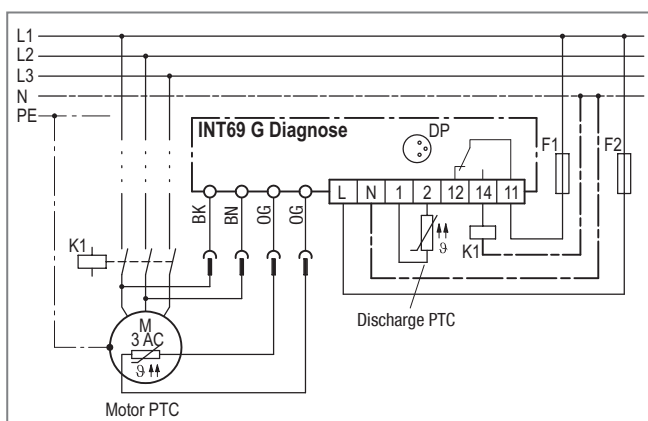


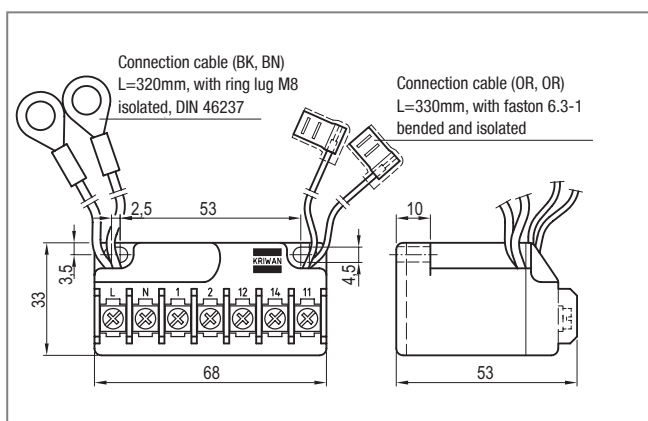
INT69 G® Diagnose



INT69 G Diagnose



Wiring diagram



Dimensions in mm



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.

Order data

INT69 G Diagnose (AC 115-230V)	51154
Accessories and application information	see www.kriwan.com

Application

The compressor protection INT69 G Diagnose is a further development of the reliable KRIWAN motor protectors. An additional input for a discharge gas sensor and its supplementary flexible-response protective functions help to improve the availability and extend the service life of a refrigeration system.

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

This motor protector is mainly employed on small and medium semi-thermal piston compressors.

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.

The discharge gas temperature is evaluated statically.

A short circuit at an AMS or PTC input also leads to a switch-off. A short cycling leads to a reset delay. If no discharge gas sensor is installed, a 100 ohm resistor has to be installed at the input.

After cooldown or elimination of the error and a subsequent reset delay, the compressor can be restarted.

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

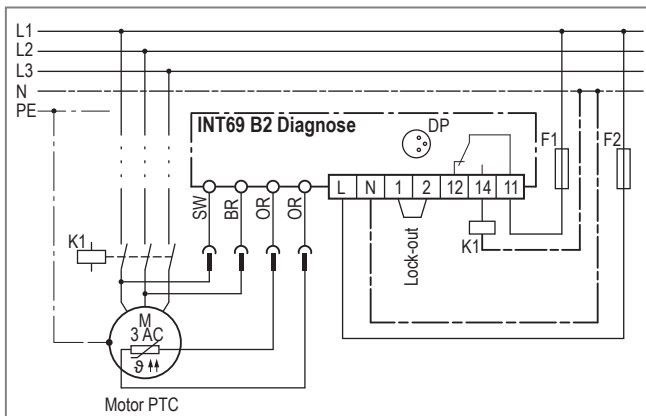
Technical specifications

Supply voltage	AC 50-60Hz 115-230V $\pm 10\%$ 3VA
Permitted ambient temperature	-30...+70 °C
Temperature measuring circuits - Type	1-2 AMS sensors in series alternative 1-9 PTC acc. to DIN 44081, DIN 44082 in series
- R_{25} , total	<1,8 k Ω
- R_{trip} , static	4,5 k $\Omega \pm 20\%$
- R_{reset}	2,75 k $\Omega \pm 20\%$
- Max. length connection line	30m
Short circuit monitoring system PTC	Typically <30 Ω
Input, operating recognition motor - Lower limit	AC 100V at 20Hz up to 175V at 90Hz
- Upper limit	AC 460V $\pm 15\%$
Operation with frequency converters	Suitable
Switching frequency overstepping	3 switch-offs in 30 sec.
Reset delay - Motor temperature static	1min $\pm 12s$
- Motor temperature dynamic	5min $\pm 1min$
- Discharge gas temperature	10min $\pm 2min$
- Switching frequency overstepping	5min $\pm 1min$
Reset of reset delay	Main reset >5 sec. only possible if there is no error current
Relay - Contact	AC 240V 2,5A C300 at least AC/DC 24V 20mA
- Mechanical service life	Approx. 1 million switching cycles
Interface	Diagnose port (DP)
Protection class acc. to EN 60529	IP00
Connection type	Eye screw M8 (operating recognition), flat plug sleeves (PTC), screw terminals
Housing material	PA glass-fibre-reinforced
Mounting	Can be snapped onto 35mm standard rail as per EN 60715 or screw mounted
Dimensions	Refer to dimensions in mm
Weight	Approx. 200g
Check base	EN 61000-6-3, EN 61000-6-2 EN 61010-1 Overvoltage category II Pollution level 2
Approval	UL File No. E75899 cURus

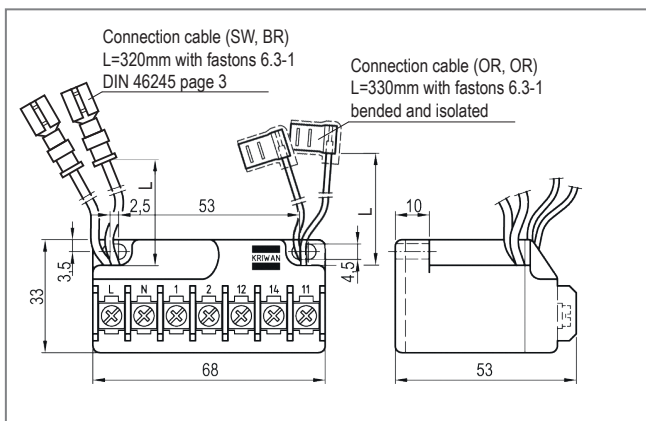
INT69 B2® Diagnose



INT69 B2 Diagnose



Wiring diagram



Dimensions in mm

! 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.

Order data

INT69 B2 Diagnose (AC 24V)	52483
Accessories and application information	see www.kriwan.com

Application

The motor protector INT69 G 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 B2 Diagnose automatically saves operational and error data in a non-volatile memory. This data can be retrieved on a PC and analysed for diagnose. The full scope of the diagnose is achieved by using a KRIWAN-specific AMS sensor.

This motor protector is mainly employed on small and medium semi-thermal piston compressors.

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 the AMT or PTC input also leads to a switch-off. If the lock-out bridge is installed, errors (with the exception of short circuit) always lead to a locked switch-off.

Restarting after locking only after reset.

If the lock-out bridge is not inserted, the compressor can be restarted after it cools down or the error is rectified and a subsequent reset delay. A network restart has to be carried out after the lock-out bridge has been changed.

For operation in the specified manner, the supply voltage has to be on permanently on the INT69 B2 Diagnose.

Technical specifications

Supply voltage	AC 50-60Hz 24V $\pm 10\%$ 3VA
Permitted ambient temperature	-30...+70 °C
Temperature measuring circuits - Type	1-2 AMS sensors in series alternative 1-9 PTC acc. to DIN 44081, DIN 44082 in series <1,8 k Ω - $R_{25, total}$ - $R_{trip, static}$ - R_{reset} - Max. length connection line
Short circuit monitoring system PTC	Typically <30 Ω
Input, operating recognition motor - Lower limit - Upper limit	AC 100V at 20Hz up to 175V at 90Hz AC 460V $\pm 15\%$
Operation with frequency converters	Suitable
Reset delay - Motor temperature static - Motor temperature dynamic	1min $\pm 12s$ 5min $\pm 1min$
Reset the lock-out or the reset delay	Main reset >5 sec. only possible if there is no error current
Relay - Contact	AC 240V 2,5A C300 at least AC/DC 24V 20mA Approx. 1 million switching cycles
- Mechanical service life	
Interface	Diagnose port (DP)
Protection class acc. to EN 60529	IP00
Connection type	Flat plug sleeves (PTC, operating recognition), screw terminals
Housing material	PA glass-fibre-reinforced
Mounting	Can be snapped onto 35mm standard rail as per EN 60715 or screw mounted
Dimensions	Refer to dimensions in mm
Weight	Approx. 200g
Check base	EN 61000-6-3, EN 61000-6-2 EN 61010-1 Overvoltage category II Pollution level 2
Approval	UL File No. E75899 cUR _{us}