

Interface Module UG 3091



Your Advantages

- Simple contact multiplication and reinforcement also for safety modules
- Cost and space saving alternative compared to contactors
- Easy monitoring of contact state via forcibly guided NC contacts

Features

- According to IEC/EN 60 947-5-1
- With partially forcibly guided contacts according to IEC 61810-3
- 10 output contacts
- As option with pluggable terminal block for easy exchange of devices
 - With screw terminals
- 22,5 mm Baubreite

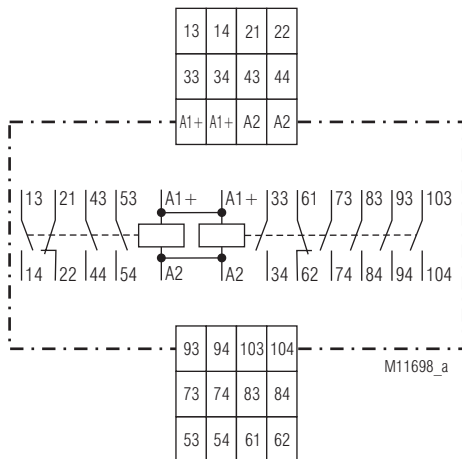
Product Description

The interface module UG 3091 provides 10 contacts in 2 relays with forcibly guided contacts. It is suitable for safe electrical separation of control and power levels as well as for contact multiplication and reinforcement of safety modules.

Approvals and Markings



Circuit Diagram



Applications

- Interfacing between control and load circuits
- Contact multiplication and reinforcement
- separate switching of several current circuits, e. g. with
 - Machines and plants,
 - Energy production and transport

Indicator

green LED: on, when supply connected

Connection Terminals

Terminal designation	Signal description
A1+, A2	Hilfsspannung DC, 2-fach vorhanden, gepolt
33, 34; 73, 74; 83, 84; 93, 94; 103, 104	5 SchlieBerkontakte, Rel 1, zwangsgeföhrt
61, 62	1 Öffnerkontakt, Rel 1, zwangsgeföhrt
13, 14; 43, 44; 53, 54	3 SchlieBerkontakte, Rel 2 zwangsgeföhrt
21, 22	1 Öffnerkontakt, Rel 2, zwangsgeföhrt

Technical Data

Input

Nominal voltage U_N:	DC 24, 110 V (others on request)
Voltage range:	0.8 ... 1.1 U_N
Nominal consumption:	1.4 W
Min. release time	
DC 24 V:	200 ms
DC 110 V:	500 ms

Output

Contacts:	8 NO and 2 NC contacts
Contact type:	2 relays, forcibly guided
Operate time:	typisch 12 ms
Rückfallzeit:	typisch 35 ms
Nominal output voltage:	AC 250 V, DC 24 V
Thermal current I_{th}:	max. 4 A (see quadratic total current limit curve)

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

nach DC 13:

NO contacts:	2 A / DC 24 V	IEC/EN 60 947-5-1
NC contacts:	2 A / DC 24 V	IEC/EN 60 947-5-1

to DC 13:

NO contacts:	4 A / DC 24 V at 0.1 Hz	IEC/EN 60 947-5-1
NC contacts:	4 A / DC 24 V at 0.1 Hz	IEC/EN 60 947-5-1

Electrical life

at AC 230 V, 5 A, $\cos \varphi = 1$:	2.2 x 10 ⁶ switch. cycl.	IEC/EN 60 947-5-1
at DC 24 V, 5 A, ohmic:	1.5 x 10 ⁶ switch. cycl.	IEC/EN 60 947-5-1

Permissible switching

frequency: 10 switching cycles / s

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

Short circuit strength

max. fuse rating:

NO contact:	10 A gG / gL	IEC/EN 60 947-5-1
NC contact:	6 A gG / gL	IEC/EN 60 947-5-1

Mechanical life:

≥ 20 x 10⁶ switching cycles

General Data

Operating mode: Continuous operation

Temperature range:

Operation:	- 20 ... + 60 °C (siehe Kennlinie)
Storage:	- 40 ... + 70 °C

Clearance and creepage distances

Rated impulse voltage / pollution degree

Auxiliary voltage / contacts:	6 kV / 2	IEC 60 664-1
Contacts / contacts:	4 kV / 2	IEC 60 664-1

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2

HF irradiation

80 MHz ... 2.7 GHz: 10 V / m IEC/EN 61 000-4-3

Fast transients: 4 kV IEC/EN 61 000-4-4

Surge voltage between

wires for power supply: 1 kV IEC/EN 61 000-4-5

between wire and ground: 2 kV IEC/EN 61 000-4-5

HF-wire guided: 10 V IEC/EN 61 000-4-6

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 with VO behaviour according to UL subject 94

Vibration resistance:

Amplitude 0,35 mm, frequency 10 ... 55 Hz, IEC/EN 60 068-2-6

20 / 060 / 04 IEC/EN 60 068-1

EN 50 005

Climate resistance:

Terminal designation:

EN 50 005

Wire connection:

DIN 46 228-1/-2/-3/-4

Plugin with screw terminals (PS)

Cross section: 1 x 0.25 ... 2.5 mm² solid or stranded ferruled (isolated) or 2 x 0.25 ... 1.0 mm² solid or stranded ferruled (isolated)

Technical Data

Insulation of wires or sleeve length:

7 mm
captive slotted screw

Wire fixing:

0.5 Nm

Fixing torque:

DIN rail

IEC/EN 60 715

Mounting:

Weight:

approx. 210 g

Dimensions

Width x height x depth:

UG 3091 PS: 22.5 x 110 x 120.3 mm

Standard Type

UG 3091.67PS DC 24 V

Article number:

0067553

• Outputs:

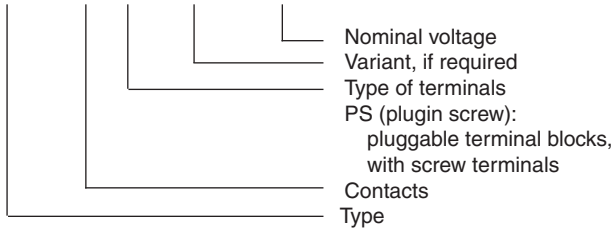
8 NO, 2 NC

• Width:

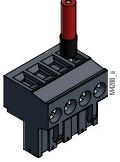
22.5 mm

Variants

UG 3091 .67 / DC 24 V

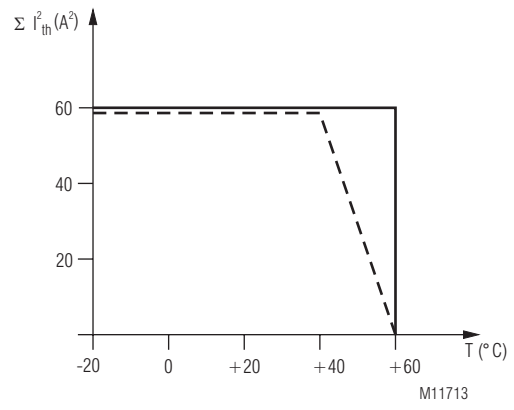


Option with Pluggable Terminal Block



Screw terminal
(PS/plugin screw)

Characteristic



— Mounted with distance, with air circulation

- - - Mounted without distance,
heated by units with similar load

Quadratic total current

$$\Sigma I_{th}^2 = I_{th1}^2 + \dots + I_{th7}^2 + \dots + I_{th10}^2$$

$I_{th1} \dots I_{th10}$: thermal current in contactrows

Quadratic total current limit curve

