

INT69 TM2[®] Diagnose

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Application

The motor protector INT69 TM2 Diagnose is a further development of the reliable KRIWAN motor protectors. Its supplementary flexible-response protective functions help to improve the availability and extend the service life of a refrigeration system.

The INT69 TM2 Diagnose automatically saves operational and error data in a non-volatile memory. This data can be retrieved on a PC and analysed for diagnosis. The full scope of the diagnosis is achieved by using a KRIWAN-specific AMS sensor.

This motor protector is mainly employed on compressors which are qualified acc. to IEC/EN 60335.

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.

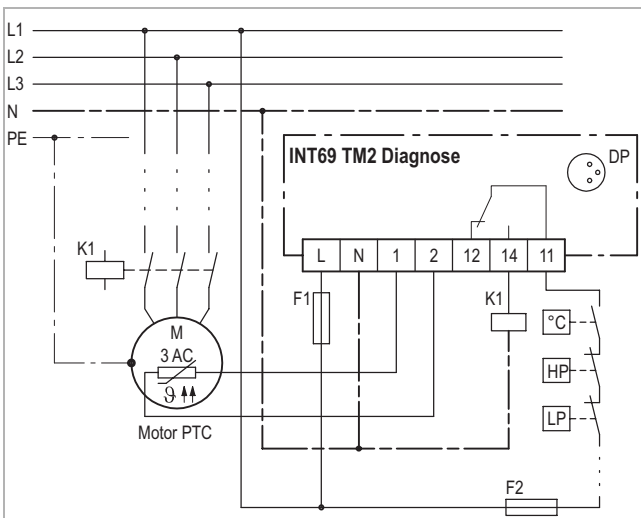
After expiration of the reset delay and elimination of the error or cool-down, the compressor can be restarted.

For operation in the specified manner, the supply voltage has to be on permanently on the INT69 TM2 Diagnose.

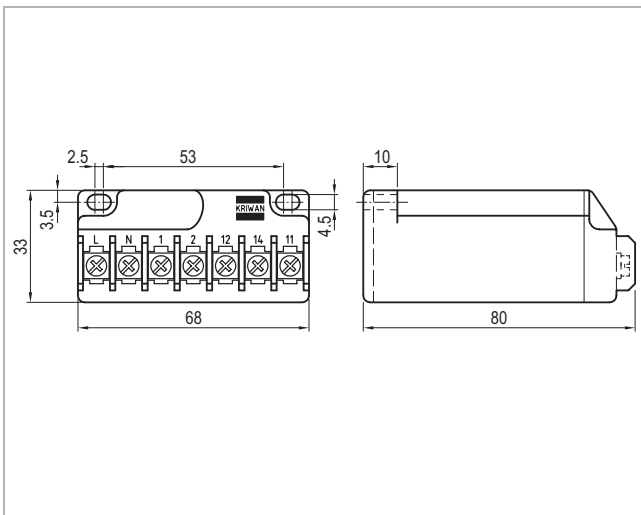
! The mounting, maintenance and operation are to be carried out by an electrician. The valid European and national standards for connecting electrical equipment and cooling installations have to be observed. Connected sensors and connection lines that extend from the terminal box have to feature at least a basic insulation.

! To determine the compressor running times, the INT69 TM2 Diagnose has to be the last protection unit before the compressor contactor (see wiring diagram). For that, the INT69 TM2 Diagnose and the safety circuit have to be connected to the same phase of the same supply network.

See back side for further specifications



Wiring diagram



Dimensions in mm

Technical changes reserved

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Technical specifications

Supply voltage	115-230V ~ 50Hz ±10% 3VA 120-240V ~ 60Hz ±10% 3VA
Permitted ambient temperature	-30...+70°C
Temperature measuring circuits	
- Type	1-2 AMS sensors in series alternative 1-9 PTC sensors acc. to DIN 44081, DIN 44082 in series
- R _{25,total}	<1.8kΩ
- R _{trip, static}	4.5kΩ ±20%
- R _{reset}	2.75kΩ ±20%
- Max. length connection line	30m
Short circuit monitoring system PTC	Typically <30Ω
Reset delay	
- Motor temperature static	5min ±1min
- Motor temperature dynamic	5min ±1min
Reset of reset delay	Main reset >5s only possible if there is no error current
Relay	
- Connection	Refer to wiring diagram Max. 2.5A C300
- Mechanical service life	Approx. 1 million switching cycles
Interface	Diagnose port (DP)
Protection class acc. to EN 60529	IP00
Connection type	Screw type terminal
Housing material	PA glass-fibre-reinforced
Mounting	Screw mounted
Dimensions	Refer to dimensions in mm
Weight	Approx. 200g
Check base	IEC/EN 60335, IEC/EN 60730 EN 61000-6-2, EN 61000-6-3 EN 61010-1 Overvoltage category II Pollution level 2
Approval	UL File no. E75899 cUR _{us} VDE certification no. 40022017

Order data

INT69 TM2 Diagnose	22 A 263 S80
Accessories and application information	see www.kriwan.com