Ex-approved-Reed Relays

DESCRIPTION

MRX Reed Relay Series are used for the galvanic separation of intrinsically safe and non-intrinsically safe circuits with an Ex-approval by PTB-01 ATEX 2050 U. The MRX series is also suitable for circuits of the category “ia” due to its peak voltage of 375 Voltage.

FEATURES

- Up to 4 form A switches or 1 form C switch are available according to the different castings.

APPLICATIONS

- Test and measurement
- Process automatization in the mining industry, chemical industry and refineries.

ORDER INFORMATION

Part Example No. MRX05 - 1A71

05 is the nominal voltage
1A71 is the contact form

COIL DATA

Contact form	Contact type	Nominal voltage	Coil resistance ± 10%	Pull-in voltage	Drop-out voltage	Nominal power
All Data at 20°		VDC	Ω	VDC	VDC	mW
1A/ 1C	21 71 79 90	5	360	3.8	1.0	70
		6	360	4.5	1.0	100
		12	1300	9.0	2.0	110
		24	5880	18.0	3.5	98
2A	71 79	5	250	3.8	1.0	100
		6	250	4.5	1.0	144
		12	890	9.0	2.0	160
		24	3500	18.0	3.5	165
4A	71 79	5	125	3.8	1.0	200
		6	125	4.5	1.0	288
		12	500	9.0	2.0	288
		24	1780	18.0	3.5	324

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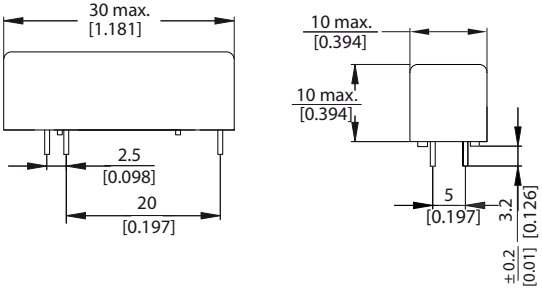
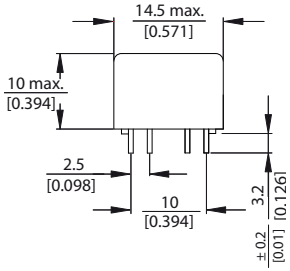
DIMENSIONS

All Dimensions in mm [inch]

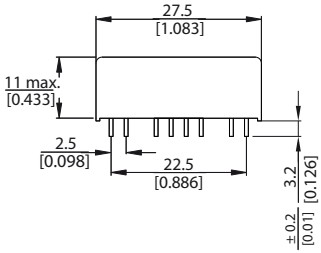
1A / 1C



2 A



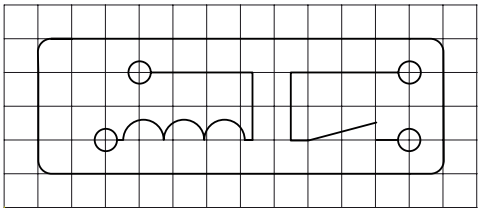
4 A



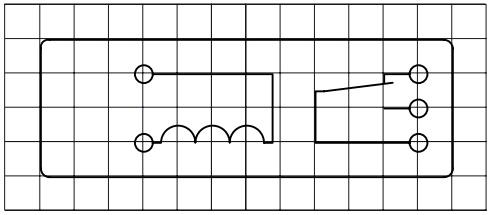
PIN OUT

(Top View)

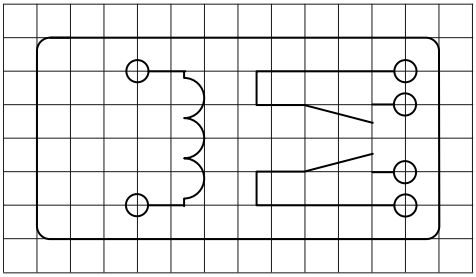
1A



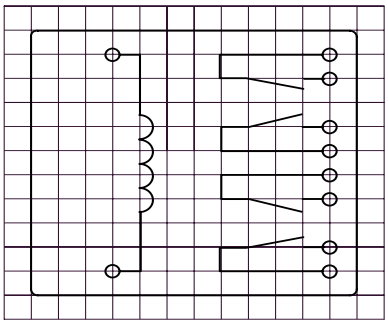
1C



2 A



4 A



RELAY DATA

All Data at 20° C	Switch Model → Contact form →	Switch 71 Form A / dry			Switch 79 Form A / dry			
Contact Ratings	**Conditions**	**Min.**	**Typ.**	**Max.**	**Min.**	**Typ.**	**Max.**	**Unit**
Switching Power	Any DC combination of V & A not to exceed their individual max's.			10			10	W
Switching Voltage	DC or peak AC			200VDC			220VAC	
Switching Current	DC or peak AC			0.5			0.5	A
Carry Current	DC or peak AC			1			1	A
Contact Resistance	with 20 mV, 10 mA			150			150	mΩ
Isolation Resistance	Across contacts Contact to coil	10^{10}			10^{11}			Ω
Breakdown Voltage	Across contacts Contact to coil	300			400			VDC
Operate Time incl. Bounce	With nominal voltage			0.5			0.8	ms
Release Time	Without protective diode			0.2			0.4	ms
Capacitance	Across open contacts Contact to coil		0.3 2.0			0.4 2.0		pF
Life Expectance								
Switching 5 Volts & 10m A	DC only & <1010 pF stray cap.		1000			1000		10^6 Cycles
Environment Data								
Shock Resistance	1/2 sinus wave duration 11ms			50			50	g
Vibration Resistance	from 10 - 2000 Hz			20			20	g
Ambient Temperature	max. 10°C/ minute allowable	-20		85	-20		85	°C
Storage Temperature	max. 10°C/ minute allowable	-40		105	-40		105	°C
Soldering Temperature	5 Sec. dwell			260			260	°C
Washability		Fully sealed						

RELAY DATA

All Data at 20° C	Switch Model → Contact form →	Switch 90 Form C / dry			Switch 21 Form C / dry			
Contact Ratings	**Conditions**	**Min.**	**Typ.**	**Max.**	**Min.**	**Typ.**	**Max.**	**Unit**
Switching Power	Any DC combination of V & A not to exceed their individual max's.			7			10	W
Switching Voltage	DC or peak AC			28			100	VDC
Switching Current	DC or peak AC			0.24			0.25	A
Carry Current	DC or peak AC			0.5			0.5	A
Contact Resistance	with 20 mV, 10 mA			150			150	mΩ
Isolation Resistance	Across contacts Contact to coil	10^{10}			10^{11}			Ω
Breakdown Voltage	Across contacts Contact to coil	300			400			VDC
Operate Time incl. Bounce	With nominal voltage			2			2.5	ms
Release Time	Without protective diode			2			2	ms
Capacitance	Across open contacts Contact to coil		1.0 2.0			0.8 2.0		pF
Life Expectance								
Switching 5 Volts & 10 mA	DC only & <1010 pF stray cap.		100			100		10^6 Cycles
Environment Data								
Shock Resistance	1/2 sinus wave duration 11ms			50			50	g
Vibration Resistance	from 10 - 2000 Hz			20			20	g
Ambient Temperature	max. 10°C/ minute allowable	-20		85	-20		85	°C
Storage Temperature	max. 10°C/ minute allowable	-40		105	-40		105	°C
Soldering Temperature	5 Sec. dwell			260			260	°C
Washability		Fully sealed						