

Reed Sensors with Mounting Holes for Screw Fastening



DESCRIPTION

MK21 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. Leads are Teflon coated. Designed for extreme environment. Resistant to water, fuels, oils, inks and most acids.

APPLICATIONS

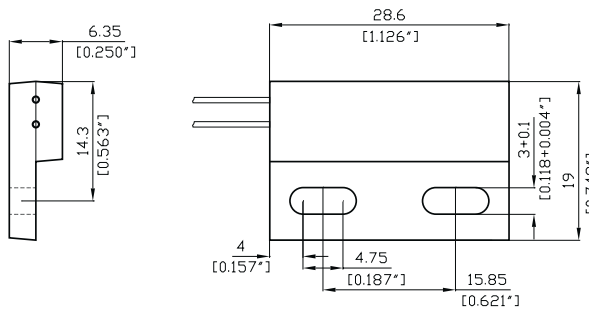
- **Position and limit switch**
Pneumatic or hydraulic actuator position
- **End motion detection for linear drive**
Indication and end travel limit switch
- **Machine industry**
End motion detection and door/flap control

FEATURES

- High power switches available
- Designed for high temperature up to 160° C (molded version)
- Four operate sensitivities available
- A choice of cable terminations and lengths are available
- Molded and potted versions available

DIMENSIONS

All dimensions in mm [inch]



ORDER INFORMATION

Part Number Example

MK21M - 1A66 C - 500 W
 MK21P - 1A66 C - 500 W

M = molded
 P = potted

66 is the switch model
C is the magnetic sensitivity
500 is the cable length (mm)

Series	Contact-form	Switch Model	Magnetic Sensitivity	Cable Length (mm)	Termination
MK21x-	xx	xx	x -	xxx	W
Options	1 Form A	66	B, C, D, E	500*	
		52, 85	C, D, E		
	1 Form B** 1 Form C**	90	C, D, E		
* Other cable lengths available ** Potted version					

MAGNETIC SENSITIVITY

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

TERMINATION

For wire and termination details, as well as other magnetic sensitivity classes please contact factory.

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

All Data at 20° C	Switch Model → Contact Form →	Switch 52 Form A			Switch 66 Form A			Unit
	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			50 70 (VA)			10	W
Switching Voltage	DC or peak AC			250			200	V
Switching Current	DC or peak AC			0.5			0.5	A
Carry Current	DC or peak AC			2.5			1.25	A
Static Contact Resistance	w/ 0.5 V & 10 mA			200			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5 V & 50 mA , 1.5 ms after closure						200	mΩ
Insulation Resistance across Contact	100 volts applied	10 ¹⁰			10 ^{10*}			Ω
Breakdown Voltage across Contact	Voltage applied for 60 sec. min.	600			225*			VDC
Operate Time incl. Bounce	Measured w/ 100 % overdrive			1.0			0.5	ms
Release Time	Measured w/ no coil suppression			0.1			0.1	ms
Capacitance	at 10 kHz cross contact		0.2			0.2		pF
Contact Operation **								
Must Operate Condition	Steady state field	10		30	10		60	AT
Must Release Condition	Steady state field	4		27	4		54	AT
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	M 10°C/ minute max. allowable	-20		85	-30		150	°C
Ambient Temperature	P 10°C/ minute max. allowable	-35		85	-20		85	°C
Stock Temperature	10°C/ minute max. allowable			260	-40		160	°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 85 Form A			Switch 90 Form B/C, potted			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Contact Ratings	Conditions							
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			100			20	W
Switching Voltage	DC or peak AC			400			175	V
Switching Current	DC or peak AC			1.0			0.5	A
Carry Current	DC or peak AC			2.5			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			250	mΩ
Insulation Resistance across Contact	100 volts applied	10 ¹⁰			10 ⁹			Ω
Breakdown Voltage across Contact	Voltage applied for 60 sec. min.	4000			200			VDC
Operate Time incl. Bounce	Measured w/ 100 % overdrive			1.0			0.7	ms
Release Time	Measured w/ no coil suppression			0.1			1.5	ms
Capacitance	at 10 kHz cross contact		0.2			1.0		pF
Contact Operation **								
Must Operate Condition	Steady state field	20		60	15		40	AT
Must Release Condition	Steady state field	12		54				AT
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	M 10°C/ minute max. allowable	-20		85	-20		85	°C
Ambient Temperature	P 10°C/ minute max. allowable	-35		85	-35		85	°C
Stock Temperature	10°C/ minute max. allowable			260			260	°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.								
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