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MICROSWITCHES - SEALED, POSITIVE BREAK

PBX - 8324

- › Double-break snap-action mechanism with electrically separated circuits (form Zb)
- › Positive opening action according to IEC 60947-5-1 Annex K
- › Long overtravel, also after the positive opening position
- › Protection of mechanism: IP67/IP65, or IP40 with sealed plunger
- › Operating temperature -50 °C to +85 °C
- › Ratings from 1 mA 4 V_{DC} to 6 A 250 V_{AC} - Rating codes: A300, Q150
- › Very long mechanical life
- › Choice of connections - Mounting plates and roller lever (pre-assembled or retrofittable)
- › cURus and CCC approved - Meet applicable railway standards



Main specifications

| | | Standard 83240 | High force 83242 | Dual-current 83244 | Dual-current High force 83245 |
|--|--------------------|-------------------|---------------------|-----------------------|-------------------------------------|
| Degree of protection | Connections | | | | |
| IP40 | W3 | 83240000 | 83242000 | 83244000 | 83245000 |
| IP40 | W3/90B | 83240010 | 83242010 | ● | ● |
| IP40 | W5 | 83240020 | 83242020 | 83244020 | 83245020 |
| IP40 | W5/IP20 | 83240030 | 83242030 | 83244030 | 83245030 |
| IP40 | W1 | ● | ● | ● | ● |
| IP67 | W3 | 83240200 | 83242200 | 83244200 | 83245200 |
| IP67 | W3/90B | 83240210 | ● | 83244210 | ● |
| IP67 | W5 | 83240220 | 83242220 | 83244220 | 83245220 |
| IP67 | W5/IP20 | 83240230 | 83242230 | 83244230 | 83245230 |
| IP 67 | W1 | ● | ● | ● | ● |
| Electrical characteristics | | | | | |
| Positive opening action | | → | → | → | → |
| Rating nominal / 250 V _{AC} (A) | | 6 | 6 | 6* | 6* |
| Rating nominal / 250 V _{DC} (A) | | 0.6 | 0.6 | 0.6* | 0.6* |
| Rating Thermal (A) | | 10 | 10 | 10 | 10 |
| Mechanical characteristics | | | | | |
| Maximum operating force (N) | | 4.5 | 6.5 | 4.5 | 6.5 |
| Minimum release force (N) | | 0.6 | 2.5 | 0.6 | 2.5 |
| Minimum positive opening force (N) | | 28 | 28 | 28 | 28 |
| Maximum rest position (mm) | | 8.9 | 8.9 | 8.9 | 8.9 |
| Operating position (mm) | | 6.6 ±0.25 | 6.6 ±0.25 | 6.6 ±0.25 | 6.6 ±0.25 |
| Positive opening position (mm) | | 4.4 | 4.4 | 4.4 | 4.4 |
| Maximum total travel position (mm) | | 3.4 | 3.4 | 3.4 | 3.4 |
| Differential travel (mm) | | 1 ±0.3 | 1 ±0.3 | 1 ±0.3 | 1 ±0.3 |
| Operating temperature (°C) | | -50 → +85 | -50 → +85 | -50 → +85 | -50 → +85 |
| Mechanical life - IP40 versions (operations) | | 10 ⁷ | 10 ⁷ | 10 ⁷ | 10 ⁷ |
| Mechanical life - IP67 versions (operations) | | 4x10 ⁶ | 4 x 10 ⁶ | 4 x 10 ⁶ | 4 x 10 ⁶ |
| Contact gap (mm) | | 2 x 1 | 2 x 1 | 2 x 1 | 2 x 1 |
| Weight (g) | | 22 | 22 | 22 | 22 |

Additional characteristics

- Case: PC GF (UL 94-V2 / GWFI 960 °C / GWIT 775 °C)
- Button: PBT GF (UL 94-V0 / GWFI 960 °C)
- Membrane: silicone rubber
- Contacts: silver alloy, micro-profile
gold alloy on silver alloy, micro-profile (dual-current)
- Terminals: brass (silver-plated brass : on request)
- Screws: stainless steel
- Levers: stainless steel, polyamide roller
- Degree of protection: IP65/IP67 or IP40 (mechanism)
- Recommended min actuating speed: 0.5 mm/s
- Rated insulation voltage U_i: 400 V
- Impulse withstand voltage U_{imp}: 4 kV
- Pollution degree: 3
- Protection against electric shock: Button and actuators of IP67 versions have reinforced insulation
- Dimensional conformity: DIN 41636 F
- Fire/smoke resistance: EN 45545, NFF 16101/102-I3F1
- Approvals: cURus (A300, Q150), CCC

Product adaptations

- › IP67 wire lead or cable outputs, EN 50306 halogen-free versions
- › Special connections: W3 QC tabs with specific folding angles, double QC tabs, W5 without screws, ...
- › Special levers: special shapes and lengths
- › AgPd contacts for infrequent switching in corrosive atmospheres up to 1A (83241/83243)
- › Maintained action variant (bistable reset switch), with plunger or lever
- › Two-pole DPDT assemblies with common lever
- › IP40 protective cover/housing on connections



Standard product

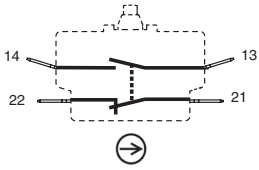
Product made to order

● Contact us

Principles

Double break snap-action switch with electrically separated circuits and with positive opening action on NC contacts (21-22) according to IEC 60947-5-1 Annex K

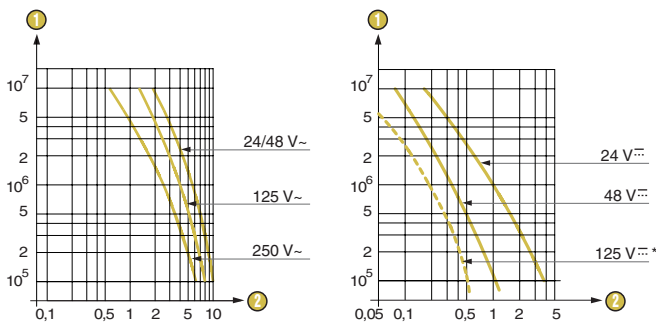
Changeover - SPDT (form Zb)



Both circuits can be used at opposite polarities

Curves

Operating curve for category AC15 Operating curve for category DC13



- ① Number of operations
- ② Current in Amps

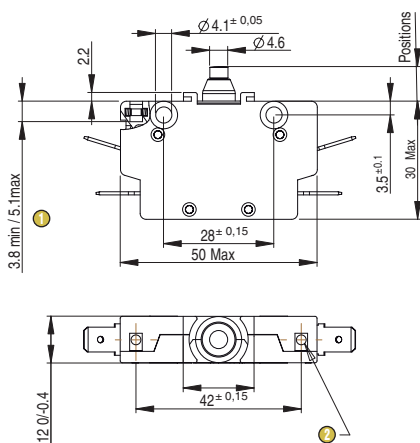
For IP67 versions used in 125 V DC, please consult us.

* Models 83244 and 83245 are designed to operate equally well on low-current (1 mA 4 V minimum recommended) or medium to high current circuits. However, a given product should only be used to switch one type of circuit during its working life.

Dimensions (mm)

Product

8324

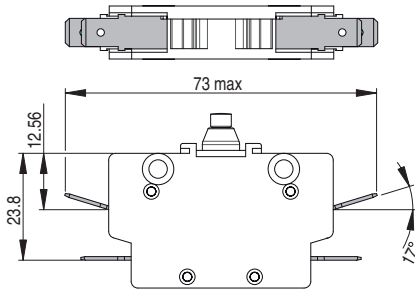


- ① Fixing screw threaded length
- ② Fixing nuts 2 x M3

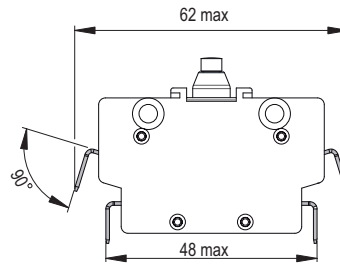
Max. tightening torque of fixing screws: 1.3 N.m on $\varnothing 4.1$ holes
0.9 N.m on M3 nuts

Connections

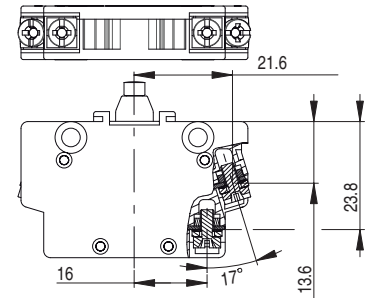
W3 quick-connect 6.3 x 0.8



W3/90B quick-connect 6.3x0.8, 90° downward folding

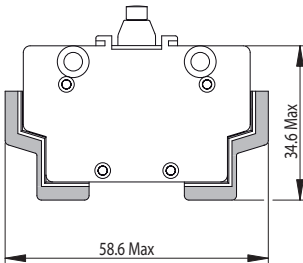
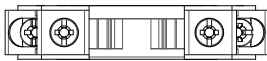


W5 screw with clamp W1 screw with washer



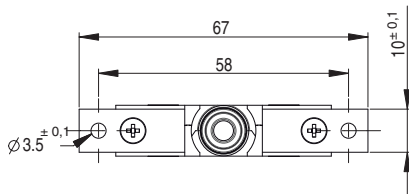
4 x M3 screws - PZ1 type

W5/IP20 screw with clamp and IP20 protection



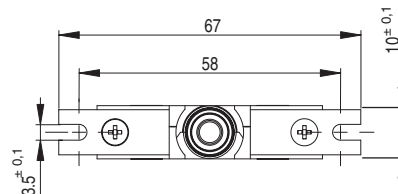
Mounting accessories

PT mounting plates with holes



Thickness: 1 mm

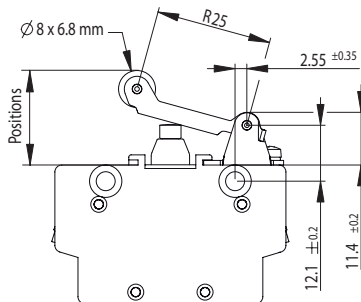
PE mounting plates with notches



Thickness: 1 mm

Actuators

LG roller lever



Mechanical characteristics on roller

| | 83240/83244 | 83242/83245 |
|------------------------------------|-------------|-------------|
| Maximum operating force (N) | 3 | 4 |
| Minimum release force (N) | 0.3 | 1.3 |
| Min. positive opening force (N) | 19 | 19 |
| Maximum rest position (mm) | 21 | 21 |
| Operating position (mm) | 16,6±0,5 | 16,6±0,5 |
| Positive opening position (mm) | 13,2 | 13,2 |
| Maximum total travel position (mm) | 12 | 12 |
| Differential travel (mm) | 1,8±0,55 | 1,8±0,55 |

Actuators and mounting accessories

PBX 8324 with referenced accessories

| | Roller lever | Mounting plates | Accessory kit | LG | LG | LG | - | - |
|-------|--------------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | | | - | PT | PE | PT | PE |
| | | | | 79552456 | 79552457 | 79552458 | 79552459 | 79552460 |
| 83240 | IP40 | W3 | W3/90B | 83240003 | 83240004 | 83240005 | • | • |
| | | | W5 | 83240013 | 83240014 | 83240015 | • | • |
| | | | W5/IP20 | 83240023 | 83240024 | • | • | |
| | | | W5/IP20 | 83240033 | 83240034 | • | • | |
| | IP67 | W3 | W3/90B | 83240203 | • | • | • | • |
| | | | W5 | 83240213 | • | • | • | |
| | | | W5/IP20 | 83240223 | 83240224 | 83240225 | 83240221 | • |
| | | | W5/IP20 | • | • | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| 83242 | IP40 | W3 | W3/90B | 83242003 | 83242004 | 83242005 | • | • |
| | | | W5 | • | 83242014 | • | 83242011 | • |
| | | | W5/IP20 | 83242023 | 83242024 | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| | IP67 | W3 | W3/90B | • | • | • | • | • |
| | | | W5 | • | • | • | • | |
| | | | W5/IP20 | 83242223 | 83242224 | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| 83244 | IP40 | W3 | W3/90B | 83244003 | 83244004 | • | • | |
| | | | W5 | 83244013 | 83244014 | • | • | |
| | | | W5/IP20 | 83244023 | 83244024 | • | • | |
| | | | W5/IP20 | • | 83244034 | • | • | |
| | IP67 | W3 | W3/90B | 83244203 | • | • | • | • |
| | | | W5 | 83244213 | • | • | • | |
| | | | W5/IP20 | 83244223 | • | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| | | | W5/IP20 | • | • | • | • | |
| | | | W5/IP20 | • | • | • | • | |

Installation recommendations

See "Basic technical concepts"

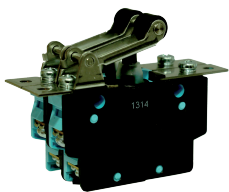
How to order

Use the 8 digit part numbers when they are defined

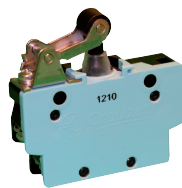
Other cases, precise: Type of microswitch - Degree of protection - Connection - Actuator* - Mounting accessories* - Adaptation*
* if needed

Example: 83240 IP67 W3/90B LG PE

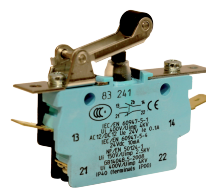
Examples of special adaptations



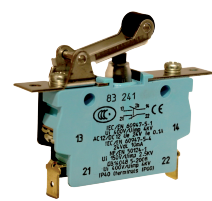
Two-pole DPDT assembly with linked levers



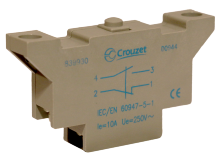
Short roller lever



Mixed connections: NO quick-connect 6.3 x 0.8 / NC screw with clamp



Mixed connections: NO screw with clamp / NC quick-connect 6.3 x 0.8, 90° downward folding



Economic version (839930): SPDT form Za without positive opening, Ø 3.2 mounting holes on top face, screw terminals

Standard product

Product made to order



Contact us