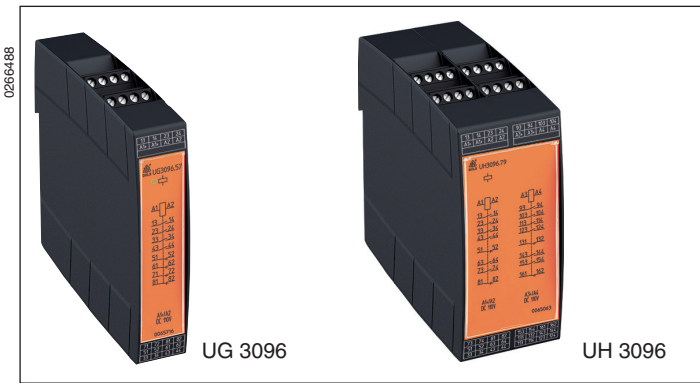


## Interface Module UG 3096, UH 3096



### Your Advantages

- According to IEC/EN 60 947-5-1
- 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



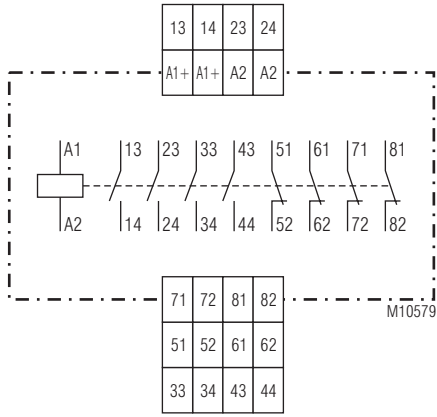
### Applications

- 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

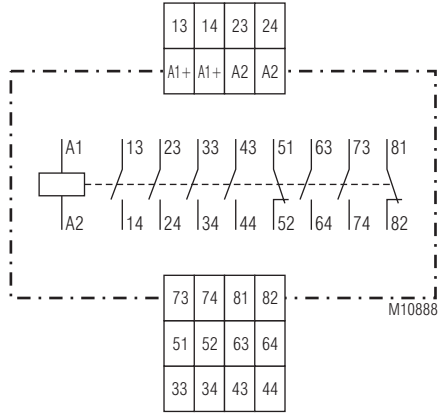
### Indicator

green LED: on, when supply connected

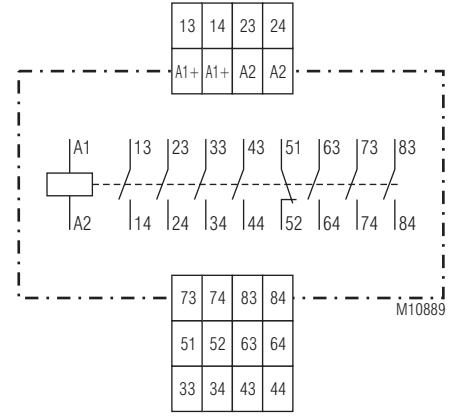
**Circuit Diagrams**



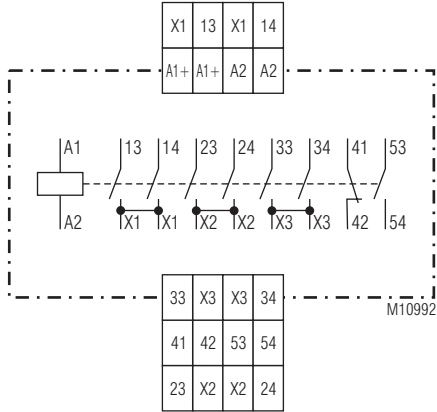
UG 3096.57



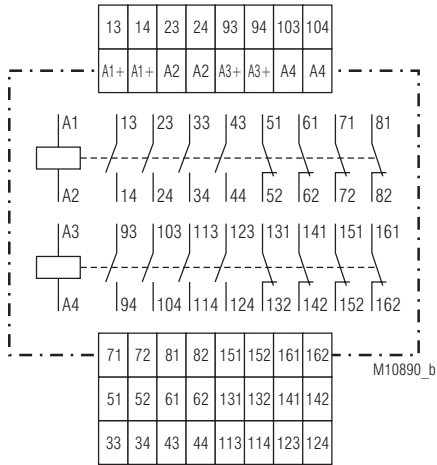
UG 3096.59



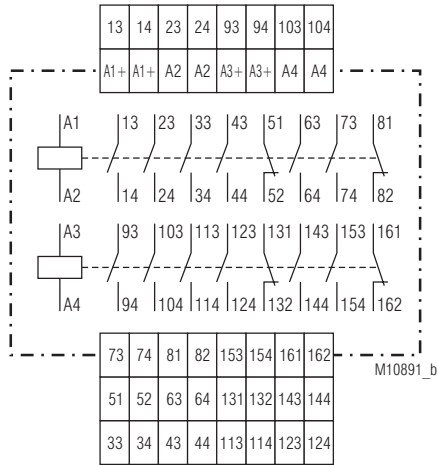
UG 3096.63



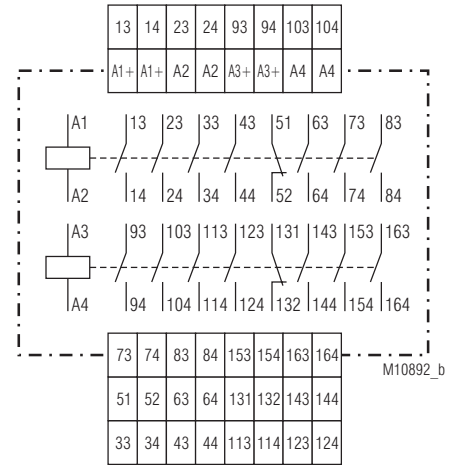
UG 3096.63/800



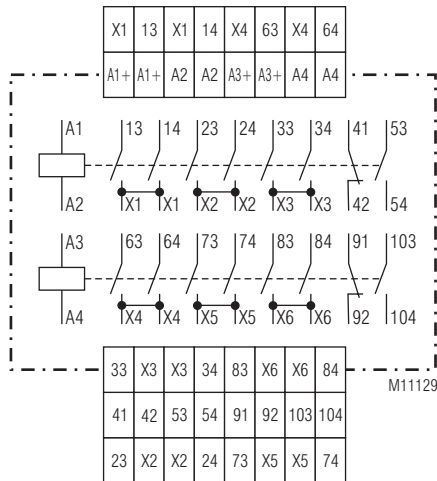
UH 3096.78



UH 3096.79



UH 3096.80



UH 3096.80/800

Connection Terminals	
Terminal designation	Signal description
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

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

#### Output

<b>Contacts:</b>		
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	
<b>Contact type:</b>	forcibly guided	
<b>Operate time:</b>	typical 30 ms	
<b>Release time:</b>	typical 12 ms	
<b>Nominal output voltage:</b>	AC 250 V, DC 24 V	
<b>Thermal current <math>I_{th}</math>:</b>	max. 6 A	(see quadratic total current limit curve)
<b>Switching capacity</b>		
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
<b>Electrical life</b>		
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
NO contacts:		
to AC 15 at 0.5 A, AC 230 V:	2.5 x 10 <sup>6</sup> switch. cycl.	IEC/EN 60 947-5-1
NC contacts:		
to AC 15 at 1 A, AC 230 V:	1 x 10 <sup>6</sup> switch. cycl.	IEC/EN 60 947-5-1
NO contacts:		
to DC 13 at 1 A, DC 24 V:	0.5 x 10 <sup>6</sup> switch. cycl.	IEC/EN 60 947-5-1
<b>Permissible switching frequency:</b>	10 switching cycles / s	
<b>Switching voltage min./max.:</b>	AC/DC 10 V / AC/DC 250 V	
<b>Switching current min./max.:</b>	10 mA (typical values) / 6 A	
<b>Short circuit strength</b>		
<b>max. fuse rating:</b>	6 A gG / gL	IEC/EN 60 947-5-1
<b>Mechanical life:</b>	≥ 30 x 10 <sup>6</sup> switching cycles	

### Technical Data

#### General Data

<b>Operating mode:</b>	Continuous operation
<b>Temperature range:</b>	
Operation:	- 20 ... + 60° C
Storage:	- 40 ... + 60° C

#### Clearance and creepage distances

rated impulse voltage / pollution degree		
Auxiliary voltage / contacts:	6 kV / 2	IEC 60 664-1
Contacts / contacts:	4 kV / 2	IEC 60 664-1

#### EMC

Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
HF-irradiation		
80 MHz ... 2.7 GHz:	10 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 VO behaviour according to UL subject 94	
<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>	DIN 46 228-1/-2/-3/-4

#### Plugin with screw terminals (PS)

max. cross section for connection:	1 x 0.25 ... 2.5 mm <sup>2</sup> solid or stranded ferruled (isolated) or 2 x 0.25 ... 1.0 mm <sup>2</sup> solid or stranded ferruled (isolated)
Insulation of wires or sleeve length:	7 mm
<b>Wire fixing:</b>	captive slotted screw
<b>Fixing torque:</b>	0.5 Nm
<b>Mounting:</b>	DIN rail IEC/EN 60 715
<b>Weight</b>	
UG 3096:	approx. 215 g
UH 3096:	approx. 420 g

#### Dimensions

<b>Width x height x depth</b>	
UG 3096 PS:	22.5 x 110 x 120.3 mm
UH 3096 PS:	45 x 110 x 120.3 mm

#### Standard Types

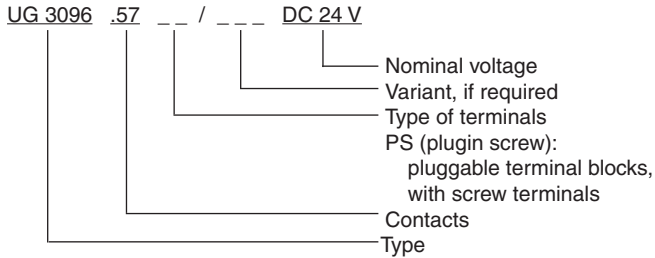
UG 3096.57 DC 24 V	
Article number:	0065332
• 4 NO contacts, 4 NC contacts	
• Width:	22.5 mm
UH 3096.78 DC 110 V	
Article number:	0065062
• 8 NO contacts, 8 NC contacts	
• Width:	45 mm

## Variants

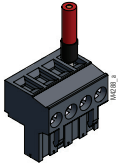
UG 3096.57/004: For switching small loads of 10 mVA ... 12 VA resp. 10 mW ... 12 W in the ranges 2 ... 60 V und 2 ... 300 mA. The device is also suitable for switching the maximum switching current. However, this will burn off the gold plating of the contacts, so that switching of small loads is no longer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

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

### Ordering example for variant

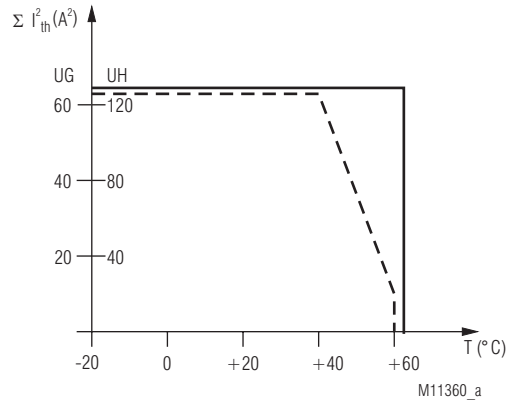


### Option with Pluggable Terminal Block



Screw terminal  
(PS/plugin screw)

## Characteristic



— Mounted with distance, with air circulation

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

Quadratic total current

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

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

Quadratic total current limit curve