

Interface Module UG 3096, UH 3096



Your Advantages

- Simple contact multiplication and reinforcement also for safety modules
- Cost and space saving alternative compared to contactors
- Easy monitoring of contact state via forcibly guided NC contacts

Features

- With **forcibly guided** contacts according to IEC 61810-3
- UG 3096: 8 output contacts
UH 3096: 16 output contacts
- As option with gold plated contacts to switch low loads
- As option with contacts connected in series to switch high DC-loads
- As option with pluggable terminal block for easy exchange of devices
 - with screw terminals
- UG 3096: Width 22.5 mm
UH 3096: Width 45 mm

Approvals and Markings



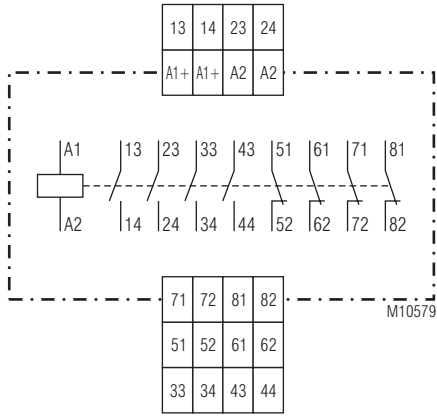
Applications

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

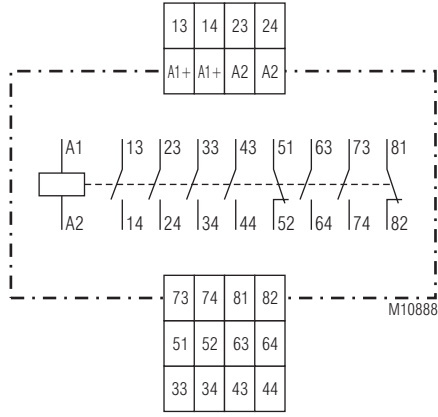
Indicator

green LED: on, when supply connected

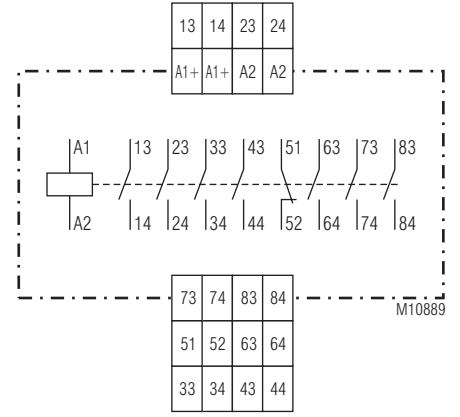
Circuit Diagrams



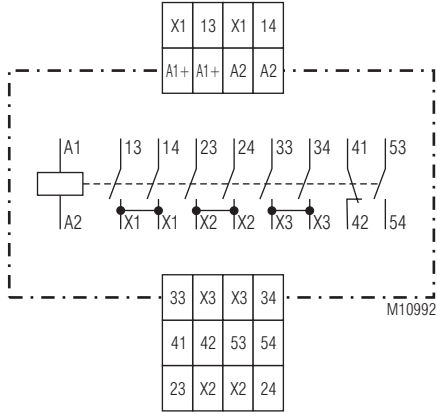
UG 3096.57



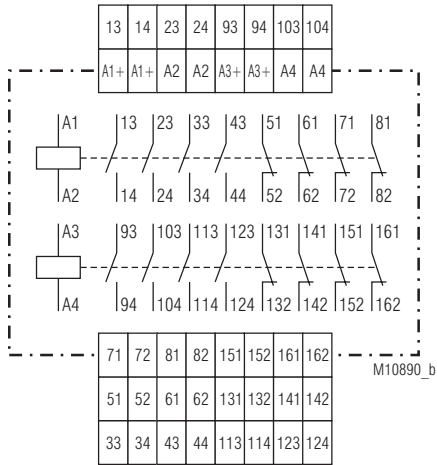
UG 3096.59



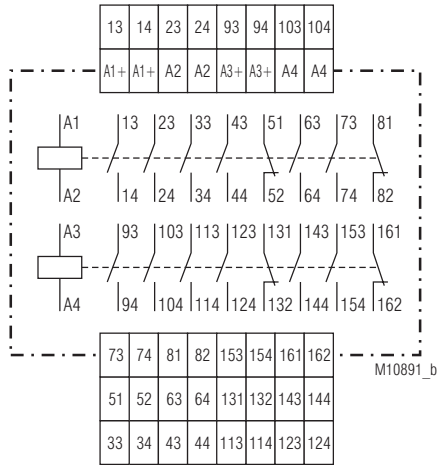
UG 3096.63



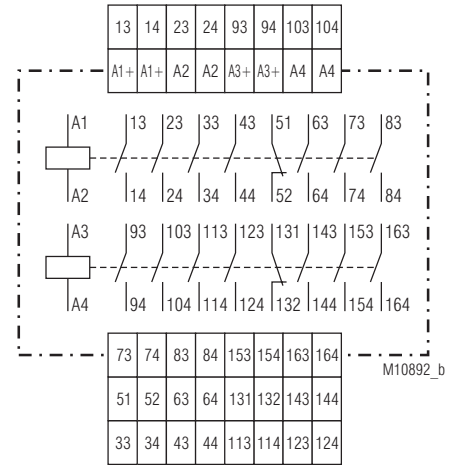
UG 3096.63/800



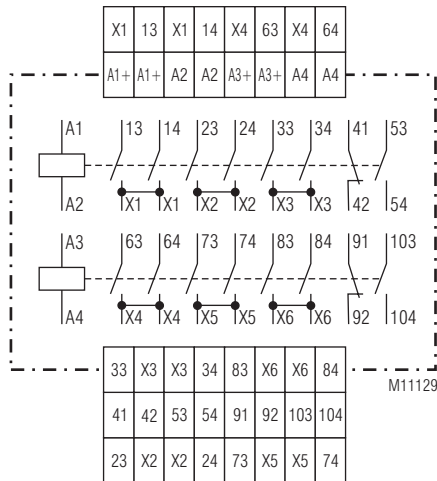
UH 3096.78



UH 3096.79



UH 3096.80



UH 3096.80/800

Connection Terminals	
Terminal designation	Signal designation
A1 / A2	Supply voltage relay 1
A3 / A4	Supply voltage relay 2
13 ... 162	Output contacts after contacts
X1 ... X6	Internal bridges for variant /800

Technical Data

Input

Nominal voltage U_N:	DC 24 V, 110 V (others on request)
Voltage range:	0.8 ... 1.1 U_N
Nominal consumption:	
UG 3096:	1.4 W
UH 3096:	2.8 W

Output

Contacts:

UG 3096.57:	4 NO and 4 NC contacts
UG 3096.59:	6 NO and 2 NC contacts
UG 3096.63:	7 NO and 1 NC contacts
UH 3096.78:	8 NO and 8 NC contacts
UH 3096.79:	12 NO and 4 NC contacts
UH 3096.80:	14 NO and 2 NC contacts

Contact type: forcibly guided

Operate time: typical 30 ms

Release time: typical 12 ms

Nominal output voltage: AC 250 V, DC 24 V

Thermal current I_{th} : max. 6 A
(see quadratic total current limit curve)

Switching capacity

to AC 15:

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

NC contacts: 2 A / AC 230 V IEC/EN 60 947-5-1

to DC 13 at 0.1 Hz

NO contacts: 4 A / DC 24 V IEC/EN 60 947-5-1

NC contacts: 4 A / DC 24 V IEC/EN 60 947-5-1

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

2 contacts in series

NO contacts: 3 A / DC 110 V IEC/EN 60 947-5-1

3 contacts in series

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

Electrical life

NO contacts:
to AC 15 at 1 A, AC 230 V: 1.5 x 10⁶ switch. cycl. IEC/EN 60 947-5-1

NO contacts:
to AC 15 at 0.5 A, AC 230 V: 2.5 x 10⁶ switch. cycl. IEC/EN 60 947-5-1

NC contacts:
to AC 15 at 1 A, AC 230 V: 1 x 10⁶ switch. cycl. IEC/EN 60 947-5-1

NO contacts:
to DC 13 at 1 A, DC 24 V: 0.5 x 10⁶ switch. cycl. IEC/EN 60 947-5-1

Permissible switching frequency: 10 switching cycles / s

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

Switching current min./max.: 10 mA (typical values) / 6 A

Short circuit strength

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

Mechanical life: ≥ 30 x 10⁶ switching cycles

Technical Data

General Data

Operating mode: Continuous operation

Temperature range:

Operation: - 20 ... + 60° C

Storage: - 40 ... + 60° C

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

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 VO behaviour

according to UL subject 94

Vibration resistance: Amplitude 0.35 mm,

frequency 10 ... 55 Hz, IEC/EN 60 068-2-6

20 / 060 / 04 IEC/EN 60 068-1

Climate resistance: EN 50 005

Terminal designation: DIN 46 228-1/-2/-3/-4

Wire connection:

Plugin with screw terminals (PS)

max. cross section

for connection: 1 x 0.25 ... 2.5 mm² solid or

stranded ferruled (isolated) or

2 x 0.25 ... 1.0 mm² solid or

stranded ferruled (isolated)

Insulation of wires

or sleeve length: 7 mm

Wire fixing: captive slotted screw

Fixing torque: 0.5 Nm

Mounting: DIN rail IEC/EN 60 715

Weight

UG 3096: approx. 215 g

UH 3096: approx. 420 g

Dimensions

Width x height x depth

UG 3096 PS: 22.5 x 110 x 120.3 mm

UH 3096 PS: 45 x 110 x 120.3 mm

Standard Types

UG 3096.57 DC 24 V

Article number: 0065332

• 4 NO contacts, 4 NC contacts

• Width: 22.5 mm

UH 3096.78 DC 110 V

Article number: 0065062

• 8 NO contacts, 8 NC contacts

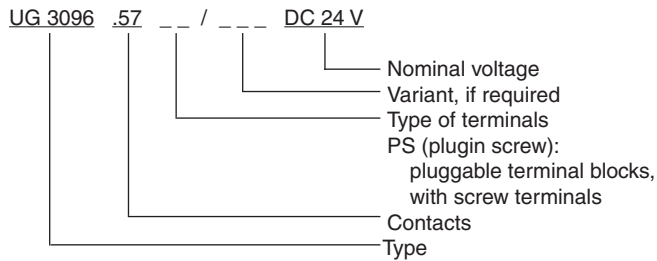
• Width: 45 mm

Variants

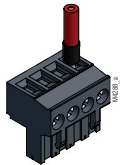
UG 3096.57/004: For switching small loads of 10 mA ... 12 VA resp. 10 mW ... 12 W in the ranges 2 ... 60 V und 2 ... 300 mA. The device is also suitable for switching the maximum switching current. However, this will burn off the gold plating of the contacts, so that switching of small loads is no longer possible afterwards.

UG 3096.63/800: With contacts connected in series to switch high DC-loads

Ordering example for variant

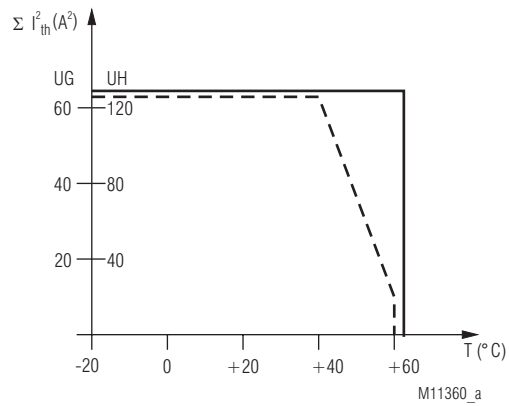


Option with Pluggable Terminal Block



Screw terminal
(PS/plugin screw)

Characteristic



— Mounted with distance, with air circulation

- - - Mounted without distance, heated by units with similar load

Quadratic total current

$$\Sigma I_{th}^2 = I_{th1}^2 + \dots + I_{th8}^2 + \dots + I_{th16}^2$$

$I_{th1} \dots I_{th16}$: thermal current in contactrows

Quadratic total current limit curve