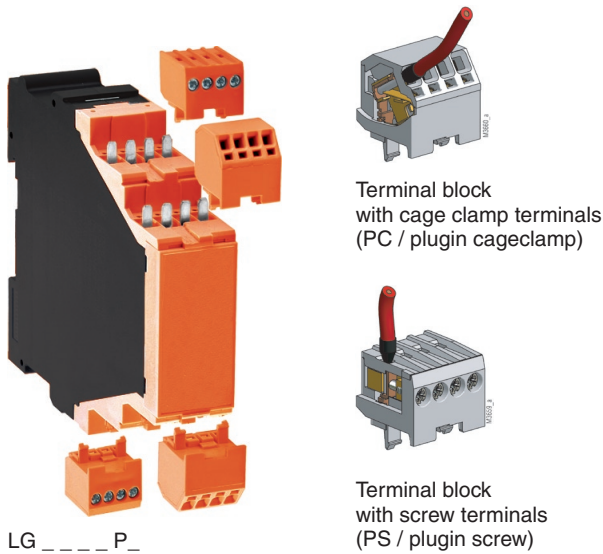




- According to
 - SIL-Claimed Level (SIL CL) 1 to EN 62061
 - Performance Level (PL) c to DIN EN ISO 13849-1
- With **positive guided** contacts according to EN 50 205
- Max. 6 contacts
- As option goldplated contacts to switch low loads
- Wire connection: also 2 x 1.5 mm² stranded ferruled, or 2 x 2.5 mm² solid DIN 46 228-1/-2/-3/-4
- As option with pluggable terminal blocks for easy exchange of devices
 - with screw terminals
 - or with cage clamp terminals
- Width 22.5 mm

Options with pluggable terminal blocks



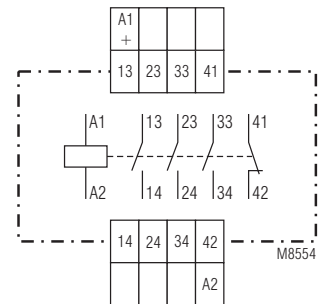
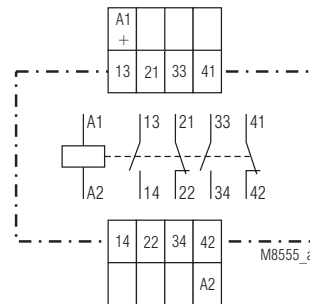
Approvals and marking



Anwendungen

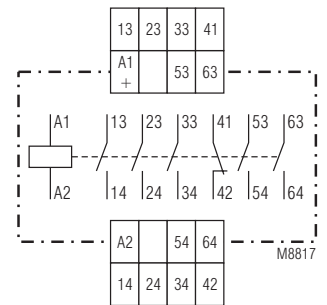
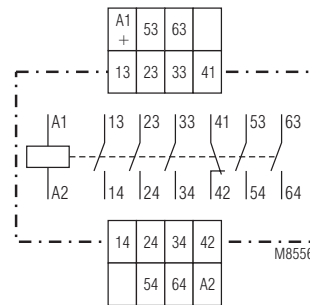
- Safety switching device with the possibility to monitor the contact status via positive guided NC contacts.
- Interface module for inverters with integrated safe stop function.

Circuit diagrams



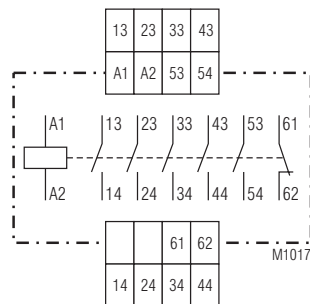
LG 3096.52
MK 3096N.52

LG 3096.48
MK 3096N.48



LG 3096.60
MK 3096N.60

MK 3096N.60/100

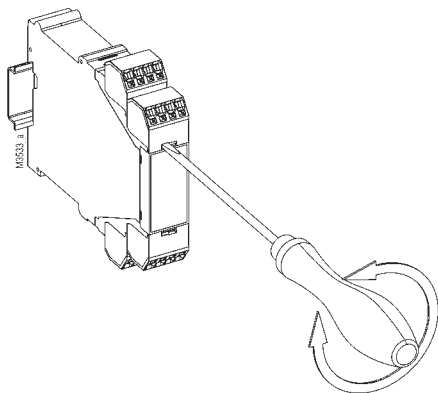


LG 3096.60/300

Notes

Removing the terminal blocks with cage clamp terminals

1. The unit has to be disconnected.
2. Insert a screwdriver in the side recess of the front plate.
3. Turn the screwdriver to the right and left.
4. Please note that the terminal blocks have to be mounted on the belonging plug in terminations.



Technical Data

Input

Nominal voltage U_N :

LG 3096: DC 24, 48 V; AC 100, 230 V

MK 3096: DC 24, 48 V

Voltage range: 0.8... 1.1 U_N

Nominal consumption 0.6 W

Output

Contacts:

MK 3096.52, LG 3096.52: 2 NO and 2 NC contacts

MK 3096.48, LG 3096.48: 3 NO and 1 NC contacts

MK 3096.60, LG 3096.60: 5 NO and 1 NC contacts

Contact type: positive guided

Operate time: typical 20 ms

Release time: typical 15 ms

Nominal output voltage: AC 250 V

Thermal current I_{th} 5 A

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

Standard type: 0.5 A / DC 110 V IEC/EN 60 947-5-1

2 contacts in series: 1 A / DC 110 V IEC/EN 60 947-5-1

MK 3096N/100: 1 A / DC 110 V IEC/EN 60 947-5-1

2 contacts in series: 4 A / DC 110 V IEC/EN 60 947-5-1

Electrical life IEC/EN 60 947-5-1

NO contacts:

to AC 15 at 3 A, AC 230 V: 1.5×10^5 switching cycles

NO contacts:

to AC 15 at 2 A, AC 230 V: 3×10^5 switching cycles

NC contacts:

to AC 15 at 2 A, AC 230 V: 1×10^5 switching cycles

Permissible switching

frequency: 10 switching cycles / s

Switching voltage min./max.: AC/DC 10 V / DC 250 V, AC 400 V

Switching current min./max.: 10 mA / 5 A

Switching capacity min./max.: 3 VA / 1250 VA

3 W / 200 W

Short circuit strength

max. fuse rating:

LG 3096: 10 A gL IEC/EN 60 947-5-1

MK 3096N: 6 A gL IEC/EN 60 947-5-1

Mechanical life: $\geq 50 \times 10^6$ switching cycles

General Data

Operating mode: Continuous operation

Temperature range: -20 ... +60 °C

Clearance and creepage distances

rated impuls voltage / pollution degree: 4 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 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

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

Screw terminals

(integrated):

1 x 4 mm² solid or
1 x 2.5 mm² stranded ferruled (isolated)
or
2 x 1.5 mm² stranded ferruled (isolated)
or 2 x 2.5 mm² solid

Insulation of wires

or sleeve length: 8 mm

Plugin with screw terminals

max. cross section

for connection: 1 x 2.5 mm² solid or
1 x 2.5 mm² stranded ferruled (isolated)

Insulation of wires

or sleeve length: 8 mm

Plugin with cage

clamp terminals

max. cross section

for connection: 1 x 4 mm² solid or
1 x 2.5 mm² stranded ferruled (isolated)

min. cross section

for connection: 0.5 mm²

Insulation of wires

or sleeve length: 12 ^{+0.5} mm

Wire fixing:

Plus-minus terminal screws M 3.5
box terminals with wire protection or
cage clamp terminals

Mounting:

Weight

DIN rail IEC/EN 60 715
160 g

Dimensions

Width x height x depth

LG 3096: 22.5 x 90 x 121 mm

LG 3096 PC: 22.5 x 111 x 121 mm

LG 3096 PS: 22.5 x 104 x 121 mm

MK 3096N: 22.5 x 90 x 102 mm

MK 3096N PC: 22.5 x 111 x 102 mm

MK 3096N PS: 22.5 x 104 x 102 mm

Safety related data

Probability of dangerous

Failure per Hour (PFH_D): $1.58 \cdot 10^{-7}$ 1/h

Safe Failure Fraction (SFF): 68.2 % (AC/DC)

Proof Test Intervall (T1): 20 Years



The values stated above are valid for the standard type.
Safety data for other variants are available on request

Standard type

LG 3096.60 DC 24 V

Article number: 0056147

• 5 NO and 1 NC contacts

• Width: 22.5 mm

MK 3096N.60 DC 24 V

Article number: 0055931

• 5 NO and 1 NC contacts

• Width: 22.5 mm

Variants

LG 3096._._/004

MK 3096N._._/004:

With gold plated contacts to switch low loads.

Because of the gold plated contacts the MK 3096N._._/004, LG 3096._._/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.

LG 3096._._/300:

AC-units

LG 3096._._/304:

AC-units with gold plated contacts

LG3096._._/3._._/60:

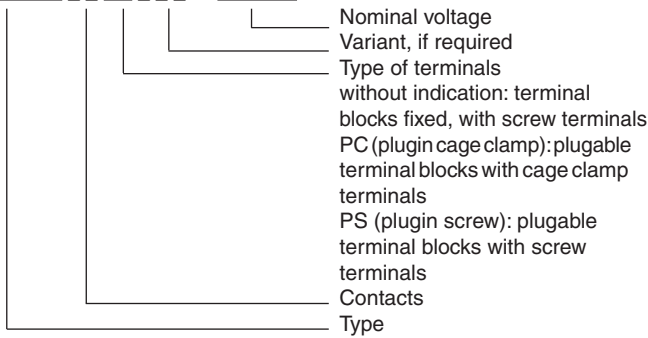
with CSA-approval (Canada/USA) for all AC-voltages 110 V and 230 V

MK 3096N/100:

2 contacts switched internally in series.

Ordering example for Variants

MK 3096N._._ PS/_._ _ DC 24 V



Characteristics

