# **MEDER electronic**

## **MK02 Series**

#### Ferromagnetic Metal Detection Sensors

### DESCRIPTION

These reed proximity switches operate when in the presence of magnetically conductive material. Instead of an actuating magnet, only a simple piece of iron is required to operate the sensor from the front or from above. The standard cable is UL listed and is round twin core  $2 \times 0.35 \text{ mm}^2$  (AWG22).

#### **FEATURES**

- Form A and B are available
- Other cables, connectors and colors available
- Activation from the front or from above
- · Sabotage loop available



#### **APPLICATIONS**

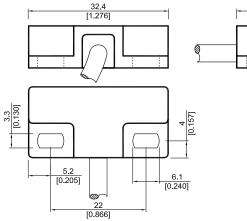
- Industrial applications
- End travel sensing limit switch in pneumatic cylinders
- Position control
- · Control functions in plant and utility vehicles
- Security applications
- Door and window control
- Opening recognition contact
- · Fire protection doors

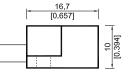
## **DIMENSIONS**

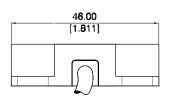
All dimensions in mm [inch]

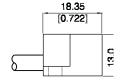
<u>Series</u> MK02/5

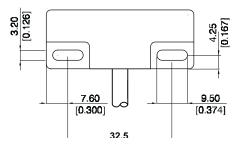












#### **TERMINATION**

W ####################################
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The cable cut length includes: 5 mm of wire stripped and tinned.

For wire and termination details please consult factory.

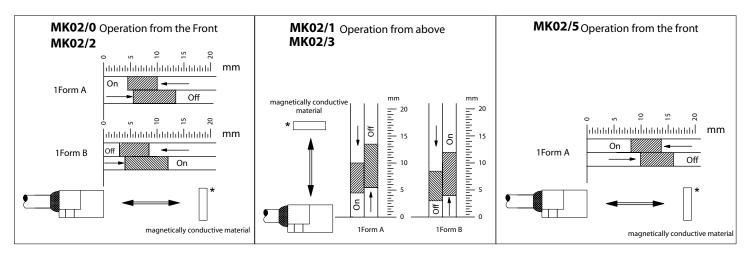
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Ferromagnetic Metal Detection Sensors

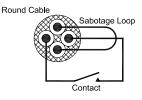
## **OPERATION EXAMPLE**

For best operation it is recommended that you **<u>DO NOT</u>** mount these sensors on any ferromagnetic material **<u>OR</u>** use any ferromagnetic screws.



\* Dimension (mm): 3 x 12 x 32

The standard cable is a 4-wire round - core  $4 \times 0.14 \text{ mm}^2$  (cable sheath and wires are white) forming a sabotage loop. See example of this loop to the right.



(Sabotage loop for MK02/2, MK02/3.)

Series	Contact Form	Terminati		Termination	Sabotage Loop	Operation
MKX/X -	XX	XX -	xxx	x		
02/0	1 A 1 B	66 90			No	Front
02/1	1 A 1 B	66 90		W	No	Above
02/2	1 A 1 B	66 90	500*		Yes	Front
02/3	1 A 1 B	66 90			Yes	Above
02/5	1 A	41			No	Front
02/6	1 A	41			Yes	Front

### **ORDER INFORMATION**

#### **Part Number Example**

MK02/0 - 1A66 - 500 W

MK02/0 is the front operation series
1A is the contact form
66 is the switch model
500 is the cable length (mm)
W is the termination

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MK02 Series

### Ferromagnetic Metal Detection Sensors

## **CONTACT DATA**

All Data at 20° C	Switch Model $\rightarrow$ Contact Form $\rightarrow$	Switch 41 Form A			Switch 66 Form A		Switch 90 Form B				
Contact Ratings	Conditions	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Units
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			16			10			3	w
Switching Voltage	DC or peak AC			40			200			175	V
Switching Current	DC or peak AC			0.4			0.5			0.25	А
Carry Current	DC or peak AC			0.7			1.25			1.2	А
Static Contact Resistance	w/ 0.5 V & 10 mA			100			150			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5 V & 50 mA , 1.5 ms after closure			150			200			250	mΩ
Insulation Resistance across Contacts	100 volts applied	10 <sup>9</sup>			10 <sup>10*</sup>			10 <sup>9</sup>			Ω
Breakdown Voltage across Contact	Voltage applied for 60 sec. min.	150			225*						VDC
Operate Time incl. Bounce	Measured w/ 100 % overdrive			0.7			0.5			0.7	ms
Release Time	Measured w/ no coil suppression			0.05			0.1			1.5	ms
Capacitance	at 10 kHz cross contact		0.3			0.2			1.0		pF
Environmental Data											
Shock Resistance	1/2 sinus wave duration 11 ms			50			30			50	g
Vibration Resistance	From 10 - 2000 Hz			20			10			20	g
Ambient Temperature	10°C/ minute max. allowable	-20		85	-20		85	-20		85	°C
Stock Temperature	10°C/ minute max. allowable	-35		85	-35		85	-35		85	°C
Soldering Temperature	5 sec.			260			260			260	°C
	electrical data are maximum valu				ards wh	ien usin	g a more	e sensit	ve swite	ch.	

Insulation resistance of 10<sup>12</sup> and breakdown voltage of 480 VDC is available.

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