

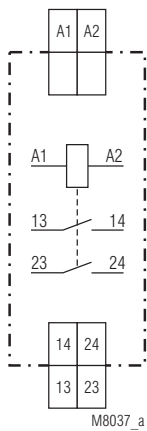
Interface Relay Input-Output Interface Relay IK 3070

Translation
of the original instructions

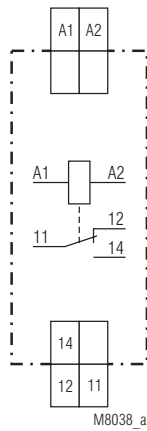


- According to IEC/EN 60947-5-1
- Relay, triac or transistor output
- Protective separation according to IEC/EN 61140, IEC/EN 60947-1 on devices with relay output (only at IK 3070.02 / _0_, IK 3070.11 / _0_)
- LED as operating position display
- Optionally input wiring with recovery diode or MOV
- As option with semiconductor output
 - For high switching frequency
 - Input protection with varistor
- Width 17.5 mm

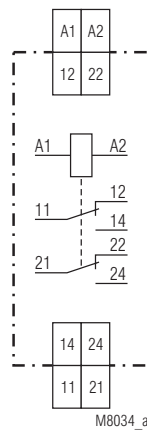
Circuit Diagrams



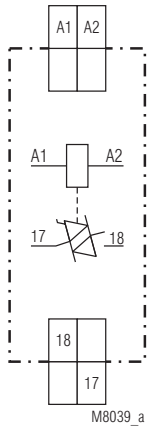
IK 3070.02



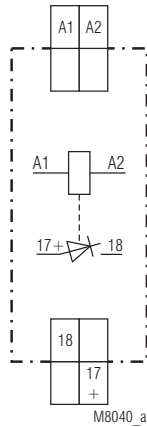
IK 3070.11



IK 3070.12



IK 3070.91



IK 3070.95

Approvals and Markings



Applications

- Link between the control and the power level
- For separating potentials

Indicators

Green LED: On, when supply connected

Connection Terminals

Terminal designation	Signal description
A1, A2	Operating voltage
11 ... 24	Output contacts see circuit diagrams

Technical Data**Input for Interface Relay with Relay Output**

Nominal voltage U_N:	DC 24 V AC 230 V
Voltage range:	DC 0.9 ... 1.2 U_N AC 0.8 ... 1.1 U_N
Nominal consumption:	DC approx. 0.5 W AC approx. 0.9 W

Input for Interface Relay with Semiconductor Output

Nominal voltage U_N:	DC 24 V	AC 230V
Voltage range:	DC 18 ... 30 V	AC 0.8 ... 1.1 U_N
Input current:	Approx. 10 mA	Approx. 10 mA
Power consumption:	Approx. 0.25 W	Approx. 2.5 VA
Nominal frequency:	-	50 / 60 Hz
Frequency range:	-	$\pm 5\%$
Protection:	Varistor	Varistor

Relay Output**Contacts**

IK 3070.02:	2 NO contacts	
IK 3070.11:	1 changeover contact	
IK 3070.12:	2 changeover contacts	
Reaction time:	≤ 10 ms	
Release time:	≤ 15 ms	
Nominal switching voltage:	AC 250 V	
Nominal output voltage:	Min. AC 8 V; max. AC 400 V	
Switching-on capacity:	Min. 0.3 A Max. 8 A or 2 x 5 A at the same time	
Thermal current I_{th}:	Max. 8 A (see continuous current limit curve) 2 x 5 A	

IK 3070.12:

Switching capacity

For IK 3070.11		
To AC 15:	6 A / AC 230 V	IEC/EN 60947-5-1
To DC 13:	2 A / DC 24 V	IEC/EN 60947-5-1
For IK 3070.02		
To AC 15:	3 A / AC 230V	IEC/EN 60947-5-1
To DC 13:	2 A / DC 24V	IEC/EN 60947-5-1
For IK 3070.12		
To AC 15		
NO contact:	3 A / AC 230 V	IEC/EN 60947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60947-5-1
To DC 13		
NO contact:	1 A / DC 24 V	IEC/EN 60947-5-1
NC contact:	1 A / DC 24 V	IEC/EN 60947-5-1

Electrical lifeTo AC 15 at 3 A, AC 230 V: $\geq 2.5 \times 10^5$ switching cycles**Permissible****switching frequency:** Max. 10 switching cycles / s**Short circuit strength**

max. fuse rating:	10 A gG / gL	IEC/EN 60947-5-1
IK 3070.12:	4 A gG / gL	IEC/EN 60947-5-1

Mechanical life: $\geq 10 \times 10^6$ switching cycles**Transistor Output for DC-Load (pay attention to polarity)**

IK 3070.95:	1 Transistor	
Nominal output voltage:	DC 24 V	
Voltage range:	DC 0 ... 30 V	
Switching current:	Max 5 A (see diagram)	
Pick-up time:	< 2 ms	
Drop-out time:	< 18 ms	
Max. overcurrent:	25 A, max. 5 s (not cyclic)	
Residual voltage:	< 0.3 V	
Residual current:	< 1 mA	
Min. load current:	1 mA	
Protection:	Varistor (tp = 2 ms 8.6 J)	

Technical Data**Triac Output for AC-Load**

IK 3070.91:	1 Triac	
Nominal output voltage:	AC 230 V	
Voltage range:	AC 12 ... 275 V	
Switching current:	Max. 3 A (see diagram)	
Pick-up time:	< 12 ms	
Drop-out time:	< 20 ms	
Max. overcurrent:	25 A, max. 5 s (not cyclic)	
Residual voltage:	< 1.1 V	
Residual current:	< 1 mA	
Min. load current:	50 mA	
Protection:	Varistor (tp = 2 ms 8.6 J)	

General Data

Operating mode:	Continuous operation	
Temperature range:	Operation: - 20 ... + 55 °C Storage: - 20 ... + 55 °C Altitude: < 2000 m	
Clearance and creepage distances		
Rated insulation voltage:	300 V	
Overvoltage category:	III	
Rated impulse voltage / pollution degree:	4 kV / 2	IEC 60664-1
EMC		
Electrostatic discharge:	8 kV (air)	IEC/EN 61000-4-2
HF irradiation	80 MHz ... 2,7 GHz	
Variants with relay output:	10 V / m	IEC/EN 61000-4-3
Variants with semiconductor outputs:	3 V / m	IEC/EN 61000-4-3
Fast transients:	2 kV	IEC/EN 61000-4-3
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 61000-4-6
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 IEC/EN 60068-2-6 frequency 10 ... 55 Hz	
Climate resistance:	20 / 055 / 04	IEC/EN 60068-1
Terminal designation:	EN 50005	
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded ferruled DIN 46228-1/-2/-3/-4	
Stripping length:	10 mm	
Wire fixing:	Vis de serrage cruciformes imperdables M3,5; bornes en caisson avec protection du conducteur. Fonction selon IEC 60999-1	
Fixing torque:	0.8 Nm	
Mounting:	DIN rail	IEC/EN 60715
Weight:	68 g	

Dimensions

Width x height x depth:	17.5 x 90 x 58 mm
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Standard Type

IK 3070.02/002 DC 24 V
 Article number: 0045093
 • Output: 2 NO contacts
 • Nominal voltage U_N : DC 24 V
 • With operating position display (LED)
 • Width: 17.5 mm

Variants*

IK 3070. / 0 0

- Input circuit
 - 0 Standard
 - 1 With MOV
 - 2 With LED as operating position display
 - 8 With recovery diode for DC version
 - A With MOV and recovery diode DC version
 - B With MOV and LED as operating position display
 - C With LED as operating position display and recovery diode DC version
 - D With MOV, LED as operating position display and recovery diode DC version
- Contacts
 - 02 2 NO contacts
 - 11 1 changeover contact
 - 12 2 changeover contacts (only variants with MOV possible)
 - 91 1 NO contact semiconductor triac only with /001 or /00B
 - 92 1 NO contact semiconductor transistor only with /001 or /00B

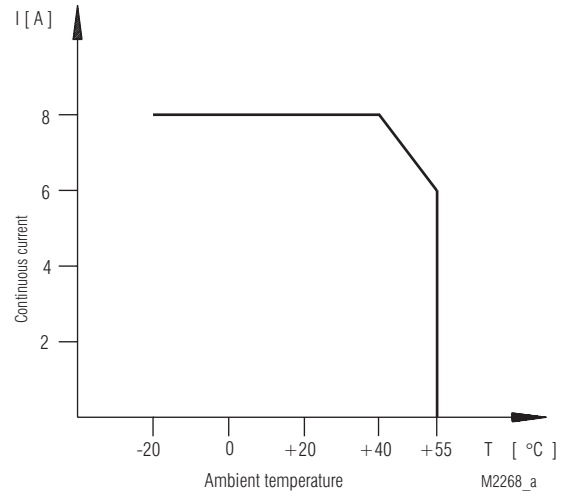
* on request

Ordering example for variants

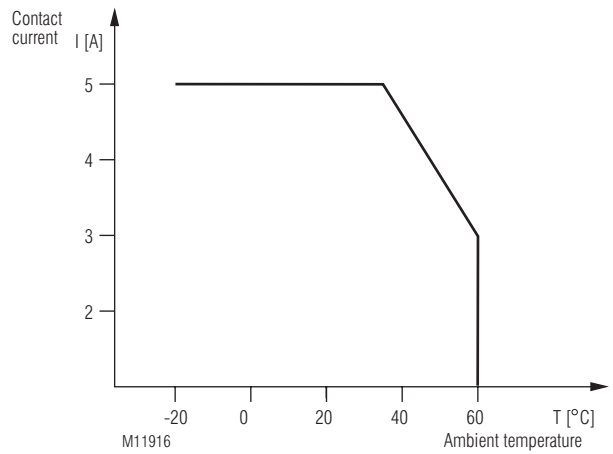
IK 3070 .12 / _ _ DC 24 V

- Nominal voltage
- Variant, if required
- Contact
- Type

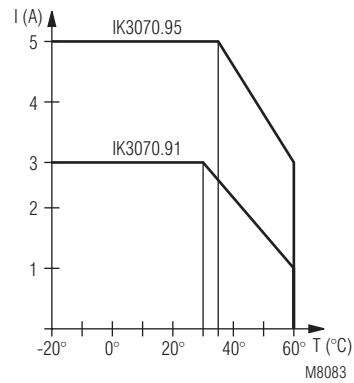
Characteristics



Continuous current limit curve for IK 3070.02, IK 3070.11



Continuous current limit curve for IK 3070.12



Continuous current limit curve for IK 3070.95, IK 3070.91

