

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

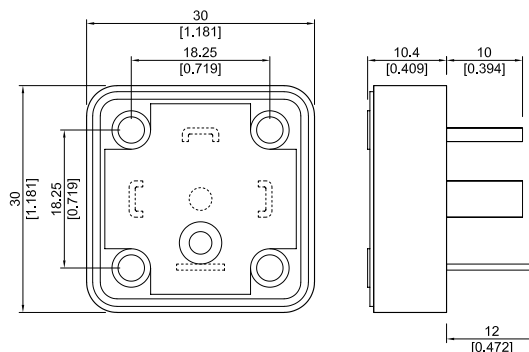
- **Air filter maintenance**
Monitoring of filter condition
- **Air conditioning and clean room systems**
Filter condition detection
- **Pneumatic and hydraulic cylinders**
Position detection
- **Machine industry**

FEATURES

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

DIMENSIONS

All dimensions in mm [inches]



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ORDER INFORMATION

SERIES	CONTACT FORM	SWITCH MODEL	MAGNETIC SENSITIVITY
MK9 -	XX	XX	X
OPTIONS	1 Form A	71	B, C, D, E
		81	A
		84	B, C, D, E
	1 Form B 1 Form C	90, 96	C, D, E

Part Number Example

MK9 - 1A71 C

1A is the contact form

71 is the switch model

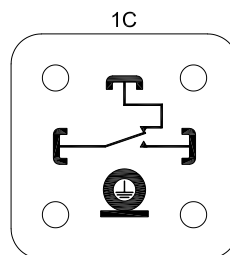
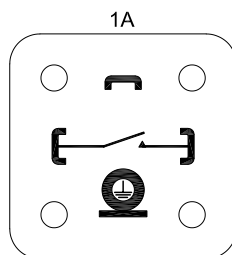
C is the magnetic sensitivity

MAGNETIC SENSITIVITY

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

PIN OUT

View from top of component



CONTACT DATA

All data at 20 °C	Switch Model --> Contact Form -->	Contact 71 Form A			Contact 81 Form A			
Contact Ratings	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Contact Rating	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
<p>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.</p>								

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CONTACT DATA

All data at 20 °C	Switch Model --> Contact Form -->	Contact 84 Form A			Contact 90 Form B / C			Contact 96 Form B / C			
Contact Ratings	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Contact Rating	Any DC combination of V & A not to exceed their individual max.'s			10			3			20	W
Switching Voltage	DC or peak AC			400			175			150	V
Switching Current	DC or peak AC			0.5			0.25			1.0	A
Carry Current	DC or peak AC			1.0			1.2			2.0	A
Static Contact Resistance	w/ 0.5V & 10mA			150			150			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200			250			250	mΩ
Insulation Resistance across Contacts	100 Volts applied	10 ¹¹			10 ⁹			10 ⁹			Ω
Breakdown Voltage across Contacts	Voltage applied for 60 sec. min.	700			200			200			VDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			2.0			0.7			2.6	ms
Reset Time	Measured w/ no coil suppression			0.1			1.5			1.5	ms
Capacitance	@ 10kHz across contact		0.7			1.0			0.8		pF
Contact Operation *											
Must Operate Condition	Steady state field	15		30	15		30	15		30	AT
Must Reset Condition	Steady state field	6		27	6		27	6		27	AT
Environmental Data											
Shock Resistance	1/2 sine wave duration 11ms			50			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20			20	g
Ambient Temperature	10 °C/ minute max. allowable	-20		85	-20		85	-20		85	°C
Storage Temperature	10 °C/ minute max. allowable	-35		85	-35		85	-35		85	°C
Soldering Temperature	5 sec. dwell			260			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.