

MICROSWITCHES - SEALED, POSITIVE BREAK

PBXR - 8325

- › Double-break snap-action mechanism with electrically separated circuits (form Zb) and double wiping contacts
- › Positive opening action according to IEC 60947-5-1 Annex K
- › Very long overtravel: 2 mm after the positive opening position
- › Protection of mechanism: IP67 or IP40
- › Operating temperature -50 °C to +85 °C
- › Ratings from 1mA 4 V $\overline{\text{---}}$ to 2A 250 V $\sim$ - Rating codes: B300, 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 83250	High force 83252	Dual-current 83254	Dual-current High force 83255
Degree of protection	Connections				
IP40	W3 (QC 6.3 x 0.8)	83250000	83252000	83254000	83255000
IP40	W3/90B (QC 6.3 x 0.8, folded)	83250010	83252010	●	●
IP40	W5 (screw + clamp)	83250020	83252020	83254020	83255020
IP40	W5/IP20 (screw + clamp, protected)	83250030	83252030	83254030	83255030
IP40	W1 (screw + washer)	●	●	●	●
IP67	W3 (QC 6.3 x 0.8)	83250200	83252200	83254200	83255200
IP67	W3/90B (QC 6.3 x 0.8, folded)	83250210	●	83254210	●
IP67	W5 (screw + clamp)	83250220	83252220	83254220	83255220
IP67	W5/IP20 (screw + clamp, protected)	83250230	83252230	83254230	83255230
IP67	W1 (screw + washer)	●	●	●	●
Electrical characteristics					
Positive opening action		➔	➔	➔	➔
Rating nominal / 250 V $\sim$ (A)		2	2	2*	2*
Rating nominal / 250 V $\overline{\text{---}}$ (A)		0.6	0.6	0.6*	0.6*
Rating thermal (A)		10	10	10	10
Mechanical characteristics					
Maximum operating force (N)		3.6	5.5	3.6	5.5
Minimum release force (N)		0.5	2	0.5	2
Minimum positive opening force (N)		20	20	20	20
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)		5.5	5.5	5.5	5.5
Maximum total travel position (mm)		3.6	3.6	3.6	3.6
Differential travel (mm)		1.2 ±0.3	1.2 ±0.3	1.2 ±0.3	1.2 ±0.3
Operating temperature (°C) IP40		-50 → +85	-50 → +85	-50 → +85	-50 → +85
Operating temperature (°C) IP67		-40 → +85	-40 → +85	-40 → +85	-40 → +85
Mechanical life - IP40 versions (operations)		10 ⁷	10 ⁷	10 ⁷	10 ⁷
Mechanical life - IP67 versions (operations)		5x10 ⁶	5x10 ⁶	5x10 ⁶	5x10 ⁶
Contact gap (mm)		2 x 0.9	2 x 0.9	2 x 0.9	2 x 0.9
Weight, terminal versions (g)		20	20	20	20

Additional specifications

- Case: PC GF20 (UL 94-V0 / GWFI 960 °C / GWIT 775 °C)
- Button: PBT GF17 (UL 94-V0 / GWFI 960 °C)
- Membrane: silicone rubber
- Contacts: silver alloy, micro-profile
gold alloy on silver alloy, micro-profile (dual-current)
- Terminals: Tin-plated brass
- Screws: stainless steel
- Levers: stainless steel, POM

- Degree of protection: IP67 or IP40 (mechanism)
- Recommended min actuating speed: 0.1 mm/s
- Rated insulation voltage Ui: 400 V
- Impulse withstand voltage Uimp: 4 kV
- Pollution degree: 3
- Protection against electric shock: 400V (button and actuators of IP67 versions have reinforced insulation)
- Dimensional conformity: DIN 41636-6, type F
- Fire & Smoke Resistance: EN 45545-2 EL10 class
- Certification marks: /EAC Pending

Standard product

Product made to order



Contact us

Product adaptations

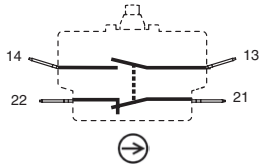


- › Special connections: W3 QC tabs with specific folding angles, double QC tabs, W5 without screws, ...
- › Special levers: special shapes and lengths
- › Maintained action variant (bistable reset switch), with plunger or lever
- › Two-pole DPDT assemblies with common lever
- › IP40 protective cover/housing 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

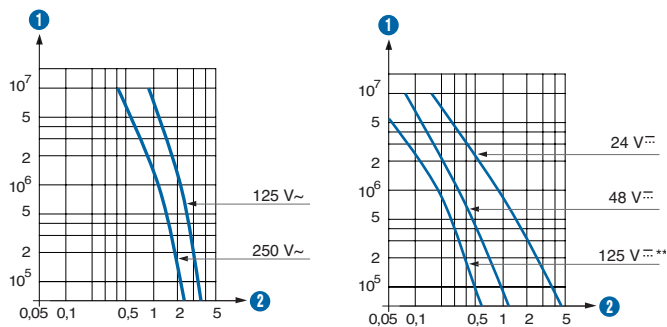
Changeover - SPDT (form Zb)



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

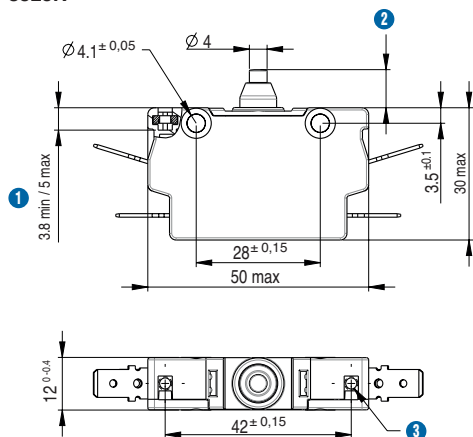
** For IP67 versions used in 125 V~, please consult us.

* Models 83254 and 83255 are designed to operate equally well on low-current (1 mA 4 V minimum recommended) or medium current circuits. However, a given product should only be used to switch one type of circuit during its working life.

Dimensions

Product

8325R

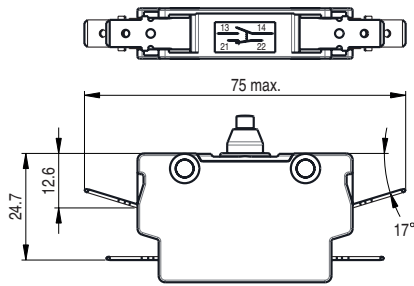


- ① Fixing screw threaded length
- ② Positions
- ③ 2 x M3 fixing holes

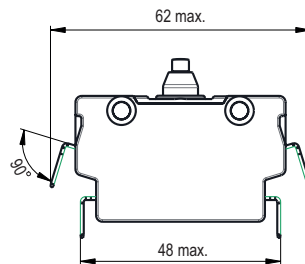
Max. tightening torque of fixing screws: 1.3 N.m on Ø 4.1 holes
0.9 N.m on M3 nuts

Connections

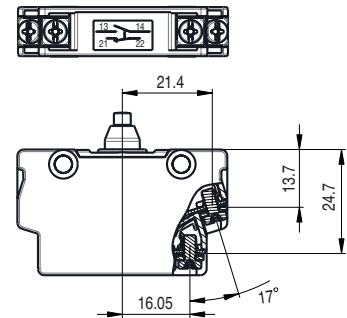
W3 quick-connect 6.3 x 0.8



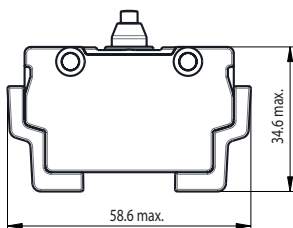
W3/90B quick-connect 6.3 x 0.8, 90° downward folding



W5 screw with clamp W1 screw with washer

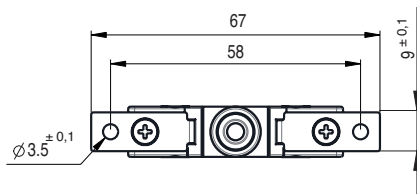


W5/IP20 screw with clamp IP20 protection



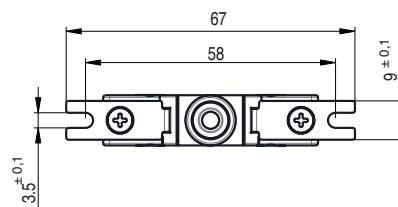
Mounting accessories

PT mounting plates with holes 79556204



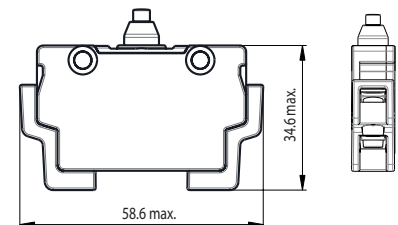
Thickness: 1 mm

PE mounting plates with notches 79556205



Thickness: 1 mm

IP20 screw connection cover 79556165



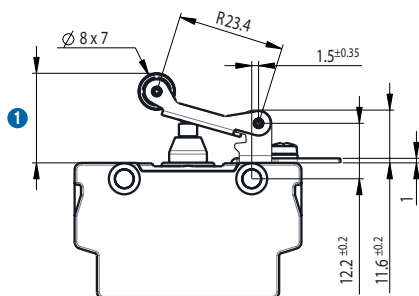
Snap-on mounting
2 pieces are needed

Actuators

LG roller lever 79556201

LG PT roller lever + plates with holes 79556202

LG PE roller lever + plates with notches 79556203



1 Positions

Mechanical characteristics on roller

	83250 / 83254 Standard	83252 / 83255 High Force
Maximum operating force (N)	2.4	3.7
Minimum release force (N)	0.4	1.3
Min. positive opening force (N)	14	14
Maximum rest position (mm)	20.5	20.5
Operating position (mm)	16.6 ± 0.5	16.6 ± 0.5
Min. positive opening position (mm)	14.5	14.5
Maximum total travel position (mm)	12	12
Differential travel (mm)	1.8 ± 0.55	1.8 ± 0.55

Actuators and mounting accessories

PBXR 8325 with referenced accessories

Roller lever Mounting plates Accessory kit			LG	LG	LG	-	-
			-	PT	PE	PT	PE
			79556201	79556202	79556203	79556204	79556205
83250	IP40	W3	83250003	83250004	83250005	•	•
		W3/90B	83250013	83250014	83250015	•	•
		W5	83250023	83250024	•	83250021	•
		W5/IP20	83250033	83250034	•	•	•
	IP67	W3	83250203	•	•	•	•
		W3/90B	83250213	83250214	•	•	•
		W5	83250223	83250224	83250225	83250221	•
		W5/IP20	•	•	•	•	•
	IP40	W3	83252003	83252004	83252005	•	•
		W3/90B	•	83252014	•	83252011	•
		W5	83252023	83252024	•	83252021	•
		W5/IP20	•	•	•	•	•
83252	IP67	W3	•	•	•	•	•
		W3/90B	•	•	•	•	•
		W5	83252223	83252224	•	•	•
		W5/IP20	•	•	•	•	•
83254	IP40	W3	83254003	83254004	•	•	•
		W3/90B	83254013	83254014	•	•	•
		W5	83254023	83254024	•	•	•
		W5/IP20	83254033	83254034	•	•	•
	IP67	W3	83254203	•	•	•	•
		W3/90B	83254213	•	•	•	•
		W5	83254223	83254224	•	•	•
		W5/IP20	•	•	•	•	•
83255	IP40	W3	83255003	•	•	•	•
		W3/90B	•	•	•	•	•
		W5	83255023	83255024	•	•	•
		W5/IP20	•	•	•	•	•
	IP67	W3	•	•	•	•	•
		W3/90B	•	•	•	•	•
		W5	•	•	•	•	•
		W5/IP20	•	•	•	•	•

Installation recommendations

See "Basic technical concepts".

To observe the required clearances and creepage distances in the connection area :

- above 125 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: 83250 IP67 W3/90B LG PE

Standard product

Product made to order



Contact us

Warning:

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79556165	79556201	79556202	79556203	79556204	79556205	83255024	83255030	83255200	83255220
83255230	83254224	83254230	83255000	83255003	83255020	83255023	83254200	83254203	83254210
83254213	83254220	83254223	83254020	83254023	83254024	83254030	83254033	83254034	83252230
83254000	83254003	83254004	83254013	83254014	83252024	83252030	83252200	83252220	83252223
83252224	83252010	83252011	83252014	83252020	83252021	83252023	83250225	83250230	83252000
83252003	83252004	83252005	83250213	83250214	83250220	83250221	83250223	83250224	83250030
83250033	83250034	83250200	83250203	83250210	83250014	83250015	83250020	83250021	83250023
83250024	83250000	83250003	83250004	83250005	83250010	83250013			