

# Plastic bodied limit switch Series IN65

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Description <b>IN65-SU1 AVK M12</b> | Article number <b>6083000331</b> |
|-------------------------------------|----------------------------------|

**Operating symbol**

(1) 13 - 14 (2)  
(3) 21 - 22 (4)

**Plug**

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

**Operating diagram**

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| 0°    | 21-22 | 13-14 | 13-14 | 21-22 | [Ncm] |
| 19,5° | ON    | OFF   | OFF   | ON    | 9,8   |
| 38,7° | ON    | OFF   | OFF   | ON    | 10,7  |
| 75,6° | ON    | OFF   | OFF   | ON    | 11,3  |
|       | ON    | OFF   | OFF   | ON    | 22,7  |

ON
  OFF

Tolerance:  
 Operating point ± 3,5°;  
 Operating torque ± 20 %

|  |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|-----|
|  | 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                | $U_i$     | 250 V   |
| Rated impulse withstand voltage         | $U_{imp}$ | 2,5 kV  |
| Rated operational voltage               | $U_e$     | 240 V AC  |
| Rated supply frequency AC               |           | 50 / 60 Hz  |
| Overvoltage category                    |           | II acc. EN 60947-1 annex H table H1                         |
| Conv. thermal current                   | $I_{the}$ | 4 A   |
| Minimum current                         |           | 1 mA  |
| Utilization category                    |           | AC 15, $U_e/I_e$ 240 V / 3 A<br>DC 13, $U_e/I_e$ 24 V / 4 A |
| 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                           |       | Metal lever with plastic roller / lever in 15 ° increments adjustable                   |
| 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.  |
| Operating rate                     | $V$   | 0,06 m/min $\leq V \leq$ 30 m/min   |
| Bounce duration                    | ms    | < 3 ms  |
| Switchover time                    | ms    | < 8 ms  |
| Switching frequency                |       | $\leq$ 60 / min.  |
| Mechanical life                    |       | 10 x 10 <sup>6</sup> operating cycles   |
| Mission time                       |       | $\leq$ 20 years   |
| Connection                         |       | Connector M12x1, A-coded  |
| 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                             |       | $\approx$ 0,09 kg   |
| Installation position              |       | operator definable  |

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

| Standards                                      |
|--|
| VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1 |
| UL 508 / CSA C22.2 No.14                       |

**EU Conformity**

acc. to directive 2014/35/EU (Low-Voltage-Directive)

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

The degree of protection specified (IP code) applies only to a properly closed cover and the use of an equivalent connector.  
The connector and the cable (fix or flexible mounted) must at least be suitable for the described ambient air temperatures.  
The connector must not be connected or disconnected when voltage is applied.  
The mechanical life of the connector is 100 connection cycles.  
Suitable connector and cable must be used to meet approval requirements.