

Technical data

Rotary cam switches OC 10...25 Amperes

Ratings according to IEC60947-3

| | | | | OC10 | OC25 |
|---|------------------------|--------------------|----|-----------------|-----------------|
| Rated insulation voltage | U_i | Pollution degree 3 | V | 500 | 690 |
| Rated impulse withstand voltage | U_{imp} | | kV | 2.5 | 4 |
| Rated thermal current | I_{th} | | A | 10 | 25 |
| Rated conditional short circuit current | I_p (r.m.s.) | | kA | 1 ¹⁾ | 7 ¹⁾ |
| Max back-up fuse link | | | A | 10 | 25 |
| Rated short time withstand current | r.m.s. -value I_{pw} | 1s | A | 120 | 300 |
| | | 3s | A | 70 | 173 |
| Conditional short circuit current | I_q | 500 V | kA | 3 | - |
| | | 690 V | kA | - | 7 |
| Rated operational current | AC-21A 1 and 3-phase | 400 V | A | 10 | 25 |
| | | Up to 500V | A | 10 | 20 |
| | AC-22A 1 and 3-phase | 500...690 V | A | - | 20 |
| | | | | | |
| | AC-23A 3-phase | 230 V | A | 7.6 | 15 |
| | | 400 V | A | 6.5 | 15 |
| | | 500 V | A | - | 8.1 |
| | | 690 V | A | - | 5.9 |
| | AC-23A 1-phase | 230 V | A | 7.2 | 8.7 |
| | | 400 V | A | 6.1 | 8.3 |
| | AC-3 3-phase | 230 V | A | 7.6 | 12 |
| | | 400 V | A | 4.9 | 12 |
| | | 500 V | A | - | 6.8 |
| | | 690 V | A | - | 4.9 |
| | AC-3 1-phase | 230 V | A | 5.3 | 7.2 |
| | | 400 V | A | 4.2 | 7.2 |
| | AC-4 3-phase | 380...440 V | A | 1.4 | 7.7 |
| | | 660...690 V | A | - | 3.8 |
| Rated operational current, DC-21A Time constant 0...1ms | 1-contact in series | 48 V | A | 10 | 25 |
| | 1-contact in series | 110 V | A | 0.7 | 1.5 |
| | 1-contact in series | 220 V | A | 0.3 | 0.5 |
| | 2-contact in series | 60 V | A | 10 | 20 |
| | 3-contact in series | 110 V | A | 10 | 20 |
| | 5-contact in series | 220 V | A | 10 | 20 |
| | 9-contact in series | 440 V | A | 10 | 20 |
| | 10-contact in series | 600 V | A | - | 16 |
| Rated operational current, DC-22A Time constant 1...50ms | 1-contact in series | 24 V | A | 6 | 10 |
| | 1-contact in series | 30 V | A | 3 | 4.5 |
| | 1-contact in series | 40 V | A | 3 | 4.5 |
| | 2-contact in series | 60 V | A | 3 | 4.5 |
| | 3-contact in series | 110 V | A | 3 | 4.5 |
| | 5-contact in series | 220 V | A | 3 | 4.5 |
| Rated operational current, DC-13 | 1 contact in series | 48 V | A | - | 3 |
| | 1 contact in series | 110 V | A | - | 0.8 |
| | 1 contact in series | 220 V | A | - | 0.4 |
| Rated operational current, according to IEC60947-5-1 | AC-15 | 220...240 V | A | 2.5 | 5.5 |
| | | 380...440 V | A | 1.5 | 3.5 |

¹⁾ 400 V

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| | | | | OC10 | OC25 |
|---|---|-------------|-----------------|-----------|-----------|
| Rated operational power ²⁾ | AC-23A 3-phase | 230 V | kW | 1.8 | 2.6 |
| | | 400 V | kW | 3 | 7.5 |
| | | 500 V | kW | - | 4.8 |
| | | 690 V | kW | - | 4.8 |
| | AC-23A 1-phase | 230 V | kW | 0.8 | 0.9 |
| | | 400 V | kW | 1.1 | 1.5 |
| | AC-3 3-phase | 230 V | kW | 1.8 | 2.2 |
| | | 400 V | kW | 2.2 | 5.5 |
| | | 500 V | kW | - | 4 |
| | | 690 V | kW | - | 4 |
| | AC-3 1-phase | 230 V | kW | 0.6 | 0.8 |
| | | 400 V | kW | 0.8 | 1.3 |
| | AC-4 3-phase | 380...440 V | kW | 0.55 | 4 |
| | | 660...690 V | kW | - | 3 |
| Power loss per contact - at rated I _{th} | Standard contacts | | W | ≤ 0.6 | ≤ 1.8 |
| Contact resistance | Standard contacts | | Ohms | ≤ 0.004 | ≤ 0.003 |
| Power loss per contact - at rated I _{th} | Gold contacts | | W | 0.4 | ≤ 1.8 |
| Contact resistance | Gold contacts | | Ohms | ≤ 0.006 | ≤ 0.003 |
| Minimum switching capacity | Gold contacts | | mA | 5 | 5 |
| | Gold contacts | | V AC/DC | 5 | 5 |
| Terminals | Max cable cross section, solid/ stranded ³⁾ | | mm ² | 0.5...1.5 | 1.5...4 |
| Mechanical endurance ⁵⁾ | 8 Contacts and less | | Number | 500 000 | 500 000 |
| | 9 to 14 Contacts | | of | 300 000 | 300 000 |
| | 15-24 Contacts | | operations | 100 000 | 100 000 |
| Temperature | Storing and operational ²⁾ temperature | | °C | -40...+80 | -40...+85 |

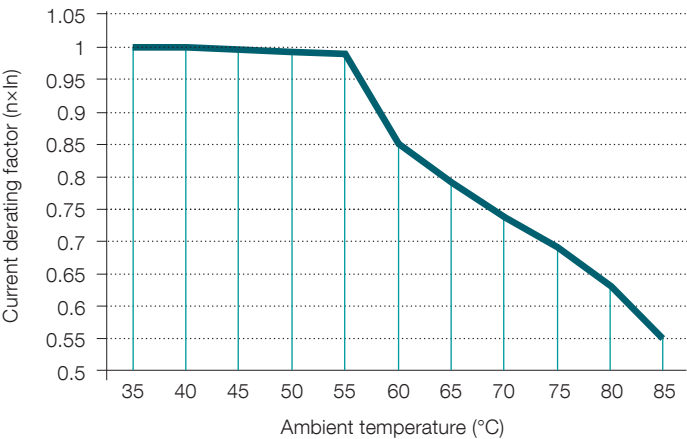
²⁾ At 40°C, derating 0%. Current peaks up to 60°C, derating 0%. For higher temperatures, see derating curve below.

³⁾ Use copper wire only.

⁴⁾ These values are given for guidance and may vary acc. to the motor manufacturer.

⁵⁾ The mechanical endurance ratings are dependent on the switching angles and the number of contacts. The ratings shown represent the minimum values achieved. Higher ratings may be available upon request.

Derating for ambient temperature



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Ratings according to UL 60947-4-1

Standards UL 60947-1, UL 60947-4-1, CSA C22.2 no. 60947-1-13, CSA C22.2 no. 60947-4-1-14.

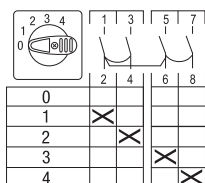
| Model designation | | | OC10 | OC25 |
|---|-------|------|-------------------|-------------------|
| Maximum general use ratings: | | | | |
| Pilot duty, V ac | | V ac | A300 | A600 |
| General rating, A | | A | 10 | 25 |
| Voltage rating, 50/60 Hz, V ac | | V ac | 300 | 600 |
| Single phase horsepower ratings | | | | |
| Voltage, V ac, 50/60 Hz | 120 V | HP | 0.33 | 0.75 |
| | | FLA | 7.2 | 13.8 |
| | 240 V | HP | 1 | 2 |
| | | FLA | 8.0 | 12.0 |
| | 480 V | HP | - | 3 |
| | | FLA | - | 8.5 |
| | 600 V | HP | - | 3 |
| | | FLA | - | 6.8 |
| Three phase horsepower ratings | | | | |
| Voltage, V ac, 50/60 Hz | 120 V | HP | 1 | 2 |
| | | FLA | 8.4 | 13.6 |
| | 240 V | HP | 1.0 | 3 |
| | | FLA | 4.2 | 9.6 |
| | 480 V | HP | - | 5 |
| | | FLA | - | 7.6 |
| | 600 V | HP | - | 7.5 |
| | | FLA | - | 9.0 |
| Short circuit ratings, manual motor controllers | | | | |
| Short circuit ratings | | | 1 kA rms, 300 Vac | 5 kA rms, 600 Vac |
| Maximum fuse size (Fuse class) | | | 30 A (RK5) | 35 A (RK5) |
| Cabling | | | | |
| Wire range | | AWG | 14** | 14-10** |

** Solid or stranded copper conductors only.

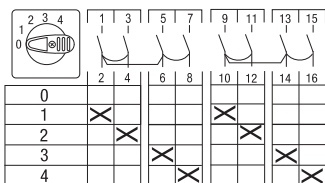
The standard for Industrial Control Equipment UL 508 has been harmonized with the relevant product standards of the IEC standard for Low-Voltage Switchgear and Controlgear IEC 60947.

Ordering information

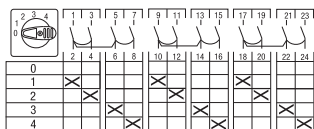
Rotary cam switches, standard



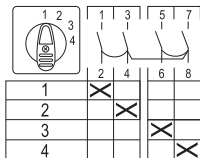
OC_SO41



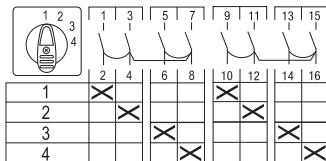
OC_SO42



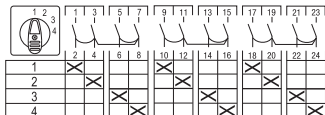
OC_SO43



OC_ST41



OC_ST42



OC_ST43

Multistep switches

The handle and front plate with position indication are included according to the table below.
The round front ring: to be used in situations when position indications are on the door of the enclosure. Step angle 30°

| Function | Number of poles/ contacts | Rated thermal current I_m [A] | Type | Order number | Weight/ unit [kg] |
|---|---------------------------|---------------------------------|--------------------|-----------------|-------------------|
| 4- step, with 0-position, door mounted | | | | | |
| Snap-on mounted black nose handle, black front frame and silver front plate | | | | | |
| 0-1-2-3-4 | 1 / 4 | 10 | OC10G04PNBN00NSO41 | 1SCA126586R1001 | 0.045 |
| 0-1-2-3-4 | 2 / 8 | 10 | OC10G08PNBN00NSO42 | 1SCA126587R1001 | 0.065 |
| 0-1-2-3-4 | 3 / 12 | 10 | OC10G12PNBN00NSO43 | 1SCA126588R1001 | 0.084 |
| 0-1-2-3-4 | 1 / 4 | 25 | OC25G04PNBN00NSO41 | 1SCA126589R1001 | 0.109 |
| 0-1-2-3-4 | 2 / 8 | 25 | OC25G08PNBN00NSO42 | 1SCA126590R1001 | 0.155 |
| 0-1-2-3-4 | 3 / 12 | 25 | OC25G12PNBN00NSO43 | 1SCA126591R1001 | 0.201 |
| 4- step, without 0-position, door mounted | | | | | |
| Snap-on mounted black nose handle, black front frame and silver front plate | | | | | |
| 1-2-3-4 | 1 / 4 | 10 | OC10G04PNBN00NST41 | 1SCA126592R1001 | 0.045 |
| 1-2-3-4 | 2 / 8 | 10 | OC10G08PNBN00NST42 | 1SCA126593R1001 | 0.065 |
| 1-2-3-4 | 3 / 12 | 10 | OC10G12PNBN00NST43 | 1SCA126594R1001 | 0.084 |
| 1-2-3-4 | 1 / 4 | 25 | OC25G04PNBN00NST41 | 1SCA126595R1001 | 0.109 |
| 1-2-3-4 | 2 / 8 | 25 | OC25G08PNBN00NST42 | 1SCA126598R1001 | 0.155 |
| 1-2-3-4 | 3 / 12 | 25 | OC25G12PNBN00NST43 | 1SCA126599R1001 | 0.201 |
| Screw mounted black nose handle, black front frame and silver front plate | | | | | |
| 1-2-3-4 | 1 / 4 | 25 | OC25G04RNB00NST41 | 1SCA126597R1001 | 0.180 |
| Snap-on mounted black nose handle with round black front ring, no engraving | | | | | |
| 1-2-3-4 | 1 / 4 | 25 | OC25G04PXB00NST41 | 1SCA126596R1001 | 0.103 |

For more options of standard cam switches, see Order code configuration, pages 40...56.