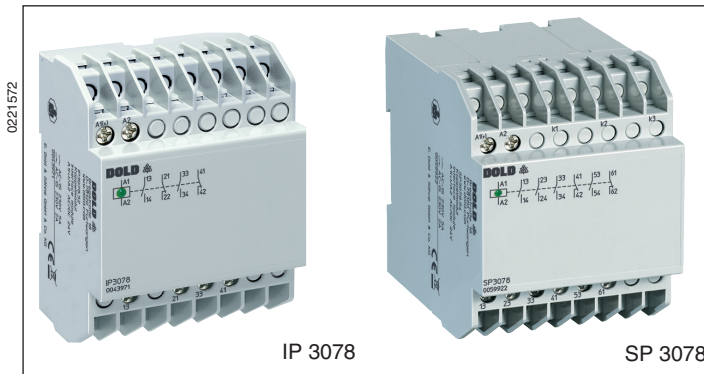


## SAFEMASTER Interface Module IP 3078, SP 3078



- According to IEC/EN 60947-5-1, IEC/EN 61810-1
- Forcibly guided contacts according to IEC 61810-3
- Max. 6 output contacts
- High thermal current  $I_{th} = 8 \text{ A}$
- LED for operating state
- Devices available in 2 enclosure versions:
  - IP 3078: Depth 61 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
  - SP 3078: Depth 100 mm, with terminals at the top
- Width 70 mm

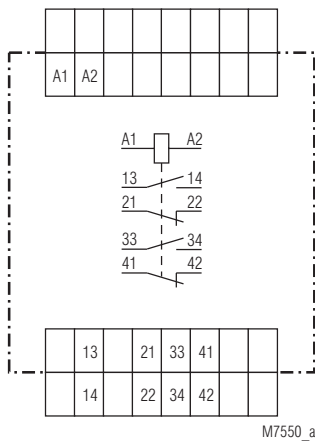
### Product Description

The coupling module IP 3078, SP 3078 can be used with its positively driven contacts for electrical decoupling of control and power levels as well as for contact multiplication and amplification. The coupling module can be easily adapted to the respective application by connecting the output contacts accordingly.

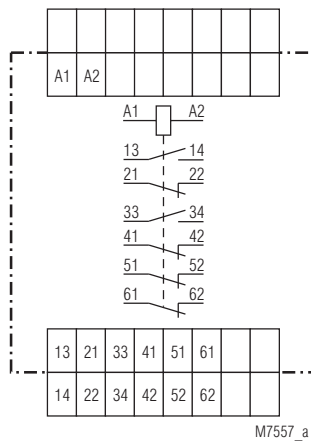
### Approvals and Markings



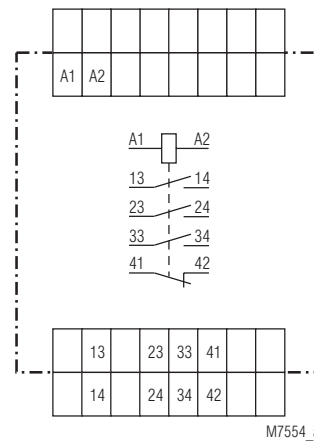
### Circuit Diagrams



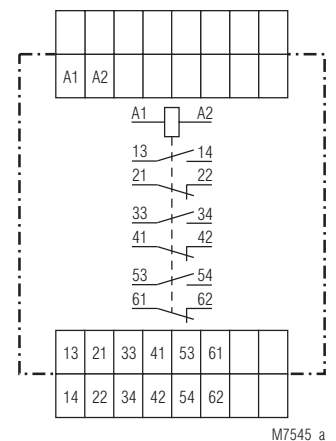
IP 3078.52, SP 3078.52



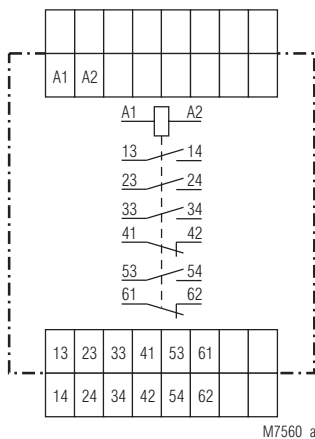
IP 3078.50, SP 3078.50



IP 3078.48, SP 3078.48



IP 3078.18, SP 3078.18



IP 3078.54, SP 3078.54

## Connection Terminals

Terminal designation	Signal description
A1	+ / L
A2	- / N
13, 14; 23, 24; 33, 34; 53, 54	Forcibly guided NO contacts for release circuit
21, 22; 41, 42; 51, 52; 61, 62	Forcibly guided NC contacts for release circuit

## Indicators

Green LED: On, when supply connected

## Technical Data

### Input

**Nominal voltage  $U_N$ :** AC/DC 24 V  
AC 220 ... 240 V

**Voltage range:** 0.8 ... 1.1  $U_N$

**Nominal consumption:**  
IP 3078.52, SP 3078.52: 1 W / 2 VA  
IP 3078.18, SP 3078.18: 1.5 W / 4 VA

**Nominal frequency:** 50 / 60 Hz

**Frequency range:**  $\pm 5\%$  of nominal frequency

### Output

#### Contacts

IP 3078.52, SP 3078.52: 2 NO and 2 NC contacts  
IP 3078.50, SP 3078.50: 2 NO and 4 NC contacts  
IP 3078.48, SP 3078.48: 3 NO and 1 NC contacts  
IP 3078.18, SP 3078.18: 3 NO and 3 NC contacts  
IP 3078.54, SP 3078.54: 4 NO and 2 NC contacts

**Response time:** Typ. 25 ms  
**Release time:** Typ. 20 ms  
**Contact type:** Spring contact  
**Nominal output voltage:** Min. AC/DC 10 V  
max. DC 250 V, AC 230 / 400 V

**Thermal current  $I_{th}$ :** 8 A  
(see continuous current limit curve)

#### Switching capacity

to AC 15:  
NO contact: 3 A / AC 230 V IEC/EN 60947-5-1  
NC contact: 2 A / AC 230 V IEC/EN 60947-5-1

**Electrical life** IEC/EN 60947-5-1  
to AC 15 at 2 A, AC 230 V: 2.5 x 10<sup>5</sup> switching cycles

**Permissible switching frequency:** Max. 36000 switching cycles / h

**Mechanical life:**  $\geq 30 \times 10^6$  switching cycles

## General Data

**Operating mode:** Continuous operation

**Temperature range:**  
Operation: - 20 ... + 60 °C  
Storage: - 20 ... + 60 °C  
**Altitude:**  $\leq 2000$  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 ... 6,0 GHz: 20 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: 20 V IEC/EN 61000-4-6  
Interference suppression: Limit value class B EN 55011

## Technical Data

### 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 IEC/EN 60068-2-6  
frequency 10 ... 55 Hz

### Climate resistance:

20 / 060 / 04 IEC/EN 60068-1  
EN 50005

### Terminal designation:

### Wire connection:

2 x 2.5 mm<sup>2</sup> solid or  
2 x 1.5 mm<sup>2</sup> stranded ferruled  
DIN 46228-1/-2/-3/-4

### Wire fixing:

Captive terminal screw M3.5  
clamping piece as per  
IEC 60664-1 / IEC/EN 60999-1

### Fixing torque:

0.8 Nm

### Mounting:

DIN rail IEC/EN 60715

### Weight

IP 3078: 225 g  
SP 3078: 274 g

## Dimensions

### Width x height x depth

IP 3078: 70 x 90 x 61 mm  
SP 3078: 70 x 90 x 100 mm

## Standard Type

### IP 3078.52 AC/DC 24 V

Article number: 0043971  
• Output: 2 NO, 2 NC contacts  
• Nominal voltage  $U_N$ : AC/DC 24 V  
• Width: 70 mm

### IP 3078.52 AC/DC 24 V

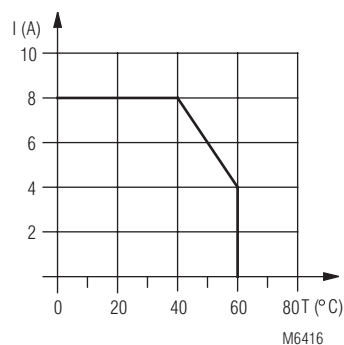
Article number: 0054717  
• Output: 2 NO, 2 NC contacts  
• Nominal voltage  $U_N$ : AC/DC 24 V  
• Width: 70 mm

## Ordering Example

IP 3078 .52 AC/DC 24 V 50 / 60 Hz

\_\_\_\_\_ Nominal frequency  
\_\_\_\_\_ Nominal voltage  
\_\_\_\_\_ Contacts  
\_\_\_\_\_ Type

## Characteristic



Continuous current limit curve