# › H3US
# › 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 220 →3 x 480 V AC* | 2 single changeover relays / one per threshold | 84873220 |

| 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 |

CROUZET CONTROL

| 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 $10^6$ |

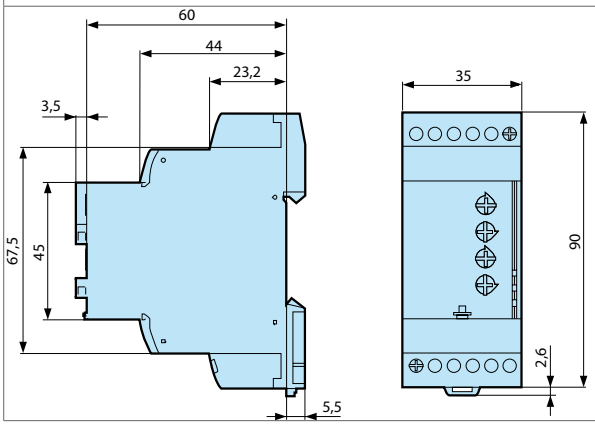
| Insulation | |
|---|---|
| Nominal insulation voltage IEC/EN 60664-1 | 400 V |
| Insulation coordination (IEC/EN 60664-1) | Overvoltage category III : degree of pollution 3 |
| Rated impulse withstand voltage (IEC/EN 60664-1) | 4 KV (1,2 / 50 µs) |
| Dielectric strength (IEC/EN 60664-1) | 2 kV AC 50 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<br>Casing : IP30 |
| Connecting capacity IEC/EN 60947-1 | Rigid : 1 x $4^2$ - 2 x $2.5^2$ $mm^2$<br>1 x 11 AWG - 2 x 14 AWG<br>Flexible with ferrules : 1 x $2.5^2$ - 2 x $1.5^2$ $mm^2$<br>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**

H3US - H3USN




**Curves**

## Connections

H3US