MRX Series Reed Relays

- **Features: Ex-Approved for Intrinsic Safety Circuits**
- **Applications: Process Automatization in Refineries, Mining and Chemical Industry & Others**
- **Markets: Explosive Environment & Others**

Part Description: MRX00-0X00

Nominal Voltage	Contact Quantity	Contact Form	Switch Model
05, 12, 24	1, 2, 4	A, C	21, 71, 79, 90

Customer Options / Contact Data	Switch Model 21 (A-Dry)	71 (A-Dry)	79 (A-Dry)	90 (C-Dry)	Unit
Contact Material	Rhodium	Rhodium	Rhodium	Rhodium	
Rated Power (max.) Any DC combination of V&A not to exceed their individual max.'s	10	10	10	10	W
Switching Voltage (max.) DC or peak AC	100	200	220	175	V
Switching Current (max.) DC or peak AC	0.25	0.5	0.5	0.5	A
Carry Current (max.) DC or peak AC	0.5	1	1	1.0	A
Contact Resistance (max.) @ 0.5V & 10mA	150	150	150	150	mOhm
Breakdown Voltage (min.) According to EN60255-5	0.4	0.5	0.4	0.2	kVDC
Operating Time (max.) Including Bounce, Measured w/40% Pull-In Overdrive	2.5	0.2	0.8	0.7	ms
Release Time (max.) Measured without Coil Suppression	2	0.1	0.4	1.5	ms
Insulation Resistance (typ.) Rh<45%, 100V Test Voltage	10^{11}	10^{10}	10^{11}	10^{9}	Ohm
Capacitance (typ.) @ 10kHz across open Switch	0.8	0.3	0.2	1.5	pF

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Coil Data (at 20°C)		Coil Voltage (VDC)		Coil Resistance (Ohm)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Coil Power (mW)
Contact Form	Switch Model	Nominal	Max.	Typical (± 10 %)	Max.	Min.	Nominal
1A	71 79*	5	7.5	360	3.8	1.0	70
		12	16	1300	9	2	110
		24	30	5,880	18	3.5	100
2A	71 79**	5	7.5	250	3.8	1.0	100
		12	16	890	9	2	260
		24	30	1,000	18	3.5	165
4A	71	24	30	1,780	18	3.5	320
1C	21*** 90	5	7.5	360	3.8	1.0	70
		12	16	305	9	2	110
		24	30	5,880	18	3.5	100

The Pull-In / Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °C.
*1A79 only available with Coil Voltage 12 ** 2A79 only available with Coil Voltage 24 ***1C21 only available with Coil Voltage 05 & 12

Relay Data (@ 20°C)		Unit
Dielectric Strength Coil/Contact (min.) According to EN60255-27		kVDC
Insulation Resistance Coil/Contact (min.) Rh<45%, 200V Test Voltage	10^{10}	Ohm
Capacitance Coil/Contact (typ.) @10 kHZ	1.2	pF
Shock Resistance (max.) 1/2 sine wave, 6md, 3-axis	50	g
Vibration Resistance (max.) 10 – 2,000 Hz	20	g
Operating Temperature (max.) Surrounding of the relay's housing	-20 to 85	°C
Storage Temperature (max.) Surrounding of the relay's housing	-40 to 105	°C
Soldering Temperature (max.) 5 sec. max.	260	°C
Washability Aqueous rinse suitable. Proper drying necessary.	Fully Sealed	

Glossary Contact Form	
Form A	NO = Normally Open Contacts SPST = Single Pole Single Throw
Form B	NC = Normally Closed Contacts SPST = Single Pole Single Throw
Form C	Changeover SPDT = Single Pole Double Throw

Handling & Assembly Instructions

- Switching inductive and/or capacitive loads create voltage and/or current peaks, which may damage the relay. Protective circuits need to be used.
- External magnetic fields needs to be taken into consideration, including a too high packing density. This may influence the relays' electrical characteristics.
- Mechanical shock impacts e.g. dropping the relays may cause immediate or post-installation failure.
- Wave soldering: maximum 260°/5 seconds.

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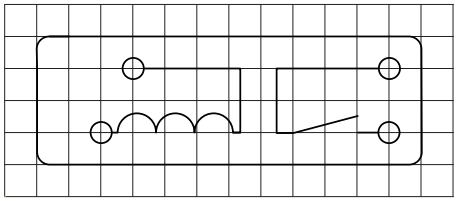
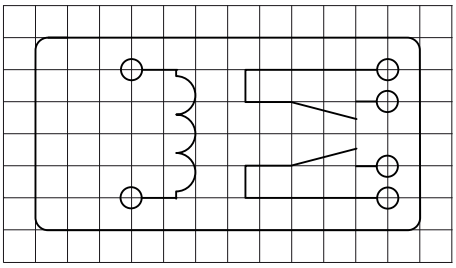
Pin-Out (Top View)

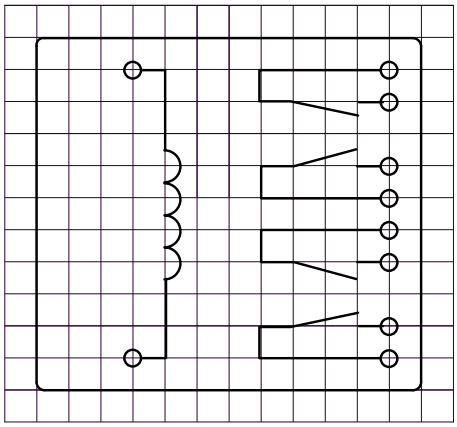
Form 1A



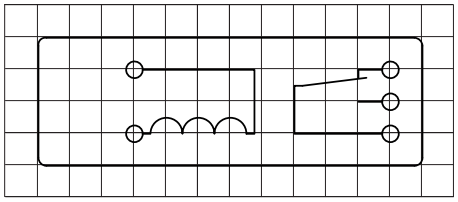
Form 2A



Form 4A

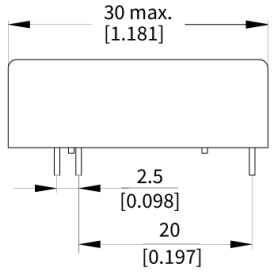


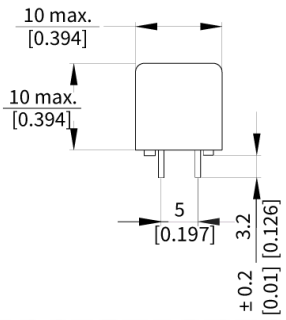
Form 1C



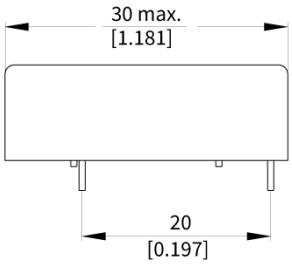
Dimensions (in mm [inch]) Tolerances acc. to ISO 2768-m

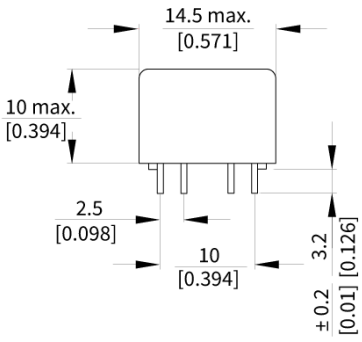
Form 1A/1C



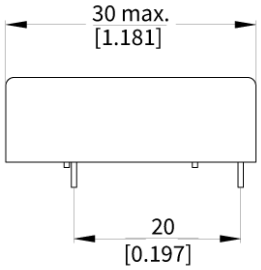


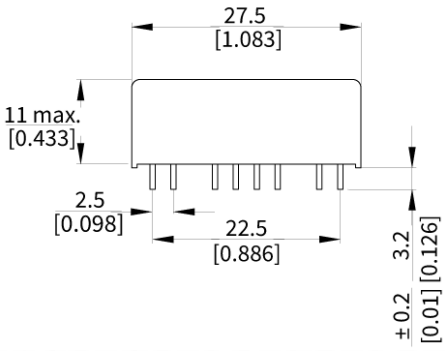
Form 2A





Form 4A





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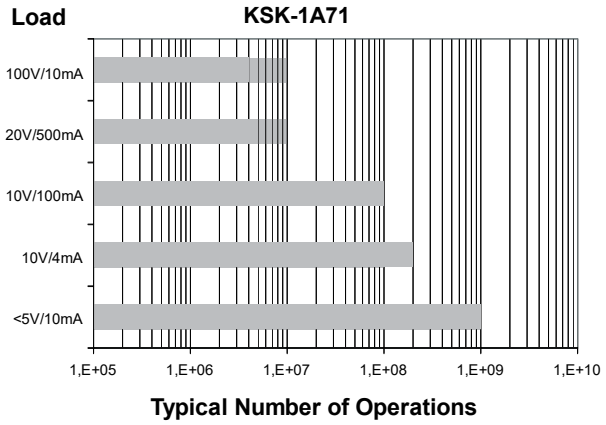
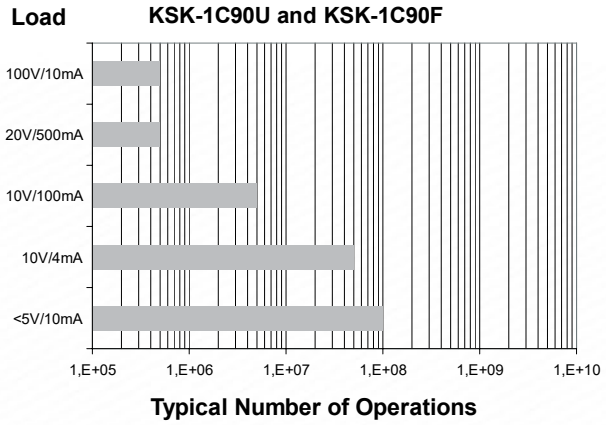
Life Test Data (*Load increase reduces life expectancy of Reed Switches)





Please note: All technical specifications on this series datasheet refer to the standard product range. Modifications in the sense of technical progress are reserved. For general information only. For more specific information, please consult the product datasheet, available upon request.

This series datasheet could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These change will be incorporated in future revisions.

For deviating values, most current specifications and products please contact your nearest sales office.

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