

Reed Sensors with Screw Fastening Slot



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

DESCRIPTION

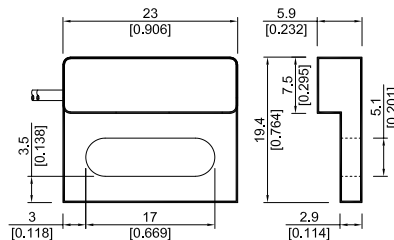
MK5 sensors are magnetically operated Reed proximity switches designed for screw mounting. The sensor should be mounted on a fixed surface with the actuating magnet on the moving surface. Introduction or removal of the magnetic field determines the closing and opening of the Reed Switch.

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

MK5 - 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

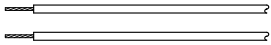
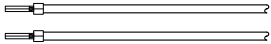
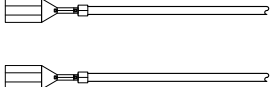
SERIES	CONTACT FORM	SWITCH MODEL	MAGNETIC SENSITIVITY	CABLE LENGTH (mm)	TERMINATION
MK5 -	XX	XX	X -	XXX	X
OPTIONS	1 Form A	66	B, C, D, E	500 *	W, X, Y
		81	A		
		84	C, D, E		
	90				
* Other cable lengths available.					

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
with Screw Fastening Slot**
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

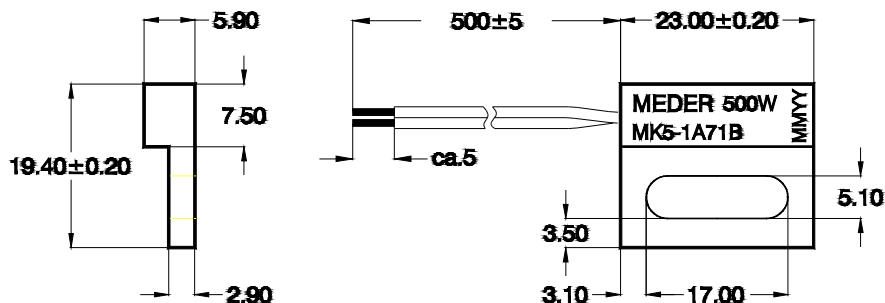
Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch.

* 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.								

dimensions (tolerance $\pm 0,1\text{mm}$) / marking


contact data 71 (FormA/Dry)	condition	Min.	Typ.	Max.	Unit
pull-in energization contact unmodified	measuring ramp 10 mA/s	10		15	AT
pull-in energization contact modified	measuring ramp 10 mA/s	20,66		41,98	AT
test coil		KMS-14			
contact material		Ruthenium			
rated power	each combination of the switching voltage end current must not exceed the given rated power			10	W
switching voltage				180	VDC
switching current				0,5	A
carry current				1,5	A
static contact resistance	starting values measured with $1,4 \times AT_{\text{pull-in}}$			150	m Ω
insulation resistance	RH Ω 45%	10^{12}			Ω
breakdown voltage		200			VDC
resonant frequency			6700		Hz
operate time incl. bounce	measured with $1,4 \times AT_{\text{pull-in}}$		0,5		ms
release time			0,1		ms
capacitance	without test coil			0,3	pF

general data		Min.	Typ.	Max.	Unit
contact resistance incl. cable	measured with $1,4 \times AT_{\text{pull-in}}$			250	m Ω
shock	$\frac{1}{2}$ sine wave, duration 11ms			150	g
vibration	10 – 2000Hz			10	g
operating temperature		-5		70	$^{\circ}\text{C}$
storing temperature		-25		70	$^{\circ}\text{C}$

washability		fully sealed			
material of case		Glass fibre reinforced polybutylene terephthalate (PBTP) self-extinguishing Self-extinguishing V-0 according to UL94			
sealing compound		polyurethane			
cable		flat cable LIYZ 2 x 0,14 mm ² , white cable end with approx. 5 mm tinned leads			

remark

The switching distance can be decreased by mounting the MK5 on iron.
 When mounting the sensor, magnetically conductive screws must not be used.