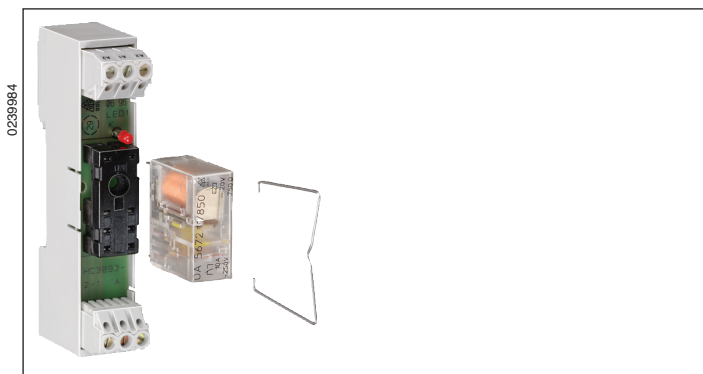


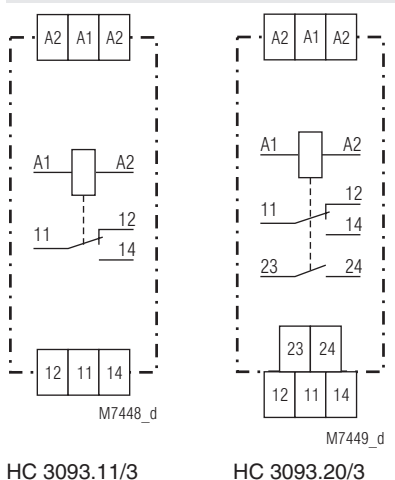
Plugin Socket HC 3093.__/3__ Relay, Plugin OA 5668, OA 5669, OA 5672

Translation
of the original instructions



- According to IEC/EN 60947-5-1
- Protective separation according to IEC/EN 61140, IEC/EN 60947-1 between the in- and output
- Plug-in relay
- LED indicator
- 1 changeover contact or 1 changeover contact, 1 NO contact
- As option with MOV at the input to increase the peak voltage resistance
- As option with gold plated contacts to switch low loads
- As option with RC or diode contact protection
- Relay OA 5669 with forcibly guided contacts and 0.5 mm contact gap
- Width 17.5 mm

Circuit Diagrams



HC 3093.11/3__

HC 3093.20/3__

Approvals and Markings



Application

- Link between control and power system
- For galvanic separation

Function

The relay consists of one relay OA 5672, OA 5668 or OA 5669 and socket HC 3093. The plug-in design makes it very easy to change the relay. OA 5672 is used only on socket HC 3093.11/3__ and OA 5668 or OA 5669 only on socket HC 3093.20/3__.

Indication

LED: On, when control voltage applied

Technical Data

Input

Nominal voltage U_N : AC/DC 24 V
AC 110 ... 130 V, 220 ... 240 V
Voltage range: 0.8 ... 1.1 U_N
0.9 ... 1.15 U_N with battery supply
Release voltage: 0.05 ... 0.33 U_N
Nominal consumption: DC 24 V / 0.5 W
AC 230 V / 0.8 VA
Nominal frequency: 50 / 60 Hz
Frequency range: $\pm 5\%$

Output

Contacts

HC 3093.11 with OA 5672.11: 1 changeover contact
HC 3093.20 with OA 5668.12,
HC 3093.20 with OA 5669.12: 1 changeover contact, 1 NO contact

Response time: < 15 ms

Release time: < 15 ms

Thermal current I_{th}

HC 3093.11 with OA 5672.11: 8 A

HC 3093.20 with OA 5668.12,

HC 3093.20 with OA 5669.12: 2 x 4 A

Switching capacity

to AC 15

OA 5668

NO contact: 2 A / AC 230 V IEC/EN 60947-5-1

NC contact: 1 A / AC 230 V IEC/EN 60947-5-1

OA 5669

NO contact: 2 A / AC 230 V IEC/EN 60947-5-1

NC contact: 1 A / AC 230 V IEC/EN 60947-5-1

OA 5672

NO contact: 10 A / AC 230 V IEC/EN 60947-5-1

NC contact: 5 A / AC 230 V IEC/EN 60947-5-1

Connection Terminals

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

Technical Data

to DC 13		
OA 5668		
NO contact:	1 A / DC 24 V	IEC/EN 60947-5-1
NC contact:	1 A / DC 24 V	IEC/EN 60947-5-1
OA 5669		
NO contact:	2 A / DC 24 V	IEC/EN 60947-5-1
NC contact:	1 A / DC 24 V	IEC/EN 60947-5-1
OA 5672		
NO contact:	1 A / DC 24 V	IEC/EN 60947-5-1
NC contact:	1 A / DC 24 V	IEC/EN 60947-5-1

Especially for switching low loads as option (OA 5668, OA5672: 1 mVA ... 7 VA resp. 1 mW ... 7 W at range from 0,1 ... 60 V and 1 ... 300 mA and OA 5669: 10 mVA ... 12 VA bzw. 10 mW ... 12 W at range from 2 ... 60 V and 2 ... 300 mA) the relays are available with goldplated output contact - as an option. The contacts can switch heavy loads too. However the gold-plating is burnt away and after that the relay can not longer to be used for switching low loads.

Electrical life IEC/EN 60947-5-1

to AC 15 at 3 A, AC 230 V	
HC 3093.11:	3 x 10 ⁵ switching cycles
HC 3093.20:	8 x 10 ⁵ switching cycles

Permissible switching frequency: 6000 switching cycles / h

Short circuit strength

Max. fuse rating

HC 3093.11:	6 A gG / gL	IEC/EN 60947-5-1
HC 3093.20:	4 A gG / gL	IEC/EN 60947-5-1

Mechanical life: > 30 x 10⁶ switching cycles

General Data

Operating mode: Continuous operation

Temperature range:

Operation:	- 40 ... + 70 °C
Storage:	- 40 ... + 70 °C
Altitude:	< 2000 m

Clearance and creepage distances

Rated insulation voltage:	300 V
Overvoltage category:	III
Rated impulse voltage / pollution degree	
Input to Output:	6 kV / 2 IEC 60664-1

EMC

Electrostatic discharge:	8 kV (air)	IEC/EN 61000-4-2
HF-irradiation:		
80 MHz ... 2.7 GHz:	10 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 61000-4-6
Interference suppression:	Limit value class B	EN 55011

Degree of protection

Terminals: IP 20 IEC/EN 60529

Housing:

Thermoplast with V0-behaviour according to UL subject 94
Vibration resistance: Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60068-2-6
 40 / 070 / 04 IEC/EN 60068-1
 EN 50005

Climate resistance:

Terminal designation:

Wire connection

Cross section: 1 x 0.2 ... 4 mm² solid or 1 x 0.2 ... 2.5 mm² stranded ferruled (isolated)
 DIN 46228-1/-2/-3/-4

Insulation of wires or sleeve length

8 mm
Wire fixing: Box terminal with unloosable screws

Fixing torque: 0.6 Nm

Mounting: DIN rail IEC/EN 60715

Weight:

HC 3093.../300:	32 g
OA 5668:	15 g
OA 5669:	15 g
OA 5672:	17 g

Dimensions

Width x height x depth: 17.5 x 88 x 60 mm

Standard Types

OA 5972.11/850 DC 20 V

Article number: 0052460
 • Output: 1 changeover contact
 • Nominal voltage U_N: DC 20 V

HC 3093.11/3_ _ AC/DC 24 V

Article number: 0040350
 • Output: 1 changeover contact
 • Nominal voltage U_N: AC/DC 24 V
 • Width: 17.5 mm

OA 5668.12/938 DC 20 V

Article number: 0036024
 • Output: 1 changeover contact, 1 NO contact
 • Nominal voltage U_N: DC 20 V

OA 5669.12/3003L1 DC 24 V

Article number: 0051170
 • Output: 1 changeover contact, 1 NO contact
 • Nominal voltage U_N: DC 24 V

HC 3093.20/300 AC/DC 24 V

Article number: 0040352
 • Output: 1 changeover contact, 1 NO contact
 • Nominal voltage U_N: AC/DC 24 V
 • Width: 17.5 mm

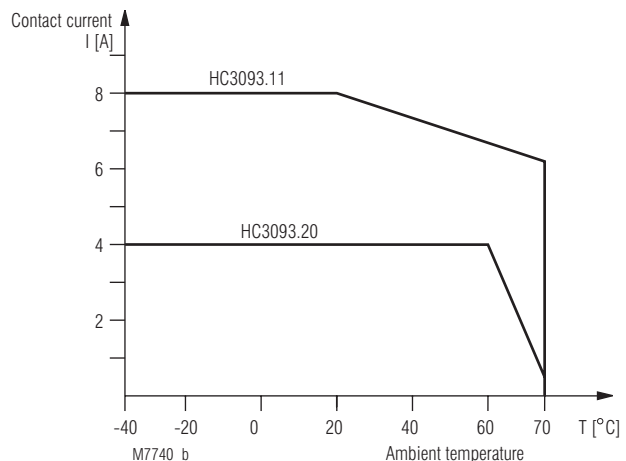
Variants

OA 5672.11/065:	Relay with 1 changeover contact for switching low loads
OA 5668.12/928:	Relay with 1 changeover contact, 1 NO contact for switching low loads
OA 5669.12/3003L1:	Relay with 1 changeover contact, 1 NO contact for switching low loads

Ordering example for variants

HC 3093... / 0	AC 220 ... 240 V	50 / 60 Hz
		Nominal frequency
		Nominal voltage
	0	Without MOV
	1	With MOV
	3	Pluggable
	4	Soldered
	11	For relay module OA 5672.11 with 1 changeover contact
	20	For relay module OA 5668.12 with 1 changeover contact, 1 NO contact

Characteristics



Max. continuous current in relation to the ambient temperature