

# Plastic bodied limit switch Series IN65

Description <b>IN65-U1Z KNK</b>	Article number <b>6183000202</b>
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**Operating symbol**

**Operating diagram**

[mm]	11-12	23-24	[N]
0	■	□	5
1,9	□	□	
3,2	□	□	
4,4	□	■	
10,1	□	■	18

ON  
 OFF

Tolerance:  
 Operating point ± 0,45 mm;  
 Direct opening action +0,45 mm  
 Operating force ± 10 %

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	-	-	-	-	-
B	40°	40°	30°	20°	10°

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; direct opening force: 22 N
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 with roller (Thermoplastic)
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	10 x 10 <sup>6</sup> operating cycles
Mission time	$\leq$ 20 years
Connection	4 screw connections (M3)
Conductor cross-sections	Solid or Litz wire with ferrules 0,34 mm <sup>2</sup> - 1,5 mm <sup>2</sup> ; AWG 22-16
Cable entrance	1 x M20 x1,5
Weight	$\approx$ 0,08 kg
Installation position	operator definable

Actuation
The actuating device is preferably started from 1 side. 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. 20 x 10 <sup>6</sup> cycles
B10d N.O. 1 x 10 <sup>6</sup> 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
DGUV (AC 15, U <sub>e</sub> /I <sub>e</sub> 240 V / 1,5 A; DC 13, U <sub>e</sub> /I <sub>e</sub> 24 V / 1,5 A)
CCC (AC 15, U <sub>e</sub> /I <sub>e</sub> 240 V / 1,5 A; DC 13, U <sub>e</sub> /I <sub>e</sub> 24 V / 1,5 A)
cCSA <sub>US</sub> B300, 240Vac 1.5A G.P., 24Vdc 1.5A R. Enclosure Type 4X
TÜV SÜD (AC 15, U <sub>e</sub> /I <sub>e</sub> 240 V / 1,5 A; DC 13, U <sub>e</sub> /I <sub>e</sub> 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.

The actuating device is preset to 270 ° at delivery.