

ABB's new control and protection devices

One product family

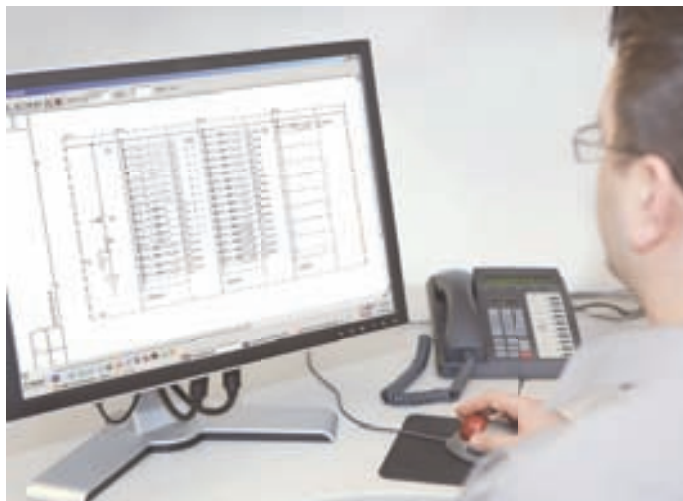
ABB presents a new generation of first-class specialized components: manual motor starters, contactors, overload relays and softstarters for motor starting solutions up to 18.5 kW / 20 hp

- Harmonized design & colour
- Compact and modular
- Low energy consumption
- Small number of parts
- Minimum need for accessories
- Optimized wiring and configuration
- High ratings and service capability
- Increased application possibilities
- Reliability proven over many years of experience



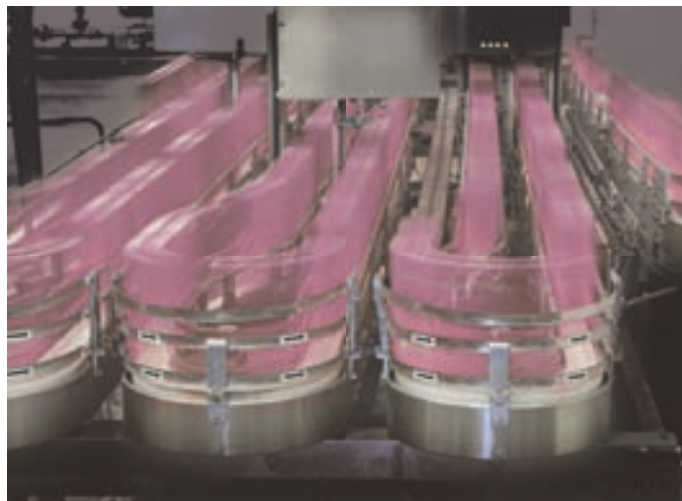
Simplicity for your design

Our engineers have taken modularity and uniformity to the next level in terms of flexibility and practicality for your applications. We offer you flexibility, increased application possibilities, exchangeability and reduced panel size.



Safety and reliability

ABB's new line of industrial motor control and protection devices has been developed in order to meet the main safety standards of the toughest industrial scenarios where high reliability and safety level are required.



Increased availability for your equipment

Designing with simplicity in mind, our engineers have made it possible to integrate the entire family into just a few components. We offer you reduced inventory, greater exchangeability, to help you to have fewer mistakes and shortages and less down time.

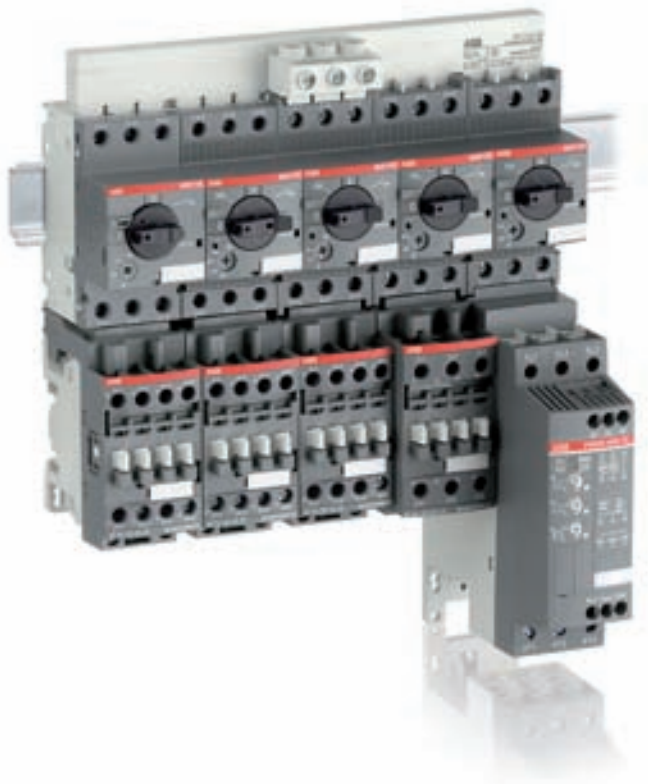


Energy efficiency and sustainability

Reducing energy consumption and protecting the environment has long been at the top of ABB's list of priorities, and we are proud to introduce a first-class proposal.



Large choice of starting solutions in kit form



Short-circuit and overload protection

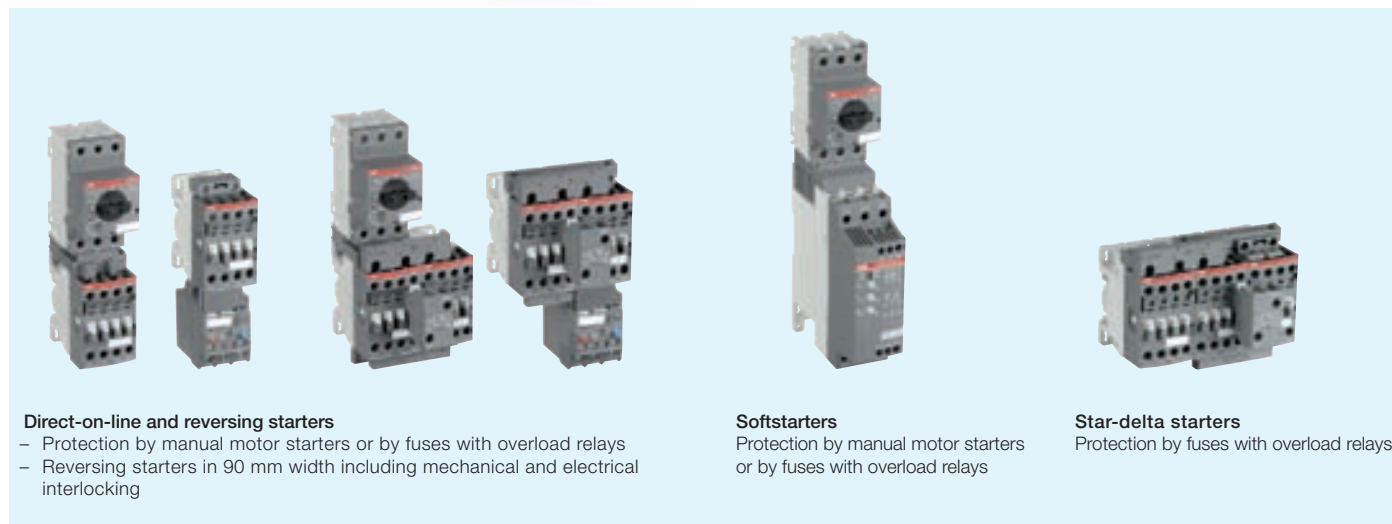
- Type 1 or type 2 coordination guaranteed with manual motor starters
- Choice of thermal or electronic overload relays

Simple construction

- All starters in 45 mm width module

Time/cost saving

- Same frame size for AC or DC control supply
- Easy, fast and secure assembly, fitting and wiring of components



Direct-on-line and reversing starters

- Protection by manual motor starters or by fuses with overload relays
- Reversing starters in 90 mm width including mechanical and electrical interlocking

Softstarters

- Protection by manual motor starters or by fuses with overload relays

Star-delta starters

- Protection by fuses with overload relays

Standardized busbars and optimized interconnection accessories

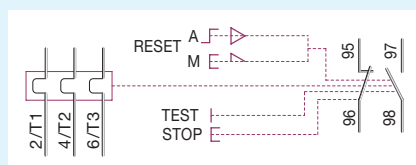
- Same 3-phase busbar and feeder range up to 100 A for manual motor starters
- Direct 35 mm rail mounting: no additional mounting plate required
- Complete range of connection links with manual motor starters and connection sets to build reversing and star-delta starters
- Easy installation and dismantling of contactors: no unwiring of manual motor starters





Protect your motors with thermal or electronic overload relays

- One range of TF42 thermal overload relays, trip class 10
- One range of EF19 and EF45 electronic overload relays up to 45 A, 7 setting ranges, trip class 10E, 20E, 30E
- Adjustable current setting ranges
- Overload protection with phase loss sensitivity
- Temperature compensation:
 - up to +60 °C for thermal overload relays
 - up to +70 °C for electronic overload relays
- Automatic or manual reset, sealable
- Stop and test function



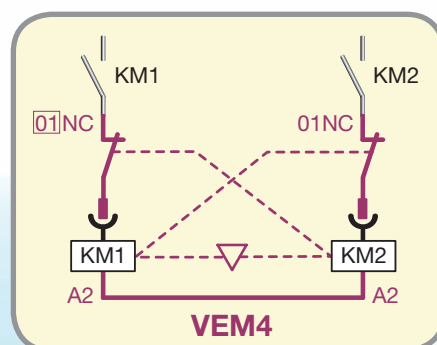
- Current setting range
- Reset function
- Test function
- Stop function



Interlock your reversing contactors quickly in 90 mm width:

- Easy with VM4 mechanical interlock unit
- Simple with VEM4 set including mechanical interlock unit and electrical interlock block with A2-A2 connection
- 50% wiring cost savings in one click!

Fixing the electrical interlock block to the contactor front face connects the 2 built-in N.C. interlocking contacts with the two coil supplies



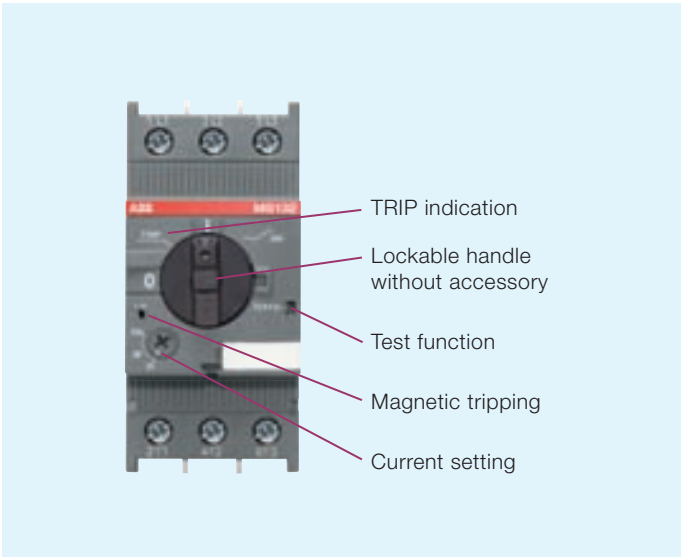
MS116 and MS132 manual motor starters

Harmonized design in 45 mm width

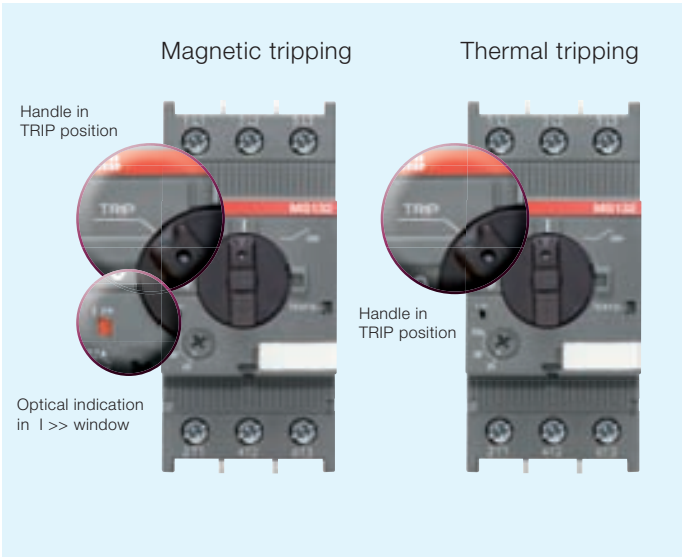


Types	MS116	MS132
Setting range	0.1 ... 16 A	0.1 ... 32 A
Switch position	ON / OFF	ON / OFF / TRIP
Magnetic trip indication	–	yes
Lockable handle without accessories	–	yes
Max. breaking capacity I _{cs}	up to 50 kA	up to 100 kA
Trip class	10A	10

ON/OFF switch functionality

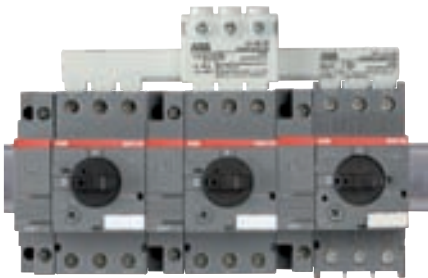


Clear tripping identification



One range of accessories for MS116 and MS132

- Common auxiliary contacts, signaling contacts and auxiliary trip units
- Common busbar systems



AF09 ... AF38 3-pole contactors

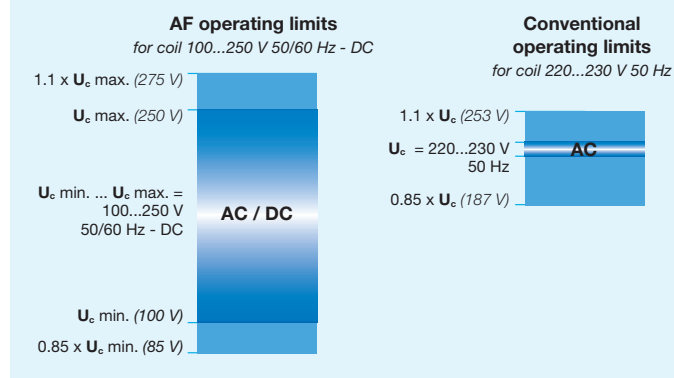
Simple design with 2 frame sizes in 45 mm width



Types	AF09	AF12	AF16	AF26	AF30	AF38
Rated operational power 400 V AC-3	4 kW	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW
Rated operational current AC-1 (40 °C)	25 A	28 A	30 A	45 A	50 A	50 A
UL 3-phase motor power 480 V	5 hp	7.5 hp	10 hp	15 hp	20 hp	20 hp

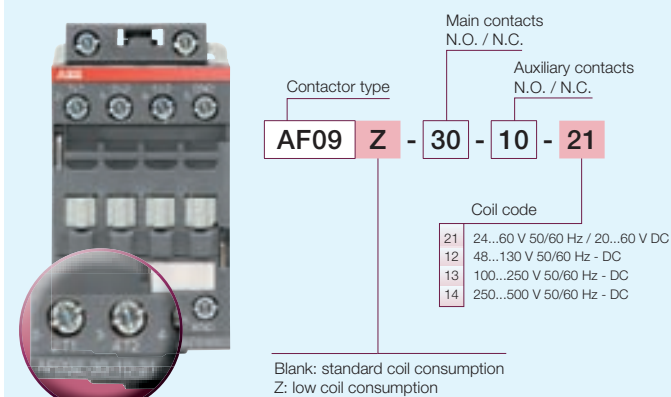
A unique contactor for AC or DC control supply

- Manages large control voltage variations
- Includes an electronic coil interface with extended operating limits $0.85 \times U_e$ min. ... $1.1 \times U_e$ max.



Only four coils for easier selection

Control voltages covering 24...500 V 50/60 Hz and 20...500 V DC



Reduced panel energy consumption

- With low holding AC and DC coil consumption
- From 30% (AF coil) to 80% (AF..Z coil) reduction of AC pull-in consumption

Built-in surge protection

- No extra surge suppressor required

Improve your equipment reliability with AF..Z contactors

- Withstands control voltage short dips
- Withstands control voltage sags according to SEMI F47-0706 standards
- Additional AF..Z coils available for control voltages between 12...20 V DC and 48...250 V 50/60 Hz - DC

Direct control by PLC-output ≥ 500 mA, 24 V DC

No use of interface relay



Switching of auxiliary and control circuits



Optimize your auxiliary contact block configuration

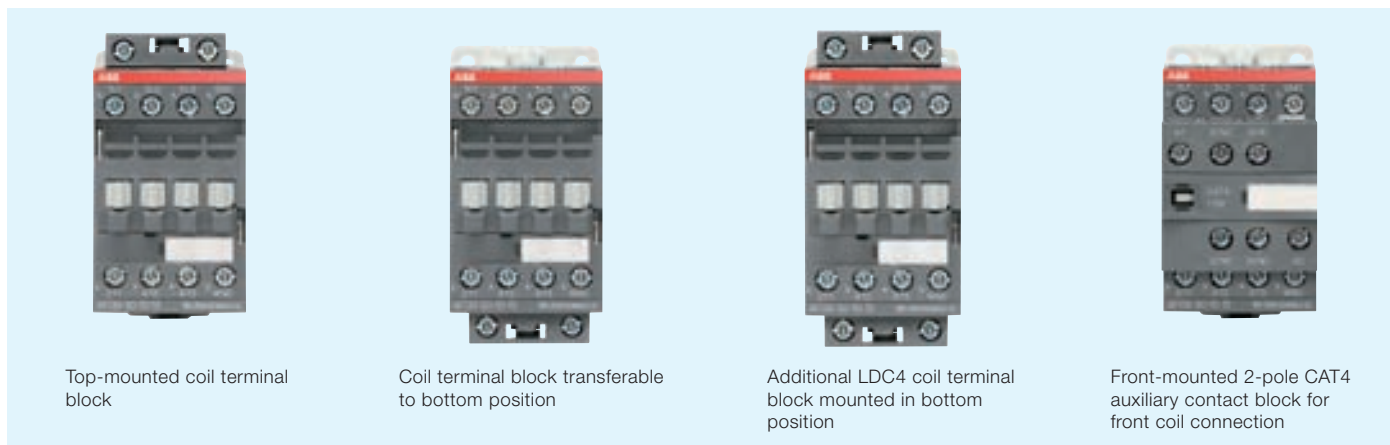
- AF09...AF16 3-pole contactors equipped with a built-in auxiliary contact N.O. or N.C.
- Up to 6 additional auxiliary contacts:
 - front-mounted 1 or 4-pole CA4 blocks
 - side-mounted 2-pole CAL4 blocks
- Reduced panel dimension using up to 2 side-mounted 2-pole CAL4 blocks

Make your control circuit safe

- **Mirror contact** according to IEC 60947-4-1 Annex F 2.1
- **Mechanically linked contacts** according to IEC 60947-5-1 Annex L 3.0



Free choice of your coil terminal access



Top-mounted coil terminal block

Coil terminal block transferable to bottom position

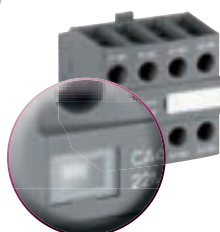
Additional LDC4 coil terminal block mounted in bottom position

Front-mounted 2-pole CAT4 auxiliary contact block for front coil connection

Protect your equipment against accidental contact



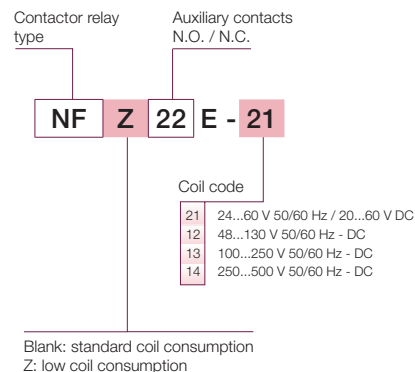
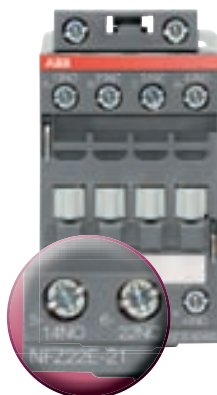
Sealable and transparent protective covers on contactors (BX4) and overload relays



Non-removable protective covers (BX4-CA) for auxiliary contact blocks

Complete choice of contactor relays

- Same advantages and accessories as AF contactors
- Only four coils for easier selection



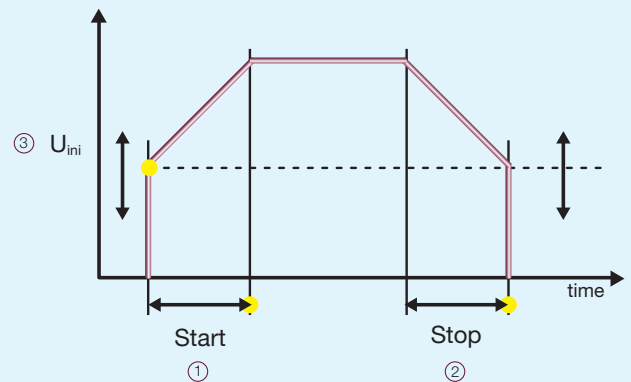
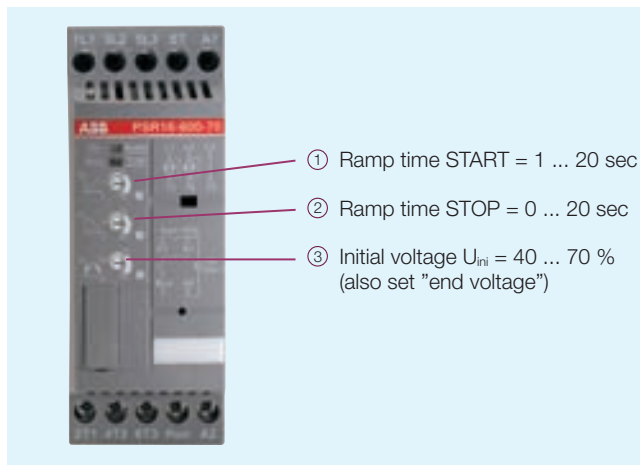
PSR softstarters

Compact design with 3 frame sizes



Types	PSR3 ... PSR16	PSR25, PSR30	PSR37
Rated operational power 400 V AC-53a	1.5 ... 7.5 kW	11 ... 15 kW	18.5 kW
UL 3-phase motor power - 480 V	2 ... 10 hp	15 ... 20 hp	25 hp

- Built-in by-pass contacts in main circuit
- Wide main voltage range: from 208 to 600 V
 - fewer variants
 - very robust and insensitive to voltage variations
- Wide supply voltage range: 100 ... 240 V AC or 24 V DC



Easy to install and set up

- 35 mm rail or screw mounting
- All settings visible and adjustable on front face
- Run signal relay for all sizes
- Output signal for TOR (Top Of Ramp) for PSR25...PSR37
- 10 starts per hour standard, increased to 20 starts or more with addition of auxiliary cooling fan
- Remote control connection using Field Bus Plug as accessory

Compact starter solution in 45 mm width with manual motor starter up to 15 kW - 400 V



