CATALOG

Motor operating devices (MOD) & Auto-reclosing units (AR)

Empower your systems,
with remote control and automation

- Operational continuity
- Compactness
- Effectiveness
- Connectivity

Wherever continuity of service is critical, especially in installations that are not easily accessible, motor operating devices (MODs) for MCBs and RCDs and auto-reclosing units (ARs) for RCCBs allows remote control of the connected protection devices.

The integration into the InSite energy management system enables increased connectivity and automated remote control.

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Motor operating devices (MODs) & Auto-reclosing units (ARs)

Empower your systems, with remote control and automation

In scenarios where continuity of service is vital, particularly in hard-to-reach installations, motor operating devices (MODs) for MCBs and RCDs and auto-reclosing units (ARs) for RCCBs are essential, enabling remote control of the associated protective equipment.

Regardless of whether the application is commercial or industrial, protective devices might be affected by unwanted tripping at any time due to their high sensitivity.

This accidental interruption of the service, unlike the reasons of actual hazardous situations, can be caused by a variety of circumstances, such as atmospheric events, start-up or shut-down of industrial machinery, harmonic components due to inverters and much more.

Such situations often occur only temporarily, and to reactivate the circuit it is sufficient to reset the main protection device. Unfortunately, resetting is an operation that requires on-site intervention and involves unpredictable downtime.

In public areas or stores, the loss of power to illumination systems, supermarket's fridges or freezers, alarms, elevators or electric gates can have serious consequences for people and goods, ranging from downtime of public light and shops signs or spoilage of groceries, from impossibility of using anti-theft and surveillance systems to efficiency of payment systems.

While in factories or offices, you may notice the malfunction of production lines, manufacturing machines, security systems, computers, etc.

ABB's range of motor operating and auto-reclosing devices has been designed to prevent these types of incidents.

Motor operating devices
allow the remote control of the coupled device. They are especially suitable in centralized systems (either large size or difficult to access) and whenever multiple daily intervention are needed such as unattended electrical lines, safety lines and unmanned stations.

Auto-reclosing units
are used to automatically operate the reclosing of the associated device in case of untimely tripping such as overcurrent due to lightning. Those devices are particularly suitable either in unattended systems or whenever service continuity must be guaranteed.

Visualize, control and optimize your systems remotely.

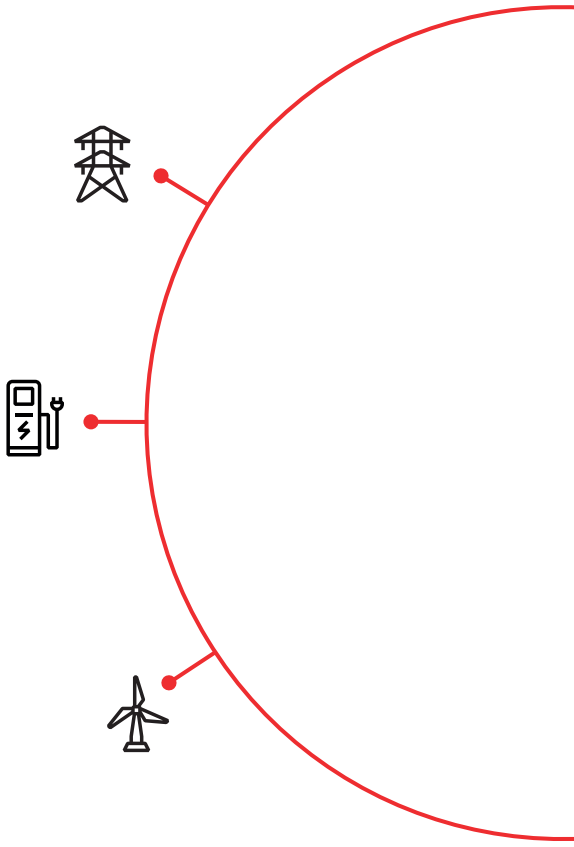
Main applications
Keep your systems up and running

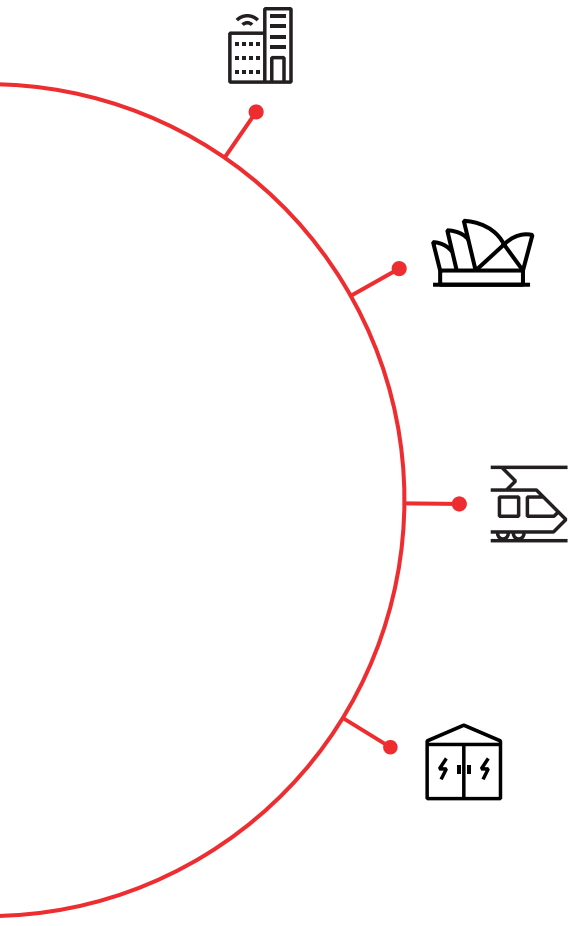
In all the contexts where continuity of service is an essential feature, ABB offers motor operating devices (for MCBs and RCDs) and autoreclosing units (for RCBBs) to ensure remote management and continuity of service of your installation, both in commercial and industrial fields.

Utility network or telecommunication stations
Remote control and maintenance through MOD and AR are highly beneficial for unmanned stations in hard-to-reach areas that allow operating and controlling main switches, reducing maintenance and on-site operation costs and time.

EV charging station
MOD or autoreclosing units instead, can grant continuity of re-charging operations avoiding unpleasant down-time and unplanned waiting times.

Wind
Combining a motor operator with MCB or RCD support the remote reset of the main protection device. Where services activities are expensive, our solution can help to save time and cost.





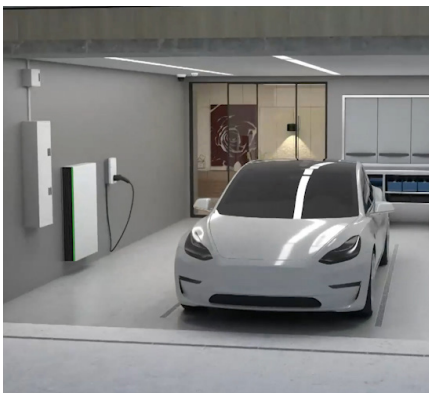
Commercial and industrial sectors
Autoreclosing ensure an improved functionality of systems and customer satisfaction.

Continuity of electricity supply is key to grant security of customers and goods, efficiency of payment systems, attractiveness of spaces, and production continuity.

Public areas
Where continuity of service is a benefit for people, RCCBs in combination with autoreclosing units can offer continuity in illumination systems of public streets or parks as well as in surveillance systems.

Railway
Motor operator is a reliable solution for rail infrastructure where continuity of service of information panels, emergency exits signals or lighting system, access control system or HVAC systems are key for passengers safety and comfort.

Battery storage system
Motor operator device in combination with MCB can be used for a residential application with integrated solar system, battery storage and EV charging.



Benefits

Operational continuity
Keep your systems up and running to save costs and time.

Compactness
Reduced size of installation thanks to slim product design as well as optimized performance.

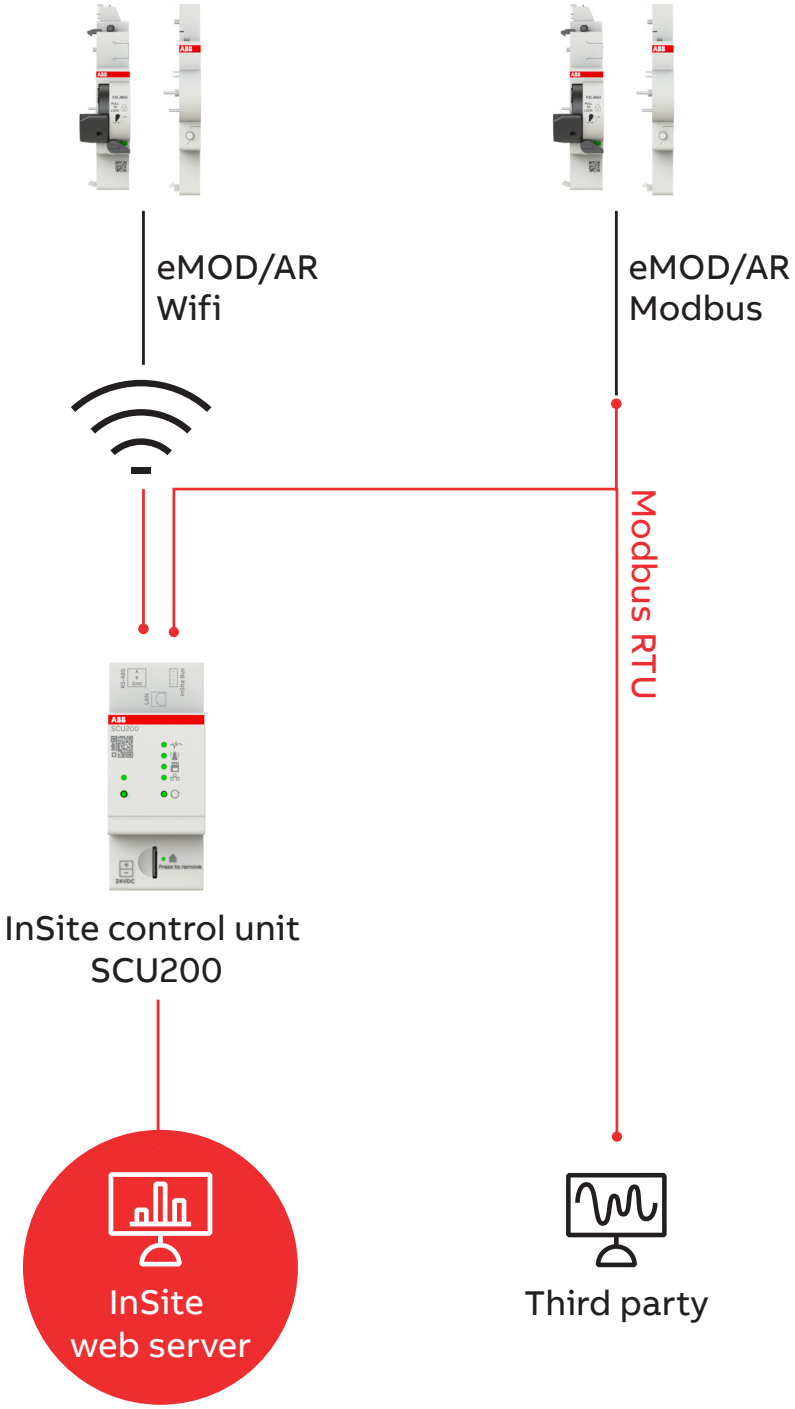
Effectiveness
A comprehensive range to cover a wide scope of applications and needs with flexibilty to expand the system according to your specific needs.

Connectivity
Fully integrate the ranges within InSite energy management system with the compact communication modules.

The power of data and interconnectivity

By mounting the compact communication module to the motor operating unit (MOD) or auto-reclosing units (AR and AR230C), the devices can be connected to the InSite energy management system, either via Modbus or via Wi-Fi.
This allows remote control of the opening and/or closing (for MOD) or automatic reclosing (for AR ranges) of the connected device to be set up and automated via the InSite web server. Continuous monitoring allows real-time and historical data to be easily accessed remotely.

User-defined alerts and automated actions ensure quick responses to minimize downtime.



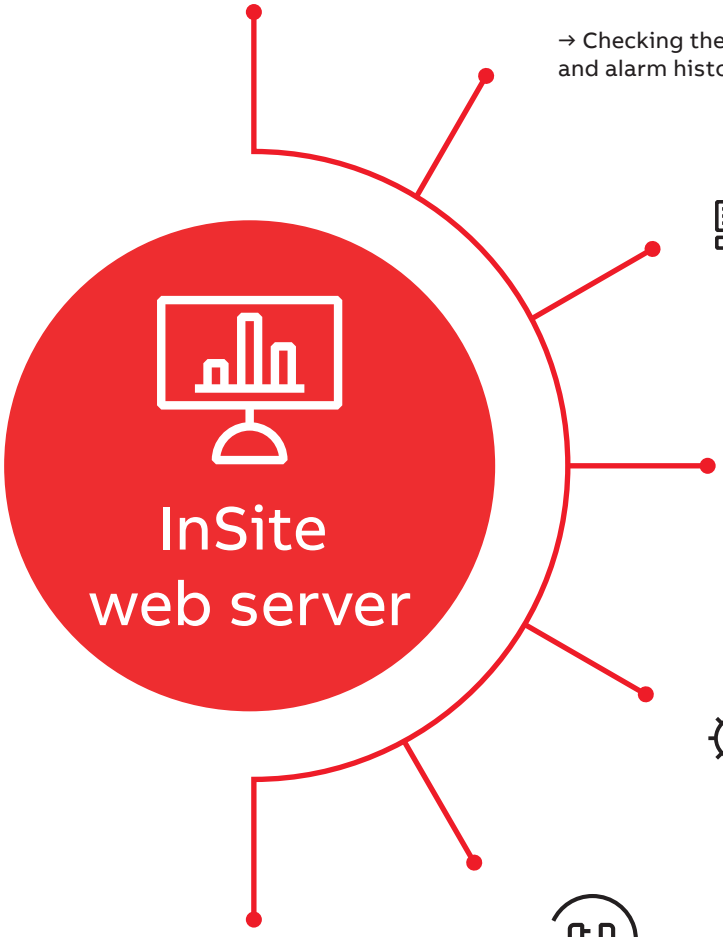
InSite web server integration

Open and close command
allows end user to take actions on the MOD or AR and therefore on the main protection device and installation circuits downstreams.

→ It helps to save cost and time in case of maintenance operation and need of shutdown/re-activate the affected lines.

Tripping and operations event counter (times, D/H)
is the number of operations (1,2,3….) handled and monitored by the MOD or AR.

→ Checking the event logs with its collection of event and alarm history, it helps to track the installation status.



Optimum interface
Customized UI (InSite) dashboard with user friendly widgets and alarm setup.

Firmware upgrade
Remotely upgrade the firmware of MOD/AR it is possible through SCU200 WebUI.

Settings
for autoreclosing units, a number of parameter values can be managed and adjusted by user.

→ system customization can grant easy and flexible management.

Main protection device monitoring
Shows the status of the protection device upstream MOD or AR.

→ If the protection device is switched OFF and the downstream installation is not up and running anymore, user is informed and can decide action to take.

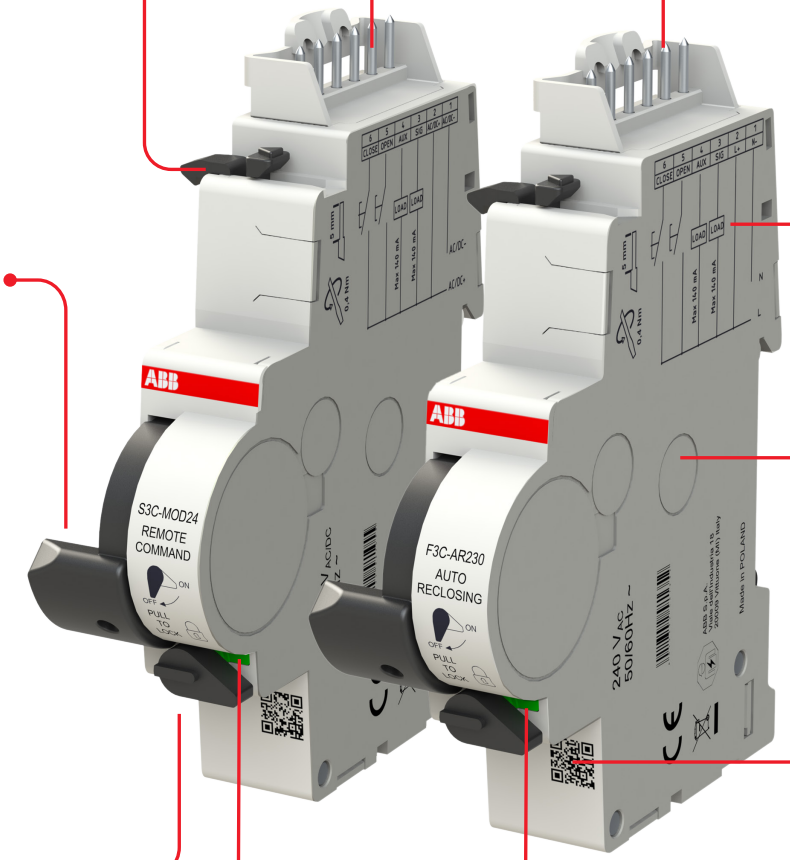
Connection status
states if the MOD or AR are is correctly connected to Insite.

→ If not connected, the device cannot be visible from webserver. Network status has to be checked and eventually connection operations have to be performed once again.


ABB
Homepage
Homepage
MOD & AR 1
Instantaneous Values
Instantaneous Values
Online events
Energy Values
Instantaneous

S3C-MOD and F3C-AR

Main features



Hook for fixation to main protection device

Connection to adapter link for the main protection device toggle

Locking/disabling of remote command

6P plug-in terminal for the Power Supply, remote commands, auxiliary and signal contacts

Clear terminal marking ensure readability over time and prevent misuses

Easy coupling with a wide range of accessories and with dedicated communication interfaces

QR code to quickly access product main details and relevant documentation

Frontal LED to clearly identify the device status

Compactness
Being in just one module, motor operator and autoreclosing units can enhance space saving in switchboards and consumer units.

Connectivity
The ranges can be fully integrated within InSite energy management system either via Modbus or via Wi-Fi, thanks to the compact communication modules that can be assembled on the motor operators and autoreclosing units.

Expandability
Enhanced compatibility with main protection devices and with the wide portfolio of SystemProM accessories, as well as the extended voltage rages in two versions (24-48 V AC/DC and 230-240 V AC), give more flexibility to customer installation.

S3C-MOD Series
Technical features

S3C-MOD

	S3C-MOD24	S3C-MOD230
Suitable for:	MCBs S200 and S300 series RCCBs F200 (up to 100A) and F200 B type (up to 63A) RCBOs DS201 Switch Disconnectors SD200	
Number of modules	1	
Operating voltage	24…48 V AC/DC +10% -10%	230-240 V AC +10% -5%
Minimum operating voltage	21,6 V AC/DC	110 V AC
Power consumption during operation	<25 VA (AC); <20 W (DC)	<26 VA
Power consumption at rest	<1 VA	<1,5 VA
Closing time	<1 s	
Opening time	<1 s	
Mechnical endurance	20000**	
Protecion degree acc. To EN 60529	IP40 (housing)/IP20 (terminals)	
Operating temperature (with daily average ≤ +35 °C)	-25 …+60 °C	
Storage temperature	-40 …+70 °C	
Overvoltage category	III	
Pollution degree acc. to EN 60664	2	
Shock resistance acc. to IEC/EN 60068-2-27	25g, 2 shocks, 13ms	
Vibration resistance acc. to IEC/EN 60068-2-6	1g - 20 cycle at 5… 150 …5 Hz	
Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30	28 cycles with 55°C/90-96% and 25°C/95-100%	
Terminal type	plug-in	
Cross-section of conductors	0,2…2,5 mm2	
Tightening torque	0,4 Nm	
Stripping length of the cable	5 mm	
Cable length of the control circuits	10 m	
Remote control: make contact*	Terminal 6	
Remote control: open contact	Terminal 5	
Auxiliarycontact	Terminal 4	
Signal contact	Terminal 3	

* In case of the device opening due to a fault, the remote controlling (open/close) shall be avoided for 8 seconds
** 10000 for 4P versions of MCBs or SDs and for MCBs with metal toggle link

F3C-AR Series
Technical features

F3C-AR

	F3C-AR24	F3C-AR230	F3C-AR230 D
Suitable for:	RCCBs F200 (up to 100A) and F200 B type (up to 63A)		
Number of modules	1		
Supply voltage	24…48 V AC/DC +10% -15%	230-240 V AC +10% -15%	230-240 V AC +10% -15%
Minimum operating voltage	20,4 V AC/DC	110 V AC	110 V AC
Number of automatic reclosing attempts	3		
Waiting time between auto-reset attempts	3 s	3 s	30 s
Power consumption during operation	<25 VA (AC); <20 W (DC)	< 26 VA	< 26 VA
Power consumption at rest	< 1 VA	<1,5 VA	< 1,5 VA
Closing time	<1 s		
Opening time	<1 s		
Mechnical endurance	20000		
Protecion degree acc. To EN 60529	IP40 (housing)/IP20 (terminals)		
Operating temperature (with daily average ≤ +35 °C)	-25 …+60 °C		
Storage temperature	-40 …+70 °C		
Overvoltage category	III		
Pollution degree acc. to EN 60664	2		
Shock resistance acc. to IEC/EN 60068-2-27	25g, 2 shocks, 13ms		
Vibration resistance acc. to IEC/EN 60068-2-6	1g - 20 cycle at 5… 150 …5 Hz		
Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30	28 cycles with 55°C/90-96% and 25°C/95-100%		
Terminal type	plug-in		
Cross-section of conductors	0,2…2,5 mm2		
Tightening torque	0,4 Nm		
Stripping length of the cable	5 mm		
Cable length of the control circuits	10 m		
Remote control: make contact	Terminal 6		
Remote control: open contact	Terminal 5		
Auxiliary contact	Terminal 4		
Alarm contact	Terminal 3		

Ordering codes

S3C-MOD

S3C-MOD

Description	Bbn 8012542	Order details		Price 1 piece	Weight 1 piece	Pack unit
	EAN	Type code	Order code		kg	pc.
Motor Operator Device, 24-48 V AC/DC	539254	S3C-MOD24	2CSS201998R0033		0.100	1
Motor Operator Device, 110-240 V AC	539353	S3C-MOD230	2CSS202998R0033		0.100	1

F3C-AR

F3C-AR

Description	Bbn 8012542	Order details		Price 1 piece	Weight 1 piece	Pack unit
	EAN	Type code	Order code		kg	pc.
Autoreclosing unit, 24-48 V AC/DC	539452	F3C-AR24	2CSF201998R0034		0.100	1
Autoreclosing unit, 110-240 V AC	539551	F3C-AR230	2CSF202998R0034		0.100	1
Autoreclosing unit, 110-240 V AC, with 30s waiting time	539650	F3C-AR230 D	2CSF203998R0034		0.100	1

e-MOD/AR ModBus

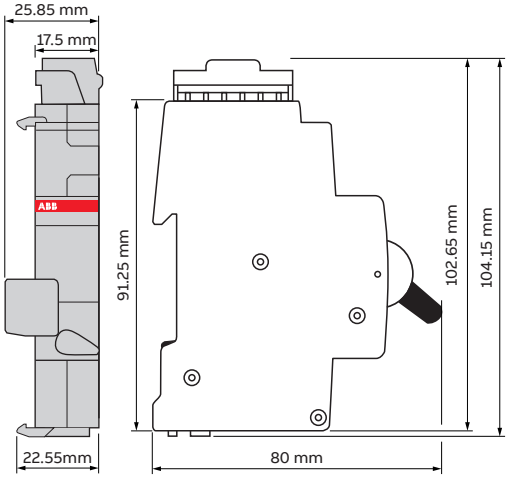
Communication interfaces*

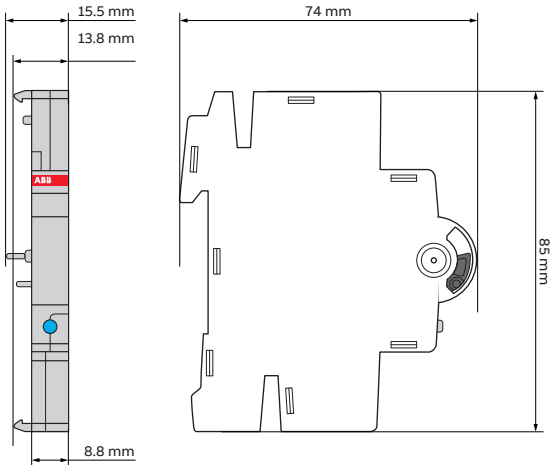
Description	Bbn 8012542	Order details		Price 1 piece	Weight 1 piece	Pack unit
	EAN	Type code	Order code		kg	pc.
Modbus Interface for MOD/AR ranges	540151	eMOD/AR ModBus	2CSS201998R0036		0.030	1
Wifi Interface for MOD/AR ranges	540250	eMOD/AR Wifi	2CSS202998R0036		0.030	1

*** Availability: Q4 2023**

Dimensional drawings

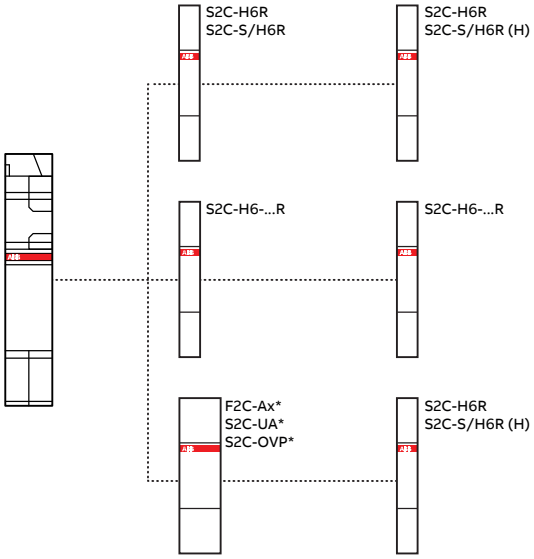
S3C-MOD, F3C-AR





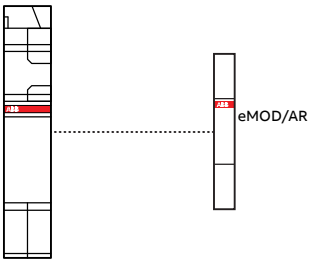
System ProM accessories and communication interfaces

S3C-MOD, F3C-AR



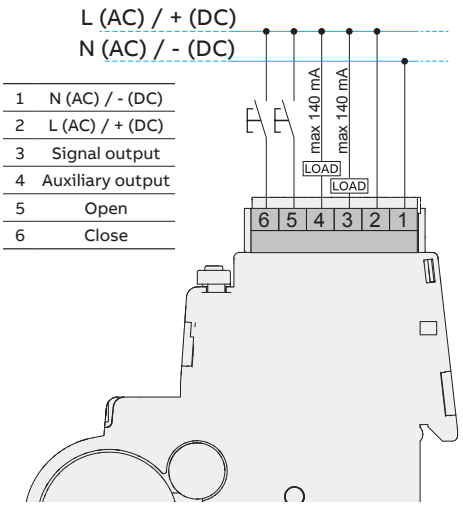
* combination not allowed with DS201

S3C-MOD, F3C-AR

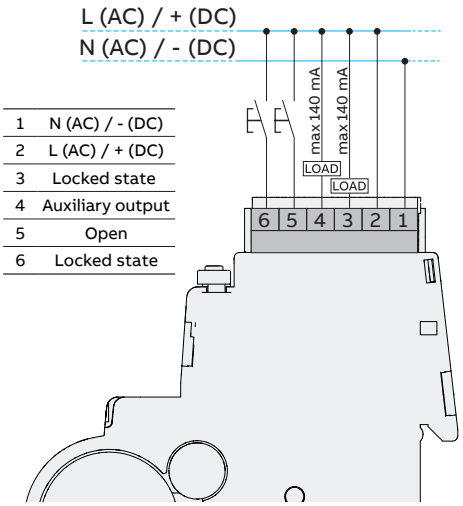


Wiring diagram

S3C-MOD



F3C-AR



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