

INT69 Y[®] Diagnose

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Application

The compressor protection INT69 Y Diagnose is a further development of the reliable KRIWAN 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 INT69 Y Diagnose automatically saves operational and error data in a non-volatile memory. This data can be retrieved 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 of which the motor's direction of rotation is essential for the function.

Functional description

The temperature monitoring in the motor winding is done according to the static evaluation process; the motor is switched off immediately if the nominal response temperature of the built-in AMS or PTC sensors is reached.

Following cooling off and/or error rectification and subsequent restart delay, the compressor may be restarted. Restart after a lock-out is only possible after a reset.

The monitoring of the correct phase sequence and phase failure is active 1s after the motor start for 5s. If a wrong phase sequence is detected or there is a phase failure, the motor protector will lock switch off.

After motor stop, the phase monitoring is deactivated for approx. 20s to prevent unintended locking due to brief reverse running of the machine.

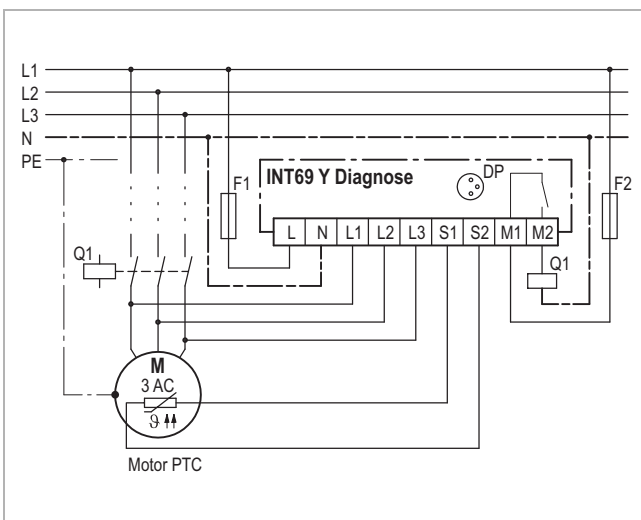
For operation in the specified manner, the supply voltage has to be on permanently on the INT69 Y Diagnose.

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

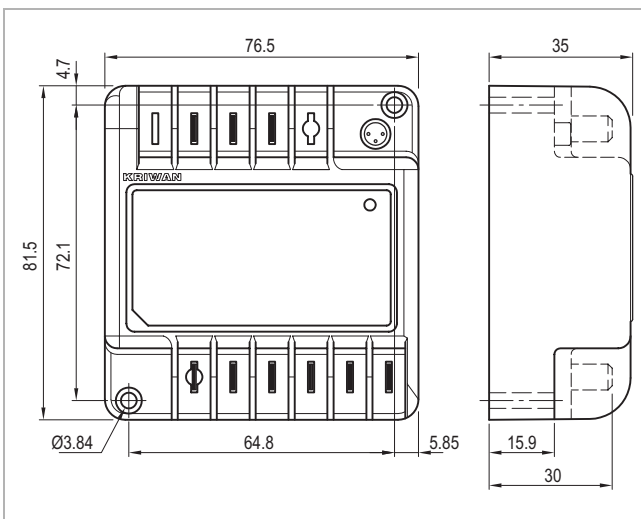
! The mounting, maintenance and operation are to be carried out by an electrician. The valid European and national standards for connecting electrical equipment and cooling installations have to be observed.

Connected sensors and connection lines that extend from the terminal box have to feature at least a basic insulation.

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 flash sequence. The current status can be determined from the number of pulsing flashes.

Overview flash code

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

Flash sequence [ms]				Description
LED on	LED off	LED on	LED off	
40	460	40	460	Reset static Nominal response temperature of motor was exceeded
80	920	80	920	Time delay active after static switch-off
500	500	500	500	Motor voltage: Phase failure/asymmetry
120	120	120	400	Motor voltage: Incorrect phase sequence

Technical specifications

Supply voltage	
- 22 A 626	AC 50/60Hz 115-240V ±10% 3VA
- 31 A 626	AC 50/60Hz 24V ±10% 3VA
Permissible ambient temperature T_A	-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 <1.8kΩ
- $R_{25, total}$	4.5kΩ ±20%
- $R_{trip, static}$	2.75kΩ ±20%
- R_{reset}	30m
- Max. length connection line	3 AC 50/60Hz 200-575V ±10%
Motor voltage	
Phase monitoring	
- Phase sequence	Active about 1s after motor start for about 5s
- Phase failure	Active about 1s after motor start for about 5s
- Inactive	After motor stop for approx. 20s
Operation with frequency converters	Not suitable
Reset delay	
- Motor temperature static	5min ±1min
- Incorrect phase sequence	Locked
- Phase failure	Locked
Resetting the lock or the reset delay	Main reset >5s only possible if there is no error current
Relay	
- Contact (22 A 626)	AC 240V 2.5A C300 at least AC/DC 24V 20mA
- Contact (31 A 626)	AC 240V 2.5A C300 at least AC/DC 100mV 0.5mA
- 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	
INT69 Y Diagnose (AC 115-240V)	22 A 626
INT69 Y Diagnose (AC 24V)	31 A 626
Accessories and application information	see www.kriwan.com

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