

Plastic bodied limit switch Series I81

Description I81-U1Z AHK	Article number 6083000246
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Operating symbol

Direct opening action only at appropriate actuating travel over device

Operating diagram
(R = Latch; F @ 45°, 0,1m/s)

Angle	Force [N]
0°	0,3
R 11,7°	3,7
12,7°	
23,1°	2,2
32°	2,2
73,4°	2,1

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

	m/s	0,1	0,5	1	2	5
A		45°	45°	45°	40°	30°
B		45°	45°	45°	40°	30°

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
Utilization category		AC 15, U_e/I_e 240 V / 3 A DC 13, U_e/I_e 24 V / 4 A
Direct opening action	⊖	acc. IEC/EN 60947-5-1, annex K
Short-circuit protective device		Fuse 4 A gG
Rated conditional short-circuit current		400 A
Max. contact resistance		25 mOhm (unused)

Mechanical data	
Enclosure	Thermoplastic, glass fibre reinforced (UL 94-V0)
Cover	Thermoplastic, glass fibre reinforced (UL 94-V0)
Actuator	Lever arm housing (GD-Zn), Lever (GD-Zn), roller (thermoplastic (UL 94-V2))
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	1×10^5 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 0,16 kg
Installation position	operator definable

Actuation
<p>The actuating device is preferably started from 2 sides. By lifting the clamp the actuation assembly can be rotated in 45° increments such that 16 actuation directions are possible. The actuation assembly is to be again fastened to the housing by lowering the clamp.</p>

ID for safety engineering
B10d N.C. 2 x 10 ⁵ cycles
B10d N.O. 1 x 10 ⁵ cycles

Standards
VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1
UL 508 / CSA C22.2 No.14
DIN EN ISO 13849-1
EN81-20
EN81-50

EU Conformity
acc. to directive 2006/42/EC (Safety-of-Machinery-Directive)

Approvals	
	CCC (AC 15, U _e /I _e 240 V / 1,5 A; DC 13, U _e /I _e 24 V / 1,5 A)
	cCSA _{US} B300, 240Vac 1.5A G.P., 24Vdc 1.5A R. Enclosure Type 4X
	TÜV SÜD (AC 15, U _e /I _e 240 V / 1,5 A; DC 13, U _e /I _e 24 V / 1,5 A)

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.	