

Plastic bodied limit switch Series I81

Description **I81-U1Z RK**

Article number **6083000243**

Operating symbol

11 — 12 Direct opening action only at appropriate
23 — 24 actuating travel over device

Operating diagram
(R = Latch; F @ 20°, 0,1 m/s)

[mm]	11-12	23-24	[N]
0	Black	White	0,3
R 0,8	Black	White	4,5
0,9	White	Black	5,2
1,7	White	Black	4,4
2,4	Black	White	2,2
6	Black	White	

Fixed positioning with e.g. fixing screw M5 according to the standard DIN EN ISO 4762.

Legend:
 ■ ON
 □ OFF
 Tolerance:
 Operating point ± 0,25 mm;
 Direct opening action + 0,25 mm
 Operating force ± 10 %

	m/s	0,1	0,5	1	2	5
A	20°	20°	10°	5°	-	-
B	20°	20°	10°	5°	-	-

Electrical Data		
Rated insulation voltage	U_i	400 V
Rated impulse withstand voltage	U_{imp}	4 kV
Rated operational voltage	U_e	240 V AC / 24 V DC
Rated supply frequency AC		50 / 60 Hz
Overvoltage category		II acc. EN 60947-1 annex H table H1
Conv. thermal current	I_{the}	5 A
Minimum current		1 mA
Reliability		acc. EN 60947-5-4 @ 24 V DC, 10 mA, 1 mA, U_{kd} 10 %
Utilization category		AC 15, U_e/I_e 240 V / 1,5 A DC 13, U_e/I_e 24 V / 1,5 A (B300 table A.1)
Direct opening action	⊕	acc. IEC/EN 60947-5-1, annex K; direct opening force: tbd
Short-circuit protective device		Fuse 4 A gG
Rated conditional short-circuit current		400 A
Max. contact resistance		25 mOhm (unused)
Electrical life		on request

Mechanical data	
Enclosure	Thermoplastic, glass fibre reinforced (UL 94-V0)
Cover	Thermoplastic, glass fibre reinforced (UL 94-V0)
Actuator	Roller (Thermoplastic)
Reset facility	pull blue RESET - button
Actuating force	F_B 10 N $\leq F_B \leq$ 30 N
Operating temperature	-30 °C ... +75 °C
Storage temperature	-40 °C ... +80 °C
Protection type	IP66 / IP67 acc. EN 60529
Pollution degree (built-in switch)	3
Contact material	silver
Device Class (built-in switch)	Category E (MC3+CC2+SC1) acc. EN 60947-1 annex Q
Contact type	1 N.C. (Form Zb), 1 N.O.
Isolating distance	4 mm (2x2 mm)
Operating rate	V 0,06 m/min $\leq V \leq$ 30 m/min
Bounce duration	ms The value depends on the operating rate.
Switchover time	ms The value depends on the operating rate.
Switching frequency	\leq 60 / min.
Mechanical life	1 x 10 ⁵ operating cycles
Mission time	\leq 20 years
Connection	4 screw connections (M3)
Conductor cross-sections	Solid or Litz wire with ferrules 0,34 mm ² - 1,5 mm ² ; AWG 22-16
Cable entrance	1 x M20 x1,5
Weight	\approx 0,11 kg
Installation position	operator definable

Actuation	
The actuating device is preferably started from 2 sides. By lifting the clamp the actuation assembly can be rotated in 45° increments such that 8 actuation directions are possible. The actuation assembly is to be again fastened to the housing by lowering the clamp.	

ID for safety engineering	
B10d N.C.	2 x 10 ⁵ cycles Tbd (check acc. to DIN EN 60947-5-1)
B10d N.O.	1 x 10 ⁵ cycles (Tbd contact with reduced power for consumers with resistive load)

Standards	
	VDE 0660 T100, DIN EN 60947-1, IEC 60947-1
	VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1
	VDE 0660 T211, DIN EN 60947-5-4, IEC 60947-5-4
	UL 60947-1, CAN/CSA-22.2 No. 60947-1-13
	UL 60947-5-1, CAN/CSA-C22.2 No. 60947-5-1-14
	DIN EN ISO 13849-1
	DIN EN ISO 13849-2
	UL 508
	EN 81

EU Conformity	
acc. to directive 2006/42/EC	

Approvals	
	CCC
	Approvals for the North American market have been applied for
	TÜV (in preparation)

Notes	
The degree of protection (IP code) specified applies solely to a property closed cover and the use of an equivalent cable gland with adequate cable.	