

MK23 Series Surface Mount Reed Sensors

DESCRIPTION

MK23 Series Reed Sensors are non-molded, magnetically actuated, and designed for surface mounting.

FEATURES

- Hermetically sealed
- Dynamically tested contacts
- Millions of reliable operations
- Eight different switch models (SPST & SPDT)
- Multiple lead designs
- No external power required for sensor operation
- Tape & Reel packaging (IEC 60286-3)
- Suitable for automatic pick and place

APPLICATIONS

- Air Conditioning/Purifying System
- Exit Device Motor Latch
- Gas Metering System
- Handheld Barcode Scanners
- Personal Watercraft Propulsion
- Security Panel
- Smart Security Key
- Surveillance Inspection Camera
- Water Flow Gauge
- Wireless Helmet Brake & Turn
- Indicator Light

MARKETS

- Automotive, Aviation, Marine,
- Telecommunications, Security
- Test & Measurement, Household
- Medical, Computer

MK23-85

MK23-52

MK23-90

MK23-66

MK23-46

MK23-35

MK23-87

MK23-80



- The MK23 Series offers versatility with multiple surface mount lead designs
- Non-molded compact designs offer high density board population with multipoint sensing
- Available in Single Pole Single Throw (Form A) & Single Pole Double Throw (Form C) and multiple lead designs
- High Insulation compared to Hall Effect
- No external power required for operation

Our MK23 Series Reed Sensors have expanded with the addition of our new MK23-90 Reed Sensor. The MK23-90-C-2 is a Single-Pole Double-Throw switch with a 14mm glass body. This SPDT (Form C) surface mount sensor comes in two lead designs, lead design 1 (straight cut axial lead) and lead design 2 ("Gull Wing" with coined bent leads). The MK23-90 sensor comes in 5 contact sensitivity ranges (B, C, D, E, & F), listed on page 3 of this product spotlight. Choose from glass sizes ranging from 7mm-21mm in low and high power configurations.

The MK23 Series is a non-molded version of our surface mount sensors, offering a more economic and compact design as compared to our over-molded sensors. The MK23 series is sold in Tape & Reel packing and is suitable for pick and place automation. MK23 Reed Sensors are magnetically actuated and are ideal in applications that require little or no external power to operate. The MK23 Series offers versatility in that it can be designed into any application where single or multi-point position or liquid level sensing is required.

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MK23 SERIES CONTACT DATA

All Data at 20° C	Contact Form →	Switch Model								Unit	
		A									B/C
		35	46	52	66	80	85	87	90		
Contact Ratings	Conditions										
Rated Power (max.)	Any DC combination of V & A not to exceed their individual max.'s	20*	10*	50*	10*	10*	100*	10*	10*	W	
Switching Voltage (max.)	DC or peak AC	200	200	250	200	170	1000	200	175	V	
Switching Current (max.)	DC or peak AC	1.0	0.5	0.5	0.5	0.25	1.0	0.5	0.5	A	
Carry Current (max.)	DC or peak AC	1.25	1.0	2.5	1.25	0.5	2.5	0.5	1.0	A	
Static Contact Resistance (max.)	w/ 0.5V & 10mA	150	150	150	150	200	150	150	150	mΩ	
Insulation Resistance (min.)	RH 45%	10 ¹²	10 ¹²	10 ¹⁰	10 ¹⁰	10 ⁹	10 ¹⁰	10 ⁹	10 ⁹	Ω	
Breakdown Voltage (min.)	Voltage applied for 60 sec. min.	320	225	600	225	210	2000	230	200	VDC	
Operation Time incl. Bounce (max.)	Measured w/ 100% overdrive	0.5	0.7	1.0	0.5	0.6	1.1	0.6	0.7	ms	
Release Time (max.)	Measured w/ no coil suppression	0.1	0.1	0.2	0.1	0.1	0.1	0.1	1.5	ms	
Capacitance (typ.)	At 10kHz across contact	0.2	0.2	0.2	0.2	0.2	0.5	0.2	1.0	pF	
Contact Operation **											
Pull-In		10-30	10-40	15-70	10-30	10-70	15-70	7-37	10-30	AT	
Environmental Data											
Shock Resistance (max.)	½ sine wave duration 11ms	30	50	50	50	50	50	50	50	g	
Vibration Resistance (max.)	From 10-2000 Hz	20	20	20	20	20	20	20	20	g	
Operating Temp.	10°C/ minute max. allowable	-40 up to + 130								°C	
Storage Temp.	10°C/ minute max. allowable	-55 up to + 130								°C	
Soldering Temp. (max.)	5 sec. dwell	260	260	260	260	260	260	260	260	°C	

* The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch. Consult factory if more detail is required.

** These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section of our catalog. Consult factory if more detail is required.

Part Number Example

MK23 – 35 – B – 2

35 Reed Switch contact form

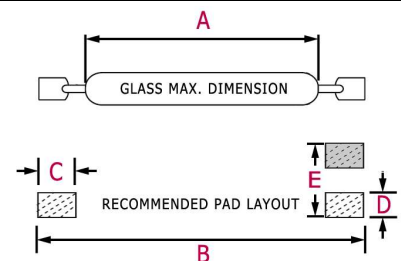
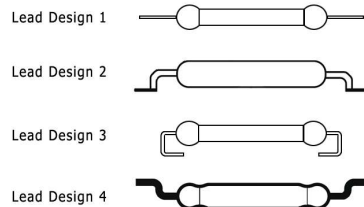
B Is the magnetic sensitivity class

2 is the lead design

MK23 SERIES SENSITIVITY CLASS / LEAD DESIGNS

Series	Contact Form	Sensitivity Class	Pull-In Range mT	Lead Design	Max. Glass	Recommended Pad Layout					Lead Design
						A	B	C	D	E	
MK23	35	B	1.0 – 2.3	1, 2, 3	10mm	17mm	2mm	1.5mm			1 + 2
MK23	35	C	1.5 – 3.1	1, 2, 3	10mm	13.5mm	2mm	1.5mm			3
MK23	46	B	1.1 – 1.8	2, 4	12mm	18mm	1.9mm	1.8mm			2
MK23	46	C	1.5 – 2.1	2, 4	12mm						
MK23	46	D	2.0 – 2.5	2, 4	12mm	19.3mm	1.9mm	1.8mm			4
MK23	46	E	2.4 – 3.0	2, 4	12mm						
MK23	66	B	1.1 – 1.8	2, 4	14mm	20.3mm	2.8mm	2.0mm			2
MK23	66	C	1.5 – 2.1	2, 4	14mm						
MK23	66	D	2.0 – 2.5	2, 4	14mm	21.3mm	1.9mm	1.8mm			4
MK23	66	E	2.4 – 3.0	2, 4	14mm						
MK23	80	B	1.6 – 2.2	2, 4	7mm	13.5mm	1.6mm	1.5mm			2
MK23	80	C	1.9 – 2.5	2, 4	7mm						
MK23	80	D	2.3 – 2.7	2, 4	7mm	14.3mm	1.7mm	1.6mm			4
MK23	80	E	2.5 – 3.0	2, 4	7mm						
MK23	87	B	1.1 – 1.8	2, 4	10mm	16mm	1.7mm	1.6mm			2
MK23	87	C	1.7 – 2.4	2, 4	10mm						
MK23	87	D	2.3 – 2.7	2, 4	10mm	17.3mm	1.8mm	1.7mm			4
MK23	87	E	2.5 – 3.0	2, 4	10mm						
MK23	90	B	2.6 – 3.1	1, 2	14mm	26.8mm	3.0mm	0.75mm	4.35mm		1
MK23	90	C	3.1 – 3.8	1, 2	14mm						
MK23	90	D	3.8 – 4.5	1, 2	14mm	26.8mm	3.0mm	0.75mm	4.35mm		2
MK23	90	E	4.4 – 5.1	1, 2	14mm						
MK23	90	F	5.0 – 5.6	1, 2	14mm						
MK23	52 / 85	C	0.8 – 1.1	1, 2	21mm	30.0mm	2.0mm	3.0mm			1
MK23	52 / 85	D	1.1 – 1.4	1, 2	21mm						
MK23	52 / 85	E	1.4 – 2.1	1, 2	21mm	30.0mm	2.8mm	2.0mm			2
MK23	52 / 85	F	2.1 – 2.4	1, 2	21mm						
MK23	52 / 85	G	2.4 – 2.7	2	21mm						

USE AS A REFERENCE ONLY



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