



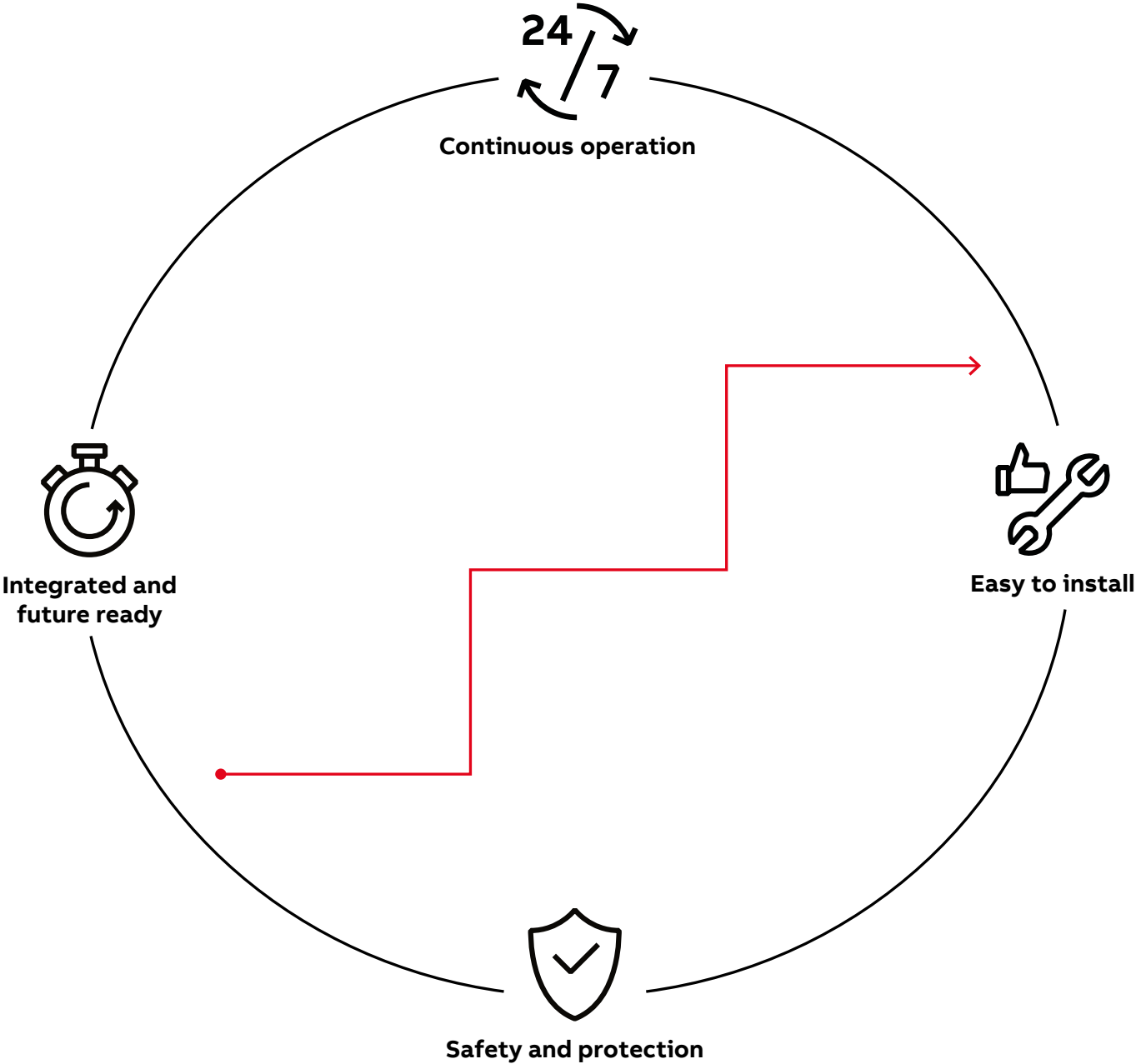
Motor Starting and Protection

eBrochure





Contents





Reduce the total cost of ownership

Easy selection of IE3 compatible solutions

The purchasing price makes up only a fraction of the total costs of ownership. Discover how ABB constant speed motor starting and protection solutions can help drive down the total cost of ownership of your installations.

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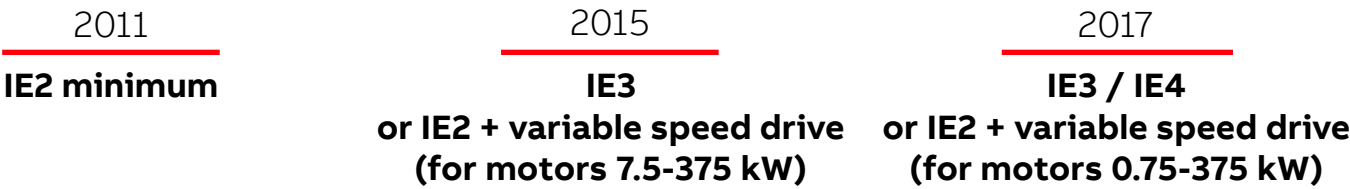
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Energy-efficient motor starting solutions

Reduce CO₂ emissions with ABB's solutions

One of the biggest challenges of our time is the reduction of CO₂ emissions. ABB's motor starting solutions are ready for premium efficiency motors and help reduce the CO₂ footprint with energy-efficient technology.



IE3 premium and IE4 super premium efficiency motors
During the starting phase of an IE3 motor, the starting current can be roughly 25 % higher than in IE1/IE2 motors, which may lead to unwanted tripping of the protection device. In addition, a correct evaluation of the electrical endurance of the contactor should be carried out. ABB's control and protection low voltage products are IE3/IE4 compatible, offering users premium motor starting solutions, with small footprints.

~80 %
of all motors are used in full
speed applications

up to **80 %**
reduced coil energy consumption
with the AF contactor range



Solution selector

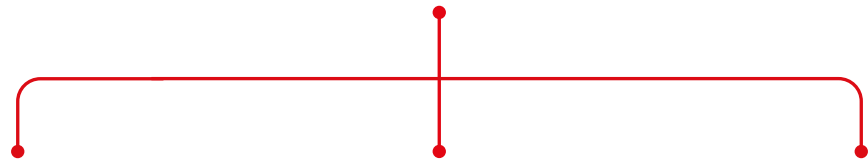
Our broad portfolio of motor starting and protection solutions are fully scalable, allowing you to keep things moving whatever the extent of your operations.

- Continuous operation and energy efficiency
- Best in-class, innovative technology
- Prevents downtime and can stand up to any conditions
- Choosing the right solution for your needs is easy

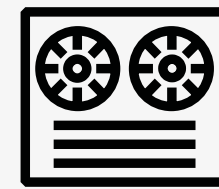


Essential solutions

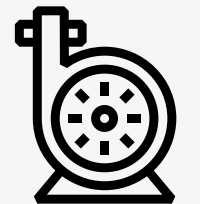
Get the essentials right with fast, reliable installations



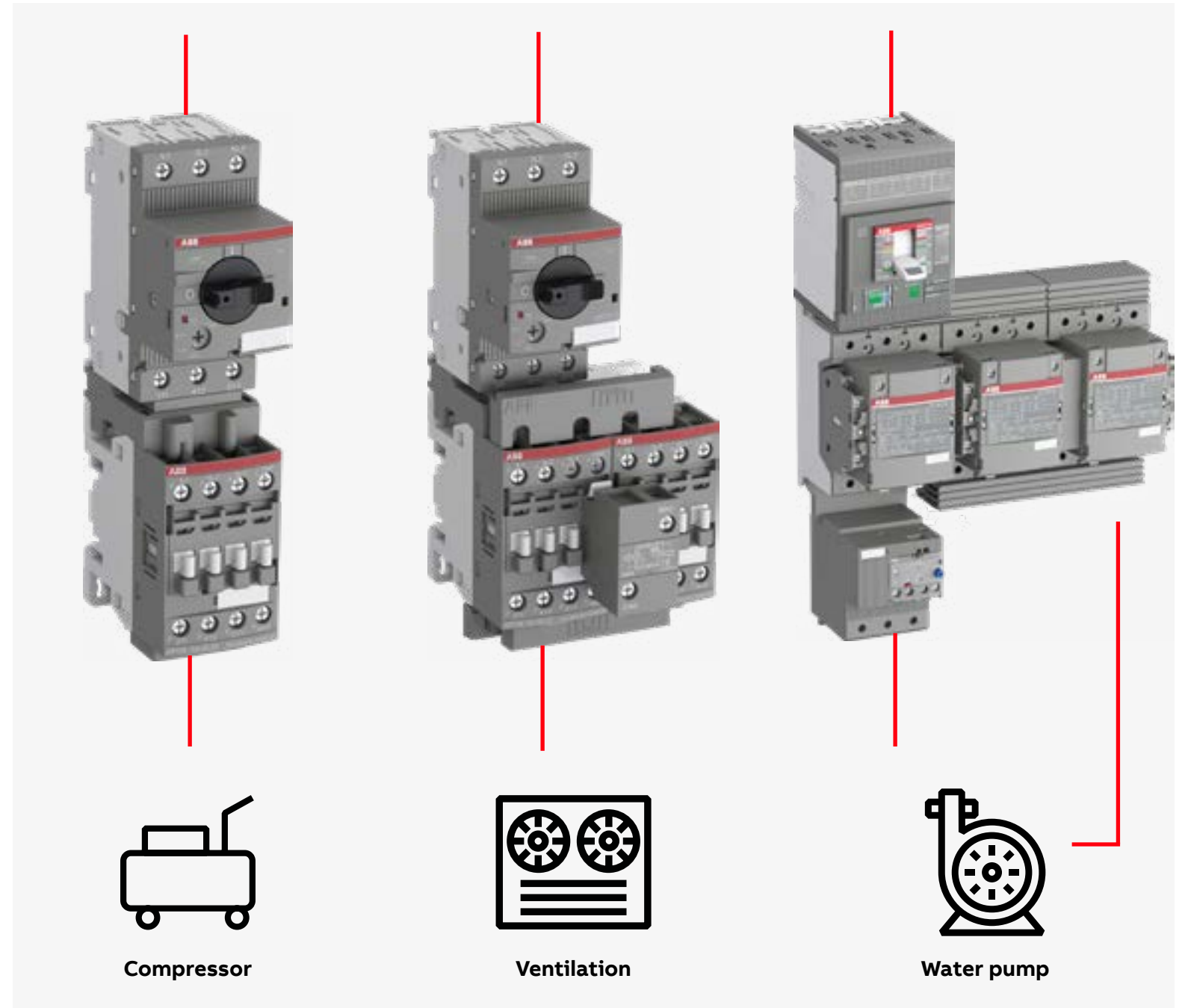
Compressor



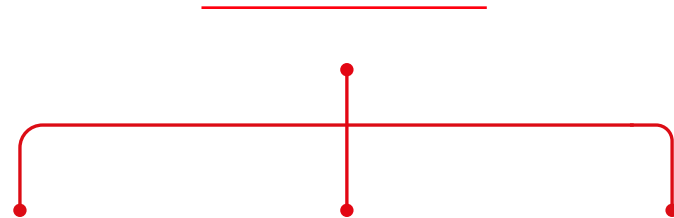
Ventilation



Water pump

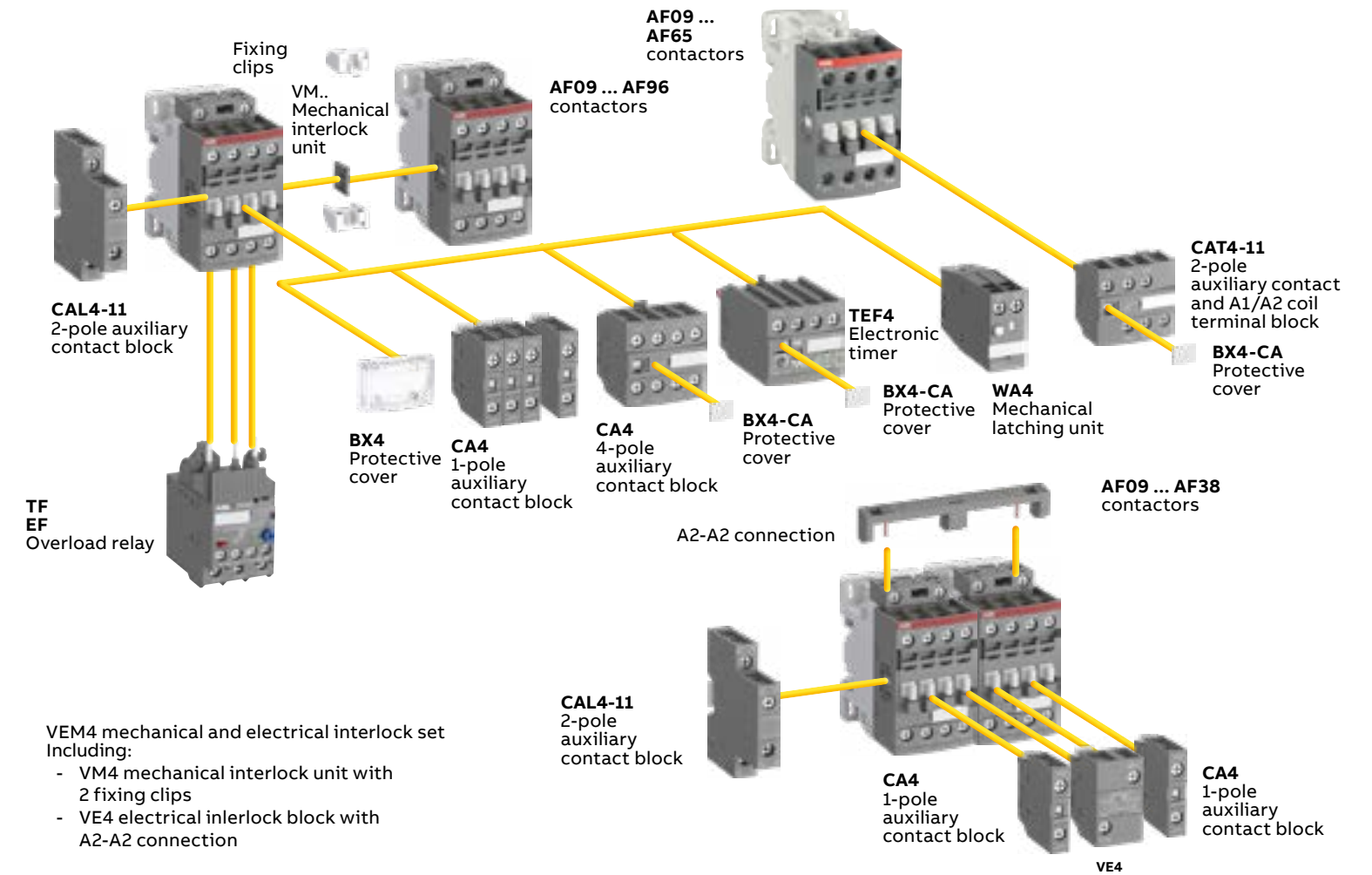


Easy to install

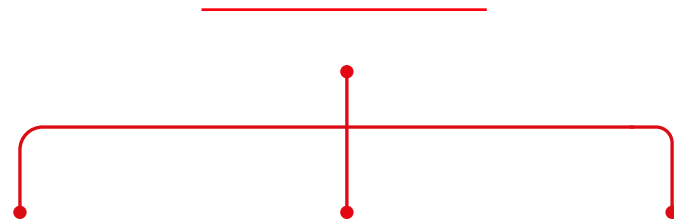


Cut control panel assembly time by up to 50 %. This provides savings on labor costs, cut the total cost of the installation and reduces time to market.

- Wide range of easy-to-use accessories and connection sets
- Push-in Spring technology opens up new possibilities. With its unmatched ease of use, wiring becomes far more intuitive



Continuous operation



Ensure continuous operation so that your machines are even more competitive in the market, thanks to reliable connections, reliable power and a reliable partner.

- AF contactors ensure distinct operation in unstable networks and are a major advancement in motor control and power switching
- Push-in Spring motor starting solutions provide vibration-proof and robust electrical contact with easier than ever wiring
- More than 1800 tested and validated coordination tables available in the SOC tool, so that you can quickly and easily choose the right ABB solution

SOC - SELECTED OPTIMIZED COORDINATION

Power and productivity for a better world™ **ABB**

Motor protection Selectivity Back-up Other Devices protection

SOC - Selected Optimized Coordination

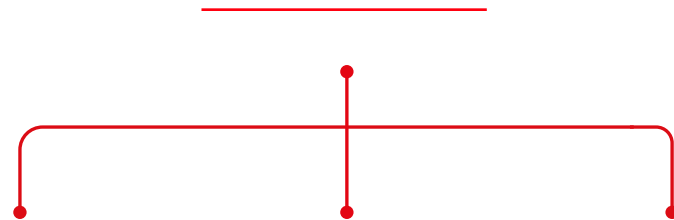
Motor protection
Coordination tables for motor starting and protection.

Selectivity
Selectivity coordination tables between short circuit protection devices.

Back-up
Back-up coordination tables between short-circuit protection devices.

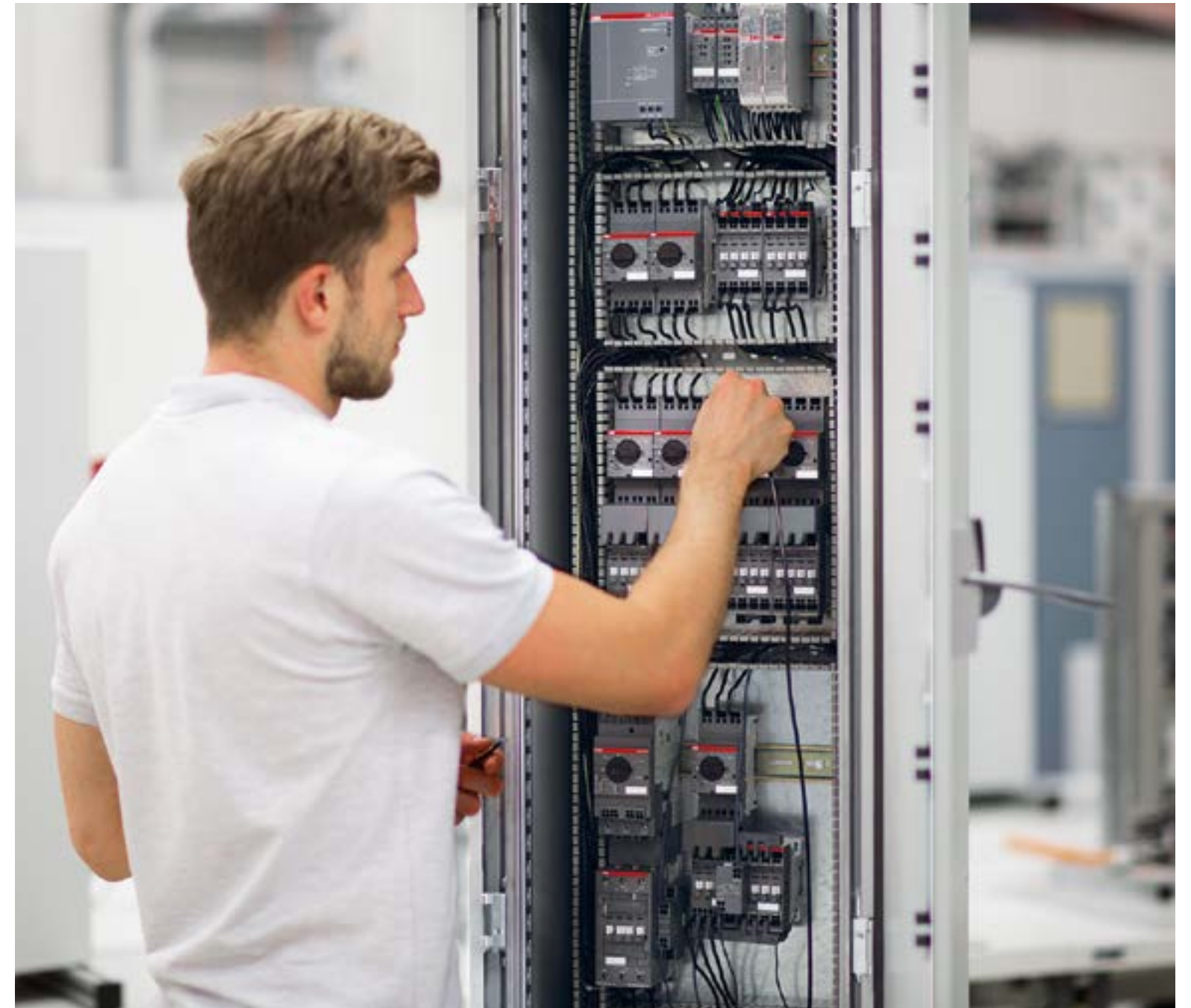
Other Devices protection
Coordination table for the protection of switch-disconnector and other devices by short circuit protection devices.

Space saving



Compact design requires less space in the control panel, allowing you to reduce control panel dimensions and costs.






- Takes up less space in the control panel thanks to AF contactor widths reduced by up to 30 %
- Interlocking reversing pairs don't require spacing between contactors
- Connection kits for reversing/star-delta starters and kits for starter and short circuit protection device (SCPD) connection require less space
- Thanks to 80 % coil consumption reduction of AF contactors less heat is dissipated, so that the installation density in the panel can be increased





Essential solutions






Key features - Protection



Short-circuit and overload protection with single devices				
MS116	MS132	MS132-K	MS165	Tmax XT
			 <div>Extension</div>	 <div>New</div>
Motor power at 400 V AC (IEC) and at 480 V AC (UL)				
From 0.03 up to 15 kW, from ¾ up to 20 hp	From 0.03 up to 15 kW, from ¾ up to 20 hp	From 0.03 up to 15 kW, from ¾ up to 20 hp	From 4 up to 45 kW, from 7 ½ up to 60 hp	From 0.25 up to 355 kW, from ½ up to 400 hp
Key features				
<ul style="list-style-type: none">• Phase loss sensitivity• Switch position ON/OFF• Common accessories throughout the complete MS/MO range	<ul style="list-style-type: none">• Phase loss sensitivity• Switch position ON/OFF/Trip• Magnetic trip indication• Common accessories throughout the complete MS/MO range• ATEX & IECEx certified• UL type E ratings and UL type F with AF contactors	<ul style="list-style-type: none">• Push-in Spring terminals• Vibration-proof according to IEC 60068-2-27 and IEC 60068-2-6• Self-tightening terminals• Tool-less connecting links• Phase loss sensitivity• Switch position ON/OFF/Trip• UL type E ratings	<ul style="list-style-type: none">• Phase loss sensitivity• Switch position ON/OFF/Trip• Magnetic trip indication• Common accessories throughout the complete range• ATEX & IECEx certified• UL type E ratings and UL type F with AF contactors	<ul style="list-style-type: none">• Electronic trip unit Ekip M LIU available up to 800 A• Short circuit, overload, phase loss and unbalance protections are embedded in the trip unit• Wide range of internal and external accessories• High breaking capacity



Essential solutions

Key features - Protection



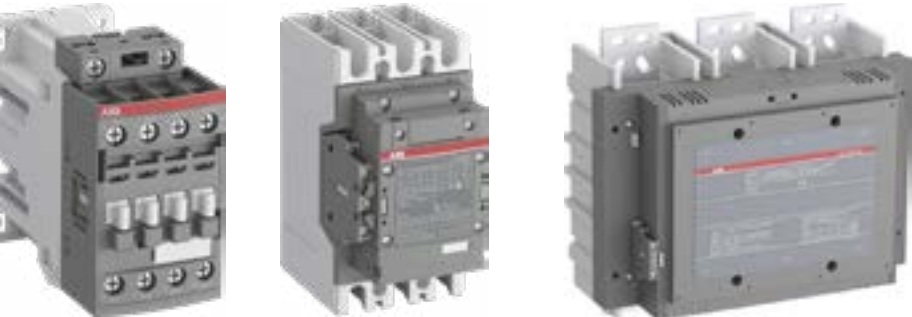
Short-circuit protection				
MO132	MO165	XLP fuse switch	OS switch fuse	Tmax XT
				
Motor power at 400 V AC (IEC) and at 480 V AC (UL)				
From 0.03 up to 15 kW, from ¾ up to 20 hp	From 4 up to 45 kW, from 7 ½ up to 60 hp	From 1.2 up to 110 kW	From 5.5 up to 1000 kW, from 7 ½ up to 500 hp	From 0.25 up to 450 kW, from ½ up to 500 hp
Key features				
<ul style="list-style-type: none">• Switch position ON/OFF/Trip• Common accessories throughout the complete MS/MO range• UL type F ratings with AF contactors and EF/TF overload relays	<ul style="list-style-type: none">• Switch position ON/OFF/Trip• Common accessories throughout the complete MS/MO range• UL type F ratings with AF contactors and EF/TF	<ul style="list-style-type: none">• Supports IEC fuse standard NH Fuses 000-4a• Available as base mounted and for different busbar distances• Electronic fuse monitoring available• Wide range of cable connection terminals and other snap on accessories.	<ul style="list-style-type: none">• Supports many IEC and UL fuse standards• Front, side and motor operated versions• Special terminals: left-right or back-back• Knife contact technology• Modular structure• Adjustable shaft• Interlocked fuse cover• Wide range of accessories	<ul style="list-style-type: none">• Magnetic MA/MF trip units up to 500 A• MA adjustable, MF fixed• Adjustable electronic trip unit with short-circuit protection Ekip M Dip I is up to 1600 A• Wide range of internal and external accessories• High breaking capacity

Overload protection	
TF - Thermal overload relay	EF - Electronic overload relay
	
Motor power at 400 V AC (IEC) and at 480 V AC (UL)	
From 0.06 up to 110 kW and from ½ up to 150 hp	From 0.06 up to 710 kW and from ½ up to 900 hp
Key features	
<ul style="list-style-type: none">• Trip class 10• Separate stop button• Manual / automatic reset selectable• Test function• Sealable cover• ATEX & IECEx certified types	<ul style="list-style-type: none">• Trip class 10E, 20E, 30E• Separate stop button• Manual / automatic reset selectable• Test function• Sealable cover• ATEX & IECEx certified types



Essential solutions

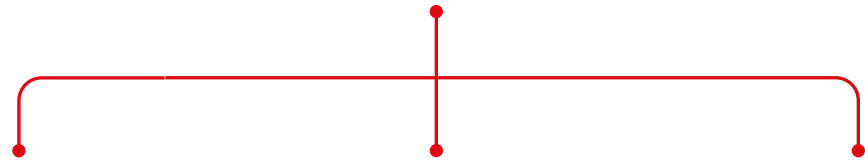
Key features - Control

Contactors		
M and B mini	AF09..K ... AF38..K	AF09 ... AF1650 (AC-3)*
		
Motor power at 400 V AC (IEC) and at 480 V AC (UL)		
From 4 up to 5.5 kW, From 3 up to 7.5 hp	From 4 up to 18.5 kW, from 5 up to 25 hp	From 4 up to 560 kW, From 5 up to 900 hp
Key features		
<ul style="list-style-type: none">• Very compact dimensions• Several connection types• Reversing solutions available,• Standard/low consumption/extended operating limit coils• Wide set of accessories	<ul style="list-style-type: none">• Push-in Spring terminals• Vibration proof• Electronic AC/DC coil• Wide control voltage range• Only 4 coils cover 24 V–500 V AC and 20 V–500 V DC	<ul style="list-style-type: none">• Electronic AC/DC coil• Wide control voltage range• Only 4 coils cover 24 V–500 V AC and 20 V–500 V DC

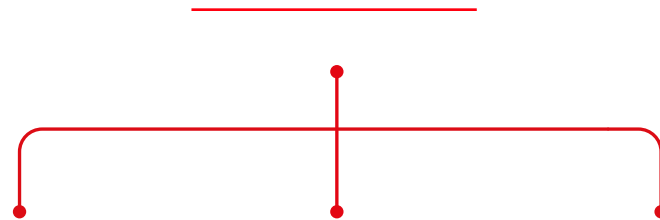
* AC-1 ratings available up to 2850 A.

Enhanced solutions

Get robust protection with enhanced safety, control and monitoring

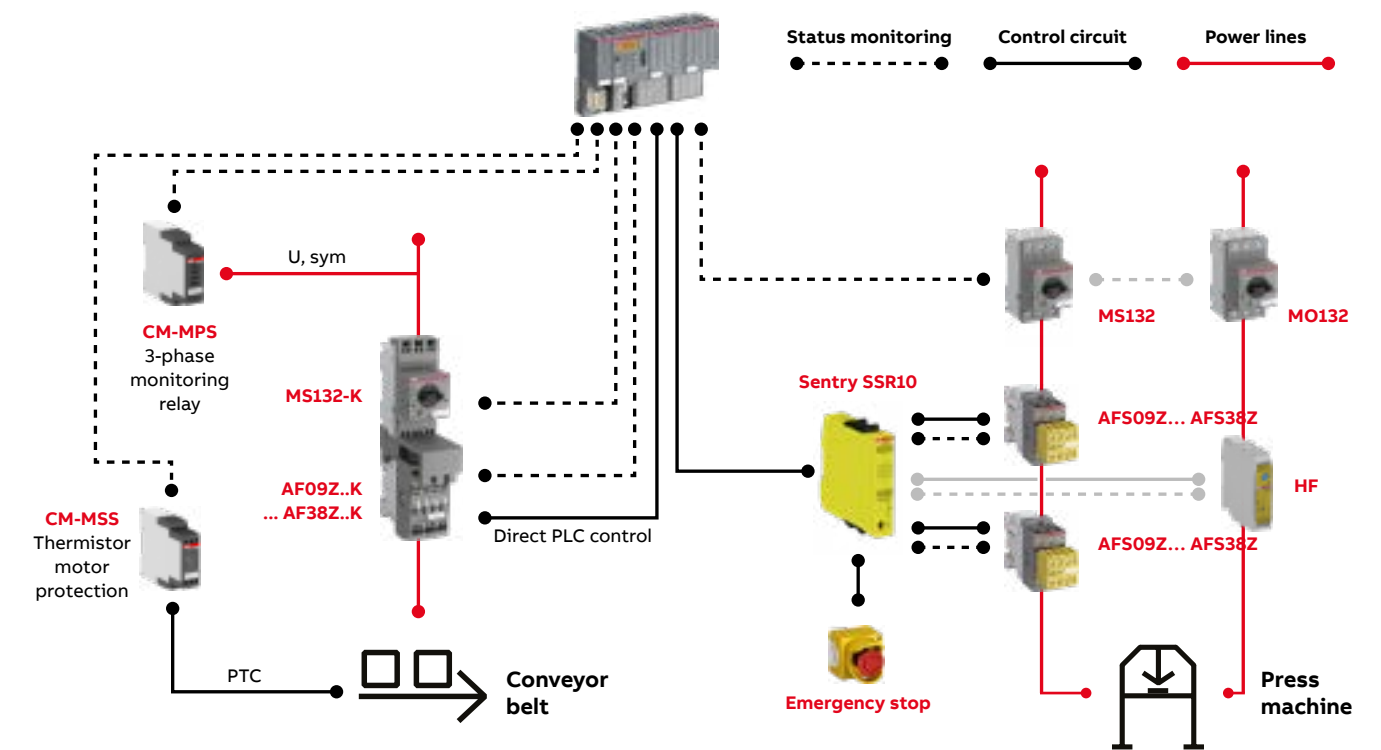


Safety and protection

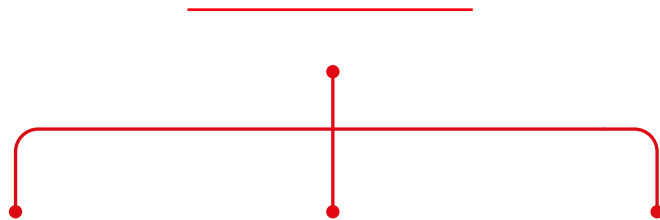


Enhanced safety and protection for solutions with higher specification requirements.

- Integration in machine manufacturer's systems complying with main standards EN ISO 13849, EN 62061 and IEC/EN 61508
- Trouble-free and economic operation of machines and installations thanks to the monitoring of all important parameters in your three-phase network
- Prevent overheating, overload and insufficient cooling. Irregularities are signaled early to avoid plant downtime



Speed up your projects

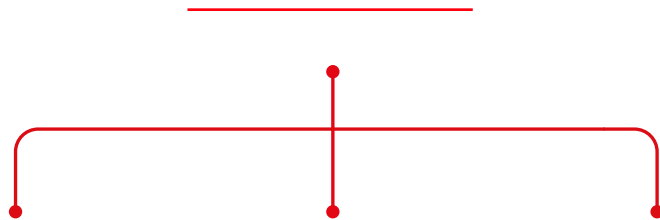


Reduce time in planning, designing, assembly and delivery of custom panels to market.

- Use the same starters in Europe, Asia and North America as one contactor coil now handles 100 V – 250 V AC / DC, 50 / 60 Hz
- Push-in Spring allows you to insert both ferruled and rigid cables without the need to use any tools, boosting your productivity like never before
- With more than 1800 tested and validated coordination tables available in the SOC tool, you can quickly and easily choose the right ABB solution



Space saving



Space is usually very limited for control panels, but our compact solutions are designed to easily fit into your application.

- Motor starters can be controlled directly by PLC thanks to AF contactor versions with low consumption coil, external or built-in PLC interface. No need for interface relays, which require extra space
- Motor starters up to 3 kW / 3 hp require 90 % less space thanks to ABB's HF electronic compact starter. At just 22.5 mm width, it still provides motor starting functionalities with embedded protection and safety










Enhanced solutions

Key features - monitoring, protection & control

Protection








Electronic relays		
CM-MSS	CM-MPS	CM-TCN
		
Key features		
Thermistor motor protection <ul style="list-style-type: none">• Dynamic interrupted wire detection• Short-circuit monitoring of sensor circuit• Non-volatile fault storage• Remote reset• Screw or push-in terminals available• ATEX-certified	Three phase monitoring relay <ul style="list-style-type: none">• Over-/ undervoltage• Phase unbalance• Phase sequence monitoring• Phase failure detection• Screw or push-in terminals available	Temperature monitoring relays <ul style="list-style-type: none">• Different types of sensors and monitoring functions (over-/under-temperature, window monitoring)• Open- or closed-circuit principle configurable• Short-circuit monitoring and interrupted wire detection

Electronic Compact Starter	
HF starter with overload protection	HF emergency stop application
	
Motor power at 400 V AC (IEC) and at 480 V AC (UL)	
From 0.18 up to 3 kW, from 0.4 up to 3 hp	From 0.18 up to 3 kW, from 0.4 up to 3 hp
Key features	
<ul style="list-style-type: none">• Width of only 22.5 mm• Direct and reverse switching of motors up to 3 kW/400 V AC• Integrated overload (trip class 10 A) and phase unbalance protection• Fault auxiliary, three reset modes, LED indication	<ul style="list-style-type: none">• Safety variants offer same functionality as standard variants• Emergency-stop rated up to SIL 3 (IEC 61508-1) and PL e (ISO 13849-1)• ATEX certification



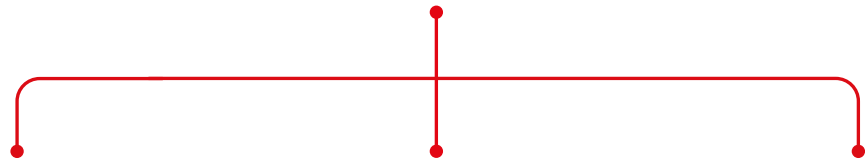
Enhanced solutions

Key features - Control

Contactors				
AF09Z ... AF38Z	AF09Z...K ... AF38Z...K	AF40 ... AF1650	AFS09Z... AFS38Z	AFS09... AFS750
				 Extension
Motor power at 400 V AC (IEC) and at 480 V AC (UL)				
From 4 up to 18.5 kW, from 5 up to 25 hp	From 4 up to 18.5 kW, from 5 up to 25 hp	From 18.5 up to 560 kW, from 30 up to 900 hp	From 4 up to 18.5 kW, from 5 up to 25 hp	From 4 up to 400 kW, from 5 up to 500 hp
Key features				
<ul style="list-style-type: none">• Versions for PLC 24 V DC \geq 250 mA, or other specific applications: low consumption coil, 24 V DC fast operating time• Semi F47: voltage dips and voltage sags immunity	<ul style="list-style-type: none">• Push-in Spring terminals• Vibration proof• Versions for PLC 24 V DC \geq 250 mA, or other specific applications: low consumption coil, 24 V DC fast operating time• Semi F47: voltage dips and voltage sags immunity	<ul style="list-style-type: none">• Built-in or external PLC interface• Electronic AC/DC coil• Wide control voltage range• Only 4 coils cover 24 V–500 V AC and 20 V–500 V DC	<ul style="list-style-type: none">• Dedicated for safety applications: mirror and mechanically linked contacts, factory-mounted, cover-shield, guaranteeing the right contactor status end preventing unexpected operations• Versions for PLC 24 V DC \geq 250 mA: low consumption coil, 24 V DC fast operating time	<ul style="list-style-type: none">• Dedicated for safety applications: mirror and mechanically linked contacts, factory-mounted, cover-shield, guaranteeing the right contactor status end preventing unexpected operations• Electronic AC/DC coil• Wide control voltage range• Built-in PLC interface available AFS116... AFS750

Advanced solutions

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



Universal Motor Controller UMC100.3



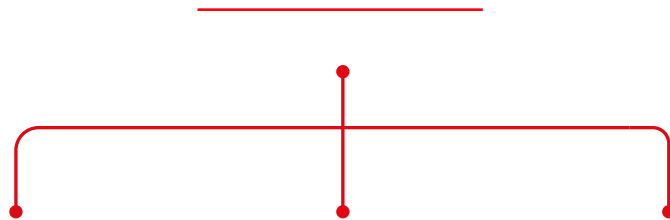
The Universal Motor Control UMC100.3 is future-ready – and equipped to take your motor control to the next level. With outstanding ease of use, unrivalled communication, and simple configuration, the smooth running of your operations has never been so simple. ABB's intelligent motor controllers combine motor protection and control functions, fieldbus and Ethernet communication, and fault diagnosis in a single device. They provide detailed operational, diagnostic and service data continuously, giving any plant an effective data source for predictive maintenance systems.

SACE® Tmax® XT



The SACE® Tmax® XT series of Moulded Case Circuit Breakers (MCCBs) are designed to maximize ease of use, integration and connectivity while reliably delivering safety and quality. Rather than just offering standalone protection, they are seen as key elements of the system that give you complete flexibility, extreme breaking capabilities and reliable performance under pressure. With seven different sizes and protection features of up to 1600A there's a solution for every purpose.

Integrated and future ready

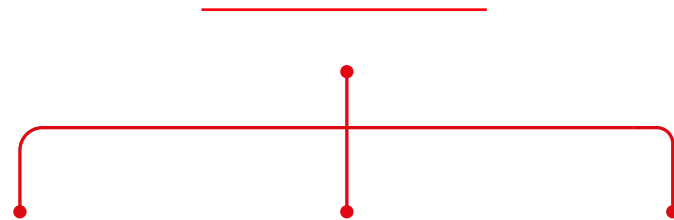


Data and precise measurements accessible via flexible communication options ensure reliable operations and efficient energy management. Adapt to future needs without big investments.

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



Continuous operation

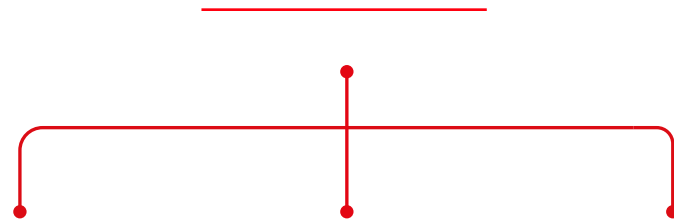


Detect problems earlier and prevent plant stand-stills with integrated protection functions as well as extensive diagnostic and status information.

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



Speed up your project



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

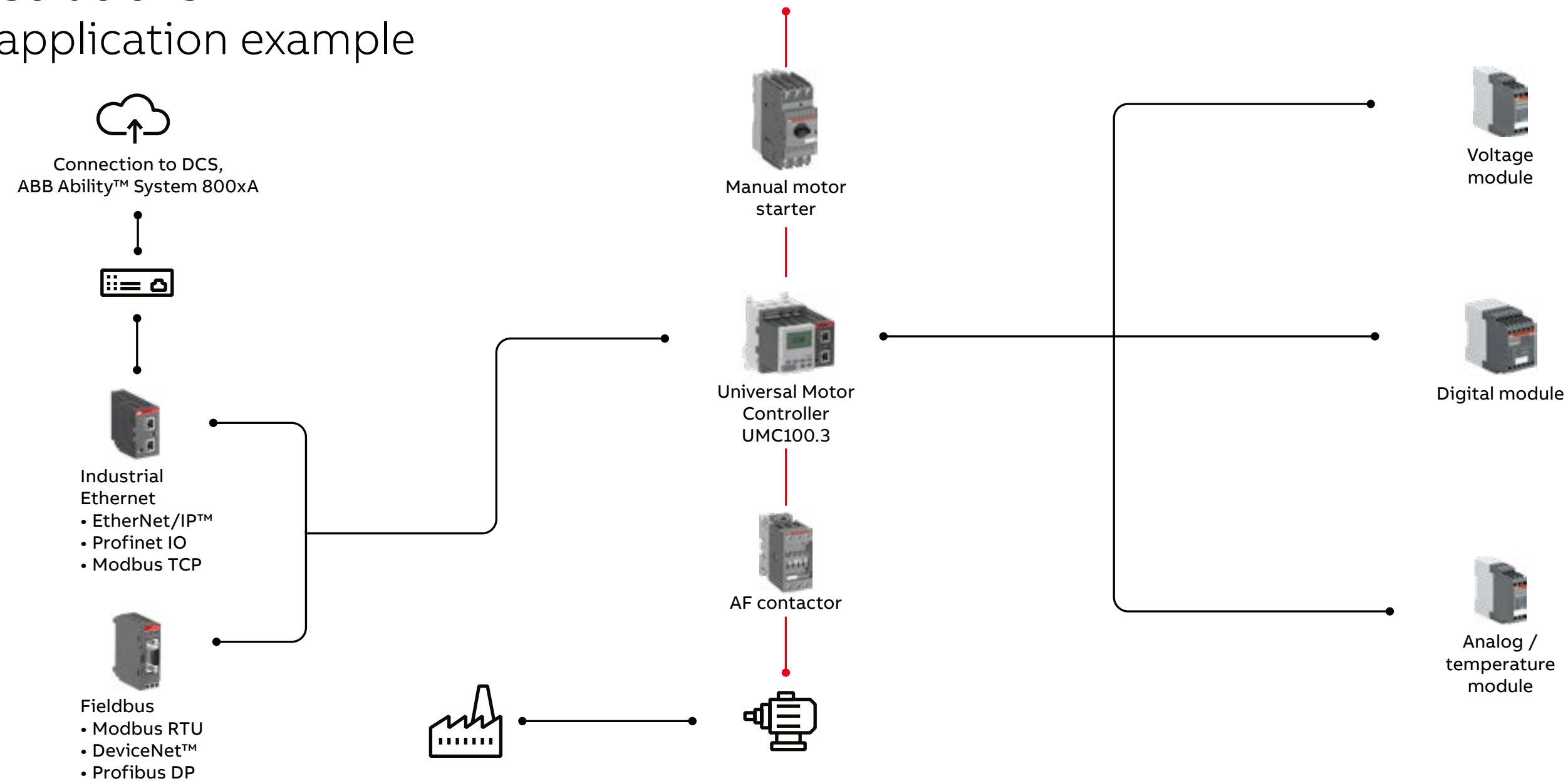
- With the UMC100.3, simple software configuration means that you're always in control. Parameters can be set via quality FDI-based software or directly using the operating panel
- With the SACE Tmax XT range, simplified installation of frames, integration of circuit breakers into a communication network,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





Advanced solutions

UMC100.3 application example



Advanced solutions

UMC100.3 key features



Easy expansion for higher functionality

Its modular design means that the UMC meets all motor management requirements, greatly simplifying planning, construction and inventory. Easy-to-attach modules – such as digital expansion modules, analog and temperature modules and voltage modules – give you complete flexibility and cover a wide range of applications.



Integrated into distributed control systems (DCS)

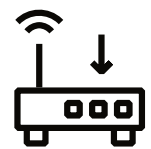
The UMC100.3 connects to ABB Ability™ System 800xA which acts as a gateway for ABB Ability™ Energy and Asset Manager. Due to the support of many communication systems, it also fits into other control systems and programmable logic controllers (PLC).



New

Software tool FIM UMC edition

The FIM UMC Edition is the standard software that provides all the functionalities you need for effective use of the UMC100.3. Device parametrization and operating and monitoring modes allow a fast and easy configuration of UMC100.3, testing and online diagnosis. Project management is included for the handling of larger projects and the localized software allows for multilingual use.



Communication modules

Fieldbus interfaces are available for Profibus DP, DeviceNet and Modbus RTU. Ethernet interfaces are available for EtherNet/IP™, Modbus TCP and Profinet IO. They meet all relevant standards and are tested and approved by relevant certification bodies, to ensure a proper function with the control system. The modules can be mounted in two ways:

- Directly onto the UMC100.3
- Separately in the cable chamber of an MCC



Motor protection

- The UMC provides comprehensive motor protection
- Overload protection for single- and three-phase AC motors according to EN/IEC 60947-4-1
- Rated motor currents from 0.24 to 63 A with integrated measuring system in a single version
- Rated motor currents up to 850 A with external current transformer CT4L / CT5L
- Selectable tripping classes 5E, 10E, 20E, 30E or 40E
- Locked rotor protection
- Phase failure, asymmetry and sequence protection
- Under-/overcurrent protection
- Thermistor motor protection
- Ground leakage detection – internally or using CEM11 sensor
- Limitation of motor starts per time
- Motor protection independent from bus communication

In combination with voltage module VI150/VI155-FBP.0

- Undervoltage/overvoltage protection
- Power supervision
- Power factor supervision ($\cos \varphi$)
- Voltage-based detection of phase failure, asymmetry and sequence



Motor control

- Integration of the most important motor control functions as ready, easily parameterizable blocks
- Direct, reversing, star-delta starters
- Pole changing Dahlander / Actuator mode
- Inching / jog mode
- Adjustable restart strategy (load shedding)

Extended motor control

- Freely programmable for special, application-specific control functions
- Simple adaptation to specified control functions
- Comprehensive library
- Blocks for logic, counters, timing
- Access to all I/Os and internal signals

Advanced solutions

Tmax XT Ekip M Touch LRIU application example

7 communication protocols plus cloud connectivity

Fieldbus networks

- Modbus RTU
- Profibus DP
- DeviceNet™

Ethernet networks

- Modbus TCP
- Profinet
- Ethernet/IP™
- IEC 61850

Ekip Cartridge

- Ekip Supply
- Ekip CI
- Ekip Com...
- Ekip Com Hub



ABB Ability™
Energy and Asset
Manager



XT5 Ekip M
Touch LRIU



AF contactor



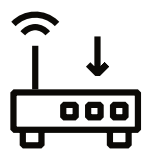
Interface to the
contactor

PTC thermistor



Advanced solutions

Tmax XT Ekip M Touch LRIU



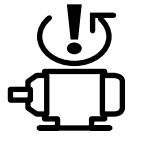
Ekip M Touch LRIU
It allows a large number of specific protections,thus ensuring high trip accuracy and extremely reliable operations, while granting a complete motor protection fully integrated into Tmax XT2-XT4-XT5-XT7 circuit breakers, up 1250 A.

New This solution is even able to interact directly with the contactor and can also be connected to a PTC sensor, to monitor the temperature of the motor and open the contactor in case the motor over heats.



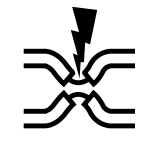
Ekip M Touch LRIU allows several protection functions:

Overload protection, with thresholds complying with IEC 60947-4-1 and relevant Annex 2. The tripping time is defined by choosing the appropriate trip class. Moreover, with the thermal memory function always active, the unit trips in a shorter time than the time set for a cold fault condition whenever a new overload occurs before the thermal memory automatically resets.

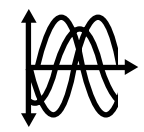


Locked rotor protection, which ensures the operating conditions defined by IEC 60947-4-1 Annex 2.

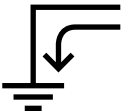
- The “Jam” condition to protect the motor against rotor jamming during normal operation, to ensure the start-up phase is properly performed
- The “Stall” condition to protect and operate the motor against rotor jamming upon start-up



Short-circuit protection, which guarantees an immediate trip when a short-circuit occurs, thus ensuring the correct start-up in the presence of high current values flowing for some milliseconds.



Phase unbalance protection, which acts against unbalances among the currents circulating in the phases.

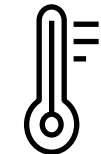


Earth fault protection, which trips in case of faults between the phases and the earthing conductor.

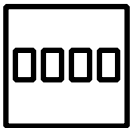


Undercurrent protection, which avoids damages to the motor under conditions of reduced or null load.

Ekip CI module
The Ekip CI module can be installed into the Ekip Cartridge giving the chance of additional functionalities:



PTC connection: with thresholds complying with IEC 60947-8, it is possible to connect a PTC (PT100) sensor to the trip unit. When the temperature is exceeded the trip unit opens the circuit breaker.



Interface to the contactor: motor protection and operation are optimized when both contactor and circuit-breaker are used. In case of fault, instead of opening the circuit breaker, the trip unit commands the contactor, which can guarantee a consistently higher operation numbers than a circuit-breaker (about 1 million).

Connectivity and measurements with Ekip M Touch LRIU



Ekip M Touch LRIU enables connectivity through several communication protocols, and thanks to ABB Ability™ Energy and Asset Manager, data is always quickly available on the cloud.

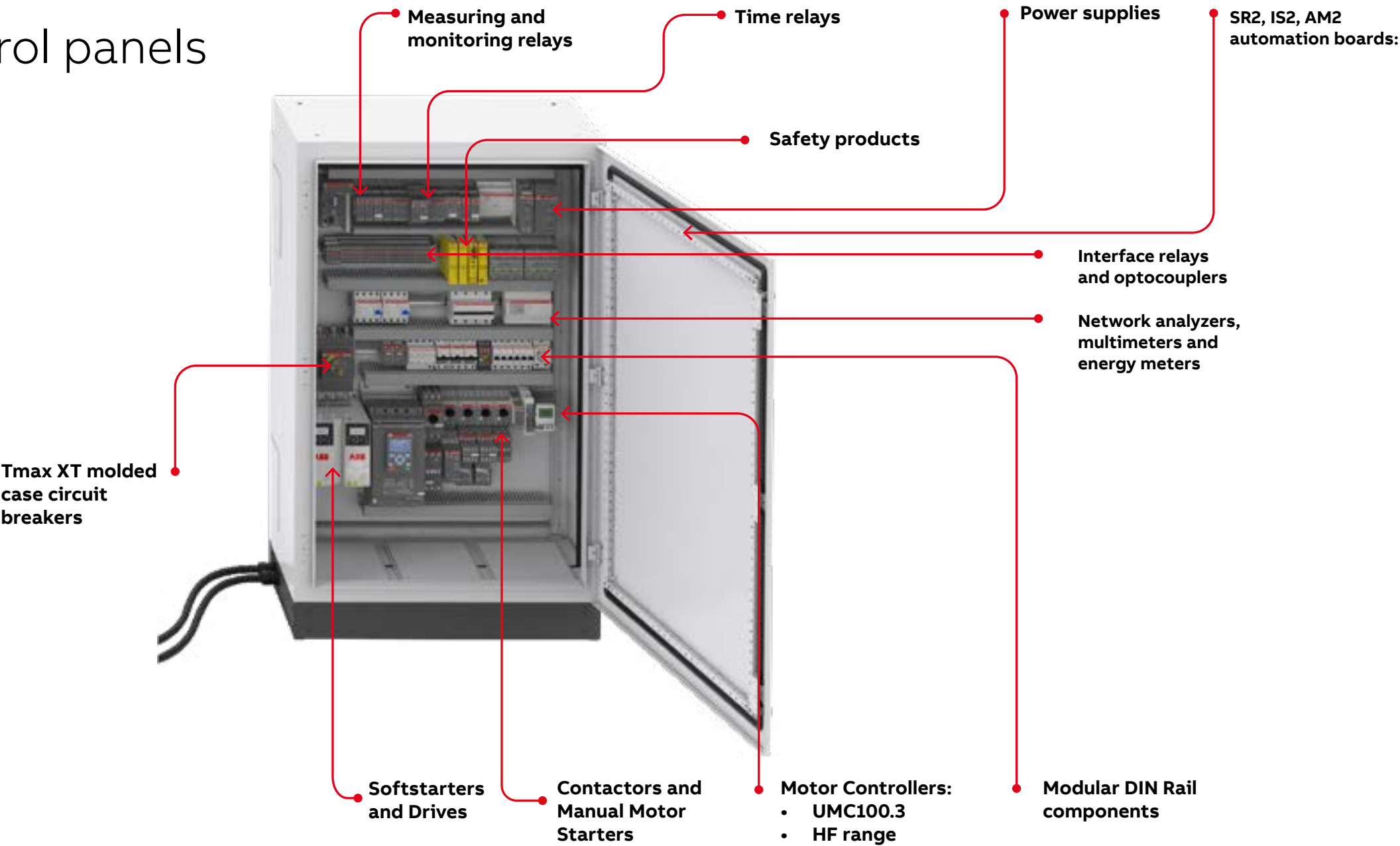


Ekip M Touch LRIU also allows measuring of the main parameters of the system with extreme accuracy (current, voltage, energy, power, power factor, etc.).

Related products

Complete solutions for control panels

ABB's broad portfolio offers all you need for your application, at every level





Materials

Marketing material



Materials

Technical material - Online data sheet

Online data sheets



Access the online data sheet by simply typing <http://new.abb.com/products/> and adding either the order code or the type.

For example for AF09-30-10K-11 type:
new.abb.com/products/1SBL137005R1110 or
new.abb.com/products/af09-30-10k-11

Clicking directly on the order codes in this document and other material like the catalog will also lead to the online data sheets.

By default, the language is English. By adding the country code in front of the product ID or type code you get the information in your language.
Example: <http://new.abb.com/products/de/1SAM350000R1011>



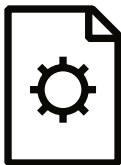
Open online data sheets by clicking on the document number

Data Sheet, Technical Information:	2CDC131021D0201
Data Sheet, Technical Information (Part 2):	1SAM300505F0011



Materials

Technical material - SOC



Selected optimized coordination (SOC) tables

ABB provides coordination tables for the selection of low voltage equipment, specifically tested for starting and protecting IE3 motors in the SOC tool. Essential, enhanced and advanced solutions as introduced in this brochure can be selected there. Product selection for different types of starting methods are available as well, including direct-on-line, star-delta and softstarters. Usage of coordination tables helps reduce the time for selection and design of solutions as well as the risk of unwanted downtime, e.g. caused by nuisance tripping. This provides protection and safety, further driving down the total cost of ownership.

You can find SOC tables [here](#) **more than 1800 tested and validated coordination tables available**

SOC - SELECTED OPTIMIZED COORDINATION

Coordination tables for Motor protection

Info on IE3 Motors

UL Motor Coordinations RETA

Clear selection

Standard: ☒ IEC ☐ UL

Motor efficiency class: ☒ ANY ☐ IE1/IE2/IE3 N/H ☐ IE3 N/HE

Motor Rated Power	Rated voltage	Short-Circuit Current	Starter Type	Coordination type	Protection device	Overload relay
[kW]		[kA]				
0.09	200Vac	3	DOL-NS	IEC Type 1	ACB	Embedded
0.09	230Vac	5	DOL-HD	IEC Type 2	Fuses	TOL
0.12	240Vac	12	SD-NS		MCCB	EOL
0.18	400Vac	18	SD-HD		MMS	UNC
0.25	415Vac	20	SS-NS-II			
0.37	440Vac	22	SS-NS-III			
0.55	480Vac	25				
0.75	480Vac	27				
1.1	500Vac	30				
1.5	625Vac	35				

Search Export PDF

Results: 1000 internal use only records

20 Number of Records to show

ACB, 415 Vac, 42 kA, DOL-NS, Coordination type: IEC Type 2, Overload relay: Embedded, Motor efficiency class: IE1/IE2/IE3 N/H

Motor	SAGE Emux Circuit Breaker				
Motor Rated Power [kW]	Rated Current (FLA) [A]	Type	Inst. Trip Current [A]	Max allowed load current [A]	Status Table

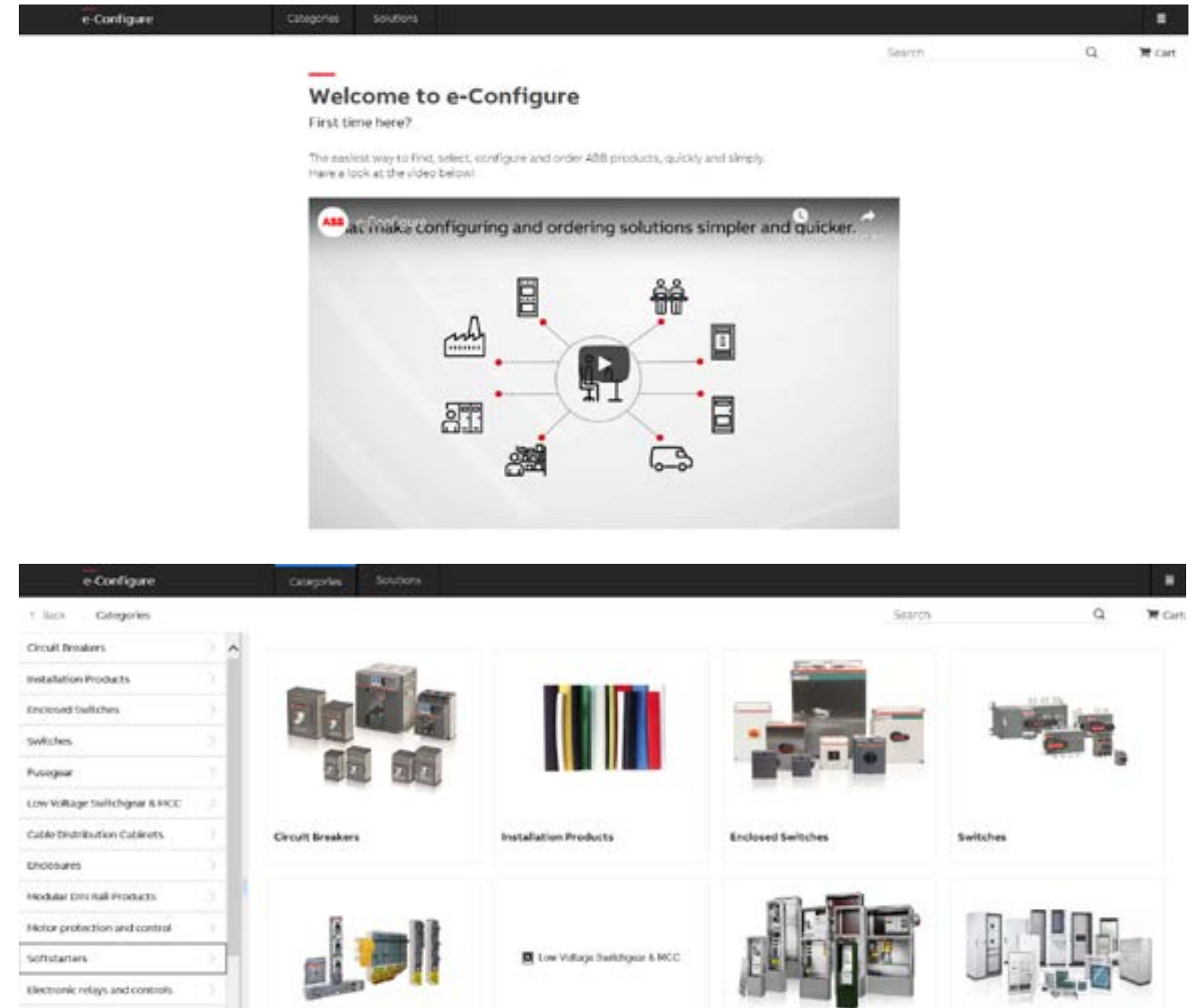
Materials

Technical material - e-Configure

e-Configure is a product and application configuration tool for low voltage products and solutions that provides customers a quick and easy configuration process.

- Browse for products by categories, product code or description
- Retrieve product related information (specs, prices, availability)
- Select and configure products and accessories
- Create, modify and order the bill of material
- Re-order custom configured units

You can find e-Configure [here](#)



Materials

Technical material - EPLAN

EPLAN Electric P8 is a CAE tool to create wiring diagrams.

EPLAN Pro Panel Professional is a tool for 3D switchboard constructions.

Widely used by panel builders and machine builders in Europe and Asia.

You can find the EPLAN Data Portal [here](#).

You can find EPLAN data in the ABB Library [here](#).



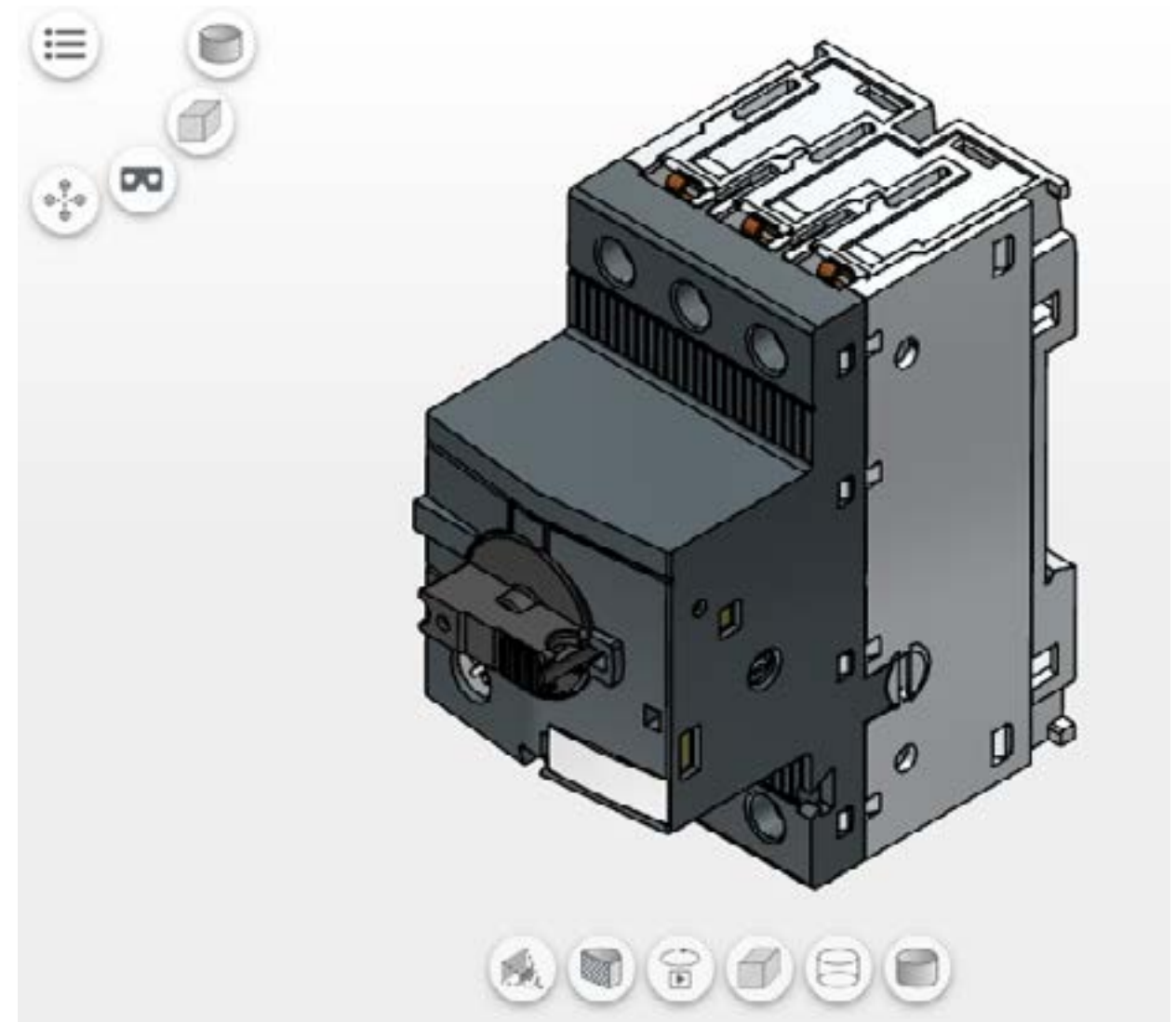
Materials

Technical material - 3D Portal

Cadenas provides 3D and 2D data for ABB Motor Starting & Safety products.

- Download CAD models in different file formats
- Generate Pdf data sheets

You can find 3D Portal [here](#).



ABIB