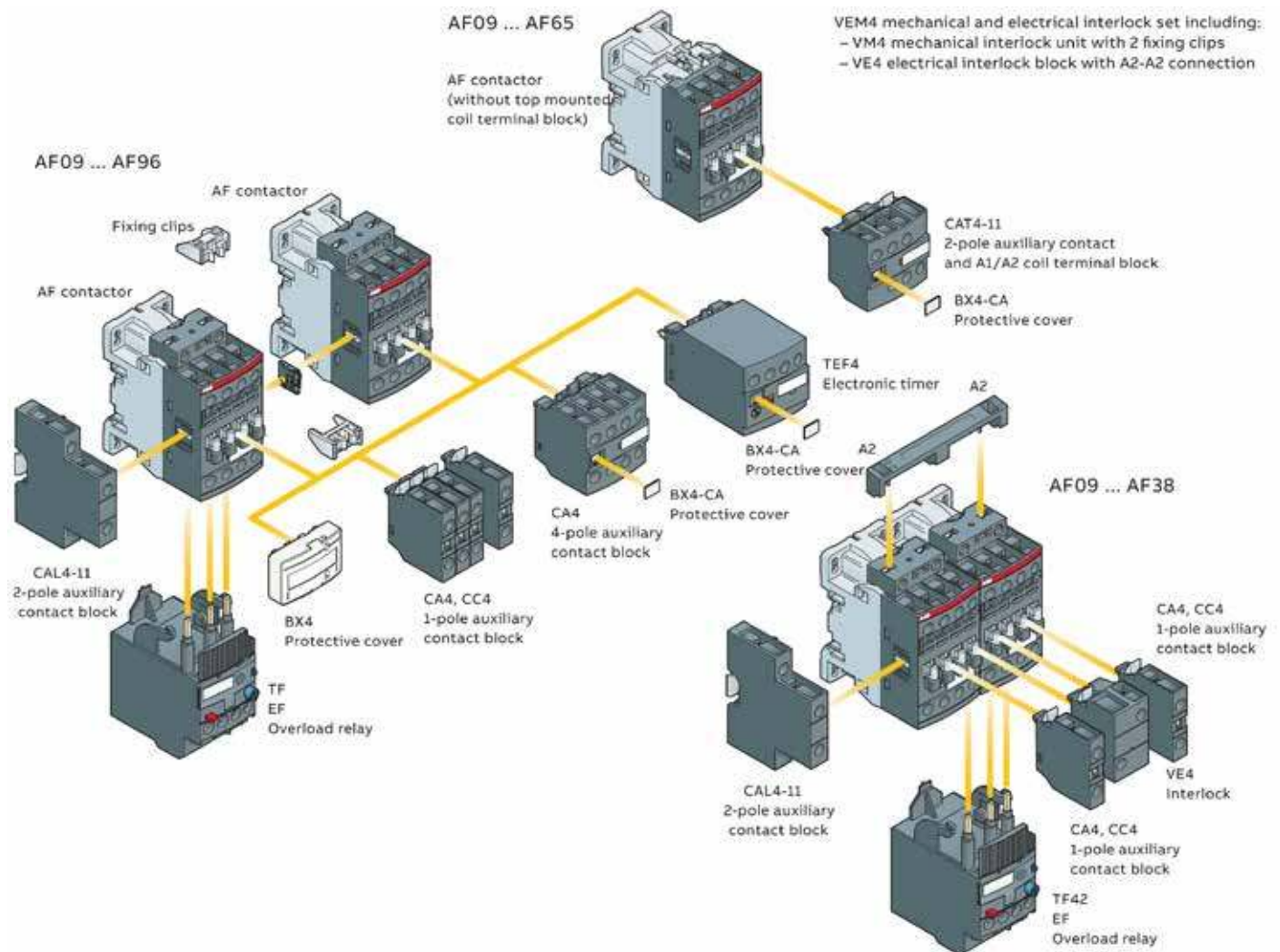
For contactor types	Type	Ordering code	Unit L.P.(₹)
AF09 ... AF16	BER16-4	1SBN081311R1000	1,030
AF26 ... AF30	BER38-4	1SBN082311R1000	1,390
AF40 ... AF65	BER65-4	1SBN083411R1000	1,660
AF80 ... AF96	BER96-4	1SBN083911R1000	2,900

Connection sets for star-delta starting

For contactor types	Type	Ordering code	Unit L.P.(₹)
AF09 ... AF16	BEY16-4	1SBN081313R2000	1,390
AF26 ... AF30	BEY38-4	1SBN082713R2000	2,150
AF40 ... AF65	BEY65-4	1SBN083413R2000	2,760
AF80 ... AF96	BEY96-4	1SBN083913R2000	3,540

■ 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.

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



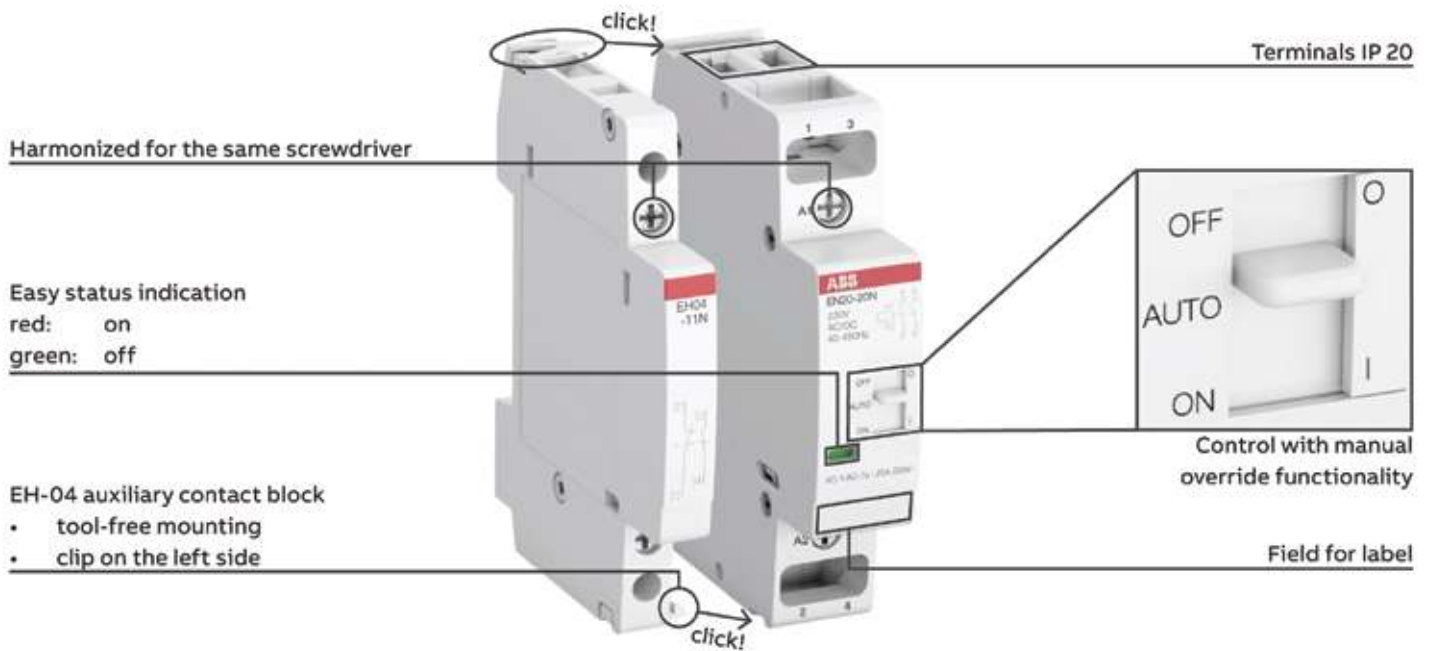
Group mounting
saves space



Global
availability



Easy identification





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

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	Unit L.P.(₹)
	1	24	ESB16-20N-01	1SBE111111R0120	Upon request
	1	230	ESB16-20N-06	1SBE111111R0620	
	1	24	ESB16-02N-01	1SBE111111R0102	
	1	230	ESB16-02N-06	1SBE111111R0602	
	1	24	ESB16-11N-01	1SBE111111R0111	
	1	230	ESB16-11N-06	1SBE111111R0611	

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

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ V AC / DC	Type	Ordering code	Unit L.P.(₹)
	3	24	ESB63-40N-01	1SAE351111R0140	Upon request
		230	ESB63-40N-06	1SAE351111R0640	
	3	230	ESB63-31N-06	1SAE351111R0631	
		230	ESB63-30N-06	1SAE351111R0630	
	3	24	ESB63-20N-01	1SAE351111R0120	
		230	ESB63-20N-06	1SAE351111R0620	
	3	230	ESB63-11N-06	1SAE351111R0611	

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ VAC / DC	Type	Ordering code	Unit L.P.(₹)
	1	24	ESB20-20N-01	1SBE121111R0120	Upon request
	1	230	ESB20-20N-06	1SBE121111R0620	
	1	24	ESB20-02N-01	1SBE121111R0102	
	1	230	ESB20-02N-06	1SBE121111R0602	
	1	24	ESB20-11N-01	1SBE121111R0111	
	1	230	ESB20-11N-06	1SBE121111R0611	

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

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

ESB and EN Installation contactors **NEW**

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

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ V AC / DC	Type	Ordering code	Unit L.P.(₹)
	2	24	EN25-40N-01	1SAE232111R0140	Upon request
		230 ... 240	EN25-40N-06	1SAE232111R0640	
	2	24	EN25-31N-01	1SAE232111R0131	Upon request
		230 ... 240	EN25-31N-06	1SAE232111R0631	
	2	24	EN25-30N-06	1SAE232111R0630	Upon request
		230 ... 240	EN20-20N-06	1SBE122111R0620	

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ V AC / DC	Type	Ordering code	Unit L.P.(₹)
	3	24	EN40-40N-01	1SAE342111R0140	Upon request
		230	EN40-40N-06	1SAE342111R0640	
	3	24	EN40-31N-01	1SAE342111R0131	Upon request
		230	EN40-31N-06	1SAE342111R0631	
	3	230	EN40-30N-06	1SAE342111R0630	Upon request
		230	EN40-20N-06	1SAE342111R0620	

Auxiliary contact blocks

Auxiliary contacts	Suitable for	Type	Ordering code	Unit 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	Upon request
		EH04-20N	1SAE901901R1020	

Distant piece

Suitable for	Type	Ordering code	Unit L.P.(₹)
Single packaging			
ESB25..N, ESB40..N, ESB63..N, EN25..N, EN40..N, ESB100..N, EN100..N	ESB-DIS (1)	GHE3201902R0001	

Mini contactors



Mini contactors with screw connection: 3 pole - AC operated

AC1 duty Amps	AC3 rating at 415V		Auxiliary contacts		Type code reference	Ordering code	Unit L.P.(₹)
Amps	hP	kW					
16A	9	5.5	4	1NO -	B06-30-10 **	GJL1211001R□10□ ■	1,070
16A	9	5.5	4	- 1NC	B06-30-01 **	GJL1211001R□01□ ■	
20A	12	7.5	5.5	1NO -	B07-30-10 **	GJL1311001R□10□ ■	1,160
20A	12	7.5	5.5	- 1NC	B07-30-01 **	GJL1311001R□01□ ■	

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

3 pole - DC operated

Type code reference	Ordering code	Unit L.P.(₹)
BC6-30-10 **	GJL1213001R□10□ ■	1,490
BC6-30-01 **	GJL1213001R□01□ ■	
BC7-30-10 **	GJL1313001R□10□ ■	1,610
BC7-30-01 **	GJL1313001R□01□ ■	

Mini reversing contactors with screw connection:

3 pole - AC operated

AC1 duty Amps	AC3 rating at 415V		Auxiliary contacts		Type code reference	Ordering code	Unit L.P.(₹)
Amps	hP	kW					
16A	9	5.5	4	1NO -	VB06-30-10 **	GJL1211901R□10 □	3,100
16A	9	5.5	4	- 1NC	VB06-30-01 **	GJL1211901R□01 □	3,100
20A	12	7.5	5.5	1NO -	VB07-30-10 **	GJL1311901R□10 □	3,270
20A	12	7.5	5.5	- 1NC	VB07-30-01 **	GJL1311901R□01 □	3,270

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

3 pole - DC operated

Type code reference	Ordering code	Unit L.P.(₹)
VBC6-30-10 **	GJL1213901R□10□	3,300
VBC6-30-01 **	GJL1213901R□01□ ■	3,300
VBC7-30-10 **	GJL1313901R□10□	3,540
VBC7-30-01 **	GJL1313901R□01□	3,540

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

Mini auxiliary contactor 4 pole with screw connection

Control circuit	Contact configuration		Type code reference	Ordering code	Unit L.P.(₹)
	NO	NC			
AC	2NO	2NC	K6-22Z**	GJH1211001R□22□	1,190
	3NO	1NC	K6-31Z **	GJH1211001R□31□ ■	
	4NO	-	K6-40E **	GJH1211001R□40□	
DC	2NO	2NC	KC6-22Z**	GJH1213001R□22□ ■	1,530
	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		DC	
50-60Hz	Code	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	Unit L.P.(₹)
Front mounted instantaneous auxiliary contact blocks				
B6-, B7-30-10, BC6-, BC7-30-10	1NO + 1NC	CAF6-11M	GJL1201330R0003	640
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	640

■ Stock items

Spares for contactors

Spare coils for A range

For contactor types	Type code reference	Ordering code	Unit L.P.(₹)
N, A9.....A16, UA16..RA	ZA16 **	1SBN151410R□□06	770
A26..A40;UA26..UA30 RA	ZA40 **	1SBN152410R□□06	950
A45..A75;UA50..UA75 RA	ZA75 **	1SBN153510R□□06	2,980
A95..A110; UA95..UA110 RA	ZA110 **	1SFN154310R□□06	3,910
A145...A185	ZA185 **	1SFN154710R□□06	6,380
A210...A300	ZA300 **	1SFN155110R□□06	7,070

Spare coils for AF range

For contactor types	Type code reference	Ordering code	Unit L.P.(₹)
AF45...AF75	ZAF75	1SBN153570R□□06	8,150
AF95...AF110	ZAF110	1SFN153370R□□06	10,940
AF145...AF185	ZAF185	1SFN154770R□□06	12,800
AF210,AF260 &AF300	ZAF300	1SFN155170R□□06	23,280
AF400...AF460	ZAF460**	1SFN155770R□□06	27,350
AF580...AF750**	ZAF750**	1SFN156170R□□06	35,490

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	Unit 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 ■	4,110
	A/AF/AE/TAE63	ZL 63	1SBN163703R1000 ■	5,960
	A/AF/AE/TAE75	ZL 75	1SBN164103R1000 ■	7,480
	A/AF/AE/TAE95	ZL 95	1SFN164303R1000 ■	9,840
	A/AF/AE/TAE110	ZL 110	1SFN164503R1000 ■	10,780
	A/AF145	ZL 145	1SFN164703R1000 ■	13,660
	A/AF185	ZL 185	1SFN164903R1000 ■	17,160
	A/AF210	ZL 210	1SFN165103R1000 ■	22,100
	A/AF260	ZL 260	1SFN165303R1000 ■	26,760
	A/AF300	ZL 300	1SFN165503R1000 ■	32,000
	AF400	ZL 400	1SFN165703R1000 ■	36,050
	AF460	ZL 460	1SFN165903R1000 ■	44,470
	AF 580	ZL 580	1SFN166103R1000 ■	74,840
	AF 750	ZL 750	1SFN166303R1000 ■	93,960
	UA 50	ZLU 50	1SBN163502R1000	4,730
	UA 63	ZLU 63	1SBN163702R1000	6,590
	UA 75	ZLU 75	1SBN164102R1000	8,270

Spare contact sets for 3 pole for AX

For contactor types	Type code reference	Ordering code	Unit L.P.(₹)
AX50	ZLX50	1SBN163506R1000	3,800
AX65	ZLX65	1SBN163706R1000	5,050
AX80	ZLX80	1SBN164106R1000	6,570
AX95	ZLX95	1SFN164306R1000	7,660
AX115	ZLX115	1SFN169806R1000	9,330
AX150	ZLX150	1SFN169906R1000	12,360
AX185	ZLX185	1SFN164906R1000	14,550
AX205	ZLX205	1SFN165006R1000	17,700

Spare coils for AX range

For contactor types	Type code reference	Ordering code	Unit L.P.(₹)
AX25	ZAX25	1SBN158910R□□36	710
AX40	ZAX40	1SBN152810R□□36	930
AX80	ZAX80	1SBN153510R□□36	2,920
AX150	ZAX150	1SFN159910R□□36	4,430
AX205	ZAX205	1SFN155010R□□36	6,280

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	Unit L.P.(₹)
HP	kW				
0.25	0.18	4A	MA-0.25 **	1SYN140318R□□25	3,310
0.50	0.37	4A	MA-0.50 **	1SYN140318R□□05	3,310
0.75	0.52	6A	MA-0.75 **	1SYN140318R□□75	3,310
1.00	0.75	6A	MA-1.00 **	1SYN140318R□□10 ■	3,310
1.50	1.10	10A	MA-1.50 **	1SYN140318R□□15	3,310
2.00	1.50	10A	MA-2.00 **	1SYN140318R□□20 ■	3,310
3.00	2.20	16A	MA-3.00 **	1SYN140318R□□30 ■	3,310
5.00	3.70	25A	MA-5.00 **	1SYN140318R□□50 ■	3,310
7.50	5.50	32A	MA-7.50 **	1SYN16018R□□75 ■	3,310
10.00	7.50	32A	MA-10.00 **	1SYN180318R□□10 ■	3,580

Fully automatic Star Delta starter:

Rating at 415V 50Hz		Type code reference	Ordering code	Unit L.P.(₹)
HP	kW			
12.5	12.5/9.3	SDA-12.5 **	1SYN184322R□□00 ■	12,340
15	15/11	SDA-15 **	1SYN242322R□□00 ■	13,410
20	20/15	SDA- 20 **	1SYN244322R□□00 ■	15,560
25	25/18.5	SDA-25 **	1SYN246322R□□00	16,200
30	30/22	SDA-30 **	1SYN282322R□□00	19,580
35	35/26	SDA-35 **	1SYN284322R□□00	21,720
40	40/30	SDA-40 **	1SYN322322R□□00	26,360
50	50/37	SDA-50 **	1SYN352342R□□00	31,640
60	60/45	SDA-60 **	1SYN372342R□□00	40,700
75	75/55	SDA-75 **	1SYN412342R□□00	47,720

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	Unit L.P.(₹)
DRAS09-29P 4.0 kW 415V, 415V coil	1SBK104035R	5,790
DRAS12-29P 5.5 kW 415V, 415V coil	1SBK114035R	6,220
DRAS16-29P 7.5 kW 415V, 415V coil	1SBK124035R	8,360

Note: T16 OLR to be ordered separately. Plz refer page no. 96 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	Unit L.P.(₹)
0.03	0.10 ... 0.16	50	MS116-0.16	1SAM250000R1001 ■	2,980
0.06	0.16 ... 0.25	50	MS116-0.25	1SAM250000R1002 ■	2,980
0.09	0.25 ... 0.40	50	MS116-0.4	1SAM250000R1003 ■	2,980
0.12	0.40 ... 0.63	50	MS116-0.63	1SAM250000R1004 ■	3,390
0.25	0.63 ... 1.00	50	MS116-1.0	1SAM250000R1005 ■	3,390
0.55	1.00 ... 1.60	50	MS116-1.6	1SAM250000R1006 ■	3,400
0.75	1.60 ... 2.50	50	MS116-2.5	1SAM250000R1007 ■	3,400
1.5	2.50 ... 4.00	50	MS116-4.0	1SAM250000R1008 ■	3,460
2.2	4.00 ... 6.30	50	MS116-6.3	1SAM250000R1009 ■	3,460
4.0	6.30 ... 10.0	50	MS116-10	1SAM250000R1010 ■	3,560
5.5	8.00 ... 12.0	25	MS116-12	1SAM250000R1012 ■	4,050
7.5	10.0 ... 16.0	16	MS116-16	1SAM250000R1011 ■	4,490
9.0	16.0 ... 20.0	15	MS116-20	1SAM250000R1013 ■	4,880
12.5	20.0 ... 25.0	15	MS116-25	1SAM250000R1014 ■	5,030
15.5	25.0 ... 32.0	10	MS116-32	1SAM250000R1015 ■	8,770



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

0.03	0.10 ... 0.16	100	MS132-0.16	1SAM350000R1001	3,810
0.06	0.16 ... 0.25	100	MS132-0.25	1SAM350000R1002 ■	3,810
0.09	0.25 ... 0.40	100	MS132-0.4	1SAM350000R1003 ■	3,810
0.12	0.40 ... 0.63	100	MS132-0.63	1SAM350000R1004 ■	4,130
0.25	0.63 ... 1.00	100	MS132-1.0	1SAM350000R1005 ■	4,170
0.55	1.00 ... 1.60	100	MS132-1.6	1SAM350000R1006 ■	4,360
0.75	1.60 ... 2.50	100	MS132-2.5	1SAM350000R1007 ■	4,360
1.5	2.50 ... 4.00	100	MS132-4.0	1SAM350000R1008 ■	4,380
2.2	4.00 ... 6.30	100	MS132-6.3	1SAM350000R1009 ■	4,430
4.0	6.30 ... 10.0	100	MS132-10	1SAM350000R1010 ■	4,750
5.5	8.00 ... 12.0	100	MS132-12	1SAM350000R1012 ■	5,220
7.5	10.0 ... 16.0	100	MS132-16	1SAM350000R1011 ■	5,780
9.0	16.0 ... 20.0	100	MS132-20	1SAM350000R1013 ■	6,210
12.5	20.0 ... 25.0	50	MS132-25	1SAM350000R1014 ■	6,330
15.5	25.0 ... 32.0	50	MS132-32	1SAM350000R1015 ■	10,080

Manual motor starter

With thermal and electromagnetic protection



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	Unit L.P.(₹)
10 ... 16	100	MS165-16	1SAM451000R1011	10,810
14 ... 20	100	MS165-20	1SAM451000R1012	11,310
18 ... 25	100	MS165-25	1SAM451000R1013	11,590
23 ... 32	100	MS165-32	1SAM451000R1014 ■	12,420
30 ... 42	50	MS165-42	1SAM451000R1015 ■	12,420
40 ... 54	50	MS165-54	1SAM451000R1016 ■	15,090
52 ... 65	50	MS165-65	1SAM451000R1017 ■	16,070



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	Unit L.P.(₹)
MS495 Manual motor starters with short circuit, overload and phase loss protection					
37	57.0 ... 75.0	50	MS495-75	1SAM550000R1008	Upon request
45	70.0 ... 90.0	50	MS495-90	1SAM550000R1009	
55	80.0 ... 100.0	50	MS495-100	1SAM550000R1010	
37	57.0 ... 75.0	100	MS497-75	1SAM580000R1008	Upon request
45	70.0 ... 90.0	100	MS497-90	1SAM580000R1009	
55	80.0 ... 100.0	100	MS497-100	1SAM580000R1010	

MO132 Manual motor starters with short circuit protection only



0.03	0.16	100	MO132-0.16	1SAM360000R1001	3,700
0.06	0.25	100	MO132-0.25	1SAM360000R1002	3,700
0.09	0.40	100	MO132-0.4	1SAM360000R1003	3,700
0.12	0.63	100	MO132-0.63	1SAM360000R1004	3,950
0.25	1.0	100	MO132-1.0	1SAM360000R1005 ■	4,000
0.55	1.6	100	MO132-1.6	1SAM360000R1006 ■	4,000
0.75	2.5	100	MO132-2.5	1SAM360000R1007 ■	4,000
1.5	4.0	100	MO132-4.0	1SAM360000R1008 ■	4,050
2.2	6.3	100	MO132-6.3	1SAM360000R1009 ■	4,050
4.0	10	100	MO132-10	1SAM360000R1010 ■	4,200
5.5	12	100	MO132-12	1SAM360000R1012 ■	4,200
7.5	16	100	MO132-16	1SAM360000R1011 ■	4,200
9.0	20	100	MO132-20	1SAM360000R1013 ■	4,590
12.5	25	50	MO132-25	1SAM360000R1014 ■	4,750
15.5	32	50	MO132-32	1SAM360000R1015 ■	9,790

■ 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	Unit L.P.(₹)
16	100	MO165-16	1SAM461000R1011	10,400
20	100	MO165-20	1SAM461000R1012	10,920
32	100	MO165-32	1SAM461000R1014 ■	11,140
42	50	MO165-42	1SAM461000R1015	11,480
54	50	MO165-54	1SAM461000R1016 ■	12,660
65	50	MO165-65	1SAM461000R1017	13,150

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	



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	Unit L.P.(₹)
0.10 ... 0.16	100	MS132-0.16T	1SAM340000R1001	4,300
0.16 ... 0.25	100	MS132-0.25T	1SAM340000R1002	4,300
0.25 ... 0.40	100	MS132-0.4T	1SAM340000R1003	4,300
0.40 ... 0.63	100	MS132-0.63T	1SAM340000R1004	4,670
0.63 ... 1.00	100	MS132-1.0T	1SAM340000R1005	4,710
1.00 ... 1.60	100	MS132-1.6T	1SAM340000R1006	4,930
1.60 ... 2.50	100	MS132-2.5T	1SAM340000R1007	4,930
2.50 ... 4.00	100	MS132-4.0T	1SAM340000R1008 ■	4,950
4.00 ... 6.30	100	MS132-6.3T	1SAM340000R1009 ■	5,020
6.30 ... 10.0	100	MS132-10T	1SAM340000R1010 ■	5,370
8.00 ... 12.0	100	MS132-12T	1SAM340000R1012	5,920
10.0 ... 16.0	100	MS132-16T	1SAM340000R1011 ■	5,920
16.0 ... 20.0	100	MS132-20T	1SAM340000R1013	7,150
20.0 ... 25.0	50	MS132-25T	1SAM340000R1014	7,180

Manual motor starter

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

General accessories

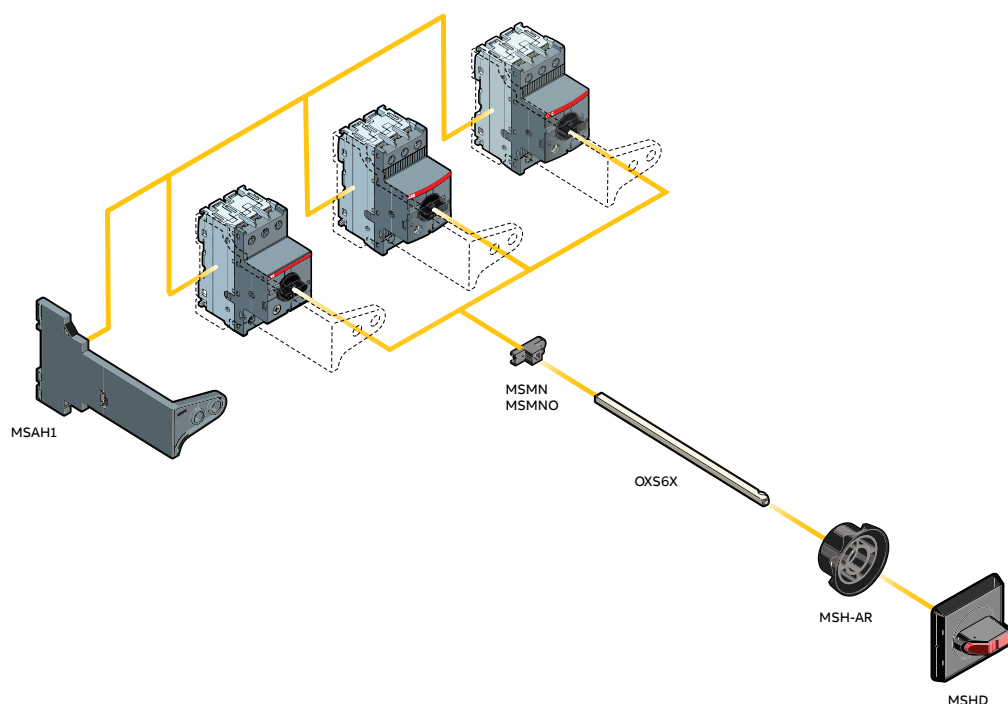
Description

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	Unit L.P.(₹)
MS116 MS132 MO132 MS165 MO165 MS4xx, MO4xx	SHAFT - Shaft diameter 6 mm. Shaft extension for door coupling driver	OX56X130	1SCA101655R1001	420
	MSHD - Handle	MSHD-LB ¹	1SAM201920R1001 ■	1,200
		MSHD-LY ²	1SAM201920R1002	1,200
		MSHD-LTB ³	1SAM201920R1011 ■	1,200
		MSHD-LTY ³	1SAM201920R1012	1,200
	MSMN- Driver	MSMN ⁴	1SAM101923R0002 ■	180
		MSMNO ⁵	1SAM101923R0012 ■	180
	MSH-AR Shaft alignment ring	MSH-AR	1SAM201920R1000 ■	200
MS116, MS132	MSAH1-Shaft supporter	MSAH1	1SAM201909R1021 ■	790

- 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



Manual motor starter

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



AA1-24

Suitable for	Shunt trip				Undervoltage release			
	Rated voltage	Type	Ordering code	Unit L.P.(₹)	Rated voltage	Type	Ordering code	Unit L.P.(₹)
MS116, MS132, MO132, MS132-T, MS165, MO165	20 ... 24	AA1-24	1SAM201910R1001	3,070	24	UA1-24	1SAM201904R1001	2,510
	110	AA1-110	1SAM201910R1002 ■	3,070	110	UA1-110	1SAM201904R1004	2,510
	200-240	AA1-230	1SAM201910R1003 ■	3,070	230	UA1-230	1SAM201904R1005	2,510
	350-415	AA1-400	1SAM201910R1004	3,070	415	UA1-415	1SAM201904R1007	2,510



HKF1-11

Suitable for	Auxiliary contacts – mountable on the front				Auxiliary contacts – mountable on the right		
	Aux contacts	Type	Ordering code	Unit L.P.(₹)	Type	Ordering code	Unit L.P.(₹)
MS116, MS132, MO132, MS132-T, MS165, MO165	1NO+1NC	HKF1-11	1SAM201901R1001 ■	640	HK1-11	1SAM201902R1001 ■	850
	2 NO	HKF1-20	1SAM201901R1002 ■	640	HK1-20	1SAM201902R1002 ■	850
	2NC	-	-	-	HK1-02	1SAM201902R1003 ■	850
	1NO	HKF1-10	1SAM201901R1003 ■	390			
	1NC	HKF1-01	1SAM201901R1004 ■	390			



SK1-11

Suitable for	Aux contacts	Type	Ordering code	Unit L.P.(₹)
MS116, MS132, MO132, MS 165	1NO+1NC	SK1-11**	1SAM201903R1001 ■	1,120
	2 NO	SK1-20**	1SAM201903R1002 ■	1,120
MO 165 MS132-T	2 NC	SK1-02**	1SAM201903R1003	1,120
MS132	1NO+1NC	CK1-11#	1SAM301901R1001 ■	1,570
MS132-T	2 NO	CK1-20#	1SAM301901R1002 ■	1,570
MS165	2 NC	CK1-02#	1SAM301901R1003	1,570

**for tripped alarm, max 2 piece

#for short-circuit alarm, max. 2 pieces



CK1-11

Manual motor starter

Accessories for MS4xx



HK4-11

Auxiliary contacts – mountable on the front				
Suitable for	Aux contacts	Type	Ordering code	Unit L.P.(₹)
MS49x, MO49x	1NO+1NC	HK4-11	1SAM401901R1001 ■	970

Auxiliary contacts – mountable on the right			
Rated voltage	Type	Ordering code	Unit L.P.(₹)
1NO+1NC	HKS4-11	1SAM401902R1001 ■	970
2 NO	HKS4-20	1SAM401902R1002 ■	970
2 NC	HKS4-02	1SAM401902R1003	970



SK4-11

Signaling contacts – mountable on the right*				
Suitable for	Aux contacts	Type	Ordering code	Unit L.P.(₹)
MS49x, MO49x	1NO+1NC	SK4-11	1SAM401904R1001 ■	1,760

*for tripped alarm, max 2 piece



AA4-24

Shunt trip units – mountable on the right					Undervoltage release mountable on the right			
Suitable for	Rated voltage	Type	Ordering code	Unit L.P.(₹)	Rated voltage	Type	Ordering code	Unit L.P.(₹)
MS49x, MO49x	20 ... 24	AA4-24	1SAM401907R1001	3,080	24	UA4-24	1SAM401905R1004	3,410
	110	AA4-110	1SAM401907R1002	3,410	110	UA4-110	1SAM401905R1001	3,410
	200-240	AA4-230	1SAM401907R1003	3,410	230	UA4-230	1SAM401905R1002	3,410
	350-415	AA4-400	1SAM401907R1004	3,410	415	UA4-415	1SAM401905R1002	3,410

■ Stock items

Thermal overload relays



TA25, TA42 and TA75 relays

Relay range in Amps	Direct mounting on contactors	Type code reference	Ordering code	Unit L.P.(₹)
0.1 ... 0.16	A9...A40 AX9...AX40 AL9...AL40 TAL9...TAL40	TA25DU 0.16M	1SAZ211201R2005 ■	1,420
0.16 ... 0.25		TA25DU 0.25M	1SAZ211201R2009 ■	1,420
0.25 ... 0.4		TA25DU 0.4M	1SAZ211201R2013 ■	1,420
0.4 ... 0.63		TA25DU 0.63M	1SAZ211201R2017 ■	1,420
0.63 ... 1.0		TA25DU 1.0M	1SAZ211201R2021 ■	1,420
1.0 ... 1.4		TA25DU 1.4M	1SAZ211201R2023 ■	1,420
1.3 ... 1.8		TA25DU 1.8M	1SAZ211201R2025 ■	1,420
1.7 ... 2.4		TA25DU 2.4M	1SAZ211201R2028 ■	1,420
2.2 ... 3.1		TA25DU 3.1M	1SAZ211201R2031 ■	1,420
2.8 ... 4.0		TA25DU 4.0M	1SAZ211201R2033 ■	1,420
3.5 ... 5.0		TA25DU 5.0M	1SAZ211201R2035 ■	1,420
4.5 ... 6.5		TA25DU 6.5M	1SAZ211201R2038 ■	1,420
6.0 ... 8.5		TA25DU 8.5M	1SAZ211201R2040 ■	1,420
7.5 ... 11.0		TA25DU 11M	1SAZ211201R2043 ■	1,420
10.0 ... 14.0		TA25DU 14M	1SAZ211201R2045 ■	1,420
13.0 ... 19.0		TA25DU 19M	1SAZ211201R2047 ■	1,760
18.0 ... 25.0		TA25DU 25M	1SAZ211201R2051 ■	1,760
24.0 ... 32.0		TA25DU 32M	1SAZ211201R2053 ■	2,460

TA42DU

18.0 ... 25.0	A30,A40,	TA42DU 25	1SAZ311201R2001 ■	2,920
22.0 ... 32.0	AX32...AX40	TA42DU 32	1SAZ311201R2002 ■	3,180
29.0 ... 42.0	AL30,AL40, TAL30,TAL 40	TA42DU 42	1SAZ311201R2003 ■	3,220

TA75DU

22 ... 32	A50...A75 AX50...AX80	TA75DU 32	1SAZ321201R2002 ■	3,680
29 ... 42		TA75DU 42	1SAZ321201R2003 ■	4,320
36 ... 52		TA75DU 52	1SAZ321201R2004 ■	4,320
45 ... 63		TA75DU 63	1SAZ321201R2005 ■	4,320
60 ... 80		TA75DU 80	1SAZ321201R2006 ■	4,630

TA80DU

36 ... 52	A95...A110, AX95...AX150	TA80DU-52	1SAZ331201R1004 ■	4,940
45 ... 63		TA80DU-63	1SAZ331201R1005 ■	4,940
60 ... 80		TA80DU-80	1SAZ331201R1006 ■	5,300

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

TA110DU

66 ... 90	A95...A110,	TA110DU-90	1SAZ411201R1001 ■	8,690
80 ... 110	AX95...AX150	TA110DU-110	1SAZ411201R1002 ■	9,500

TA200DU

66 ... 90	A145...A185 AX185...AX205 AF190, AF205	TA200DU-90	1SAZ421201R1001 ■	10,000
80 ... 110		TA200DU-110	1SAZ421201R1002 ■	10,820
100 ... 135		TA200DU-135	1SAZ421201R1003 ■	11,550
110 ... 150		TA200DU-150	1SAZ421201R1004 ■	12,580
130 ... 175		TA200DU-175	1SAZ421201R1005 ■	13,090
150 ... 200		TA200DU-200	1SAZ421201R1006 ■	13,680

Accessories

Independent Mounting Kit	TA25DU0.16..25A	DB25/25	1SAZ201108R0001 ■	360
	TA25DU32	DB25/32	1SAZ201108R0002	750
	TA42DU,TA75DU, TA80DU	DB80	1SAZ301110R0001 ■	3,290
	TA110DU, TA200DU	DB200	1SAZ401110R0001 ■	3,400

■ Stock items

Thermal overload relays



TF42

T16 Relays

Relay range in Amps	Direct mounting on contactors	Type code reference	Ordering code	Unit 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	Unit 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	Unit 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	AF116, AF140	TF96-96	1SAZ911201R1006	
66...90		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	Unit 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	Unit L.P.(₹)
0.1... 0.32A	10E, 20E and 30E	E16DU 0.32	1SAX111001R1101	7,600
0.3 ... 1.0A		E16DU 1.0	1SAX111001R1102	7,600
0.8 ... 2.7A		E16DU 2.7	1SAX111001R1103 ■	7,600
1.9 ... 6.3A		E16DU 6.3	1SAX111001R1104 ■	8,400
5.7... 18.9A		E16DU 18.9	1SAX111001R1105 ■	8,400
9 ... 30A		E45DU 30	1SAX211001R1101 ■	10,810
15 ... 45A		E45DU 45	1SAX211001R1102 ■	11,770
27 ... 80A		E80DU 80	1SAX311001R1101 ■	15,460
50 ... 140A		E140DU 140	1SAX321001R1101 ■	18,620
63 ... 210A		EF205-210	1SAX531001R1101	26,110
115 ... 380A		EF370-380	1SAX611001R1101	28,780
150 ... 500A		EF460	1SAX721001R1101 ■	29,000
250 ... 800A		EF750	1SAX821001R1101	Upon request
375 ... 1250A		E1250DU 375 - 1250 A	1SFA739001R1000	Upon request
0.10...0.32A	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	Unit L.P.(₹)
Separate mounting kit	DB16E		2,360
Separate mounting kit - EF19	DB19EF	1SAX101910R1001 ■	2,390
Separate mounting kit - EF45	DB45EF	1SAX201910R0001 ■	3,820
Separate mounting kit	DB45E	1SAX201110R1001	3,820
Separate mounting kit	DB80E	1SAX301110R1001 ■	4,770
Separate mounting kit	DB140E	1SAX301110R1002	6,890

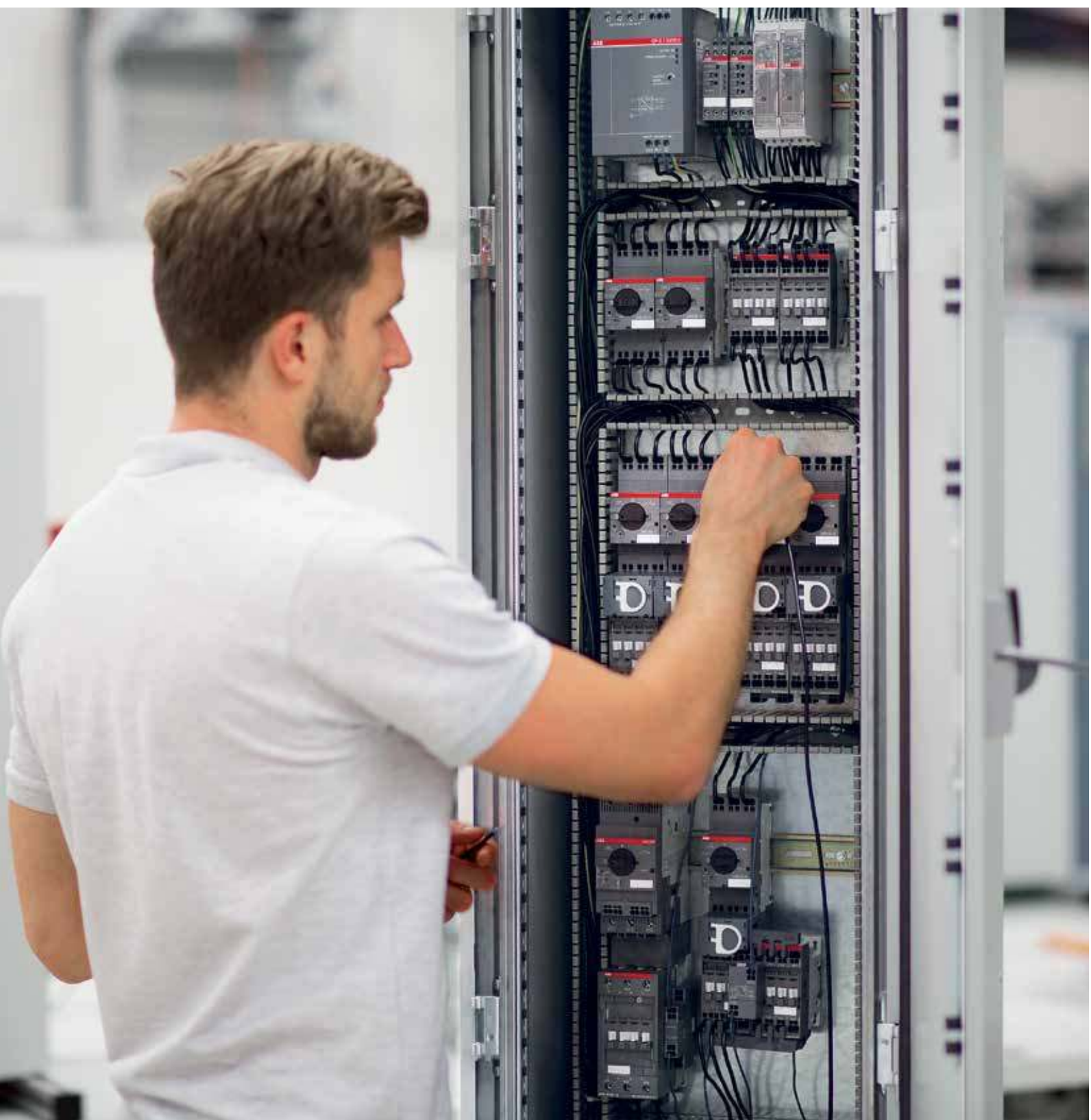
For suitable contactors refer page no. 97

■ Stock items

Just push it **NEW**

Push-in Spring motor starting solution

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



Push-in Spring motor starting solution **NEW**

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.



Just one tool for everything

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



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.



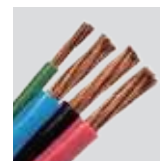
Tool-less connecting links

100% tool-less mounting and dismantling connecting links.



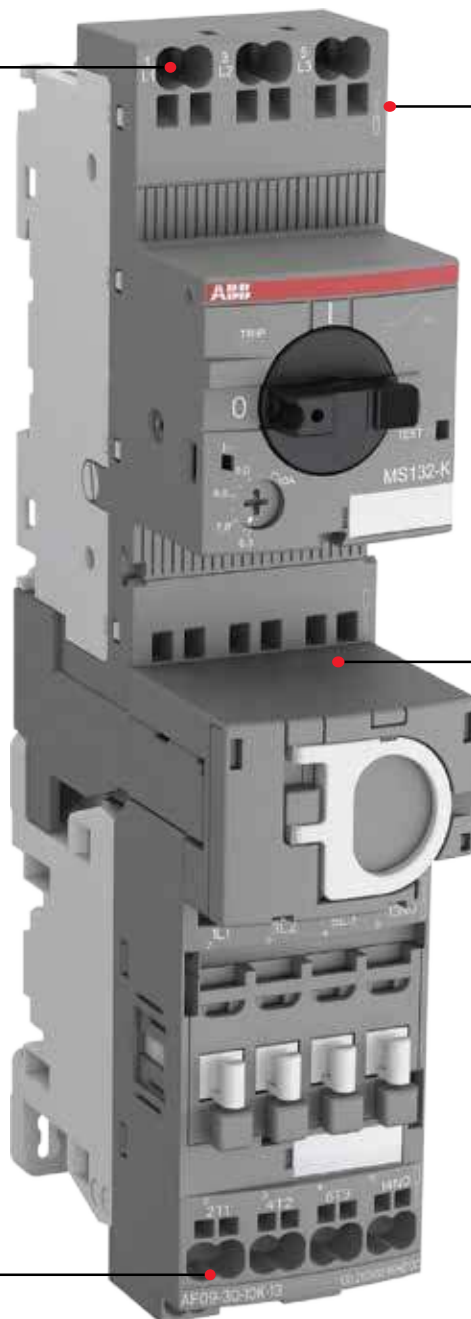
Robust by design

Contact robustness by design, independent from operator.



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 **NEW**

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

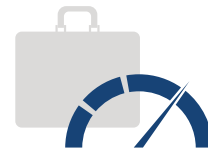
ABB's AFS contactors can be easily integrated in machine manufacturer's systems complying with main safety standards EN ISO 13849 and EN 62061 guaranteeing the safe use of your machinery and equipment. The AFS contactor range is an integral part of ABB's comprehensive range of safety products.



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.

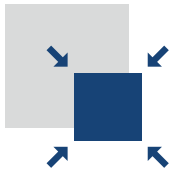
Note: Contact our nearest sales office for more information

Electronic compact starters: HF range **NEW**

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.

Note: Contact our nearest sales office for more information

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 vehicles; degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment
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 mm ² /1 x AWG22 max. 2 x 1.5 mm ² /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

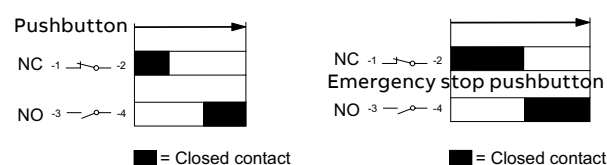
Rated insulation voltage, U _i	300 V
Rated thermal current, I _{th}	5 A
Rated operational current, I _e utilization category AC-15	at: 240 V 1 A
Rated operational current, I _e utilization category DC-13,	at: 24 V 0.3 A at: 125 V 0.2 A

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 1.5 A at: 125 V 0.75 A at: 240 V 0.22 A at: 250 V 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 % overvoltage 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	Unit L.P.(₹)
Momentary				
1 NO	CP1-10 □-10	1 X 10	1SFA619100R101 □	90
2 NO	CP1-10 □-20	1 X 10	1SFA619100R102 □	135
1 NC	CP1-10 □-01	1 X 10	1SFA619100R104 □	90
2 NC	CP1-10 □-02	1 X 10	1SFA619100R105 □	135
1 NO+1 NC	CP1-10 □-11	1 X 10	1SFA619100R107 □	135
Maintained				
1 NO	CP2-10 □-10	1 X 10	1SFA619101R101 □	125
2 NO	CP2-10 □-20	1 X 10	1SFA619101R102 □	175
1 NC	CP2-10 □-01	1 X 10	1SFA619101R104 □	125
2 NC	CP2-10 □-02	1 X 10	1SFA619101R105 □	175
1 NO+1 NC	CP2-10 □-11	1 X 10	1SFA619101R107 □	175



Non-illuminated extended Push-button with black plastic bezel

Non-illuminated extended pushbutton				
	Type	Pack size	Ordering code	Unit L.P.(₹)
Momentary				
1 NO	CP3-10 ■-10	1 X 10	1SFA619102R101 □	125
2 NO	CP3-10 ■-20	1 X 10	1SFA619102R102 □	165
1 NC	CP3-10 ■-01	1 X 10	1SFA619102R104 □	125
2 NC	CP3-10 ■-02	1 X 10	1SFA619102R105 □	165
1 NO+1 NC	CP3-10 ■-11	1 X 10	1SFA619102R107 □	165
Maintained				
1 NO	CP4-10 ■-10	1 X 10	1SFA619103R101 □	135
2 NO	CP4-10 ■-20	1 X 10	1SFA619103R102 □	165
1 NC	CP4-10 ■-01	1 X 10	1SFA619103R104 □	135
2 NC	CP4-10 ■-02	1 X 10	1SFA619103R105 □	165
1 NO+1 NC	CP4-10 ■-11	1 X 10	1SFA619103R107 □	165

Pilot devices

Compact range



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

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 integrated LED			
Type	Pack size	Ordering code	Unit L.P.(₹)
24 V, AC/DC			
CL-502R	1 X 10	1SFA619402R5021 ■	145
CL-502G	1 X 10	1SFA619402R5022 ■	145
CL-502Y	1 X 10	1SFA619402R5023 ■	145
CL-502L	1 X 10	1SFA619402R5024 ■	280
CL-502W	1 X 10	1SFA619402R5025 ■	145
CL-502A	1 X 10	1SFA619402R5029 ■	145
110-130 V, AC			
CL-513R	1 X 10	1SFA619402R5131 ■	145
CL-513G	1 X 10	1SFA619402R5132 ■	145
CL-513Y	1 X 10	1SFA619402R5133 ■	145
CL-513L	1 X 10	1SFA619402R5134 ■	280
CL-513W	1 X 10	1SFA619402R5135 ■	145
CL-513A	1 X 10	1SFA619402R5139 ■	145
110-130 V, DC			
CL-515R	1 X 10	1SFA619402R5151 ■	145
CL-515G	1 X 10	1SFA619402R5152 ■	145
CL-515Y	1 X 10	1SFA619402R5153 ■	145
CL-515L	1 X 10	1SFA619402R5154 ■	280
CL-515W	1 X 10	1SFA619402R5155 ■	145
CL-515A	1 X 10	1SFA619402R5159 ■	145
220 V, DC			
CL-520R	1 X 10	1SFA619402R5201 ■	145
CL-520G	1 X 10	1SFA619402R5202 ■	145
CL-520Y	1 X 10	1SFA619402R5203 ■	145
CL-520L	1 X 10	1SFA619402R5204 ■	280
CL-520W	1 X 10	1SFA619402R5205 ■	145
CL-520A	1 X 10	1SFA619402R5209 ■	145
230 V, AC			
CL-523R	1 X 10	1SFA619402R5231 ■	145
CL-523G	1 X 10	1SFA619402R5232 ■	145
CL-523Y	1 X 10	1SFA619402R5233 ■	145
CL-523L	1 X 10	1SFA619402R5234 ■	280
CL-523W	1 X 10	1SFA619402R5235 ■	145
CL-523A	1 X 10	1SFA619402R5239 ■	145

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 Unit L.P.(₹)s will be available upon request

Pilot devices

Compact range



Non-illuminated black selector switch with plastic bezel

Selector switch				
	Type	Pack size	Ordering code	Unit L.P.(₹)
Maintained / Two-positions				
1 NO	C2SS1-10B-10	1 X 10	1SFA619200R1016	245
2 NO	C2SS1-10B-20	1 X 10	1SFA619200R1026	270
1 NC	C2SS1-10B-01	1 X 10	1SFA619200R1046	245
2 NC	C2SS1-10B-02	1 X 10	1SFA619200R1056	270
1 NO+1 NC	C2SS1-10B-11	1 X 10	1SFA619200R1076	270
Maintained / Two-positions				
1 NO	C2SS2-10B-10	1 X 10	1SFA619201R1016	245
2 NO	C2SS2-10B-20	1 X 10	1SFA619201R1026	270
1 NC	C2SS2-10B-01	1 X 10	1SFA619201R1046	245
2 NC	C2SS2-10B-02	1 X 10	1SFA619201R1056	270
1 NO+1 NC	C2SS2-10B-11	1 X 10	1SFA619201R1076	270
Momentary / Two-positions				
1 NO	C2SS3-10B-10	1 X 10	1SFA619202R1016	235
2 NO	C2SS3-10B-20	1 X 10	1SFA619202R1026	270
1 NC	C2SS3-10B-01	1 X 10	1SFA619202R1046	235
2 NC	C2SS3-10B-02	1 X 10	1SFA619202R1056	270
1 NO+1 NC	C2SS3-10B-11	1 X 10	1SFA619202R1076	270
Maintained / Three-positions				
2 NO	C3SS1-10B-20	1 X 10	1SFA619210R1026	270
2 NC	C3SS1-10B-02	1 X 10	1SFA619210R1056	270
1 NO+1 NC	C3SS1-10B-11	1 X 10	1SFA619210R1076	270
Momentary / Three-positions				
2 NO	C3SS2-10B-20	1 X 10	1SFA619211R1026	270
2 NC	C3SS2-10B-02	1 X 10	1SFA619211R1056	270
1 NO+1 NC	C3SS2-10B-11	1 X 10	1SFA619211R1076	270
Momentary / Three-positions				
2 NO	C3SS3-10B-20	1 X 10	1SFA619212R1026	270
2 NC	C3SS3-10B-02	1 X 10	1SFA619212R1056	270
1 NO+1 NC	C3SS3-10B-11		1SFA619212R1076	270

Pilot devices

Compact range



Non-illuminated emergency stop pushbutton, 30 mm



Non-illuminated emergency stop pushbutton, 40 mm



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



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

Emergency stop pushbutton					
Description	Type	Pack size	Ordering code	Unit L.P.(₹)	
•	Twist release				
1 NC Ø 30 mm	CE3T-10R-01	1	1SFA619500R1041 ■	175	
2 NC Ø 30 mm	CE3T-10R-02	1	1SFA619500R1051	235	
1NO+1NC Ø 30 mm	CE3T-10R-11	1	1SFA619500R1071	235	
	Pull release				
2 NC Ø 30 mm	CE3P-10R-02	1	1SFA619501R1051	235	
1NO+1NC Ø 30 mm	CE3P-10R-11	1	1SFA619501R1071	235	
	Key release: Ronis 455, key code 71				
2 NC Ø 30 mm	CE3K1-10R-02	1	1SFA619502R1051	680	
1NO+1NC Ø 30 mm	CE3K1-10R-11	1	1SFA619502R1071	680	
	Twist release				
1 NC Ø 40 mm	CE4T-10R-01	1	1SFA619550R1041 ■	185	
2 NC Ø 40 mm	CE4T-10R-02	1	1SFA619550R1051 ■	235	
1NO+1NC Ø 40 mm	CE4T-10R-11	1	1SFA619550R1071 ■	235	
	Pull release				
2 NC Ø 40 mm	CE4P-10R-02	1	1SFA619551R1051 ■	235	
1NO+1NC Ø 40 mm	CE4P-10R-11	1	1SFA619551R1071	235	
	Key release: Ronis 455, key code 71				
2 NC Ø 40 mm	CE4K1-10R-02	1	1SFA619552R1051	740	
1NO+1NC Ø 40 mm	CE4K1-10R-11	1	1SFA619552R1071	740	

Machine stop					
Description	Type	Pack size	Ordering code	Unit L.P.(₹)	
•	Twist release				
1NO+1NC Ø 30 mm	CE3T-10B-11	1	1SFA619500R1076	235	
	Pull release				
1NO+1NC Ø 30 mm	CE3P-10B-11	1	1SFA619501R1076	235	
	Key release: Ronis 455, Key code 71				
1NO+1NC Ø 30 mm	CE3K1-10B-11	1	1SFA619502R1076	680	
	Twist release				
1NO+1NC Ø 40 mm	CE4T-10B-11	1	1SFA619550R1076	235	
	Pull release				
1NO+1NC Ø 40 mm	CE4P-10B-11	1	1SFA619551R1076	235	
	Key release: Ronis 455, Key code 71				
1NO+1NC Ø 40 mm	CE4K1-10B-11	1	1SFA619552R1076	740	

Pilot devices

Compact range



Buzzer						
Description	Sound output	Rated current mA	Type	Pack size	Ordering code	Unit L.P.(₹)
Rated voltage 24 V, AC/DC						
● Black	Continuous	40	CB1-620B	1	1SFA619600R6206	1,125
● Black	Pulsation	48	CB1-630B	1	1SFA619600R6306	1,125
Rated voltage 230 V, AC						
● Black	Continuous	40	CB1-623B	1	1SFA619600R6236	1,125
● Black	Pulsation	40	CB1-633B	1	1SFA619600R6336	1,125
Rated voltage 110-130 V, DC						
● Black	Continuous	15	CB1-622B	1	1SFA619600R6226	1,125
● Black	Pulsation	15	CB1-632B	1	1SFA619600R6326	1,125
Rated voltage 110-130 V, AC						
● Black	Continuous	40	CB1-621B	1	1SFA619600R6216	1,125
● Black	Pulsation	45	CB1-631B	1	1SFA619600R6316	1,125



Assembled compact emergency stop enclosures				
Description	Type	Pack size	Ordering code	Unit L.P.(₹)
1-seat plastic enclosure (yellow)				
  Twist release. Red button 2 NC	CEPY1-1001	1	1SFA619821R1001	1,345
  Pull release. Red button 2 NC	CEPY1-1002	1	1SFA619821R1002	1,345
Emergency stop enclosure with shroud				
  Twist release. Red button 2 NC	CEPY1-2002	1	1SFA619821R2002	1,620
  Pull release. Red button 2 NC	CEPY1-2001	1	1SFA619821R2001	1,620



Assembled compact machine stop enclosures					
Description	Type	Pack Size	Ordering code	Unit L.P.(₹)	
1-seat plastic enclosure with black mushroom pushbutton (dark grey)					
■ □ Twist release. Black button 1 NO + 1 NC	CEP1-1001	1	1SFA619811R1001	1,345	
■ □ Pull release. Black button 1 NO + 1 NC	CEP1-1002	1	1SFA619811R1002	1,345	
Machine stop enclosure with shroud					
■ □ Twist release. Black button 1 NO + 1 NC	CEP1-2001	1	1SFA619811R2001	1,620	
■ □ Pull release. Black button 1 NO + 1 NC	CEP1-2002	1	1SFA619811R2002	1,620	

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 - Terminal 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 mm ² AWG 20 max. 2 x 2.5 mm ² /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 voltage, U _i	690 V	
Rated thermal current, I _{th}	10 A	
Rated operational current, I _e utilisation category AC 15,	at: 120 V	8 A
	at: 230 V	6 A
	at: 400 V	4 A
	at: 690 V	2 A
Rated operational current, I _e utilisation category DC 13,	at: 24 V	5 A
	at: 125 V	1.1 A
	at: 250 V	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	6 A
	at: 240 V	3 A
	at: 480 V	1.5 A
	at: 600 V	1.2 A
	at: 125 V	0.55 A
	at: 250 V	0.27 A
	at: 480 V	0.10 A
	at: 600 V	0.10 A

Contact resistance		< 25 mΩ
Compulsory function test		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

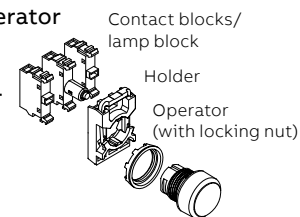


Modular product features

- 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	Unit L.P.(₹)
Momentary	MP1-10 ■	1 X 10	1SFA611100R100 □	45
Maintained	MP2-10 ■	1 X 10	1SFA611101R100 □	70

Operator : Extended button Non-illuminated push button

Momentary	MP3-10 ■	1 X 10	1SFA611102R100 □	70
Maintained	MP4-10 ■	1 X 10	1SFA611103R100 □	70

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	Unit L.P.(₹)
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Operator : Flush button illuminated push button

Momentary	MP1-11 ■	1 X 10	1SFA611100R110 □	65
	MP1-11AN	1 X 10	1SIN611100R1109	60
Maintained	MP2-11 ■	1 X 10	1SFA611101R110 □	85
	MP2-11AN	1 X 10	1SIN611101R1109	85

Operator : Extended button illuminated push button

Momentary	MP3-11 ■	1 X 10	1SFA611102R110 □	85
	MP3-11AN	1 X 10	1SIN611102R1109	85
Maintained	MP4-11 ■	1 X 10	1SFA611103R110 □	85
	MP4-11AN	1 X 10	1SIN611103R1109	85

Note:

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

Separate holder

Holders for three blocks	MCBH-00	1 X 10	1SFA611605R1100	15
Contact blocks only (without holder)				
1 NO	MCB-10	1 X 10	1SFA611610R1001 ■	55
1 NC	MCB-01	1 X 10	1SFA611610R1010 ■	55



Blocks and holder

■ Stock items

Pilot devices

Modular range



LED lamp block with built in leakage currage protection

Operator : Pilot lights				
	Type	Pack size	Ordering code	Unit L.P.(₹)
● Red	ML1-100R	1 X 10	1SFA611400R1001 ■	50
● Green	ML1-100G	1 X 10	1SFA611400R1002 ■	50
● Yellow	ML1-100Y	1 X 10	1SFA611400R1003 ■	50
● Blue	ML1-100L	1 X 10	1SFA611400R1004	50
○ White	ML1-100W	1 X 10	1SFA611400R1005	50
● Amber	ML1-100AN	1 X 10	1SIN611400R1009	50

Separate holder				
	Type	Pack size	Ordering code	Unit L.P.(₹)
Holders for three blocks	MCBH-00	1 X 10	1SFA611605R1100 ■	15

Lamp blocks with integrated LED				
Rated voltage 24 V, AC/DC				
	Type	Pack size	Ordering code	Unit L.P.(₹)
● Red	MLBL-01R	1 X 10	1SFA611621R1011 ■	125
● Green	MLBL-01G	1 X 10	1SFA611621R1012 ■	125
● Yellow	MLBL-01YN	1 X 10	1SIN611621R1013	125
● Blue	MLBL-01L	1 X 10	1SFA611621R1014 ■	280
○ White	MLBL-01W	1 X 10	1SFA611621R1015 ■	125
● Amber	MLBL-01A	1 X 10	1SFA611621R1016	125

Rated voltage 110-130 V, AC				
	Type	Pack size	Ordering code	Unit L.P.(₹)
● Red	MLBL-04R	1 X 10	1SFA611621R1041	125
● Green	MLBL-04G	1 X 10	1SFA611621R1042	125
● Yellow	MLBL-04YN	1 X 10	1SIN611621R1043	125
● Blue	MLBL-04L	1 X 10	1SFA611621R1044	280
○ White	MLBL-04W	1 X 10	1SFA611621R1045	125
● Amber	MLBL-04A	1 X 10	1SFA611621R1046	125

Rated voltage 110-130 V, DC				
	Type	Pack size	Ordering code	Unit L.P.(₹)
● Red	MLBL-05R	1 X 10	1SFA611621R1051	125
● Green	MLBL-05G	1 X 10	1SFA611621R1052	125
● Yellow	MLBL-05YN	1 X 10	1SIN611621R1053	125
● Blue	MLBL-05L	1 X 10	1SFA611621R1054	280
○ White	MLBL-05W	1 X 10	1SFA611621R1055	125
● Amber	MLBL-05A	1 X 10	1SFA611621R1056	125

Rated voltage 220 V, DC				
	Type	Pack size	Ordering code	Unit L.P.(₹)
● Red	MLBL-06R	1 X 10	1SFA611621R1061	125
● Green	MLBL-06G	1 X 10	1SFA611621R1062	125
● Yellow	MLBL-06YN	1 X 10	1SIN611621R1063	125
● Blue	MLBL-06L	1 X 10	1SFA611621R1064	280
○ White	MLBL-06W	1 X 10	1SFA611621R1065	125
● Amber	MLBL-06A	1 X 10	1SFA611621R1066	125

Rated voltage 230 V, AC				
	Type	Pack size	Ordering code	Unit L.P.(₹)
● Red	MLBL-07R	1 X 10	1SFA611621R1071	125
● Green	MLBL-07G	1 X 10	1SFA611621R1072 ■	125
● Yellow	MLBL-07YN	1 X 10	1SIN611621R1073	125
● Blue	MLBL-07L	1 X 10	1SFA611621R1074 ■	280
○ White	MLBL-07W	1 X 10	1SFA611621R1075	125
● Amber	MLBL-07A	1 X 10	1SFA611621R1076	125

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

■ Stock items

Pilot devices

Modular range



Operator : Emergency stop pushbutton				
	Type	Pack size	Ordering code	Unit L.P.(₹)
●	Ø 30 mm / Non-illuminated			
Twist release	MPET3-10R	1	1SFA611520R1001	350
Pull release	MPEP3-10R	1	1SFA611521R1001	350
Key release code 71/Ronis 455	MPEK3-11R	1	1SFA611522R1101	730
Key release code 72/ Ronis 421	MPEK3-12R	1	1SFA611522R1201	730
Key release code 73/ Ronis 3433-E	MPEK3-13R	1	1SFA611522R1301	730
	Ø 40 mm / Non-illuminated			
Twist release	MPET4-10R	1	1SFA611523R1001	305
Pull release	MPEP4-10R	1	1SFA611524R1001	350
Key release code 71/Ronis 455	MPEK4-11R	1	1SFA611525R1101	690
Key release code 72/ Ronis 421	MPEK4-12R	1	1SFA611525R1201	690
Key release code 73/ Ronis 3433-E	MPEK4-13R	1	1SFA611525R1301	690
	Ø 60 mm / Non-illuminated			
Twist release	MPMT4-10R	1	1SFA611513R1001	585
Pull release	MPMP4-10R	1	1SFA611514R1001	485
	Ø 40 mm / Illuminated			
Twist release	MPMT3-11R	1	1SFA611510R1101 ■	560
Pull release	MPMP3-11R	1	1SFA611511R1101	450
	Ø 60 mm / Illuminated			
Twist release	MPMT4-11R	1	1SFA611513R1101	765
Pull release	MPMP4-11R		1SFA611514R1101	615

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



Operator : Machine stop pushbutton				
	Type	Pack size	Ordering code	Unit L.P.(₹)
●	Ø 30 mm			
Twist release	MPET3-10B	1	1SFA611520R1006	350
Pull release	MPEP3-10B	1	1SFA611521R1006	350
Key release	MPEK3-10B	1	1SFA611522R1106	730
	Ø 40 mm			
Twist release	MPET4-10B	1	1SFA611523R1006	350
Pull release	MPEP4-10B	1	1SFA611524R1006	350
Key release	MPEK4-10B	1	1SFA611525R1061	730

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



Operator : Double pushbutton				
	Type	Pack size	Ordering code	Unit L.P.(₹)
● Upper ● Lower	Extended lower button / Non-illuminated			
I / O	MPD13-11B	1	1SFA611142R1106	350
START / STOP	MPD15-11B	1	1SFA611144R1106	350
● Upper ● Lower	Extended lower button / Illuminated			
I / O	MPD13-11C	1	1SFA611142R1108	520
START / STOP	MPD15-11C	1	1SFA611144R1108	520
● Upper ● Lower	○ Upper Extended lower button / ● Lower Non-illuminated			
I / O	MPD17-11B	1	1SFA611146R1106	350

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	Unit L.P.(₹)
Maintained / Short handle			
M2SS1-10B	1	1SFA611200R1006	235
Maintained / Short handle			
M2SS2-10B	1	1SFA611201R1006	235
Momentary / Short handle, spring return from C to B			
M2SS3-10B	1	1SFA611202R1006	245
Maintained / Long handle			
M2SS4-10B	1	1SFA611203R1006	720
Maintained / Long handle			
M2SS5-10B	1	1SFA611204R1006	720
Momentary / Long handle, spring return from C to B			
M2SS6-10B	1	1SFA611205R1006	740

Refer holder and contact block configuration for standard operator

Operator: non-illuminated black three-position selector switch

Type	Pack size	Ordering code	Unit L.P.(₹)
Maintained / Short handle			
M3SS1-10B	1	1SFA611210R1006	235
Momentary / Short handle, spring return from A to B and C to B			
M3SS2-10B	1	1SFA611211R1006	245
Momentary / Short handle, spring return from C to B			
M3SS3-10B	1	1SFA611212R1006	245
Momentary / Short handle, spring return from A to B			
M3SS7-10B	1	1SFA611216R1006	245
Maintained / Long handle			
M3SS4-10B	1	1SFA611213R1006	720
Momentary / Long handle, spring return from A to B and C to B			
M3SS5-10B	1	1SFA611214R1006	740
Momentary / Long handle, spring return from C to B			
M3SS6-10B	1	1SFA611215R1006	935
Momentary / Long handle, spring return from A to B			
M2SS8-10B	1	1SFA611217R1006	670

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	Unit L.P.(₹)
Short handle			
M3SSC1-10B	1	1SFA611250R1006	260
M3SSC2-10B	1	1SFA611251R1006	260
M3SSC3-10B	1	1SFA611252R1006	260
M3SSC7-10B	1	1SFA611256R1006	260
Long handle			
M3SSC4-10B	1	1SFA611253R1006	765
M3SSC5-10B	1	1SFA611254R1006	765
M3SSC6-10B	1	1SFA611255R1006	765
M3SSC8-10B	1	1SFA611258R1006	765

Refer holder and contact block configuration for standard operator

Pilot devices

Modular range



Operator : Key operated selector switch					
	Type		Pack size	Ordering code	Unit L.P.(₹)
●	Maintained / Two positions (The key can be removed in both position)				
71/Ronis 455	M2SSK1-101		1	1SFA611280R1001	560
72/Ronis 421	M2SSK1-102		1	1SFA611280R1002	560
73/Ronis 3433-E	M2SSK1-103		1	1SFA611280R1003	560
Random selection*)	M2SSK1-104		1	1SFA611280R1004	560
	Maintained / Two positions (The key can be removed in position B only)				
71/Ronis 455	M2SSK2-101		1	1SFA611281R1001	560
72/Ronis 421	M2SSK2-102		1	1SFA611281R1002	560
73/Ronis 3433-E	M2SSK2-103		1	1SFA611281R1003	560
Random selection*)	M2SSK2-104		1	1SFA611281R1004	560
	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	615
72/Ronis 421	M2SSK3-102		1	1SFA611282R1002	615
73/Ronis 3433-E	M2SSK3-103		1	1SFA611282R1003	615
Random selection*)	M2SSK3-104		1	1SFA611282R1004	615

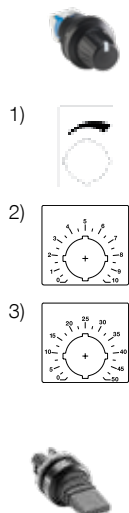
Refer holder and contact block configuration for standard operator

Operator : Key operated selector switch					
	Type		Pack size	Ordering code	Unit L.P.(₹)
●	Maintained / Three positions (The key can be removed in both position)				
71/Ronis 455	M3SSK1-101		1	1SFA611283R1001	560
72/Ronis 421	M3SSK1-102		1	1SFA611283R1002	560
73/Ronis 3433-E	M3SSK1-103		1	1SFA611283R1003	560
Random selection*)	M3SSK1-104		1	1SFA611280R1004	560
	Maintained / Three positions (The key can be removed in position B only)				
71/Ronis 455	M3SSK2-101		1	1SFA611284R1001	560
72/Ronis 421	M3SSK2-102		1	1SFA611284R1002	560
73/Ronis 3433-E	M3SSK2-103		1	1SFA611284R1003	560
Random selection*)	M3SSK2-104		1	1SFA611284R1004	560
	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	615
72/Ronis 421	M3SSK3-102		1	1SFA611285R1002	615
73/Ronis 3433-E	M3SSK3-103		1	1SFA611285R1003	615
Random selection*)	M3SSK3-104		1	1SFA611285R1004	615

Refer holder and contact block configuration for standard operator

Potentiometer					
	Type		Pack size	Ordering code	Unit L.P.(₹)
●	with resistor 5 kohm				
Black plastic	MT-105B		1	1SFA611410R1056	3,210
●	with resistor 10 kohm				
Black plastic	MT-110B		1	1SFA611410R1106	3,210
●	with resistor 50 kohm				
Black plastic	MT-150B		1	1SFA611410R1506	3,370

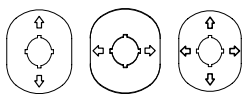
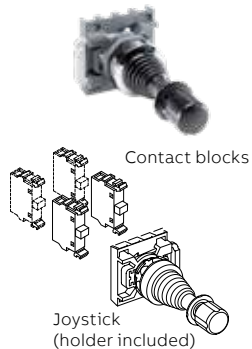
Toggle switch*					
	Type		Pack size	Ordering code	Unit L.P.(₹)
●	Maintained / Two-positions				
Black plastic	MTS1-10B		1	1SFA611300R1006	540
●	Momentary / Three-positions				
Black plastic	MTS2-10B		1	1SFA611301R1006	700
●	Maintained / Three-positions				
Black plastic	MTS3-10B		1	1SFA611302R1006	540



Pilot devices

Modular range

• Joystick (holder included)
+ contact blocks



Micro switch block



Mounting tool

Protectice cover



30 mm adaptor

Membrane of silicon rubber

Joystick				
	Type	Pack size	Ordering code	Unit L.P.(₹)
Maintained				
2 - position	MJS1-60B	1	1SFA611701R6006	3,075
4 - position	MJS5-60B	1	1SFA611705R6006	3,380
Spring return				
2 - position	MJS2-60B	1	1SFA611702R6006	3,075
4 - position	MJS6-60B	1	1SFA611706R6006	3,380
Maintained / Latching function				
2 - position	MJS7-60B	1	1SFA611707R6006	3,380
4 - position	MJS11-60B	1	1SFA611711R6006	3,910
Spring return / Latching function				
2 - position	MJS8-60B	1	1SFA611708R6006	3,380
4 - position	MJS12-60B	1	1SFA611712R6006	3,910

Legend plates for joystick

	Type	Pack size	Ordering code	Unit L.P.(₹)
2 - position	MA6-1240	1	1SFA611930R1240	260
2 - position	MA6-1241	1	1SFA611930R1241	260
4 - position	MA6-1242	1	1SFA611930R1242	260

Refer holder and contact block configuration for standard operator

Micro switch blocks

Description	Type	Pack size	Ordering code	Unit L.P.(₹)
1 NO	MCBL-10	1	1SFA611612R1010	450
1 NC	MCBL-01	1	1SFA611612R1001	450

Extreme duty pushbutton

	Type	Pack size	Ordering code	Unit L.P.(₹)
For Ø 30 mm mounting hole				
● ● ●	KP6-40 ■	1	1SFA616105R400 □	1,305

Refer contact block configuration for standard operator

Reset pushbutton

	Type	Pack size	Ordering code	Unit L.P.(₹)
● ○	With shaft			
No text	KPR3-100 ■	1	1SFA616162R100 □	405
● ○	Without shaft			
No text	KPR1-100 ■	1	1SFA616160R100 □	305
● ○	Accessories: Shaft (black)			
No text	KA1-8046	1	1SFA616920R8046	125

Accessories

	Type	Pack size	Ordering code	Unit L.P.(₹)
Mounting tool	MA1-8015	1	1SFA611920R8015	280
Membrane of silicone flush button	KA1-8052	1	1SFA611920R8052	175
Membrane of silicone extended button	KA1-8002	1	1SFA611920R8002	330
Locking nut	MA1-8019	1	1SFA611920R8019	215

*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	Unit L.P.(₹)
■ □ 1-seat	MEPY1-0	1	1SFA611821R1000	1,600
■ □ 1-seat	MEP1-0	1	1SFA611811R1000	1,570
■ □ 2-seat	MEP2-0	1	1SFA611812R1000	1,450
■ □ 3-seat	MEP3-0	1	1SFA611813R1000	2,055
■ □ 4-seat	MEP4-0	1	1SFA611814R1000	2,790
■ □ 6-seat	MEP6-0	1	1SFA611816R1000	4,250
Shroud for modular range push button operator				
■ Yellow	MA1-8053	1	1SFA611920R8053	450
■ Grey	MA1-8128	1	1SFA611920R8128	1,355
Empty enclosures for compact range				
■ □ Yellow/Light grey	CEPY1-0	1	1SFA619821R1000	1,365
■ □ Dark grey/Light grey	CEP1-0	1	1SFA619811R1000	1,115
Shroud for compact range push buttons				
■ Yellow	CA1-8053	1	1SFA619920R8053	280
■ Grey	CA1-8054	1	1SFA619920R8054	280
DIN-rail adaptor				
DIN-rail adaptor	MA1-8131	1	1SFA611920R8131	755

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	Unit 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 □	Upon request
Blinking light, 24 V AC/DC with integrated LED	KL70-306 ■	1SFA616070R306 □	
Flashing light, 24 V AC/DC with integrated xenon tube	KL70-203 ■	1SFA616070R203 □	
Blinking light, 115 V AC with integrated LED	KL70-342 ■	1SFA616070R342 □	
Flashing light, 115 V AC with integrated xenon tube	KL70-113 ■	1SFA616070R113 □	
Blinking light, 230 V AC with integrated LED	KL70-352 ■	1SFA616070R352 □	
Flashing light, 230 V AC with integrated xenon tube	KL70-123 ■	1SFA616070R123 □	
LED permanent light, 24 V AC/DC with integrated LED	KL70-305 ■	1SFA616070R305 □	
LED rotating light, 24 V AC/DC with integrated LED	KL70-307 ■	1SFA616070R307 □	

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

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

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



Signal towers



KT70-10...

1SFC151510F0001



KA70-1001

1SFC151511F0001



KA70-1034

1SFC151512F0001

Description	Type	Ordering code	Unit L.P.(₹)
Siren element			
Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 115 V AC	KS70-1104	1SFA616073R1104	Upon request
Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 230 V AC	KS70-1204	1SFA616073R1204	
Multi function, 7 diff. Tones adjustable, volume adjustable, 100 dB, 24 V DC	KS70-2004	1SFA616073R2004	
Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 24 V AC/DC	KS70-3004	1SFA616073R3004	
Continuous tone alternating 108 dB, 24 V DC	KS70-2002	1SFA616073R2002	
Terminal elements			
For tube mounting, including cap	KT70-1001	1SFA616075R1001	Upon request
For bracket or base, including cap	KT70-1002	1SFA616075R1002	
Special parts			
Contact box			
Cable exit at side	KA70-1001	1SFA616077R1001	Upon request
Magnetic base	KA70-1002	1SFA616077R1002	
Base with tube			
D=25 mm L=110 mm	KA70-1011	1SFA616077R1011	Upon request
Base for tube			
D=25 mm, plastic	KA70-1012	1SFA616077R1012	Upon request
D=25 mm, metal	KA70-1013	1SFA616077R1013	
Tube, anodized aluminum			
D=25 mm L=250 mm	KA70-1021	1SFA616077R1021	Upon request
D=25 mm L=400 mm	KA70-1022	1SFA616077R1022	
D=25 mm L=800 mm	KA70-1023	1SFA616077R1023	
Bracket			
1-sided mounting	KA70-1031	1SFA616077R1031	Upon request
2-sided mounting	KA70-1032	1SFA616077R1032	
For tube mounting	KA70-1033	1SFA616077R1033	
For surface mounting	KA70-1034	1SFA616077R1034	

Signal beacons



KSB-401G

SFC151513F0001



KASB-100

SFC151514F0001

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 □	Upon request
Flashing light, 24 V DC. With integrated xenon tube	KSB-203 ■	1SFA616080R203 □	
Flashing light, 115 V AC. With integrated xenon tube	KSB-113 ■	1SFA616080R113 □	
Flashing light, 230 V AC. With integrated xenon tube	KSB-123 ■	1SFA616080R123 □	

Light element LED: Available in red, green and yellow

LED permanent light, 24 V AC/DC. With integrated LED	KSB-305 ■	1SFA616080R305 □	Upon request
LED blinking light, 24 V AC/DC. With integrated LED	KSB-306 ■	1SFA616080R306 □	
LED rotation light, 24 V AC/DC. With integrated LED	KSB-307 ■	1SFA616080R307 □	

Special parts

Anti-twist device	KASB-100	1SFA616087R1000	Upon request
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Bulbs for signal beacons max 10 W. For permanent light Bulb Ba 15d, 52mm

12 V, 7 W, AC/DC	KA3-1018	1SFA616922R1018	Upon request
24 V, 7 W, AC/DC	KA3-1028	1SFA616922R1028	
115 V, 7 W, AC/DC	KA3-1118	1SFA616922R1118	
220-260 V, 7-10 W, AC/DC	KA3-1148	1SFA616922R1118	

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 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 variety 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.

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	Unit L.P.(₹)
CT-ERE	24 V AC / DC, 220-240 V AC	0.1-10 s	1SVR550107R1100	1,580
		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	Unit L.P.(₹)
CT-AHE	24 V AC/DC	0.1-10 s	1SVR550118R1100	1,640
		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	Unit L.P.(₹)
CT-ARE	"24 V AC/DC, 220-240 V AC"	0.1-10 s	1SVR550127R1100	2,260
		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	Unit L.P.(₹)
CT-MFE	24-240 V AC/DC	0.05 s - 100 h	1SVR550029R8100 ■	2,970

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	Unit L.P.(₹)
CT-YDE	24 V AC/DC, 220 - 240V AC	0.1-10 s	1SVR550207R1100	2,790
		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

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	Unit L.P.(₹)
CT- SDE	24 V AC/DC, 220 -240V AC	0.3-30 s	1SVR550217R4100 ■	1,820
	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	Unit L.P.(₹)
CT-VWE	24 V AC/DC, 220-240 V AC	0.1-10 s	1SVR550137R1100	3,390
		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	Unit L.P.(₹)
CT-AWE w/o Aux.	24 V AC/DC	0.05-1 s	1SVR550158R3100	4,420
	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 starting with OFF, 1 c/o contact

Type	Rated control supply voltage	Time range	Ordering code	Unit L.P.(₹)
CT-EBE	24 V AC/DC, 220-240 V AC	0.1-10 s	1SVR550167R1100	3,390
	110-130 V AC		1SVR550160R1100	1,360

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 impulse, Flasher starting with OFF, Flasher starting with ON, impulse -OFF, 2 c/o

Type	Rated control supply voltage	Time range	Ordering code	Unit L.P.(₹)
CT-MFS.21S	24-240 V AC/DC	10 (0.05 s- 300 h)	1SVR730010R0200	4,730

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

Type	Rated control supply voltage	Time range	Ordering code	Unit L.P.(₹)
CT-ERS.22S	24-48 V DC, 24-240 V AC	10 (0.05 s- 300 h)	1SVR730100R3300	3,180

■ Stock items

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	Unit L.P.(₹)
With neutral monitoring			
CM-PBE	3x380-440 V AC, 220-240 V AC	1SVR550881R9400	4,820
Without neutral monitoring			
CM-PBE	3x380-440 V AC	1SVR550882R9500	4,820

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

Type	Rated control supply voltage = measuring voltage	Ordering code	Unit L.P.(₹)
With neutral monitoring			
CM-PVE	3x320-460 V AC, 185-265 V AC	1SVR550870R9400 ■	4,820
Without neutral monitoring			
CM-PVE	3x320-460 V AC	1SVR550871R9500	4,820

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

Type	Rated control supply voltage = measuring voltage	Ordering code	Unit L.P.(₹)
CM-PFS.S	3x200-500 V AC	1SVR730824R9300	2,200

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

Type	Rated control supply voltage = measuring voltage	Ordering code	Unit L.P.(₹)
CM-PVS.31P	3x160-300 V AC	1SVR740794R1300	16,270
CM-PVS.31S		1SVR730794R1300	13,420
CM-PVS.41P	3x300-500 V AC	1SVR740794R3300	14,480
CM-PVS.41S		1SVR730794R3300	14,480



Three phase monitoring relays for phase unbalance

Type	Rated control supply voltage = measuring voltage	Ordering code	Unit L.P.(₹)
CM-PAS.31P	3x160-300 V AC	1SVR740774R1300	15,470
CM-PAS.31S		1SVR730774R1300	13,420
CM-PAS.41P	3x300-500 V AC	1SVR740774R3300	15,470
CM-PAS.41S		1SVR730774R3300	13,420

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

Type	Rated control supply voltage = measuring voltage	Ordering code	Unit L.P.(₹)
With interrupted neutral monitoring			
CM-MPS.11P	3x90-170 V AC	1SVR740885R1300	16,100
CM-MPS.11S		1SVR730885R1300	15,020
CM-MPS.21P	3x180-280 V AC	1SVR740885R3300	15,560
CM-MPS.21S		1SVR730885R3300	14,770
Without interrupted neutral monitoring			
CM-MPS.41S	3x300-500 V AC	1SVR730884R3300 ■	6,160

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	Unit L.P.(₹)
With interrupted neutral monitoring			
CM-MPS.23P	3x180-280 V AC	1SVR740885R4300	20,480
CM-MPS.23S		1SVR730885R4300	18,030
Without interrupted neutral monitoring			
CM-MPS.43P	3x300-500 V AC	1SVR740884R4300	19,750
CM-MPS.43S		1SVR730884R4300	16,360

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	Unit L.P.(₹)
CM-MPN.52P	3x350-580 V AC	1SVR760487R8300	22,480
CM-MPN.52S		1SVR750487R8300	19,100
CM-MPN.62P	3x450-720 V AC	1SVR760488R8300	22,480
CM-MPN.62S		1SVR750488R8300	19,750
CM-MPN.72P	3x530-820 V AC	1SVR760489R8300	22,490
CM-MPN.72S		1SVR750489R8300 ■	19,750

Insulation monitors for unearthed supply systems



Type	Nominal voltage Un of the distribution system to be monitored	Rated control supply voltage	Ordering code	Unit L.P.(₹)
CM-IWS.1P	0-250 V AC / 0-300 V DC	24-240 V AC/DC	1SVR740660R0100	25,770
CM-IWS.1S			1SVR730660R0100 ■	25,770
CM-IWS.2P	0-400 V AC	24-240 V AC/DC	1SVR740670R0200	22,840
CM-IWS.2S			1SVR730670R0200 ■	20,390
CM-IWN.1P	0-400 V AC / 0-600 V DC	24-240 V AC/DC	1SVR760660R0200	64,870
CM-IWN.1S			1SVR750660R0200	47,220
Coupling unit				
CM-IVN.S	Passive device, no control supply voltage needed	0-690 V AC / 0-1000 V DC	1SVR750669R9400 ■	24,690
CM-IVN.P			1SVR760669R9400	30,060

Thermistor motor protection relays



Type	Rated control supply voltage	Ordering code	Unit L.P.(₹)
CM-MSE	24 V AC	1SVR550805R9300	5,370
	110-130 V AC	1SVR550800R9300 ■	4,080
	220-240 V AC	1SVR550801R9300 ■	5,370
CM-MSS.12S	24 V AC/DC	1SVR730700R0100	6,830
CM-MSS.12P	24 V AC/DC	1SVR740700R0100	7,200
CM-MSS.13S	110-130 V AC/220-240 V AC	1SVR730700R2100	6,430
CM-MSS.13P	110-130 V AC/220-240 V AC	1SVR740700R2100	7,200
CM-MSS.22S	24 V AC/DC	1SVR730700R0200	6,870
CM-MSS.22P	24 V AC/DC	1SVR740700R0200	7,900
CM-MSS.23S	110-130 V AC/220-240 V AC	1SVR730700R2200	6,870
CM-MSS.23P	110-130 V AC/220-240 V AC	1SVR740700R2200	7,900

■ Stock items

Electronic products and relays

Pluggable interface relays



CR-M

Ordering details - CR-M range without LED

Version	Outputs	Type	Ordering code	Unit L.P.(₹)
12 V DC	2 c/o (SPDT)	CR-M012DC2	1SVR405611R4000	590
24 V DC		CR-M024DC2	1SVR405611R1000 ■	590
48 V DC		CR-M048DC2	1SVR405611R6000	590
60 V DC		CR-M060DC2	1SVR405611R4200	590
110 V DC		CR-M110DC2	1SVR405611R8000 ■	650
125 V DC		CR-M125DC2	1SVR405611R8200	650
220 V DC		CR-M220DC2	1SVR405611R9000	650
24 V AC		CR-M024AC2	1SVR405611R0000	610
48 V AC		CR-M048AC2	1SVR405611R5000	610
110 V AC		CR-M110AC2	1SVR405611R7000	610
120 V AC	4 c/o (SPDT)	CR-M120AC2	1SVR405611R2000	610
230 V AC		CR-M230AC2	1SVR405611R3000 ■	680
12 V DC		CR-M012DC4	1SVR405613R4000	600
24 V DC		CR-M024DC4	1SVR405613R1000 ■	600
48 V DC		CR-M048DC4	1SVR405613R6000	610
60 V DC		CR-M060DC4	1SVR405613R4200	610
110 V DC		CR-M110DC4	1SVR405613R8000 ■	690
125 V DC		CR-M125DC4	1SVR405613R8200 ■	690
220 V DC		CR-M220DC4	1SVR405613R9000 ■	720
24 V AC		CR-M024AC4	1SVR405613R0000	690
48 V AC		CR-M048AC4	1SVR405613R5000	640
110 V AC		CR-M110AC4	1SVR405613R7000 ■	690
120 V AC		CR-M120AC4	1SVR405613R2000	690
230 V AC		CR-M230AC4	1SVR405613R3000 ■	720

Ordering details - CR-M range with LED

Version	Outputs	Type	Ordering code	Unit L.P.(₹)
12 V DC	2 c/o (SPDT)	CR-M012DC2L	1SVR405611R4100	600
24 V DC		CR-M024DC2L	1SVR405611R1100 ■	600
48 V DC		CR-M048DC2L	1SVR405611R6100	610
60 V DC		CR-M060DC2L	1SVR405611R4300	610
110 V DC		CR-M110DC2L	1SVR405611R8100	690
125 V DC		CR-M125DC2L	1SVR405611R8300	690
220 V DC		CR-M220DC2L	1SVR405611R9100	720
24 V AC		CR-M024AC2L	1SVR405611R0100	690
48 V AC		CR-M048AC2L	1SVR405611R5100	640
110 V AC		CR-M110AC2L	1SVR405611R7100	690
120 V AC	4 c/o (SPDT)	CR-M120AC2L	1SVR405611R2100	690
230 V AC		CR-M230AC2L	1SVR405611R3100	720
12 V DC		CR-M012DC4L	1SVR405613R4100	730
24 V DC		CR-M024DC4L	1SVR405613R1100 ■	730
48 V DC		CR-M048DC4L	1SVR405613R6100	730
60 V DC		CR-M060DC4L	1SVR405613R4300	640
110 V DC		CR-M110DC4L	1SVR405613R8100 ■	810
125 V DC		CR-M125DC4L	1SVR405613R8300	810
220 V DC		CR-M220DC4L	1SVR405613R9100 ■	850
24 V AC		CR-M024AC4L	1SVR405613R0100	810
48 V AC		CR-M048AC4L	1SVR405613R5100	810
110 V AC		CR-M110AC4L	1SVR405613R7100	810
120 V AC		CR-M120AC4L	1SVR405613R2100	740
230 V AC		CR-M230AC4L	1SVR405613R3100 ■	850



CR-M



CR-M4SS

Ordering details - CR-M range accessories

Version	Type	Ordering code	Unit L.P.(₹)
Standard socket for 2 c/o	CR-M2SS	1SVR405651R1000 ■	370
Standard socket for 2/4 c/o	CR-M4SS	1SVR405651R3000 ■	400
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	Unit L.P.(₹)	MOQ
12 V DC	2 c/o (SPDT), 250 V, 7 A	CR-MX012DC2L	1SVR405631R4100	250	250
24 V DC		CR-MX024DC2L	1SVR405631R1100 ■	270	250
48 V DC		CR-MX048DC2L	1SVR405631R6100	290	250
110 V DC		CR-MX110DC2L	1SVR405631R8100 ■	270	250
24 V AC		CR-MX024AC2L	1SVR405631R0100 ■	250	250
110 V AC		CR-MX110AC2L	1SVR405631R7100	250	250
230 V AC	4 c/o (SPDT), 250 V,	CR-MX230AC2L	1SVR405631R3100 ■	290	250
12 V DC		CR-MX012DC4L	1SVR405633R4100	290	250
24 V DC		CR-MX024DC4L	1SVR405633R1100 ■	310	250
48 V DC		CR-MX048DC4L	1SVR405633R6100	320	250
110 V DC		CR-MX110DC4L	1SVR405633R8100 ■	320	250
24 V AC		CR-MX024AC4L	1SVR405633R0100 ■	320	250
110 V AC	5 A	CR-MX110AC4L	1SVR405633R7100 ■	330	250
230 V AC		CR-MX230AC4L	1SVR405633R3100 ■	330	250

Accessories* - CR-MX range

Version	Type	Ordering code	Unit L.P.(₹)	MOQ
For 2 c/o (SPDT) contacts, black	CR-M2SFB	1SVR405651R1400 ■	130	250
For 2 or 4 c/o (SPDT) contacts, black	CR-M4SFB	1SVR405651R3400 ■	170	250
Metal holder	CR-MH1	1SVR405659R1100 ■	40	250

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	Unit L.P.(₹)
100-240 V AC	5 V DC / 3 A	CP-E 5/3.0	1SVR427033R3000	4,510
100-240 V AC	12 V DC / 2.5 A	CP-E 12/2.5	1SVR427032R1000 ■	4,670
115 / 230 V AC auto select	12 V DC / 10 A	CP-E 12/10.0	1SVR427035R1000 ■	8,590
100-240 V AC	24 V DC / 0.75 A	CP-E 24/0.75	1SVR427030R0000	3,430
100-240 V AC	24 V DC / 1.25 A	CP-E 24/1.25	1SVR427031R0000 ■	3,750
100-240 V AC	24 V DC / 2.5 A	CP-E 24/2.5	1SVR427032R0000 ■	3,870
115 / 230 V AC auto select	24 V DC / 5 A	CP-E 24/5.0	1SVR427034R0000 ■	6,960
115 / 230 V AC auto select	24 V DC / 10 A	CP-E 24/10.0	1SVR427035R0000 ■	10,190
115 / 230 V AC	24 V DC / 20 A	CP-E 24/20.0	1SVR427036R0000 ■	18,240
100-240 V AC	48 V DC / 0.625 A	CP-E 48/0.62	1SVR427030R2000	4,820
100-240 V AC	48 V DC / 1.25 A	CP-E 48/1.25	1SVR427031R2000	6,140
115 / 230 V AC auto select	48 V DC / 5 A	CP-E 48/5.0	1SVR427034R2000	12,430
115 / 230 V AC	48 V DC / 10 A	CP-E 48/10.0	1SVR427035R2000 ■	17,710

Note: Refer technical data sheet for DC voltage input range

CP-C.1

Input voltage range	Rated output Voltage/Current	Type	Ordering code	Unit L.P.(₹)
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	Unit L.P.(₹)
340-575 V AC/ 480-820 V DC	24 V DC / 5 A	CP-T 24/5.0	1SVR427054R0000	12,400
340-575 V AC/ 480-820 V DC	24 V DC / 10 A	CP-T 24/10.0	1SVR427055R0000	15,790
340-575 V AC/ 480-820 V DC	24 V DC / 20 A	CP-T 24/20.0	1SVR427056R0000	19,590
340-575 V AC/ 480-820 V DC	24 V DC / 40 A	CP-T 24/40.0	1SVR427057R0000	28,980
340-575 V AC/ 480-820 V DC	48 V DC / 5 A	CP-T 48/5.0	1SVR427054R2000	17,170
340-575 V AC/ 480-820 V DC	48 V DC / 10 A	CP-T 48/10.0	1SVR427055R2000	23,460
340-575 V AC/ 480-820 V DC	48 V DC / 20 A	CP-T 48/20.0	1SVR427056R2000	34,340

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 $I_e = 0.24 - 63$ A in one single device. Compact housing with integrated current transformer for cable cross section up to 25 mm^2 (max. $\varnothing$ 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	Unit 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	

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	Unit 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

2CDC 341 005 F0009



DX122-FBP

2CDC 341 004 F0009



VI150-FBP

2CDC 345 001 S0011



VI155-FBP

2CDC 345 002 S0011

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 ($\cos \phi$), 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	Unit L.P.(₹)
I/O module for UMC100, 24 V DC digital input	DX111	1SAJ611000R0101	
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	Upon request
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	

Other offerings



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.

Other offerings

Ordering details				
Description	Rated supply voltage	Type	Ordering code	Unit 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	

Production-friendly safety systems

from ABB Jokab Safety

Quick-Guard fencing system prevents unauthorised access and offers noise reduction

Magne magnetic lock to keep doors closed during a process

Smile emergency stop to stop machinery when there is a hazard

The Eden sensor monitors that doors are closed

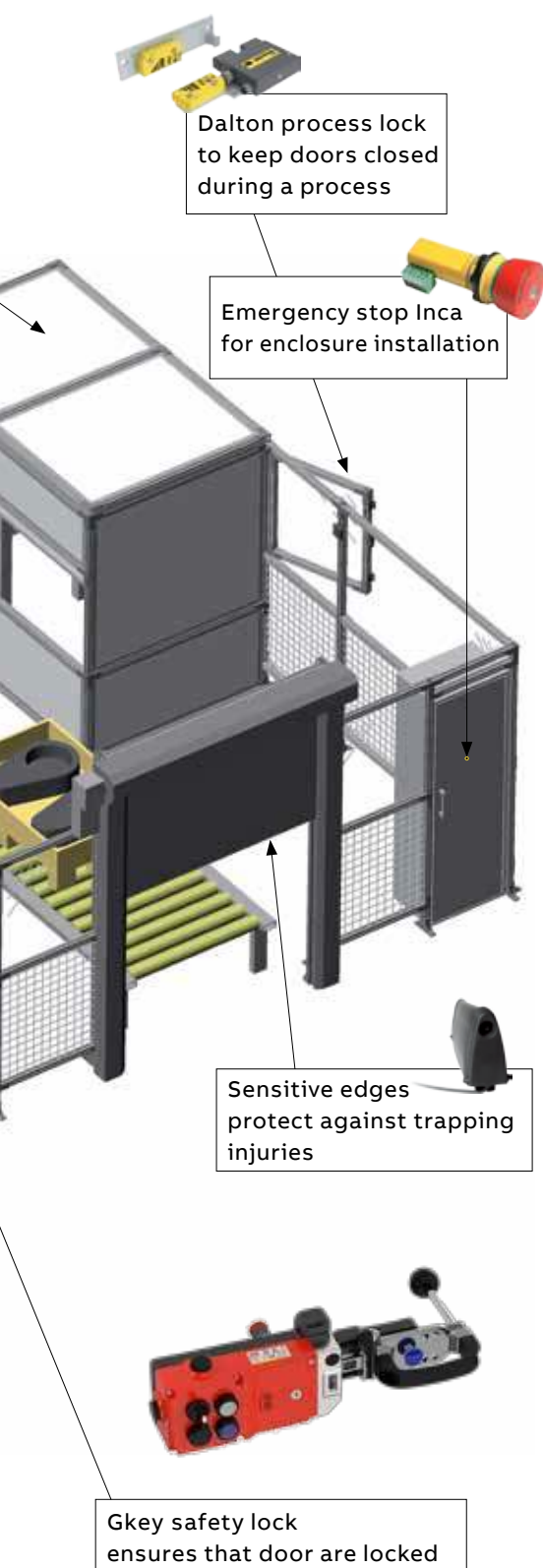
3-position device for troubleshooting

Pluto Safety PLC, Vital and safety relays for monitoring protection

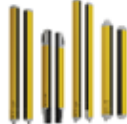
Safeball control device for ergonomic and safe two-handed control

Focus light curtain with finger detection

Focus light beam to provide protection when entering an area



Product groups

	Training & Advice Practical application of standards and regulations, along with CE-labelling.
	Pluto Safety PLC A unique All-Master safety PLC for dynamic and static safety circuits.
	Pluto AS-i Programmable safety system AS-i where all units are connected to the same bus cable and the function of the unit is determined in the PLC program.
	Vital safety controller Dynamic safety circuit for multiple protection according to the highest safety category
	Tina adapter units Transformation of static signals to dynamic safety signals, etc.
	Safety relays The market's most flexible safety relays for different protection purposes and categories.
	Light curtain/light beam/scanner Complete range of light beams, light curtains and scanners.
	Sensors/switches/locks Dynamic non-contact sensors, safety switches, magnetic switches and locks.
	Control devices Ergonomic three-position control units, two-hand control units and foot pedals.
	Emergency stop devices Emergency stop devices for dynamic and static safety circuits.
	Contact strips/Bumpers/Safety mats Sensitive edges, bumpers and safety mats.
	Fencing systems/SafeCAD/Roller doors A stable and flexible fencing system that is easy to install.



Sentry safety relays

Description	Type	Ordering code	Unit L.P.(₹)
24VDC , Safety/Expansion Relay,3 NO + 1 NC - No Time Delay	SENTRY BSR10	2TLA010040R0000	
24VDC,Safety/Expansion Relay,4 NO - No Time Delay	SENTRY BSR11	2TLA010040R0200	
24VDC,Safety/Expansion Relay,4 NO + 1 NC - No Time Delay	SENTRY BSR23	2TLA010041R0600	
24VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay	SENTRY SSR10	2TLA010050R0000	
85-265VAC/120-275VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay	SENTRY SSR10M	2TLA010050R0100	
24VDC,Safety Relay with Relay outputs3 NO + 1 NC - No Time Delay	SENTRY SSR20	2TLA010051R0000	
85-265VAC/120-275VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay	SENTRY SSR20M	2TLA010051R0100	
24VDC,Safety Relay with Relay outputs,2 NO + 2 NO (delayed) - OFF-Delay - 0.5 second.	SENTRY SSR32	2TLA010052R0400	
24VDC,Safety Relay with Relay outputs,2 NO + 2 NO (delayed) - OFF-Delay - 1.5 seconds.	SENTRY SSR42	2TLA010053R0400	Upon request
24VDC,safety relay/safety timer with delayable relay outputs,3 NO + 1 NC - Multifunction - 0 ... 999 seconds.	SENTRY TSR10	2TLA010060R0000	
24VDC,safety expansion timer with delayed relay outputs,3 NO + 1 NC - OFF-Delay - 0.5 and 1.5 seconds.	SENTRY TSR20	2TLA010061R0000	
85-265VAC/120-275VDC,3 NO + 1 NC - OFF-Delay - 0.5 and 1.5 seconds	SENTRY TSR20M	2TLA010061R0100	
24VDC,universal safety relay/safety timer with delayable relay outputs,3 NO + 1 NC - Multifunction - 0 ... 999 seconds.	SENTRY USR10	2TLA010070R0000	
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	
Terminal block for Sentry safety relays. One piece,Contact block	SENTRY S30A	2TLA010099R0000	
Coding kit for terminal blocks for Sentry safety relays.Should be enough for one Sentry relay,Coding kit	SENTRY S30B	2TLA010099R0100	



Safety controller

Description	Type	Ordering code	Unit L.P.(₹)
Safety module with one single channel input for dynamic sensors. Relay outputs 2NO	Vital 1	2TLA020052R1000	Upon request



Programmable safety controller

Description	Type	Ordering code	Unit L.P.(₹)
Pluto AS-i v2 Safety-PLC AS-i bus,Programmable	Pluto Safety PLC	2TLA020070R1100	
Pluto B42 AS-i, Safety-PLC AS-i bus, 42	Pluto Safety PLC	2TLA020070R1400	
Pluto B46 v2 Safety-PLC 24+16+4+2	Pluto Safety PLC	2TLA020070R1700	
Pluto S46 v2 Safety PLC 24+16+4+2 No BUS	Pluto Safety PLC	2TLA020070R1800	
Pluto A20 v2, Safety-PLC	Pluto Safety PLC	2TLA020070R4500	
Pluto B20 v2, Safety-PLC	Pluto Safety PLC	2TLA020070R4600	
Pluto S20 v2, Safety-PLC	Pluto Safety PLC	2TLA020070R4700	
Pluto B22 Safety-PLC	Pluto Safety PLC	2TLA020070R4800	Upon request
Pluto D20 Safety-PLC	Pluto Safety PLC	2TLA020070R6400	
Pluto D20 Safety PLC, Harsh environment	Pluto Safety PLC	2TLA020070R6401	
Pluto D45 Safety-PLC	Pluto Safety PLC	2TLA020070R6600	
Pluto D45 Safety PLC, Harsh environment	Pluto Safety PLC	2TLA020070R6601	
Pluto O2 Safety PLC output module with Pluto safety bus. Safety output module.	Pluto Safety PLC	2TLA020070R8500	

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The System pro M compact® – DIN rail products

System Pro M

System Pro M is a modular system developed by ABB which, is capable of meeting the requirements of the most modern and up-to-date installations for low voltage applications.

MCBs

Miniature circuit-breakers.

RCDs

- Residual current circuit-breakers (RCCBs);
- RCD-blocks;
- Residual current circuit-breakers with overcurrent protection (RCBOs);
- Residual current relays (modular and front panel) with external toroid.

Auxiliary elements

A whole range of accessories and auxiliary elements.

SPDs

Surge protective devices.

Protection devices

In addition to MCBs and RCDs, ABB supplies other modular devices for protection such as fuse holders, fuses, switch disconnectors, insulation monitoring devices etc.

Command devices

This category includes devices that are operated manually to command the electric system: contactors, latching relays, switch-isolators, switches, pushbuttons etc. Typically they are installed to control lights from several points of the same circuit or to pilot user devices with a high number of operations.

Load management devices

Overload relays, load management switches, anti black-out lamps, time switches and the other modular devices in this category react automatically to variations of parameters and other events in the system to allow for plant optimisation.

Measurement devices

The range of devices in this category is very wide, including a great number of auxiliary components and accessories that make installation in switchboards and consumer units practical and economic.

Other devices

The System pro M compact® range also includes bells, transformers, modular sockets etc.



Miniature Circuit Breaker (MCB)

SH200M series

25 mm² cage terminals, a well proven and reliable technology.

IP20 - finger safety.

Scratch and solvent resistant marking due to laser printing. Easy identification of the products in case of maintenance or replacements.

Easy product coding - easy identification - easy life. Basic technical information already integrated into the name.

Don't loose what's important for you - captive screws.

Laser printed EAN code. Easy integration into merchandise management systems and quick identification of devices.

Wiring diagram and basic technical specification printed on the front of the MCB. Save your time - all important data available right away.

Technical Features

Electrical Data	SH200 M
Standards	IS/IEC 60898-1
Poles	1P, 2P, 3P, 4P, 1P + N, 3P + N
Tripping Characteristics	B, C, D
Rated Current	0.5A - 63 A (0.5 A - 40 A in D chr.)
Rated Voltage	1P : 230/400/415 V AC 1P + N : 230 V AC 2...4P : 400/415 V AC 3P + N : 400/415 V AC
Insulation Voltage	250 V AC (Phase to Ground) 440 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	3
Over Voltage Category (B,C upto 40A)	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	No

SH200M - MCBs, C characteristics - 10 kA



SH201M-C

Single pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH201M-C 0.5	0.5	12	1SYS271011R0984	350
SH201M-C 1	1	12	1SYS271011R0014	
SH201M-C 1.6	1.6	12	1SYS271011R0974	
SH201M-C 2	2	12	1SYS271011R0024	
SH201M-C 3	3	12	1SYS271011R0034	
SH201M-C 4	4	12	1SYS271011R0044	
SH201M-C 6	6	12	1SYS271011R0064 ■	238
SH201M-C 10	10	12	1SYS271011R0104 ■	
SH201M-C 16	16	12	1SYS271011R0164 ■	
SH201M-C 20	20	12	1SYS271011R0204 ■	
SH201M-C 25	25	12	1SYS271011R0254 ■	
SH201M-C 32	32	12	1SYS271011R0324 ■	
SH201M-C 40	40	12	1SYS271011R0404 ■	485
SH201M-C 50	50	12	1SYS271011R0504 ■	
SH201M-C 63	63	12	1SYS271011R0634 ■	



SH201M-C NA

Single Pole & neutral

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH201M-C 0.5 NA	0.5	6	1SYS271113R0984	1,000
SH201M-C 1 NA	1	6	1SYS271113R0014	
SH201M-C 1.6 NA	1.6	6	1SYS271113R0974	
SH201M-C 2 NA	2	6	1SYS271113R0024	
SH201M-C 3 NA	3	6	1SYS271113R0034	
SH201M-C 4 NA	4	6	1SYS271113R0044	
SH201M-C 6 NA	6	6	1SYS271113R0064 ■	690
SH201M-C 10 NA	10	6	1SYS271113R0104 ■	
SH201M-C 16 NA	16	6	1SYS271113R0164 ■	
SH201M-C 20 NA	20	6	1SYS271113R0204 ■	
SH201M-C 25 NA	25	6	1SYS271113R0254 ■	
SH201M-C 32 NA	32	6	1SYS271113R0324 ■	
SH201M-C 40 NA	40	6	1SYS271113R0404 ■	1,120
SH201M-C 50 NA	50	6	1SYS271113R0504 ■	
SH201M-C 63 NA	63	6	1SYS271113R0634 ■	



SH202M-C

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH202M-C 0.5	0.5	6	1SYS272011R0984	930
SH202M-C 1	1	6	1SYS272011R0014	
SH202M-C 1.6	1.6	6	1SYS272011R0974	
SH202M-C 2	2	6	1SYS272011R0024	
SH202M-C 3	3	6	1SYS272011R0034	
SH202M-C 4	4	6	1SYS272011R0044	
SH202M-C 6	6	6	1SYS272011R0064 ■	650
SH202M-C 10	10	6	1SYS272011R0104 ■	
SH202M-C 16	16	6	1SYS272011R0164 ■	
SH202M-C 20	20	6	1SYS272011R0204 ■	
SH202M-C 25	25	6	1SYS272011R0254 ■	
SH202M-C 32	32	6	1SYS272011R0324 ■	
SH202M-C 40	40	6	1SYS272011R0404 ■	1,090
SH202M-C 50	50	6	1SYS272011R0504 ■	
SH202M-C 63	63	6	1SYS272011R0634 ■	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP/TPN/FP - 1 No.

■ Stock items

SH200M - MCBs, C characteristics - 10 kA



SH203M-C

Triple pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH203M-C 0.5	0.5	1	1SYS273011R0984	1,380
SH203M-C 1	1	1	1SYS273011R0014	
SH203M-C 1.6	1.6	1	1SYS273011R0974	
SH203M-C 2	2	1	1SYS273011R0024	
SH203M-C 3	3	1	1SYS273011R0034	
SH203M-C 4	4	1	1SYS273011R0044	1,020
SH203M-C 6	6	1	1SYS273011R0064 ■	
SH203M-C 10	10	1	1SYS273011R0104 ■	
SH203M-C 16	16	1	1SYS273011R0164 ■	
SH203M-C 20	20	1	1SYS273011R0204 ■	
SH203M-C 25	25	1	1SYS273011R0254 ■	1,650
SH203M-C 32	32	1	1SYS273011R0324 ■	
SH203M-C 40	40	1	1SYS273011R0404 ■	
SH203M-C 50	50	1	1SYS273011R0504 ■	
SH203M-C 63	63	1	1SYS273011R0634 ■	



SH203M-C NA

Triple pole & neutral

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH203M-C 0.5 NA	0.5	1	1SYS273113R0984	2,040
SH203M-C 1 NA	1	1	1SYS273113R0014	
SH203M-C 1.6 NA	1.6	1	1SYS273113R0974	
SH203M-C 2 NA	2	1	1SYS273113R0024	
SH203M-C 3 NA	3	1	1SYS273113R0034	
SH203M-C 4 NA	4	1	1SYS273113R0044	1,400
SH203M-C 6 NA	6	1	1SYS273113R0064 ■	
SH203M-C 10 NA	10	1	1SYS273113R0104 ■	
SH203M-C 16 NA	16	1	1SYS273113R0164 ■	
SH203M-C 20 NA	20	1	1SYS273113R0204 ■	
SH203M-C 25 NA	25	1	1SYS273113R0254 ■	2,080
SH203M-C 32 NA	32	1	1SYS273113R0324 ■	
SH203M-C 40 NA	40	1	1SYS273113R0404 ■	
SH203M-C 50 NA	50	1	1SYS273113R0504	
SH203M-C 63 NA	63	1	1SYS273113R0634 ■	



SH204M-C

Four pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH204M-C 0.5	0.5	1	1SYS274011R0984	1,930
SH204M-C 1	1	1	1SYS274011R0014	
SH204M-C 1.6	1.6	1	1SYS274011R0974	
SH204M-C 2	2	1	1SYS274011R0024	
SH204M-C 3	3	1	1SYS274011R0034	
SH204M-C 4	4	1	1SYS274011R0044	1,400
SH204M-C 6	6	1	1SYS274011R0064 ■	
SH204M-C 10	10	1	1SYS274011R0104 ■	
SH204M-C 16	16	1	1SYS274011R0164 ■	
SH204M-C 20	20	1	1SYS274011R0204 ■	
SH204M-C 25	25	1	1SYS274011R0254 ■	1,980
SH204M-C 32	32	1	1SYS274011R0324 ■	
SH204M-C 40	40	1	1SYS274011R0404 ■	
SH204M-C 50	50	1	1SYS274011R0504 ■	
SH204M-C 63	63	1	1SYS274011R0634 ■	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP/TPN/FP - 1 No.

■ Stock items

SH200M - MCBs, D characteristics - 10 kA



SH201M-D

Single pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH201M-D 0.5	0.5	12	1SYS271011R0981	400
SH201M-D 1	1	12	1SYS271011R0011	
SH201M-D 1.6	1.6	12	1SYS271011R0971	
SH201M-D 2	2	12	1SYS271011R0021	
SH201M-D 3	3	12	1SYS271011R0031	
SH201M-D 4	4	12	1SYS271011R0041	
SH201M-D 6	6	12	1SYS271011R0061	290
SH201M-D 10	10	12	1SYS271011R0101	
SH201M-D 16	16	12	1SYS271011R0161	
SH201M-D 20	20	12	1SYS271011R0201	
SH201M-D 25	25	12	1SYS271011R0251	
SH201M-D 32	32	12	1SYS271011R0321	
SH201M-D 40	40	12	1SYS271011R0401	540



SH202M-D

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH202M-D 0.5	0.5	6	1SYS272011R0981	1,100
SH202M-D 1	1	6	1SYS272011R0011	
SH202M-D 1.6	1.6	6	1SYS272011R0971	
SH202M-D 2	2	6	1SYS272011R0021	
SH202M-D 3	3	6	1SYS272011R0031	
SH202M-D 4	4	6	1SYS272011R0041	
SH202M-D 6	6	6	1SYS272011R0061	780
SH202M-D 10	10	6	1SYS272011R0101	
SH202M-D 16	16	6	1SYS272011R0161	
SH202M-D 20	20	6	1SYS272011R0201	
SH202M-D 25	25	6	1SYS272011R0251	
SH202M-D 32	32	6	1SYS272011R0321	
SH202M-D 40	40	6	1SYS272011R0401	1,290

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP/TPN/FP - 1 No.

SH200M - MCBs, D characteristics - 10 kA



SH203M-D

Triple pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH203M-D 0.5	0.5	1	1SYS273011R0981	1,640
SH203M-D 1	1	1	1SYS273011R0011	
SH203M-D 1.6	1.6	1	1SYS273011R0971	
SH203M-D 2	2	1	1SYS273011R0021	
SH203M-D 3	3	1	1SYS273011R0031	
SH203M-D 4	4	1	1SYS273011R0041	
SH203M-D 6	6	1	1SYS273011R0061	1,240
SH203M-D 10	10	1	1SYS273011R0101	
SH203M-D 16	16	1	1SYS273011R0161	
SH203M-D 20	20	1	1SYS273011R0201	
SH203M-D 25	25	1	1SYS273011R0251	
SH203M-D 32	32	1	1SYS273011R0321	
SH203M-D 40	40	1	1SYS273011R0401	1,950



SH204M-D

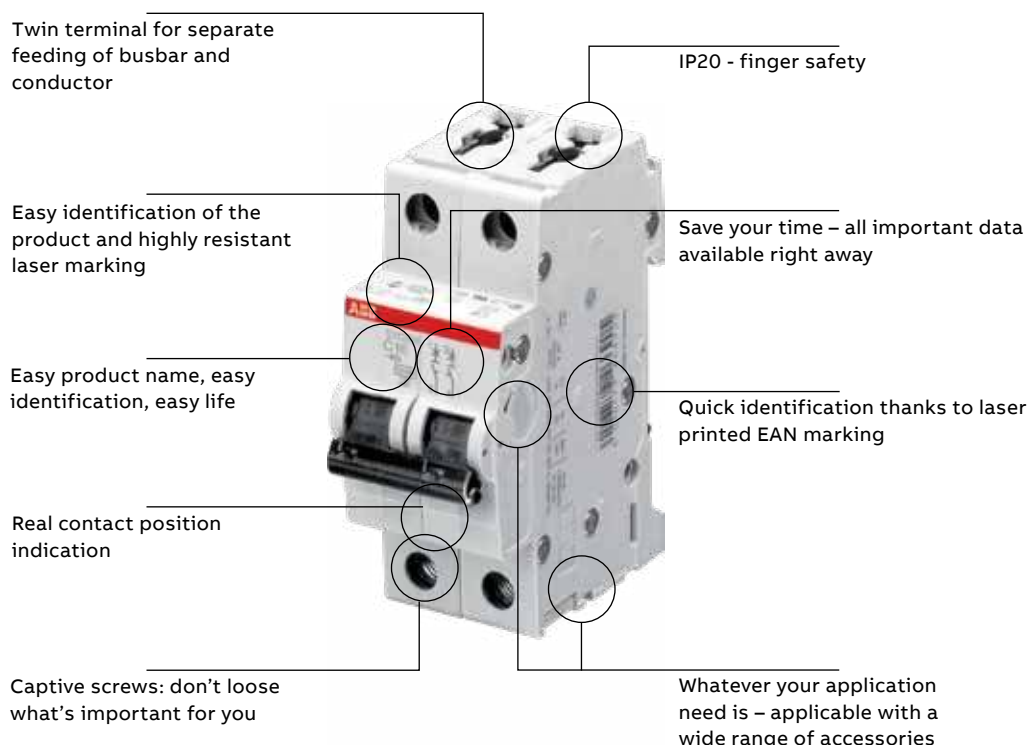
Four pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
SH204M-D 0.5	0.5	1	1SYS274011R0981	2,150
SH204M-D 1	1	1	1SYS274011R0011	
SH204M-D 1.6	1.6	1	1SYS274011R0971	
SH204M-D 2	2	1	1SYS274011R0021	
SH204M-D 3	3	1	1SYS274011R0031	
SH204M-D 4	4	1	1SYS274011R0041	
SH204M-D 6	6	1	1SYS274011R0061	1,710
SH204M-D 10	10	1	1SYS274011R0101	
SH204M-D 16	16	1	1SYS274011R0161	
SH204M-D 20	20	1	1SYS274011R0201	
SH204M-D 25	25	1	1SYS274011R0251	
SH204M-D 32	32	1	1SYS274011R0321	
SH204M-D 40	40	1	1SYS274011R0401	2,260

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP/TPN/FP - 1 No.

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 : 60 V DC
	1P + N : 230 V AC	2P : 120 V DC
	2...4P : 400 V AC	
	3P + N : 400 V AC	
Insulation voltage	250 V AC (Phase to ground)	
	500 V AC (Phase to phase)	
Max operating voltage	1P: 253 V AC	
Min operating voltage	2...4P : 440 V AC	
Rated frequency	12 V AC	
Rated short circuit capacity	50/60 Hz	
Energy limiting class (B, C upto 40 A)	10kA	
Over voltage category	3	
Pollution degree	III	
Rated impulse withstand voltage	2	
Dielectric test voltage	4kV (Test Voltage 6.2kV at Sea Level, 5kV at 2,000 m)	
Accessories mountable	2kV (50/60 Hz, 1 min)	
Cross-section of conductor (top / bottom)	Yes	
Terminal	35 mm ²	
Contact position indication	Fail safe bi-directional cylinder - lift terminal	
Real 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



S201M-C

Single pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S201M-C 0.5	0.5	12	2CDS271001R0984	465
S201M-C 1	1	12	2CDS271001R0014	
S201M-C 1.6	1.6	12	2CDS271001R0974	
S201M-C 2	2	12	2CDS271001R0024	
S201M-C 3	3	12	2CDS271001R0034	
S201M-C 4	4	12	2CDS271001R0044	
S201M-C 6	6	12	2CDS271001R0064 ■	285
S201M-C 10	10	12	2CDS271001R0104 ■	
S201M-C 16	16	12	2CDS271001R0164 ■	
S201M-C 20	20	12	2CDS271001R0204 ■	
S201M-C 25	25	12	2CDS271001R0254 ■	
S201M-C 32	32	12	2CDS271001R0324 ■	
S201M-C 40	40	12	2CDS271001R0404	580
S201M-C 50	50	12	2CDS271001R0504	
S201M-C 63	63	12	2CDS271001R0634 ■	



S201M-C NA

Single pole & neutral

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S201M-C 0.5 NA	0.5	6	2CDS271103R0984	1,195
S201M-C 1 NA	1	6	2CDS271103R0014	
S201M-C 1.6 NA	1.6	6	2CDS271103R0974	
S201M-C 2 NA	2	6	2CDS271103R0024	
S201M-C 3 NA	3	6	2CDS271103R0034	
S201M-C 4 NA	4	6	2CDS271103R0044	
S201M-C 6 NA	6	6	2CDS271103R0064	865
S201M-C 10 NA	10	6	2CDS271103R0104	
S201M-C 16 NA	16	6	2CDS271103R0164	
S201M-C 20 NA	20	6	2CDS271103R0204	
S201M-C 25 NA	25	6	2CDS271103R0254	
S201M-C 32 NA	32	6	2CDS271103R0324	
S201M-C 40 NA	40	6	2CDS271103R0404	1,465
S201M-C 50 NA	50	6	2CDS271103R0504	
S201M-C 63 NA	63	6	2CDS271103R0634	



S202M-C

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S202M-C 0.5	0.5	6	2CDS272001R0984	1,200
S202M-C 1	1	6	2CDS272001R0014	
S202M-C 1.6	1.6	6	2CDS272001R0974	
S202M-C 2	2	6	2CDS272001R0024	
S202M-C 3	3	6	2CDS272001R0034	
S202M-C 4	4	6	2CDS272001R0044	
S202M-C 6	6	6	2CDS272001R0064 ■	880
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 ■	1,365
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/TPN/FP - 1 No.

■ Stock items

S200M - MCBs, C characteristics - 10 kA



S203M-C

Triple pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S203M-C 0.5	0.5	1	2CDS273001R0984	1,825
S203M-C 1	1	1	2CDS273001R0014	
S203M-C 1.6	1.6	1	2CDS273001R0974	
S203M-C 2	2	1	2CDS273001R0024	
S203M-C 3	3	1	2CDS273001R0034	
S203M-C 4	4	1	2CDS273001R0044	
S203M-C 6	6	1	2CDS273001R0064 ■	1,365
S203M-C 10	10	1	2CDS273001R0104 ■	
S203M-C 16	16	1	2CDS273001R0164 ■	
S203M-C 20	20	1	2CDS273001R0204 ■	
S203M-C 25	25	1	2CDS273001R0254 ■	
S203M-C 32	32	1	2CDS273001R0324 ■	
S203M-C 40	40	1	2CDS273001R0404 ■	2,090
S203M-C 50	50	1	2CDS273001R0504	
S203M-C 63	63	1	2CDS273001R0634 ■	



S203M-C NA

Triple pole & neutral

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S203M-C 0.5 NA	0.5	1	2CDS273103R0984	2,430
S203M-C 1 NA	1	1	2CDS273103R0014	
S203M-C 1.6 NA	1.6	1	2CDS273103R0974	
S203M-C 2 NA	2	1	2CDS273103R0024	
S203M-C 3 NA	3	1	2CDS273103R0034	
S203M-C 4 NA	4	1	2CDS273103R0044	
S203M-C 6 NA	6	1	2CDS273103R0064	1,765
S203M-C 10 NA	10	1	2CDS273103R0104	
S203M-C 16 NA	16	1	2CDS273103R0164	
S203M-C 20 NA	20	1	2CDS273103R0204 ■	
S203M-C 25 NA	25	1	2CDS273103R0254 ■	
S203M-C 32 NA	32	1	2CDS273103R0324 ■	
S203M-C 40 NA	40	1	2CDS273103R0404 ■	2,670
S203M-C 50 NA	50	1	2CDS273103R0504 ■	
S203M-C 63 NA	63	1	2CDS273103R0634 ■	



S204M-C

Four pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S204M-C 0.5	0.5	1	2CDS274001R0984	2,325
S204M-C 1	1	1	2CDS274001R0014	
S204M-C 1.6	1.6	1	2CDS274001R0974	
S204M-C 2	2	1	2CDS274001R0024	
S204M-C 3	3	1	2CDS274001R0034	
S204M-C 4	4	1	2CDS274001R0044	
S204M-C 6	6	1	2CDS274001R0064 ■	1,755
S204M-C 10	10	1	2CDS274001R0104 ■	
S204M-C 16	16	1	2CDS274001R0164 ■	
S204M-C 20	20	1	2CDS274001R0204 ■	
S204M-C 25	25	1	2CDS274001R0254 ■	
S204M-C 32	32	1	2CDS274001R0324 ■	
S204M-C 40	40	1	2CDS274001R0404 ■	2,635
S204M-C 50	50	1	2CDS274001R0504	
S204M-C 63	63	1	2CDS274001R0634 ■	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP/TPN/FP - 1 No.

■ Stock items

S200M - MCBs, D characteristics - 10 kA



S201M-D

Single pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S201M-D 0.5	0.5	12	2CDS271001R0981	470
S201M-D 1	1	12	2CDS271001R0011	
S201M-D 1.6	1.6	12	2CDS271001R0971	
S201M-D 2	2	12	2CDS271001R0021	
S201M-D 3	3	12	2CDS271001R0031	
S201M-D 4	4	12	2CDS271001R0041	
S201M-D 6	6	12	2CDS271001R0061	395
S201M-D 10	10	12	2CDS271001R0101	
S201M-D 16	16	12	2CDS271001R0161	
S201M-D 20	20	12	2CDS271001R0201	
S201M-D 25	25	12	2CDS271001R0251	
S201M-D 32	32	12	2CDS271001R0321	
S201M-D 40	40	12	2CDS271001R0401	740
S201M-D 50	50	12	2CDS271001R0501	
S201M-D 63	63	12	2CDS271001R0631	



S202M-D

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S202M-D 0.5	0.5	6	2CDS272001R0981	1,395
S202M-D 1	1	6	2CDS272001R0011	
S202M-D 1.6	1.6	6	2CDS272001R0971	
S202M-D 2	2	6	2CDS272001R0021	
S202M-D 3	3	6	2CDS272001R0031	
S202M-D 4	4	6	2CDS272001R0041	
S202M-D 6	6	6	2CDS272001R0061	915
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	1,585
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/TPN/FP - 1 No.

S200M - MCBs, D characteristics - 10 kA



S203M-D

Triple pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S203M-D 0.5	0.5	1	2CDS273001R0981	1,980
S203M-D 1	1	1	2CDS273001R0011	
S203M-D 1.6	1.6	1	2CDS273001R0971	
S203M-D 2	2	1	2CDS273001R0021	
S203M-D 3	3	1	2CDS273001R0031	
S203M-D 4	4	1	2CDS273001R0041	1,610
S203M-D 6	6	1	2CDS273001R0061	
S203M-D 10	10	1	2CDS273001R0101	
S203M-D 16	16	1	2CDS273001R0161	
S203M-D 20	20	1	2CDS273001R0201	
S203M-D 25	25	1	2CDS273001R0251	2,395
S203M-D 32	32	1	2CDS273001R0321	
S203M-D 40	40	1	2CDS273001R0401	
S203M-D 50	50	1	2CDS273001R0501	
S203M-D 63	63	1	2CDS273001R0631	



S204M-D

Four pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
S204M-D 0.5	0.5	1	2CDS274001R0981	2,660
S204M-D 1	1	1	2CDS274001R0011	
S204M-D 1.6	1.6	1	2CDS274001R0971	
S204M-D 2	2	1	2CDS274001R0021	
S204M-D 3	3	1	2CDS274001R0031	
S204M-D 4	4	1	2CDS274001R0041	2,015
S204M-D 6	6	1	2CDS274001R0061	
S204M-D 10	10	1	2CDS274001R0101	
S204M-D 16	16	1	2CDS274001R0161	
S204M-D 20	20	1	2CDS274001R0201	
S204M-D 25	25	1	2CDS274001R0251	3,000
S204M-D 32	32	1	2CDS274001R0321	
S204M-D 40	40	1	2CDS274001R0401	
S204M-D 50	50	1	2CDS274001R0501	
S204M-D 63	63	1	2CDS274001R0631	

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP/TPN/FP - 1 No.

Miniature circuit-breaker (MCB)

S200M DC - MCB for DC applications



S200 M DC MCB in System pro M compact range impresses with its performance range, approvals and high inbuilt short circuit breaking capacity in DC applications. S200 M DC MCBs

can be used in 1-pole version at 220V DC and in 2-pole version up to 440V DC. During the installation process it is necessary to take into account, the polarity marked on the device.

Technical features

Electrical data	S200 M DC	
Standards	IEC / EN 60947-2	
Poles	1P, 2P	
Tripping characteristics curve	C	
Rated current	1.6A - 63 A	
Rated voltage	1P : 220 V DC	2P : 440V DC
Maximum power frequency recovery voltage, U _{max}	1P : 250V DC	2P : 500V DC
Min. operating voltage	12 V DC	
Rated ultimate short-circuit breaking capacity, I _{cu}	10kA	
Rated service short-circuit breaking capacity, I _{cs}	10kA	
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	
Accessories mountable	Yes (All System ProM Compact accessories)	
Housing	Insulation group I, RAL 7035	
Toggle	Insulation group II, black, sealable	
Ambient temperature	-25..... +55°C	
Storage temperature	-40..... +70°C	
Torque	2.8 Nm	
Screwdriver	No. 2 Pozidrive	
Mounting	On DIN rail 35 mm acc. to EN 60715 by fast clip	
Mounting position	any	
Mounting dimensions acc. To DIN 43880	1	
Pole dimensions (H X D X W)	85 X 69 X 17.5	
Pole weight	approx. 125g	

S200M - DC, C characteristics - 10 kA



S201M-C DC

Single pole

Description	Current rating (A)	Pack Unit (Pc)	Ordering code	Unit L.P. (₹)
S201M-C1,6DC	1.6	12	2CDS271064R0974	755
S201M-C2DC	2	12	2CDS271064R0024	
S201M-C3DC	3	12	2CDS271064R0034	
S201M-C4DC	4	12	2CDS271064R0044	
S201M-C6DC	6	12	2CDS271064R0064	620
S201M-C10DC	10	12	2CDS271064R0104	
S201M-C16DC	16	12	2CDS271064R0164	
S201M-C20DC	20	12	2CDS271064R0204	
S201M-C25DC	25	12	2CDS271064R0254	790
S201M-C32DC	32	12	2CDS271064R0324	
S201M-C40DC	40	12	2CDS271064R0404	
S201M-C50DC	50	12	2CDS271064R0504	
S201M-C63DC	63	12	2CDS271064R0634	



S202M-C DC

Double Pole

Description	Current rating (A)	Pack Unit (Pc)	Ordering code	Unit L.P. (₹)
S202M-C1,6DC	1.6	6	2CDS272064R0974	1,600
S202M-C2DC	2	6	2CDS272064R0024	
S202M-C3DC	3	6	2CDS272064R0034	
S202M-C4DC	4	6	2CDS272064R0044	
S202M-C6DC	6	6	2CDS272064R0064	1,290
S202M-C10DC	10	6	2CDS272064R0104	
S202M-C16DC	16	6	2CDS272064R0164	
S202M-C20DC	20	6	2CDS272064R0204	
S202M-C25DC	25	6	2CDS272064R0254	1,745
S202M-C32DC	32	6	2CDS272064R0324	
S202M-C40DC	40	6	2CDS272064R0404	
S202M-C50DC	50	6	2CDS272064R0504	
S202M-C63DC	63	6	2CDS272064R0634	

Note: Standard packing quantity for MCBs: SP - 12 Nos, DP - 6 Nos

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	Unit L.P. (₹)
Single pole				
S201-C80	80	1	2CDS251001R0804	2,295
S201-C100	100	1	2CDS251001R0824	2,685
Single pole & neutral				
S201-C80NA	80	1	2CDS251103R0804	4,800
S201-C100NA	100	1	2CDS251103R0824	5,730
Double pole				
S202-C80	80	1	2CDS252001R0804	4,500
S202-C100	100	1	2CDS252001R0824	5,200
Triple pole				
S203-C80	80	1	2CDS253001R0804	6,550
S203-C100	100	1	2CDS253001R0824	7,925
Triple pole & neutral				
S203-C80NA	80	1	2CDS253103R0804	9,850
S203-C100NA	100	1	2CDS253103R0824	11,740
Four pole				
S204-C80	80	1	2CDS254001R0804	9,200
S204-C100	100	1	2CDS254001R0824	9,950

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	Unit L.P. (₹)
S801B-C32	32	1	2CCS811001R0324	2,285
S801B-C40	40	1	2CCS811001R0404	2,285
S801B-C50	50	1	2CCS811001R0504	2,400
S801B-C63	63	1	2CCS811001R0634	2,400
S801B-C80	80	1	2CCS811001R0804	2,800
S801B-C100	100	1	2CCS811001R0824	2,950
S801B-C125	125	1	2CCS811001R0844	3,100

Double pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit L.P. (₹)
S802B-C32	32	1	2CCS812001R0324	4,800
S802B-C40	40	1	2CCS812001R0404	4,800
S802B-C50	50	1	2CCS812001R0504	5,040
S802B-C63	63	1	2CCS812001R0634	5,040
S802B-C80	80	1	2CCS812001R0804	5,800
S802B-C100	100	1	2CCS812001R0824	6,200
S802B-C125	125	1	2CCS812001R0844	6,500

Triple pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit L.P. (₹)
S803B-C32	32	1	2CCS813001R0324	7,300
S803B-C40	40	1	2CCS813001R0404	7,300
S803B-C50	50	1	2CCS813001R0504	7,680
S803B-C63	63	1	2CCS813001R0634	7,680
S803B-C80	80	1	2CCS813001R0804	8,960
S803B-C100	100	1	2CCS813001R0824	9,440
S803B-C125	125	1	2CCS813001R0844	9,920

Four pole

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit L.P. (₹)
S804B-C32	32	1	2CCS814001R0324	9,820
S804B-C40	40	1	2CCS814001R0404	9,820
S804B-C50	50	1	2CCS814001R0504	10,320
S804B-C63	63	1	2CCS814001R0634	10,320
S804B-C80	80	1	2CCS814001R0804	12,040
S804B-C100	100	1	2CCS814001R0824	12,680
S804B-C125	125	1	2CCS814001R0844	13,330

Isolators

SHD series

Isolator for panel installation onto DIN rail acc. to DIN EN 60715

Mounting depth : 70 mm

Mounting width : per pole = 17.5 mm = 1 module

Colour : grey, RAL 7035

Colour of switch lever : red RAL 3000®

Captive screws with recessed/slotted head, Pozidrive size 2

Compatibility for Locking device (unauthorized ON/OFF)



SHD201

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
Double pole				
SHD202/25	25	6	1SYD272111R0025 ■	490
SHD202/40	40	6	1SYD272111R0040 ■	525
SHD202/63	63	6	1SYD272111R0063 ■	695
Triple pole				
SHD203/25	25	4	1SYD273111R0025 ■	825
SHD203/40	40	4	1SYD273111R0040 ■	900
SHD203/63	63	4	1SYD273111R0063 ■	1,050
Four pole				
SHD204/25	25	3	1SYD274111R0025 ■	920
SHD204/40	40	3	1SYD274111R0040 ■	1,115
SHD204/63	63	3	1SYD274111R0063 ■	1,235

Note: Standard packing quantity for SHD Isolators: SP - 12 Nos, DP - 6 Nos, TP - 4 Nos, FP - 3 Nos.



E201

Description	Current rating (A)	Pack unit (Pc)	Ordering code	Unit L.P.(₹)
Double pole				
E202/80r	80	1	2CDE282001R0080	900
E202/100r	100	1	2CDE282001R0100	1,415
E202/125r	125	1	2CDE282001R0125	1,460
Triple pole				
E203/80r	80	1	2CDE283001R0080	1,510
E203/100r	100	1	2CDE283001R0100	1,650
E203/125r	125	1	2CDE283001R0125	1,850
Four pole				
E204/80r	80	1	2CDE284001R0080	1,700
E204/100r	100	1	2CDE284001R0100	1,800
E204/125r	125	1	2CDE284001R0125	2,010



E213

Change over switch

Description	Ordering code	Unit L.P.(₹)
E213-16-002, double pole change over switch, 16 A (I-II)	2CCA703045R0001	2,050
E213-25-002, double pole change over switch, 25 A (I-II)	2CCA703046R0001	2,550
E214-16-202, group switch, 16 A (I-O-II)	2CCA703030R0001	2,315
E214-25-202, group switch, 25 A (I-O-II)	2CCA703031R0001	2,585

Residual current circuit breaker (RCCB)

FH200 Series

Test pushbutton to verify the correct functioning of the device.

Bi-directional cylindrical terminal ensures higher safety of connecting operations, making them easier.

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.



Technical data	FH200
Standards	IEC/EN 61008; IS 12640-1: 2008
Type (wave form of the earth leakage sensed)	AC
Poles	2P, 4P
Rated current I_n	25, 40, 63 A
Rated sensitivity $I_{\Delta n}$	30, 100, 300 mA
Rated voltage U_e	230/400 - 240/415 V
Insulation voltage U_i	500 V
Max. operating voltage of circuit test	254 V
Min. operating voltage of circuit test	110 V
Rated frequency	50..60 Hz
Dielectric test voltage at ind. freq. for 1 min.	2.5 kV
Mechanical features	
Toggle	BLACK sealable in ON-OFF position
Contact position indicator (CPI)	not available
Ambient temperature (with daily average $\leq +35^\circ\text{C}$)	-5..... +40°C
Storage temperature	-40..... +70°C
Installation	
Terminal type	Failsafe bi-directional cylinder-lift terminal at top and bottom (shock protected)
Terminal size top/bottom for cable	25/25 mm ²
Terminal size top/bottom for busbar	10/10 mm ²
Tightening torque	2.8 N*m
Connection	from top and bottom
Accessories mountability	No

Residual current circuit breaker (RCCB) 1SYF202006R1400

FH200 series



FH202 AC

Two pole

Product description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
FH202 AC-25/0.03	25	30	1	1SYF202006R1250 ■	2,440
FH202 AC-25/0.1	25	100	1	1SYF202006R2250 ■	2,585
FH202 AC-25/0.3	25	300	1	1SYF202006R3250	2,605
FH202 AC-40/0.03	40	30	1	1SYF202006R1400 ■	2,695
FH202 AC-40/0.1	40	100	1	1SYF202006R2400 ■	2,815
FH202 AC-40/0.3	40	300	1	1SYF202006R3400	2,825
FH202 AC-63/0.03	63	30	1	1SYF202006R1630 ■	3,200
FH202 AC-63/0.1	63	100	1	1SYF202006R2630 ■	3,465
FH202 AC-63/0.3	63	300	1	1SYF202006R3630	3,520



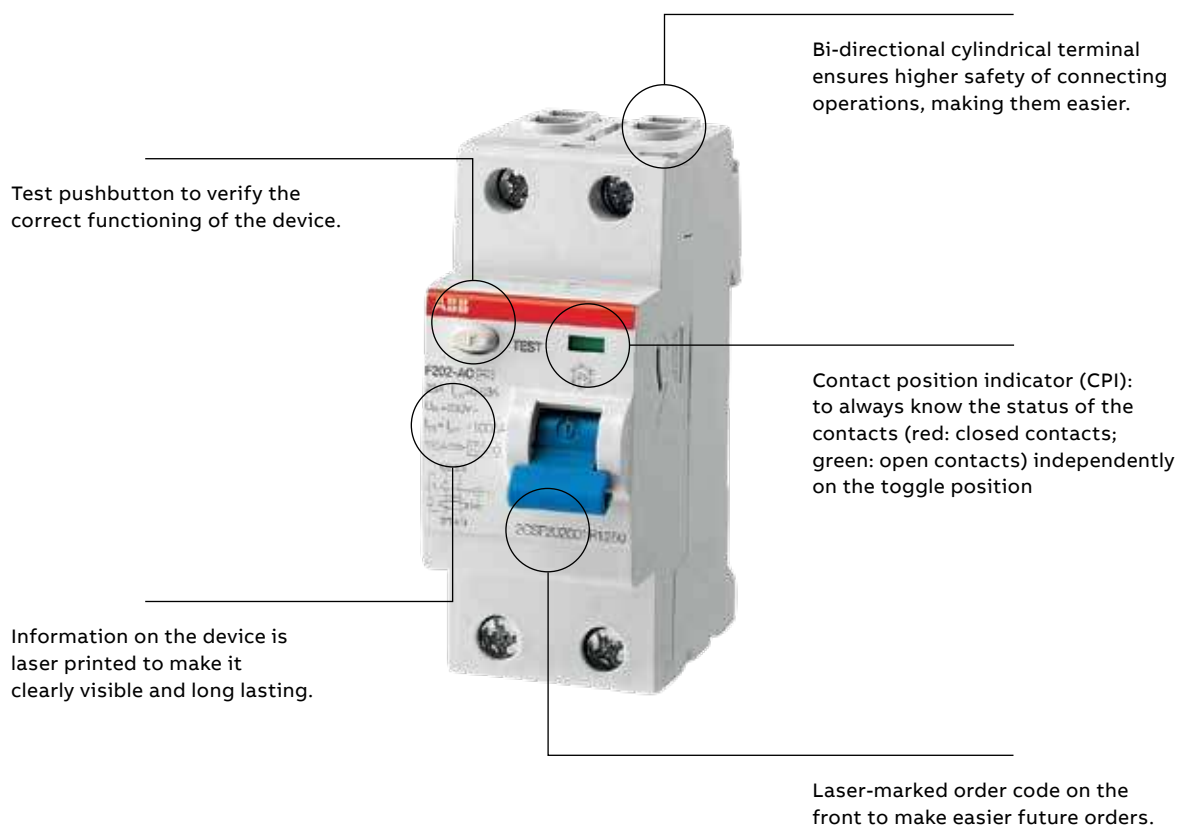
FH204 AC

Four pole

Product description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
FH204 AC-25/0.03	25	30	1	1SYF204006R1250	3,195
FH204 AC-25/0.1	25	100	1	1SYF204006R2250	3,325
FH204 AC-25/0.3	25	300	1	1SYF204006R3250	3,350
FH204 AC-40/0.03	40	30	1	1SYF204006R1400 ■	3,275
FH204 AC-40/0.1	40	100	1	1SYF204006R2400 ■	3,375
FH204 AC-40/0.3	40	300	1	1SYF204006R3400 ■	3,470
FH204 AC-63/0.03	63	30	1	1SYF204006R1630	3,630
FH204 AC-63/0.1	63	100	1	1SYF204006R2630 ■	3,805
FH204 AC-63/0.3	63	300	1	1SYF204006R3630 ■	3,925

Residual current circuit breaker (RCCB)

F200 series



Technical data	F200
Standards	IEC/EN 61008; IS 12640-1: 2008
Type (wave form of the earth leakage sensed)	AC
Poles	2P, 4P
Rated current I_n	25, 40, 63, 80, 100 & 125 A
Rated sensitivity $I_{\Delta n}$	30, 100, 300 mA
Rated voltage U_e	230/400 - 240/415 V
Insulation voltage U_i	500 V
Max. operating voltage of circuit test	254 V
Min. operating voltage of circuit test	110 V
Rated frequency	50..60 Hz
Dielectric test voltage at ind. freq. for 1 min.	2.5 kV
Mechanical features	
Toggle	BLUE sealable in ON-OFF position
Contact position indicator (CPI)	yes
Ambient temperature (with daily average $\leq +35^\circ\text{C}$)	$-25..+55^\circ\text{C}$
Storage temperature	$-40...+70^\circ\text{C}$
Installation	
Terminal type	Failsafe bi-directional cylinder-lift terminal at top and bottom (shock protected)
Terminal size top/bottom for cable	25/25 mm ²
Terminal size top/bottom for busbar	10/10 mm ²
Tightening torque	2.8 N*m
Connection	from top and bottom
Accessories mountability	Yes

Residual current circuit breaker (RCCB)

F200 series



F202 AC

Two pole

Product Description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
F202 AC-25/0,03	25	30	1	1SYF202005R1250 ■	2,775
F202 AC-25/0,1	25	100	1	1SYF202005R2250 ■	2,860
F202 AC-25/0,3	25	300	1	1SYF202005R3250	3,045
F202 AC-40/0,03	40	30	1	1SYF202005R1400 ■	3,005
F202 AC-40/0,1	40	100	1	1SYF202005R2400 ■	3,460
F202 AC-40/0,3	40	300	1	1SYF202005R3400	3,480
F202 AC-63/0,03	63	30	1	1SYF202005R1630 ■	3,500
F202 AC-63/0,1	63	100	1	1SYF202005R2630 ■	3,745
F202 AC-63/0,3	63	300	1	1SYF202005R3630	3,990
F202 AC-80/0,03	80	30	1	2CSF202005R1800	8,985
F202 AC-80/0,1	80	100	1	2CSF202005R2800	8,910
F202 AC-80/0,3	80	300	1	2CSF202005R3800	8,910
F202 AC-100/0,03	100	30	1	2CSF202005R1900	8,045
F202 AC-100/0,1	100	100	1	2CSF202005R2900	8,420
F202 AC-100/0,3	100	300	1	2CSF202005R3900	9,125



F204 AC

Four pole

Product Description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	Unit M.R.P.(₹)
F204 AC-25/0,03	25	30	1	1SYF204005R1250	3,980
F204 AC-25/0,1	25	100	1	1SYF204005R2250	4,060
F204 AC-25/0,3	25	300	1	1SYF204005R3250	4,285
F204 AC-40/0,03	40	30	1	1SYF204005R1400 ■	3,770
F204 AC-40/0,1	40	100	1	1SYF204005R2400 ■	3,915
F204 AC-40/0,3	40	300	1	1SYF204005R3400 ■	4,245
F204 AC-63/0,03	63	30	1	1SYF204005R1630	4,370
F204 AC-63/0,1	63	100	1	1SYF204005R2630 ■	4,575
F204 AC-63/0,3	63	300	1	1SYF204005R3630 ■	4,710
F204 AC-80/0,03	80	30	1	2CSF204005R1800	9,525
F204 AC-80/0,1	80	100	1	2CSF204005R2800	9,955
F204 AC-80/0,3	80	300	1	2CSF204005R3800	10,055
F204 AC-100/0,03	100	30	1	2CSF204005R1900	9,685
F204 AC-100/0,1	100	100	1	2CSF204005R2900	10,770
F204 AC-100/0,3	100	300	1	2CSF204005R3900	10,505
F204 AC-125/0,03	125	30	1	2CSF204001R1950	13,740
F204 AC-125/0,1	125	100	1	2CSF204001R2950	16,180
F204 AC-125/0,3	125	300	1	2CSF204001R3950	35,000

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	Unit L.P.(₹)
DS201 M C6 AC30	6	30	1	2CSR275040R1064	3,300
DS201 M C6 AC100	6	100	1	2CSR275040R2064	3,430
DS201 M C6 AC300	6	300	1	2CSR275040R3064	3,610
DS201 M C10 AC30	10	30	1	2CSR275040R1104	3,250
DS201 M C10 AC100	10	100	1	2CSR275040R2104	3,380
DS201 M C10 AC300	10	300	1	2CSR275040R3104	3,560
DS201 M C16 AC30	16	30	1	2CSR275040R1164	3,195
DS201 M C16 AC100	16	100	1	2CSR275040R2164	3,330
DS201 M C16 AC300	16	300	1	2CSR275040R3164	3,510
DS201 M C20 AC30	20	30	1	2CSR275040R1204	3,195
DS201 M C20 AC100	20	100	1	2CSR275040R2204	3,330
DS201 M C20 AC300	20	300	1	2CSR275040R3204	3,510
DS201 M C25 AC30	25	30	1	2CSR275040R1254 ■	3,195
DS201 M C25 AC100	25	100	1	2CSR275040R2254 ■	3,330
DS201 M C25 AC300	25	300	1	2CSR275040R3254	3,510
DS201 M C32 AC30	32	30	1	2CSR275040R1324	3,470
DS201 M C32 AC100	32	100	1	2CSR275040R2324	3,565
DS201 M C32 AC300	32	300	1	2CSR275040R3324	3,685
DS201 M C40 AC30	40	30	1	2CSR275040R1404 ■	4,010
DS201 M C40 AC100	40	100	1	2CSR275040R2404 ■	4,120
DS201 M C40 AC300	40	300	1	2CSR275040R3404	4,230

Residual current circuit breaker with overcurrent protection

RCD blocks - DDA200 series



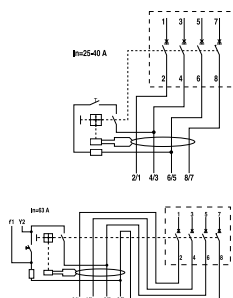
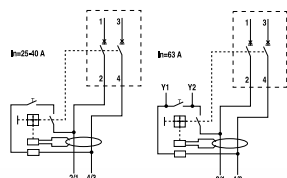
DDA - 200 AC type

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 $I\Delta n=30$ mA) contacts.

Standard: IEC/EN 61009 Ann. G



DDA202 AC



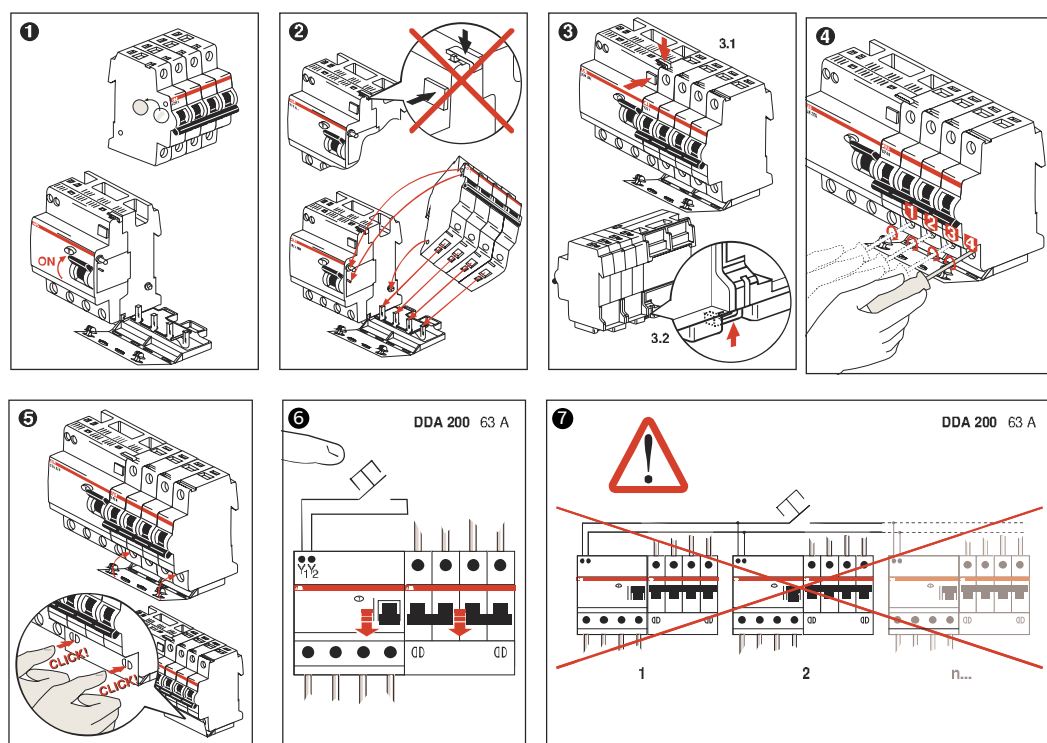
DDA 200 AC

Two pole

Description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	Unit L.P.(₹)
DDA202 AC-63/0.03	63	30	1	2CSB202001R1630 ■	2,985
DDA202 AC-63/0.1	63	100	1	2CSB202001R2630 ■	3,635
DDA202 AC-63/0.3	63	300	1	2CSB202001R3630	3,650

Four pole

Description	Current rating (A)	Residual rated current (mA)	Pack unit (Pc)	Ordering code	Unit L.P.(₹)
DDA204 AC-25/0.03	25	30	1	2CSB204001R1250	2,800
DDA204 AC-40/0.03	40	30	1	2CSB204001R1400 ■	2,905
DDA204 AC-63/0.03	63	30	1	2CSB204001R1630 ■	3,075
DDA204 AC-25/0.1	25	100	1	2CSB204001R2250	3,115
DDA204 AC-40/0.1	40	100	1	2CSB204001R2400 ■	3,310
DDA204 AC-63/0.1	63	100	1	2CSB204001R2630 ■	3,960
DDA204 AC-25/0.3	25	300	1	2CSB204001R3250	3,195
DDA204 AC-40/0.3	40	300	1	2CSB204001R3400 ■	3,435
DDA204 AC-63/0.3	63	300	1	2CSB204001R3630 ■	3,815



■ 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 $2 I_{\Delta n}=150$ 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.

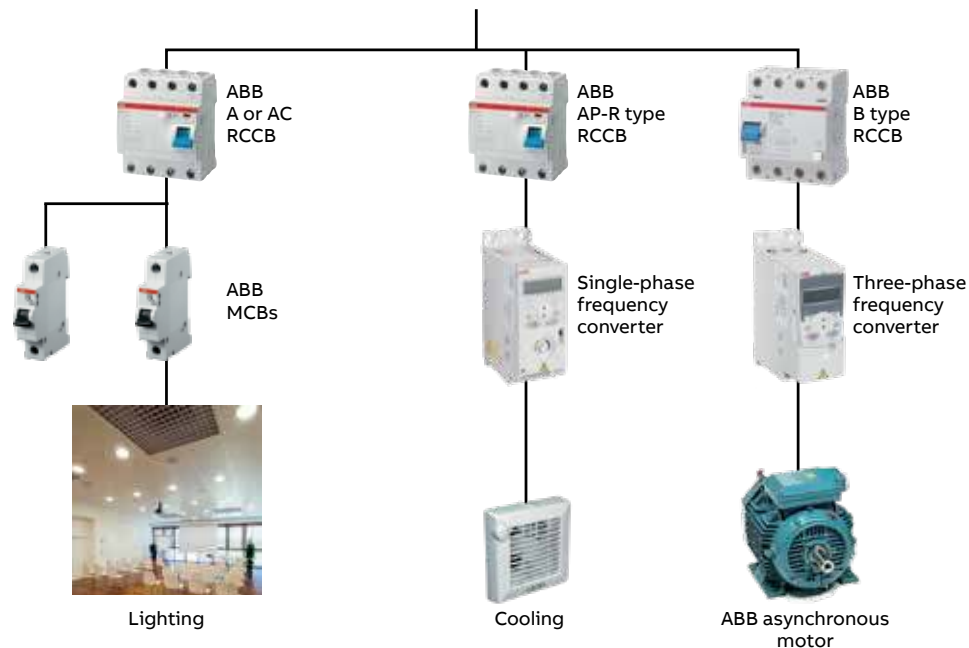
The use of multiple electronic reactors for the supply of fluorescent lamps instead generates permanent leakage currents and inrush currents that can cause nuisance tripping of a standard residual current circuit breaker.

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.

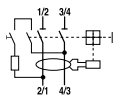
While, in case of fault within a three-phase frequency converter, B type RCDs ensure complete protection because in case of insulation fault between the rectifier and the inverter or downstream the inverter we can have a smooth DC earth fault current.



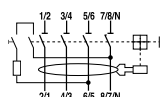
RCCB - F200 series: AP-R (high immunity)



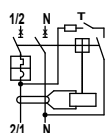
F202A



F204A



DS201M APR-1P+N



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 ($I\Delta n=30$ 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	Unit L.P.(₹)
Two pole					
F202 A-25/0.03 AP-R	25	30	1	2CSF202401R1250	5,590
F202 A-40/0.03 AP-R	40	30	1	2CSF202401R1400	5,885
F202 A-63/0.03 AP-R	63	30	1	2CSF202401R1630	7,105

Four pole

F204 A-25/0.03 AP-R	25	30	1	2CSF204401R1250	6,870
F204 A-40/0.03 AP-R	40	30	1	2CSF204401R1400	7,065
F204 A-63/0.03 AP-R	63	30	1	2CSF204401R1630	8,020

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 ($I\Delta n=30$ mA) contact; protection and isolation of resistive and inductive loads.

Application: residential, commercial, industrial. Standard: IEC/EN 61009

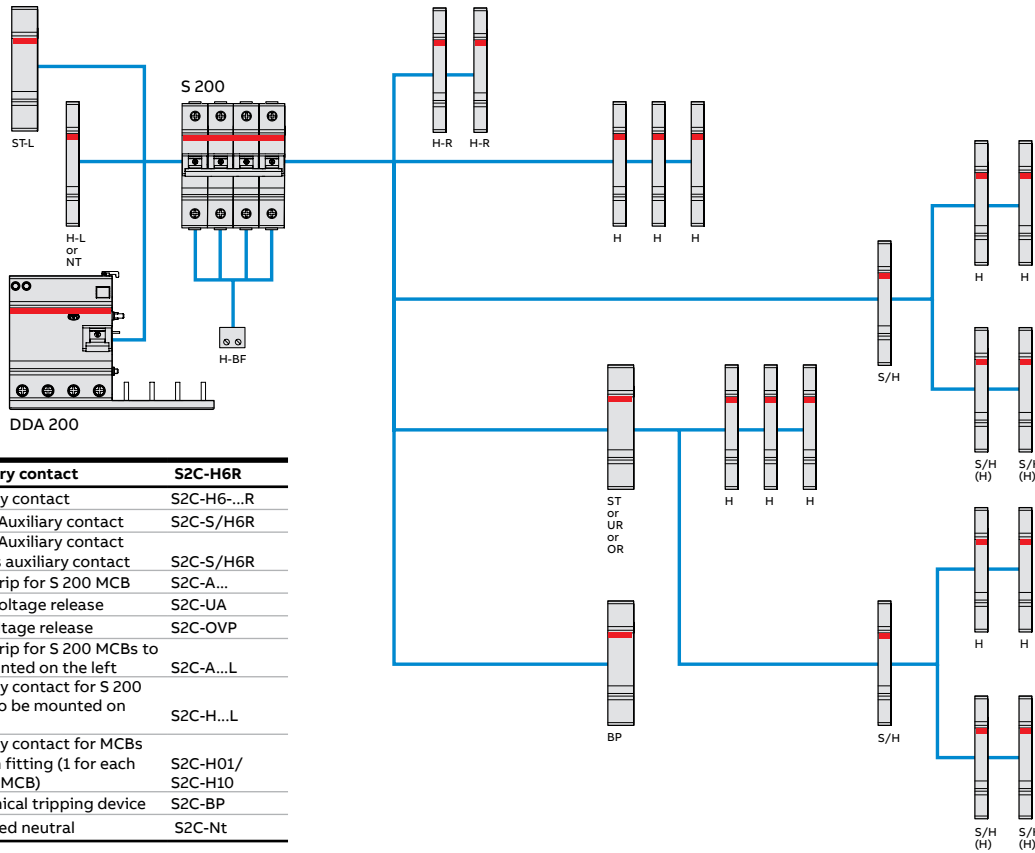
$I_{cn}=10$ kA

RCBO - DS200 series APR type

Description	Current rating (A)	Residual rated current (mA)	Packing	Ordering code	Unit M.R.P. (₹)
DS201 M C6 APR30	6	30	1	2CSR275440R1064	5,935
DS201 M C10 APR30	10	30	1	2CSR275440R1104	
DS201 M C16 APR30	16	30	1	2CSR275440R1164	
DS201 M C20 APR30	20	30	1	2CSR275440R1204	
DS201 M C25 APR30	25	30	1	2CSR275440R1254	
DS201 M C32 APR30	32	30	1	2CSR275440R1324	6,135
DS201 M C40 APR30	40	30	1	2CSR275440R1404	6,165
DS201 M C6 APR100	6	100	1	2CSR275440R2064	6,955
DS201 M C10 APR100	10	100	1	2CSR275440R2104	
DS201 M C16 APR100	16	100	1	2CSR275440R2164	
DS201 M C20 APR100	20	100	1	2CSR275440R2204	
DS201 M C25 APR100	25	100	1	2CSR275440R2254	
DS201 M C32 APR100	32	100	1	2CSR275440R2324	7,085
DS201 M C40 APR100	40	100	1	2CSR275440R2404	7,215
DS201 M C6 APR300	6	300	1	2CSR275440R3064	7,345
DS201 M C10 APR300	10	300	1	2CSR275440R3104	
DS201 M C16 APR300	16	300	1	2CSR275440R3164	
DS201 M C20 APR300	20	300	1	2CSR275440R3204	
DS201 M C25 APR300	25	300	1	2CSR275440R3254	
DS201 M C32 APR300	32	300	1	2CSR275440R3324	8,290
DS201 M C40 APR300	40	300	1	2CSR275440R3404	

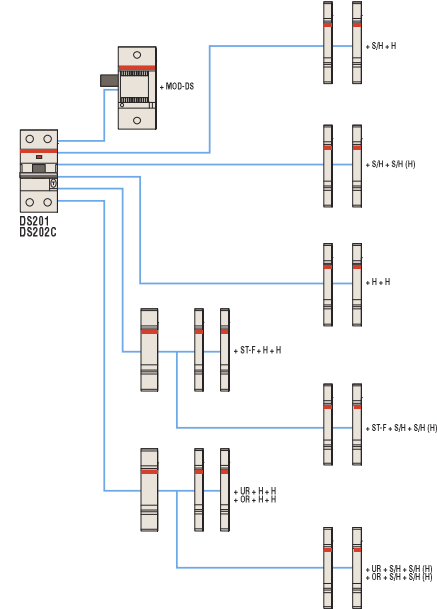
Auxiliary elements and accessories for MCBs S200, RCDs F200 and DS200 series

Combination of auxiliary elements with S200, DDA200 + S200 or DS200



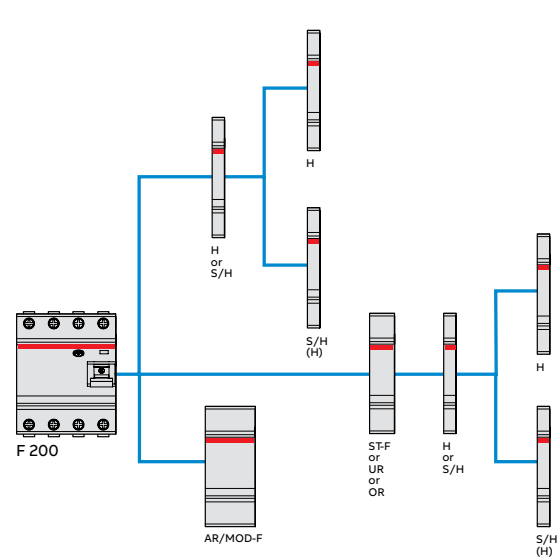
H	Auxiliary contact	S2C-H6R
H-R	Auxiliary contact	S2C-H6-...R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
ST	Shunt trip for S200 MCB	S2C-A...
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
ST-L	Shunt trip for S200 MCBs to be mounted on the left	S2C-A...L
H-L	Auxiliary contact for S200 MCBs to be mounted on the left	S2C-H...L
H-BF	Auxiliary contact for MCBs bottom fitting (1 for each pole of MCB)	S2C-H01/S2C-H10
BP	Mechanical tripping device	S2C-BP
NT	Switched neutral	S2C-Nt

Combination of auxiliary elements with DS201, DS202C



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 F200 RCCB	F2C-A
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
MOD-DS	Motor operating device	DS2C-CM

Combination of auxiliary elements with F200



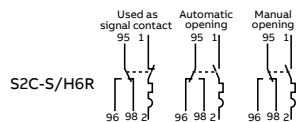
H	Auxiliary contact	S2C-H6R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
AR	Auto reclosing unit	F2C-ARI
MOD-F	Motor operating device	F2C-CM
ST-F	Shunt trip for F200 RCCB	F2C-A

Selection tables

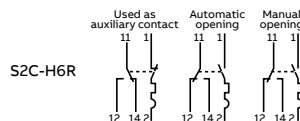


S2C-S/H6R

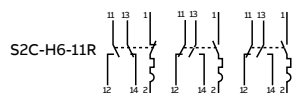
S2C-H6-...



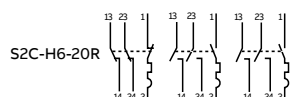
S2C-S/H6R



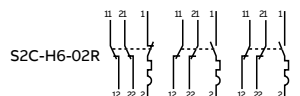
S2C-H6R



S2C-H6-11R



S2C-H6-20R



S2C-H6-02R



S2C-H



S2C-A



F2C-A

Signal/auxiliary contacts

Function S2C-S/H6R: choice through a selector between indication of the position of the device's contacts and signalling of the fault (overcurrent/short-circuit for MCBs and RCBOs; earth fault for RCCBs and RCBOs). Suitable for MCBs S 200 series, RCCBs F 200 series, RCBOs DS201, DS202C, DS 200 series.

Function S2C-H6R: indication of the position of the device's contacts. Suitable for MCBs S200 series. To be mounted on the left side of the MCBs, thanks to the special pin. They are not suitable to be mounted together with RCD-block DDA200.

Function S2C-H6-xxR: indication of the position of the MCB contact. Mounted on the right side. They are not suitable to be mounted together with other right side mounted auxiliary contacts.

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Auxiliary Contact, 1CO (Right side)	S2C-H6R	1	2CDS200912R0001	750
Auxiliary Contact, 1NO / 1NC (Right side)	S2C-H6-11R	1	2CDS200946R0001 ■	760
Auxiliary Contact, 2NO (Right side)	S2C-H6-20R	1	2CDS200946R0002 ■	770
Auxiliary Contact, 2NC (Right side)	S2C-H6-02R	1	2CDS200946R0003 ■	770
Signal contact / Auxiliary switch, 1CO (Right side)	S2C-S/H6R	1	2CDS200922R0001 ■	1,340

Auxiliary contacts mounting on the left side

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Auxiliary Contact, 1NO / 1NC (Left side)	S2C-H11L	1	2CDS200936R0001 ■	870
Auxiliary Contact, 2NO (Left side)	S2C-H20L	1	2CDS200936R0002 ■	850
Auxiliary Contact, 2NC (Left side)	S2C-H02L	1	2CDS200936R0003 ■	850

Bottom-fitting auxiliary contacts for S200, S200M, S200P, S200S

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Bottom fitting Aux contact, 1NC	S2C-H01	1	2CDS200970R0001	1,185
Bottom fitting Aux contact, 1NO	S2C-H10	1	2CDS200970R0002	1,185

Shunt trips

Function: remote opening of the device when a voltage is applied. Suitable for MCBs S200 series and RCBOs DS200 series.

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Shunt Trip, 12...60V AC/DC	S2C-A1	1	2CDS200909R0001 ■	3,355
Shunt Trip, 110...415V AC, 110...250 DC	S2C-A2	1	2CDS200909R0002 ■	3,355

Function: remote opening of the device when a voltage is applied. Suitable for RCCBs F200 series and RCBOs DS201 and DS202C.

It can be used with MCBs SN201 series by means of SN201-IH interface module.

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Shunt Trip, 12...60V AC/DC	F2C-A1	1	2CSS200933R0011	4,085
Shunt Trip, 110...415V AC/ 110...250V DC	F2C-A2	1	2CSS200933R0012 ■	4,085

Auxiliary elements for MCBs S200, RCDs F200 and DS200

Selection tables



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 (device's tripping when the voltage is disconnected) emergency stop by means of a button. Suitable for MCBs S200 series, RCCBs F200 series and RCBOs DS201, DS202C, DS200 series It can be used with MCBs SN201 series by means of SN201-IH interface module.

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Undervoltage Release, 12V DC	S2C-UA 12 DC	1	2CSS200911R0001	4,305
Undervoltage Release, 24V AC	S2C-UA 24 AC	1	2CSS200911R0002	
Undervoltage Release, 24V DC	S2C-UA 24 DC	1	2CSS200911R0007	
Undervoltage Release, 48V AC	S2C-UA 48 AC	1	2CSS200911R0003	
Undervoltage Release, 48V DC	S2C-UA 48 DC	1	2CSS200911R0008	
Undervoltage Release, 110V AC	S2C-UA 110 AC	1	2CSS200911R0004	
Undervoltage Release, 110V DC	S2C-UA 110 DC	1	2CSS200911R0009	
Undervoltage Release, 230V AC	S2C-UA 230 AC	1	2CSS200911R0005 ■	
Undervoltage Release, 230V DC	S2C-UA 230 DC	1	2CSS200911R0010	
Undervoltage Release, 400V AC	S2C-UA 400 AC	1	2CSS200911R0006 ■	



S2C-OVP

Overvoltage releases

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 S200 series up to 63 A, and RCCBs of the F200 series up to 100 A and RCBOs DS201 and DS202C series.

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Over Voltage Release (Max tripping : 275 V AC)	S2C-OVP1	1	2CSS200910R0005	5,130
Over Voltage Release (Max tripping : 290 V AC)	S2C-OVP2	1	2CSS200993R0005	



S2C-NT

Hand operated neutral

The hand operated neutral has to be mounted to the left side of the MCB and be snapped on 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.

The S2C - Nt is not to switch with a tool (screw driver).

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Hand operated neutral (Right side)	S2C-NT	1	2CDS200918R0001	770

Auxiliary elements for MCBs S800 series



S800-AUX

Auxiliary contact

Description	Order details	Packing	Ordering code	Unit L.P.(₹)
Auxiliary contact	S800-AUX	1	2CCS800900R0011	2,625



S800-AUX/ALT

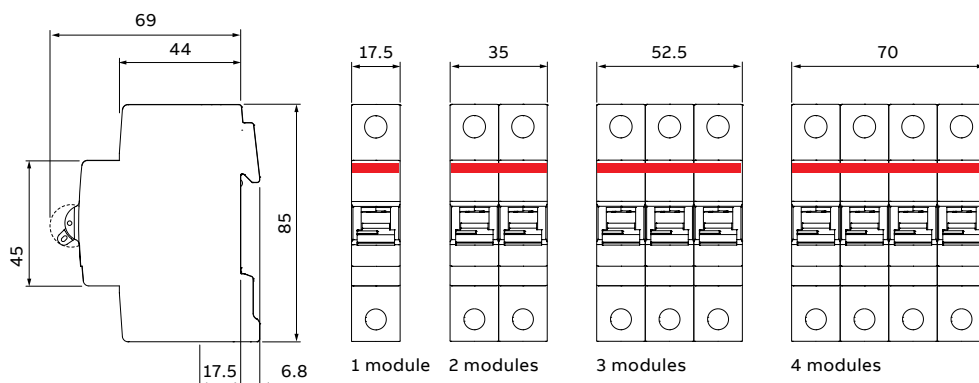
Combined auxiliary and signal contact

Description	Order details	Packing	Ordering Code	Unit L.P.(₹)
Auxiliary/signal contact	S800-AUX/ALT	1	2CCS800900R0021	3,135

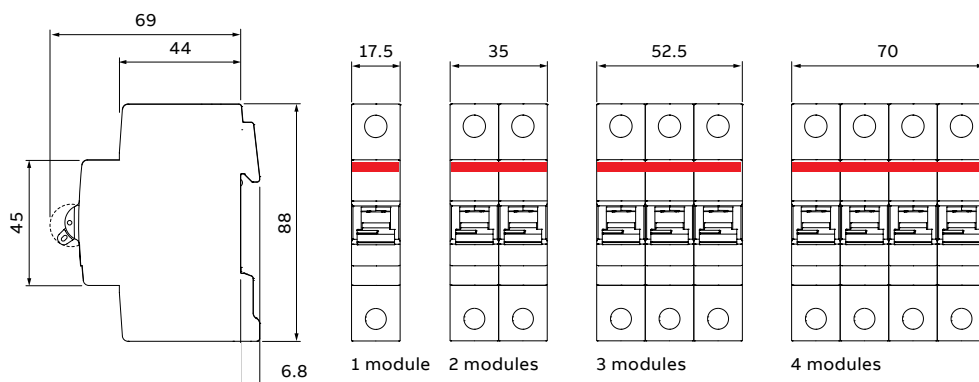
■ Stock items

Overall dimensions

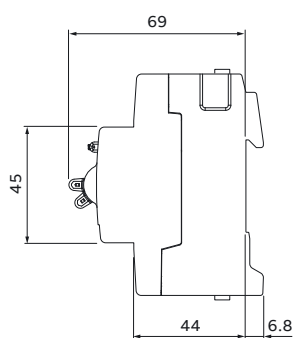
MCB - (SH200) and Isolator (SHD)



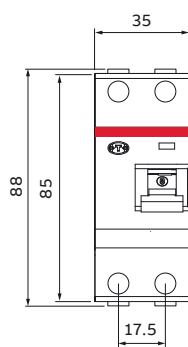
MCB - (S200)



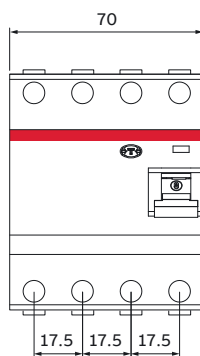
RCCB - (F200)



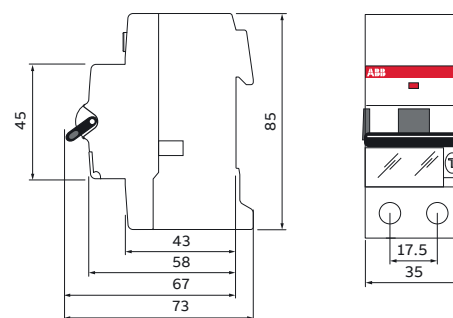
Two pole



Four pole



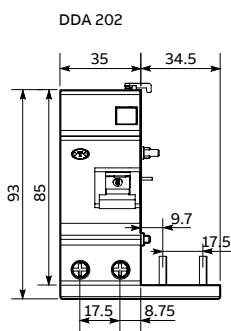
RCBO (DS200)



DDA 200

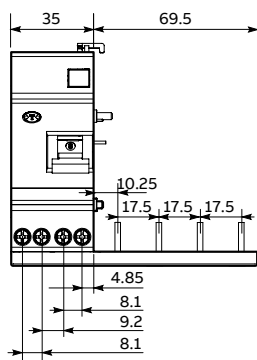
Two pole

In=25-63 A



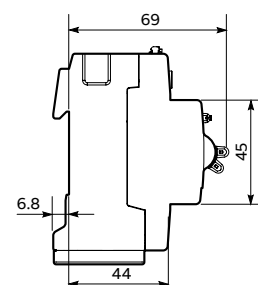
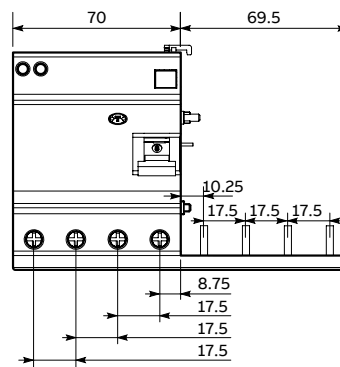
Four pole

In=25-40 A

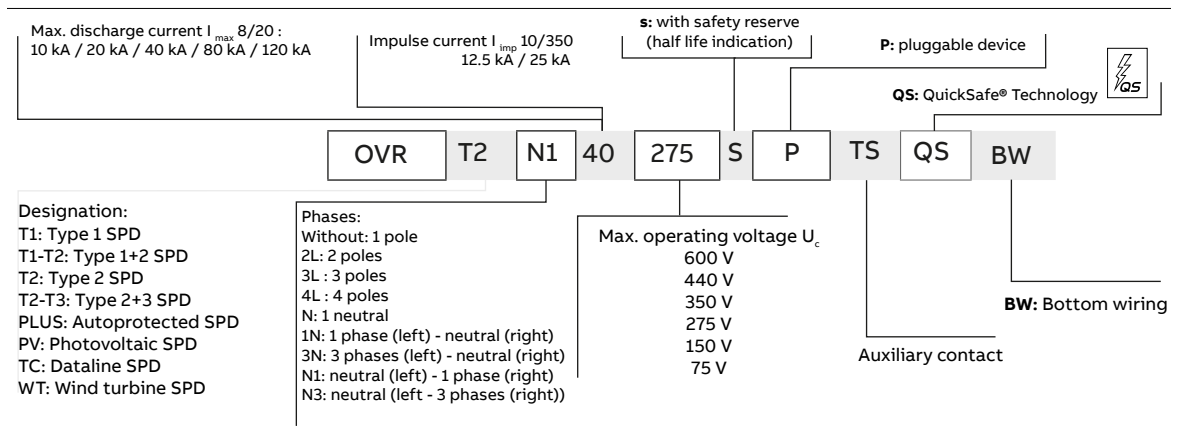


Four pole

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 U_c (V)	"I imp in kA (10/350us wave)"	"I max in kA (8/20us wave)"	Pole	No of modules	Ordering code	Unit L.P.(₹)
OVR T1 3N 25 255-7 (TT)	255	25	-	3+1	4	2CTB815101R8800	31,090
OVR T1 3N 25 255 (TT)	255	25	-	3+1	4	2CTB815101R1600	62,151
OVR T1 3N 25 255 TS (TT)	255	25	-	3+1	5	2CTB815101R0700	62,525

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 μ s wave form which simulate natural lightning current.



OVR Type 1

Three pole + Neutral

Description	Max. continuous operating voltage U_c (V)	"I imp in kA (10/350us wave)"	"I max in kA (8/20us wave)"	Pole	No of modules	Ordering code	Unit L.P.(₹)
OVR T1-T2 3N 12.5-275s P QS	275	12.5	80	3+1	4	2CTB815710R1900	20,055
OVR T1-T2 3N 12.5-275s P TS QS	275	12.5	80	3+1	4	2CTB815710R0700	23,065
OVR T1-T2 3N 12.5-440s P QS	440	12.5	80	3+1	4	2CTB815710R4800	24,065
OVR T1-T2 3N 12.5-440s P TS QS	440	12.5	80	3+1	4	2CTB815710R3600	27,675

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 U_c (V)	I max in kA (8/20us wave)	No of Modules	Ordering code	Unit L.P.(₹)
OVR T2 40-275 P QS	275	40	1	2CTB803871R2300	3,400
OVR T2 40-275s P QS	275	40	1	2CTB815704R1200	5,020
OVR T2 40-275 P TS QS	275	40	1	2CTB803871R1700	4,325
OVR T2 40-440 P QS	440	40	1	2CTB803871R1200	3,465
OVR T2 40-440s P QS	440	40	1	2CTB815704R4100	4,770
OVR T2 80-275s P QS	275	80	1	2CTB815708R1200	5,190
OVR T2 80-275s P TS QS	275	80	1	2CTB815708R0000	6,395
OVR T2 80-440s P QS	440	80	1	2CTB815708R4100	4,695
OVR T2 80-440s P TS QS	440	80	1	2CTB815708R2900	5,890

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	Unit L.P.(₹)
OVR T2 1N 40-275 P QS	275	40	2	2CTB803972R1100	7,230
OVR T2 1N 40-275s P QS	275	40	2	2CTB815704R1400	9,110
OVR T2 1N 40-275 P TS QS	275	40	2	2CTB803972R0500	8,205
OVR T2 1N 40-275s P TS QS	275	40	2	2CTB815704R0200	9,970
OVR T2 1N 40-350 P QS	350	40	2	2CTB803982R1100	7,810
OVR T2 1N 40-350 P TS QS	350	40	2	2CTB803982R0500	8,860
OVR T2 1N 80-275s P QS	275	80	2	2CTB815708R1400	9,595
OVR T2 1N 80-275s P TS QS	275	80	2	2CTB815708R0200	10,590

Three pole + Neutral



OVR Type 2

Description	Max. continuous operating voltage U _c (V)	I max in kA (8/20us wave)	No of modules	Ordering code	Unit L.P.(₹)
OVR T2 3N 40-275 P QS	275	40	4	2CTB803973R1100	12,350
OVR T2 3N 40-275s P QS	275	40	4	2CTB815704R2000	17,600
OVR T2 3N 40-275 P TS QS	275	40	4	2CTB803973R0500	15,725
OVR T2 3N 40-275s P TS QS	275	40	4	2CTB815704R0800	20,630
OVR T2 3N 40-350 P QS	350	40	4	2CTB803983R1100	13,340
OVR T2 3N 40-350 P TS QS	350	40	4	2CTB803983R0500	20,025
OVR T2 3N 40-440 P QS	440	40	4	2CTB803973R1400	12,720
OVR T2 3N 40-440 P TS QS	440	40	4	2CTB803973R1500	15,920
OVR T2 3N 40-440s P TS QS	440	40	4	2CTB815704R3700	37,135
OVR T2 3N 80-275s P QS	275	80	4	2CTB815708R2000	18,400
OVR T2 3N 80-275s P TS QS	275	80	4	2CTB815708R0800	21,920
OVR T2 3N 80-440s P QS	440	80	4	2CTB815708R4900	16,060
OVR T2 3N 80-440s P TS QS	440	80	4	2CTB815708R3700	19,380

Surge arrester for photovoltaic applications



OVR PV

Description	Max. continuous operating voltage U _c (V)	I max in kA (8/20us wave)	No. of modules	Ordering code	Unit L.P.(₹)
OVR PV T2 40-1000 P QS	1100	40	3	2CTB804153R2400	4,525
OVR PV T2 40-1000 P TS QS	1100	40	3	2CTB804153R2500	5,720

Surge arrester for data line protection (Pluggable)



OVR SL

Description	Max. continuous operating voltage U _c (V)	I max in kA (8/20us wave)	Width	Ordering code	Unit L.P.(₹)
OVR SL06	7.79 V	10 kA	7mm	7TCA085400R0360	9,025
OVR SL15	16.7 V	10 kA	7mm	7TCA085400R0361	7,565
OVR SL30	36.7 V	10 kA	7mm	7TCA085400R0363	7,935
OVR SL50	56.7 V	10 kA	7mm	7TCA085400R0364	7,765
OVR SLTN	296 V	10 kA	7mm	7TCA085400R0323	6,135

D Line. Simply precise

An ideal range for automating the functions of the installation

Sealable glass and keypad lock to prevent tampering by unauthorised personnel

Inputs for the connection of remote controls (i.e. switches and buttons) and for DCF77 or GPS receiver connection

Clear display of each contact status

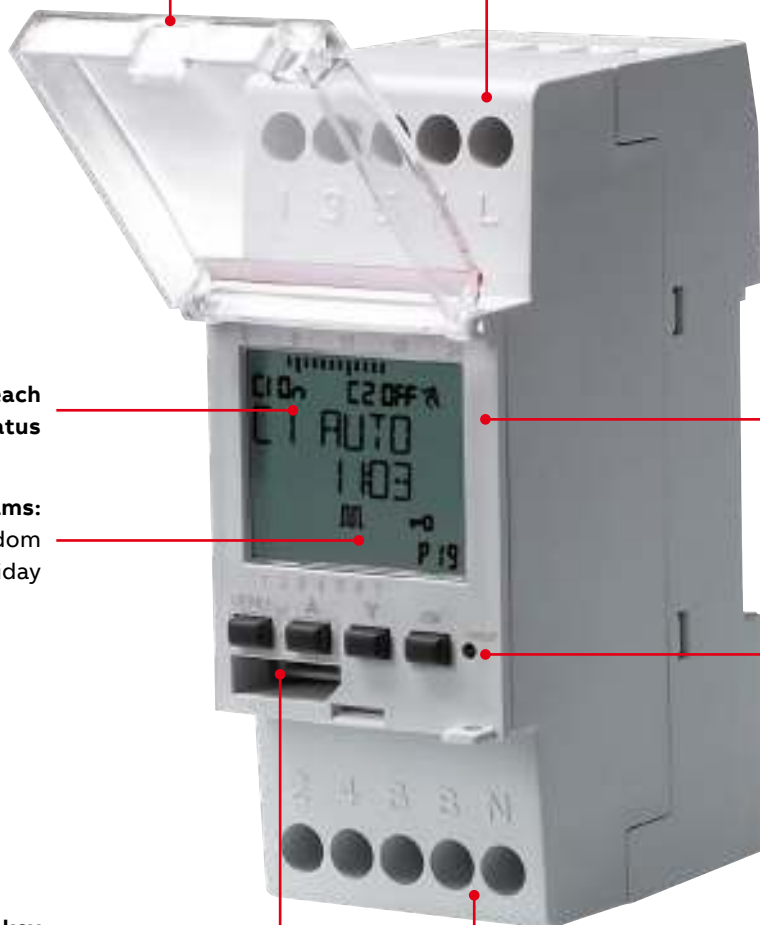
High contrast LCD monitor for excellent visibility in all conditions due to timed back-lighting

Wide range of programs: standard, cyclic, random and holiday

Permanent or temporary manual deviation, directly activated with a single touch

Programming key slot to run, copy or save programs

Terminals for wires up to 6 mm².



D Line. Simply precise

An ideal range for automating the functions of the installation



D Line

D Line weekly digital time switches

The unique design, with white backlit LCD display, and extreme ease of use with two lines of text menu and only four buttons, make D Line ideal to automate the installation functions. Thanks to the innovative management of time vacation, the D Line digital time switches allow the exclusion of the normal weekly program in one or more periods of several years or between two different years.

Description	Ordering code	Unit L.P.(₹)
D Line weekly digital time switches-D1, 1 channel	2CSM258763R0621	8,145
D Line weekly digital time switches-D2, 2 channel	2CSM256313R0621	12,725



T Line

T Line modular twilight switches

These twilight switches allow to switch ON and switch OFF lighting devices according to a scheduled level of the ambient light. They are used in combination with an external sensor to detect if the ambient light is higher or lower than the set level. A switching delay prevents them from operating unnecessarily when the light intensity suddenly changes (e.g. lightning, moving vehicles, etc.).

Description	Ordering code	Unit L.P.(₹)
T Line modular twilight switches 1 channel is preset with a 10 LUX T1	2CSM295563R1341	7,260
"T Line modular twilight switches adjusted for 4 different scale values (2:40, 20:200, 200:2000, 2000:15000) T1 PLUS"	2CSM295793R1341	7,760
T1 POLE twilight switches, installation on the pole/wall, T1 POLE	2CSM295753R1341	6,760
Accessories for T Line modular twilight switches External sensor LS-D	2CSM295723R1341	2,455



TWA

TWA twilight astronomical switches

The twilight astronomical switches TWA-1 and TWA-2, respectively, in 1 and 2 channels, automatically control lighting circuits depending on the time of sunrise and sunset, greatly increasing energy efficiency. The programming is in fact based on a mathematical algorithm able to calculate the time of the rising and setting of the sun in a certain location for each day of the year. Once powered the device, simply insert date, time, geographical coordinates and time zone so that it is ready to work.

Description	Ordering code	Unit L.P.(₹)
TWA twilight astronomical switches 1NO/NC TWA-1	2CSM204365R1341	17,645
TWA twilight astronomical switches 2NO/NC TWA-2	2CSM204375R1341	22,025



AT2e-R

AT and ATe electro-mechanical time switches

They control circuit opening and closing according to the scheduled program. Both available on daily and weekly versions and equipped with a 16 A contact, they can be set on the scheduled program or on the permanent ON function (ON-OFF only for two modules versions).

Description	Ordering code	Unit L.P.(₹)
AT2e-R Daily electro-mechanical time switch, with running reserve, 2 modules, 15 minutes minimum switching time	2CSM231235R0601	3,570

Control and automation components



E200

Description	Ordering code	Unit L.P.(₹)
E 232-230 staircase lighting time-delay switches, Staircase lighting time-delay switches are usually operated by pushbuttons, often fitted with a glow lamp. Switches are designed for a glow lamp current of up to 150 mA and thus perfectly suitable for installations in multi-storey buildings.	2CDE110000R0501	5,050
The E 232-230 staircase lighting time-delay switch includes an electro-mechanical timer with a synchronous motor drive to ensure high operational safety in whatever mounting position. The time range is adjustable in increments of 15 seconds from 1 to seven minutes. Resettable after 30 seconds	2CDE110003R0511	6,555

SMISLINE TP plug-in system

Changes are never been easier

SMISLINE 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.

SMISLINE TP plug-in system

Changes have never been easier



Even safer: protection against electrical hazards

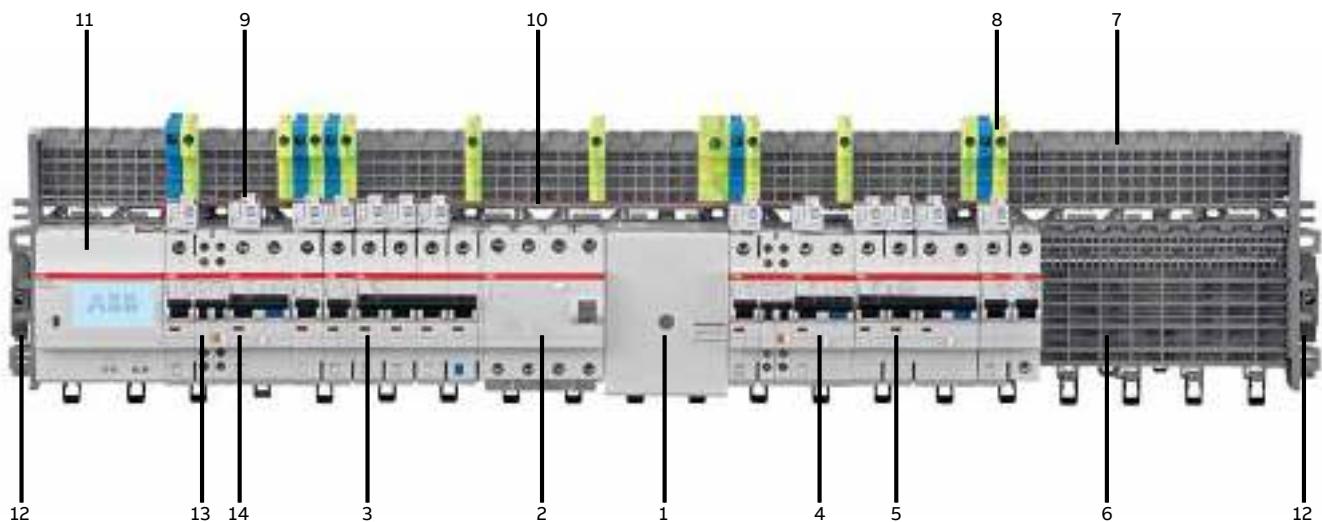
We have upgraded our unique SMISLINE socket system even further through the addition of a pioneering innovation. With the new SMISLINE TP system, components can now be plugged in or unplugged load-free without any risk from electrical current running through the body.

The SMISLINE TP pluggable socket system is completely fingersafe (IP2XB) – when devices are plugged in and unplugged, the system is always touch-proof. This means that SMISLINE 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. SMISLINE 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 Additional socket IP20
- 8 Terminals
- 9 Sensor for current measurement system
- 10 Cable Bus system CMS

- 11 Control unit CMS
- 12 Socket end piece
- 13 Auxiliary contact
- 14 Signal contact

ELR, Earth leakage relay - (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 Δn .

Description	Operating voltage	Pack	Ordering code	Unit 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	Unit L.P.(₹)
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	Toroid useful diameter (mm)	Min. measureable current (mA)	Max. rated current ¹ (A)	Max. capacity ² (A)	Pack	Ordering code	Unit 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 – DMTME multimeters



DMTME multimeters

The instruments DMTME are digital multimeters that allow the measurement, in TRMS mode, of the principal electrical parameters in three-phase and single-phase 230/400 Vac networks, including the max/min/average detection of the main electrical parameters and the active and reactive energy count. The multiple measured variables are displayed locally on four red 7-segment LED displays providing easy readability and simultaneous display of the measures of the electrical parameters of the phases individually and of the whole network.

The instruments DMTME combine, in a single instrument, the functions of multiple devices: voltmeter, ammeter, power factor meter, wattmeter, varmeter, frequency meter, active and reactive energy meters; it allows remarkable financial savings, thanks to the reduction of space taken up in the panel and also of time required for cabling, along with the advantage of providing clear readings on a single device.

The DMTME-I-485, DMTME-I-485-96 and DMTME-I-485-72 models are additionally equipped with two digital relays, fully programmable as either pulse outputs for remote metering of energy consumption, or as alarm outputs. The output relay can be set as NO or NC. There is also an RS485 port for communicating the measured parameters and alarms over a Modbus network; used in addition to a converter of the CUS series, it allows direct connection to a central PC for remote supervision and control of the electrical network. All versions come complete with Mini CD containing the instruction manual, technical documentation, Modbus communication protocol and the DMTME-SW tool, intended to be a first-hand PC-based application for the remote visualization of the measures.

DMTME modular multimeters

TRMS measure of VL-L, VL-N, A, W, Var, VA, kWh, kVar, PF in 230/400 V a.c. lines.

Indirect connection through CT .../5 A. Auxiliary supply at 110 V a.c. and 230 V a.c.

Product description	RS485	Program.	Pack	Ordering code	Unit L.P.(₹)
DMTME	-	-	1	2CSM170040R1021	Upon request
DMTME-I-485	✓	2	1	2CSM180050R1021	

DMTME-96 panel multimeters

Auxiliary supply 230 V a.c. and 110 V a.c.

Product description	RS485	Program	Dimension	Pack	Ordering code	Unit L.P.(₹)
DMTME-96	-	-	96x96	1	2CSG133030R4022	Upon request
DMTME-I-485-96	✓	2	96x96	1	2CSG163030R4022	

DMTME-72 panel multimeters

Auxiliary supply 230 V a.c. and 400 V a.c.

Product description	RS485	Program	Dimension	Pack	Ordering code	Unit L.P.(₹)
DMTME-72	-	-	72x72	1	2CSG132030R4022	Upon request
DMTME-I-485-72	✓	2	96x96	1	2CSG162030R4022	

M2M - network analyser

The measure of efficiency

The new M2M network analyser has advanced analysis functions which allow effective measurement of the main single-phase or three-phase electrical parameters: voltage, current, frequency, power factor, active and reactive power, active and reactive energy.

Fitted to low- and medium-voltage electrical panels, the new analyser allows the measurement and analysis in real time of electrical parameters, also verifying the quality of the energy thanks to THD measurement.

M2M also keeps the system's consumption under control, giving figures in CO₂ kg and Euros to ensure more efficient and rational use of energy. Bidirectional metering of energy and power on the 4 quadrants allows both production and consumption of energy to be monitored with a single device. Aside from optimising the use of loads, real time measurement contributes to containing both environmental and budgetary impact.

All information gathered by the analyser can be transmitted quickly to remote locations through specific communication interfaces – RS485, RJ45 or RS232, with the support of numerous protocols including Modbus RTU, Modbus TCP/IP and Profibus DP.

Interaction with the control and supervision systems is possible via different inputs and outputs, all programmable.

Features

- The importance of control
Measurement and advanced analysis of electrical parameters
- The value of flexibility
Versatility in its different applications and completeness of functions
- The advantages of communication
Intuitive analyser with multiple integrated functions, which communicates also via digital and analogue I/O
- Easy to install
- Ease of use



M2M - Network analyser

The measure of efficiency

Type	Description	Protocol	Serial port	Ordering code	Unit L.P.(₹)
M2M	2 digital outputs programmable as threshold alarms or pulses	-	-	2CSG299883R4052	Upon request
M2M MODBUS	2 digital outputs programmable as threshold alarms or pulses	Modbus RTU	RS485	2CSG299893R4052	
M2M ETHERNET	2 digital outputs programmable as threshold alarms or pulses	Modbus TCP/IP	RJ45	2CSG299903R4052	
M2M PROFIBUS	2 digital outputs programmable as threshold alarms or pulses	Profibus	RS232	2CSG299913R4052	
M2M ALARM	2 digital outputs programmable as threshold alarms or pulses, 2 programmable relay outputs	Modbus RTU	RS485	2CSG299923R4052	
M2M I/O	2 digital outputs programmable as threshold alarms or pulses, 3 digital inputs and 2 analogue outputs	Modbus RTU	RS485	2CSG299933R4052	

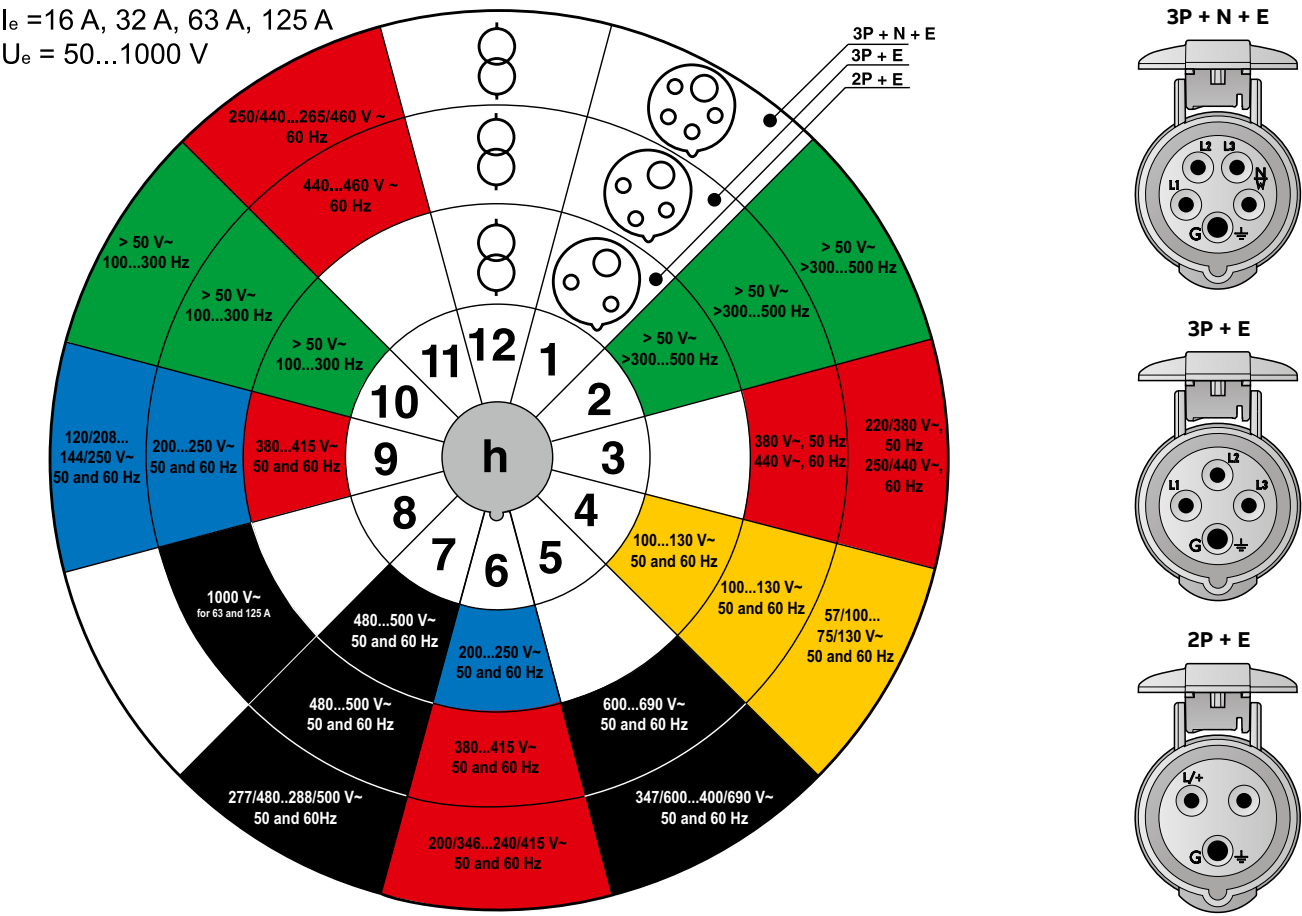
Wiring accessories

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

Plugs



IP44 (2P+E)



IP44 (3P+E)



IP67 (3P+N+E)

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	Unit L.P.(₹)
3 (2P+E)	IP44	Blue	200...250	16	216-P6-I	2CMA100202R1000	405
		Blue	200...250	32	232-P6-I	2CMA100204R1000	580
		Blue	200...250	63	263P6	2CMA166742R1000	2,620
	IP67	Blue	200...250	16	216P6W	2CMA166460R1000	1,390
		Blue	200...250	32	232P6W	2CMA166722R1000	1,720
		Blue	200...250	63	263P6W	2CMA166776R1000	3,970
		Blue	200...250	125	2125P6W	2CMA166810R1000	10,810
4 (3P+E)	IP44	Red	380...415	16	316-P6	2CMA193506R1000	600
		Red	380...415	32	332-P6	2CMA193515R1000	740
		Red	380...415	63	363P6	2CMA166752R1000	2,930
	IP67	Red	380...415	16	316P6W	2CMA166476R1000	1,500
		Red	380...415	32	332P6W	2CMA166738R1000	1,955
		Red	380...415	63	363P6W	2CMA166786R1000	4,200
		Red	380...415	125	3125P6W	2CMA166816R1000	11,200
5 (3P+N+E)	IP44	Red	346...415	16	416-P6-I	2CMA100203R1000	630
		Red	346...415	32	432-P6-I	2CMA100205R1000	760
		Red	346...415	63	463P6	2CMA166764R1000	3,150
	IP67	Red	346...415	16	416P6W	2CMA166494R1000	1,455
		Red	346...415	32	432P6W	2CMA166524R1000	2,165
		Red	346...415	63	463P6W	2CMA166798R1000	4,250
		Red	346...415	125	4125P6W	2CMA166828R1000	11,250

Connectors



IP44 (2P+E)



IP67 (3P+E)



IP67 (3P+N+E)

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	Unit L.P.(₹)
3 (2P+E)	IP44	Blue	200...250	16	216-C6-I	2CMA100206R1000	670
		Blue	200...250	32	232-C6-I	2CMA100208R1000	815
		Blue	200...250	63	263C6	2CMA166840R1000	3,385
	IP67	Blue	200...250	16	216C6W	2CMA166538R1000	1,630
		Blue	200...250	32	232C6W	2CMA166584R1000	2,080
		Blue	200...250	63	263C6W	2CMA166874R1000	4,555
		Blue	200...250	125	2125C6W	2CMA166918R1000	11,670
4 (3P+E)	IP44	Red	380...415	16	316-C6	2CMA193523R1000	760
		Red	380...415	32	332-C6	2CMA193529R1000	1,065
		Red	380...415	63	363C6	2CMA166850R1000	3,500
	IP67	Red	380...415	16	316C6W	2CMA166554R1000	1,940
		Red	380...415	32	332C6W	2CMA166604R1000	2,240
		Red	380...415	63	363C6W	2CMA166894R1000	5,200
		Red	380...415	125	3125C6W	2CMA166924R1000	13,500
5 (3P+N+E)	IP44	Red	346...415	16	416-C6-I	2CMA100207R1000	790
		Red	346...415	32	432-C6-I	2CMA100209R1000	1,100
		Red	346...415	63	463C6	2CMA166862R1000	3,680
	IP67	Red	346...415	16	416C6W	2CMA166572R1000	2,000
		Red	346...415	32	432C6W	2CMA166618R1000	2,575
		Red	346...415	63	463C6W	2CMA166906R1000	5,360
		Red	346...415	125	4125C6W	2CMA166936R1000	14,590

Wiring accessories

Industrial plugs and sockets

Panel mounted socket - Unified angled flange

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	Unit L.P.(₹)
 IP44 (2P+E)	IP44	Blue	200...250	16	216RAU6-I	2CMA100218R1000	630
		Blue	200...250	32	232RAU6-I	2CMA100220R1000	710
		Blue	200...250	63	263RAU6	2CMA167408R1000	2,810
	IP67	Blue	200...250	16	216RAU6W	2CMA166996R1000	1,320
		Blue	200...250	32	232RAU6W	2CMA166948R1000	1,605
		Blue	200...250	63	263RAU6W	2CMA167442R1000	2,950
 IP44 (3P+E)	IP44	Red	380...415	16	316RAU6	2CMA193226R1000	710
		Red	380...415	32	332RAU6	2CMA193274R1000	930
		Red	380...415	63	363RAU6	2CMA167418R1000	3,085
	IP67	Red	380...415	16	316RAU6W	2CMA167012R1000	1,420
		Red	380...415	32	332RAU6W	2CMA166964R1000	1,850
		Red	380...415	63	363RAU6W	2CMA167452R1000	3,185
 IP44 (3P+N+E)	IP44	Red	346...415	16	416RAU6-I	2CMA100219R1000	760
		Red	346...415	32	432RAU6-I	2CMA100221R1000	950
		Red	346...415	63	463RAU6	2CMA167430R1000	3,125
	IP67	Red	346...415	16	416RAU6W	2CMA167030R1000	1,655
		Red	346...415	32	432RAU6W	2CMA166982R1000	1,960
		Red	346...415	63	463RAU6W	2CMA167464R1000	3,420

Panel mounted sockets - Unified straight Flange

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	Unit L.P.(₹)
 IP44 (2P+E)	IP44	Blue	200...250	16	216RU6-I	2CMA100210R1000	600
		Blue	200...250	32	232RU6-I	2CMA100212R1000	675
		Blue	200...250	63	263RU6	2CMA167510R1000	2,810
	IP67	Blue	200...250	63	263RU6W	2CMA167374R1000	3,685
		Blue	200...250	125	2125RU6W	2CMA167133R1000	11,350
 IP44 (3P+E)	IP44	Red	380...415	16	316RU6	2CMA193178R1000	655
		Red	380...415	32	332RU6	2CMA193250R1000	780
		Red	380...415	63	363RU6	2CMA167520R1000	2,905
	IP67	Red	380...415	63	363RU6W	2CMA167384R1000	3,690
		Red	380...415	125	3125RU6W	2CMA167136R1000	11,480
 IP44 (3P+N+E)	IP44	Red	346...415	16	416RU6-I	2CMA100211R1000	670
		Red	346...415	32	432RU6-I	2CMA100213R1000	810
		Red	346...415	63	463RU6	2CMA167532R1000	3,125
	IP67	Red	346...415	63	463RU6W	2CMA167396R1000	3,700
		Red	346...415	125	4125RU6W	2CMA167142R1000	11,520

Wiring accessories

Industrial plugs and sockets

Surface Sockets Outlet



IP44 (2P+E)



IP67 (2P+E)



IP44 (3P+E)



IP67 (3P+E)



IP44 (3P+N+E)



IP67 (3P+N+E) 125

Terminals / Pole	IP Protection	Color code	Voltage	Current rating (A)	Type	Order code	Unit L.P.(₹)
3 (2P+E)	IP44	Blue	200...250	16	216RS6	2CMA193098R1000	715
		Blue	200...250	32	232RS6	2CMA193122R1000	975
		Blue	200...250	63	263RS6	2CMA167476R1000	3,415
	IP67	Blue	200...250	16	216RS6W	2CMA167149R1000	1,570
		Blue	200...250	32	232RS6W	2CMA167172R1000	2,235
		Blue	200...250	63	263RS6W	2CMA167306R1000	4,695
		Blue	200...250	125	2125RS6W	2CMA167246R1000	12,600
4 (3P+E)	IP44	Red	380...415	16	316RS6	2CMA193106R1000	765
		Red	380...415	32	332RS6	2CMA193130R1000	1,070
		Red	380...415	63	363RS6	2CMA167498R1000	3,700
	IP67	Red	380...415	16	316RS6W	2CMA167157R1000	1,900
		Red	380...415	32	332RS6W	2CMA167180R1000	2,400
		Red	380...415	63	363RS6W	2CMA167316R1000	4,800
		Red	380...415	125	3125RS6W	2CMA167252R1000	13,300
5 (3P+N+E)	IP44	Red	346...415	16	416RS6	2CMA193115R1000	825
		Red	346...415	32	432RS6	2CMA193139R1000	1,100
		Red	346...415	63	463RS6	2CMA167484R1000	3,880
	IP67	Red	346...415	16	416RS6W	2CMA167166R1000	2,035
		Red	346...415	32	432RS6W	2CMA167189R1000	2,650
		Red	346...415	63	463RS6W	2CMA167328R1000	4,940
		Red	346...415	125	4125RS6W	2CMA167264R1000	13,500

Surface socket outlet with protection

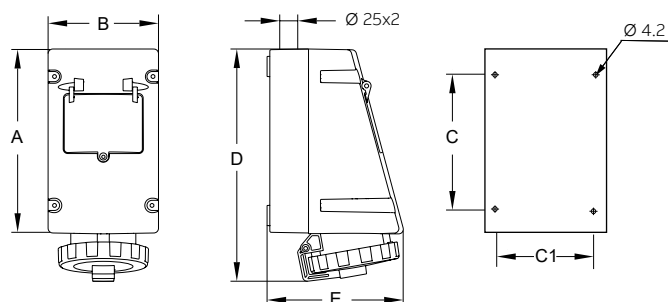
Housing in plastic (PBT). Cable entry with knock-outs 2 x Ø 25 mm.

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	Unit L.P.(₹)
3 (2P+E)	IP67	Blue	200...250	16	216RP6WP	2CMA164572R1000	7,245
		Blue	200...250	32	232RP6WP	2CMA164602R1000	8,330
5 (4P+E)	IP67	Red	346...415	16	416RP6WP	2CMA164589R1000	8,050
		Red	346...415	32	432RP6WP	2CMA164619R1000	8,500



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

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	Unit LP (₹)
3 (2P+E)	IP44	Blue	200...250	16	216MHS6	2CMA167623R1000	6,460
		Blue	200...250	32	232MHS6	2CMA167669R1000	7,880
		Blue	200...250	63	263MHS6	2CMA167715R1000	13,705
	IP67	Blue	200...250	16	216MHS6W	2CMA167801R1000	6,460
		Blue	200...250	32	232MHS6W	2CMA167848R1000	8,670
		Blue	200...250	63	263MHS6W	2CMA167894R1000	15,760
4 (3P+E)	IP44	Red	380...415	16	316MHS6	2CMA167631R1000	7,200
		Red	380...415	32	332MHS6	2CMA167677R1000	8,145
		Red	380...415	63	363MHS6	2CMA167721R1000	17,195
	IP67	Red	380...415	16	316MHS6W	2CMA167809R1000	7,790
		Red	380...415	32	332MHS6W	2CMA167856R1000	9,595
		Red	380...415	63	363MHS6W	2CMA167899R1000	18,610
5 (3P+N+E)	IP44	Red	346...415	16	416MHS6	2CMA167640R1000	7,615
		Red	346...415	32	432MHS6	2CMA167686R1000	8,755
		Red	346...415	63	463MHS6	2CMA167727R1000	17,405
	IP67	Red	346...415	16	416MHS6W	2CMA167818R1000	8,375
		Red	346...415	32	432MHS6W	2CMA167865R1000	9,635
		Red	346...415	63	463MHS6W	2CMA167905R1000	18,765



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Electrification products

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Installation products

Product brands overview

The acquisition of Thomas & Betts advances ABB's strategy of expanding its electrification products division into new geographies, sectors and products. The combination of Thomas & Betts' electrical components and ABB's low voltage protection, control and measurement products offer more of the components you need every day than any other single manufacturer in the world.

Our focus is on improving your business performance by providing practical, reliable electrical products and services that solve everyday problems in:

Wire & cable management -

cable ties, wiring ducts, accessories.

Connectivity & grounding -

connectors, terminals, earthing, lightning protection

Cable protection systems -

rigid and flexible conduit & fittings

Lighting & systems -

emergency lighting, lighting & battery systems

Explosion protection -

IECex, UL, CSA lighting, boxes and conduit systems

Cable accessories and apparatus -

MV and HV switches, cable accessories

Markets we protect & connect together.

1 Renewables

Wind, solar, water & bio

2 Utilities

Power generation, transmission & distribution, telecom & datacentre, water & waste

3 Extraction

Oil, gas, mining

4 Transportation & Infrastructure

Rail, road, marine, aerospace, rail track, motorways, waterways

5 Commercial & Institutional

Office & storage, retail & leisure, healthcare & education, Government

6 Residential

Residential towers & apartment blocks, housing development projects, HMOs & university accommodation

7 Industry processing chemicals, pharma, minerals, metals, materials, food & beverage, agriculture

8 Industry assembling & OEM

OEM equipment & devices, machinery, automation, robotics

Wire & cable management - Energy & data connection	Cable protection systems - Energy & data protection	Connectivity & grounding - Critical process protection	Lighting - Safety & explosion proof
 Ty-Rap® Premium cable ties	 Adaptaflex Flexible conduit systems for critical power & data protection	 furse Earthing & lightning protection	 EMERGI-LITE Emergency lighting systems
 Ty-Met™ Stainless steel cable ties	 KOPEX™ Flexible conduit systems for hazardous areas	 elastimold Underground cable protection accessories	 EMERGI-LITE Emergency safety systems
 T&B Cable Tray Cable tray, ladder, support systems & wire duct	 PMA Cable protection systems	 JOSLYN Overhead products for electrical power systems	 ETS Explosion-proof lighting & emergency lighting
 E-Klips® Electrical & mechanical steel spring fasteners	 Harnessflex Automotive wiring harness protection	 Spec-Kon® Solderless crimp connectors	 ETS Custom built control panels for hazardous areas

Wire and cable management

Fastening products

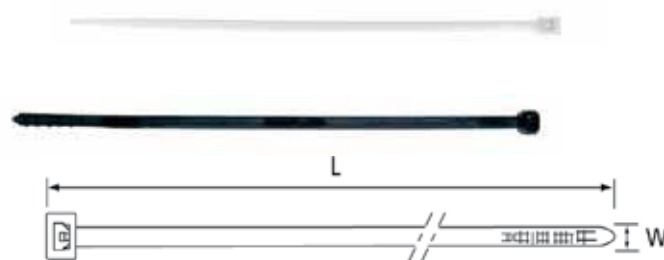
Thomas & Betts (today a member of the ABB Group) invented the Ty-Rap® cable tie to solve the problem of harnessing the hundreds of wires used in manufacturing aircraft and revolutionised the world of fastening. Today, the Ty-Rap® brand remains the benchmark for excellence and innovation in wire management.

ABB's broad offering of cable ties is designed to make the task of fastening, bundling, clamping and managing wires easier and quicker for industrial applications, construction, communications, utility and OEM professionals as well as home improvement specialists and do-it-yourself enthusiasts. When strength, aesthetics, reliability and performance are required, knowledgeable professionals turn to the original and the best source for cable ties and accessories. The corrosion-proof, non-magnetic stainless steel locking device inside the tie head guarantees the strongest and most durable locking you will ever find on the market. Ty-Rap® can be used in the most adverse conditions: humidity, heat, cold,... Engineered for labour savings and high performance, Ty-Rap® cable ties are commonly used in a variety of applications. When you choose a Ty-Rap® cable tie, you can count on quality, performance and innovation to make your work easier.



Spec-Kon® general purpose cable ties

The right cable tie for the right application Characteristics A complete range of cable ties for indoor and outdoor Available in two different packaging quantities Available in different lengths and tensile strengths Technical Information Material: Polyamide 6.6; Halogen-free, Silicone-free Temperature range: -40°C to +85°C Colour: Natural and black (Type code with 'X' is black colour and UV resistant) Flammability rating: UL 94 V-2



Natural colour - indoor use

Type code	Ordering Code	Description	UOM	MOQ	SPQ	Unit M.R.P.(₹)
SKT100-80	7TCA300040R0000	100 mm length 2.5 mm width large pack	EA	10000	1000	0.66
SKT100-80-100	7TCA300020R0000	100 mm length 2.5 mm width small pack	EA	10000	100	0.81
SKT160-80	7TCA300040R0002	160 mm length 2.5 mm width large pack	EA	10000	1000	1.11
SKT160-80-100	7TCA300020R0002	160 mm length 2.5 mm width small pack	EA	10000	100	1.30
SKT200-180	7TCA300120R0001	200 mm length 2.5 mm width large pack	EA	10000	1000	1.73
SKT200-180-100	7TCA300100R0001	200 mm length 2.5 mm width small pack	EA	10000	100	1.85
SKT300-180	7TCA300120R0002	300 mm length 3.6 mm width large pack	EA	12000	1000	2.79
SKT300-180-100	7TCA300100R0002	300 mm length 3.6 mm width small pack	EA	12000	100	2.98
SKT370-180	7TCA300120R0003	370 mm length 3.6 mm width large pack	EA	12000	1000	4.45
SKT370-180-100	7TCA300100R0003	370 mm length 3.6 mm width small pack	EA	12000	100	4.62
SKT450-540-50	7TCA300260R0003	450 mm length 7.6 mm width small pack	EA	1000	50	13.64
SKT750-540-50	7TCA300260R0002	750 mm length 7.6 mm width small pack	EA	1500	50	22.74
SKT912-780-50	7TCA300340R0001	912 mm length 9 mm width small pack	EA	500	50	33.44

Black colour - indoor & outdoor use

Type code	Ordering Code	Description	UOM	MOQ	SPQ	Unit M.R.P.(₹)
SKT100-80X	7TCA300080R0000	100 mm length 2.5 mm width large pack	EA	10000	1000	0.78
SKT100-80X-100	7TCA300060R0000	100 mm length 2.5 mm width small pack	EA	10000	100	0.86
SKT160-80X	7TCA300080R0002	160 mm length 2.5 mm width large pack	EA	10000	1000	1.25
SKT160-80X-100	7TCA300060R0002	160 mm length 2.5 mm width small pack	EA	10000	100	1.30
SKT200-180X	7TCA300160R0001	200 mm length 2.5 mm width large pack	EA	10000	1000	1.81
SKT200-180X-100	7TCA300140R0001	200 mm length 2.5 mm width small pack	EA	10000	100	1.93
SKT300-180X	7TCA300160R0002	300 mm length 3.6 mm width large pack	EA	12000	1000	2.78
SKT300-180X-100	7TCA300140R0002	300 mm length 3.6 mm width small pack	EA	12000	100	3.01
SKT370-180X	7TCA300160R0003	370 mm length 3.6 mm width large pack	EA	12000	1000	4.76
SKT370-180X-100	7TCA300140R0003	370 mm length 3.6 mm width small pack	EA	12000	100	4.99
SKT450-540X-50	7TCA300300R0003	450 mm length 7.6 mm width small pack	EA	1000	50	12.82
SKT750-540X-50	7TCA300300R0002	750 mm length 7.6 mm width small pack	EA	1500	50	21.55
SKT912-780X-50	7TCA300360R0001	912 mm length 9 mm width small pack	EA	500	50	30.62

Wire and cable management

Termination solution

Experience the Spec-Kon® advantage!

Thomas & Betts (today a Member of the ABB group) developed the first tool-applied solderless terminals and connectors more than 60 years ago in response to industry awareness of the need for better performance of electrical systems.

Since then, the crimping technology, in which a permanent joining of wires/cables to connectors is achieved by the insertion of a conductor into the barrel of the connector, which is then compressed to form a solid joint, has proven its many advantages year after year. Reliability of connection, low installed cost, low level of skill required to produce repeatable and quality crimps, environmental compliance (versus soldering for instance) are examples of benefits that have given this technology its natural superiority.

Easy entry design

This feature makes wire insertion faster and easier. Chamfering eliminates wire strand "hang up" and departure upon insertion into the terminal's barrel. The loss of even a couple of wire strands can have negative results on electrical efficiency and resistance to mechanical strain.

Spec-Kon® Insulated Tinned copper Easy-entry Terminal

Type Code	Description	UOM	SPQ	Unit M.R.P.(₹)
VT1E-RRΔ	0.5 - 1.5sq mm Ring Terminal	pc	100	Upon request
VT2E-BRΔ	1.5 - 2.5sq mm Ring Terminal	pc	100	Upon request
VT6E-YRΔ	4 - 6sq mm Ring Terminal	pc	100	Upon request
VT1E-RFΔ	0.5 - 1.5sq mm Fork Terminal	pc	100	Upon request
VT2E-BFΔ	1.5 - 2.5sq mm Fork Terminal	pc	100	Upon request
VT6E-YFΔ	4 - 6sq mm Fork Terminal	pc	100	Upon request
VT1E-RBΔ	0.5 - 1.5sq mm Blade Terminal	pc	100	Upon request
VT2E-BBΔ	1.5 - 2.5sq mm Blade Terminal	pc	100	Upon request
VT6E-YBΔ	4 - 6sq mm Blade Terminal	pc	100	Upon request

Color-Keyed®

Solderless compression connectors for power cables

The better method to install solderless compression connectors on power cables. Designed to provide a tight degree of reliability in electrical wiring, this method allows electrical workers to make installations with little effort and considerable savings in time.

A simple installation method in just three steps:

- First, the appropriate connector is chosen for the conductor size
- Next, the proper installing die is selected by matching the die colour to the connector colour
- Last, the die is installed in the tool, and the connector is compressed

Color-Keyed® Electro-tin plated copper lug

Type Code	Description	UOM	SPQ	Unit M.R.P.(₹)
□MΔ-A	Straight Lug	pc	10	Upon request
□MΔ-A-2	Double hole Straight Lug	pc	10	Upon request
□MΔ-A-45	45° bend Lug	pc	10	Upon request
□MΔ-A-90	90° bend Lug	pc	10	Upon request

Brazed seam/tubular construction

Spec-Kon® brazed seam connectors have a barrel with brazed seam (or a tubular construction), which provides increased mechanical properties (no barrel separation during the crimp process, higher wire pullout force) and electrical properties (reduced chances of wirestrand loss and electrical failure) compared to butted seam connectors.

Double crimp

The double crimp feature has an extra copper sleeve within the barrel to ensure additional solid conductivity and pull-out-strenght. Ideal for high vibration or heavy industrial applications.

Wide range of styles, materials and application tools

Extensive range of styles to suit the various applications: rings, forks, blades, pins, bootlace ferrules, disconnects, splices.... Non-insulated or insulated with various types of material (Polycarbonate, Vinyl, Nylon, Heat Shrink) according to the specific requirements (moisture protection, short circuits, dust, and solid crimping against vibration).

Complete range of tooling, from ergonomic hand tool to pneumatic and hydraulic power tools.



Type Code	Description	UOM	SPQ	Unit M.R.P.(₹)
NC05ΔCD	0.5sq mm Cord end Terminal	pc	1000	Upon request
NC01ΔCD	1sq mm Cord end Terminal	pc	1000	Upon request
NC15ΔCD	1.5sq mm Cord end Terminal	pc	1000	Upon request
NC25ΔCD	2.5sq mm Cord end Terminal	pc	1000	Upon request
NC40ΔCD	4 sq mm Cord end Terminal	pc	1000	Upon request
NC60ΔCD	6 sq mm Cord end Terminal	pc	1000	Upon request
NC100ΔCD	10sq mm Cord end Terminal	pc	1000	Upon request
NC160ΔCD	16sq mm Cord end Terminal	pc	1000	Upon request

Δ Complete with stud hole size

Color-Keyed®: special lugs for special applications

ABB can solve your difficult wire bending and terminating problems in power distribution panels, switchgear and motor control enclosures.

- In addition to straight lugs, 45° and 90° angle lugs let you run the cable directly to a bus bar with no bending.
- One hole or two-hole configurations.
- Cross-sections from 10-400mm²
- All lugs meet the stringent requirements of IEC61238-1 Class A to deliver a high-level of performance and safety.



□ Complete with cable size

Δ Complete with stud hole size

Wire and cable management

Flexible conduit system

Adaptaflex flexible conduit system

Adaptaflex is one of the market leading flexible conduit system brands that can be found all over the world. Combining innovative design with dedicated manufacture, it offers customers one of the world's broadest ranges of cable protection products and solutions. With a choice of over 6000 products the range covers metallic and non-metallic flexible conduit systems for the protection of critical power and data cables.

The system solutions from Adaptaflex need to perform in a wide variety of environments from high temperature to freezing subzero conditions. The products are designed and tested to withstand constant vibrations, water ingress, offer corrosion resistance and are available in halogen free, low smoke and low toxicity materials. An extensive range of engineered solutions are designed to withstand the rigours of some of the most technically demanding markets. So whatever your project involves, our experience will provide the answer, helping you to specify the correct flexible conduit system.

Markets and industries

Adaptaflex flexible conduit systems are used to protect critical power and data cabling are available throughout a wide range of markets including:

- Commercial contracting
- Machinery
- Rail / Infrastructure
- Marine
- Mechanical
- Security / CCTV
- Data cabling
- Critical power

Many components are designed specifically for a market solution. These products uniquely meet an industry's needs - solving a specific application requirement, providing product innovation, saving installation and component costs, improving the quality and the integrity of the end product. Wherever you need mechanical and electrical protection for your cables you can be confident in specifying Adaptaflex products

Type PA - Polyamide (Nylon) 6 conduit

Type Code	Description	UOM	MOQ	SPQ	Unit M.R.P.*
PAFL13/BL	13mm nominal dia Nylon conduit, black	mtr	50	50	105
PAFL16/BL	16mm nominal dia Nylon conduit, black	mtr	50	50	145
PAFL21/BL	21mm nominal dia Nylon conduit, black	mtr	50	50	230
PACL28/BL	28mm nominal dia Nylon conduit, black	mtr	50	50	425
PACL34/BL	34mm nominal dia Nylon conduit, black	mtr	50	50	499
PACL42/BL	42mm nominal dia Nylon conduit, black	mtr	25	25	520
PACL54/BL	54mm nominal dia Nylon conduit, black	mtr	25	25	825
PACS80/BL	80mm nominal dia Nylon conduit, black	mtr	10	10	3,850
PACS106/BL	106mm nominal dia Nylon conduit, black	mtr	10	10	4,950

* Price per meter



Approvals



Temperature Range

Static applications: -40°C to +120°C

Moving applications: -5°C to +120°C

Flexibility & fatigue life

High flexibility - high fatigue life

Fire performance & EMI screen

Self extinguishing Halogen-free

UV resistance

Very high

Type S - Galvanised steel general purpose conduit

Type Code	Description	UOM	MOQ	SPQ	Unit M.R.P.*
S16	16mm nominal dia steel conduit	mtr	10	10	515
S20	20mm nominal dia steel conduit	mtr	10	10	495
S25	25mm nominal dia steel conduit	mtr	10	10	575
S32	32mm nominal dia steel conduit	mtr	10	10	950
S40	40mm nominal dia steel conduit	mtr	10	10	1,310
S50	50mm nominal dia steel conduit	mtr	10	10	1,855
S63	63mm nominal dia steel conduit	mtr	10	10	4,840
S75	75mm nominal dia steel conduit	mtr	10	10	7,435

* Price per meter



Approvals



Temperature range

Static applications: -50°C to +300°C

Moving applications: -45°C to +250°C

Flexibility & fatigue life

High flexibility - High fatigue life

Fire performance & EMI screen

UV resistance

Very high



Type SP - Covered steel general purpose conduit

Type Code	Description	UOM	MOQ	SPQ	Unit M.R.P.*
SP16/BL	BL 16mm nom. dia covered steel conduit, black	mtr	10	10	570
SP20/BL	20mm nom. dia covered steel conduit, black	mtr	10	10	640
SP25/BL	25mm nom. dia covered steel conduit, black	mtr	10	10	735
SP32/BL	32mm nom. dia covered steel conduit, black	mtr	10	10	1,265
SP40/BL	40mm nom. dia covered steel conduit, black	mtr	10	10	1,650
SP50/BL	50mm nom. dia covered steel conduit, black	mtr	10	10	2,155
SP63/BL	63mm nom. dia covered steel conduit, black	mtr	10	10	5,165
SP75/BL	75mm nom. dia covered steel conduit, black	mtr	10	10	7,740

* Price per meter



Approvals



Temperature range

Static applications: -25°C to +70°C

Moving applications: -5°C to +90°C

Flexibility & fatigue life

High flexibility - Medium fatigue life

Fire performance & EMI screen

Self extinguishing

UV resistance

Very high

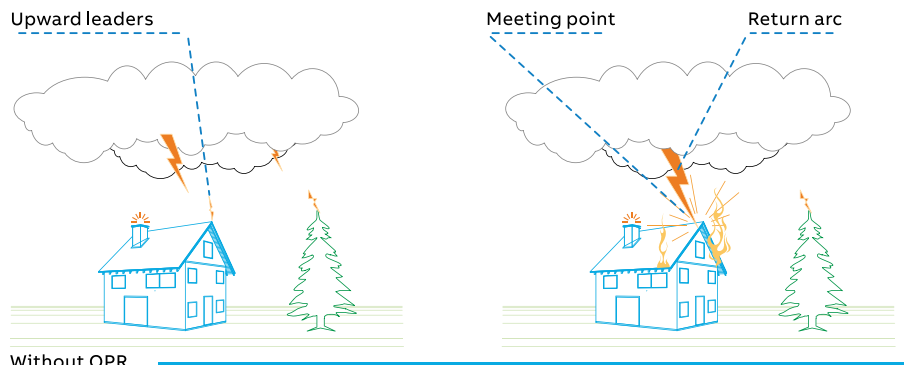
For any other specification/requirement of conduits and accessories kindly contact local ABB sales office

External lightning protection

OPR - Optimized Pulse Rod

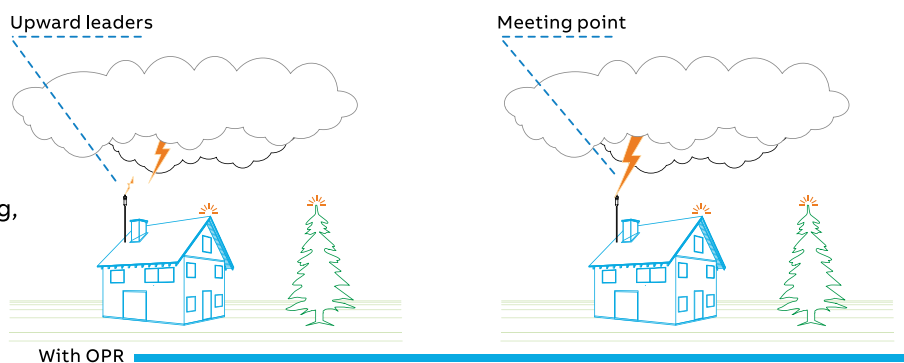
The OPR efficiency (ΔT)

Lightning is one of the most spectacular meteorological phenomena. Generated by the interaction of clouds elements (water and ice), it can kill, injure and damage. The unique efficiency of the OPR Early streamer emission is based on the difference (ΔT), measured in a laboratory, in between the emission time of the OPR and the one from a simple rod. The OPR ESE air terminal is composed of a striking point connected to a down conductor to conduct the lightning to the ground.



Complete autonomy

During a storm the ambient electric field may rise from 600 V to 10-20 kV/m. When the electric field reach this level representing a minimum risk for a lightning, the OPR begins to get activated and generates high voltage pulses, helping to create and propagating an upward leader. After a strike on the OPR, the lightning current is driven to ground by the down conductor to the earth termination system.



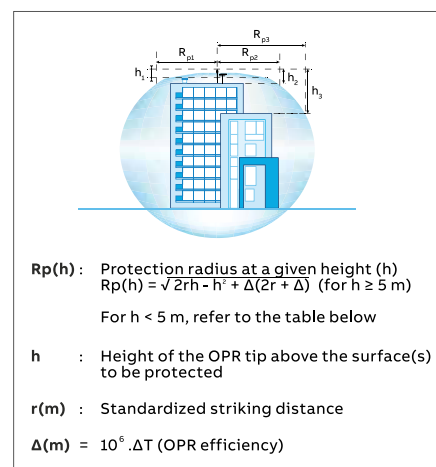
Radius of protection

The radius of protection (R_p) of the OPR is calculated according to the NF C 17-102 (edition 2011). It depends on the OPR efficiency (ΔT) expressed in micro-seconds. The maximum value for ΔT is 60 μs .

The risk assessment shall be calculated according to the NF C 17-102 Annex A / IEC 62305-2 and will define the protection level (LPL I, II, III or IV) which will be used in the determination of the OPR radius of protection.

Installing/testing

The installation and verification of lightning protection systems using one or more OPR units must be performed in accordance with the manufacturer's recommendations and to the NF C 17-102 standard.



OPR radius of protection

Protection level	I ($r = 20$ m)			II ($r = 30$ m)			III ($r = 45$ m)			IV ($r = 60$ m)		
OPR	OPR 30	OPR 45	OPR 60	OPR 30	OPR 45	OPR 60	OPR 30	OPR 45	OPR 60	OPR 30	OPR 45	OPR 60
h (m)	Radius of protection R_p (m)											
2	19	25	31	22	28	35	25	32	39	28	36	43
3	29	38	47	33	42	52	38	48	58	43	57	64
4	38	51	63	44	57	69	51	65	78	57	72	85
5	48	63	79	55	71	86	63	81	97	71	89	107
6	48	63	79	55	71	87	64	81	97	72	90	107
8	49	64	79	56	72	87	65	82	98	73	91	108
10	49	64	79	57	72	88	66	83	99	75	92	109
15	50	65	80	58	73	89	69	85	101	78	95	111
20	50	65	80	59	74	89	71	86	102	81	97	113
45	43	65	76	58	75	89	75	90	105	89	104	119
50	40	65	74	57	75	88	75	90	105	89	104	120
55	36	65	72	55	75	86	74	90	105	90	105	120
60	30	65	69	52	75	85	73	90	104	90	105	120

External lightning protection

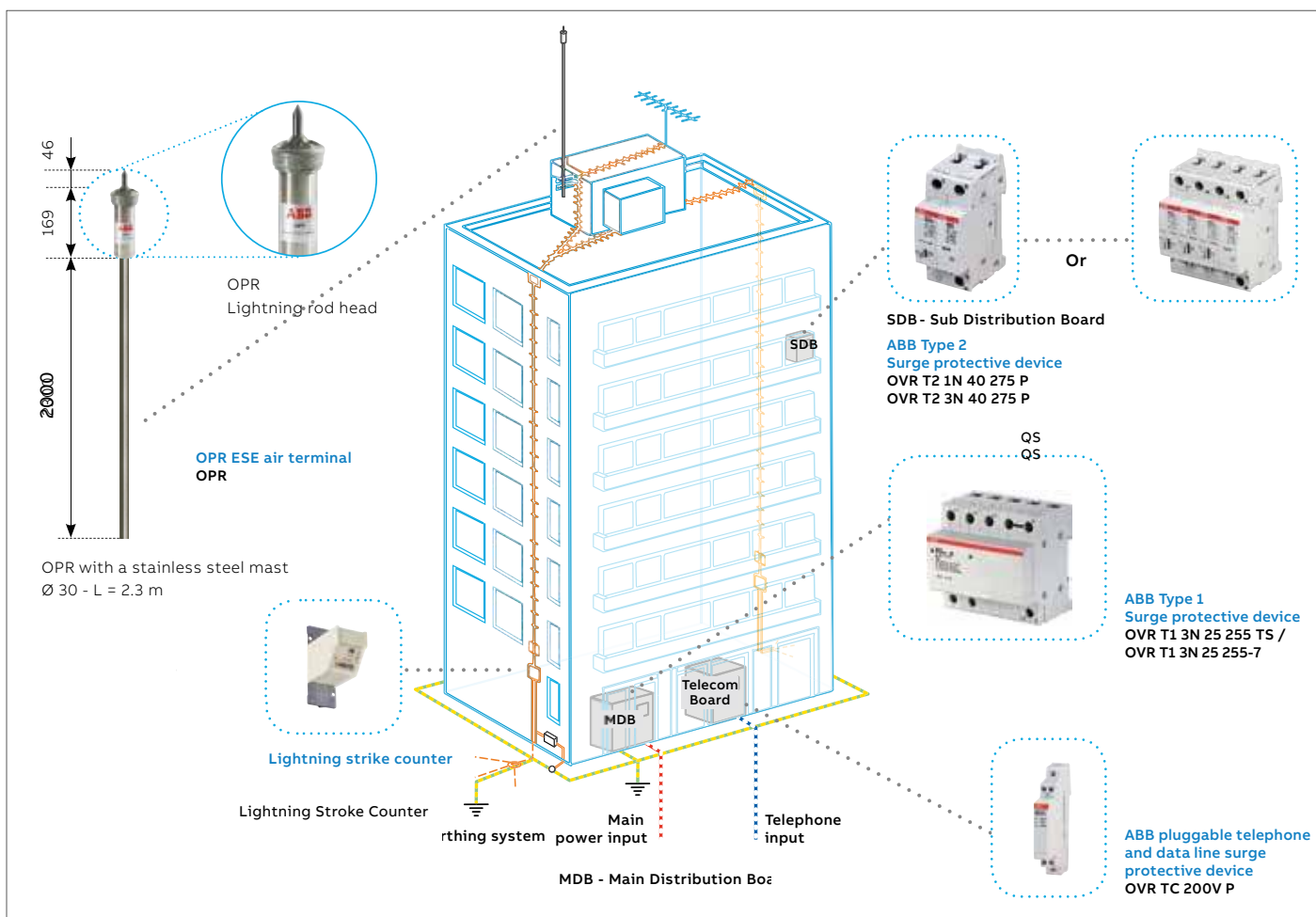
OPR - Optimized Pulse Rod

OPR Range

Type Code	Description	Length (m)	Weight (kg)	Time gain (μs)	Ordering code	Unit M.R.P. (₹)
OPR 30	ESE Air terminal without mast	0.215	2.4	30	2CTB899800R7000	1,18,200
OPR 45	ESE Air terminal without mast	0.215	2.4	45	2CTB899800R7500	1,41,350
OPR 60	ESE Air terminal without mast	0.215	2.4	60	2CTB899800R7100	1,55,650

Accessories

Type Code	Description	Length (m)	Weight (kg)	Ordering code	Unit M.R.P. (₹)
LS COUNTER	Lightning stroke counter	-	0.56	2CTH0CCF2004	41,500
MAST 2M30	Mounting Mast, 2m, 30mm dia	2	4.4	H00003002L	7,650
MAST 3M	Mounting Mast, 3m with guywire and base plate	3	6.5	H00003003LGB	15,150
CM015	Bentonite Moisture retainer - Powder	-	25	-	Upon enquiry
CM020	Bentonite Moisture retainer - Granules	-	25	-	Upon enquiry
CM025	FurseCEM conductive aggregate	-	25	-	Upon enquiry
RB Δ □	Copperbond earth rod	-	-	-	Upon enquiry
CR Δ □	Rod to tape clamp	-	-	-	Upon enquiry
PT205	Light weight inspection pit with grey polymer lid	-	-	-	Upon enquiry



External lightning protection

Furse - Earthing and lightning protection

Furse provides world leading earthing, lightning and electronic systems protection from our own designed and manufactured products through to risk assessment and systems design advice.

Our renowned Furse range of earthing & lightning protection design services provide a unique total solution.

Expertise

Specialist advice from our fully qualified technical engineers - focusing on your earthing & lightning protection issues and concerns.

Experience

Experience to provide the optimum design - one that doesn't use more material than is necessary, saving you money.

Knowledge

Our knowledge of the latest products ensures a tailored design that can be installed using the most appropriate and up-to-date products.



Structural lightning protection

From Furse air termination systems including air rods and strike plates to capture lightning strikes, through to our comprehensive range of down conductors and lightning protection components which channel lightning energy safely to a Furse earth termination network.

- Air termination systems
- Lightning protection conductors
- Conductor clips, clamps and holdfasts
- Bimetallic connection components



Electronic systems protection

Our exhaustive range of equipotential bonding and transient overvoltage SPDs providing fully co-ordinated protection against transient overvoltages on all incoming and outgoing metallic service lines including power, data, signal & telecoms.

- Lightning equipotential bonding SPDs
- Mains power transient overvoltage SPDs
- Data, signal & telecommunication lines SPDs
- DC power & photovoltaic SPDs

Compliance, now & in the future

Furse designs comply with all recognised standards - national and international. Our engineers actively contribute to national and harmonised European / international standards, ensuring we remain at the forefront of new developments.

- BS EN/IEC 62305 protection against lightning
- NFPA 780 Standard for the installation of lightning protection systems
- IEEE Std 80:2000 IEEE guide for safety in AC substation grounding
- ENA TS 41-24 guidelines for the design, installation, testing & maintenance of main earthing systems in substations
- BS EN 50522:2010 - earthing of power installations exceeding 1.k Vac
- IS/IEC 62305 - protection against lightning



Earthing

A combination of Furse earth electrodes, soil conditioning, conductors and equipotential bonding bars provide an effective, low resistance dissipation from the lightning protection system to earth.

- Earth rods and conductor systems
- Mechanical earth clamps and bonds
- Soil conditioning agents
- Earth bars and equipotential bonding



FurseWELD - Exothermic welding

FurseWELD exothermic welding is a cost-efficient, self-contained system that uses the high temperature reaction of powdered copper oxide and aluminium, within a mould, to form permanent electrical connections.

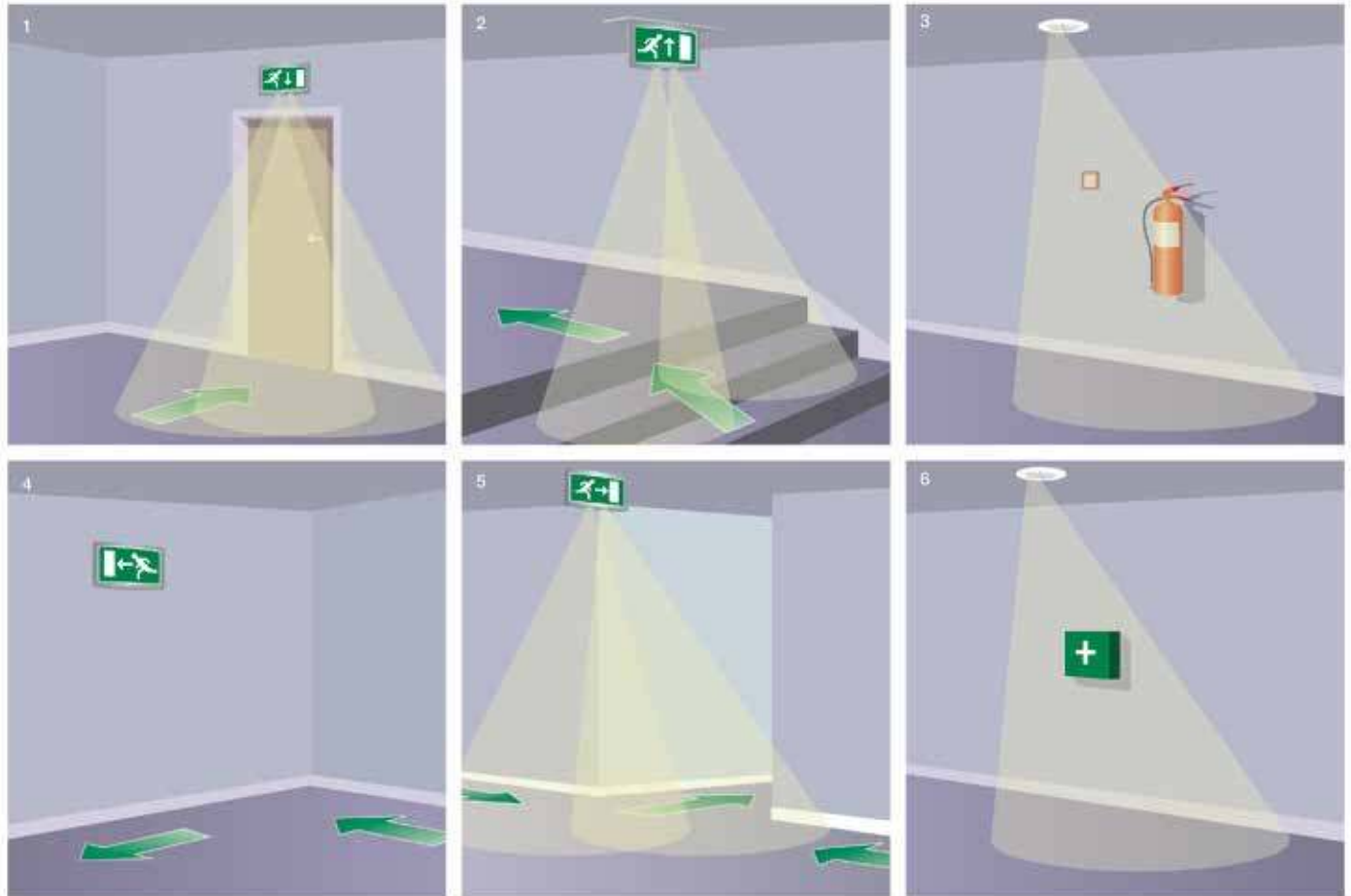
- Moulds
- Powder
- Handle clamps
- Accessories

Emergency lighting systems

Exit sign, light and battery system

The requirement for emergency lighting originates from the Fire Precautions Act, 1971 and was further enforced by the Fire Precautions (Workplace) Regulations, 1997 (Amended 1999).

The Emergi-Lite concept is clear and simple. Emergi-Lite offers you reliable total solutions for safe evacuation. The way in which we do this is what makes the difference. Emergi-Lite offers advantages to everybody involved in the construction process. That way, you know that Emergi-Lite is always the right choice, for both you and your customers.

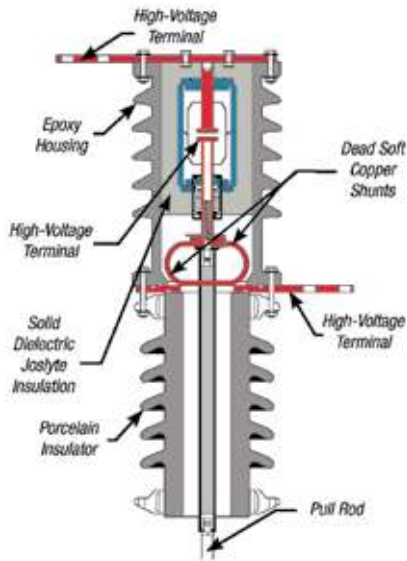


MV and HV apparatus

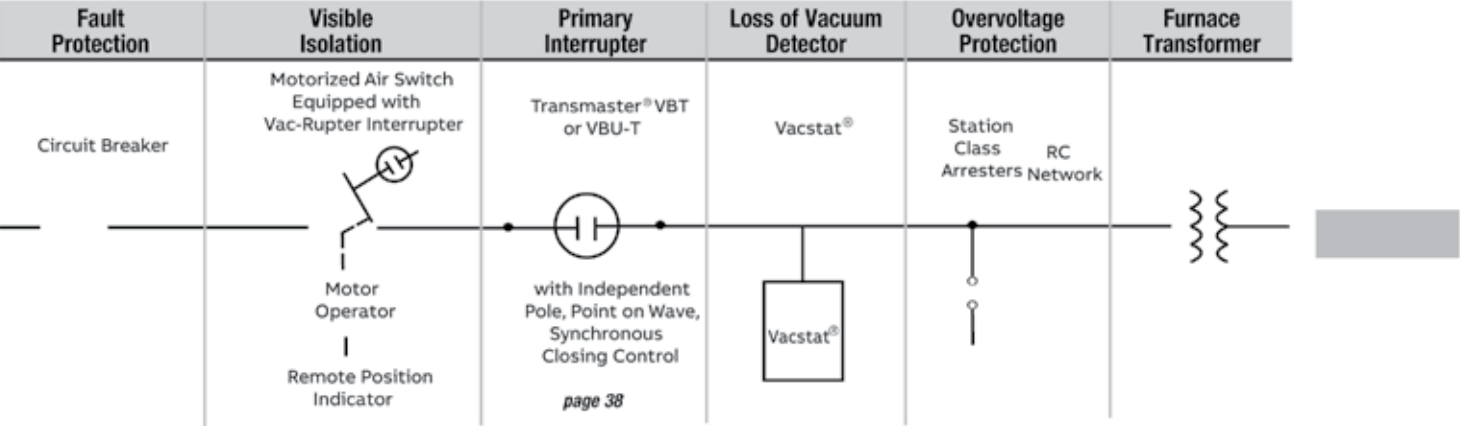
Capacitor and furnace switches

Transmaster® VBT Electric Furnace Switches
Longest life product for electric furnaces!
Joslyn Hi-Voltage® Transmaster®
Electric Furnace Switch

- Long, maintenance-free life under demanding conditions, designed for 100,000 operations
- No oil or gas used for interruption or insulation
- Safe - no visible or hazardous arcing and no hot exhaust or ionized gas dissemination
- Vacuum interrupter condition can be determined by a high-potential withstand test quickly
- Lightweight modular design - no special foundations or costly support required
- Removable fuses provide protection
- Vacuum contacts withstand excessive overloads and system short circuits at any power factor
- Eight heavy-duty auxiliary contacts are provided for remote indications, control and interlocking of other furnace functions or equipment
- Capacitor discharge circuit trips switch open upon loss of control voltage
- Circuit trips switch open if one mechanism does not close within the specified time



Ideal Furnace System



DESCRIPTION	15.5kV						38kV					
h (m)	Radius of protection Rp (m)											
Continuous Current (Amps)	600	1000	1500	2000	3000	4000	600	1000	1500	2000	2500	3000
Momentary Current (RMS Amps, Asymmetrical) (kA)	20	35	50	65	65	65	20	35	50	65	65	65
Impulse Withstand Open-Gap (kV BIL)	110	110	110	110	110	110	200	200	200	200	200	200
Impulse Withstand Line-to-Ground (kV BIL)	150	150	150	150	150	150	200	200	200	200	200	200
Maximum 60 Cycle Withstand Line-to-Ground Dry (One Minute) (kV)	112	112	112	112	112	112	112	112	112	112	112	112
Maximum 60 Cycle Withstand Line-to-Ground Wet (Ten Seconds) (kV)	55	55	55	55	55	55	55	55	55	55	55	55
Fault Interrupting Rating (Amps, Symmetric) (kA)	4	4	4	4	4	4	4	4	4	4	4	4

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ABB's comprehensive range of low voltage capacitors and filter modules

The range of ABB Low Voltage Capacitors and Filter modules ranks amongst the most extensive in the market with a full range of innovative solutions for various applications, helping to optimise resources, reduce energy costs, boost productivity.

- Q Cap - L (normal duty and heavy duty) capacitors
 - Cylindrical type
 - Box type
- CLMD heavy duty capacitors
- APP type oil-filled capacitors
- Harmonic De Tuned filter modules
- APFC relays



Q Cap - L Capacitors

440 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Normal Duty



Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor CYL ND 1 kvar F5 V440	1 kvar	12	PC	1HYC414005-001-1	220
LV Capacitor CYL ND 2.1 kvar F5 V440	2.1 kvar	12	PC	1HYC414005-002-1	540
LV Capacitor CYL ND 3 kvar F5 V440	3 kvar	12	PC	1HYC414005-003-1	800
LV Capacitor CYL ND 4.2 kvar F5 V440	4.2 kvar	12	PC	1HYC414005-004-1	1,140
LV Capacitor CYL ND 5 kvar F5 V440	5 kvar	12	PC	1HYC414005-005-1	1,150
LV Capacitor CYL ND 6 kvar F5 V440	6 kvar	12	PC	1HYC414005-006-1	1,350
LV Capacitor CYL ND 7.5 kvar F5 V440	7.5 kvar	12	PC	1HYC414005-007-1	1,690
LV Capacitor CYL ND 10 kvar F5 V440	10 kvar	12	PC	1HYC414005-008-1	2,250
LV Capacitor CYL ND 12.5 kvar F5 V440	12.5 kvar	12	PC	1HYC414005-009-1	2,800
LV Capacitor CYL ND 15 kvar F5 V440	15 kvar	12	PC	1HYC414005-010-1	3,370
LV Capacitor CYL ND 20 kvar F5 V440	20 kvar	12	PC	1HYC414005-011-1	4,490
LV Capacitor CYL ND 25 kvar F5 V440	25 kvar	12	PC	1HYC414005-012-1	5,620

440 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Heavy Duty



Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor CYL HD 1 kvar F5 V440	1 kvar	12	PC	1HYC414007-101-1	430
LV Capacitor CYL HD 2 kvar F5 V440	2 kvar	12	PC	1HYC414007-102-1	850
LV Capacitor CYL HD 3 kvar F5 V440	3 kvar	12	PC	1HYC414007-103-1	1,190
LV Capacitor CYL HD 4 kvar F5 V440	4 kvar	12	PC	1HYC414007-104-1	1,620
LV Capacitor CYL HD 5 kvar F5 V440	5 kvar	12	PC	1HYC414007-105-1	1,710
LV Capacitor CYL HD 6 kvar F5 V440	6 kvar	12	PC	1HYC414007-106-1	2,060
LV Capacitor CYL HD 7.5 kvar F5 V440	7.5 kvar	12	PC	1HYC414007-107-1	2,610
LV Capacitor CYL HD 10 kvar F5 V440	10 kvar	12	PC	1HYC414007-108-1	3,510
LV Capacitor CYL HD 12.5 kvar F5 V440	12.5 kvar	12	PC	1HYC414007-109-1	4,420
LV Capacitor CYL HD 15 kvar F5 V440	15 kvar	12	PC	1HYC414007-110-1	5,300
LV Capacitor CYL HD 20 kvar F5 V440	20 kvar	12	PC	1HYC414007-111-1	7,120
LV Capacitor CYL HD 25 kvar F5 V440	25 kvar	12	PC	1HYC414007-112-1	8,960

480 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Heavy Duty



Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor CYL HD 5.5 kvar F5 V480	5.5 kvar	4	PC	1HYC414015-002-1	1,990
LV Capacitor CYL HD 8.3 kvar F5 V480	8.3 kvar	4	PC	1HYC414015-003-1	3,050
LV Capacitor CYL HD 11.1 kvar F5 V480	11.1 kvar	4	PC	1HYC414015-005-1	4,120
LV Capacitor CYL HD 12.5 kvar F5 V480	12.5 kvar	4	PC	1HYC414015-006-1	4,670
LV Capacitor CYL HD 13.8 kvar F5 V480	13.8 kvar	4	PC	1HYC414015-007-1	5,150
LV Capacitor CYL HD 16.6 kvar F5 V480	16.6 kvar	4	PC	1HYC414015-009-1	6,210
LV Capacitor CYL HD 20 kvar F5 V480	20 kvar	4	PC	1HYC414015-010-1	7,520
LV Capacitor CYL HD 22.1 kvar F5 V480	22.1 kvar	4	PC	1HYC414015-011-1	8,310
LV Capacitor CYL HD 25 kvar F5 V480	25 kvar	4	PC	1HYC414015-012-1	8,900
LV Capacitor CYL HD 27.7 kvar F5 V480	27.7 kvar	4	PC	1HYC414015-013-1	10,440
LV Capacitor CYL HD 30 kvar F5 V480	30 kvar	4	PC	1HYC414015-014-1	12,170

Q Cap - L Capacitors



525 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Heavy Duty

Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor CYL HD 6.6 kvar F5 V525	6.6 kvar	4	PC	1HYC414008-102-1	3,050
LV Capacitor CYL HD 10 kvar F5 V525	10 kvar	4	PC	1HYC414008-104-1	5,130
LV Capacitor CYL HD 12.5 kvar F5 V525	12.5 kvar	4	PC	1HYC414008-105-1	5,780
LV Capacitor CYL HD 15.4 kvar F5 V525	15.4 kvar	4	PC	1HYC414008-107-1	6,340
LV Capacitor CYL HD 16.6 kvar F5 V525	16.6 kvar	4	PC	1HYC414008-108-1	6,830
LV Capacitor CYL HD 20 kvar F5 V525	20 kvar	4	PC	1HYC414008-111-1	7,580
LV Capacitor CYL HD 25 kvar F5 V525	25 kvar	4	PC	1HYC414008-112-1	9,360
LV Capacitor CYL HD 33.1 kvar F5 V525	33.1 kvar	4	PC	1HYC414008-113-1	12,390

440 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Super Heavy Duty

Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor CYL SHD 5 kvar F5 V440	5 kvar	12	PC	1HYC414017-101-1	1,940
LV Capacitor CYL SHD 10 kvar F5 V440	10 kvar	12	PC	1HYC414017-103-1	3,880
LV Capacitor CYL SHD 15 kvar F5 V440	15 kvar	12	PC	1HYC414017-105-1	5,820
LV Capacitor CYL SHD 20 kvar F5 V440	20 kvar	12	PC	1HYC414017-006-1	7,760
LV Capacitor CYL SHD 25 kvar F5 V440	25 kvar	12	PC	1HYC414017-007-1	9,700

480 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Super Heavy Duty

Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor CYL SHD 5.5 kvar F5 V480	5.5 kvar	12	PC	1HYC414017-108-1	2,310
LV Capacitor CYL SHD 11.1 kvar F5 V480	11.1 kvar	12	PC	1HYC414017-109-1	4,660
LV Capacitor CYL SHD 16.6 kvar F5 V480	16.6 kvar	12	PC	1HYC414017-110-1	6,970
LV Capacitor CYL SHD 22.1 kvar F5 V480	22.1 kvar	12	PC	1HYC414017-111-1	9,280
LV Capacitor CYL SHD 27.7 kvar F5 V480	27.7 kvar	12	PC	1HYC414017-112-1	11,630
LV Capacitor CYL SHD 30 kvar F5 V480	30 kvar	12	PC	1HYC414017-120-1	12,600

525 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Super Heavy Duty

Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor CYL SHD 6.6 kvar F5 V525	6.6 kvar	12	PC	1HYC414017-113-1	2,570
LV Capacitor CYL SHD 13.2 kvar F5 V525	13.2 kvar	12	PC	1HYC414017-114-1	5,150
LV Capacitor CYL SHD 15 kvar F5 V525	15 kvar	12	PC	1HYC414017-115-1	5,850
LV Capacitor CYL SHD 20 kvar F5 V525	20 kvar	12	PC	1HYC414017-117-1	7,800
LV Capacitor CYL SHD 25 kvar F5 V525	25 kvar	12	PC	1HYC414017-118-1	9,750
LV Capacitor CYL SHD 33.1 kvar F5 V525	33.1 kvar	12	PC	1HYC414017-119-1	12,910

Q Cap - L Capacitors



440 VOLTS, 3 PHASE, 50 Hz

Box Type - Normal Duty

Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor BOX NDW 1 kvar F5 V440	1 kvar	1	PC	1HYC414009-101-1	330
LV Capacitor BOX NDW 2 kvar F5 V440	2 kvar	1	PC	1HYC414009-102-1	650
LV Capacitor BOX NDW 3 kvar F5 V440	3 kvar	1	PC	1HYC414009-103-1	980
LV Capacitor BOX NDW 4 kvar F5 V440	4 kvar	1	PC	1HYC414009-104-1	1,310
LV Capacitor BOX ND 5 kvar F5 V440	5 kvar	1	PC	1HYC414009-105-1	1,460
LV Capacitor BOX ND 6 kvar F5 V440	6 kvar	1	PC	1HYC414009-106-1	1,750
LV Capacitor BOX ND 7.5 kvar F5 V440	7.5 kvar	1	PC	1HYC414009-107-1	2,220
LV Capacitor BOX ND 10 kvar F5 V440	10 kvar	1	PC	1HYC414009-108-1	2,820
LV Capacitor BOX ND 12.5 kvar F5 V440	12.5 kvar	1	PC	1HYC414009-109-1	3,560
LV Capacitor BOX ND 15 kvar F5 V440	15 kvar	1	PC	1HYC414009-110-1	4,300
LV Capacitor BOX ND 20 kvar F5 V440	20 kvar	1	PC	1HYC414009-112-1	5,000
LV Capacitor BOX ND 25 kvar F5 V440	25 kvar	1	PC	1HYC414009-114-1	7,120
LV Capacitor BOX ND 50 kvar F5 V440.	50 kvar	1	PC	1HYC414009-120-1	14,360



440 VOLTS, 3 PHASE, 50 Hz

Box Type - Heavy Duty

Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor BOX HD 1 kvar F5 V440	1 kvar	1	PC	1HYC414012-101-1	400
LV Capacitor BOX HD 2 kvar F5 V440	2 kvar	1	PC	1HYC414012-102-1	880
LV Capacitor BOX HD 3 kvar F5 V440	3 kvar	1	PC	1HYC414012-103-1	1,330
LV Capacitor BOX HD 4 kvar F5 V440	4 kvar	1	PC	1HYC414012-104-1	1,820
LV Capacitor BOX HD 5 kvar F5 V440	5 kvar	1	PC	1HYC414012-105-1	1,920
LV Capacitor BOX HD 6 kvar F5 V440	6 kvar	1	PC	1HYC414012-106-1	2,330
LV Capacitor BOX HD 7.5 kvar F5 V440	7.5 kvar	1	PC	1HYC414012-107-1	2,920
LV Capacitor BOX HD 10 kvar F5 V440	10 kvar	1	PC	1HYC414012-108-1	3,940
LV Capacitor BOX HD 12.5 kvar F5 V440	12.5 kvar	1	PC	1HYC414012-109-1	4,960
LV Capacitor BOX HD 15 kvar F5 V440	15 kvar	1	PC	1HYC414012-110-1	5,950
LV Capacitor BOX HD 20 kvar F5 V440	20 kvar	1	PC	1HYC414012-112-1	7,930
LV Capacitor BOX HD 25 kvar F5 V440	25 kvar	1	PC	1HYC414012-114-1	9,920
LV Capacitor BOX HD 50 kvar F5 V440	50 kvar	1	PC	1HYC414012-120-1	19,950



480 VOLTS, 3 PHASE, 50 Hz

Box Type - Heavy Duty

Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor BOX HD 5.5 kvar F5 V480	5.5 kvar	1	PC	1HYC414013-001-1	2,240
LV Capacitor BOX HD 8.3 kvar F5 V480	8.3 kvar	1	PC	1HYC414013-002-1	3,420
LV Capacitor BOX HD 11.1 kvar F5 V480	11.1 kvar	1	PC	1HYC414013-003-1	4,620
LV Capacitor BOX HD 13.8 kvar F5 V480	13.8 kvar	1	PC	1HYC414013-004-1	5,770
LV Capacitor BOX HD 16.6 kvar F5 V480	16.6 kvar	1	PC	1HYC414013-006-1	6,960
LV Capacitor BOX HD 22.1 kvar F5 V480	22.1 kvar	1	PC	1HYC414013-008-1	9,260
LV Capacitor BOX HD 25 kvar F5 V480	25 kvar	1	PC	1HYC414013-009-1	10,440
LV Capacitor BOX HD 27.7 kvar F5 V480	27.7 kvar	1	PC	1HYC414013-010-1	11,570

Q Cap - L Capacitors

525 VOLTS, 3 PHASE, 50 Hz

Box Type - Heavy Duty



Description	kvar	Standard Pkg. Qty.	Unit	Ordering code	Unit M.R.P. (₹)
LV Capacitor BOX HD 6.6 kvar F5 V525	6.6 kvar	1	PC	1HYC414013-011-1	2,760
LV Capacitor BOX HD 13.2 kvar F5 V525	13.2 kvar	1	PC	1HYC414013-013-1	5,620
LV Capacitor BOX HD 15 kvar F5 V525	15 kvar	1	PC	1HYC414013-014-1	6,400
LV Capacitor BOX HD 16.6 kvar F5 V525	16.6 kvar	1	PC	1HYC414013-015-1	7,090
LV Capacitor BOX HD 20 kvar F5 V525	20 kvar	1	PC	1HYC414013-016-1	8,540
LV Capacitor BOX HD 25 kvar F5 V525	25 kvar	1	PC	1HYC414013-017-1	10,640
LV Capacitor BOX HD 26.5 kvar F5 V525	26.5 kvar	1	PC	1HYC414013-018-1	11,280
LV Capacitor BOX HD 33.1 kvar F5 V525	33.1 kvar	1	PC	1HYC414013-019-1	14,120

CLMD series for heavy duty applications

415 Volts, 3 Phase, 50 Hz



Voltage	Description	Rating in kvar	Ordering code	Unit M.R.P. (₹)
415 V	CLMD 13	5	1HYC414000-068	2,400
	CLMD 13	10	1HYC414000-063	4,800
	CLMD 13	15	1HYC414000-172	7,200
	CLMD 43	20	1HYC414000-143	12,300
	CLMD 43	25	1HYC414000-009	13,100
	CLMD 43	30	1HYC414000-069	13,300
	CLMD 53	40	1HYC414000-003	21,250
	CLMD 53	50	1HYC414000-013	26,500
	CLMD 63	60	1HYC414000-142	32,500
	CLMD 63	75	1HYC414000-029	39,990
	CLMD 83	100	1HYC414000-086	54,450

440 Volts, 3 Phase 50 Hz



Voltage	Description	Rating in kvar	Ordering code	Unit M.R.P. (₹)
440 V	CLMD 13	5	1HYC414001-060	3,220
	CLMD 33	10	1HYC414000-060	6,450
	CLMD 33	15	1HYC414000-071	9,670
	CLMD 43	20	1HYC414000-007	12,900
	CLMD 43	25	1HYC414000-008	13,100
	CLMD 43	30	1HYC414000-021	13,250
	CLMD 53	40	1HYC414000-012	21,200
	CLMD 53	50	1HYC414000-001	24,900
	CLMD 63	60	1HYC414000-011	29,700
	CLMD 63	75	1HYC414000-042	34,900
	CLMD 83	100	1HYC414000-067	49,000

480 Volts, 3 Phase 50 Hz



Voltage	Description	Rating in kvar	Ordering code	Unit M.R.P. (₹)
480 V	CLMD 13	6.6	1HYC414001-029	4170
	CLMD 13	12.5	1HYC414000-099	7900
	CLMD 43	20	1HYC414000-157	13000
	CLMD 33	25	1HYC414000-098	13300
	CLMD 53	33.5	1HYC414000-206	20300
	CLMD 53	50	1HYC414000-108	27990
	CLMD 63	62.5	1HYC414000-254	37300

CLMD series for heavy duty applications



525 Volts, 3 Phase 50 Hz

Voltage	Description	Rating in kvar	Ordering code	Unit M.R.P. (₹)
525 V	CLMD 13	6.6	1HYC414001-029	4,810
	CLMD 13	10	1HYC414000-230	7,400
	CLMD 33C	15	1HYC414000-101	7,250
	CLMD 43	20	1HYC414000-124	13,700
	CLMD 33	25	1HYC414000-109	13,850
	CLMD 53	34	1HYC414000-044	21,000
	CLMD 53	50	1HYC414000-095	28,550
	CLMD 63	69	1HYC414000-045	35,850
	CLMD 63	75	1HYC414000-080	36,800



CLMD 33 – Slim design capacitors for panel mounting

415 Volts, 3 Phase 50 Hz

Voltage	Description	Rating in kvar	Ordering code	Unit M.R.P. (₹)
415 V	CLMD 33C	10	1HYC414000-065	7,200
	CLMD 33C	12.5	1HYC414000-088	6,900
	CLMD 33C	15	1HYC414000-097	6,950
	CLMD 33	25	1HYC414000-053	12,600



440 Volts, 3 Phase 50 Hz

Voltage	Description	Rating in kvar	Ordering code	Unit M.R.P. (₹)
440 V	CLMD 33C	10	1HYC414000-066	6,250
	CLMD 33C	12.5	1HYC414000-096	6,400
	CLMD 33C	15	1HYC414000-119	6,900
	CLMD 33	25	1HYC414000-010	11,800



APP type for heavy duty applications

Voltage	Rating in Kvar	Ordering code	Unit M.R.P. (₹)
440 V	5	1HYC420000-020-V	2480
	10	1HYC420000-019-V	4960
	15	1HYC420000-018-V	7800
	20	1HYC420000-017-V	9930
	25	1HYC420000-015-V	12410
	50	1HYC420000-016-V	34830
480 V	5.5	1HYC420000-030-V	2730
	11.1	1HYC420000-012-V	5510
	15	1HYC420000-006-V	7450
	20	1HYC420000-032-V	9930
	25	1HYC420000-014-V	12410
	28	1HYC420000-001-V	13910
	33	1HYC420000-002-V	16380
525 V	6.6	1HYC420000-010-V	3280
	13.8	1HYC420000-009-V	6850
	20	1HYC420000-008-V	9930
	25	1HYC420000-028-V	12410
	33.5	1HYC420000-007-V	16630
	67	1HYC420000-035-V	33270

De tuned harmonic filter module

(Box heavy duty capacitor + 7% De tuned reactor)



7% Aluminium reactor						
Type	BUS voltage	Effective KVAR at Bus voltage	Cap voltage (Volts)	Cap output (KVAR)	Reactor current rating (Amps)	Unit M.R.P. (₹)
BOX	440V	5	480	5.5	7.28	5,800
		10	480	11.1	14.56	9,700
		15	480	16.6	21.84	13,450
		20	480	22.1	30.4	16,400
		25	480	27.7	36.4	19,600
		50	480	55.4	72.8	34,000
		75	480	83.1	109.2	48,250
		100	480	110.8	145.6	61,820
7% Copper reactor						
BOX	440V	5	480	5.5	7.28	9,200
		10	480	11.1	14.56	12,520
		15	480	16.6	21.84	16,200
		20	480	22.1	30.4	19,650
		25	480	27.7	36.4	23,200
		50	480	55.4	72.8	40,300
		75	480	83.1	109.2	59,200
		100	480	110.8	145.6	78,050

7% Aluminium reactor						
Type	BUS voltage	Effective KVAR at Bus voltage	Cap voltage (Volts)	Cap output (KVAR)	Reactor current rating (Amps)	Unit M.R.P. (₹)
BOX	440V	5	525	6.6	7.28	6,600
		10	525	13.2	14.56	11,300
		15	525	20	21.84	15,900
		20	525	26.5	30.4	19,700
		25	525	33.1	36.4	23,600
		50	525	66.2	72.8	41,920
		75	525	99.3	109.2	60,230
		100	525	132.4	145.6	77,900
7% Copper reactor						
BOX	440V	5	525	6.6	7.28	9,990
		10	525	13.2	14.56	14,200
		15	525	20	21.84	18,800
		20	525	26.5	30.4	22,900
		25	525	33.1	36.4	27,100
		50	525	66.2	72.8	48,400
		75	525	99.3	109.2	71,200
		100	525	132.4	145.6	94,180

De tuned harmonic filter module

(Cylindrical heavy duty capacitor + 7% De tuned reactor)



7% Aluminium reactor						
Type	BUS voltage	Effective KVAR at Bus voltage	Cap voltage (Volts)	Cap output (kvar)	Reactor current rating (Amps)	Unit M.R.P. (₹)
Cylindrical	440V	5	480	5.5	7.28	5,800
		10	480	11.1	14.56	9,700
		15	480	16.6	21.84	13,500
		20	480	22.1	30.4	16,400
		25	480	27.7	36.4	19,600
		50	480	55.4	72.8	33,950
		75	480	83.1	109.2	48,300
		100	480	110.8	145.6	61,820

7% Copper reactor						
Cylindrical	440V	5	480	5.5	7.28	9,300
		10	480	11.1	14.56	12,600
		15	480	16.6	21.84	16,200
		20	480	22.1	30.4	19,700
		25	480	27.7	36.4	23,000
		50	480	55.4	72.8	40,350
		75	480	83.1	109.2	59,150
		100	480	110.8	145.6	78,050

7% Aluminium reactor						
Type	BUS voltage	Effective KVAR at Bus voltage	Cap voltage (Volts)	Cap output (kvar)	Reactor current rating (Amps)	Unit M.R.P. (₹)
Cylindrical	440V	5	525	6.6	13.01	7,200
		10	525	15	14.56	12,710
		15	525	20	21.84	16,180
		20	525	25	30.4	19,210
		25	525	33.1	36.4	23,820
		50	525	66.2	72.8	42,450
		75	525	99.3	109.2	61,150
		100	525	132.4	145.6	78,820

7% Copper reactor						
Cylindrical	440V	5	525	6.6	13.01	10,200
		10	525	15	14.56	15,600
		15	525	20	21.84	18,900
		20	525	25	30.4	22,400
		25	525	33.1	36.4	27,300
		50	525	66.2	72.8	48,900
		75	525	99.3	109.2	71,950
		100	525	132.4	145.6	94,950

De tuned harmonic filter module

(CLMD heavy duty capacitor + 7% De tuned reactor)



7% Aluminium reactor						
Type	BUS voltage	Effective KVAR at Bus voltage	Cap voltage (Volts)	Cap output (KVAR)	Reactor current rating (Amps)	Unit M.R.P. (₹)
CLMD Square Type	440V	5	480	6	7.28	11,400
		10	480	12.5	14.56	14,700
		15	480	16.6	21.84	19,900
		20	480	22.1	30.4	22,800
		25	480	28	36.4	25,300
		50	480	56	72.8	44,400
		75	480	84	109.2	55,300
		100	480	112	145.6	81,700

7% Copper reactor						
CLMD Square Type	440V	5	480	6	7.28	15,600
		10	480	12.5	14.56	18,200
		15	480	16.6	21.84	23,150
		20	480	22.1	30.4	26,910
		25	480	28	36.4	29,490
		50	480	56	72.8	52,310
		75	480	84	109.2	68,550
		100	480	112	145.6	1,01,090

7% Aluminium reactor						
CLMD Square Type	440V	5	525	6.6	7.28	11,700
		10	525	15	14.56	14,900
		15	525	20	21.84	19,950
		20	525	27.5	30.4	25,700
		25	525	34	36.4	32,290
		50	525	66	72.8	58,150
		75	525	100	109.2	86,400
		100	525	132	145.6	1,08,890

7% Copper reactor						
CLMD Square Type	440V	5	525	6.6	7.28	15,990
		10	525	15	14.56	18,400
		15	525	20	21.84	23,400
		20	525	27.5	30.4	29,550
		25	525	34	36.4	36,400
		50	525	66	72.8	65,950
		75	525	100	109.2	99,700
		100	525	132	145.6	1,28,600

RVC relay

Type	Ordering code	No of steps	Unit M.R.P. (₹)
RVC 6 (100 - 440V)	1HYC418006-014	6	18,000
RVC 8 (100 - 440V)	1HYC418006-015	8	24,500
RVC 10 (100 - 440V)	1HYC418006-016	10	26,800
RVC 12 (100 - 440V)	1HYC418006-017	12	28,650

RVT relay

Type	No of steps	Ordering code	Unit M.R.P. (₹)
RVT 6	2GCA291720A0050	6	71,500
RVT 12	2GCA291721A0050	12	94,900
RVT 6 with Modbus Adapter Kit	1HYC418006-049	6	97,950
RVT 12 with Modbus Adapter Kit	1HYC418006-048	12	1,10,000
RVT 12 3Phase	2GCA291722A0050	12	99,900

Distribution automation



ABB offers innovative technology for complete protection of your distribution systems. With a wide range of products and systems based on electromechanical, static and numerical micro-processor based platforms, ABB offers complete protection solutions for utility and industry power distribution networks for improved performance, reliability and safety.

ABB solutions include application engineering, testing & commissioning, after sales service, troubleshooting and training. The products manufactured are approved by leading consultants in the electrical engineering field and are widely used by major utilities, industries and OEMs.

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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	1,950
CV2AJ	Single element auxiliary relay, self reset contacts with operation indicator	110/240 V AC	Flush mounting	2NO+0NC/ 1NO+1NC	Contact multiplication, signalling	2,380
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	2,700
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	3,130
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	3,610
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	4,040
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	3,990
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	3,270
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	3,590
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	3,910
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	4,285
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	4,365
UVT92M	Fuse failure relay	110V AC, 50 Hz, 30/110/220 V DC	Flush mounting		Fuse failure supervision	8,835
NT10	Universal time relay	18-80 V DC 80-265 V DC/AC	Flush mounting	1NO+2C/O	ON delay timer, OFF delay timer, Interval, flasher	6,640

*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	3,280
PQ5nCH2J	High speed tripping relay, hand reset contacts with operation indicator	110/240 V AC	Flush mounting	4NO+0NC/ 3NO+1NC	Low burden tripping	3,705
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	3,920
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	4,240
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	3,920
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	3,320
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	11,665
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	11,665
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	7,070
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	7,070
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	12,585
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	7,630

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	6,425
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	10,600
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	6,425
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	10,600
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 transformers, high impedance differential protection for motors, generators	6,960
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	7,710
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	11,245
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	7,710
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	11,245

*Combiflex accessories need to be ordered separately. Check with your local ABB office.

Section III: Numerical protection and control relays

Type	Product description	Unit L.P.(₹)
Relion® 605 series		
REF601	Numerical feeder protection and control relay	Upon request
REJ601	Numerical feeder protection relay	Upon request
REM601	Numerical motor protection and control / Motor protection relay	Upon request
REJ603	Numerical self-powered feeder protection relay	Upon request
Relion® 611 series		
REF611	Numerical feeder protection and control relay	Upon request
REM611	Numerical motor protection and control relay	Upon request
REB611	Numerical busbar and multipurpose differential protection and control relay	Upon request
REU611	Numerical voltage protection and control relay	Upon request
Relion® 615 series		
REF615	Numerical feeder protection and control relay	Upon request
REM615	Numerical motor protection and control relay	Upon request
RED615	Numerical line differential protection and control relay	Upon request
RET615	Numerical transformer protection and control relay	Upon request
REV615	Numerical capacitor bank protection and control relay	Upon request
REU615	Numerical voltage protection and control relay	Upon request
REC615	Grid automation, numerical remote monitoring and control relay	Upon request
RER615	Grid automation, numerical recloser protection and control relay	Upon request
REG615	Numerical generator protection and control relay	Upon request
Relion® 620 series		
REF620	Numerical feeder protection and control relay	Upon request
RET620	Numerical transformer protection and control relay	Upon request
REM620	Numerical motor protection and control relay	Upon request
Relion® 630 series		
REF630	Numerical feeder protection and control relay	Upon request
RET630	Numerical transformer protection and control relay	Upon request
REG630	Numerical generator protection and control	Upon request
REM630	Numerical motor protection and control	Upon request
Relion® 640 series		
REX640	All-in-one protection for advanced power generation and distribution applications	Upon request

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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	Unit L.P. (₹)
RIO600	Remote I/O unit	
	Power supply module	Upon request
	Communication module	Upon request
	Digital input module with 8 inputs	Upon request
	Digital output module with 4 outputs	Upon request
	RTD/mA input module with 4 inputs	Upon request
	Analog output module with 4 outputs	Upon request
COM600	Grid automation controller	Upon request
PML630	Power management/Compact load-shedding solution	Upon request
REK510	Current injection device for rotor earth fault protection	Upon request
PCM600	Protection and control IED manager	Upon request
REA10	Arc fault protection system	Upon request
SUE3000	High speed transfer device (Fast bus transfer)	Upon request
RTU	RTU560/RTU511	Upon request
ARC600	Wireless controller for RMU/Feeder automation	Upon request
ARG600	Wireless gateway for connection over cellular network	Upon request
ARR600	Wireless I/O gateway for connection over cellular network	Upon request
ARM600 (M2M)	Communication server manages all arctic product family	Upon request

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Prices "Upon request" for numerical relays shall be provided as per the configuration requirement.



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Capacitors and filter modules

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Type 2 co-ordination

MS132/MS165 DOL-NS-IE1/IE2

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

MS132/MS165 SD-NS-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			
	[A]	Type		[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

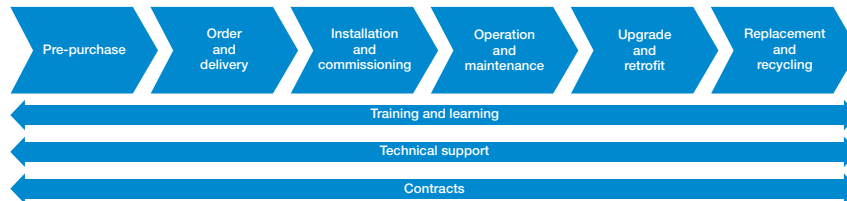
MCCB SD-NS

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.

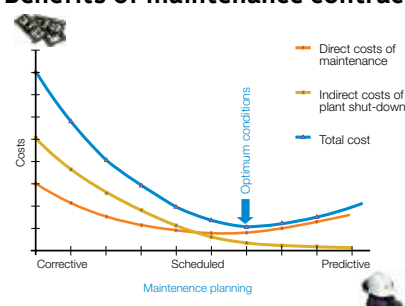
ABB LP service is the only one able to supply original and guaranteed spare parts. These can be easily selected and ordered through the authorized channel.

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

LV capacitor factory:

Plot No. 485/6, 14th Cross, IV Phase,

Peenya Industrial Area, Bangalore - 560 058

Karnataka, India

E-mail: lvcapacitors-sales@in.abb.com

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.

5. **LV capacitor:** The warranty 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.



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

