INT69 SCY® Motor protector

Application:
The microprocessor-based INT69 SCY motor protector has been specially developed to monitor motor winding temperature, phase sequence and phase failure on scroll compressors.

Functional description:
- When supply voltage is applied, the output relay pulls in after an initialisation period of approx. 3 seconds, provided all thermistors lie below their rated response temperature.
- 1 to 9 PTC thermistors with varied rated response temperatures can be connected in series to the input terminals.
- If any thermistor resistance increases above trip level, the output relay drops out. At the same time a 30 minute time delay is activated, during which the relay remains dropped out. After this period has elapsed and the thermistor resistance has dropped below the reset level, the relay pulls in again.
- The phase monitoring function is active 1 second after motor start during a 5 second window. Incorrect phase sequence results in lockout trip. Phase loss results in trip and a subsequent 5 minute reset delay.
- A maximum of 9 automatic resets following phase loss trip are permitted during a rolling 24 hour period. A tenth trip results in lockout.
- To avoid nuisance tripping due to reverse running after shutdown (pressure equalisation), the phase monitoring function is only re-enabled approx. 5 seconds after motor stop.
- The relay is fed out as a N/O dry contact, which is closed under good conditions.

Technical data:
Supply voltage
- dual voltage
- AC 24V
Ambient temperature range
-30...+70°C
Temperature monitoring
- PTC, to DIN 44081/082
- Number of sensors 1...9 in Series
- R 25, total 1.8kΩ
- Rtrip 4.50kΩ ±20%
- Rreset 2.75kΩ ±20%
- max. lead length <30m
After thermal trip
- Time delay 30min ±5min
Phase monitor
- 5 AC 50Hz/60Hz 200...575V ±10%
- aktive window t₀ + 1s...t₀ + 6s
Phase sequence
- Lockout
- Time delay 5min ± 1min, after 10 failures within 24h - lockout.
Phase loss
- AC 240V, max. 2.5A, C300 min. 24V AC/DC, >20mA
- AgNi 90/10 (gold-plated) min. >100mV >0.5mA
- After a single operation at AC/DC >36V or >50mA resistive load, the 240V AC relay values apply

Mechanical service life
approx. 1 mio. switching cycles
Protection class acc. to EN 60529
IP00
Approval
UL File Nr. E7899
Connection
6.3mm connectors (Faston)
Housing Material
PA66 GF25
Mounting
Screw mounted or latching
Dimensions
76.5x81.5x34.5mm
Weigh
approx. 200g

Part-No.
- dual voltage 22 A 406
- dual voltage/gold-plated contacts 22 A 406 S22
- AC 24V 31 A 406

Note: The unit must be connected by trained electrical personnel. All valid standards for connecting electrical equipment must be observed. Limit values for the supply voltage of the unit may not be exceeded.