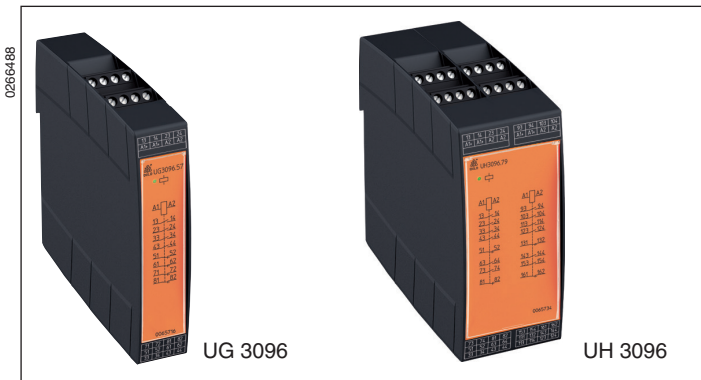


Interface Module UG 3096, UH 3096



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 EN 50 205
- 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 blocks for easy exchange of devices
 - with screw terminals
 - or with cage clamp terminals
- UG 3096: Width 22.5 mm
UH 3096: Width 45 mm

Approvals and Markings



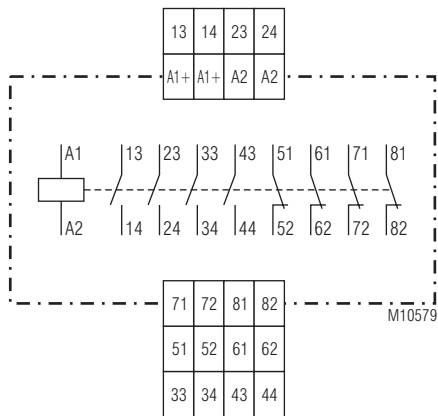
Application

- 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

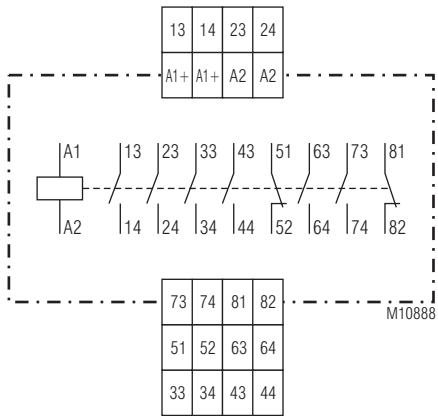
Indication

green LED: on, when supply connected

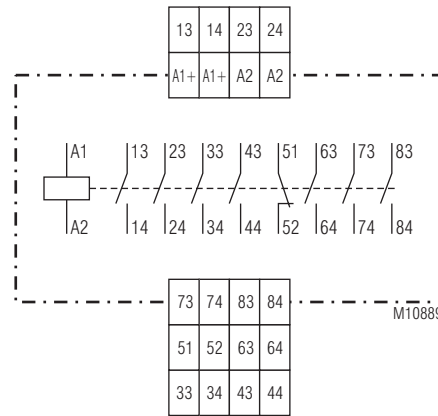
Circuit Diagrams



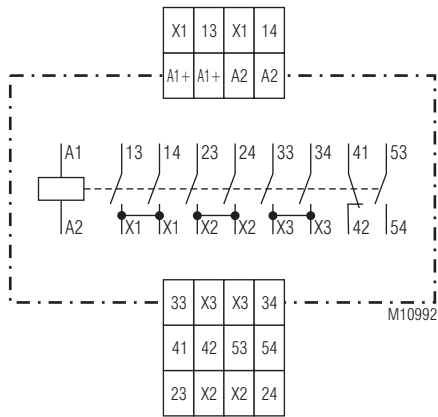
UG 3096.57



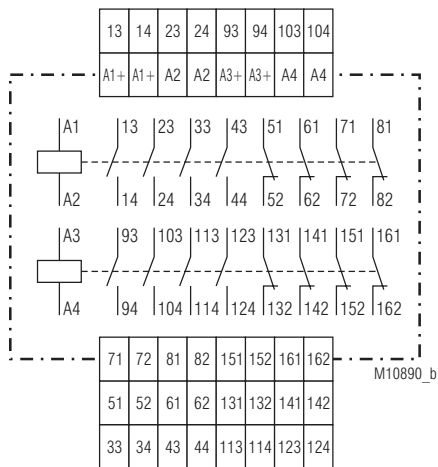
UG 3096.59



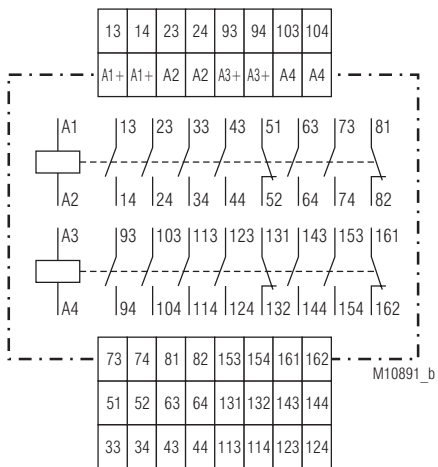
UG 3096.63



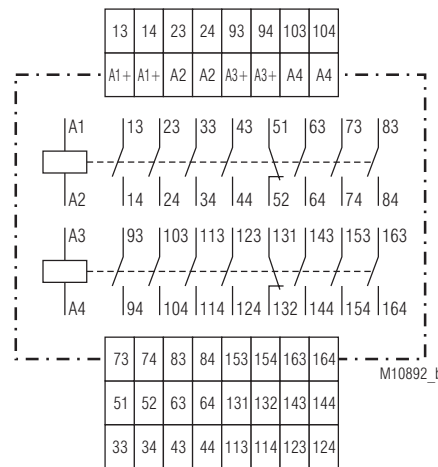
UG 3096.63/800



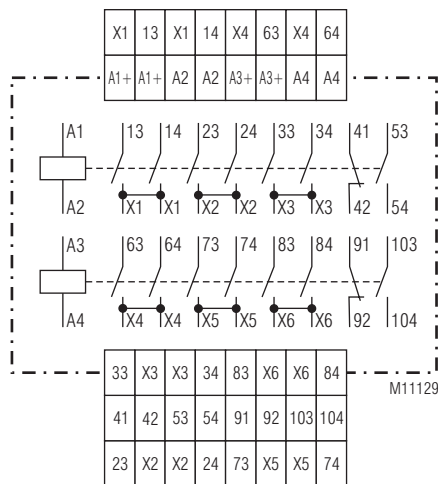
UH 3096.78



UH 3096.79



UH 3096.80



UH 3096.80/800

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 10 ⁶ switch. cycl. IEC/EN 60 947-5-1
NO contacts:	
to AC 15 at 0.5 A, AC 230 V:	2.5 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:	
	10 switching cycles / s
Switching voltage min./max.:	AC/DC 10 V / AC/DC 250 V
Switching current min./max.:	0.3 mA / 1 A
Short circuit strength	
max. fuse rating:	6 A gL IEC/EN 60 947-5-1
Mechanical life:	≥ 30 x 10 ⁶ switching cycles
General Data	
Operating mode:	Continuous operation
Temperature range:	- 20 ... + 60° C (see characteristics)
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
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
Climate resistance:	20 / 060 / 04 IEC/EN 60 068-1
Terminal designation:	EN 50 005

Technical Data	
Wire connection:	DIN 46 228-1/-2/-3/-4
Plugin with screw terminals (PS)	
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 solid or stranded ferruled (isolated)
Insulation of wires or sleeve length:	7 mm
Plugin with cage clamp terminals (PC)	
max. cross section for connection:	1 x 0,25 ... 2,5 mm ² solid or stranded ferruled (isolated)
Insulation of wires or sleeve length:	10 mm
PT	
max. cross section for connection:	1 x 0,25 ... 1,5 mm ² solid or stranded ferruled (isolated)
Insulation of wires or sleeve length:	8 mm
Wire fixing:	
	8 mm captive slotted screw or cage clamp terminals
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:	22,5 x 105 x 120,3 mm
UG 3096 PS:	22,5 x 110 x 120,3 mm
UG 3096 PC, PT:	22,5 x 120 x 120,3 mm
UH 3096:	45 x 105 x 120,3 mm
UH 3096 PS:	45 x 110 x 120,3 mm
UH 3096 PC, PT:	45 x 120 x 120,3 mm

Standard Types

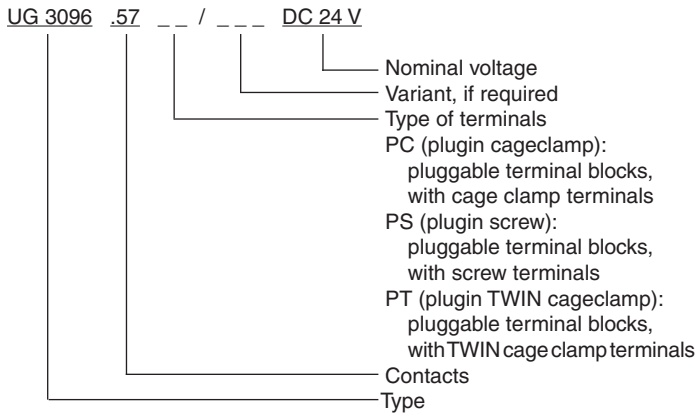
UG 3096.57 DC 24 V	
Article number:	0065332
• 4 NO contacts, 4 NC contacts	
• Width:	22.5 mm
UH 3096.78 DC 110 V	
Article number:	0065062
• 8 NO contacts, 8 NC contacts	
• Width:	45 mm

Variants

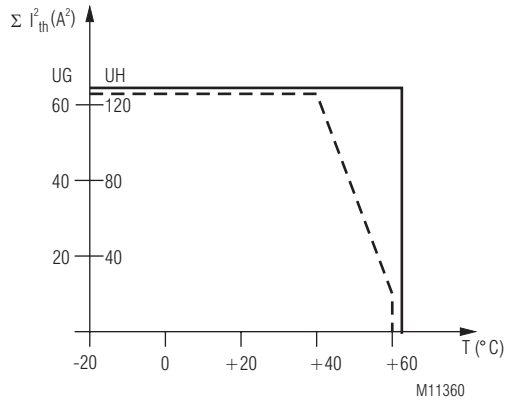
UG 3096.57/004: With gold plated contacts to switch low loads.
Because of the gold plated contacts the UG 3096.57/004 can be used to switch small loads 1 mVA ... 7 VA, 1 mW ... 7 W in the range of 0.1 ... 60 V, 1 ... 300 mA. The gold plated contacts allow also to switch the maximum current but the gold plating will be burnt off. After that the contacts cannot be used any more to switch the small loads.

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

Ordering example for variant



Characteristics



— Mounted with distance, with air circulation

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

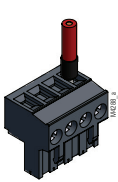
Quadratic total current

$$\sum I_{th}^2 = I_{th1}^2 + \dots + I_{th7}^2 + \dots + I_{th14}^2$$

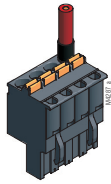
$I_{th1} \dots I_{th14}$: thermal current in contactrows

Quadratic total current limit curve

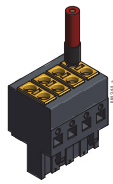
Options with Pluggable Terminal Blocks



Screw terminal
(PS/plugin screw)

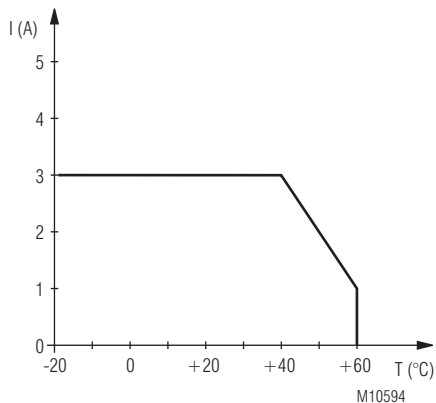


Cage clam terminal
(PC/plugin cage clamp)



TWIN Cage clam terminal
(PT/plugin TWIN cage clamp)

Characterisiques



Continuous current limit curve
for 4 contacts with equal load