

## SAFEMASTER Interface Module UG 3088



### Your Advantages

- According to IEC/EN 60 947-5-1
- Economic and space saving because of 2 separate interface modules in one enclosure
- Simple contact multiplication and reinforcement - also of safety modules
- Cost and space saving alternative compared to contactors
- Simple contact monitoring by forcibly guided contacts
- With pluggable terminal blocks for easy exchange of devices

### Features

- With forcibly guided contacts according to IEC 61810-3
- Version with up to 2 x 4 contacts
- Variant to switch high DC-load
- Width: 22,5 mm

### Product Description

The interface module UG3088 includes 2 separate devices in one enclosure. Because of its forcibly guided contacts a safe interfacing between control circuit and load circuit is provided. It can also be used to multiply and reinforce the contacts of safety modules. Different internal configuration possibilities allow to offer interface modules for various applications. To switch e.g. high DC loads the the output contacts can be connected in series. On the module with 2NO and 2 NC contacts these can be connected internally as changeover contacts. Also a common control of both relays with only one input can be done.

### Approvals and Markings



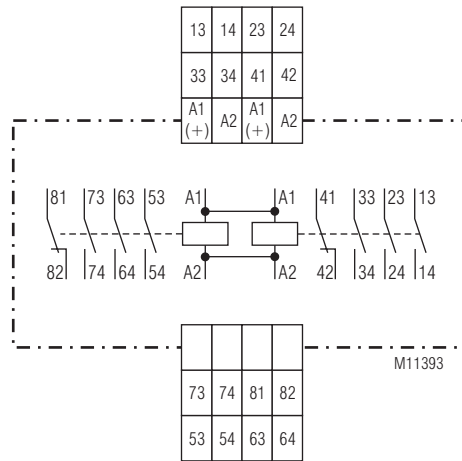
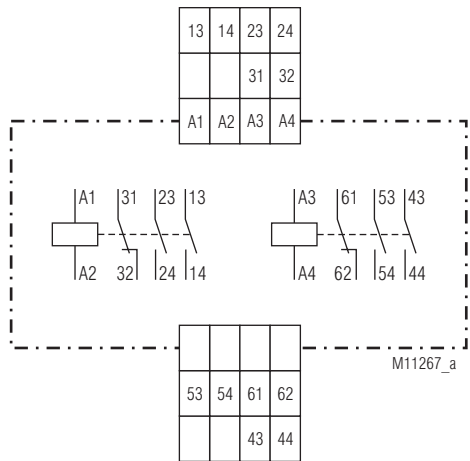
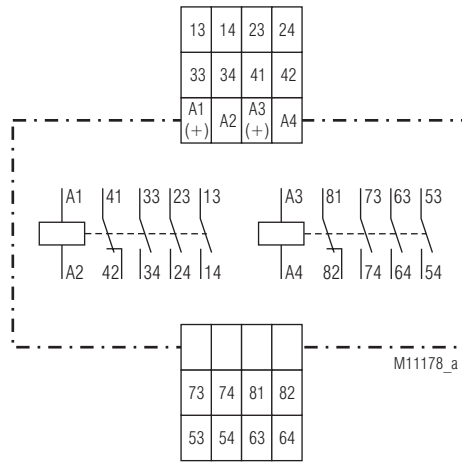
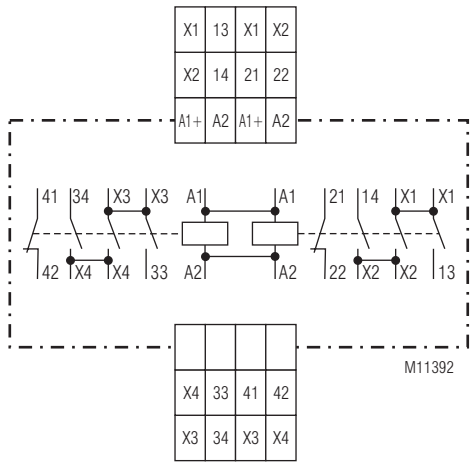
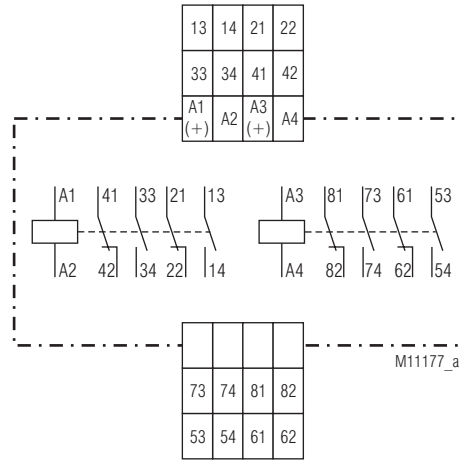
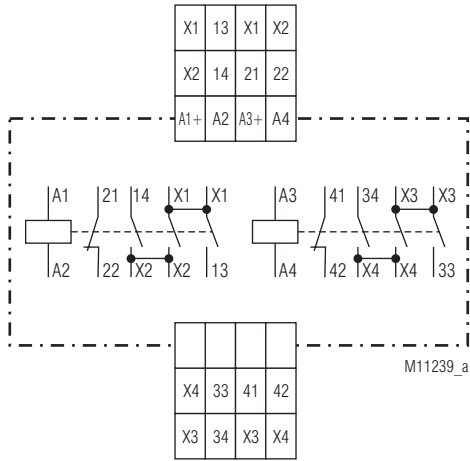
### Applications

- Interfacing between control and load circuits
- Contact multiplication and reinforcement
- Separate switching of several current circuits, e. g. at
  - Machines and plants
  - Energy production and transport

### Indicators

- |              |                                      |
|--------------|--------------------------------------|
| green LED 1: | on, when supply connected at Relay 1 |
| green LED 2: | on, when supply connected at Relay 2 |

## Circuit Diagrams



### Connection Terminals

Terminal designation	Signal description
A1, A2	Operation voltage Relay 1
A3, A4	Operation voltage Relay 2
13, 14, 23, 24, 33, 34 53, 54, 63, 64, 73, 74	Positive guided NO contacts for release circuit
21, 22, 41, 42, 61, 62, 81, 82	Positive guided NO contacts

## Technical Data

### Input

<b>Nominal voltage <math>U_N</math>:</b>	AC 24, 48, 110, 230 V DC 24, 48, 110, 220 V
<b>Voltage range:</b>	0.8 ... 1.1 $U_N$
<b>Nominal consumption</b>	
DC 24 V:	1.1 W
DC 110 V:	1.3 W
AC 230 V:	2.1 W
<b>Nominal frequency:</b>	50 / 60 Hz
<b>Min. Off-time:</b>	250 ms

### Output

#### Contacts:

UG 3088.52/100, /101: 2 NO contacts, 2 NC contacts  
UG 3088.54

(AC 230 V, DC 220 V): 4 NO contacts, 2 NC contacts  
UG 3088.57:

4 NO contacts, 4 NC contacts  
UG 3088.59, /001:

6 NO contacts, 2 NC contacts

**Contact material:** AgNi + 0.2  $\mu$ m Au

**Operate time  $U_N$ :** typical 10 ms (only for DC devices)

**Release time:** typical 15 ms (only for DC devices)

**Nominal output voltage:** AC 250 V, DC 24 V

**Thermal current  $I_{th}$ :** 2,5 A

#### Switching capacity

to AC 15:

NO contacts: 3 A / AC 230 V IEC/EN 60 947-5-1

NC contacts: 1 A / AC 230 V IEC/EN 60 947-5-1

to DC 13:

NO contacts: 2 A / DC 24 V IEC/EN 60 947-5-1

NC contacts: 2 A / DC 24 V IEC/EN 60 947-5-1

to DC 13:

NO contacts: 0.5 A / DC 110 V IEC/EN 60 947-5-1

NC contacts: 0.5 A / DC 110 V IEC/EN 60 947-5-1

#### Switching capacity variant /100 (internal 3 NO connected in series)

to DC 13:

NO contacts: 3 A / DC 110 V at 0.1 Hz

NC contacts: 3 A / DC 110 V at 0.1 Hz

#### Electrical life

NO contacts

to AC 15 at 1 A, AC 230 V: 1,5 x 10<sup>6</sup> switch. cycl. IEC/EN 60 947-5-1

NC contacts: 1 x 10<sup>6</sup> switch. cycl. IEC/EN 60 947-5-1

to AC 15 at 1 A, AC 230 V:

NO contacts: 1 x 10<sup>6</sup> switch. cycl. IEC/EN 60 947-5-1

to DC 13 at 1 A, DC 24 V:

NO contacts: 0,5 x 10<sup>6</sup> switch. cycl. IEC/EN 60 947-5-1

#### Permissible switching

**frequency:** 2 switching cycles / s

**Switching voltage min./max.:** AC/DC 10 V / AC/DC 250 V

**Switching current min./max.:** 10 mA / 2,5 A

#### Short circuit strength

**max. fuse rating:** 6 A gG / gL IEC/EN 60 947-5-1

**Mechanical life:**  $\geq 40 \times 10^6$  switching cycles

### General Data

**Mounting-position:** any

**Operating mode:** Continuous operation

#### Temperature range

Operation: - 20 ... + 60°C

Storage: - 40 ... + 60°C

**Altitude:** < 2,000 m

#### Clearance and creepage

distances  
rated impulse voltage /  
pollution degree: 4 kV / 2 (base insulation) IEC 60 664-1

#### EMC

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

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

Interference suppression: Limit value class B EN 55 011

#### Degree of protection

Housing: IP 20 IEC/EN 60 529

Terminals: IP 20 IEC/EN 60 529

**Housing:** Thermoplast mit V0-Verhalten nach

UL Subjekt 94

## Technical Data

<b>Vibration resistance:</b>	Amplitude 0,35 mm, frequency 10 ... 55 Hz, IEC/EN 60 068-2-6
<b>Climate resistance:</b>	20 / 060 / 04 IEC/EN 60 068-1
<b>Terminal designation:</b>	EN 50 005
<b>Wire connection:</b>	
<b>Plugin with screw terminals</b>	
max. cross section	1 x 0.25 ... 2.5 mm <sup>2</sup> solid or
for connection:	stranded ferruled (isolated) or
	2 x 0.25 ... 1.0 mm <sup>2</sup> massiv oder
	stranded ferruled (isolated)

Insulation of wires

or sleeve length: 7 mm

**Wire fixing:** captive slotted screw

**Mounting:** DIN rail IEC/EN 60 715

**Weight:** approx. 180 g

### Dimensions

**Width x height x depth:** 22.5 x 105 x 120.3 mm

### Standard Types

UG 3088.59PS DC 24 V

Article number: 0066280

• 6 NO contacts, 2 NC contacts

• Width: 22.5 mm

UG 3088.57PS DC 110 V

Article number: 0066380

• 4 NO contacts, 4 NC contacts

• Width: 22.5 mm

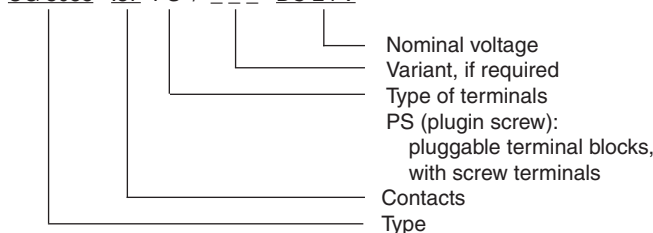
### Variants

UG 3088.\_PS/100: With contacts connected in series to  
switch high DC-loads.  
Separate control of the 2 relays

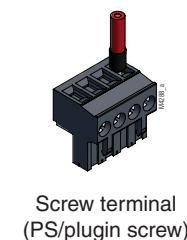
UG 3088.\_PS/101: With contacts connected in series to  
switch high DC-loads.  
Common control of the 2 relays

### Ordering example for variants

UG 3088 .57 PS / \_ \_ \_ DC 24 V



### Options with Pluggable Terminal Blocks



Screw terminal  
(PS/plugin screw)

