Reed Sensor Incorporated
into a Hirschmann Connector

DESCRIPTION

MK9 sensors are magnetically operated Reed proximity switches potted into a standard Hirschmann connector casing according to "DIN 43650 / type AM3". In combination with the corresponding Hirschmann socket a coupling with firmly defined position is achieved. In order to fix the sensor, its potted surface is screwed to a flat surface in the direction of the operating magnet. The magnet is fixed to a moving part which is travelling towards the sensor.
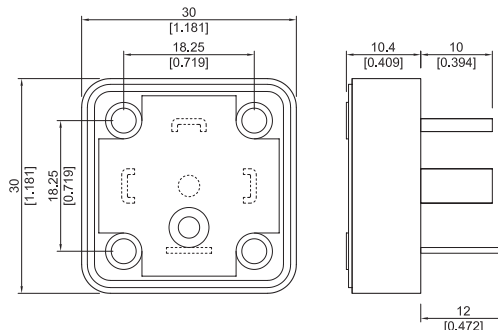
APPLICATIONS

• **Air filter maintenance**
  Monitoring of filter condition
• **Air conditioning and clean room systems**
  Filter condition detection
• **Pneumatic and hydraulic cylinders**
  Position detection
• **Machine industry**

FEATURES

• Form A, B and C available
• High power switches available
• Five operate sensitivities available

DIMENSIONS
All dimensions in mm [inches]

ORDER INFORMATION

Part Number Example

MK9 - 1A66   C

1A is the contact form
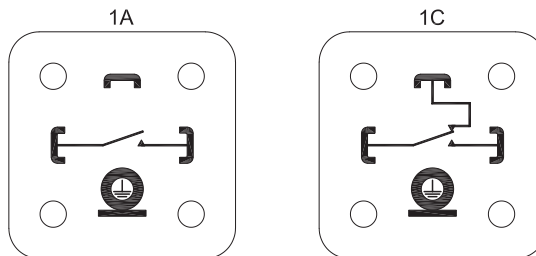**66** is the switch model
C is the magnetic sensitivity

Series	Contact-form	Switch-model	Magnetic Sensitivity
MK9 -	**1A**	**XX**	**X**
Options	1 Form A	66	B, C, D, E
		84	B, C, D, E
	1 Form B 1 Form fC	90	C, D, E

MAGNETIC SENSITIVITY

Sensitivity Class	Pull In At Range
B	10 - 15
C	15 - 25
D	20 - 25
E	25 - 30

PIN OUT

View from top of component

1A

1C

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CONTACT DATA

All Data at 20° C	Switch Model → Contact Form →	Switch 66 Form A			Switch 84 Form A			
Contact Ratings	**Conditions**	**Min.**	**Typ.**	**Max.**	**Min.**	**Typ.**	**Max.**	**Units**
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			10			10	W
Switching Voltage	DC or peak AC			200			400	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/ 0.5 V & 10 mA			150			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5 V & 50 mA , 1.5 ms after closure			200			200	mΩ
Insulation Resistance across Contacts	100 volts applied	10^{10} *			10^{11}			Ω
Breakdown Voltage across Contact	Voltage applied for 60 sec. min.	225*			700			VDC
Operation Time incl. Bounce	Measured w/ 100 % overdrive			0.5			2.0	ms
Release Time	Measured w/ no coil suppression			0.1			0.1	ms
Capacitance	at 10 kHz cross contact		0.2			0.7		pF
Contact Operation **								
Must Operate Condition	Steady state field	10		30	15		30	
Must Release condition	Steady state field	4		27	6		27	
Environmental Data								
Shock Resistance	1/2 sinus wave duration 11 ms			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20	g
Ambient Temperature	10°C/ minute max. allowable	-20		85	-20		85	°C
Stock Temperature	10°C/ minute max. allowable	-35		85	-35		85	°C
Soldering Temperature	5 sec.			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 10^{12} 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 90 Form C / B			
Contact Ratings	**Conditions**	**Min.**	**Typ.**	**Max.**	**Units**
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			3	W
Switching Voltage	DC or peak AC			175	V
Switching Current	DC or peak AC			0.25	A
Carry Current	DC or peak AC			1.2	A
Static Contact Resistance	w/ 0.5 V & 10 mA			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5 V & 50 mA , 1.5 ms after closure			250	mΩ
Insulation Resistance across Contacts	100 volts applied	10^9			Ω
Breakdown Voltage across Contact	Voltage applied for 60 sec. min.	100			VDC
Operation Time incl. Bounce	Measured w/ 100 % overdrive			0.7	ms
Release Time	Measured w/ no coil suppression			1.5	ms
Capacitance	at 10 kHz cross contact		0.2		pF
Contact Operation *					
Must Operate Condition	Steady state field	15		30	AT
Must Release condition	Steady state field	6		27	AT
Environmental Data					
Shock Resistance	1/2 sinus wave duration 11 ms			50	g
Vibration Resistance	From 10 - 2000 Hz			20	g
Ambient Temperature	10°C/ minute max. allowable	-20		85	°C
Stock Temperature	10°C/ minute max. allowable	-35		85	°C
Soldering Temperature	5 sec.			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.