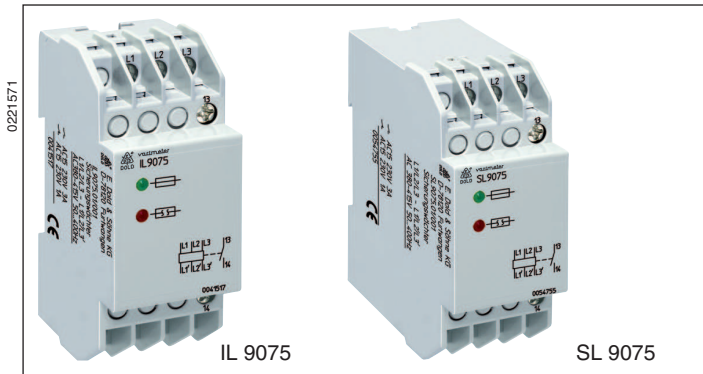


## VARIMETER

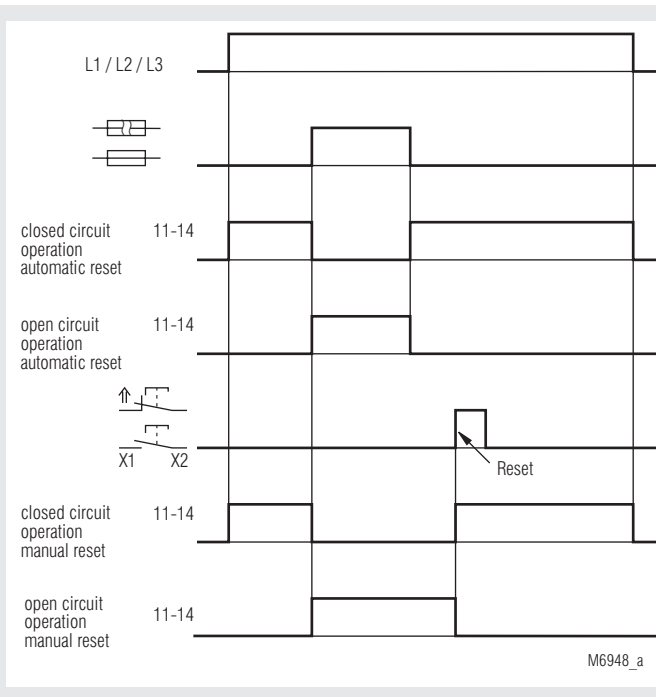
### Fuse Monitor

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



<sup>1)</sup> 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.

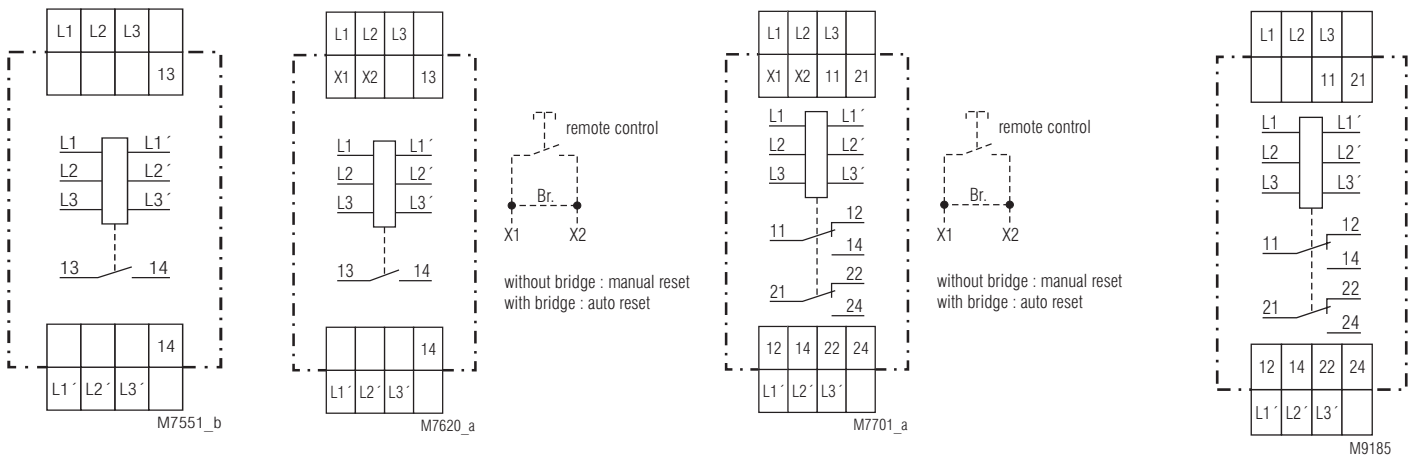
### Indicators

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



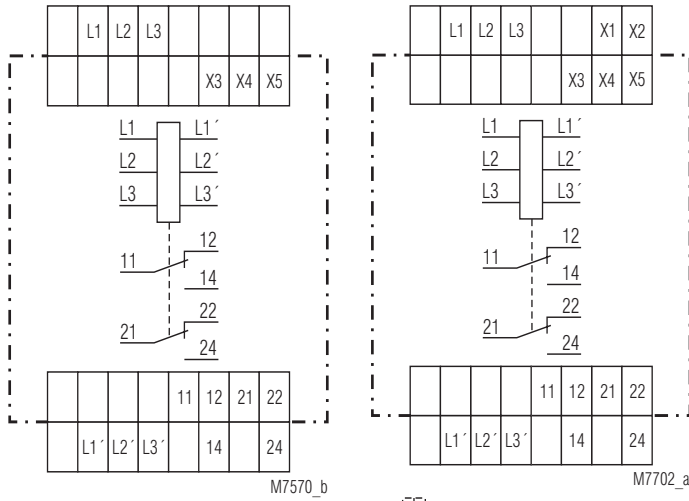
IL 9075.01,  
SL 9075.01

IL 9075.01/01\_  
SL 9075.01/01\_

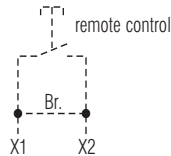
IL 9075.12/01\_  
SL 9075.12/01\_

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 designation
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  $\Omega/V$

#### 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:

Schließer:

3 A / AC 230 V

IEC/EN 60 947-5-1

Öffner:

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 10<sup>5</sup> switching cycles

IP/SP 9075:

2.5 x 10<sup>5</sup> switching cycles

#### Short circuit strength

##### max. fuse rating:

4 A gL

IEC/EN 60 947-5-1

##### Mechanical life:

> 10<sup>8</sup> 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 impulse 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 mm<sup>2</sup> solid or  
2 x 1.5 mm<sup>2</sup> stranded ferruled

DIN 46 228-1/-2/-3/-4  
0,6 mm

Min. cross section:

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,

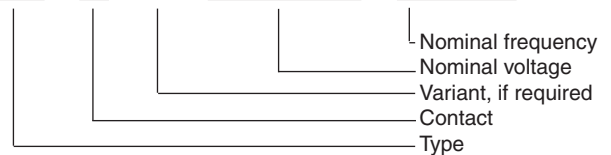
open/de-energized on trip, settable:

IP 9075.12 : automatic reset

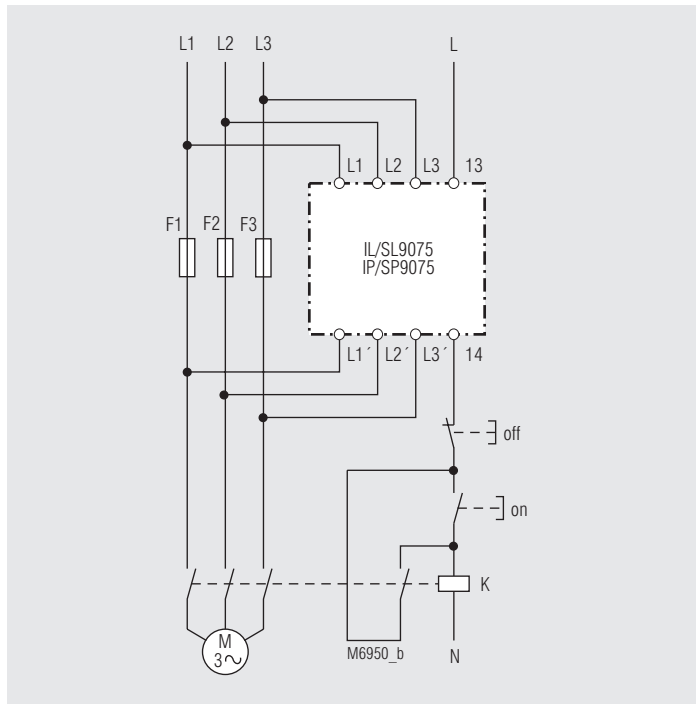
IP 9075.12/010 : manual reset or automatic reset settable

## Ordering example for variants

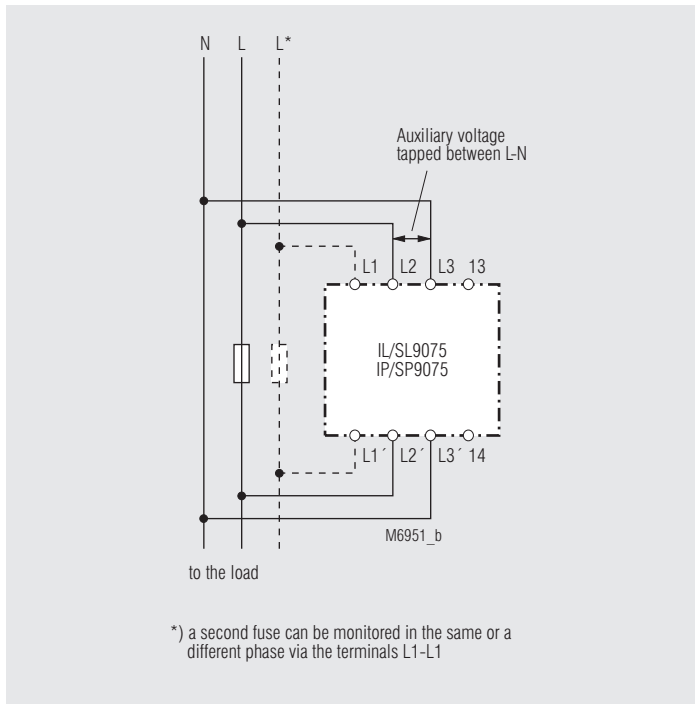
IL 9075 .01 / \_ \_ \_ AC 380 ... 415 V 50 ... 400 Hz



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