



- Monitoring relays – MMR17 series
- Monitoring of phase sequence and phase asymmetry
- Regulation of asymmetry and the time delay
- Supply voltage = measuring voltage
- 1 Change Over contact
- Width 17.5mm
- Installation design



1

Technical data

Description

Output circuit			
Contact arrangement			1 CO
Rated voltage	V AC		250/400
Switching current range	AC1	A/V AC	8/250
	DC1	A/V DC	8/24
Switching load range	AC1	VA	2 000
Contact resistance		mΩ	≤ 100
Max. rated current		A	8
Input circuit			
Terminals			L1, L2, L3
Supply voltage U_n , AC (50-60Hz) = measured voltage	V		3x400/230
Tolerance			0,8...1,1 U_n (184...253V)
Phase power supply control system			L1
Rated consumption	VA		≤ 8
Rated frequency	Hz		47...63
Rated surge voltage	V		4 000
Insulation			
Insulation rated voltage	V AC		400
Rated surge voltage	V		4 000 1,2/50μs
Overtoltage category			III
Dielectric strength			
• Input – output	V AC		4 000
• Open contact			1 000
Measuring circuit			
Regulation range asymmetry U_{asym}	V		30...70
Functions			MA, MS
Setting accuracy	%		≤ 5
Repeatability	%		≤ 2
Time module data			
Setting range of time off delay and on delay (symmetrical)	s		1...6
Reset time	ms		≤ 500
The accuracy of the timing	%		20
General data			
Electrical life AC1 at 1000 VA resistive load	cycles		≥ 1,5 x 10 ⁵
Mechanical life	cycles		≥ 1 x 10 ⁷
Dimensions (L x W x H) / Weight	mm / g		90 x 17,5 x 66 / 50g
Ambient temperature / storage temperature	°C		-40...+70 / -20...+55
IP rating			IP20
Relative humidity	%		85
Shock resistance	g		15
Vibration resistance	mm		0,35 10...55Hz
LED indicator			2 LED

The supervisory relay is designed for applications in automation and control systems to control the asymmetry and phase sequence in AC three-phase networks. It is used to secure loads (eg. motors) from the voltage unbalance or incorrect phase sequence. The relay has an adjustable off delay and on delay time range from 1s to 6s (symmetrical) and an adjustable voltage asymmetry threshold from 30 to 70V. The relay is powered from L1 phase and does not protect from symmetric voltage drop. After the powering is given system will switch the contactor's circuit only in the absence of asymmetry and when the correct phase sequence is detected, regardless of the present, set time delay. Relay status is indicated by two LEDs.

Mounting

Mounted on DIN-rail TS 35 according to EN 60715
 Mounting position: any
 IP rating IP20
 Tightening torque: max. 1 Nm
 Terminal capacity: 1 x 0.5 to 2.5 mm² with/without multicore cable end 1 x 4 mm² without multicore cable end 2 x 0.5 to 1.5 mm² with/without multicore cable end 2 x 2.5 mm² flexible without multicore cable end

Danger!

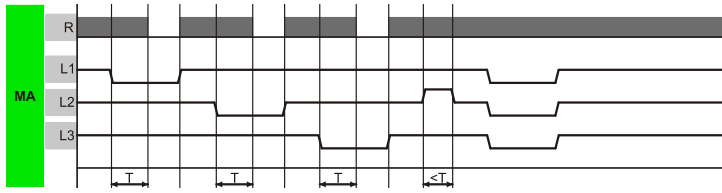
Ordering information



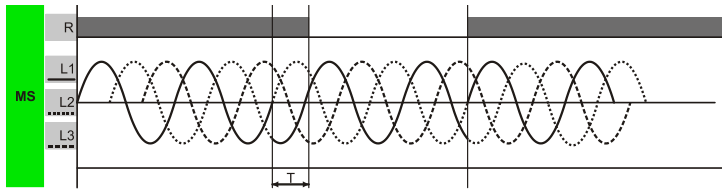
Read and understand these instructions before installing, operating or maintaining the equipment. Never carry out work on live parts! Danger of fatal injury! The product must not be used in case of obvious damage. To be installed by an authorized person.

MMR17-PDF-A230-108

Functions

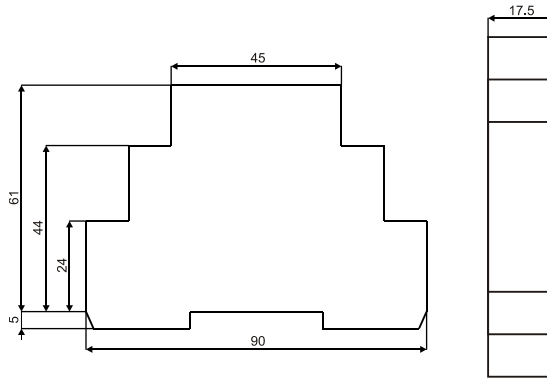


Functions - MA (asymmetry) – Asymmetry monitoring
As soon as the asymmetry exceeds the value at the U_{as} - regulator, the set interval of the tripping delay (DELAY) begins. After the interval has expired the output relay R switches into off-position (yellow LED not illuminated).

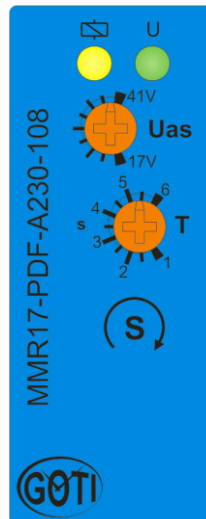


Function - MS (sequence) – Phase sequence monitoring
When all the phases are connected in the correct sequence and the measured asymmetry is less than the set value, the output relay switches into on-position (yellow LED illuminated). When the phase sequence changes, the output relay switches into off-position (yellow LED not illuminated).

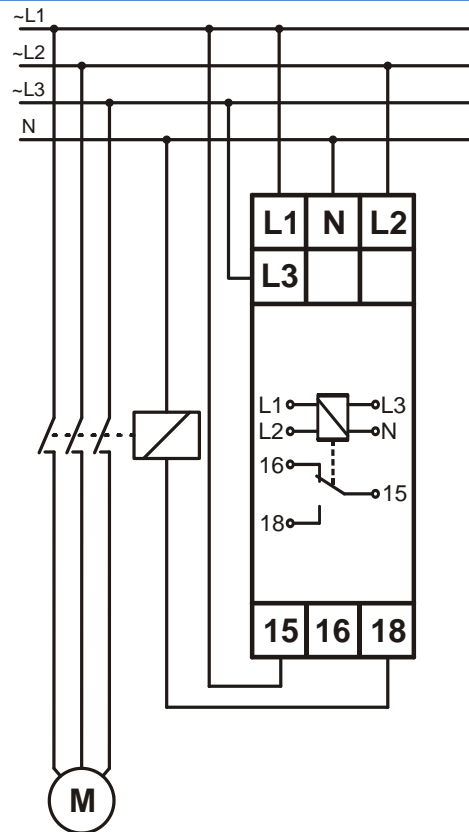
Dimensions



Front panel view



Connection diagram



LED indicator

- Yellow LED indication of relay R output.
- Green LED indication of supply voltage.



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