

| | | | | |
|--|--|-----|---------------------------------------|---|
| Product designation | | | Frequency monitoring relays | |
| Product type designation | | | PMF20 | |
| General characteristics | | | | |
| Description | | | Minimum and maximum frequency control | |
| Type of system | | | Single phase | |
| Power supply | | | | |
| Auxiliary supply voltage U_s | | | Self powered | |
| Operating voltage range | | | 0.85... 1.1 U_e | |
| Rated frequency | | Hz | 50 or 60 Hz selectable | |
| Power consumption Max | | VA | 17 | |
| Power dissipation Max | | W | 1.5 | |
| Control circuit | | | | |
| Rated voltage to control (U_e) | | min | VAC | 380 |
| | | Max | VAC | 415 |
| Frequency set-point (% rated frequency) | | min | % | 90...99 |
| | | Max | % | 101...110 |
| Tripping delay | | | s | 0.1...20 |
| Resetting time | | | s | 0.1...20 |
| Resetting hysteresis | | | % | 0.5 |
| Type of reset | | | Automatic | |
| Repeat accuracy | | | % | <±0.1 |
| Voltage inputs | | | | |
| Frequency range | | | Hz | 40...70 |
| Relay outputs | | | | |
| Number of relays | | | Nr. | 1 |
| Relay state | | | | Normally energised De-energises at tripping |
| Contact arrangement | | | | 1 changeover SPDT |
| Rated operational voltage AC (IEC) | | | VAC | 250 |
| Maximum switching voltage | | | VAC | 400 |
| IEC Conventional free air thermal current I_{th} | | | A | 8 |
| UL/CSA and IEC/EN 60947-5-1 designation | | | | B300 |
| Electrical life (with rated load) | | | cycles | 100000 |
| Mechanical life | | | cycles | 30000000 |
| Indications | | | | |
| Indication | | | | 1 green LED for power on and tripping and 2 red LEDs for min/max tripping |
| Connections | | | | |
| Terminals type | | | | Screw |
| Tightening torque for terminals | | max | Nm | 0.8 |
| | | max | lbin | 7 |

Conductor cross section

AWG/Kcmil

| | | |
|-----|-----|----|
| min | AWG | 24 |
| Max | AWG | 12 |

IEC

| | | |
|-----|-----------------|-----|
| min | mm ² | 0.2 |
| Max | mm ² | 4 |

Insulations

| | | |
|---------------------------------------|----|-----|
| Rated insulation voltage Ui | V | 575 |
| Rated impulse withstand voltage Uimp | kV | 6 |
| Operating frequency withstand voltage | kV | 4 |

Ambient conditions

Temperature

Operating temperature

| | | |
|-----|----|-----|
| min | °C | -20 |
| max | °C | +60 |

Storage temperature

| | | |
|-----|----|-----|
| min | °C | -30 |
| max | °C | +80 |

Housing

| | |
|---------------------------|-------------------------------------|
| Execution (n° of modules) | 2 |
| Material | Self-extinguishing polyamide |
| Mounting | 35mm DIN rail (IEC/EN 60715) |
| IEC degree of protection | IP40 on front; IP20 at terminals |
| Dimensions (W x H x D) | mm 35.8 x 104.7 x 64.9 |
| Weight | g 125 |

Dimensions

Wiring diagrams

Certifications and compliance

Compliance

CSA C22.2 n° 14
IEC/EN 60255-5
IEC/EN 61000-6-2
IEC/EN 61000-6-3
UL 508

Certificates

cULus
EAC

ETIM classification

| | |
|----------|---|
| ETIM 8.0 | EC001442 - Frequency monitoring relay |
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