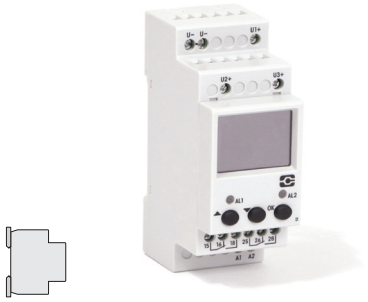
MRM32, MRM32R

Three phase multifunction monitoring | 12 … 48 V UC | 110 … 240 V UC



Power supply

Nominal voltage	12 … 48 V UC	110 … 240 V UC
Operating voltage range	10 … 60 V	85 … 250 V
Power consumption AC/DC	3.2 VA / 1.6 W	2.6 VA / 1.5 W
Rated frequency	16 … 63 Hz	

Measuring circuit

Measured parameters	U, I, P, S, f, Cosφ, ΔPhi, phase sequence
Min. setting step, resolution	0.1 V / 0.1 A / 1 W / 1 VA / 0.1 Hz / 0.01 / 1°
Monitoring functions	Under, over, inside, outside, phase sequence, phase failure
Number of voltage measurement inputs	3
Rated AC voltage L-N / L-L	230 V / 400 V
AC voltage measurement range L-N / L-L	0.1 … 480 V
Rated DC voltage U+-U-	300 V
DC voltage measurement range U+-U-	±0.1 … 690 V
Undervoltage setting range	0.1 … 480 V AC / ±0.1 … 690 V DC
Overvoltage setting range	0.1 … 480 V AC / ±0.1 … 690 V DC
Number of current measurement inputs	3
Rated measurement current	5 A
Measurement current range	0.1 … 6 A
Undercurrent setting range	0.1 … 5 A
Overcurrent setting range	0.1 … 5 A
Rated base frequency	15 … 150 Hz
Alarm delay	0.5 … 999.9 s
Alarm reset delay	0.5 … 999.9 s

Main circuit

Number of contacts	2 CO
Contact Material	AgNi
Rated voltage	250 V
Rated current	6 A
Minimum load	10 mA, 10 V
Inrush current	10 A, 10 ms
Rated load DC	fig. 2
Rated load AC-1	1500 VA
Mechanical endurance (cycles)	3 x 10^7
Electrical endurance at rated load AC-1 (cycles)	fig. 3

Insulation

Rated test voltage measuring / measuring circuit	1.5 kV rms / 1 min
Rated test voltage measuring circuit / power supply	2 kV rms / 1 min
Rated test voltage measuring circuit / main circuit	2 kV rms / 1 min
Rated test voltage main circuit / power supply	2 kV rms / 1 min
Rated test voltage main / main circuit	1.5 kV rms / 1 min
Rated test voltage open contact	1 kV rms / 1 min
Pollution degree	2
Overvoltage category	III

General data

Ambient temperature storage	-40 … 85 °C
Ambient temperature operation	-40 … 60 °C
Ambient temperature operation railway version	-40 … 70 °C
Conductor cross section	2.5 mm^2
Nominal screw torque	0.6 Nm
Module width	fig. 4
Weight	125 g
Protection degree	IP 20
Housing material	PC

Product references

Types	Product reference	12-48	110-240
Three phase monitoring	MRM32/UC…V	✓	✓
Three phase monitoring, railway version	MRM32R/UC…V	✓	✓

"…" list control circuit voltage to complete product references.
Other voltages on request. Please contact support@comatreleco.com.

fig. 1. Wiring diagram

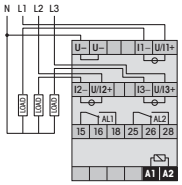


fig. 2. DC load limit curve

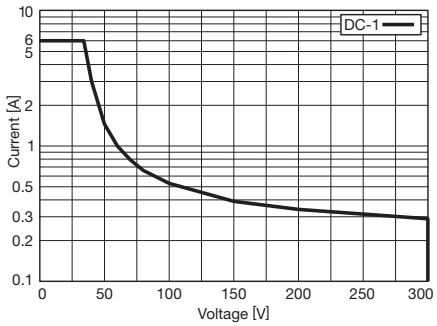


fig. 3. AC voltage endurance

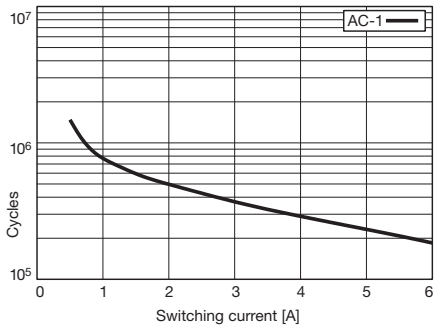
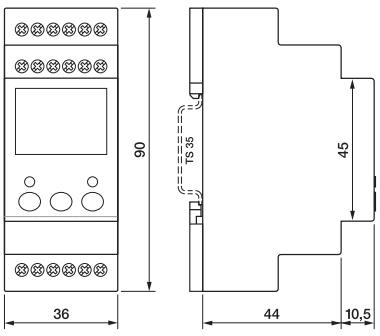


fig. 4. Dimensions (mm)



Standards and approvals

Standards	IEC/EN 60947, IEC/EN 60730, IEC/EN 50155, IEC/EN 45545, IEC/EN 43880
Approvals	CE EAC cULus

	Description	MRE-44S	MRM11	MRM11R	MRM32	MRM32R	MRU11	MRU32	MV53	SSU34	SSU31	SSU33L	MRI11	MRI32	TSR19	ESU-D2R	CT515R	CT524R
Monitoring	One phase voltage monitoring		●	●			●		●									
	Three phase voltage monitoring				●	●		●		●		●						
	Four channel voltage measuring	●																
	DC Voltage monitoring		●	●	●	●	●	●			●							●
	One phase current monitoring		●	●									●					
	Three phase current monitoring				●	●								●				
	Four channel current measuring	●																
	DC current monitoring		●	●	●	●							●	●			●	
	Phase failure				●	●		●		●	●	●						
	Phase sequence monitoring	●			●	●		●		●	●	●						
	Phase angle monitoring / measuring*	●			●	●		●		●		●						
	Differential voltage monitoring / measuring*	●								●		●						
	Neutral failure monitoring	●								●		●						
	Frequency monitoring / measuring*	●	●	●	●	●	●	●		●		●	●	●				
	Apparent power monitoring / measuring*	●	●	●	●	●												
	Active power monitoring / measuring*	●	●	●	●	●												
	Power factor monitoring / measuring*	●	●	●	●	●												
	Active energy measuring	●																
	THDI / THDU measuring	●																
	PTC monitoring														●			
	Earth failure monitoring															●		
Functions	Treshold exceeded "over" fig. 3.	●	●	●	●	●	●	●	●	●		●	●	●	●		●	●
	Theshold undershot "under" fig. 4.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Window function "inside" fig. 2.	●	●	●	●	●	●	●					●	●			●	●
	Window function "outside" fig.1.	●	●	●	●	●	●	●					●	●			●	●
	Alarm on-delay	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●
	Alarm off-delay	●	●	●	●	●	●	●	●				●	●				
	Error storage function	●	●	●	●	●	●	●					●	●	●			
	Threshold selectable	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●
	Threshold fixed										●	●			●			
Power supply	Supply isolated from measuring circuit	●	●	●	●	●	●	●					●	●	●	●		
	Supply from measure circuit								●	●	●	●					●	●
Mounting	DIN rail mounting	●	●	●	●	●	●	●	●	●			●	●		●		
	Housing according IEC/EN 43880 (electrical distribution mounting)	●	●	●	●	●	●	●	●					●	●			
	Plug-in (socket mounting)											●	●		●		●	●

*Measuring: MRE-44S only

fig. 1. Outside

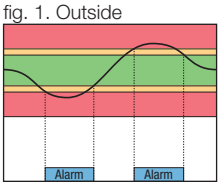


fig. 2. Inside

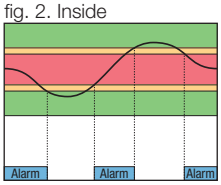


fig. 3. Over

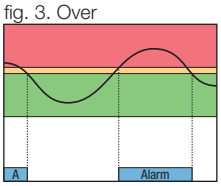
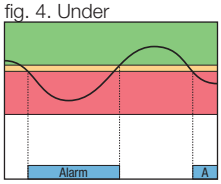


fig. 4. Under



Alarm ok hysteresis