

SAFETY PRODUCTS

MKEY 9 Series Safety Switch Data Sheet

MKey 9 is a mechanical solenoid safety switch used for monitoring doors and hatches.

The switch is mounted on the frame and the actuator key on the moving part of the guard.

Available in a spring lock (power to unlock).
Comes standard with a stainless steel head.



Easy to install

Variety of actuators

Many types of actuators available depending on application.

Easy mounting

Rotating head allows for up to 8 actuating positions allowing for many mounting possibilities.



Continuous operation

Protect against unwanted stops

A strong holding force of up to 1800 N prevents unwanted process stops.

Long Mechanical Life

Cam system in switches all rotate the same direction reducing wear giving long mechanical life and good tolerance to misalignment.



Safety and Protection

Added Safety

Auxiliary release on front and side making it is always possible to open the door from inside the dangerous zone.

Safe Locking

Models that use a power to unlock can be used as a safety lock

Ordering Information

| Description | Material Housing | Material Head | Type | Order code |
|--|------------------|-----------------|--------|-----------------|
| Spring lock, ½ NPT, 24VDC, No Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1012 |
| Spring lock, ½ NPT, 115VAC, No Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1013 |
| Spring lock, ½ NPT, 230VAC, No Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1014 |
| Spring lock, ½ NPT, 24VDC, Standard Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1112 |
| Spring lock, ½ NPT, 115VAC, Standard Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1113 |
| Spring lock, ½ NPT, 230VAC, Standard Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1114 |
| Spring lock, ½ NPT, 24VDC, Flat Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1212 |
| Spring lock, ½ NPT, 115VAC, Flat Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1213 |
| Spring lock, ½ NPT, 230VAC, Flat Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1214 |
| Spring lock, ½ NPT, 24VDC, Metal Flex Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1412 |
| Spring lock, ½ NPT, 115VAC, Metal Flex Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1413 |
| Spring lock, ½ NPT, 230VAC, Metal Flex Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1414 |
| Spring lock, ½ NPT, 24VDC, SS Flex Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1512 |
| Spring lock, ½ NPT, 115VAC, SS Flex Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1513 |
| Spring lock, ½ NPT, 230VAC, SS Flex Key | Polyester | Stainless Steel | MKEY 9 | 2TLA050007R1514 |

Accessories

| Description | Material Housing | Order code |
|---------------------------------------|------------------|-----------------|
| Standard Key | Stainless Steel | 2TLA050040R0202 |
| Flex Key with metal housing | Stainless Steel | 2TLA050040R0203 |
| Flex Key with stainless steel housing | Stainless Steel | 2TLA050040R0204 |
| Flat Key | Stainless Steel | 2TLA050040R0220 |
| ½ NPT Cable Gland | Stainless Steel | 2TLA050040R0001 |

Additional information can be found in the [MKEY 9 Product Manual](#).

| | |
|--|---|
| Technical Data | |
| Manufacturer | |
| Address | ABB Electrification Sweden AB / JOKAB SAFETY Varlabergsvägen 11 SE-434 39 Kungsbacka Sweden |
| Electrical characteristics | |
| Utilization category | AC-15 A300 3A |
| Thermal current | 10A |
| Rated insulation/withstand voltages | 600 VAC/2500 VAC |
| LED 2 supply voltage | 24VDC +/-10% |
| Solenoid power consumption | 12 W |
| Solenoid voltage (by part number) | 24VDC +/-10% or 230VAC +/-10% |
| Auxiliary Contact 33/34 (selectable with LED2) | 230VAC/DC 500mA max. |
| Auxiliary Contact 43/44 | 230VAC/DC 500mA max. |
| General | |
| Travel for positive opening | 10 mm |
| Actuation Frequency | 2 cycle/sec |
| Actuator entry minimum radius | 175 mm Standard Key 100 mm Flexible Key |
| Protection class | IP67 |
| Ambient temperature | -25...+80°C |
| Size | 160mm(length) x 46mm(width) x 45.5mm(height) |
| Conduit entries | ½ NPT |
| Material | Stainless steel 316/Glass filled Polyester |
| Fixing | Body: 4 x M5 Actuator: 2 x M5 |
| Maximum approach / withdrawal speed | 600 mm/s |
| Holding force | 1800N (Max.) |
| Vibration | IEC 68-2-6, 10-55 Hz+1 Hz, Excursion: 0.35 mm, 1 octave/min |
| Safety-related characteristic data and Conformity | |
| Conformity | European Machinery Directive 2006/42/EC EN ISO 12100, EN ISO 14119, EN 60204- 1:2006+A1:2009 EN 60947-1:2007+A1:2011, EN 60947-5-1:2004+A1:2009 |
| EN ISO 13849-1 | Up to PL e, Cat. 4 depending on system architecture |
| EN 62061 | Up to SIL3 depending on system architecture |
| Safety data | 2,500,000 operations at 100 mA load |
| B10d | 356 years (8 cycles per hour / 24 hours per day / 365 days per year) |
| MTTFd | 35 years |
| Proof test interval (Life) | 35 years |
| Certifications | TÜV, cULus |
| Information with regard to UL 508 | Use 12AWG copper conductors only Electrical Rating: A300 48W5 Type 1 Enclosure Max. Switching Current / Volt / Amp: 120V 6A (720VA break) PF 0.38, 240V 3A (720VA break) PF 0.38 |

NOTE: A single switch can achieve PL c, category 1, according to EN ISO 13849-1 if used correctly with a safety controller. If a fault exclusion is applied according to EN ISO 14119, it is possible to reach PL d, category 3, with e.g. the Slide Lock combined with the MKey switch.

A single switch combined with a second interlocking switch, can reach PL e, category 4, if a fault exclusion is applied meeting the requirements of EN ISO 14119 and EN ISO 13849-1.

ABB Inc.
305 Gregson Drive
Cary, North Carolina 27511
United States
electrification.us.abb.com/
products/machine-motor-control

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG.
Copyright© 2022 ABB
All rights reserved