

Interface Relay IK 3076

Translation
of the original instructions



Your advantages

- According to IEC/EN 60947-5-1, IEC/EN 61810-1
- Protective separation according to IEC/EN 61140, IEC/EN 60947-1 in configuration with 1 changeover contact
- With input wiring protection against voltage surges
- High permanent current I_{th}

Features

- LED indicator
- As option with 1 or 2 changeover contacts
- As option for switching low loads
- DIN rail or screw mounting
- Depth 59 mm with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43880
- Width 17.5 mm

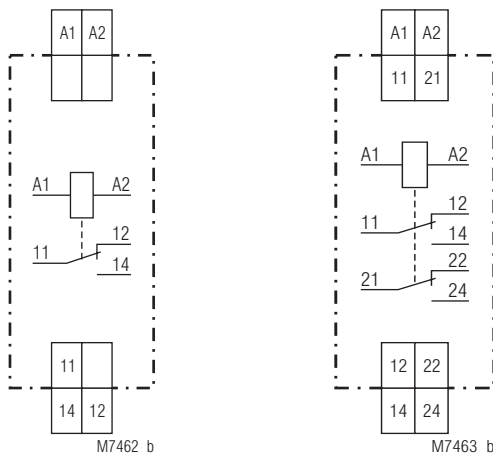
Product Description

The coupling relay IK 3076 is used for contact multiplication and is suitable as a link between control and power level. The coupling relay is available with different contact combinations and optionally for switching small loads.

Approvals and Markings



Circuit Diagrams



IK 3076.11

IK 3076.12

Applications

- Link between the control and power levels
- For separating potentials
- For industrial and railway applications

Indicator

LED green: On when the relay is supplied with current

Technical Data

Input

Nominal voltage U_N : AC/DC 8, 12, 24, 48 V
AC 110 ... 130, 230 ... 240 V

Voltage range: 0.8 ... 1.1 U_N
0.9 ... 1.25 U_N in battery operating mode

Nominal consumption: DC 24 V AC 230 V
0.5 W 0.8 VA

Nominal frequency: 50 / 60 Hz

Frequency range: $\pm 5\%$

Output

Contacts

IK 3076.11: 1 changeover contact
IK 3076.12: 2 changeover contacts

Operate/release time: < 10 ms / < 20 ms

Thermal current I_{th}

IK 3076.11: 10 A
IK 3076.12: 5 A

Switching capacity

to AC 15:

NC contact: 1 A / AC 230 V IEC/EN 60947-5-1
NO contact: 3 A / AC 230 V IEC/EN 60947-5-1

To DC 13:

NC contact: 1 A / DC 24 V IEC/EN 60947-5-1
NO contact: 1 A / DC 24 V IEC/EN 60947-5-1

Electrical life

AC 15 at 3 A, AC 230 V IEC/EN 60947-5-1

IK 3076.11: 1 x 10⁵ switching cycles

IK 3076.12: 1 x 10⁵ switching cycles

Permissible switching frequency:

6000 switching cycles/h

Short circuit strength

max. fuse rating

IK 3076.11: 10 A gG / gL IEC/EN 60947-5-1
IK 3076.12: 4 A gG / gL IEC/EN 60947-5-1

Mechanical life:

> 30 x 10⁶ switching cycles

Connection Terminals

Terminal designation	Signal description
A1	L / +
A2	N / -
11, 12, 14 21, 22, 24	Changeover contacts

Technical Data

General Data

Operating mode: Continuous operation

Temperature range

Operation: - 25 ... + 60 °C

Storage: - 40 ... + 80 °C

Altitude: ≤ 2000 m

Clearance and creepage distances

Rated impulse voltage /

pollution degree:

IK 3076.11:

Input / output: 6 kV / 2 IEC 60664-1

IK 3076.12:

Input / output: 4 kV / 2 IEC 60664-1

Contacts: 2.5 kV / 2 IEC 60664-1

Only for 1-phase systems
(same phase)

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61000-4-2

HF irradiation

80 MHz ... 1 GHz: 10 V/m IEC/EN 61000-4-3

1 GHz ... 2.5 GHz: 3 V/m IEC/EN 61000-4-3

2.5 GHz ... 2.7 GHz: 1 V/m IEC/EN 61000-4-3

Fast transients: 2 kV IEC/EN 61000-4-4

Surge voltages

between

wires for power supply: 1 kV IEC/EN 61000-4-5

Between wire and ground: 2 kV IEC/EN 61000-4-5

HF-wire guided: 10 V IEC/EN 61000-5-6

Interference suppression: Limit value class B EN 55011

Degree of protection

Housing: IP 40 IEC/EN 60529

Terminals: IP 20 IEC/EN 60529

Housing: Thermoplastic with V0 behaviour
according to UL Subject 94

Vibration resistance: Amplitude 0.35 mm
frequency 10 ... 55 Hz IEC/EN 60068-2-6

Climate resistance: 25 / 060 / 04 IEC/EN 60068-1

Terminal designation:

Wire connection

Cross section: 2 x 2.5 mm² solid or
2 x 1.5 mm² stranded ferruled
DIN 46228-1/-2/-3/-4

Stripping length: 10 mm

Wire fixing: Flat terminals with self-lifting
clamping piece IEC/EN 60999-1

Fixing torque: 0.8 Nm

Mounting: DIN rail mounting (IEC/EN 60715) or
screw mounting M4, 90 mm hole pattern,
with additional clip available as accessory

Weight: 72 g

Dimensions

Width x height x depth: 17.5 x 89 x 59 mm

Standard Type

IK 3076.12 AC/DC 24 V 50/60 Hz

Article number: 0033445

• Output: 2 changeover contacts

• Nominal voltage U_N : AC/DC 24 V

• Width: 17.5 mm

Variants

IK 3076.__/004: For switching small loads of
10 mVA ... 12 VA or 10 mW ... 12 W
in the ranges of 2 ... 60 V and 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

IK 3076.__/007: Release voltage: The output relay is
de-energized at $U < 27\% U_N$

IK 3076/107: For rooms used for medical purposes

IK 3076.12/211 AC 230 V: Response value at AC 120 V and for
switching small loads of 10 mVA ... 12 VA
or 10 mW ... 12 W in the ranges of
2 ... 60 V and 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

IK 3076.12/120: Output terminal 21, 22, 24 with
5 µm Au gold plating and marking the
corresponding contacts on the device

IK 3076.12/227: $U_N = DC 220 V$,
Response value at approx. 30 V

Ordering Example for Variants

IK 3076 .12 / _ _ _ AC/DC 48 V 50 / 60 Hz

Nominal frequency
Nominal voltage
Variant, if required
Contacts
Type

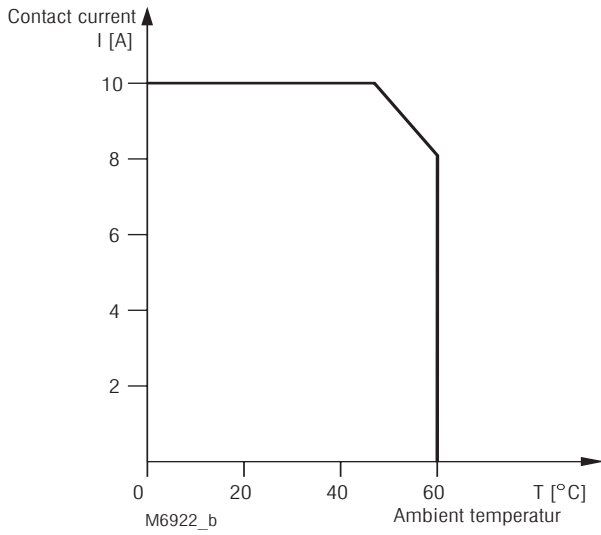
Classification to DIN EN 50155 for IK 3076

Vibration and shock resistance: Category 1, Class B IEC/EN 61373

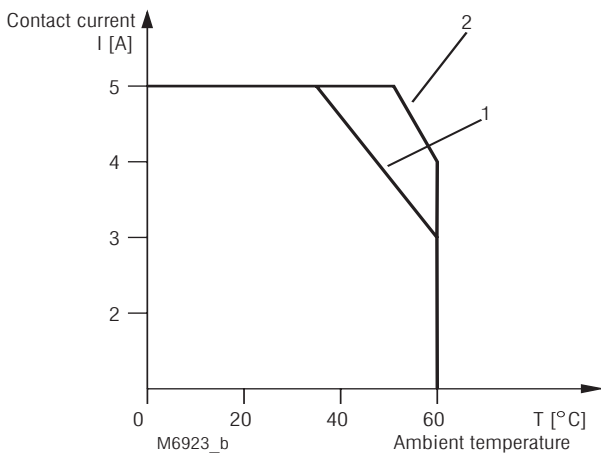
Service temperature classes: OT1 compliant

Protective coating of the PCB: No

Characteristics



Permanent current limit curve:
Perm. contact current of IK 3076.11 in relation to the ambient temperature



Permanent current limit curve:
Perm. contact current of IK 3076.12 in relation to the ambient temperature

- 1 Nominal voltage, mounted without distance, current supplied to both cont.
- 2 Nominal voltage, mounted without distance, current only supplied to one contact

Accessories

ET 4086-0-2: Additional clip for screw mounting
Article number: 0046578

