

SAFETY PRODUCTS

# MKEY 8M Series Safety Switch Data Sheet

MKey 8M are mechanical solenoid safety switches 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 electro-magnetic lock (power to lock). Option for a stainless steel head is also available.



## 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 2000 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

Actuator key is designed to prevent tampering with the safety switch by using a tool, magnet or and similar object.

### Safe Locking

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

**Ordering Information**

<b>Description</b>	<b>Material Housing</b>	<b>Material Head</b>	<b>Type</b>	<b>Order code</b>
Power to lock, ½ NPT, 24VDC, No Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1032
Power to lock, ½ NPT, 115VAC, No Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1033
Power to lock, ½ NPT, 230VAC, No Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1034
<b>Power to lock, ½ NPT, 24VDC, Standard Key</b>	<b>Die Cast</b>	<b>Die Cast</b>	<b>MKEY 8M</b>	<b>2TLA050013R1132</b>
Power to lock, ½ NPT, 115VAC, Standard Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1133
Power to lock, ½ NPT, 230VAC, Standard Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1134
Power to lock, ½ NPT, 24VDC, Flat Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1232
Power to lock, ½ NPT, 115VAC, Flat Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1233
Power to lock, ½ NPT, 230VAC, Flat Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1234
Power to lock, ½ NPT, 24VDC, Metal Flex Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1432
Power to lock, ½ NPT, 115VAC, Metal Flex Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1433
Power to lock, ½ NPT, 230VAC, Metal Flex Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1434
Power to lock, ½ NPT, 24VDC, SS Flex Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1532
Power to lock, ½ NPT, 115VAC, SS Flex Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1533
Power to lock, ½ NPT, 230VAC, SS Flex Key	Die Cast	Die Cast	MKEY 8M	2TLA050013R1534
Power to lock, ½ NPT, 24VDC, No Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1042
Power to lock, ½ NPT, 115VAC, No Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1043
Power to lock, ½ NPT, 230VAC, No Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1044
<b>Power to lock, ½ NPT, 24VDC, Standard Key, SS Head</b>	<b>Die Cast</b>	<b>Stainless Steel</b>	<b>MKEY 8M</b>	<b>2TLA050013R1142</b>
Power to lock, ½ NPT, 115VAC, Standard Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1143
Power to lock, ½ NPT, 230VAC, Standard Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1144
Power to lock, ½ NPT, 24VDC, Flat Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1242
Power to lock, ½ NPT, 115VAC, Flat Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1243
Power to lock, ½ NPT, 230VAC, Flat Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1244
Power to lock, ½ NPT, 24VDC, Metal Flex Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1442
Power to lock, ½ NPT, 115VAC, Metal Flex Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1443
Power to lock, ½ NPT, 230VAC, Metal Flex Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1444
Power to lock, ½ NPT, 24VDC, SS Flex Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1542
Power to lock, ½ NPT, 115VAC, SS Flex Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1543
Power to lock, ½ NPT, 230VAC, SS Flex Key, SS Head	Die Cast	Stainless Steel	MKEY 8M	2TLA050013R1544

NOTE: Anything in **bold** is typically stocked.

**Accessories**

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

NOTE: Anything in **bold** is typically stocked.

Additional information can be found in the [MKEY 8 Product Manual](#).

<b>Technical Data</b>	
<b>Manufacturer</b>	
Address	ABB Electrification Sweden AB / JOKAB SAFETY Varlabergsvägen 11 SE-434 39 Kungsbacka Sweden
<b>Electrical characteristics</b>	
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 (inrush current 1.5A)
Solenoid voltage (by part number)	24VDC +/-10% or 230VAC +/-10%
Auxiliary Contact 43/44	24VDC 200mA max.
<b>General</b>	
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...+40°C
Size	See manual
Conduit entries	3 x ½ NPT
Material	Die cast painted red
Fixing	Body: 4 x M5 Actuator: 2 x M5
Maximum approach / withdrawal speed	600 mm/s
Holding force	2000N (Max.)
Vibration	IEC 68-2-6, 10-55 Hz+1 Hz, Excursion: 0.35 mm, 1 octave/min
<b>Safety-related characteristic data and Conformity</b>	
Conformity	European Machinery Directive 2006/42/EC EN ISO 12100:2010, EN 1088:1995+A2:2008, 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 MKey8 can achieve performance level PL c according to EN ISO 13849 if used correctly with an ABB Jokab Safety safety relay, Pluto safety-PLC or Vital safety module. If two MKey8-switches are used for the same safety function, a performance level up to PL e can be achieved. Refer to EN ISO 13849 for details on how to achieve this if necessary.

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