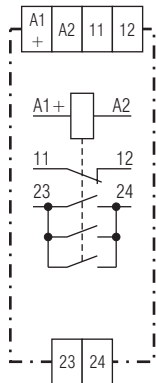


Product Description

The interface module HK 3087N has forcibly guided contacts. Therefore it can be used to safely separate control and load circuits as well as to reinforce contacts of safety devices. The interface module has a strong isolation between monitoring and load contact and is designed for high thermal current.

Circuit Diagram



M11283_a

HK 3087N.16

Connection Terminals

Terminal designation	Signal description
A1+	+ 24 V DC Coil
A2	GND Coil
11, 12	Forcibly guided indicator contact
23, 24	Forcibly guided load contact

Your Advantages

- Simple contact extension and re-inforcement also of safety modules
- Cost and space saving alternative compared to contactors
- Simple contact monitoring via forcibly guided NC contact
- Large wire cross section 0.5 - 6 mm² (10 - 24 AWG) reduces thermal load on wires

Features

- According to IEC/EN 61810-1, IEC 60664-1,
- With forcibly guided contacts according to IEC 61810-3
- Models with soldered in PCB safety relay
- With polarity protected diode
- Optionally with free-wheeling diode across relay coil
- With LED indicator
- Optionally AgNi + 0.2 μm Au or AgNi + 5 μm Au
- For DIN rail mounting according IEC/EN 60715
- Clearance and creepage distance between NC and NO contact > 10 mm
- Width 22.5 mm

Approvals and Markings



Applications

- Interfacing between control and load circuits
- Contact extension and re-inforcement
- Separate switching of several current circuits, e. g. at
 - Machines and plants,
 - Energy production and transport

Indicator

green LED: on, when supply connected

Technical Data

Input

Nominal voltage U_N : DC 24 V (andere auf Anfrage)
Voltage range: 0.8 ... 1.2 U_N
Nominal consumption: 1.0 W

Output

Contacts

HK 3087.16, OA 5602.48: 1 NO and 1 NC contact
Contact material: AgSnO₂ + 0.2 μmAu
 other on request

Contact type: spring contact

Operate time: max. 20 ms

Release time: max. 39 ms

Nominal output voltage: AC 250 V

Thermal current I_{th}

NO contact: 25 A

NC contact: 5 A

Switching capacity

to AC 15

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

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

to DC 13

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

NC contact: 2 A / DC 24 V IEC/EN 60 947-5-1

Technical Data

Electrical life

NO contact	
to AC 15 at 1 A, AC 230 V:	1.5 x 10 ⁶ switch. cycl. IEC/EN 60 947-5-1
to AC 15 at 0.5 A, AC 230 V:	2.5 x 10 ⁶ switch. cycl. IEC/EN 60 947-5-1
NC contact	
to AC 15 at 1 A, AC 230 V:	1 x 10 ⁶ switch. cycl. IEC/EN 60 947-5-1
to DC 13 at 1 A, DC 24 V:	0.5 x 10 ⁶ switch. cycl. IEC/EN 60 947-5-1

Short circuit strength

max. fuse rating

NO contact:	32 A gL	IEC/EN 60 947-5-1
NC contact	6 A gL	IEC/EN 60 947-5-1

Mechanical life: ≥ 50 x 10⁶ switching cycles

General Data

Operating mode: Continuous operation

Temperature range:

Operation:	- 40 ... + 55 °C
Storage:	- 25 ... + 70 °C

Altitude: < 4,000 m

Clearance and creepage distances

between contact 23, 24
to contact 11, 12:

> 10.3 mm

rated impulse voltage /

pollution degree: 8 kV / 2 IEC 60 664-1

between contact 23, 24
to relay coil A1+, A2:

> 10.3 mm

rated impulse voltage /

pollution degree: 8 kV / 2 IEC 60 664-1

between contact 11, 12
to relay coil A1+, A2:

> 3.0 mm

rated impulse voltage /

pollution degree: 2.5 kV / 2 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 transient: 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

Terminal connection:

NC contact	NO contact
auxiliary voltage	
0.5 ... 2.5 mm ² solid	0,5 ... 6 mm ² solid
0.5 ... 2.5 mm ² flexible	0,5 ... 4 mm ² flexible

Wire connection: Cable wedging according to the elevator principle with captive plus-minus-terminal screws

Mounting: DIN rail IEC/EN 60 715

Weight: approx. 130 g

Dimensions

Width x height x depth: 22.5 x 106 x 75 mm

Standard Type

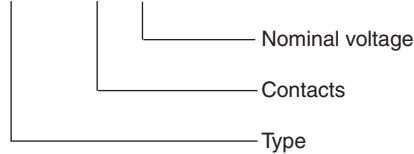
HK 3087N.16 DC 24 V

Article number: 0066764

- 1 NO contact , 1 NC contact
- Contact material AgSnO₂ + 0.2 μm Au
- Width: 22.5 mm

Ordering Example

HK 3087N. 16 DC 24 V



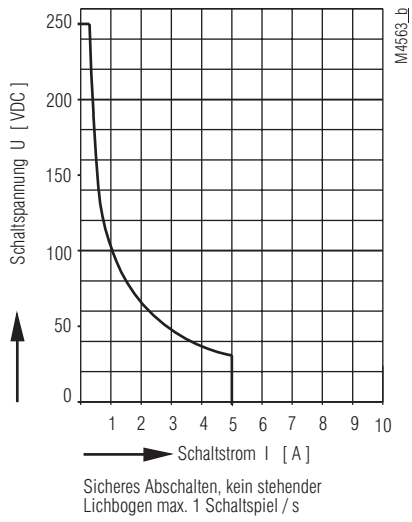
Connection Example for HK 3087N.16

Relay: OA 5602.48 ≅ 1 NO contact and 1 NO contact (standard)

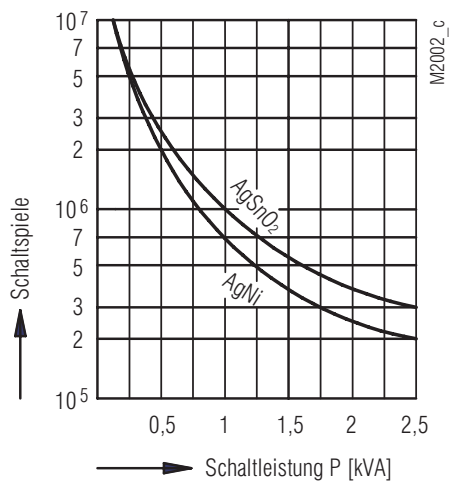
A1+ A2	Contact	Contact-type	Connection
{ 11 23 12 24 }	1	NC contact	11, 12
	2	NO contact	23, 24

The terminal assignment is according to the diagram on the installed relay

Characteristic (NC contact)



Arc limit curve under resistive load



Contact service life

Dimension

