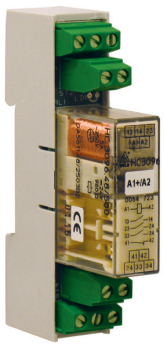
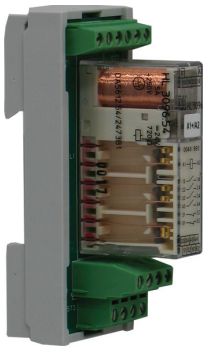
Interface module HC 3096, HL 3096
SAFEMASTER®

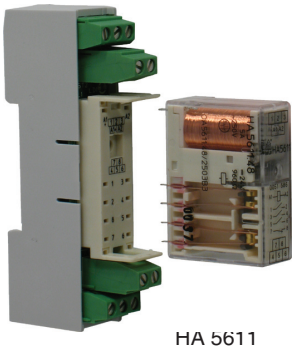
0227720



HC 3096

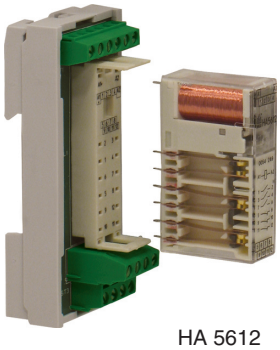


HL 3096



HA 5611

HC 3096/10_



HA 5612

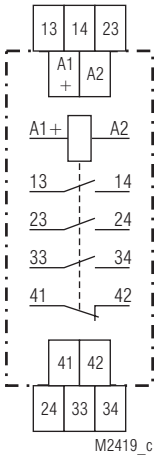
HL 3096/10_

- According to EN 62 061, DIN EN ISO 13 849-1
- According to IEC/EN 60 255, IEC/EN 61 810-1
- With positively guided contacts according to DIN EN 50 205
- Safety relay soldered on board
- Max. 6 output contacts
- Contact material AgNi + 0.2 µm Au
- Optionally plug-in type
  - HA 5611 on socket HC 3096/10_
  - HA 5612 on socket HL 3096/10_
- Optionally with free-wheeling diode across A1/A2
- Optionally AgNi + 5 µm Au or AgSNO + 0.2 µm Au
- Width HC 3096: 18 mm
  HL 3096: 38 mm

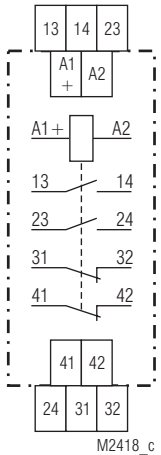
Approvals and marking

CE

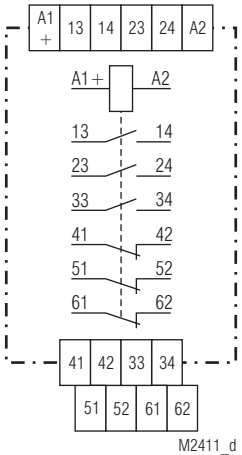
Circuit diagrams



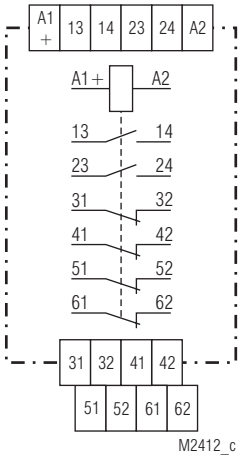
HC 3096.48



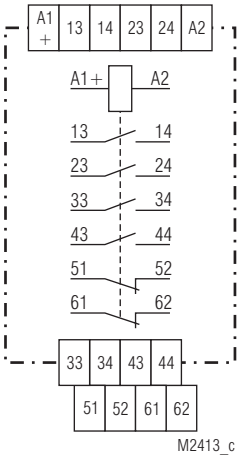
HC 3096.52



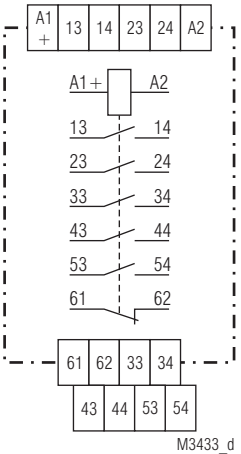
HL 3096.18



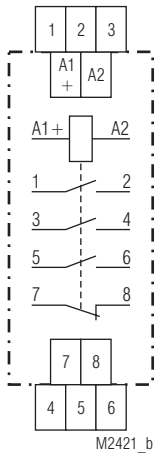
HL 3096.50



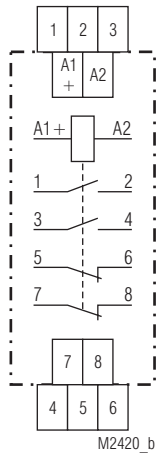
HL 3096.54



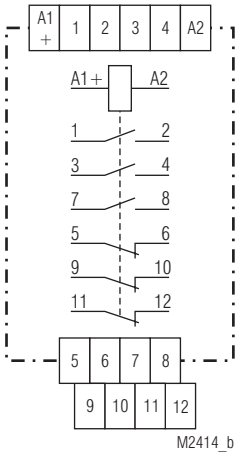
HL 3096.60



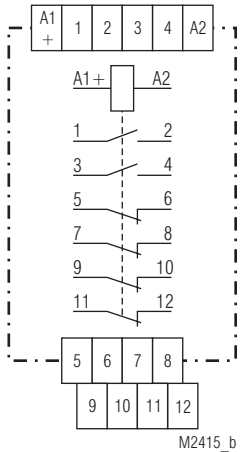
HA 5611.48



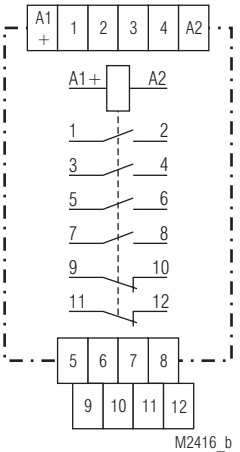
HA 5611.52



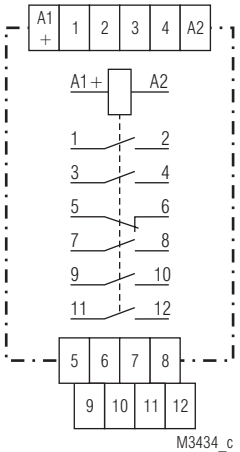
HA 5612.18



HA 5612.50

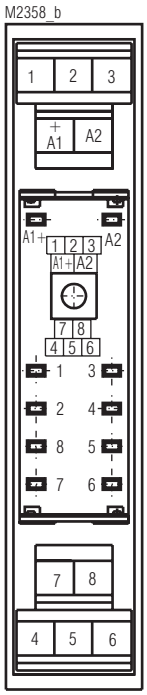


HA 5612.54

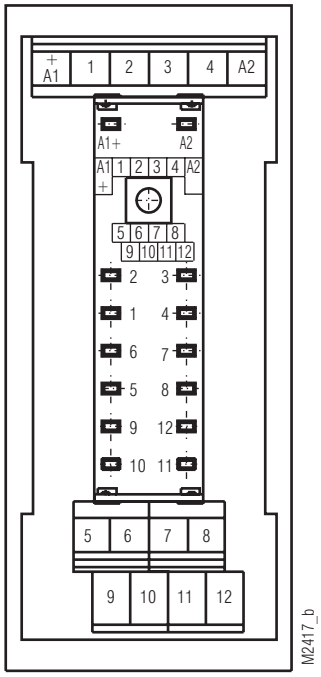


HA 5612.60

Circuit diagrams



HC 3096/10_



HL 3096/10_

Technical Data

Input

Nominal voltage U_N:	DC 6, 12, 24, 48, 60, 110 V (other voltages on request)
Voltage range:	0.8 ... 1.1 U_N
Nominal consumption	
HC 3096:	0.6 W
HL 3096:	0.8 W (at HL 3096.50, HA 5612.50: 1 W)

Output

Contacts:		
HC 3096.52, HA 5611.52:	2 NO and 2 NC contacts	
HC 3096.48, HA 5611.48:	3 NO and 1 NC contacts	
HL 3096.18, HA 5612.18:	3 NO and 3 NC contacts	
HL 3096.50, HA 5612.50:	2 NO and 4 NC contacts	
HL 3096.54, HA 5612.54:	4 NO and 2 NC contacts	
HL 3096.60, HA 5612.60:	5 NO and 1 NC contacts	
Contact material:	AgNi10 + 0.2 µm Au	
Contact type:	spring contact	
Operate time:	typical 20 ms	
Release time:	typical 15 ms	
Nominal output voltage:	AC 250 V	
Thermal current I_{th}		
HC 3096:	3 x 5 A	
HL 3096:	4 x 5 A	
Switching capacity		
to AC 15:		
NO contact:	3 A / AC 230 V	IEC/EN 60 947-5-1
NC contact:	2 A / AC 230 V	IEC/EN 60 947-5-1
Electrical life		
NO contact:		
to AC 15 at 3 A, AC 230 V:	1.5 x 10^5 switching cycles / AgNi10	
NO contact:		
to AC 15 at 2 A, AC 230 V:	3 x 10^5 switching cycles / AgNi10	
NC contact:		
to AC 15 at 2 A, AC 230 V:	1 x 10^5 switching cycles / AgNi10	
Permissible switching frequency:	10 switching cycles / s	
Switching voltage min./max.:	AC/DC 10 V / DC 250 V, AC 400 V (100 mV / AC/DC 60 V for AgNi10-Contacts + 5 µm Au)	
Switching current min./max.:	10 mA / 5 A (1 mA / 0.3 A for AgNi10-Contacts + 5 µm Au)	

Technical Data

Switching power min./max.:	3 VA / 1250 VA (1 mVA / 7 VA for AgNi10-Contacts + 5 µm Au) 3 W / 200 W (1 mW / 7 W for AgNi10-Contacts + 5 µm Au)	
Short circuit strength		
max. fuse rating:	6 A gL	IEC/EN 60 947-5-1
Mechanical life:	≥ 50 x 10^6 switching cycles	

General Data

Operating mode:	Continuous operation	
Temperature range:	- 25 ... + 55°C	
Clearance and creepage distances		
rated impuls voltage /		
pollution degree:	2.5 kV / 3	IEC 60 664-1
EMC		
Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation:	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:	1 kV	IEC/EN 61 000-4-5
between wire and ground:	2 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	
Vibration resistance:	Amplitude 0.35 mm frequency 10 ... 55 Hz	IEC/EN 60 068-2-6
Climate resistance:	Humid heat	IEC/EN 60 068-2-30
Terminal designation:	EN 50 005	
Wire connection:	0.14 ... 1.5 mm² solide 0.14 ... 1.5 mm² flexible	
Wire fixing:	Box terminals	
Mounting:	DIN rail	IEC/EN 60 715
Weight		
HC 3096:	61 g	
HC 3096/100:	33 g	
HL 3096:	74 g	
HL 3096/100:	51 g	
HA 5611:	29 g	
HA 5612:	32 g	

Dimensions

Width x height x depth	
HC 3096:	18 x 88 x 48.6 mm
HL 3096:	37.8 x 88 x 41.3 mm
Socket HC 3096 with safety relay HA 5611:	18 x 88 x 57.2 mm
Socket HL 3096 with safety relay HA 5612:	37.8 x 88 x 49.4 mm

Safety related data

Info Safety data for other variants are available on request

Standard type

HL 3096.18 DC 24 V

Article number:	0048894
• Output:	3 NO, 3 NC contacts
• Contact material:	AgNi10 + 0.2 µm Au
• Width:	38 mm

HC 3096.52 DC 24 V

Article number:	0049269
• Output:	2 NO, 2 NC contacts
• Contact material:	AgNi10 + 0.2 µm Au
• Width:	18 mm

Variants

Socket

H_ 3096 /100:	Socket
H_ 3096 /101:	Socket with free-wheeling diode
H_ 3096 /102:	Socket with free-wheeling diode and LED
H_ 3096 /103:	Socket with LED

Safety relay:

HA 5611._ _, HA 5612._ _:	Contact material AgNi + 0.2 µm Au
HA 5611._ _/001, HA 5612._ _/001:	Contact material AgNi + 5 µm Au
HA 5611._ _/002, HA 5612._ _/002:	Contact material AgSnO + 0.2 µm Au

other variants on reuqnest

Ordering example for Variants

H_ 3096. _ _ / _ _ _ DC 24 V

- DC 24 V — Nominal voltage
- 3rd position:
  - 0: Ag Ni
  - 1: AgNi + 5 µm Au
  - 2: AgSnO
- 4th position:
  - 0: standard
  - 1: wash proof
- 5th position:
  - 0: standard
  - 4: with LED
  - 5: with free-wheeling diode
  - 8: with DEL and rectifier (for AC)
  - 9: with free-wheeling diode and LED
- 1st and 2nd position — Contacts
- C: 4 Contacts; Width: 18 mm
- L: 6 Contacts; Width: 38 mm