

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



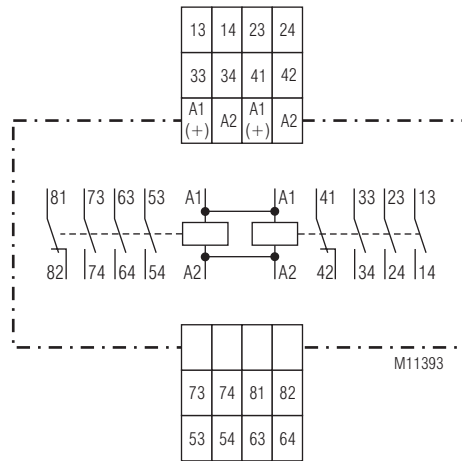
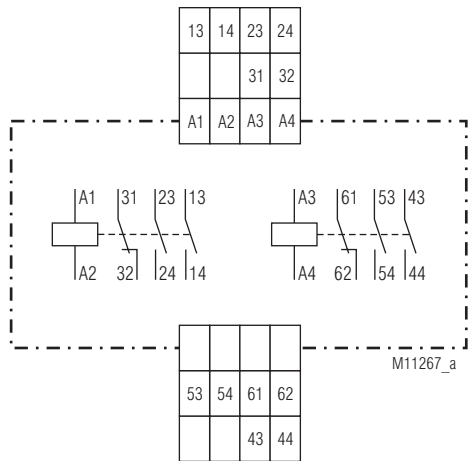
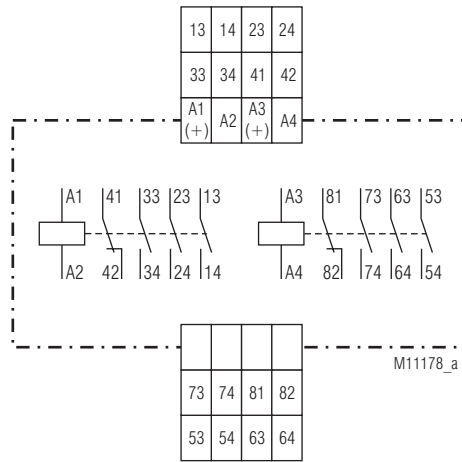
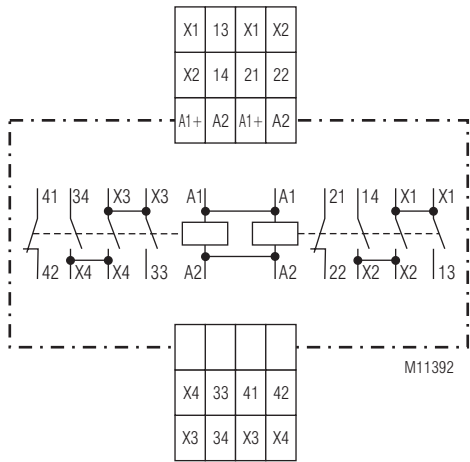
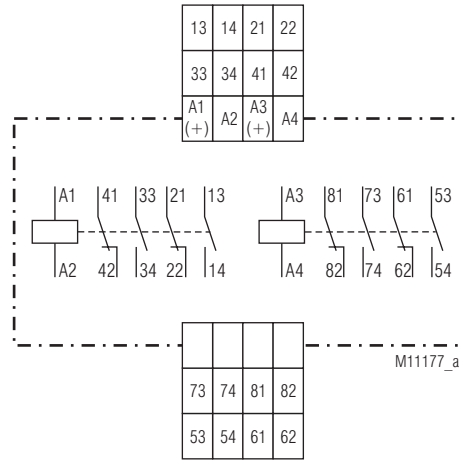
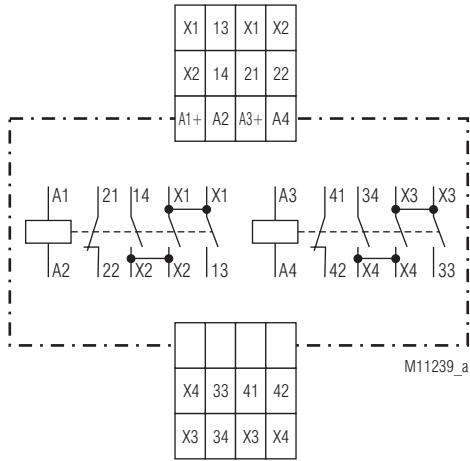
Applications

- 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

| | |
|--|--|
| Nominal voltage U_N: | AC 24, 48, 110, 230 V DC 24, 48, 110, 220 V |
| Voltage range: | 0.8 ... 1.1 U_N |
| Nominal consumption | |
| DC 24 V: | 1.1 W |
| DC 110 V: | 1.3 W |
| AC 230 V: | 2.1 W |
| Nominal frequency: | 50 / 60 Hz |
| Min. Off-time: | 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 μ 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 ⁶ switch. cycl. | IEC/EN 60 947-5-1 |
| NC contacts | | |
| to AC 15 at 1 A, AC 230 V: | 1 x 10 ⁶ switch. cycl. | IEC/EN 60 947-5-1 |
| NO contacts | | |
| to DC 13 at 1 A, DC 24 V: | 0,5 x 10 ⁶ 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

| | | |
|------------------------------------|---|--|
| 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: | EN 50 005 | |
| Wire connection: | | |
| Plugin with screw terminals | | |
| max. cross section for connection: | 1 x 0.25 ... 2.5 mm ² solid or stranded ferruled (isolated) or 2 x 0.25 ... 1.0 mm ² 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 |

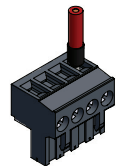
Variants

| | |
|------------------|--|
| 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 | |
| _____ | Nominal voltage |
| _____ | Variant, if required |
| _____ | Type of terminals |
| _____ | PS (plugin screw): pluggable terminal blocks, with screw terminals |
| _____ | Contacts |
| _____ | Type |

Options with Pluggable Terminal Blocks



Screw terminal (PS/plugin screw)

