

## Manual Motor Controller / Circuit Breaker for Equipment thermal-magnetic



Auxiliary contact



Signal contact



Relay trip module



### Description

- DIN-Rail Mounting
- Auxiliary contact module  
Each auxiliary contact module contains one contact, either normally open or normally closed
- Signal contact module  
Signal contact modules are linked internally with the protected poles but not linked at the handles. Contacts are actuated by a fault condition at the protected poles, not by manual operation of the CBE
- Relay trip module  
The relay trip module can be used for remote tripping of the adjacent poles by applying a voltage to the module's terminal

### Standards

- Approval Reference Type: AS168X
- VDE Certificate Number: IEC 60947-5-1
- UL File Number: UL 508
- CSA File Number: CSA C22.2

### Applications

- Industrial appliances

### Weblinks

[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [REACH](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#), [Detailed request for product](#), [Product News](#)

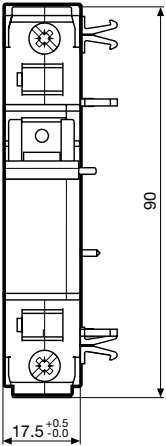
### Technical Data

|                                    |                                         |
|------------------------------------|-----------------------------------------|
| Ratings                            | AC 277 V / 6 A (50/60 Hz)               |
|                                    | DC 125 V / 1 A                          |
|                                    | DC 50 V / 6 A                           |
| Conditional short circuit capacity | IEC: Inc, PC1, AC 277 V: 1 kA           |
| Dielectric Strength                | 50Hz: > 2kV                             |
|                                    | Impulse 1.2/50 $\mu$ s                  |
| Insulation Resistance              | > 5 M $\Omega$                          |
| Endurance typical                  | mechanical: 50000 switching cycles      |
|                                    | IEC 60947-5-1                           |
|                                    | AC : 10 x I <sub>r</sub> , p.f. = 0.3 : |
|                                    | DC : 1 x I <sub>r</sub> , L/R = 0.3 s : |
|                                    | 6050 switching cycles                   |
|                                    | UL 508                                  |
|                                    | AC : 26 A / 2.6 A , p.f. = 0.35 :       |
|                                    | DC : 1.1 A / 1.1 A , L/R = 0.3 s :      |
|                                    | 6000 switching cycles                   |

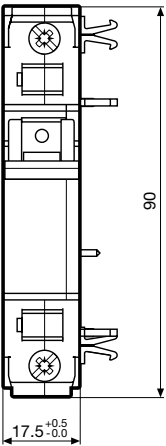
|                      |                                         |
|----------------------|-----------------------------------------|
| Overload             | AC: min. 10 trips                       |
|                      | @ 10 x I <sub>r</sub> , p.f. = 0.3      |
|                      | DC: min. 50 trips                       |
|                      | @ 1.1 x I <sub>r</sub> , L/R = 0.3 s    |
| Ambient temperature  | -20°C to 60°C                           |
| Vibration Resistance | ± 0.75 mm @ 10 - 60 Hz                  |
|                      | acc. to IEC 60068-2-6, test Fc          |
|                      | 10 G @ 60 - 500 Hz                      |
|                      | acc. to IEC 60068-2-6, test Fc          |
| Shock Resistance     | 30 G / 18ms                             |
|                      | acc. to IEC 60068-2-27, test Ea         |
| Degree of Protection | from front side IP 20 acc. to IEC 60529 |
| Weight               | 22 - 49g                                |

Dimension

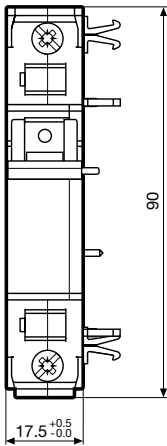
AS168X-ACBH.



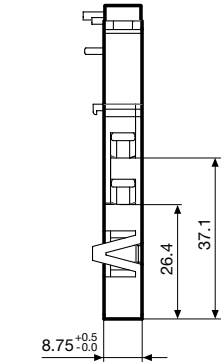
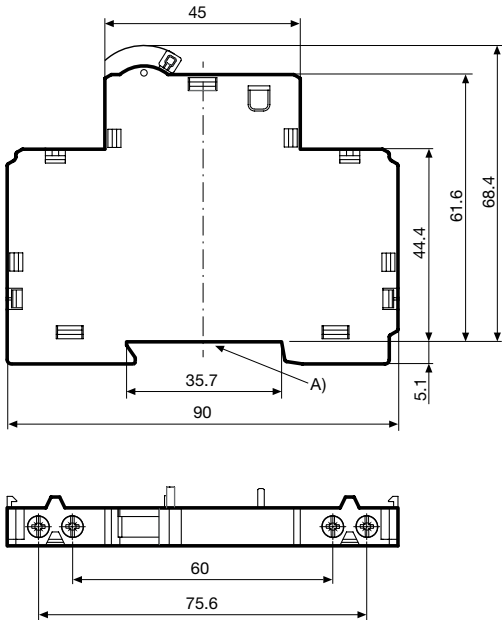
AS168X-ACBS.



AS168X-ACBA.



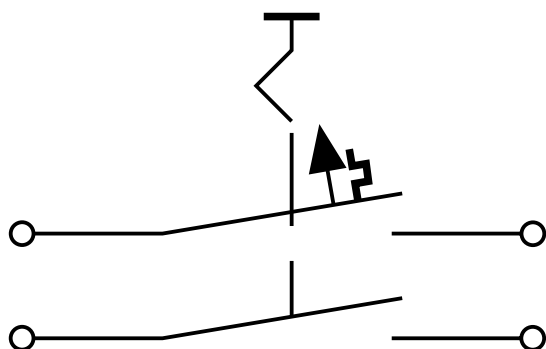
AS168X-Auxiliary contact



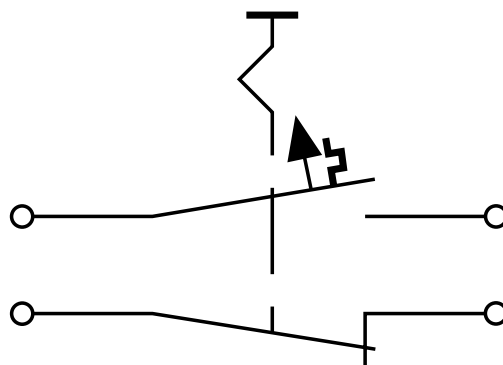
A) 35 mm DIN rail EN 50022

## Diagrams

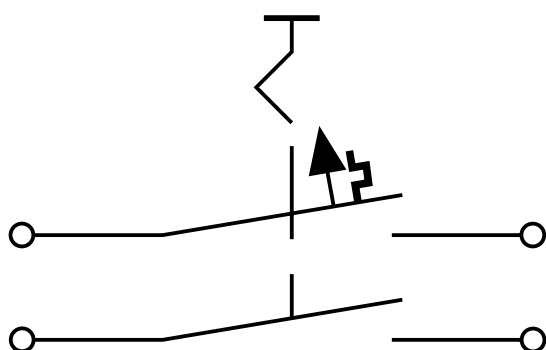
AS168X-CB1... / AS168X-ACBH1



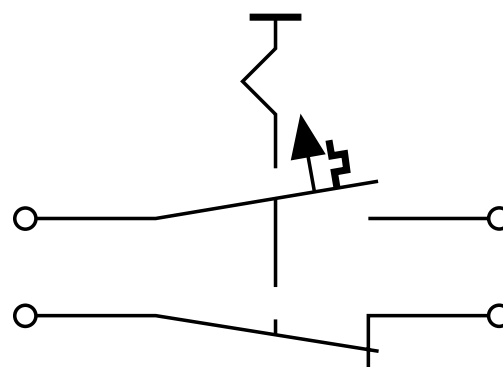
AS168X-CB1... / AS168X-ACBH2



AS168X-CB1... / AS168X-ACBS1



AS168X-CB1... / AS168X-ACBS2



## Approvals Relay trip module

| Symbol                                                                              | Standard                   | Rated voltage AC | Rated voltage DC |
|-------------------------------------------------------------------------------------|----------------------------|------------------|------------------|
|  | UL 508<br>CSA C22.2 no. 14 | -                | -                |
|  | UL 1077                    | up to 277 V      | up to 240 V      |
|                                                                                     | CSA C22.2 no. 235          | -                | -                |
|  | EN 60934                   | -                | -                |
|  | GB 17701                   | -                | -                |

## Approvals Auxiliary contact

| Symbol                                                                              | Standard                   | Rated current AC | Rated voltage AC | Rated current DC                            | Rated voltage DC       |
|-------------------------------------------------------------------------------------|----------------------------|------------------|------------------|---------------------------------------------|------------------------|
|  | UL 508<br>CSA C22.2 no. 14 | 6 A              | 277 V            | 1 A<br>6 A                                  | 125 V<br>50 V          |
|  | UL 1077                    | 6 A              | 277 V            | 1 A<br>6 A                                  | 125 V<br>50 V          |
|                                                                                     | CSA C22.2 no. 235          | -                | -                | -                                           | -                      |
|  | EN 60934                   | 6 A (Ac-15)      | 277 V            | 1 A (DC-12)<br>0.5 A (DC-13)<br>6 A (DC-12) | 125 V<br>125 V<br>50 V |
|  | GB 17701                   | -                | -                | -                                           | -                      |

## Approvals Signal contact

| Symbol                                                                           | Standard                     | Rated current AC | Rated voltage AC | Rated current DC                            | Rated voltage DC       |
|----------------------------------------------------------------------------------|------------------------------|------------------|------------------|---------------------------------------------|------------------------|
|  | UL 508<br>CSA C22.2 no. 14   | 6 A              | 277 V            | 1 A<br>6 A                                  | 125 V<br>50 V          |
|  | UL 1077<br>CSA C22.2 no. 235 | 6 A<br>-         | 277 V<br>-       | 1 A<br>6 A<br>-                             | 125 V<br>50 V<br>-     |
|  | EN 60934                     | 6 A (AC-15)      | 277 V            | 1 A (DC-12)<br>0.5 A (DC-13)<br>6 A (DC-12) | 125 V<br>125 V<br>50 V |
|  | GB 17701                     | -                | -                | -                                           | -                      |

## Effect of ambient temperature

AC-breaker are calibrated for an ambient temperature of +40°C, DC-breakers for +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below:

| Ambient temperature [°C] | Correction factor AC version | Correction factor DC version |
|--------------------------|------------------------------|------------------------------|
| -20                      | 0.78                         | 0.80                         |
| -5                       | 0.82                         | 0.87                         |
| 0                        | 0.83                         | 0.90                         |
| +10                      | 0.87                         | 0.95                         |
| +23                      | 0.91                         | 1.00                         |
| +30                      | 0.95                         | 1.05                         |
| +40                      | 1.00                         | 1.10                         |
| +50                      | 1.05                         | 1.20                         |
| +60                      | 1.11                         | 1.30                         |

Example DC version: Rated current = 10 A; Environmental temperature = 50 °C; --> Correction factor = 1.2; Resulting current = 12 A

## Add-on modules

|                               |                                                                                                                    |                                                                                       |                                                               |                                                                                                                                                 |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Functional auxiliary contact  | Type H1 assumes the same contact position<br>Type H2 assumes the opposite position                                 |                                                                                       |                                                               | Actuation of the contact is determined by the condition of the handle position of the adjacent poles.                                           |
| Functional signal contact     | Type S1 assumes the same contact position<br>Type S2 assumes the opposite position                                 |                                                                                       |                                                               | The signal contact operates due to a thermal magnetic tripping and must be reset by hand.                                                       |
| Function of relay trip module | Type<br>A1<br>A2<br>A3<br>A4<br>A5                                                                                 | Voltage range AC/DC<br>5 - 12 V<br>10 - 24 V<br>20 - 48 V<br>40 - 110 V<br>90 - 240 V | Impedance at 50 Hz<br>1.1 Ω<br>4.7 Ω<br>16 Ω<br>63 Ω<br>395 Ω | When voltage is applied across the terminals, remote tripping takes place by a self interrupting magnetic system.<br>Trip delay time 8 - 16 ms. |
| Maximum Pole combination      | The maximum allowed number of poles/modules is 6, but in any combination, only 1 or 2 add-on modules are permitted |                                                                                       |                                                               |                                                                                                                                                 |
|                               | 1 or 2 add-on modules                                                                                              | + 1 or 2 or 3 pole                                                                    | + switched neutral                                            |                                                                                                                                                 |
|                               | only 1 add-on module                                                                                               | + 4 pole                                                                              | + switched neutral                                            |                                                                                                                                                 |
|                               | 1 or 2 add-on modules                                                                                              | + 4 pole                                                                              |                                                               |                                                                                                                                                 |

## Time-Current-Curves

The time-current-curves are not relevant for the add-on modules.

## Config. Code

AS168X-ACB H1 S2 A3 LOA

The characters are placeholders for the correspondingly keys of selections from the key tables.

AS168X-ACB **H1** S2 A3 LOA = Auxiliary contact

| Auxiliary contact              | Configuration key |
|--------------------------------|-------------------|
| Auxiliary contact synchronized | H1                |
| Auxiliary contact opposited    | H2                |

AS168X-ACB H1 **S2** A3 LOA = Signal contact

| Signal contact              | Configuration key |
|-----------------------------|-------------------|
| Signal contact synchronized | S1                |
| Signal contact opposited    | S2                |

AS168X-ACB H1 S2 **A3** LOA = Relay trip module

| Relay trip module                 | Configuration key |
|-----------------------------------|-------------------|
| Relay trip module AC/DC 5 -12 V   | A1                |
| Relay trip module AC/DC 10 -24 V  | A2                |
| Relay trip module AC/DC 20 - 48 V | A3                |
| Relay trip module AC/DC 40 -110 V | A4                |
| Relay trip module AC/DC 90 -240 V | A5                |

AS168X-ACB H1 S2 A3 **LOA** = Relay trip module

| Accessories        | Configuration key |
|--------------------|-------------------|
| Lockout attachment | LOA               |

## Variants

| Auxiliary contact              | Signal contact              | Relay trip module                 | Accessories        | Config. Code  | Order Number |
|--------------------------------|-----------------------------|-----------------------------------|--------------------|---------------|--------------|
| Auxiliary contact synchronized |                             |                                   |                    | AS168X-ACBH1  | 4420.0163    |
| Auxiliary contact opposited    |                             |                                   |                    | AS168X-ACBH2  | 4420.0176    |
|                                |                             | Relay trip module AC/DC 20 - 48 V |                    | AS168X-ACBA3  | 4420.0189    |
|                                |                             | Relay trip module AC/DC 10 -24 V  |                    | AS168X-ACBA2  | 4420.0340    |
|                                | Signal contact synchronized |                                   |                    | AS168X-ACBS1  | 4420.0414    |
|                                | Signal contact opposited    |                                   |                    | AS168X-ACBS2  | 4420.0415    |
|                                |                             |                                   | Lockout attachment | AS168X-ACBLOA | 4420.0799    |

Availability for all products can be searched real-time:<http://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

**Packaging Unit** 1 Pcs