



IMS Control & EPR, 2010 01 29

We keep your motors running
ABB's new control & protection
devices up to 18.5 kW / 20 hp

ABB's new control and protection devices

Up to 18.5 kW / 20 hp



One family

New generation



- Harmonized design and colour
- Compact and modular design
- 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

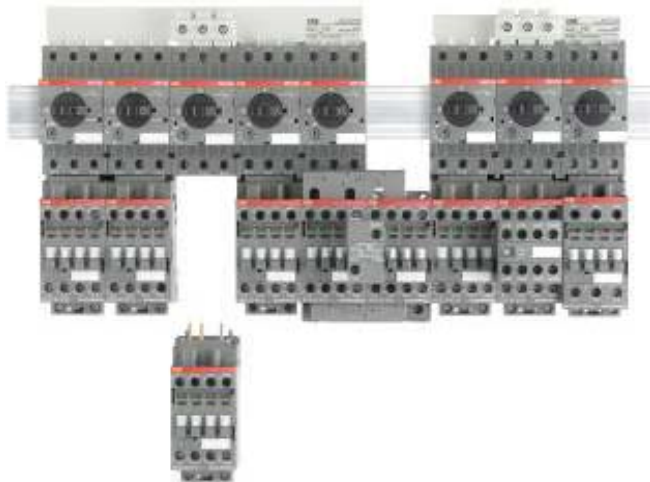
We offer



- Simplicity for design
- Improved availability & service
- Safety and reliability
- Energy efficiency and sustainability



Simplicity for your design



- Reduced panel size, compact design
- Same product for AC or DC control voltages:
 - Same part number
 - Same drawing
 - Easy to replace products
- Free choice of your coil terminal access
- Direct 35 mm rail mounting, no mounting plate required
- Choice of motor protections
- Small number of parts
- Optimize your auxiliary contact block configuration

Increased availability for your equipment



- Improved logistics and stock control
- Small number of parts with built-in functions:
 - Less mistakes
 - Less shortages
 - Less down time
- Greater exchangeability
- Increased application possibilities

Safety and reliability

Proven over many years of experience



- High ratings & service capability
- Suitable for high service factor
- Reliable in poor network conditions
 - Withstands control voltage short dips
 - Withstands control voltage interruptions
 - Additional AF..Z coil available
- Chattering free, humming / buzzing free
- Reliable control circuits
- Coordination type 1 and 2 guaranteed with Manual Motor Starters

Energy efficiency and sustainability



- 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
 - Less losses per phase
 - Less heat generated
- Smaller cabinets
 - Smaller transformers
- Reduced transport impact
- Sustainable offer

The next generation Product overview



- Manual Motor Starters
- Contactors
- Overload Relays and
Contactor Accessories
- Softstarters

Manual Motor Starters

Main benefits

- MS116-6.3
- MS132-10
- MS132-32



- High short-circuit ratings
- Ambient air temperature: -25 °C to +60 °C (+55°C for MS116)
- MS132:
 - Lockable handle
 - Clear position of the handle ON/OFF/TRIP
 - Magnetic tripping optically signaled on the front
- MS116 and MS132 with one range of common accessories

Manual Motor Starters

Technical features



One product family
up to 32 A in 45 mm

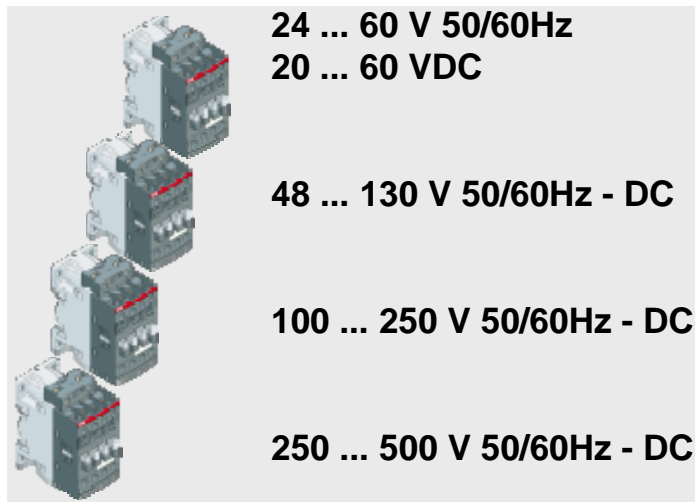
	MS116	12 setting ranges from 0.1 to 16 A	
	MS132	15 setting ranges from 0.1 to 32 A	
Short-circuit protection	MS116	0.1 A / 10 A at 400 V	Ics 50 kA
		16 A at 400 V	Ics 16 kA
	MS132	0.1 A / 20 A at 400 V	Ics 100 kA
		25 A at 400 V	Ics 50 kA
		32 A at 400 V	Ics 25 kA
	ON/OFF switch functionality	Disconnecting function	

¹Ics: ICU 50kA for
32A

Ics: Rated service
short-circuit
breaking capacity

Contactors type AF

Main benefits



- Two frames in 45 mm width up to:
 - 18.5 kW 400V AC-3 / 20 hp 480V
 - 50AAC-1
- Same coil for AC or DC control voltages
- Extended operating limits
- Reduced coil consumption
- Built-in surge suppressor
- Only 4 coils covering
 - 24 ... 500V 50/60Hz and
 - 20 ... 500 VDC
- Direct control by PLC output ≥ 500 mA, with 20..60 VDC coil

Contactors type AF..Z

Extended performance



Improve your equipment reliability

- 3 additional AF..Z coils
 - AF..Z...20 12 ... 20 V DC
 - AF..Z...22 48 ... 130 V 50/60Hz - DC
 - AF..Z...23 100 ... 250 V 50/60Hz - DC
- Withstands short voltage dips and voltage sags (SEMI F47-0706 compliance)

Reduce your panel energy consumption

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

Contactors

Technical features



	AF09	AF12	AF16	AF26	AF30	AF38
Rated operational power 400V AC-3	4 kW	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW
UL/CSA 3-phase motor power 480V	5 hp	7.5 hp	10 hp	15 hp	20 hp	20 hp
Rated operational current AC-1 (40°C)	25 A	28 A	30 A	45 A	50 A	50 A
Average AF pull in	50 VA			50 VA		
Average AF holding	2.2 VA / 2 W			2.2 VA / 2 W		
Average AF..Z pull in	16 VA			16 VA		
Average AF..Z holding	1.7 VA / 1.5 W			1.7 VA / 1.5 W		

Contactors accessories

Main benefits



- Choice of motor protection overload relays:
 - Thermal overload relays TF42
 - Electronic overload relays EF19, EF45
- Reduced need of accessories
 - Built-in surge suppressor
 - Common accessories up to 38A
 - Electrical and mechanical interlock set
- Choice and flexible use of auxiliary contacts
- Free choice of your terminal access
- Snap-on mounting
- Safe with:
 - Mechanically linked and mirror contacts
 - Sealable protection covers

Overload relays

Technical features

- Perfect match to the contactor
- Phase loss sensitivity
- Automatic reset/manual reset, sealable
- Stop and test function



TF42



EF19

EF45

Thermal overload relays TF42	Trip class 10 Temperature compensation -25 °C to +60 °C
Electronic overload relays EF19 and EF45	Trip class 10E, 20E, 30E Setting ranges - EF19 from 0.10 up to 18.9 A - EF45 from 9 up to 45 A Temperature compensation -25°C to +70°C

Softstarters

Main benefits

- PSR9-600-70
- PSR25-600-70
- PSR37-600-70



- 8 ratings in three frame sizes
 - from 1.5 to 18.5 kW
 - 45 mm width up to 15 kW*
- Reduces the starting current and limits mechanical stress
- Simple connection
 - Less wiring than Star-Delta starter
 - Busbar kit for direct connection to MMS
- Clear marking on the front
 - Clear & easy setting on the front face
 - Activated relays shown by LED's
 - Run signal relay included /Top of ramp signal relay available from PSR25
- Accessory for filedbus plug

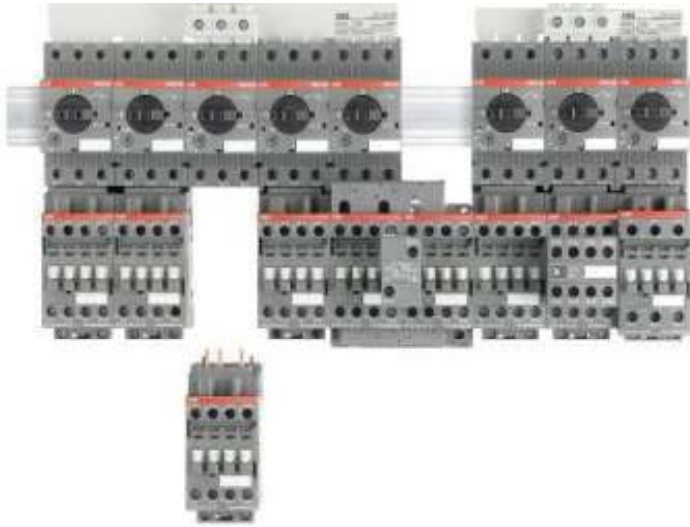
Softstarters

Technical features



Three frame sizes	From 1.5 kW to 18.5 kW
Motor voltage	208...600 V
Control voltage	24 V DC or 100...204 VAC
35 mm rail or screw mounting	
Integrated by-pass contact	
Ambient air temperature	-25 °C to +60 °C

Starter assembly is easy!



- Type 1 or type 2 coordination guaranteed with MMS
- Same frame size for AC or DC control voltage
- DOL starters in 45 mm module width
- Reversing starter in 90 mm width
- Direct 35 mm rail mounting, no mounting plate needed
- Connecting link for AF contactors or PSR softstarters with Manual Motor Starters
- Unique interlock block:
 - 50% wiring cost savings in one click!
- No specific star-delta timer required

Power and productivity
for a better world™

