

INT369® Diagnose

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Application

The motor protector INT369 Diagnose is a further development of the reliable KRIWAN motor protectors.

The INT369 Diagnose automatically saves operational and error data in a non-volatile memory. This data can be retrieved on a PC and analysed for diagnosis.

This motor protector is mainly employed on compressors of which the PTC sensors in the motor winding are led out individually.

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 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.

The INT369 Diagnose monitors the applied module supply voltage and switches off as soon as it drops below a fixed specified limit value.

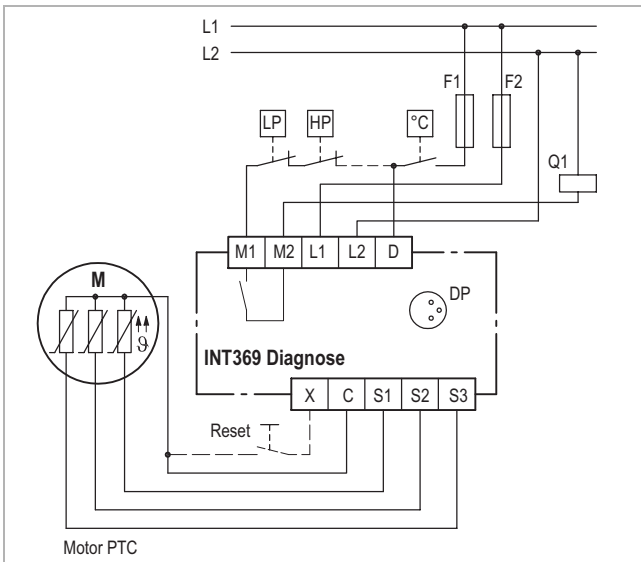
After expiration of the reset delay and elimination of the error, the compressor can be restarted. An active reset delay can be reset only by briefly connecting the terminals "X" and "C".

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

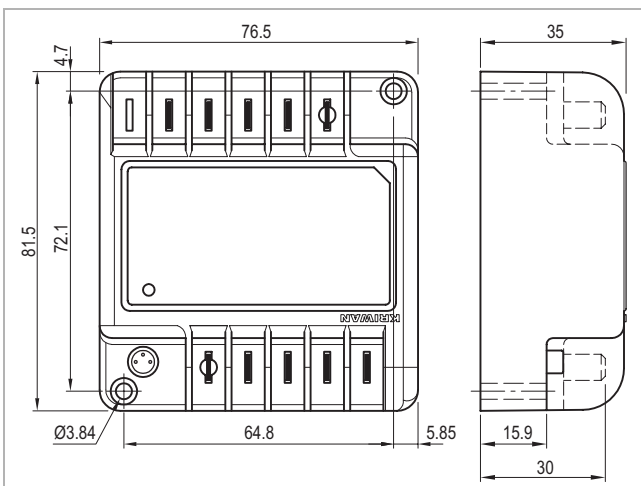
! The mounting, maintenance and operation are to be carried out by an electrician. The valid European and national standards for connecting electrical equipment and cooling installations have to be observed. Connected sensors and connection lines that extend from the terminal box have to feature at least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

! To determine the compressor running times, the INT369 Diagnose has to be the last protection unit before the compressor contactor (see wiring diagram). For that, the INT369 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

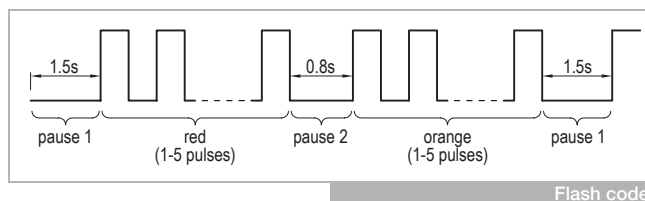
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Flash code

The KRIWAN flash code allows for a quick and easy status display and troubleshooting.

The flash code consists of a cyclical red and orange flash sequence. The current status can be determined from the number of pulsing flashes.



Overview flash code

Green lit	Compressor operational
Green flashing	Compressor running
Red/Orange flashing	Error, compressor is switched off; for description see table below

1st flashing sequence (LED red)	2nd flashing sequence (LED orange)	Description
1	1	Motor temperature: Static switch-off, Permissible winding temperature exceeded
	2	Motor temperature: Dynamic switch-off, Temperature rise in the motor winding unusually fast
	3	Motor temperature: Reset delay after static switch-off
	4	Motor temperature: Sensor input detected open circuit or short circuit
	5	Motor temperature: Reset delay after dynamic switch-off
3	1	General: Supply voltage too low
	5	General: Reset delay after "General" error

Technical specifications

Supply voltage	AC 50/60Hz 120/240V -20...+10% 3VA
Undervoltage limits	85V (120V mains) / 170V (240V mains)
Permitted ambient temperature	-40...+70°C
Temperature measuring circuits	
- Type	3 separate inputs for PTC sensors acc. to DIN 44081, DIN 44082
- R _{trip, static}	13kΩ ±3kΩ
- R _{reset}	3.25kΩ ±0.5kΩ
- Max. length connection line	30m
Reset delay	4min ±1min
Reset of reset delay	Activation of the reset input 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	6.3mm flat plugs
Housing material	PA glass-fibre-reinforced
Mounting	Screw mounted
Dimensions	Refer to dimensions in mm
Weight	Approx. 200g
Check base	EN 61000-6-2, EN 61000-6-3 EN 61010-1 Overvoltage category II Pollution level 2
Approval	UL File No. E75899 cUR _{us}

Order data

INT369 Diagnose	22 A 278 S23
Accessories and application information	see www.kriwan.com