

Mini Contactors Applications and Segments

Overview and features

Mini contactors

ABB mini contactors

Success story

Energy for motors, machines or other electrical components has to be reliably turned on and off often by remote control. In this case contactors are very important products to turn over the current for motors or other products which need energy.

Reliability is therefore a prerequisite in the choice of the right contactor.

Mini contactors are ideally suited for applications where space is at a premium. The contactors are the flattest on the market and therefore can be used in special modular and compact applications. The small dimensions, a wide range of coil types and a variety of versions within the model range provide customers with high flexibility in use for applications up to 5.5 kW.

The benefits

- Powerful, switching resistive and motor loads
- Low power consumption
- Flexible use in any position
- High temperature types and wide range coils available
- Compact size – space saving
- Positive linked & guided contacts

The family

- Standard types with screw terminals, flat pin or soldering pin connection
- Compact reversing types with safe blocking system (screws, flat pins and soldering pins)
- PLC interface types with very low power consumption
- Wide range power supply types TKC6/TBC7 for railway / battery applications
- Mini Contactor Relays for auxiliary circuit switching (screws, flat pins and soldering pins)

B6/B7 with screw terminals



B6/B7 with flat pins



B6/B7 with soldering pins



K6/KC6 contactor relay



Compact reversing types VB6/VB7/VBC6/VBC7 with safe blocking system (screw terminals, flat pins and soldering pins)

So small – so powerful

Because of a very flat design the compact product is suited to use for single setup as well for motor starter to mount in small enclosures.

High quality product

Mini contactors are produced in a full automatic production line where each product will be tested. The factory is certified to ISO 9001/ISO 14000 to guarantee a high level of quality. Mini contactors use only environmental friendly materials.

In modern test laboratories ABB is doing a lot of tests to fulfil the requirements for worldwide standards. Therefore a lot of certificates are available.

The standard technical data:

Switching of heatings (AC-1)	B6xx	B7xx
Rated operational current I _e	16 A	20 A
Rated operational power		
230 V AC 3 ~	6.4 kW	8.0 kW
400 V AC 3 ~	11.0 kW	13.8 kW
Switching of motors (AC-3)		
Rated operational current I _e	9 A	12 A
Rated operational power		
230 V AC 3 ~	2.2 kW	3.0 kW
400 V AC 3 ~	4.0 kW	5.5 kW



Mini contactors and their accessories.

With lateral auxiliary contact



With front auxiliary contact



With electronic overload relay



With manual motor starter



ABB mini contactors with benefits for your applications

Space / room saving

Mini contactors B6/B7 are very flat, small and yet powerful. Customers earn benefits in applications where room is always too small or where a compact solution is needed. Flat mini contactors can be used in applications with small enclosures for wall mounting in buildings. Also many consumer machines need effective, reliable products for power control.

Applications

- Entrance gates
- Shutters
- Coffee Machines
- Washing machines
- Sawing machines
- Industrial door control modules mounted in flat enclosures for wall mounting
- Decentralized small control panels in buildings
- Small machines where space is minimum

Features

- Flat
- Small
- Powerful



Special mounting and connection possibilities

ABB offers different connection types, with screw terminals, flat or soldering pins.

Applications

- Screw terminals, mostly used in standard applications
- Flat pin connections, used in car industries, plug solutions for prewired systems make wiring faster and safe.
- Soldering pins, mostly used for PCB board applications as for
 - Garage door controls
 - Computer power controls
 - Power supply for machines
 - Combined modules, power switching and electronic control on PCB board
 - PCB boards for high quantity of machines control modules

Features

- Low power consumption
- Flat, space saving
- Small & powerful
- Surge suppressor to avoid current peaks (integrated)

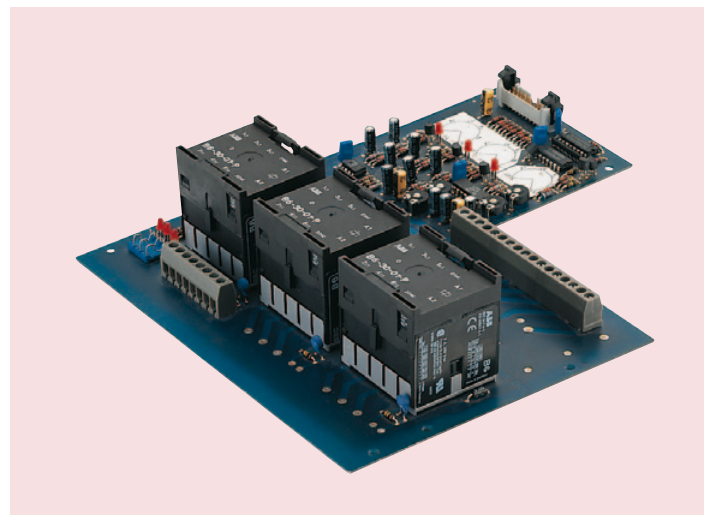
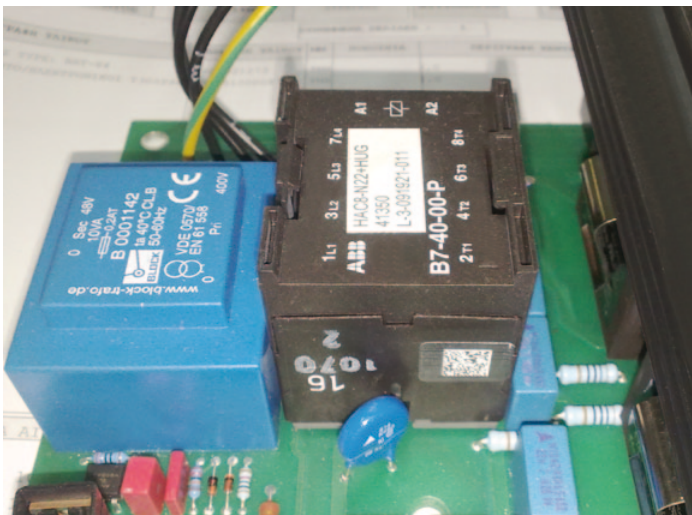
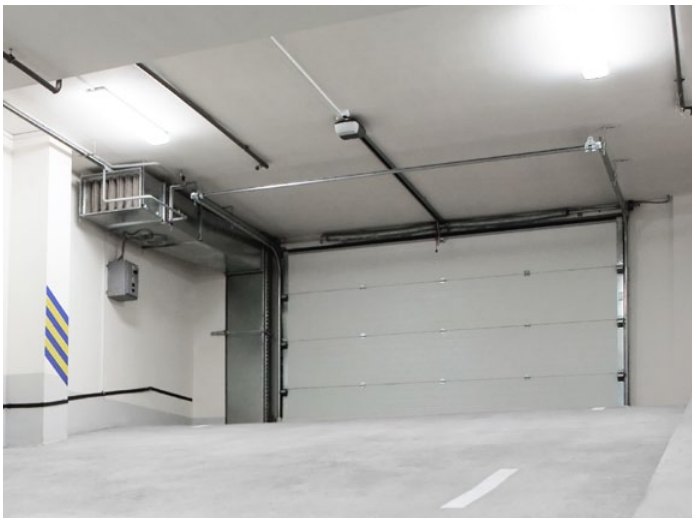


ABB mini contactors with benefits for your applications

Customized versions with special coil types

Mini contactor with low voltage coil supply 6 V, 12 V or 24 V from batteries manage the control circuits in vehicles, boats, outdoor equipments.

Applications

- Car industries, trucks
- Boat industries
- Train applications / rolling stock
- Weekend places / holiday houses / household
- Out door applications

Features

- Low power consumption
- Wide range coil supply
- Many voltage variations



High ambient temperature applications

Many applications have to withstand high temperatures because of heating up the panels and enclosures by sun power or if the heat dissipation of the system is not sufficient. Such contactors for high temperatures can be used in outdoor installations or in applications where airconditioning is not possible. Such contactors with low energy consumption and for high temperature use save costs for heat dissipation systems.

Applications

- Water heaters
- Heat pumps
- Valves
- Pump stations
- Outdoor applications

Features

- High quality
- Material adaption for high temperature range

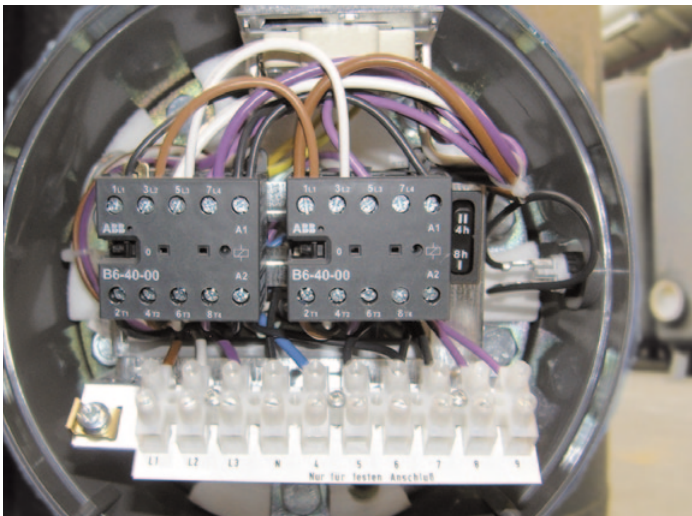


ABB mini contactors with benefits for your applications

Robust for reliable use

The mini contactor range is produced from a high quality production line with ISO 9001 certification and 100% tested outputs. ABB deliver the products worldwide with a lot of approvals acc. country specification. Support is guaranteed

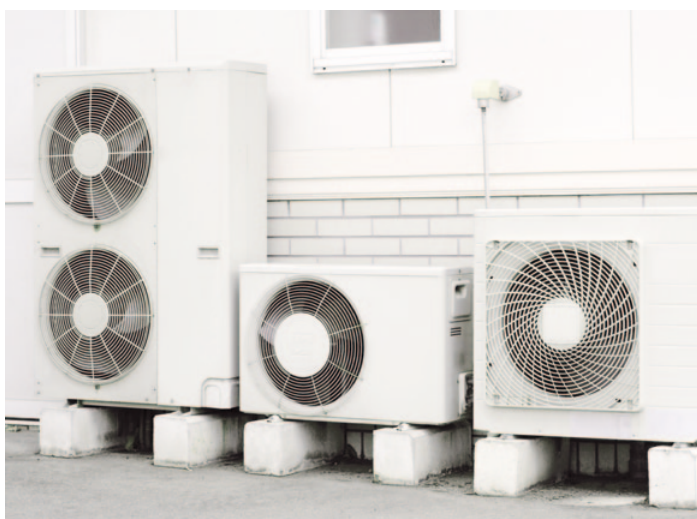
The products used in devices for consumer market must have high availability. Vending machines for food and beverages as well as cooling systems for food & beverages require reliable products because breakdowns will cause a lot of costs and business losses.

Applications

- Air conditioning
- Cooling systems in warehouses for food
- Heatings
- Vending machines for food and beverages
- Cooling systems for food and beverages

Features

- Low power consumption
- Hum-free
- Reliable functions
- High quality
- Many voltage variations



Heavy duty applications

For example those applications require extended operating data, because in cold wintertime as well as in hot areas a reliable function is necessary. These products are mostly under heavy duty as shock and vibrations. Special mini contactor types can manage such operating conditions.

Applications

- Compressors
- Railways
- Windmills - small and middle size
- Sewing machines

Features

- Shock and vibration proved
- Wide temperature ranges
- Wide voltage range coils
- Low power consumption

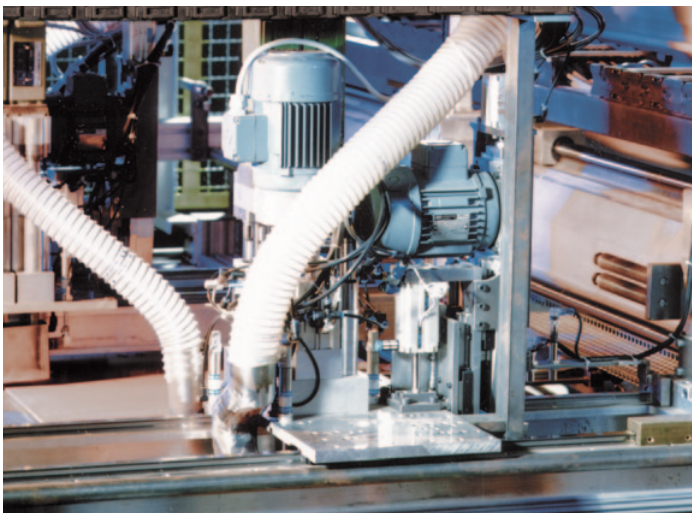


ABB mini contactors with benefits for your applications

Compact motor starting solutions

Such a compact product as the mini contactor can be used and easily linked with manual motor starter or as plug in module with busbar systems. The contactor is strong enough for motor starter solutions up to 5.5 kW for use in machines and production systems.

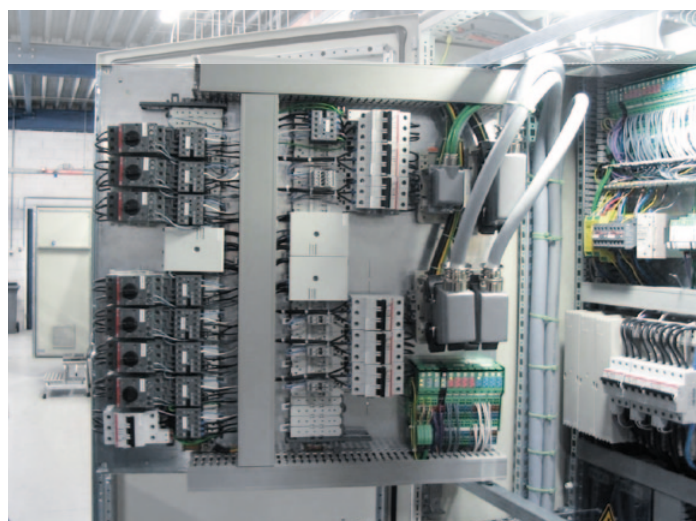
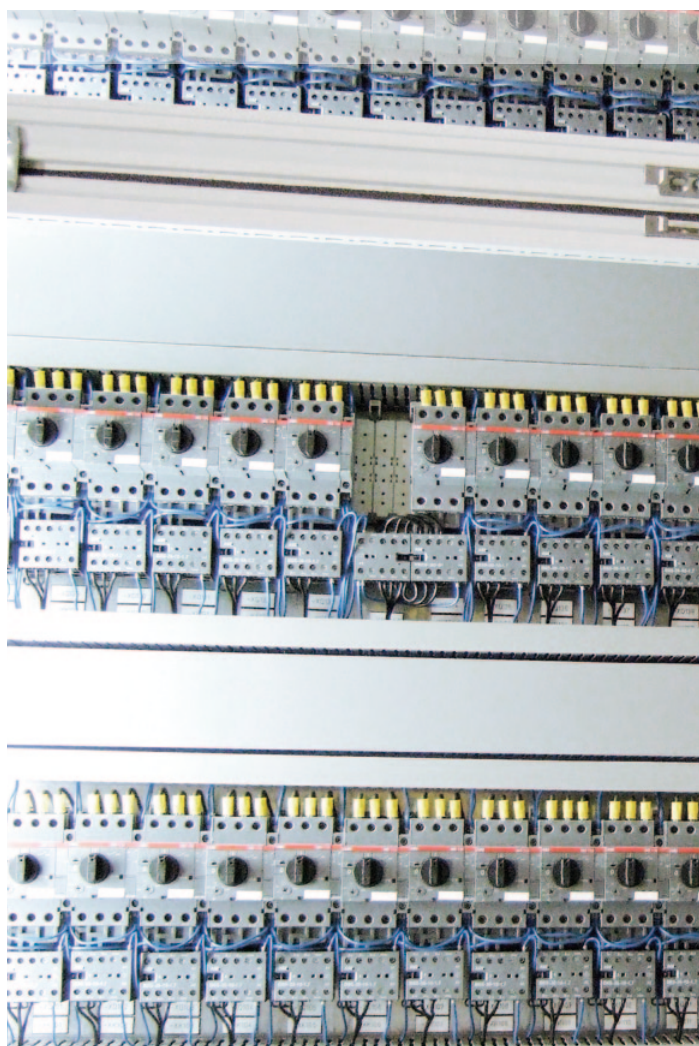
Applications

- Production systems
- Machines

Features

- Compact and very small, up to 5.5 kW
- Easy and quick mounting
- Reversing contactor is one module ready to link to the manual motor starter
- Low power consumption
- AC versions work with rectifier on DC coil

Electro Plating Line (EDF/EPL) setting the standard in leadframe solderplating, equipped with plug-in Starter (MS116 + mini contactor + plug-in module for Smissline busbar system). A redundant infeed block increases the availability.



Flexible application in any position

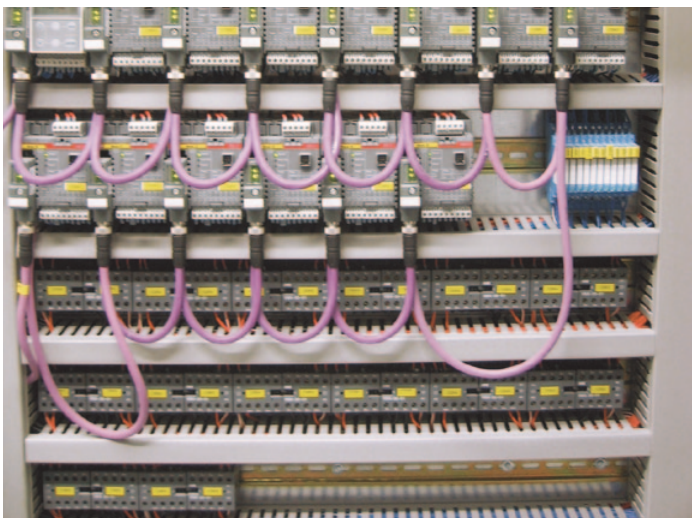
So small, so powerfull, so flexible. Mini contactors used for machines in any position make planings & construction more flexible. In every case there is a place somewhere for the product – space savings reduce costs. PLC types don't need external surge suppressor, they can be connected directly to electronic equipments.

Applications

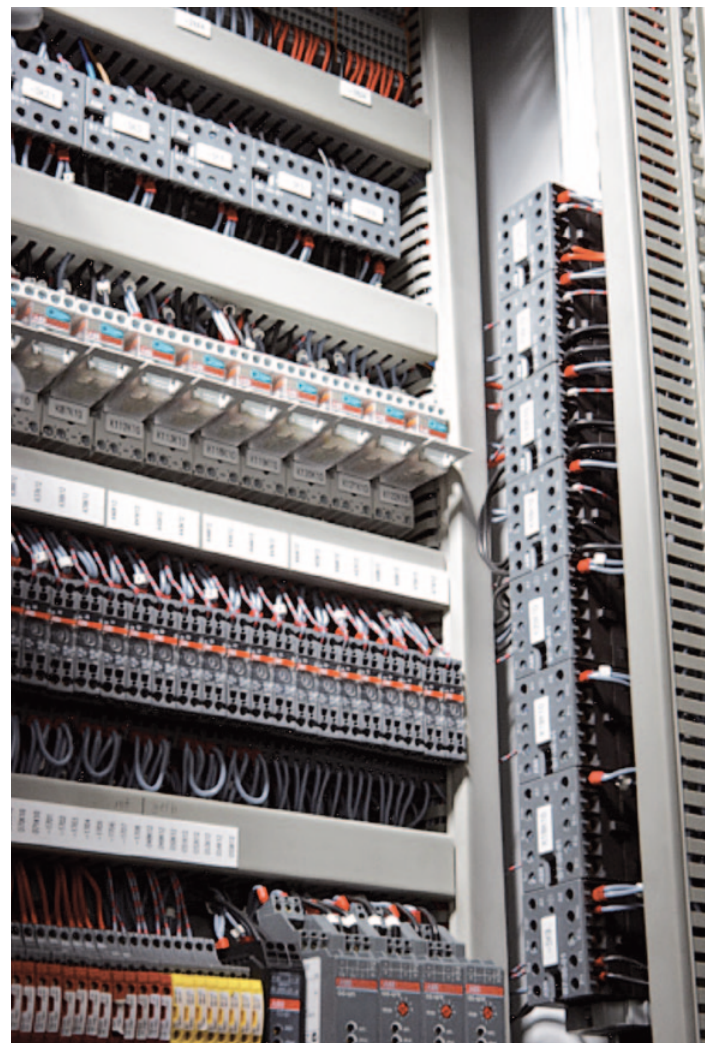
- Machinery automation: PLC-types for direct connection
- Conveyor belts: to control small motors
- Decentralized machines: small automation modules
- Robotic application

Features

- Small, flat = saving space
- Hum-free
- Mounting in any position
- Low energy consumption = low heat dissipation save money for cooling systems



Panel for production and assembly line with conveyor stations



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