

MRE Series Reed Relays

- **Features:** Special Series focused on High Voltage, High Current and High Insulation Resistance
- **Two switches as Dual-Channel, in Series or in Parallel connection**
- **Compact size, High Creepage Distance Pinout**
- **Integrated Magnetic Shield for the HC version**
- **Applications:** Insulation Measurement, ARC Testers
- **Markets:** Test & Measurement, Automated Test Equipment, Medical


Part Description: **MRE00-0X85-XX**

Nominal Voltage	Contact Quantity	Contact Form	Switch Model	Option
05, 12, 24	1, 2	A	85	HV = High Voltage, HC = High Current, P = Dual-Channel

Customer Options	Switch Model			Unit
Contact Data (@ 20°C)	1A85-HV (A-Dry) Two contacts in series	1A85-HC (A-Dry) Two contacts in parallel & integrated mag. shield	2A85-P (A-Dry) Dual-Channel	
Contact Material	Rhodium	Rhodium	Rhodium	
Rated Power (max.) Any DC combination of V&A not to exceed max. rated power	100	100	100	W
Switching Voltage (max.) DC or peak AC	1000	1000	1000	V
Switching Current (max.) DC or peak AC	1.0	1.0	1.0	A
Carry Current (max.) DC or peak AC	2.5	5	2.5	A
Contact Resistance (max.) @ 0.5V & 10mA, Measured with 40% Pull-In Overdrive	200	150	150	mOhm
Breakdown Voltage (min.) According to EN60255-27	7	2.5	3	kVDC
Operating Time (max.) Including Bouncing, Measured with 40% Pull-In Overdrive	1.5	1.5	1.1	ms
Release Time (max.) Measured without Coil Suppression	0.6	0.6	0.4	ms
Insulation Resistance (min./typ.) Rh<45%, 100V Test Voltage	10 ¹¹ /10 ¹²	10 ¹¹ /10 ¹²	10 ¹¹ /10 ¹²	Ohm
Capacitance (typ.) @ 10kHz across open Switch	0.5	1	0.5	pF

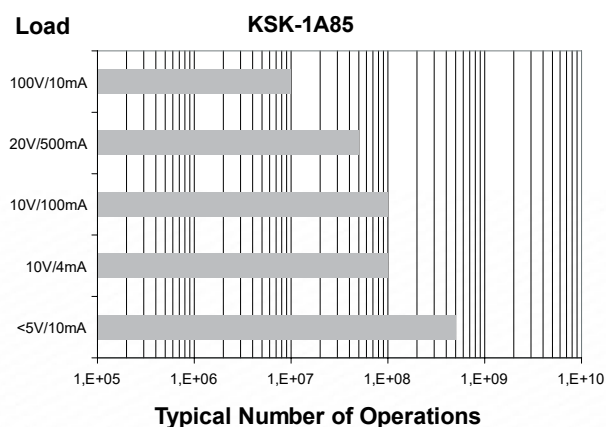
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Coil Data (at 20°C)		Coil Voltage (VDC)		Coil Resistance (Ohm)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Coil Power (mW)
Contact Form	Switch Model	Nominal	Max.	Typical (± 10 %)	Max.	Min.	Nominal
1A85-HV	85	5	7.5	120	3.75	0.5	210
		12	16	400	8.8	1.2	360
		24	30	2000	18	2.4	288
1A85-HC (integrated mag. shield)	85	5	7.5	120	3.5	0.5	210
		12	16	400	8.5	1.2	360
		24	30	1400	18	2.4	411
2A85-P	85	5	7.5	120	3.75	0.5	210
		12	16	400	8.8	1.2	360
		24	30	2000	18	2.4	288

The Pull-In, Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °C

Relay Data (@ 20°C)		Unit
Dielectric Strength Coil/Contact (min.) According to EN60255-27	7	kVDC
Insulation Resistance Coil/Contact (min.) Rh<45%, 200V Test Voltage	10 ¹²	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 70	°C
Storage Temperature (max.) Surrounding of the relay's housing	-35 to 95	°C
Soldering Temperature (max.) 5 sec. max.	260	°C
Washability Aqueous rinse suitable. Proper drying necessary.	Fully Sealed	

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



Glossary Options

1A85-HV	High Voltage version
1A85-HC	High Current version
2A85-P	Dual Channel version

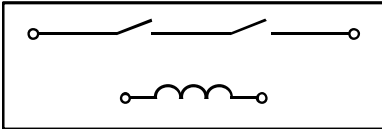
Glossary Contact Form

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
Form E	Latching unchanged until an opposite impulse is present
MRE Relays are available only in "Form A" configuration	

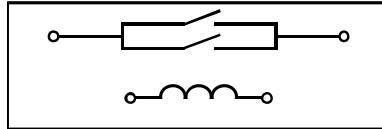
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Pin-Out (Top View)

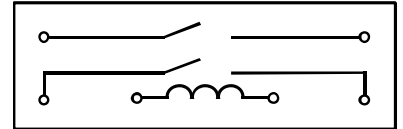
1A85-HV



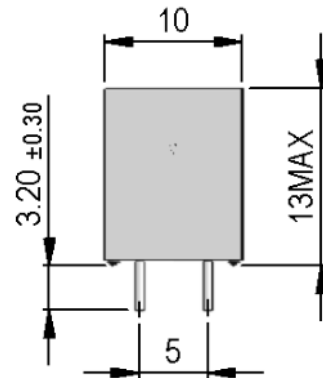
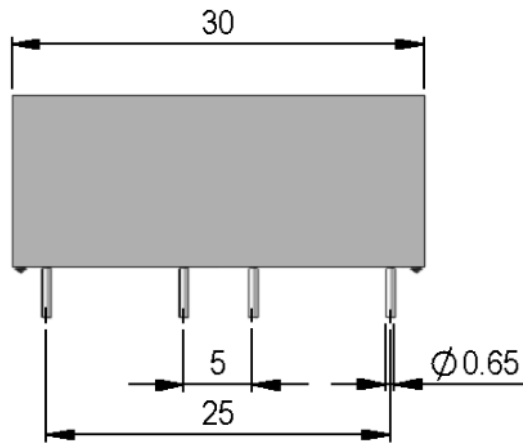
1A85-HC



2A85-P



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



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 - see our website or contact our sales office.
- External magnetic fields and magnetic effects, due to adjacent relays in high density matrices that may influence the relays' electrical characteristics, must be taken into consideration.
- Mechanical shock impacts, e.g. dropping the relays, may cause immediate or post-installation failure.
- Suppressing coil diode can have a negative influence on total number of switching cycles, especially by switching high voltage. Zener diode in series with the suppression diode is recommended.
- Wave soldering: maximum 260°C / 5 seconds.

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.