Revision—2017-04-20

Please refer to the RC2 Maintenance Manual for directions on replacing the motor protector.

Motor Protector & Kit Specifications

Supply Voltage ........ AC 50/60Hz 115-240V; -15….+10% 3VA
Motor Voltage ........... 3 AC 50/60Hz 200-690V ±10%
Ambient Temp ............ -22 ~ 158°F (-30 ~ + 70°C)

Phase Monitoring
- Sequence ........ Active about 1 second after motor start for about 5 sec.
- Failure ............ Active about 1 second after the motor start until the motor stop
- Inactive .......... After motor stop for approx. 20 sec.

Reset Delay
- Motor Temp Static ...... 5min ± 1min
- Motor Temp Dynamic . 1/24h 5min ± 1min
2/24h 60min ± 12min
3/24h Locked
- Switching Frequency Overstepping: 5min ± 1min
- Incorrect phase sequence: Locked
- Phase Failure: Locked
- Resetting the lock or the reset delay

Main reset >5 sec. only possible if there is no error current Relay
Inactive (31 A 630) ........ AC 240V 2.5A C300 at least AC/DC 100mV 0.5mA
Mechanical service life ... Approx. 1 million switching cycles
Interface .................. Diagnose port (DP)
Approval .................. UL File No E75899

Reset Kit Description

The INT69HBY Reset Kit allows you to add an optional reset button when upgrading from an INT69 or INT69Y to INT69HBY.

RC-INT69HBY-RESET KIT #1
Reset button kit for RC2-100, RC2-140
RC-INT69HBY-RESET KIT #2
Reset button kit for RC2-170~RC2-710

Application

The compressor protection INT69HBY Diagnosis is a further development of the reliable motor protectors. Additional inputs for the phase monitoring as well as supplementary flexible-response protective functions help to improve the availability and extend the service life of a refrigeration system.

The INT69HBY Diagnosis automatically saves operational and error data in a non-volatile memory. The data can be retrieved on a PC and analyzed for diagnosis. This motor protector is mainly employed on compressors of which the motors direction of rotation is essential for the function.

Functional Description

The temperature monitoring of the motor winding is done with two evaluation processes:
- Static: Switch-off is immediate if the nominal response temperature of the built-in AMS or PTC sensors is reached.
- Dynamic: If the temperature increases unusually quickly, the motor is switched off immediately even if the temperature is still far below the nominal response temperature. This prevents excess temperatures from occurring.

A short circuit at an AMS or PTC input also leads to a switch-off. A short cycling leads to a reset delay.

After cool down or elimination of the error and a subsequent reset delay, the compressor can be restarted; restarting after locking only after reset.

The phase monitoring of the motor voltage is active 1 second after the start of the motor. The correct phase sequence is monitored for 5 seconds; the phase failure is monitored for the total motor running time. If a wrong phase sequence is detected or there is a phase failure, the motor protector will lock switch off.

For operation in the specified manner, the supply voltage has to be on permanently on the INT69HBY Diagnosis.

The built-in LED signals the current status of the motor protector (see flash code).

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