› MWA
› Monitoring Relays
› 3-Phase Monitoring Relays
› Din Rail Mount 17.5 mm Multifunction

- Control of 3-phase networks : phase sequence, phase failure, imbalance (asymmetry), over and undervoltage (MWU)
- Range includes mono-function product and multi-function product
- Multi-voltage from 3 x 208 to 3 x 480 V
- Controls its own supply voltage
- True RMS measurement
- LED status indication

Specifications			
Functions	Nominal voltage (V)	Output	Code
Phase sequence, phase failure imbalance (asymmetry)	3 x 208 →3 x 480 V AC	1 single pole changeover relay	84873024

Power supply	
Supply voltage Un	3 x 208 →3 x 480 V AC *
Voltage supply tolerance	-12 % / +10 %
Operating range	183 →528 V AC
AC supply voltage frequency	50 / 60 Hz ±10 %
Galvanic isolation of power supply/measurement	No
Power consumption at Un	22 VA in 400 VAC, 50 Hz
Immunity from micro power cuts	10 ms

Inputs and measuring circuit	
Measurement ranges	183 →528 V AC
Selection of phase-phase nominal voltage Un	208 - 220 - 380 - 400 - 415 - 440 - 480 V
Frequency of measured signal	50 →60 Hz ± 10 %
Max. measuring cycle time	150 ms/True RMS measurement
Voltage threshold adjustment	2 →20 % of selected Un (-2 to -12 % across the 3 x 208 V AC range / -2 to -17 % across the 3 x 220 V AC range / 2 to 10 % across the 3 x 480 V AC range)
Voltage threshold hysteresis	2 % of fixed Un
Asymmetry threshold hysteresis	2 % of fixed Un
Asymmetry threshold adjustment	5 to 15 % of selected Un
Display precision	± 3 % of the displayed value
Repetition accuracy with constant parameters	± 0,5 %
Measuring error with voltage drift	< 1 % across the whole range
Measuring error with temperature drift	< 0,05 %/ °C
Maximum regeneration (phase failure)	70 %

Time delays	
Delay on thresold crossing	0.1 to 10 s 0 +10 %

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Time delays	
Repetition accuracy with constant parameters	± 3 %
Reset time	1500 ms
Delay on pick-up	≤ 650 ms
Alarm on delay time max.	< 200 ms

Outputs	
Type of output	1 single pole changeover relay
Type of contacts	No cadmium
Maximum breaking voltage	250 V AC/DC
Max. breaking current	5 A AC/DC
Min. breaking current	10 mA / 5 V DC
Electrical life (number of operations)	1 x 10^5
Breaking capacity (resistive)	1250 VA AC
Maximum rate	360 operations/hour at full load
Operating categories acc. to IEC/EN 60947-5-1	AC 12, AC 13, AC 14, AC 15, DC 12, DC 13, DC 14
Mechanical life (operations)	30 x 10^6

Insulation	
Nominal insulation voltage IEC/EN 60664-1	400 V
Insulation coordination (IEC/EN 60664-1)	Overvoltage category III : degree of pollution 3
Rated impulse withstand voltage (IEC/EN 60664-1)	4 KV (1,2 / 50 µs)
Dielectric strength (IEC/EN 60664-1)	2 kV AC 50 Hz 1 min
Insulation resistance (IEC/EN 60664-1)	> 500 MOhm(s) / 500 V DC

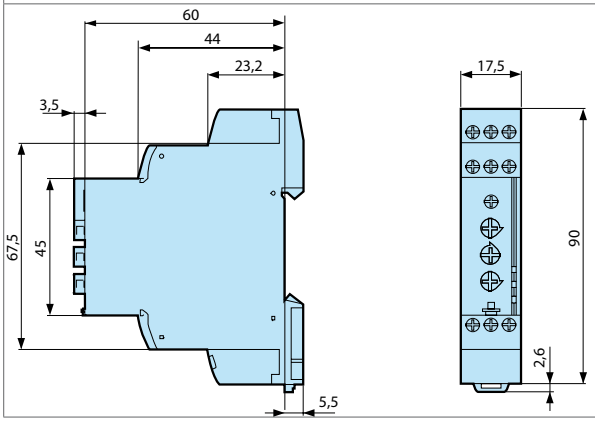
General characteristics	
Display power supply	Green LED
Display relay	Yellow LED - This LED flashes during the threshold delay
Casing	17,5 mm
Mounting	On 35 mm symmetrical DIN rail, IEC/EN 60715
Mounting position	All positions
Material : enclosure plastic type VO to UL94 standard	Incandescent wire test according to IEC 60695-2-11 & NF EN 60695-2-11
Protection (IEC/EN 60529)	Terminal block : IP20 Casing : IP30
Weight	80 g
Connecting capacity IEC/EN 60947-1	Rigid : 1 x 4^2 - 2 x 2.5^2 mm^2 1 x 11 AWG - 2 x 14 AWG Flexible with ferrules : 1 x 2.5^2 - 2 x 1.5^2 mm^2 1 x 14 AWG - 2 x 16 AWG
Max. tightening torques IEC/EN 60947-1	0,6 Nm →1 / 5,3 →8,8 Lbf.In
Operating temperature IEC/EN 60068-2	-20 →+50 °C
Storage temperature IEC/EN 60068-2	-40 →+70 °C
Humidity IEC/EN 60068-2-30	2 x 24 hr cycle 95 % RH max. without condensation 55 °C
Vibrations according to IEC/EN60068-2-6	10 →150 Hz, A = 0.035 mm
Shocks IEC/EN 60068-2-6	5 g

Standards	
Product standard	IEC/EN 50178
Electromagnetic compatibility (EMC)	IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4
Certifications	CE, UL, CSA, GL
Conformity with environmental directives	RoHS

Comments	
	* 3-phase mains with earth

Dimensions

MWG - MWA - MWU - MWUA



Curves

Connections

MWG - MWA - MWU - MWUA