

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

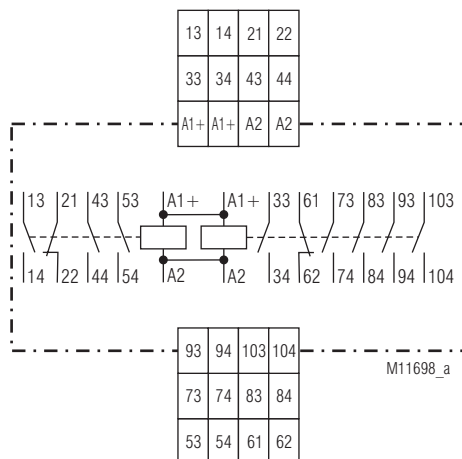
Product Description

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

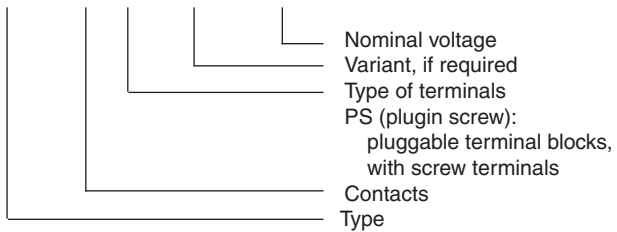
Terminal designation	Signal description
A1+, A2	Hilfsspannung DC, 2-fach vorhanden, gepolt
33, 34; 73, 74; 83, 84; 93, 94; 103, 104	5 Schließerkontakte, Rel 1, zwangsgeführt
61, 62	1 Öffnerkontakt, Rel 1, zwangsgeführt
13, 14; 43, 44; 53, 54	3 Schließerkontakte, Rel 2 zwangsgeführt
21, 22	1 Öffnerkontakt,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

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 φ = 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 10 ⁶ 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:		
Wire connection:		
DIN 46 228-1/-2/-3/-4		
Plugin with screw terminals (PS)		
Cross section:	1 x 0.25 ... 2.5 mm ² solid or stranded ferruled (isolated) or 2 x 0.25 ... 1.0 mm ² solid or stranded ferruled (isolated)	

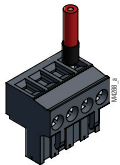
Technical Data		
Insulation of wires or sleeve length:		
	7 mm	
Wire fixing:	captive slotted screw	
Fixing torque:	0.5 Nm	
Mounting:	DIN rail	IEC/EN 60 715
Weight:		
	approx. 210 g	
Dimensions		
Width x height x depth:		
UG 3091 PS:	22.5 x 110 x 120.3 mm	
Standard Type		
UG 3091.67PS DC 24 V		
Article number:	0067553	
• Outputs:	8 NO, 2 NC	
• Width:	22.5 mm	

Variants

UG 3091 .67 / DC 24 V

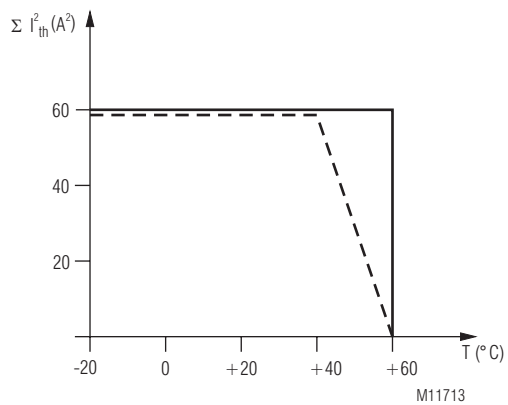


Option with Pluggable Terminal Block



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

