

SAFETY PRODUCTS

MKEY 5Z Series Safety Switch Data Sheet

MKey 5Z is a mechanical 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.

Comes standard with a stainless steel 316 enclosure and IP69K rating.



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

“Double wide seal gaskets” enables switches to keep its IP rating for the life of the switch.

Long Mechanical Life

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



Optimum Interface

Small Design

Small footprint makes it easy to install in restricted space.

Industry Footprint

Standard industry footprint for smaller mechanical switches and ½ NPT conduit entry.

Ordering Information

Description	Material Housing	Material Head	Type	Order code
MKEY 5, ½ NPT, No Key	Stainless Steel	Stainless Steel	MKEY 5Z	2TLA050003R1020
MKEY 5 ½ NPT, Standard Key	Stainless Steel	Stainless Steel	MKEY 5Z	2TLA050003R1120
MKEY 5, ½ NPT, Flat Key	Stainless Steel	Stainless Steel	MKEY 5Z	2TLA050003R1220
MKEY 5, ½ NPT, Plastic Flex Key	Stainless Steel	Stainless Steel	MKEY 5Z	2TLA050003R1320
MKEY 5, ½ NPT, Metal Flex Key	Stainless Steel	Stainless Steel	MKEY 5Z	2TLA050003R1420
MKEY 5, ½ NPT, SS Flex Key	Stainless Steel	Stainless Steel	MKEY 5Z	2TLA050003R1520
MKEY 5+, ½ NPT, No Key, 40N	Stainless Steel	Stainless Steel	MKEY 5Z+	2TLA050003R1021
MKEY 5+ ½ NPT, Standard Key, 40N	Stainless Steel	Stainless Steel	MKEY 5Z+	2TLA050003R1121
MKEY 5+, ½ NPT, Flat Key, 40N	Stainless Steel	Stainless Steel	MKEY 5Z+	2TLA050003R1221
MKEY 5+, ½ NPT, Plastic Flex Key, 40N	Stainless Steel	Stainless Steel	MKEY 5Z+	2TLA050003R1321
MKEY 5+, ½ NPT, Metal Flex Key, 40N	Stainless Steel	Stainless Steel	MKEY 5Z+	2TLA050003R1421
MKEY 5+, ½ NPT, SS Flex Key, 40N	Stainless Steel	Stainless Steel	MKEY 5Z+	2TLA050003R1521

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

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

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

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	500 VAC/2500 VAC
Contacts	2NC + 1NO
General	
Travel for positive opening	6 mm
Actuator entry minimum radius	175 mm Standard Key 100 mm Flexible Key

Protection class	IP67, IP69K
Ambient temperature	-25...+80°C
Size	See manual
Conduit entries	½ NPT
Material	Stainless Steel
Fixing	Body: 2 x M5 Actuator: 2 x M5
Maximum approach / withdrawal speed	600 mm/s
Holding Force	MKEY 5Z: 12N MKEY 5Z+: 40N
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 12100:2010, 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	
B10d	2,500,000 operations at 100 mA load
MTTFd	356 years (8 cycles per hour / 24 hours per day / 365 days per year)
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 MKey5Z 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 MKey5Z-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.

—
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