

# Plastic bodied limit switch Series IN65

Description <b>IN65-SU1Z AHK</b>	Article number <b>6083000235</b>
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**Operating symbol**

**Operating diagram**

ON  
 OFF

**Tolerance:**  
 Operating point  $\pm 3,5^\circ$ ;  
 Direct opening action  $+ 3,5^\circ$   
 Operating force  $\pm 10\%$

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

Dimensions:  $\varnothing 18$ , 24, 11,5, 7,5,  $\varnothing 4,2$ , 20, 22, 65,5, 108, 11, 21,5, 10, 4,8, 8, 16, 30,3, 31, M20x1,5.

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
Reliability		acc. EN 60947-5-4 @ 24 V DC, 10 mA, 1 mA, $U_{kd}$ 2,4 V DC
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	$\ominus$	acc. IEC/EN 60947-5-1, annex K; direct opening force: 23 N
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

<b>Mechanical data</b>	
Enclosure	Thermoplastic, glass fibre reinforced (UL 94-V0)
Cover	Thermoplastic, glass fibre reinforced (UL 94-V0)
Actuator	Metal lever with plastic roller / lever in 15 ° increments adjustable
Actuating force	$F_B$ 10 N ≤ $F_B$ ≤ 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.
Operating rate	$V$ 0,06 m/min ≤ $V$ ≤ 30 m/min
Bounce duration	ms < 3 ms
Switchover time	ms < 8 ms
Switching frequency	≤ 60 / min.
Mechanical life	15 x 10 <sup>6</sup> operating cycles
Mission time	≤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	≈ 0,09 kg
Installation position	operator definable

<b>Actuation</b>
<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>

<b>ID for safety engineering</b>	
B10d N.C.	30 x 10 <sup>6</sup> cycles Tbd (check acc. to DIN EN 60947-5-1)
B10d N.O.	1 x 10 <sup>6</sup> cycles (Tbd contact with reduced power for consumers with resistive load)

<b>Standards</b>
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

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

Approvals
DGUV
CCC
cCSA <sub>US</sub> B300, 240Vac 1.5A G.P., 24Vdc 1.5A R. Enclosure Type 4X

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.