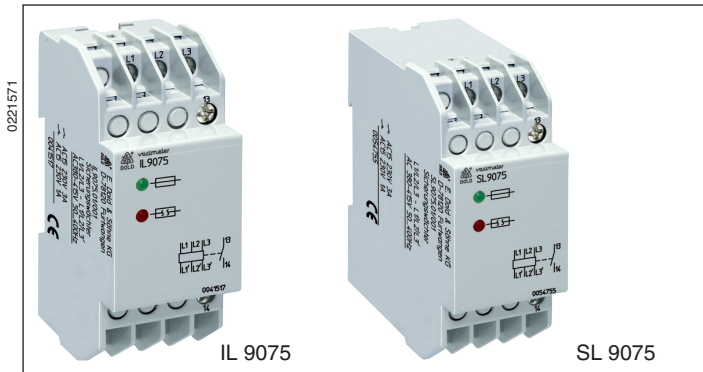


VARIMETER

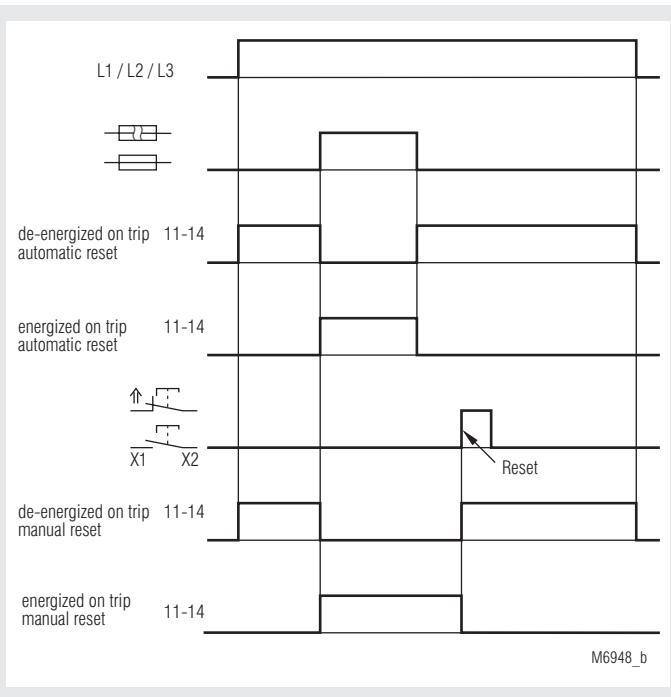
Fuse Monitor

IL 9075, IP 9075, SL 9075, SP 9075



- According to IEC/EN 60 255-1
- 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
- Signals even if loads are switched off
- No malfunction on
 - asymmetrical mains
 - mains with harmonic waves
 - motors producing feedback
- Shorter response time than with motor circuit-breakers
- Green LED for intact fuses
- Red LED for fuse failure
- As option: energized / de-energized on trip in the case of IP 9075 programmable via X4-X5 or X3-X4
- As option: with manual reset function and remote reset, programmable via X1-X2
- 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 43 880
 - 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

Function Diagram



Approvals and Markings



¹⁾ only IL 9075

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.

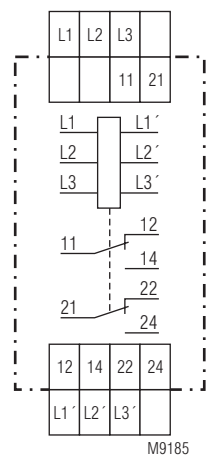
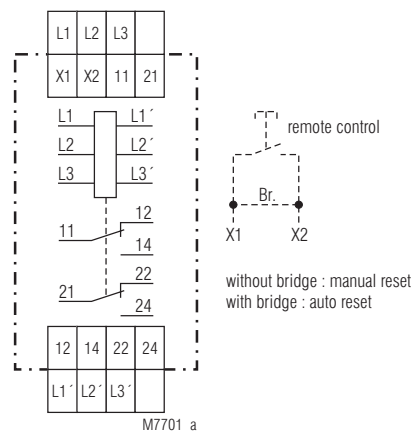
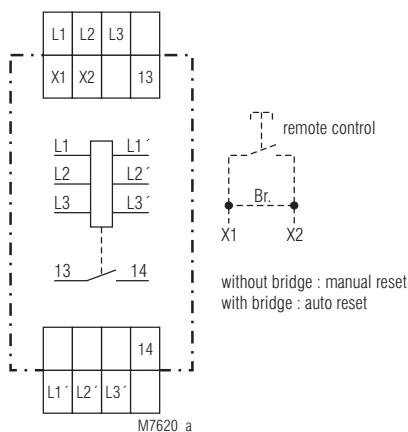
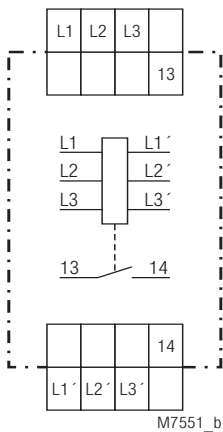
Indicators

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 (IEC 974-1, internal resistance > 2000 Ohm/V).

Circuit Diagrams



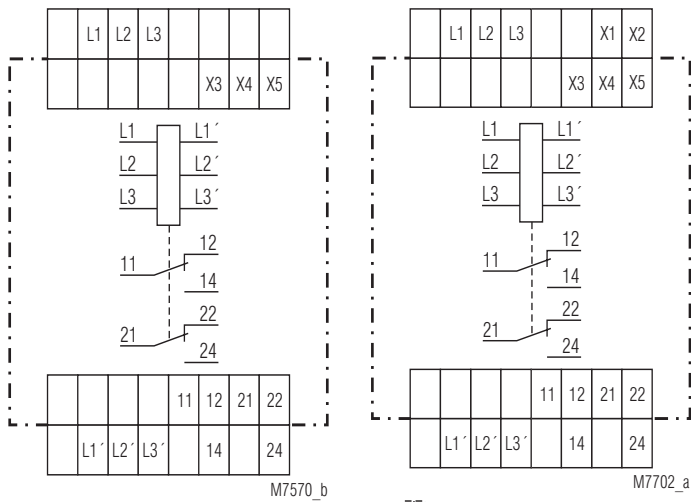
IL 9075.01,
SL 9075.01

IL 9075.01/01_
SL 9075.01/01_

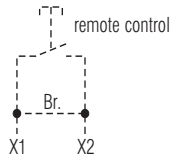
IL 9075.12/01_
SL 9075.12/01_

IL 9075.12/001,
SL 9075.12/001

Circuit Diagrams



IP 9075.12, SP 9075.12



without bridge : manual reset
with bridge : auto reset

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

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 60 947-5-1

NC contact:

1 A / AC 230 V

IEC/EN 60 947-5-1

to DC 13:

1 A / DC 24 V

IEC/EN 60 947-5-1

IP/SP 9075:

NO contact:

3 A / AC 230 V

IEC/EN 60 947-5-1

NC contact:

1 A / AC 230 V

IEC/EN 60 947-5-1

Electrical life

to AC 15 at 1 A, AC 230 V

IL/SL 9075:

1.5 x 10⁵ switching cycles

IP/SP 9075:

2.5 x 10⁵ switching cycles

Short circuit strength

max. fuse rating:

4 A gL

IEC/EN 60 947-5-1

Mechanical life:

> 10⁸ switching cycles

Technical Data

General Data

Operating mode: Continuous operation

Temperature range:

Operation: - 20 ... + 60 °C

Storage: - 25 ... + 70 °C

Altitude: < 2.000 m

Clearance and creepage distances

rated rated impulse voltage voltage /

pollution degree: 4 kV / 2 IEC 60 664-1

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2

HF irradiation

80 MHz ... 1 GHz: 10 V / m IEC/EN 61 000-4-3

1 GHz ... 2.7 GHz: 3 V / m IEC/EN 61 000-4-3

Fast transients: 4 kV IEC/EN 61 000-4-4

Surge voltages between

wires for power supply: 2 kV IEC/EN 61 000-4-5

between wire and ground: 4 kV IEC/EN 61 000-4-5

HF wire guided: 10 V IEC/EN 61 000-4-6

Interference suppression: Limit value class B EN 55 011

Degree of protection:

Housing: IP 40 IEC/EN 60 529

Terminals: IP 20 IEC/EN 60 529

Housing: Thermoplastic with V0 behaviour according to UL subject 94

Vibration resistance: Amplitude 0.35 mm, frequency 10 ... 55 Hz IEC/EN 60 068-2-6

Climate resistance: 20 / 060 / 04 IEC/EN 60 068-1

Terminal designation: 2 x 2.5 mm² solid or 2 x 1.5 mm² stranded ferruled DIN 46 228-1/-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 60 999-1

Fixing torque: 0.8 Nm

Mounting: DIN rail IEC/EN 60 715 (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

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,

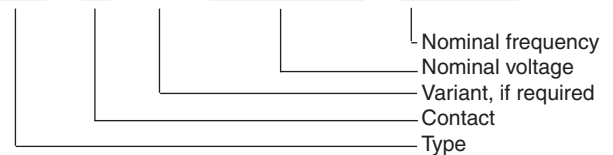
open/de-energized on trip, settable:

IP 9075.12 : automatic reset

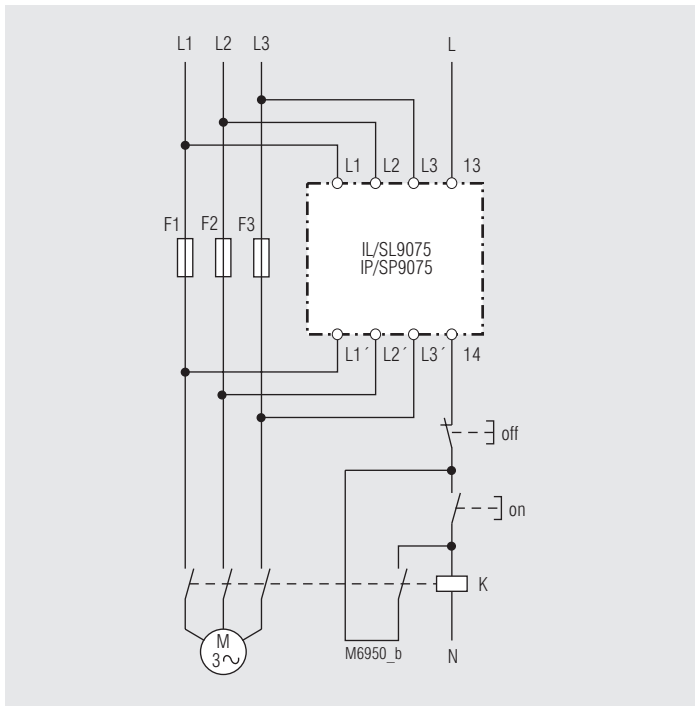
IP 9075.12/010 : manual reset or automatic reset settable

Ordering example for variants

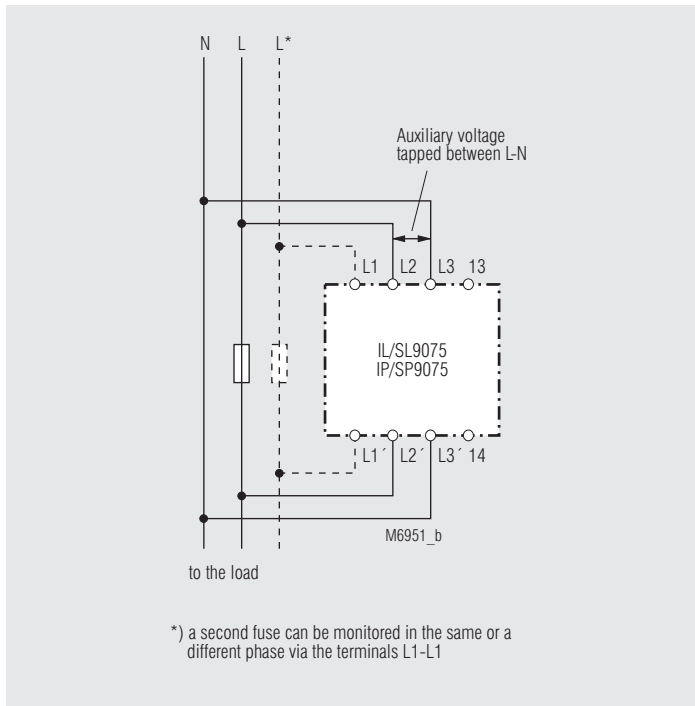
IL 9075 .01 / _ _ _ AC 380 ... 415 V 50 ... 400 Hz



Connection Examples



Fuse monitoring in the 2-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

*) a second fuse can be monitored in the same or a different phase via the terminals L1-L1