

Motor operator MOD31 for Ex9B MCBs



- Motor operator for Ex9B MCBs (Ex9BH, Ex9BN, Ex9BS)
- Two toggle lengths 18 mm (1 pole) and 36 mm (2-4 poles)
- Auto reclose function
- Open / Close status (1 NO contact)
- Supply voltage 230V AC (110-230V AC)
- Supply voltage 48V DC (20-60V DC)
- According to EN 60947-5-1:2017

Motor Operator MOD31 is an accessory designed to facilitate remote control functionality for Ex9B MCBs. Its primary function is to enable remote operations such as opening, closing, and automatic resetting of the circuit breaker. Two toggle lengths to cover all pole sizes of Ex9B MCBs.

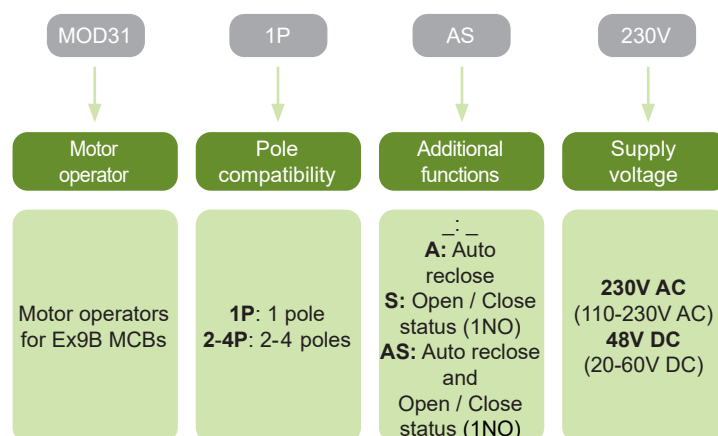
In addition to its core functionalities, the MOD31 offers the following additional features:

Auto Reclose: Upon tripping of the circuit breaker, the MOD31 automatically attempts to switch the breaker back to the ON position, providing a convenient method for restoring power after a fault event.

Open/Close Status: The motor operator incorporates an auxiliary contact (1NO), allowing for the monitoring of the open or closed status of the circuit breaker remotely.

Overall, the MOD31 enhances the efficiency and convenience of operating Ex9B MCBs by enabling remote control capabilities and providing status feedback for improved monitoring and management of electrical circuits.

Type Key



Certification marks



Motor operator MOD31 for Ex9B MCBs

Motor operator MOD31 for Ex9B MCBs



Motor operator
MOD31 1P

MCBs
Ex9BS, Ex9BN, Ex9BH
1-pole



Motor operator
MOD31 2-4P

MCBs
Ex9BS, Ex9BN, Ex9BH
2-pole



Motor operator
MOD31 2-4P

MCBs
Ex9BS, Ex9BN, Ex9BH
3-pole



Motor operator
MOD31 2-4P

MCBs
Ex9BS, Ex9BN, Ex9BH
4-pole

Motor operator MOD31 for Ex9B MCBs

Motor operator for 1 pole version of MCBs

- 18 mm toggle length compatible with 1 pole version of MCBs
- -: without additional function
- A: Auto reclose
- S: Open / Close status (1 NO contact)
- AS: Auto reclose and Open / Close status (1 NO contact)



Additional function	Supply voltage	Article No.	Type	Packing
-	110-230V AC	113720	MOD31 1P 230V AC	1
A	110-230V AC	113721	MOD31 1P A 230V AC	1
S	110-230V AC	113722	MOD31 1P S 230V AC	1
AS	110-230V AC	113723	MOD31 1P AS 230V AC	1
-	20-60V DC	113724	MOD31 1P 48V DC	1
A	20-60V DC	113725	MOD31 1P A 48V DC	1
S	20-60V DC	113726	MOD31 1P S 48V DC	1
AS	20-60V DC	113727	MOD31 1P AS 48V DC	1

Motor operator for 2-4 pole version of MCBs

- 36 mm toggle length compatible with 2 to 4 poles version of MCBs
- -: without additional function
- A: Auto reclose
- S: Open / Close status (1 NO contact)
- AS: Auto reclose and Open / Close status (1 NO contact)



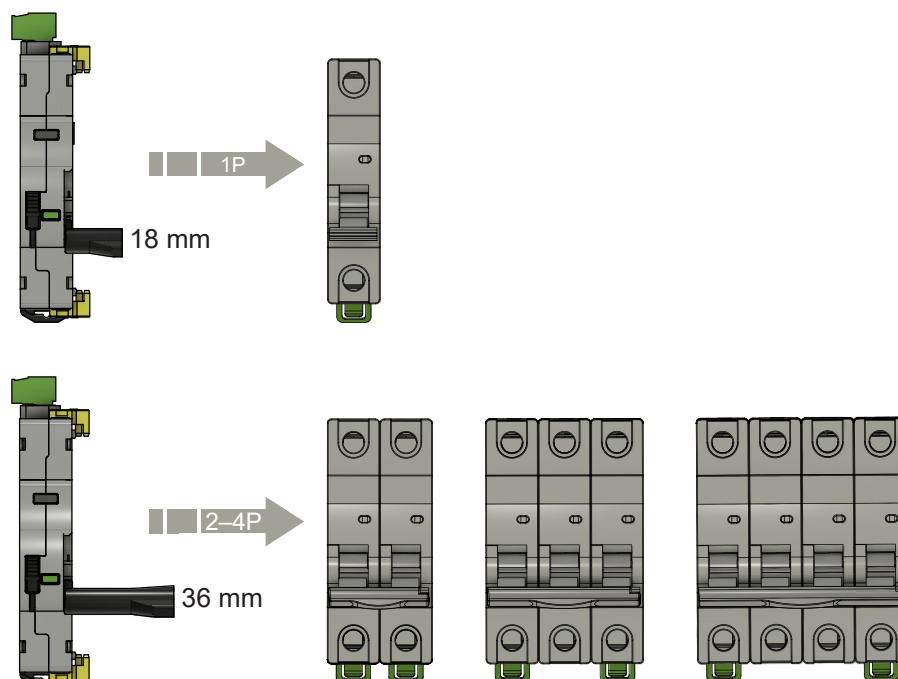
Additional function	Supply voltage	Article No.	Type	Packing
-	110-230V AC	113728	MOD31 2-4P 230V AC	1
A	110-230V AC	113729	MOD31 2-4P A 230V AC	1
S	110-230V AC	113730	MOD31 2-4P S 230V AC	1
AS	110-230V AC	113731	MOD31 2-4P AS 230V AC	1
-	20-60V DC	113732	MOD31 2-4P 48V DC	1
A	20-60V DC	113733	MOD31 2-4P A 48V DC	1
S	20-60V DC	113734	MOD31 2-4P S 48V DC	1
AS	20-60V DC	113735	MOD31 2-4P AS 48V DC	1

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Functions

Order code	Type	Remote control	Auto reclose	ON/OFF status	Supply voltage	Poles
113720	MOD31 1P 230V AC EU	✓			110-230V AC	1P
113721	MOD31 1P A 230V AC EU	✓	✓		110-230V AC	1P
113722	MOD31 1P S 230V AC EU	✓		✓	110-230V AC	1P
113723	MOD31 1P AS 230V AC EU	✓	✓	✓	110-230V AC	1P
113724	MOD31 1P 48V DC EU	✓			20-60V DC	1P
113725	MOD31 1P A 48V DC EU	✓	✓		20-60V DC	1P
113726	MOD31 1P S 48V DC EU	✓		✓	20-60V DC	1P
113727	MOD31 1P AS 48V DC EU	✓	✓	✓	20-60V DC	1P
113728	MOD31 2-4P 230V AC EU	✓			110-230V AC	2-4P
113729	MOD31 2-4P A 230V AC EU	✓	✓		110-230V AC	2-4P
113730	MOD31 2-4P S 230V AC EU	✓		✓	110-230V AC	2-4P
113731	MOD31 2-4P AS 230V AC EU	✓	✓	✓	110-230V AC	2-4P
113732	MOD31 2-4P 48V DC EU	✓			20-60V DC	2-4P
113733	MOD31 2-4P A 48V DC EU	✓	✓		20-60V DC	2-4P
113734	MOD31 2-4P S 48V DC EU	✓		✓	20-60V DC	2-4P
113735	MOD31 2-4P AS 48V DC EU	✓	✓	✓	20-60V DC	2-4P



Compatibility

Device	Ex9BS		Ex9BN		Ex9BH	
Type \ Poles	1P	2, 3, 4P	1P	2, 3, 4P	1P	2, 3, 4P
MOD31 1P	✓	×	✓	×	✓	×
MOD31 2-4P	×	✓	×	✓	×	✓

Technical Data MOD31

Motor operator MOD31 for Ex9B MCBs

General parameters

Motor operator for Ex9B MCBs (Ex9BS, Ex9BN, Ex9BH)
2 lengths of toggle (18 mm and 36 mm) cover all pole versions of Ex9B MCBs
Remote control and other additional functions
The possibility of locking the device with a lock ($\varnothing \leq 4$ mm)
MOD31 units are mounted to the device from the left

Electrical parameters

	MOD31 230V AC	MOD31 48V DC
Tested according to	EN 60947-5-1:2017	
Rated operational Voltage U _e	110-230 V AC	20-60 V DC
Min. Rated operational voltage U _e	85% U _e	
Max. Rated operational voltage U _e	110% U _e	
Dielectric strength	2500 V AC for 1 minute	
Rated frequency f	50 Hz	
Impulse voltage U _i	250 V	
Rated withstand voltage U _{imp}	4 kV	
Power of remote operation	20 VA	
Static power	1 VA	
Auto reclose (Types A and AS)		
Reclosing time interval	10 s - 60 s - 300 s / h	
Max operation frequency	30 open. / h	
Electrical life	10000 cycles	
Max. auto reclose cycle	3 times	
Reclosed counting reset time	60 sec.	
Auxiliary contact (Types S and AS)		
Rated voltage U _e	5-230 V AC/DC	
Rated current I _n	0.6 - 1 A	
Rated frequency f	50 Hz	
Utilization category	AC-12	
Contacts	1x NO (Normally open)	

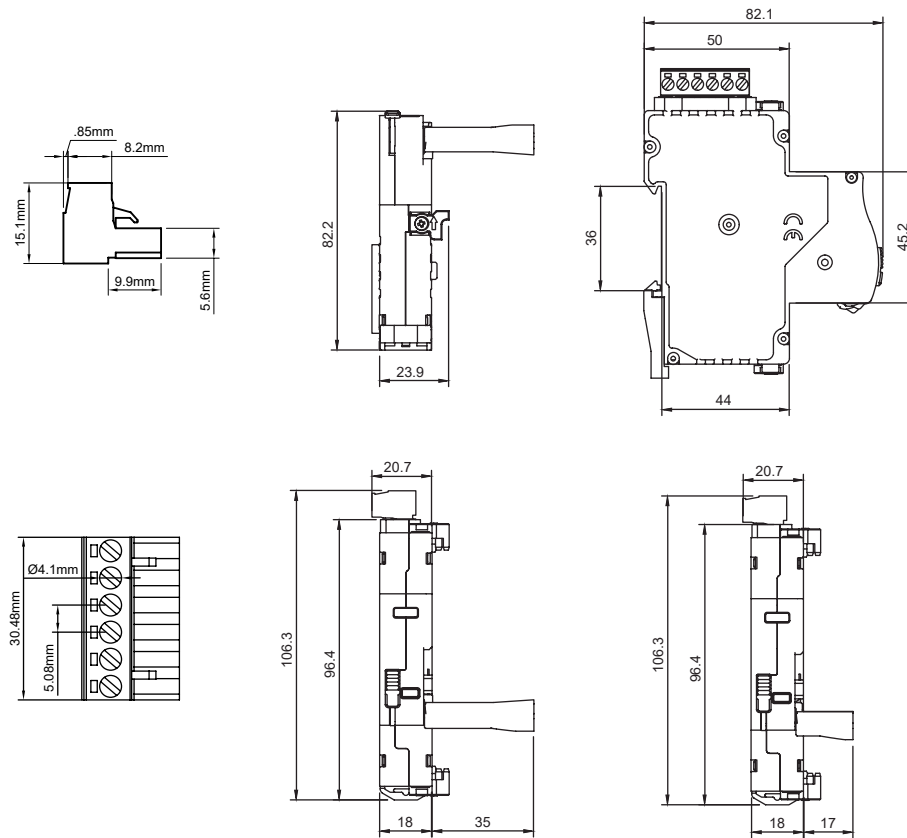
Mechanical parameters

	MOD31 1P	MOD31 2-4P
Device width	18 mm (without toggle)	
Device height	96.5 mm / 105.3 mm with terminal module	
Toggle length	18 mm	36 mm
Frame size	45 mm	
Mounting	easy fastening onto 35 mm device rail (DIN)	
Pollution degree	II	
Over-voltage category	III	
Degree of protection	IP20	
Terminals	lift	
Terminal capacity	≤ 2.5 mm ²	
Ambient temperature	-25 — +65 °C	
Fastening torque of terminals	0.4 Nm	

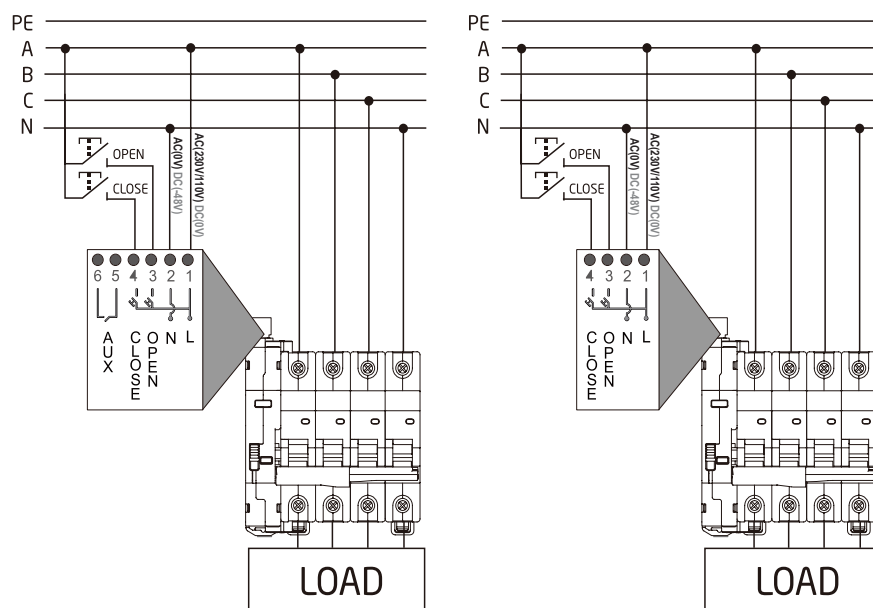
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Motor operator MOD31 for Ex9B MCBs

Dimensions



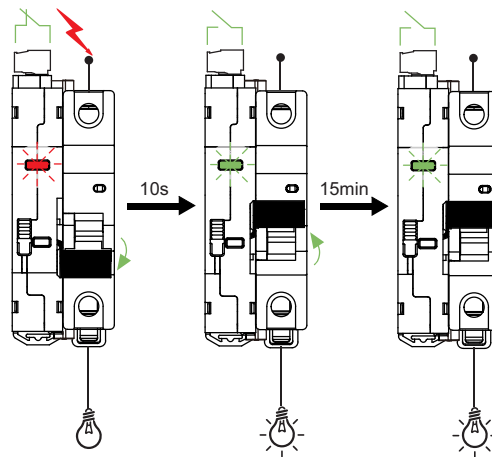
Wiring diagrams



Technical Data MOD31

Motor operator MOD31 for Ex9B MCBs

Auto reclose function



1. Auto Mode Behavior for Instantaneous Electrical Fault:

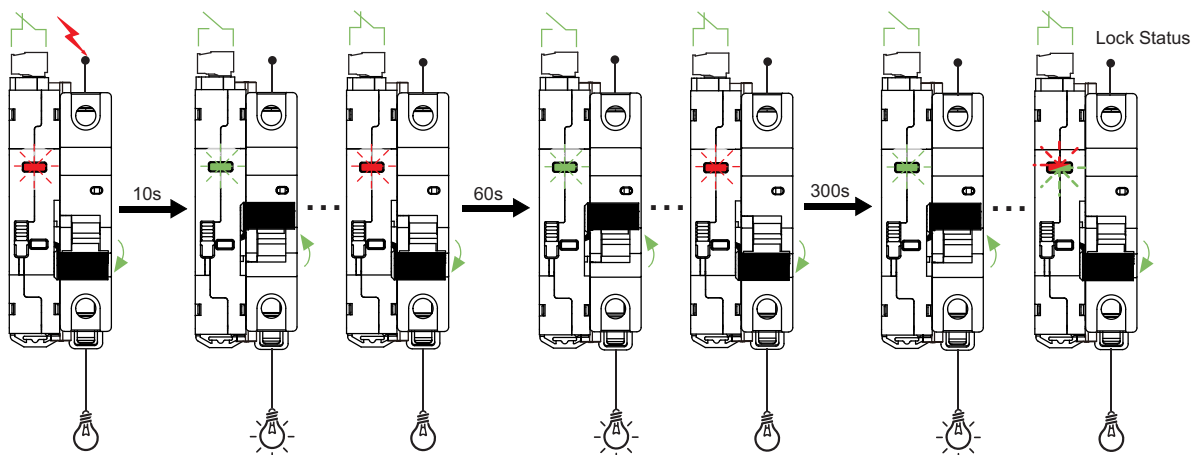
- Recloser automatically initiates reclosure 10 seconds after the breaker trips due to an instantaneous electrical fault.

2. Desired Reclosure Conditions:

- Recloser remains closed if the handle is held for more than 15 minutes after the initial trip.

3. Successful Reclosure Actions:

- After a successful reclosure, the recloser clears and renews the previous reclosure count.



1. Auto mode behaviour for continuous electrical fault:

- Recloser attempts to auto reclose after a 10-second time delay.
- If unsuccessful, it retries auto reclosure after a 60-second time delay.
- If unsuccessful again, it makes another attempt after a 300-second time delay.

2. Transition to "Lock" status:

- If auto reclosure fails after the third attempt, the recloser switches to "Lock" status.
- In "Lock" status, no further auto reclosure attempts are made.
- Simultaneously, the remote On/Off functions at the terminal are disabled.