

MRS13R/UC12-48V

1 phase | 1 NO + 1 NC | Overcurrent detection | forcibly guided contacts

Power supply

Nominal voltage	12 ... 48 V AC / DC
Operating voltage range	10 ... 60 V AC / DC
Power consumption AC / DC	3.2 VA / 1.6 W
Frequency range	0; 16 ... 63 Hz

Measuring circuit

Measured parameters	I (Load current)
Min. setting step, resolution	0.1 A
Monitoring functions	Overcurrent detection
Rated measurement current	5 A
Measurement current range	-5 ... 5 A
Overcurrent threshold I_{th} setting range	0.1 ... 5 A, default = 3.0 A
Saturation current threshold I_{max}	± 5 A
Maximum pulse current	Please refer to extended datasheet 55005-165-57-xxx available for download from ComatReleco website
Alarm switch-on delay T_{Don}	0 ... 999.9 s, default = 0.0 s
Alarm switch-on delay T_{on} intrinsic	Please refer to extended datasheet 55005-165-57-xxx available for download from ComatReleco website
Alarm switch-off delay T_{Doff}	0.5 ... 999.9 s, default = 3.0 s
Alarm switch-off delay T_{off} intrinsic	Please refer to extended datasheet 55005-165-57-xxx available for download from ComatReleco website
Hysteresis	3% ... 50%, default = 5%
Scaling factor	0.1 ... 1000, default = 400
Minimum overcurrent detection time	4.5 ms
Minimum saturation current detection time	3.1 ms
Response time in case of overcurrent or saturation current event	Please refer to extended datasheet 55005-165-57-xxx available for download from ComatReleco website

Main circuit

Number of contacts	1 NO + 1 NC zwangsgeführt, erfüllt IEC 61810-3
Available contact materials	⚡ AgCuNi + 0.2 ... 0.4 μ Au
Rated voltage	240 V AC
Rated current	6 A
Minimum load	3 mA, 15 V (40mW)
Inrush current	30 A, 20 ms
Rated load DC	fig. 2
Rated load AC-1	1,500 VA
Mechanical endurance (cycles)	10 000 000
Bounce time (typ.)	(typ.) NO: 2 ms, NC: 15 ms
Electrical endurance at rated load AC-1 (cycles)	fig. 1

Test/Diagnostic input

Maximal voltage digital inputs	160 V DC
Logic level "1"	≥ 14 V
Logic level "0"	≤ 5 V
Sampling Rate	667 Hz

Insulation

Rated test voltage current loop / diagnostic input	3.0 kV / 1 Min.
Rated test voltage power supply / current loop	3.0 kV / 1 Min.
Rated test voltage power supply / diagnostic input	3.0 kV / 1 Min.
Rated test voltage power supply / relay NO	3.0 kV / 1 Min.
Rated test voltage power supply / relay NC	3.0 kV / 1 Min.
Rated test voltage current loop / relay NO	3.0 kV / 1 Min.
Rated test voltage diagnostic input / relay NO	2.0 kV / 1 Min.
Rated test voltage diagnosis input / relay NC	2.0 kV / 1 Min.
Rated test voltage current loop / relay NC	3.0 kV / 1 Min.
Rated test voltage relay NO / relay NC	2.5 kV / 1 Min.
Pollution degree	2
Overvoltage category	III

General data

Operation	Typ 1 (IEC 60730-1)
Software class	Klasse A (IEC 60730-1)
Classification	Manual Control (IEC 60730-1)



fig. 1. Wiring diagram

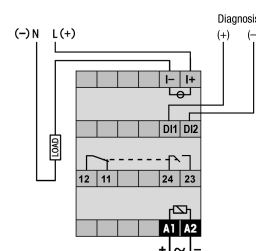


fig. 2. AC voltage endurance

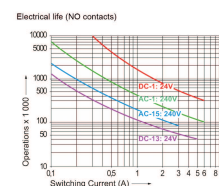


fig. 3. DC load limit curve

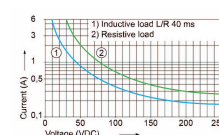


fig. 4. Insulation Diagramm

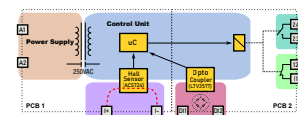
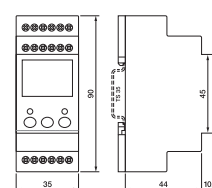


fig. 5. Dimensions (mm)



Technical approvals, conformities

Standards IEC/EN 60730-1 IEC/EN 60947

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Housing and environmental conditions

Storage temperature (no ice)	-40 ... 85 °C
Operation temperature	-40 ... 70 °C (display -20 ... 70 °C)
Relative humidity, no condensation	10 - 95 %
Vibration resistance	NO: 7g / NC: 3g
Shock resistance	NO: 17g / NC: 10g
Ingress Protection	IP 20
Weight	107 gr
Housing material	PA
Operation Altitude	max. 2'000 m over sea level (without derating)
Mounting	DIN RAIL (IEC 60715)
Operation Position	any
Dimensions	fig. 4

Wiring

Contact type control / main circuit	Schraubklemme
Conductor cross section control / main circuit	2.5 mm², AWG14 (Litze) / 4mm², AWG12 (Draht) Zu verwenden sind ausschliesslich Kupferleiter
Stripping Length control / main circuit	6 ... 7.5 mm / 0.24 ... 0.3"
Nominal screw torque control / main circuit	0.5 Nm / 4.425 lbf in
Screwdrive control / main circuit	M3, PZ2
Max. wire count control / main circuit	2
Dual sleeve control / main circuit	1



fig. 1. Wiring diagram

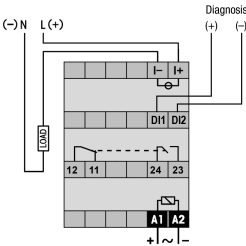


fig. 2. AC voltage endurance

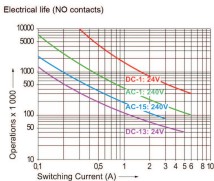


fig. 3. DC load limit curve

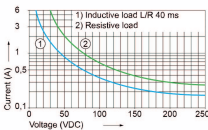


fig. 4. Insulation Diagramm

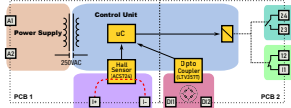
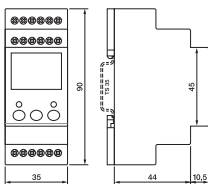


fig. 5. Dimensions (mm)



Technical approvals, conformities

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