

› M3US

› Monitoring Relays

› 3-Phase Monitoring Relays

› DIN Rail Mount - 17.5 mm / 35 mm 3-phase voltage control

- › H3US and M3US relays control, on 3-phase networks :
 - › - overvoltage between phases,
 - › - undervoltage between phases
- › The H3USN relay controls, on 3-phase networks :
 - › - overvoltage between phases and neutral,
 - › - undervoltage between phases and neutral,
 - › - loss of neutral
- › Multi-voltage Products
- › Controls its own supply voltage
- › True RMS measurement
- › LED status indication



Specifications			
Function	Nominal voltage (V)	Output	Code
Under/overvoltage between phases	3 x 208 → 3 x 480 V AC*	1 single pole changeover relay	84873222

Power supply	
AC supply voltage frequency	50 / 60 Hz ±10 %
Galvanic isolation of power supply/measurement	No
Immunity from micro power cuts	20 ms

Inputs and measuring circuit	
Frequency of measured signal	50 → 60 Hz ±10 %
Max. measuring cycle time	150 ms/True RMS measurement
Fixed hysteresis	2 % of Un (M3US, H3US)
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

Timing	
Delay on threshold crossing	0,3 → 30 s (0, +10 %)
Repetition accuracy with constant parameters	± 3 %
Reset time	1500 ms
Delay on pick-up	500 ms
Alarm on delay time max.	200 ms

Outputs	
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

Outputs	
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 VDC
General characteristics	
Display power supply	Green LED
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/EN 60695-2-11
Protection (IEC/EN 60529)	Terminal block : IP 20 Casing : IP30
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 → 1 Nm / 5,3 → 8,8 Lbf.Ft
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
Dimensions	
M3US	
Curves	

