

## PRODUCT RANGE

# Modular contactors

SB standard contactors / SBM manual control / SBX auxiliary contacts

Remote switching for single-phase and three-phase loads in lighting, heating, ventilation and building-service circuits.



## 16-100 A

Standard contactor range

## 35 mm

DIN-rail mounting

## IP20

Degree of protection

## Choose the control you need

**SB**

### Standard contactors

Remote switching with AC and DC coil options.

**SBM**

### Manual control contactors

Four-position selector: Off, Auto, temporary ON and permanent ON.

**SBX**

### Auxiliary contacts

Side-mounted 9 mm unit for contact-position indication or control.

Applications / Lighting · Heating · Ventilation · Roller blinds · Hot water · Load shedding

## 01 / TECHNICAL PROFILE

# Built for DIN-rail control

Electrical characteristics, installation and environmental conditions

| Electrical characteristic       | Specification                                        |
|---------------------------------|------------------------------------------------------|
| Standard                        | IEC/EN 61095                                         |
| Utilisation categories          | AC-7a, AC-7b, AC-1 and AC-3                          |
| AC control coil voltages        | 12, 24, 48, 110, 127, 230 and 220-240 V AC; 50/60 Hz |
| Insulation voltage              | 500 V AC                                             |
| Rated impulse withstand voltage | 2.5 kV; 4 kV for 12 / 24 / 48 V AC                   |
| Pollution degree                | 2                                                    |
| Electrical endurance            | 100,000 cycles                                       |

## Installation & environment

| Parameter           | Specification                                               |
|---------------------|-------------------------------------------------------------|
| Mounting            | 35 mm DIN rail; vertical, maximum inclination $\pm 5^\circ$ |
| Housing             | Non-flammable, self-extinguishing plastic                   |
| Ambient temperature | -10°C to +65°C                                              |
| Protection          | IP20 to IEC 60529                                           |
| Tropicalisation     | Treatment 2 to IEC 60068-1; 95% RH at 55°C                  |

Reliable switching and isolation of power contacts for consumer loads and control systems. Available with or without a manual selector.

## 02 / COIL PERFORMANCE

# Consumption & load ratings

AC coil data at 50/60 Hz. Ratings are reproduced from the supplied catalogue.

| Poles | AC-7a /<br>AC-1 (A) | AC-7b /<br>AC-3 (A) | Motor<br>(kW) | Coil (V AC) | Holding | Inrush | Max. (W) |
|-------|---------------------|---------------------|---------------|-------------|---------|--------|----------|
| 2P    | 16                  | 7                   | 1.2           | 12          | 3.8 VA  | 15 VA  | 1.3 W    |
| 2P    | 16                  | 7                   | 1.2           | 24          | 3.8 VA  | 15 VA  | 1.3 W    |
| 2P    | 16                  | 7                   | 1.2           | 48          | 3.8 VA  | 15 VA  | 1.3 W    |
| 2P    | 16                  | 7                   | 1.2           | 220-240     | 2.7 VA  | 9.2 VA | 1.2 W    |
| 2P    | 20                  | 9                   | 1.3           | 220-240     | 2.7 VA  | 9.2 VA | 1.2 W    |
| 2P    | 25                  | 10                  | 1.4           | 24          | 3.8 VA  | 15 VA  | 1.3 W    |
| 2P    | 25                  | 10                  | 1.4           | 48          | 3.8 VA  | 15 VA  | 1.3 W    |
| 2P    | 25                  | 10                  | 1.4           | 220-240     | 2.7 VA  | 9.2 VA | 1.2 W    |
| 2P    | 40                  | 22                  | 3.7           | 220-240     | 4.6 VA  | 34 VA  | 1.6 W    |
| 2P    | 63                  | 30                  | 5.0           | 24          | 4.6 VA  | 34 VA  | 1.6 W    |
| 2P    | 63                  | 30                  | 5.0           | 220-240     | 4.6 VA  | 34 VA  | 1.6 W    |
| 2P    | 100                 | -                   | -             | 220-240     | 6.5 VA  | 53 VA  | 2.1 W    |
| 3P    | 16                  | 7                   | 4             | 220-240     | 4.6 VA  | 34 VA  | 1.6 W    |
| 3P    | 25                  | 10                  | 4.1           | 220-240     | 4.6 VA  | 34 VA  | 1.6 W    |
| 3P    | 40                  | 22                  | 12.5          | 220-240     | 6.5 VA  | 53 VA  | 2.1 W    |
| 3P    | 63                  | 30                  | 15            | 220-240     | 6.5 VA  | 53 VA  | 2.1 W    |
| 4P    | 16                  | 7                   | 3.7           | 24          | 4.6 VA  | 34 VA  | 1.6 W    |
| 4P    | 16                  | 7                   | 3.7           | 220-240     | 4.6 VA  | 34 VA  | 1.6 W    |
| 4P    | 20                  | 9                   | 4             | 220-240     | 4.6 VA  | 34 VA  | 1.6 W    |
| 4P    | 25                  | 10                  | 4.2           | 24          | 4.6 VA  | 34 VA  | 1.6 W    |
| 4P    | 25                  | 10                  | 4.2           | 220-240     | 4.6 VA  | 34 VA  | 1.6 W    |
| 4P    | 40                  | 22                  | 12.5          | 220-240     | 6.5 VA  | 53 VA  | 2.1 W    |
| 4P    | 63                  | 30                  | 15            | 24          | 6.5 VA  | 53 VA  | 2.1 W    |
| 4P    | 63                  | 30                  | 15            | 220-240     | 6.5 VA  | 53 VA  | 2.1 W    |
| 4P    | 100                 | -                   | -             | 220-240     | 13 VA   | 106 VA | 4.2 W    |

A dash indicates a blank value in the source. Load ratings in this consumption table differ from some ordering-table ratings; retain the applicable model selection data when specifying.

## 03 / SB SELECTION

# Standard contactors

1P and 2P / AC control coils, 50/60 Hz

| Order code | Poles | AC-7a<br>(A) | AC-7b<br>(A) | Coil<br>(V AC) | Contacts | 18 mm<br>modules |
|------------|-------|--------------|--------------|----------------|----------|------------------|
| SB-1610    | 1P    | 16           | 7            | 230            | 1NO      | 1                |
| SB-1601    | 1P    | 16           | 7            | 230            | 1NC      | 1                |
| SB-2010    | 1P    | 20           | 9            | 230            | 1NO      | 1                |
| SB-2001    | 1P    | 20           | 9            | 230            | 1NC      | 1                |
| SB-2510    | 1P    | 25           | 9            | 230            | 1NO      | 1                |
| SB-2501    | 1P    | 25           | 9            | 230            | 1NC      | 1                |
| SB-1620    | 2P    | 16           | 6            | 230            | 2NO      | 1                |
| SB-1602    | 2P    | 16           | 6            | 230            | 2NC      | 1                |
| SB-1611    | 2P    | 16           | 6            | 230            | 1NO+1NC  | 1                |
| SB-2020    | 2P    | 20           | 7            | 230            | 2NO      | 1                |
| SB-2002    | 2P    | 20           | 7            | 230            | 1NO      | 1                |
| SB-2011    | 2P    | 20           | 7            | 230            | 1NC      | 1                |
| SB-2520    | 2P    | 25           | 9            | 230            | 2NO      | 1                |
| SB-252024  | 2P    | 25           | 9            | 24             | 2NO      | 1                |
| SB-2511    | 2P    | 25           | 9            | 230            | 1NO+1NC  | 1                |
| SB-4020    | 2P    | 40           | 18           | 230            | 2NO      | 2                |
| SB-4002    | 2P    | 40           | 18           | 230            | 2NC      | 2                |
| SB-4011    | 2P    | 40           | 18           | 230            | 1NO+1NC  | 2                |
| SB-6320    | 2P    | 63           | 25           | 230            | 2NO      | 2                |
| SB-6302    | 2P    | 63           | 25           | 230            | 2NC      | 2                |
| SB-6311    | 2P    | 63           | 25           | 230            | 1NO+1NC  | 2                |
| SB-10020   | 2P    | 100          | -            | 230            | 2NO      | 3                |
| SB-10002   | 2P    | 100          | -            | 230            | 2NC      | 3                |
| SB-10011   | 2P    | 100          | -            | 230            | 1NO+1NC  | 3                |

Source entries retained: SB-2002 is listed as 1NO and SB-2011 as 1NC. Verify these contact configurations before ordering.

## 04 / SB SELECTION

# Three- and four-pole

3P and 4P / AC control coils, 50/60 Hz

| Order code | Poles | AC-7a<br>(A) | AC-7b<br>(A) | Coil<br>(V AC) | Contacts | 18 mm<br>modules |
|------------|-------|--------------|--------------|----------------|----------|------------------|
| SB-1630    | 3P    | 16           | 6            | 230            | 3NO      | 2                |
| SB-2530    | 3P    | 25           | 9            | 230            | 3NO      | 2                |
| SB-4030    | 3P    | 40           | 18           | 230            | 3NO      | 3                |
| SB-6330    | 3P    | 63           | 25           | 230            | 3NC      | 3                |
| SB-10030   | 3P    | 100          | -            | 230            | 3NO      | 6                |
| SB-2040    | 4P    | 20           | 6            | 230            | 4NO      | 2                |
| SB-2022    | 4P    | 20           | 6            | 230            | 2NO+2NC  | 2                |
| SB-2031    | 4P    | 20           | 6            | 230            | 3NO+1NC  | 2                |
| SB-2004    | 4P    | 20           | 6            | 230            | 4NC      | 2                |
| SB-2540    | 4P    | 25           | 9            | 230            | 4NO      | 2                |
| SB-2522    | 4P    | 25           | 9            | 230            | 2NO+2NC  | 2                |
| SB-2531    | 4P    | 25           | 9            | 230            | 3NO+1NC  | 2                |
| SB-2504    | 4P    | 25           | 9            | 230            | 4NC      | 2                |
| SB-4040    | 4P    | 40           | 18           | 230            | 4NO      | 3                |
| SB-4022    | 4P    | 40           | 18           | 230            | 2NO+2NC  | 3                |
| SB-4031    | 4P    | 40           | 18           | 230            | 3NO+1NC  | 3                |
| SB-4004    | 4P    | 40           | 18           | 230            | 4NC      | 3                |
| SB-6340    | 4P    | 63           | 25           | 230            | 4NO      | 3                |
| SB-6322    | 4P    | 63           | 25           | 230            | 2NO+2NC  | 3                |
| SB-6331    | 4P    | 63           | 25           | 230            | 3NO+1NC  | 3                |
| SB-6304    | 4P    | 63           | 25           | 230            | 4NC      | 3                |
| SB-10040   | 4P    | 100          | -            | 230            | 4NO      | 6                |
| SB-10022   | 4P    | 100          | -            | 230            | 2NO+2NC  | 6                |
| SB-10031   | 4P    | 100          | -            | 230            | 3NO+1NCR | 6                |
| SB-10004   | 4P    | 100          | -            | 230            | 4NC      | 6                |

Source entries retained: SB-6330 is listed as 3NC; SB-10031 as 3NO+1NCR. Verify these contact descriptions before ordering.

## 05 / SBM SELECTION

# Manual control contactors

2P, 3P and 4P / 230 V AC control coils, 50/60 Hz

| Order code | Poles | AC-7a<br>(A) | AC-7b<br>(A) | Coil<br>(V AC) | Contacts | 18 mm<br>modules |
|------------|-------|--------------|--------------|----------------|----------|------------------|
| SBM-1620   | 2P    | 16           | 7            | 230            | 2NO      | 1                |
| SBM-1602   | 2P    | 16           | 7            | 230            | 2NC      | 1                |
| SBM-1611   | 2P    | 16           | 7            | 230            | 1NO+1NC  | 1                |
| SBM-2520   | 2P    | 25           | 10           | 230            | 2NO      | 1                |
| SBM-2502   | 2P    | 25           | 10           | 230            | 2NC      | 1                |
| SBM-2511   | 2P    | 25           | 10           | 230            | 1NO+NC   | 1                |
| SBM-4020   | 2P    | 40           | 22           | 230            | 2NO      | 2                |
| SBM-4002   | 2P    | 40           | 22           | 230            | 2NC      | 2                |
| SBM-4011   | 2P    | 40           | 22           | 230            | 1NO+1NC  | 2                |
| SBM-6320   | 2P    | 63           | 30           | 230            | 2NO      | 2                |
| SBM-6302   | 2P    | 63           | 30           | 230            | 2NC      | 2                |
| SBM-6311   | 2P    | 63           | 30           | 230            | 1NO+1NC  | 2                |
| SBM-2530   | 3P    | 25           | 10           | 230            | 3NO      | 2                |
| SBM-4030   | 3P    | 40           | 22           | 230            | 3NO      | 3                |
| SBM-6330   | 3P    | 63           | 30           | 230            | 3NO      | 3                |
| SBM-2540   | 4P    | 25           | 10           | 230            | 4NO      | 2                |
| SBM-2504   | 4P    | 25           | 10           | 230            | 4NC      | 2                |
| SBM-2522   | 4P    | 25           | 10           | 230            | 2NO+2NC  | 2                |
| SBM-4040   | 4P    | 40           | 22           | 230            | 4NO      | 3                |
| SBM-4004   | 4P    | 40           | 22           | 230            | 4NC      | 3                |
| SBM-4022   | 4P    | 40           | 22           | 230            | 2NO+2NC  | 3                |
| SBM-6340   | 4P    | 63           | 30           | 230            | 4NO      | 3                |
| SBM-6304   | 4P    | 63           | 30           | 230            | 4NC      | 3                |
| SBM-6322   | 4P    | 63           | 30           | 230            | 2NO+2NC  | 3                |

Custom AC coils: 12, 24, 110, 127 and 220-240 V AC, 50/60 Hz. For custom DC coils, including 12 and 24 V DC, contact [support@stefanelectric.com](mailto:support@stefanelectric.com).

SBM-2511 contact description is printed as "1NO+NC" in the source and is retained here.

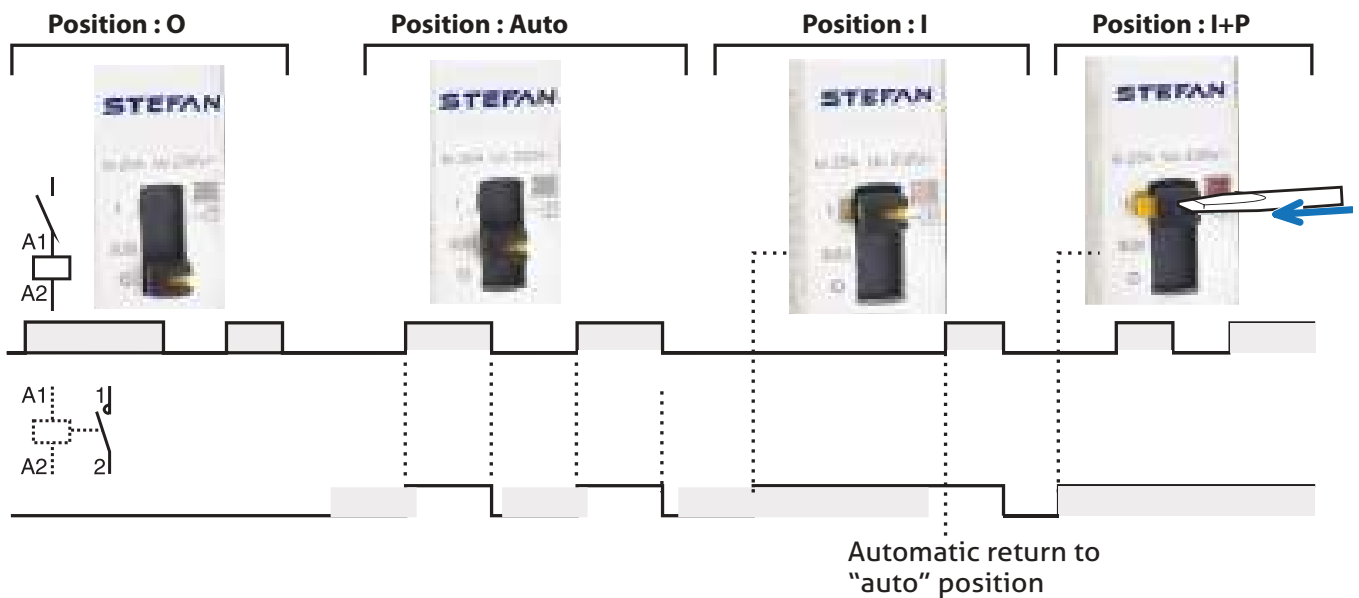
06 / INSTALLATION

# Manual operation & wiring

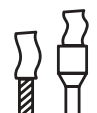
Four-position front selector on manually operated contactors

|          |                     |                       |                       |
|----------|---------------------|-----------------------|-----------------------|
| <b>O</b> | <b>Auto</b>         | <b>I</b>              | <b>I+P</b>            |
| Shutdown | Automatic operation | Temporary ON override | Permanent ON override |

Permanent ON locks the contactor in the ON position during installation or maintenance. The source sequence below shows the automatic return to Auto.



## Terminal connections

| Type     | Rating     | Length tripping | Circuit | Tightening torque | Copper cables                                                                         |                                                                                       |
|----------|------------|-----------------|---------|-------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|          |            |                 |         |                   | Rigid                                                                                 | Flexible or ferrule                                                                   |
| PZ1:4 mm | 16-100A    | 9mm             | Control | 0.8N.m            |  |  |
|          | 16 and 25A |                 |         |                   | 1.5 to 2.5mm <sup>2</sup><br>2× 1.5mm <sup>2</sup>                                    | 1.5 to 2.5mm <sup>2</sup><br>2× 2.5mm <sup>2</sup>                                    |
| PZ2:6 mm | 40A-63A    | 14mm            | Power   | 3.5N.m            | 1.5 to 6mm <sup>2</sup>                                                               | 1 to 4mm <sup>2</sup>                                                                 |
|          | 100A       |                 |         |                   | 6 to 25mm <sup>2</sup><br>6 to 35mm <sup>2</sup>                                      | 6 to 16 mm <sup>2</sup><br>6 to 35mm <sup>2</sup>                                     |

## 07 / SBX + DC OPTIONS

# Auxiliary & DC coil options

Position indication, auxiliary control and 12 V DC switching



SBX auxiliary contacts indicate or control the open / closed state of the contactor power contacts. Mount on the right side of the contactor; width 9 mm.

| Contact arrangement | Order code |
|---------------------|------------|
| 2NO                 | SBX-20     |
| 1NO+1NC             | SBX-11     |

| Auxiliary characteristic        | Specification                                         |
|---------------------------------|-------------------------------------------------------|
| Control voltage / frequency     | 24-240 V AC; 24-130 V DC; 50/60 Hz                    |
| Minimum breaking capacity       | 10 mA at 24 V DC/AC, $\cos \varphi = 1$               |
| Maximum breaking capacity       | 5 A at 240 V AC, $\cos \varphi = 1$ ; 1 A at 130 V DC |
| Operating / storage temperature | -10°C to +65°C / -40°C to +70°C                       |

## 12 V DC coil contactors

| Order code  | AC-7a (A) | AC-7b (A) | Coil (V DC) | Contacts | 18 mm modules |
|-------------|-----------|-----------|-------------|----------|---------------|
| SB-1620-12V | 16        | 7         | 12          | 2NO      | 1             |
| SB-1602-12V | 16        | 7         | 12          | 2NC      | 1             |
| SB-2020-12V | 20        | 9         | 12          | 2NO      | 1             |
| SB-2002-12V | 20        | 9         | 12          | 2NC      | 1             |
| SB-2520-12V | 25        | 10        | 12          | 2NO      | 1             |
| SB-2502-12V | 25        | 10        | 12          | 2NC      | 1             |

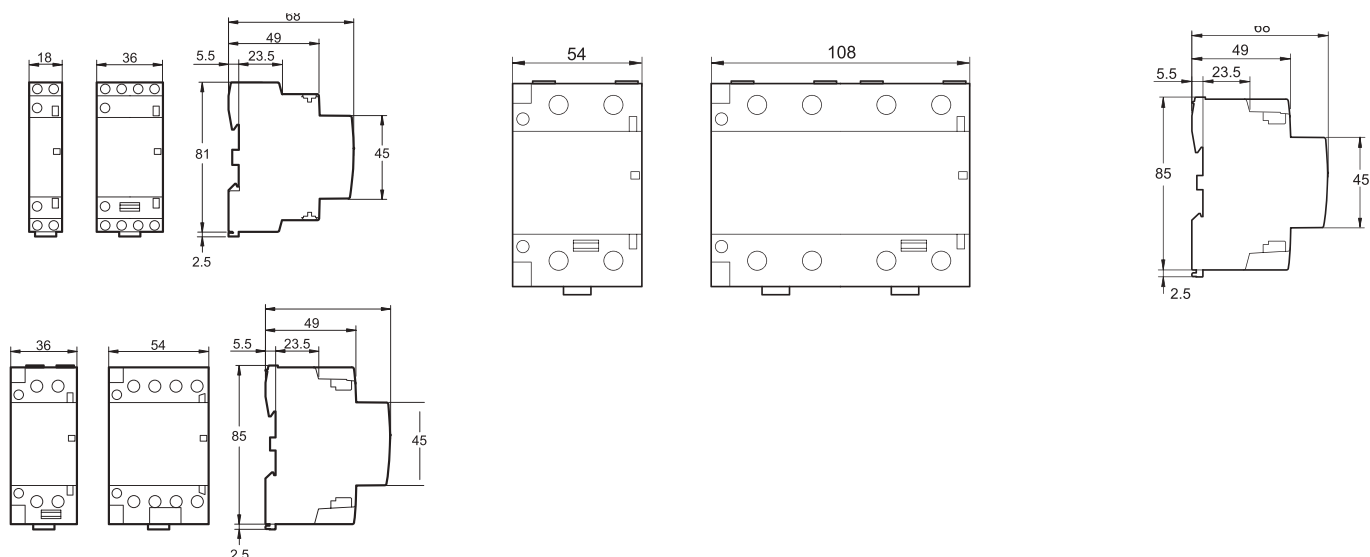
The source labels this DC selection group "1P" while listing 2NO / 2NC contacts. Verify pole designation when ordering. Custom 40 A, 63 A, 3P / 4P and DC coil options: [support@stefanelectric.com](mailto:support@stefanelectric.com).

08 / TECHNICAL DRAWINGS

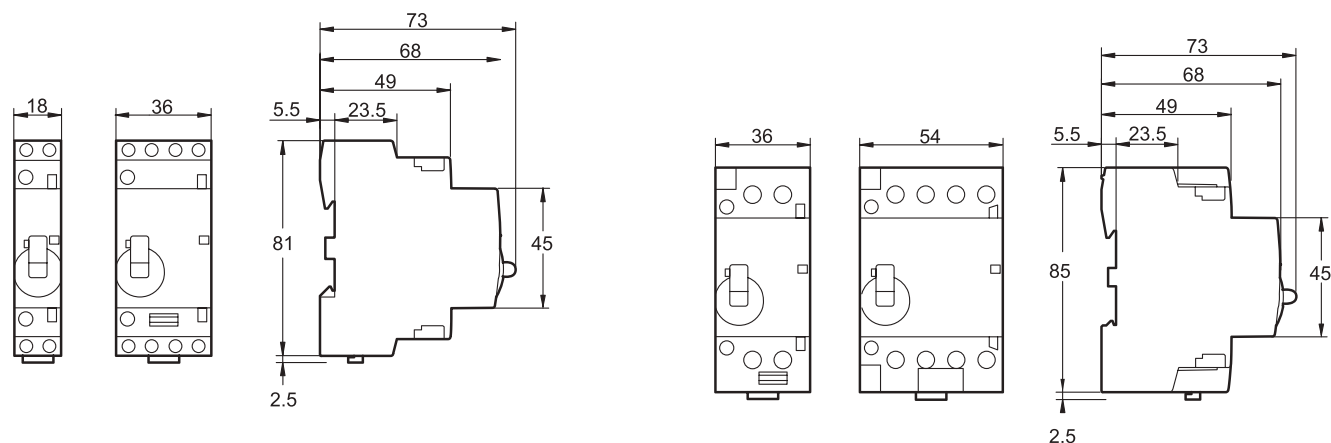
# Dimensions & circuit diagrams

Original vector drawings / dimensions in millimetres

## SB standard contactors



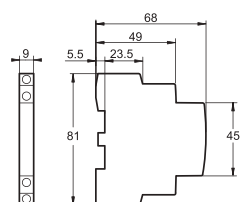
## SBM manual control contactors



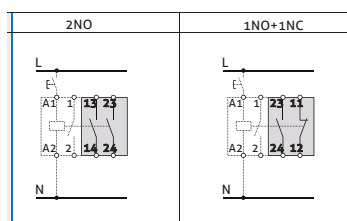
16 / 25 A

40 / 63 A

## SBX dimensions



## Auxiliary wiring



Circuit arrangements for SB and SBM are shown in the following reference page.

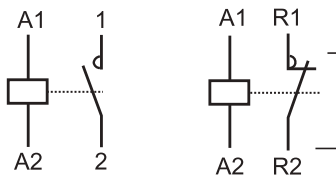
09 / CIRCUIT REFERENCE

# Contact arrangements

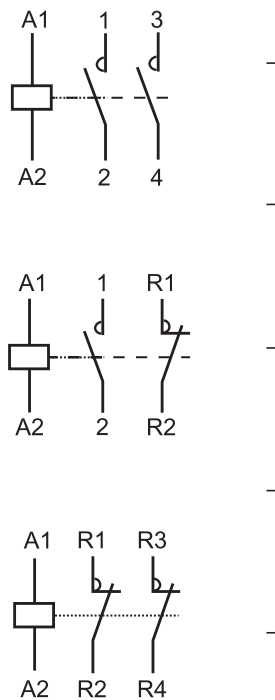
Original schematic symbols from the SB and SBM selection tables

## SB / Standard

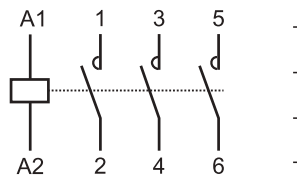
### 1P / 2P



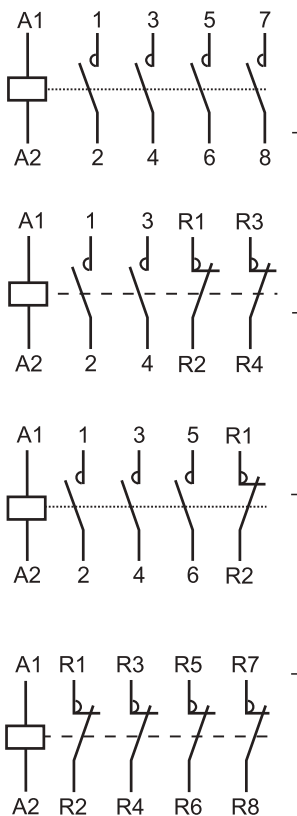
### 2P



### 3P / 4P

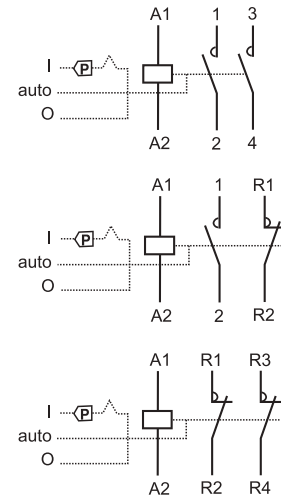


### 4P

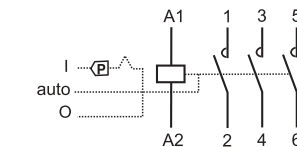


## SBM / Manual

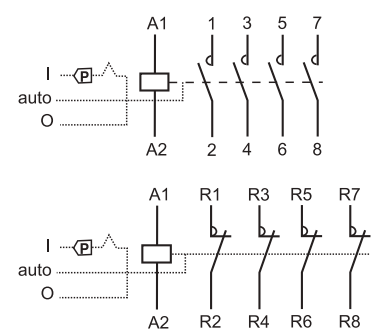
### 2P / 3P / 4P



### 3P



### 4P



NO = normally open. NC = normally closed. Refer to the order code and contact configuration in the selection tables. Circuit drawings are retained from the supplied catalogue.