

Reed Sensors for Screw Fastening



DESCRIPTION

MK4 sensors are magnetically operated Reed proximity switches designed for screw mounting. The sensor should be mounted on a fixed surface with the actuating magnet on the moving surface. Introduction or removal of the magnetic field determines the closing and opening of the Reed Switch.

APPLICATIONS

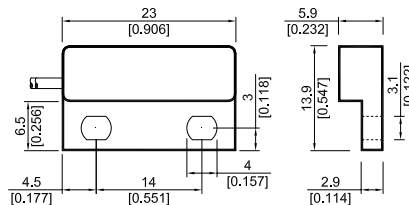
- **Position and limit switch**
Pneumatic or hydraulic actuator position indication and end travel limit switch
- **Door and window contacts**
Security system applications
- **Level sensor**
Use with magnetic floats for water level detection in coffee makers, washing machines or dishwashers

FEATURES

- Form A, B, and C available
- High power switches available
- Other cables, connectors and colors available
- Various case sizes available
- Five operate sensitivities available
- A choice of cable terminations and lengths are available

DIMENSIONS

All dimensions in mm [inches]



ORDER INFORMATION

Part Number Example

MK4 - 1A66 C - 500 W

1A is the contact form
66 is the switch model
C is the magnetic sensitivity
500 is the cable length (mm)
W is the termination

SERIES	CONTACT FORM	SWITCH MODEL	MAGNETIC SENSITIVITY	CABLE LENGTH (mm)	TERMINATION
MK4 -	XX	XX	X -	XXX	X
OPTIONS	1 Form A	66	B, C, D, E	500 *	W, X, Y
		81	A		
		84	C, D, E		
	90				
1 Form B 1 Form C					

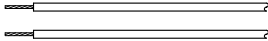
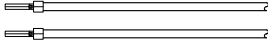

* Other cable lengths available.

MAGNETIC SENSITIVITY

SENSITIVITY CLASS	PULL IN AT RANGE
A	5 - 10
B	10 - 15
C	15 - 20
D	20 - 25
E	25 - 30

TERMINATION

For wire and termination details please consult factory.
 Form C version requires 3 conductors.

W		The cable cut length includes: 5mm of wire stripped and tinned
X		The cable cut length includes: individual crimped terminals
Y		The cable cut length includes: individual spade terminals

**Reed Sensors
for Screw Fastening**
CONTACT DATA

All data at 20 °C	Switch Model --> Contact Form -->	Switch 66 Form A			Switch 81 Form A			Units
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Contact Ratings	Conditions							
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			10			5	W
Switching Voltage	DC or peak AC			200			90	V
Switching Current	DC or peak AC			0.5			0.5	A
Carry Current	DC or peak AC			1.25			1.0	A
Static Contact Resistance	w/ 0.5V & 10mA			150			200	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200			200	mΩ
Insulation Resistance across Contacts	100 Volts applied	10 ¹⁰ *			10 ⁹			Ω
Breakdown Voltage across Contacts	Voltage applied for 60 sec. min.	225 *			100			VDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			0.5			0.5	ms
Release Time	Measured w/ no coil suppression			0.1			0.1	ms
Capacitance	@ 10kHz across contact		0.2			0.2		pF
Contact Operation **								
Must Operate Condition	Steady state field	10		30	5		10	AT
Must Release Condition	Steady state field	4		27	2		9	AT
Environmental Data								
Shock Resistance	1/2 sine wave duration 11ms			50			30	g
Vibration Resistance	From 10 - 2000 Hz			20			10	g
Ambient Temperature	10 °C/ minute max. allowable	-20		85	-20		85	°C
Storage Temperature	10 °C/ minute max. allowable	-35		85	-35		85	°C
Soldering Temperature	5 sec. dwell			260			260	°C

Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch.
* Insulation resistance of 10¹² and breakdown voltage of 480 VDC is available.
** These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required.

CONTACT DATA

All data at 20 °C	Switch Model → Contact Form →	Switch 84 Form A			Switch 90 Form B / C			Units
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Contact Ratings	Conditions							
Switching Power	Any DC combination of V & A not to exceed their individual max's			10			3	W
Switching Voltage	DC or peak AC			400			175	V
Switching Current	DC or peak AC			0.5			0.25	A
Carry Current	DC or peak AC			1.0			1.2	A
Static Contact Resistance	w/ 0.5V & 10mA			150			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200			250	mΩ
Insulation Resistance across Contacts	100 Volts applied	10 ¹¹			10 ⁹			Ω
Breakdown Voltage across Contacts	Voltage applied for 60 sec. min.	700			200			VDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			2.0			0.7	ms
Reset Time	Measured w/ no coil suppression			0.1			1.5	ms
Capacitance	@ 10kHz across contact		0.7			1.0		pF
Contact Operation **								
Must Operate Condition	Steady state field	15		30	10		35	AT
Must Reset Condition	Steady state field	6		27	4		30	AT
Environmental Data								
Shock Resistance	1/2 sine wave duration 11ms			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20	g
Ambient Temperature	10 °C/ minute max. allowable	-20		85	-20		85	°C
Storage Temperature	10 °C/ minute max. allowable	-35		85	-35		85	°C
Soldering Temperature	5 sec. dwell			260			260	°C
Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch. ** These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required.								



Products for tomorrow

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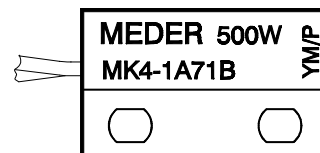
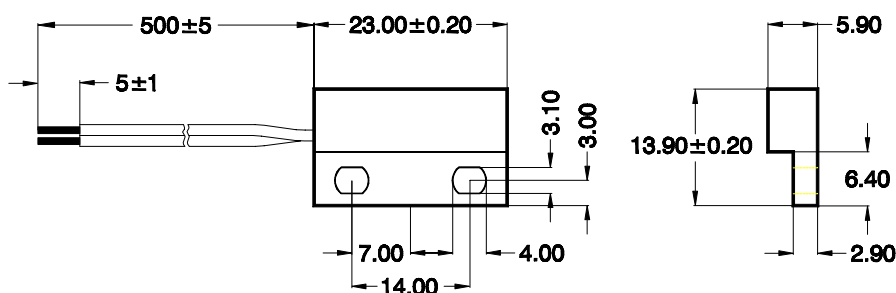
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Reed Sensor: MK4-1A71B-500W

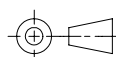
Part Number: 2242711064

Dimensions (mm)

Marking



MEDER-Label
 Type
 Production-Code-EN60062/Factory Code



Magnetic Characteristics	Conditions at 20°C	Min.	Typ.	Max.	Units
Pull-In Switch unmodified	Testcoil KMS-01	10		15	AT
Pull-In Switch modified	Testcoil KMS-14	23		44	AT

Contact Data 71 (Form A/Dry)					
Contact Rating	Any combination of the switching voltage and current must not exceed the given rated power			10	W
Switching Voltage	DC or Peak AC			180	V
Switching Current	DC or Peak AC			0,5	A
Carry Current	DC or Peak AC			1,5	A
Static Contact Resistance (initial)	Measured with 40% overdrive			150	mΩ
Insulation Resistance	RH 45%	10 ¹²			Ω
Breakdown Voltage		200			VDC
Operate Time, including Bounce	Measured with 40% overdrive			0,5	ms
Release Time				0,1	ms
Capacitance			0,3		pF

Environmental Data					
Shock	½ sine wave, duration 11ms			50	g
Vibration	from 10 - 2000 Hz			20	g
Operating Temperature	10°C/min max. allowable	-5		70	°C
Storage Temperature	10°C/min max. allowable	-20		70	°C
Contact Resistance with Cable	Measured with 40% overdrive			280	mΩ
Material of Case	Glass fibre reinforced polybutylene terephthalate (PBT) self-extinguishing				
Sealing Compound	Self-extinguishing V-0 according to UL94				
Cable	Polyurethane				
	Flat cable LIYZ 2 x 0,14 mm ² , white				
	End of cable with 5±1 mm tinned leads				
Remarks	The switching distance can be decreased by mounting the MK4 on iron. When mounting the sensor, magnetically conductive screws must not be used.				