



Brochure

STAR Series Motor Protection and Control

ABB control and protection devices for applications up to 20HP @ 480V



STAR Series: The next generation



Manual Motor Starters
MS116-6.3, MS132-10, MS132-32



Contactors
AF09-30-10, AF12-30-10, AF16-30-10,
AF26-30-00, AF30-30-00

Manual Motor Starters

- 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
- Overload protection
 - Trip class 10A/10
 - Phase loss sensitivity
 - Temperature compensated
- Short-circuit protection
 - MS116: I_{cs} up to 30 kA at 480V
 - MS132: I_{cs} up to 30 kA at 480V
- ON/OFF switch functionality
- Disconnect function

Main benefits

- MS132: Clear status indication for ON/OFF/TRIPPED
- MS132: Built-in magnetic vs. thermal trip indicator
- Ambient air temperature for operation: -25 °C to +55 °C/+60 °C
- One range of common accessories for MS116 and MS132

Contactors

- 2 frame sizes in 45 mm width from 5 to 20 HP at 480V and up to 50 A UL/CSA General Purpose
- Electronic AC / DC coils
- Extended coil operating limits allow for large voltage variations
- Only 4 coils with wide voltage range covering voltages between 24...500 V 50/60 Hz and 20...500 V DC
- Built-in surge protection
- A 30 to 80% reduction in AC pull-in coil consumption
- Direct control by PLC-output 24 V DC 500 mA
- Low AC and DC holding coil consumption
- Extended features with AF..Z type: voltage sag immunity, dips withstand, and a 12...60 VDC coil option

Main benefits

- Reduced number of part numbers for increased inventory flexibility
- Harmonized frame size for AC and DC powered devices
- Separate PLC interface relays or surge suppressor accessories not required
- Reduced AC power consumption and heat dissipation for more compact panel design
- Electronic coils eliminate chattering and extend service life



Contactor with accessories including TOL

Contactor Accessories

Overload relays

- Thermal overload relays – TF range up to 38 A
 - Overload protection trip class 10
 - Operating temperatures from -25 ... +60 °C
- Electronic overload relays – EF19/EF45 up to 45 A
 - Overload protection trip class 10E, 20E, 30E
 - Operating temperatures from -25 ... +70 °C
- Phase loss sensitivity
- Selectable automatic vs. manual reset
- Adjustable current setting for overload protection
- STOP and TEST function
- Flush mounting design

Other accessories

- Internal-mount mechanical / front-mount electrical interlocks reduce wiring and allow for 90 mm FVR starters
- Flexible assortment of front or side mounted 1-pole, 2-pole and 4-pole auxiliary contact blocks
- Detachable coil terminal for top or bottom, front-mount coil terminal accessory available
- Allow for quick and simple assembly of various full-voltage and reduced-voltage starters prior to installation

Main benefits

- Safety features offered through mechanically linked contacts, mirror contacts, and sealable protection covers
- Flexible for equipment design and manufacture
- Quick mounting, secure connection with less wiring of accessories to the contactor
- Common accessories throughout the range
- All across-the-line starters in 45 mm width and reversing starters in 90 mm width



Softstarters
 PSR9-600-70, PSR25-600-70, PSR 37-600-70

Softstarters

- 45 mm standard case width
- Three frame sizes from 2 to 25 HP
- Motor voltage 208...600 V
- Supply voltage 24 V DC or 100...240 V AC
- DIN rail or panel-mount
- Integrated bypass contact
- Operating temperatures from -25 °C to +60 °C

Main benefits

- Reduced voltage start/stop
- Field bus compatible with field bus plug accessory
- Compact design 45 mm width for up to 25 HP
- Run signal relay included
- Top of ramp signal relay available for PSR25-PSR37
- 10 starts per hour and up to 20 starts per hour with addition of cooling fan
- Reduces mechanical stress
- Reduces power consumption and control wiring (when compared to wye-delta starters)

Simplicity by design



One family

ABB's new generation of modular motor control and protection devices for applications up to 20 HP at 480V forms one powerful family. Innovatively designed, it offers state-of-the-art technology from one of the world's leading manufacturers of power engineering and automation technology components. ABB's STAR product line makes it easier than ever to maximize productivity, increase efficiency and achieve greater flexibility in a wide variety of applications. Welcome to the next generation of motor control and protection.

45 mm standard frame width

This cutting edge product family integrates seamlessly into a variety of applications by offering a standard 45 mm wide frame across the entire range. This feature not only reduces panel space, but also increases ease of installation and commonality in design.

Reliability and Energy efficiency

Electronic devices offer significantly higher reliability over legacy mechanical systems. ABB's engineers have developed a revolutionary starting solution that achieves less resistance per phase, a reduction in thermal load, lower energy consumption, and is up to 30 percent lighter than comparable electromechanical devices available today. This combination not only increases the efficiency of the installation, but reduces energy costs as well.

Sustainability

Environmental sustainability and protection is a top priority for ABB. For this reason, we have been manufacturing our device components from recyclable raw materials for many years. In addition to this, the STAR product family of motor control and protection devices is compliant with European RoHS directives.

Flexible AC/DC contactor coils

Building on the success of our larger contactors, ABB's engineers have integrated an electronic AC/DC coil into this new and compact range of motor control and protection devices. Having reduced the number of contactor part numbers by an impressive 90 percent, a single device can now span a wide range of both AC and DC control voltages, allowing for greater flexibility across many applications.

Your advantages at a glance:

- One family offering increased productivity, efficiency, and flexibility
- Compact 45 mm wide frame sizes
- Electronic devices for increased reliability
- Sustainable energy-efficiency
- Flexible AC/DC contactor coils



Flexibility in wiring

ABB's engineers have taken flexibility and interchangeability to the next level. Detachable coil terminals can be rotated from the top (standard) to the bottom of all STAR series contactors, and pre-wired prior to installation. These terminals are standard across the range, allowing for quick change-out or drop-in replacement. Front-mount and additional top/bottom-mount coil terminal accessories are also available.

User-friendly modular engineering

ABB's exciting new family of modular, integrated motor control and protection devices takes productivity to the next level. This homogenous line of manual motor starters, contactors, overload relays and softstarters for applications up to 20 HP at 480V offers added simplicity from a design point of view. Standardized width and frame sizes allow for consistency in panel design and device mounting for increased integration efficiency.

Compact design

The STAR Series devices have been harmonized on a sustainable, compact design. Limiting the frame sizes to a 45 mm width allows these devices to not only reduce panel space, but also utilize fewer raw materials in the manufacturing process.

Accessories

ABB's STAR Series product family includes a variety of accessories for various applications. This range of snap on accessories reduces installation time and is universally applied throughout the entire family.

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