## MICROSWITCHES - SEALED, POSITIVE BREAK

PBX-8324<br>> Double-break snap-action mechanism with electrically separated circuits (form Zb)<br>> Positive opening action according to IEC 60947-5-1 Annex K<br>> Long overtravel, also after the positive opening position<br>> Protection of mechanism: IP67/IP65, or IP40 with sealed plunger<br>> Operating temperature $-50^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$<br>> Max. rating 10A 250 V~- Rating codes: A300, Q150<br>> Very long mechanical life<br>> Choice of connections<br>> Mounting plates and roller lever (pre-assembled or retrofittable)<br>) cURus and CCC approved - Meet applicable railway standards



## Main specifications

| Degree of protection Connections |  |  |
| :---: | :---: | :---: |
| IP40 W3 (QC 6.3x0.8) | 83240000 | 83242000 |
| IP40 W3/90B (QC 6.3x0.8, folded) | 83240010 | 83242010 |
| IP40 W5 (screw + clamp) | 83240020 | 83242020 |
| IP40 W5/IP20 (screw + clamp, protected) | 83240030 | 83242030 |
| IP67 W3 (QC 6.3x0.8) | 83240200 | 83242200 |
| IP67 W3/90B (QC 6.3x0.8, folded) | 83240210 | - |
| IP67 W5 (screw + clamp) | 83240220 | 83242220 |
| IP67 W5/IP20 (screw + clamp, protected) | 83240230 | 83242230 |
| Electrical characteristics |  |  |
| Positive opening action | $\Theta$ | $\rightarrow$ |
| Rating nominal / $250 \mathrm{~V} \sim(\mathrm{~A})$ | 6 | 6 |
| Rating thermal (A) | 10 | 10 |
| Mechanical characteristics |  |  |
| Maximum operating force ( N ) | 4.5 | 6.5 |
| Minimum release force (N) | 0.6 | 2.5 |
| Minimum positive opening force (N) | 28 | 28 |
| Maximum rest position (mm) | 8.9 | 8.9 |
| Operating position (mm) | $6.6 \pm 0.25$ | $6.6 \pm 0.25$ |
| Positive opening position (mm) | 4.4 | 4.4 |
| Maximum total travel position (mm) | 3.4 | 3.4 |
| Differential travel (mm) | $1 \pm 0.3$ | $1 \pm 0.3$ |
| Operating temperature ( ${ }^{\circ} \mathrm{C}$ ) | $-50 \rightarrow+85$ | $-50 \rightarrow+85$ |
| Mechanical life - IP40 versions (operations) | $10^{7}$ | $10^{7}$ |
| Mechanical life - IP67 versions (operations) | $4 \times 10^{6}$ | $4 \times 10^{6}$ |
| Contact gap (mm) | $2 \times 1$ | $2 \times 1$ |
| Weight, terminal versions (g) | 22 | 22 |

## Additional specifications

- Case: PC GF (UL 94-V0 / GWFI $960{ }^{\circ} \mathrm{C} / \mathrm{GWIT} 775{ }^{\circ} \mathrm{C}$ )
- Button: PBT GF (UL 94-V0 / GWFI $960^{\circ} \mathrm{C}$ )
- Membrane: silicone rubber
- Contacts: silver alloy, micro-profile
- 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: $0.1 \mathrm{~mm} / \mathrm{s}$
- Rated insulation voltage Ui: 400 V
- Impulse withstand voltage Uimp: 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
- Conformity / Certifications: c ${ }^{4}$ (A300, Q150) / @C. EH[ C


## Product adaptations

, Special connections: W3 QC with specific folding, double QC tabs, W1 screw + washer, W5 without screw, ... > Integral wire lead or cable outputs, EN 50306 halogen-free versions
, Special levers: special shapes and lengths
> Maintained action variant (bistable reset switch), with plunger or lever
> Two-pole DPDT assemblies with common lever
>IP40 protective cover/housing on connections

## 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)


$\Theta$
Both circuits can be used at opposite polarities

## Curves

## Operating curve for category AC-15 Operating curve for category DC-13

Making \& breaking capacities IEC/EN 60947-5-1 (6000 cycles)


(1) Number of operations
(2) Current in Amps

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


## Dimensions

## Product

8324

(1) Fixing screw threaded length
(2) Fixing nuts $2 \times \mathrm{M} 3$

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

## Connections

W3 quick-connect $6.3 \times 0.8$


## W5/IP20 screw with clamp and

 IP20 protection

W3/90B quick-connect $6.3 \times 0.8$, $90^{\circ}$ downward folding


W5 screw with clamp
W1 screw with washer

$4 \times$ M3 screws - PZ1 type

Mounting accessories

PT mounting plates with holes 79552459


Thickness: 1 mm

PE mounting plates with notches 79552460


Thickness: 1 mm

IP20 screw connection cover 79552328


Snap-on mounting
2 pieces are needed

## Actuators

LG roller lever 79552456
LG PT roller lever + plates with holes 79552457 LG PE roller lever + plates with notches 79552458

Mechanical characteristics on roller


|  | 83240 | 83242 |
| :---: | :---: | :---: |
| 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) | 16,60,5 | 16,6+0,5 |
| Positive opening position (mm) | 13,2 | 13,2 |
| Maximum total travel position (mm) | 12 | 12 |
| Differential travel (mm) | 1,8 ${ }^{ \pm 0,55}$ | 1,8 ${ }^{ \pm 0,55}$ |

Actuators and mounting accessories
PBX-8324 with referenced accessories

|  | Roller lever <br> Mounting plates Accessory kit |  | LG | LG | LG | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | - | PT | PE | PT | PE |
|  |  |  | 79552456 | 79552457 | 79552458 | 79552459 | 79552460 |
| 83240 | IP40 | W3 | 83240003 | $\begin{aligned} & 83240004 \\ & 83240014 \end{aligned}$ | $\begin{aligned} & 83240005 \\ & 83240015 \end{aligned}$ | $83240021$ | - |
|  |  | W3/90B | 83240013 |  |  |  | $\bullet$ |
|  |  | W5 | 83240023 | $\begin{aligned} & 83240024 \\ & 83240034 \end{aligned}$ |  |  | $\bullet$ |
|  |  | W5/IP20 | 83240033 |  |  |  | $\bullet$ |
|  | IP67 | W3 | 83240203 | $\begin{aligned} & 83240214 \\ & 83240224 \end{aligned}$ | $83240225$ | $83240221$ | $\stackrel{-}{\bullet}$ |
|  |  | W3/90B | 83240213 |  |  |  |  |
|  |  | W5 | 83240223 |  |  |  |  |
|  |  | W5/IP20 | - |  |  |  |  |
| 83242 | IP40 | W3 | 83242003 | 83242004 | 83242005 | $\begin{aligned} & 83242011 \\ & 83242021 \end{aligned}$ |  |
|  |  | W3/90B | - | $\begin{gathered} 83242014 \\ 83242024 \\ \end{gathered}$ |  |  |  |
|  |  | W5 | 83242023 |  |  |  |  |
|  |  | W5/IP20 | - |  |  | $83242021$ |  |
|  | IP67 | W3 | - | - | - | - | $\bullet$ |
|  |  | W3/90B | - | - | - | $\bullet$ | $\bullet$ |
|  |  | W5 | 83242223 | 83242224 | - | $\bullet$ | $\bullet$ |
|  |  | W5/IP20 | - | - | - | - | - |

## Installation recommendations

See "Basic technical concepts".
To observe the required clearances and creepage distances in the connection area :

- above 100 V : an insulating plate is needed when the switch is mounted on an uninsulated surface.
- above 250 V : insulating plates are needed between switches when ganging.


## 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


In-line quick-connect terminals


Short roller lever


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

## Warning:

## X-ON Electronics

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Click to view similar products for Basic / Snap Action Switches category:
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Other Similar products are found below :
5SM901-S12 5SM9-S12N195 602EN532 602EN535-RB 602HE5-RB1 604HE162 604HE223-6B 624HE17-RB 6HM82 6HM89 6SE1 6SX1-H58 7050021670599106 MBD5B1 MBH2731 73-316-0012 EXD-AR20 $792119237 \underline{79218589}$ 7AS12

MIL30126AB6BBMD4A12XAU ML-1155 ML-1376 831010C3.0 831090C2.EL 83131904 84212012 8AS239 8HM73-3 8SX26-H33
914CE1-6G PL-100 11SM1077-H4 11SM1077-H58 11SM1-TN107 11SM405 11SM8423-H2 11SX37-T 11SX48-H58 11SM2442-T
11SM76-T 11SM77-H58 11SM77-T 11SM863-T 11SM866 A7CN-1M-1-LEFT A831700C7.0 121EN188-R $\underline{1245.0120}$

