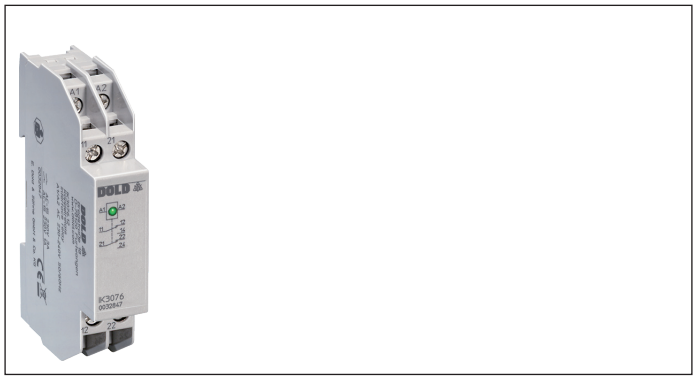
Interface Relay
IK 3076

Translation of the original instructions

0222110



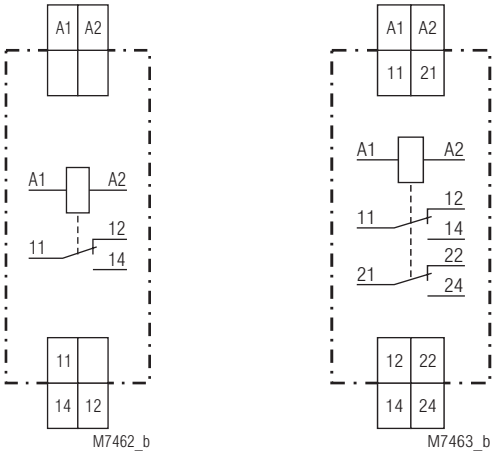
Your advantages
- According to IEC/EN 60947-5-1, IEC/EN 61810-1
- Protective separation according to IEC/EN 61140, IEC/EN 60947-1 in configuration with 1 changeover contact
- With input wiring protection against voltage surges
- High permanent current I_{th}

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.

Circuit Diagrams



IK 3076.11 IK 3076.12

Connection Terminals

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

Approvals and Markings

CE

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 0.5 W	AC 230 V 0.8 VA
Nominal frequency:	50 / 60 Hz	
Frequency range:	± 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 10^5 switching cycles	
IK 3076.12:	1 x 10^5 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 10^6 switching cycles	

All technical data in this list relate to the state at the moment of edition. We reserve the right for technical improvements and changes at any time.

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:	EN 50005	
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

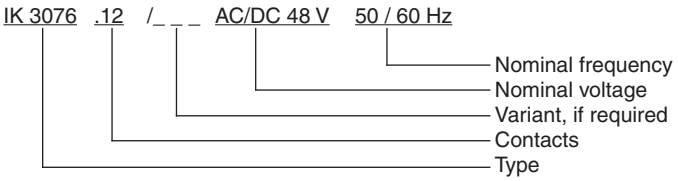
IK 3076.12 AC/DC 24 V 50/60 Hz

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 3076.12/211 AC 230 V:	Response value at approx. AC 120 V and for switching small loads of 10 ... 60 V and 10 ... 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 for switching small loads 10 mVA ... 12 VA resp. 10 mW ... 12 W in the ranges of 0.3 ... 60 V und 1 ... 300 mA. The output terminal 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 3076.12/227:	U_N = DC 220 V, Response value at approx. 30 V

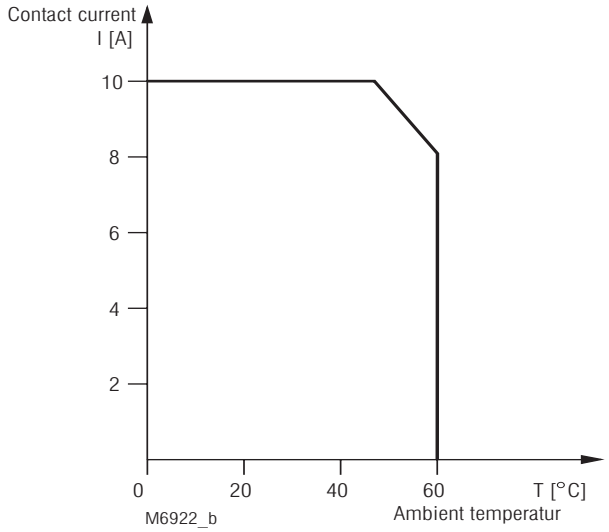
Ordering Example for Variants



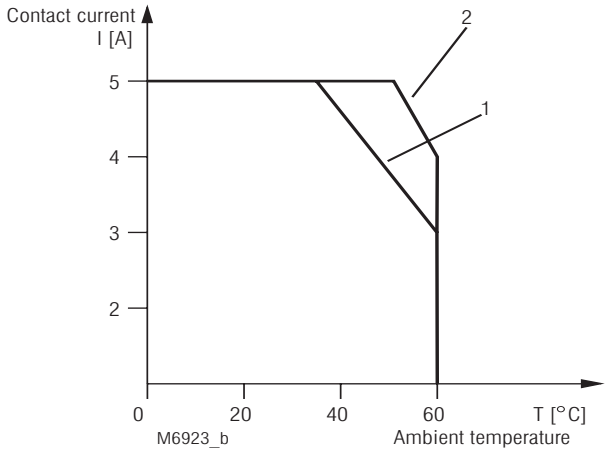
Classification to DIN EN 50155 for IK 3076

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