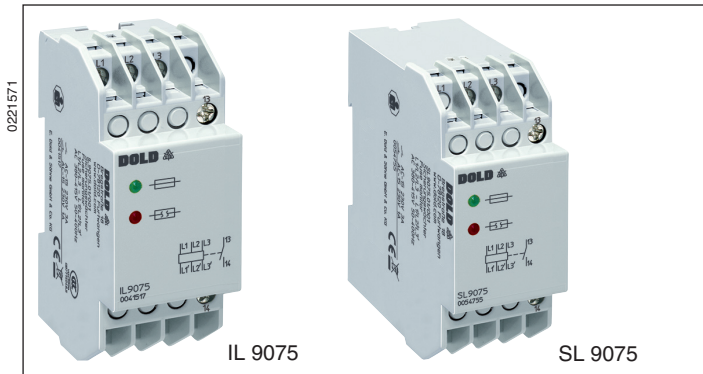


VARIMETER

Fuse Monitor

IL 9075, IP 9075, SL 9075, SP 9075

Translation
of the original instructions

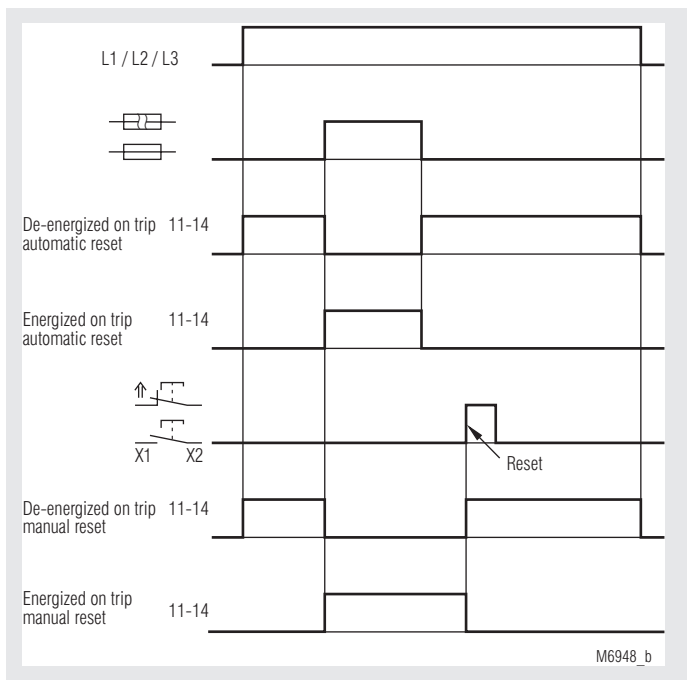


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Product Description

The fuse monitors IL/IP/SL/SP 9075 of the VARIMETER series monitor up to 3 load fuses. Early detection of blown fuses, even when loads are switched off, and preventive maintenance prevent costly damage and, as a user, you benefit from the operational reliability and high availability of your system.

Function Diagram



Your Advantages

- Increased system availability through early detection of fuse failures, which can cause considerable damage to systems
- Rapid detection of fuse failures, even when consumers are switched off, ensures system availability at the earliest possible point in time
- Reliable detection of fuse failure, even with an unbalanced or harmonic network and with regenerative motors

Features

- According to IEC/EN 60255-1
- Recognizes fuse failures in three-phase mains up to 3 AC 690 V
- Can be used for all types and sizes of fuses
- Independent of phase sequence
- Shorter response time than with motor circuit-breakers
- As option:
 - Energized on trip (output relay activated in the event of a fault)
 - De-energized on trip (output relay not activated in the event of a fault) with IP 9075 programmable via X4-X5 or X3-X4
- As option with manual reset function and remote reset, programmable via X1-X2
- 2 LED indicators
- As option: 1 NO contact or 2 changeover contacts
- Devices available in 2 enclosure versions:
 - I-model: Depth 59 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43880
 - S-model: Depth 98 mm, with terminals at the top for cabinets with mounting plate and cable duct
- IL 9075, SL 9075: Width 35 mm
- IP 9075, SP 9075: Width 70 mm

Approvals and Markings

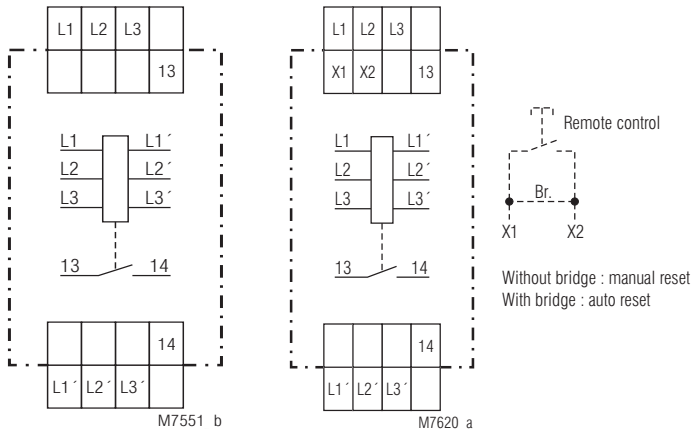


¹⁾ IL 9075 only

Applications

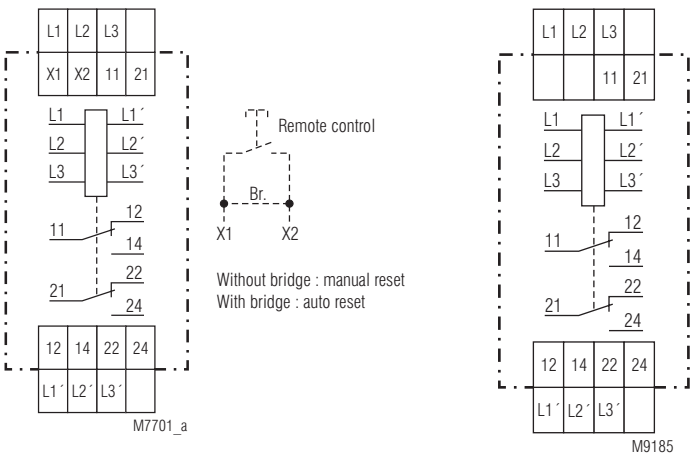
Fuse monitoring in the three-phase mains, e.g. for automatic switching-off and switch-on blockage of three-phase motors in the event of one or more phase fuses failing.

Circuit Diagrams



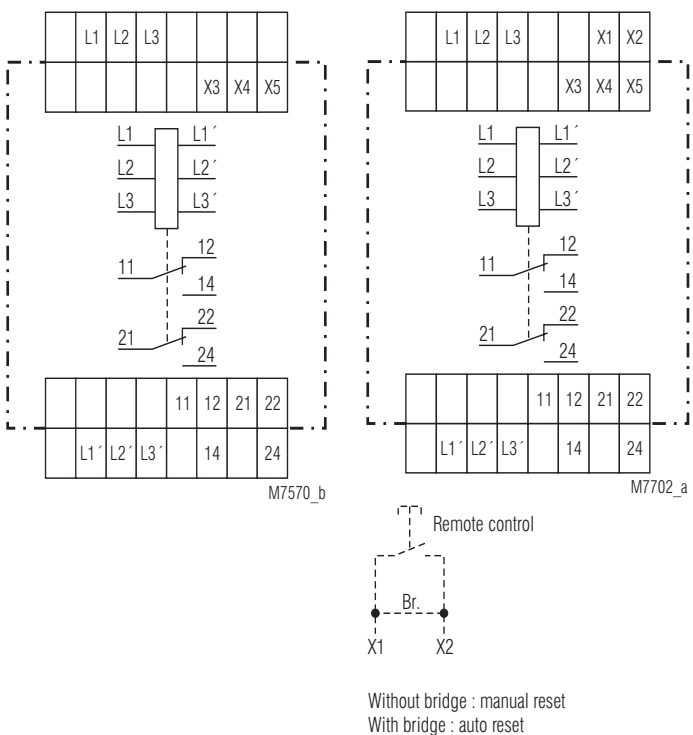
IL 9075.01,
SL 9075.01

IL 9075.01/01_,
SL 9075.01/01_



IL 9075.12/01_,
SL 9075.12/01_

IL 9075.12/001,
SL 9075.12/001



IP 9075.12, SP 9075.12

IP 9075.12/010, SP 9075.12/010

Connection Terminals

Terminal designation	Signal description
L1, L2, L3	Voltage before the fuses
L1', L2', L3'	Voltage after the fuses
X1, X2	Programming manual reset / reset
X3, X4, X5	Programming input energized / de-energized on trip
__ 9075.01: 11, 13	NO contact Rel. 1
__ 9075.12: 11, 12, 14	C/O contact Rel. 1
__ 9075.12: 21, 22, 24	C/O contact Rel. 2

Indicators

Green LED: For healthy fuse
Red LED: For blown fuse

Notes

The internal resistance of the fuse monitor's measuring path is in the MOhm range, meaning that the regulations as regards touch voltage are fulfilled if a fuse is not present or if it is faulty (internal resistance > 2000 Ohm / V).
The cable length of the programming input X3, X4, X5 (energized / de-energized on trip) must not exceed 3 m.

Technical Data**Input**

Nominal voltage U_N:	
IL/SL 9075.01/___:	3 AC 110 ... 127 V 3 AC 220 ... 240 V 3 AC 380 ... 415 V 3 AC 400 ... 440 V
IL/SL 9075.12/___:	3 AC 110 V 3 AC 230 V 3 AC 400 V
IP 9075, SP 9075:	3 AC 480 ... 550 V, 600 ... 690 V
Voltage range:	0.8 ... 1.1 U_N
Nominal consumption:	
IL 9075, SL 9075:	2.0 VA (on L2 / L3)
IP 9075, SP 9075:	3.0 VA (on L1 / L2)
Nominal frequency:	50 ... 400 Hz
Internal resistance of the measuring paths:	> 2000 Ω/V
Permissible feedback:	Max. 90 %

Output**Contacts**

IL/SL 9075.01/___:	1 NO contact
IL/SL 9075.12/___:	2 changeover contacts
IP/SP 9075.12/___:	2 changeover contacts

Response/release time:

De-energized on trip	
IL/SL 9075. ___/001:	< 50 ms
IL/SL 9075. ___/011:	< 50 ms
IP/SP 9075:	< 50 ms

Energized on trip

IL/SL 9075. ___:	< 500 ms
IL/SL 9075. ___/010:	< 500 ms
IP/SP 9075:	< 500 ms

Output nominal voltage:

Max. AC 250 V

Thermal current I_{th} :

4 A

Switching capacity

to AC 15

IL/SL 9075:		
NO contact:	3 A / AC 230 V	IEC/EN 60947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60947-5-1
To DC 13:	1 A / DC 24 V	IEC/EN 60947-5-1
IP/SP 9075:		
NO contact:	3 A / AC 230 V	IEC/EN 60947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60947-5-1

Electrical lifeat 1 A, AC 230 V $\cos \varphi = 1$:

IL/SL 9075:	1.5 x 10 ⁵ switching cycles
IP/SP 9075:	2.5 x 10 ⁵ switching cycles

Short circuit strength**max. fuse rating:** 4 A gG / gL IEC/EN 60947-5-1**Mechanical life:**

IL/SL 9075:	> 10 ⁸ switching cycles
IP/SP 9075:	≥ 50 x 10 ⁶ switching cycles

Technical Data**General Data**

Operating mode:	Continuous operation	
Temperature range:		
Operation:	- 20 ... + 60 °C	
Storage:	- 25 ... + 70 °C	
Altitude:	≤ 2000 m	
Clearance and creepage distances		
Rated impulse voltage / pollution degree:	4 kV / 2	IEC 60664-1
EMC		
Electrostatic discharge:	8 kV (air)	IEC/EN 61000-4-2
HF irradiation		
80 MHz ... 1 GHz:	10 V / m	IEC/EN 61000-4-3
1 GHz ... 2.7 GHz:	3 V / m	IEC/EN 61000-4-3
Fast transients:	4 kV	IEC/EN 61000-4-4
Surge voltages between wires for power supply:	2 kV	IEC/EN 61000-4-5
Between wire and ground:	4 kV	IEC/EN 61000-4-5
HF wire guided:	10 V	IEC/EN 61000-4-6
Interference suppression:	Limit value class B	EN 55011
Degree of protection:		
Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0.35 mm, frequency 10 ... 55 Hz IEC/EN 60068-2-6	
Climate resistance:	20 / 060 / 04 IEC/EN 60068-1	
Terminal designation:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded ferruled DIN 46228-1/-2/-3/-4	
Min. cross section:	0.6 mm	
Insulation of wires or sleeve length:	10 mm	
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60999-1	
Fixing torque:	0.8 Nm	
Mounting:	DIN rail IEC/EN 60715 (also available for screw mounting)	
Weight:		
IL 9075:	130 g	
SL 9075:	157 g	
IP 9075:	255 g	
SP 9075:	304 g	

Dimensions**Width x height x depth**

IL 9075:	35 x 90 x 59 mm
SL 9075:	35 x 90 x 98 mm
IP 9075:	70 x 90 x 59 mm
SP 9075:	70 x 90 x 98 mm

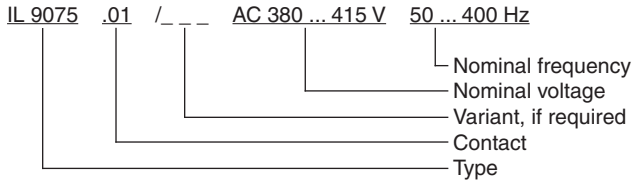
Standard Types

IL 9075.01/001 AC 380 ... 415 V 50 ... 400 Hz
 Article number: 0041517
 SL 9075.01/001 AC 380 ... 415 V 50 ... 400 Hz
 Article number: 0054755

- De-energized on trip
- Automatic reset
- 1 NO contact
- Nominal voltage U_N : AC 380 ... 415 V
- Width: 35 mm

Variants

Ordering example for variants



For rated voltages up to 3 AC 400 resp. 440 V:

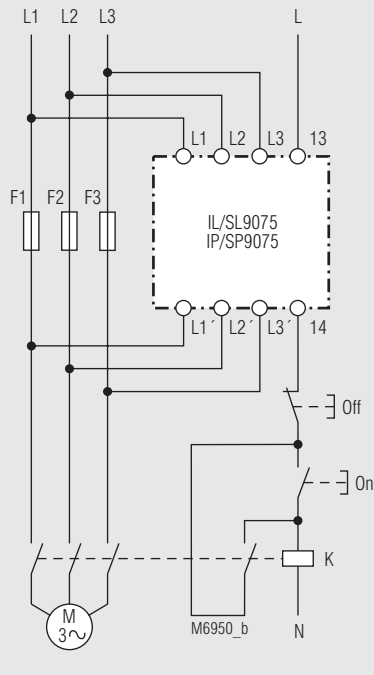
IL 9075. __: Energized on trip, automatic reset
 IL 9075. __ /001: De-energized on trip, automatic reset
 IL 9075. __ /010: Energized on trip, manual reset
 IL 9075. __ /011: De-energized on trip, manual reset

For rated voltages up to 3 AC 690 V,

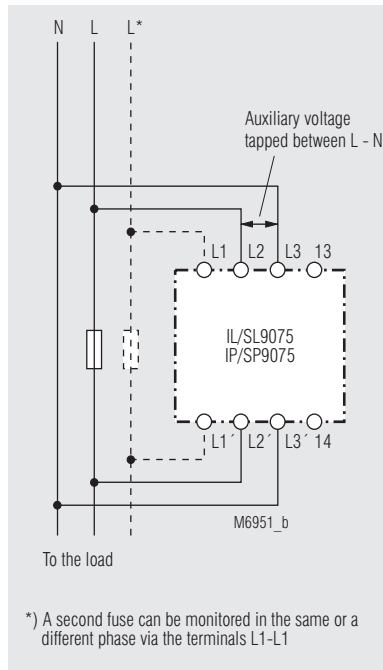
Energized / De-energized on trip, settable:

IP 9075.12: Automatic reset
 IP 9075.12/010: Manual reset or automatic reset settable

Connection Examples



Fuse monitoring in the 3-phase mains, e.g. for motor protection with IL 9075/001 or with IP 9075, de-energized on trip, jumper X3-X4



Fuse monitoring in the alternating current mains