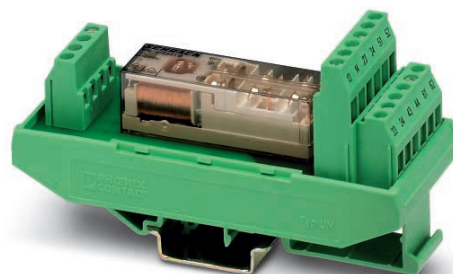


PSR-.../URM/4X1/2X2

Universal Safety Relay With Positively Driven Contacts



INTERFACE

Data Sheet

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Description

The **PSR-.../URM/4X1/2X2** safety relay is a universal safety relay with positively driven contacts according to EN 50205 application type A.

The relay has four N/O contacts and two N/C contacts with positive drive.

Positively driven contacts have the following characteristics: The contacts in a contact assembly (at least one N/C and one N/O contact) must be connected together mechanically to ensure that the N/C contact and N/O contact cannot be closed at the same time.

A distance of at least 0.5 mm must be maintained between the opened contacts at all times, even in the event of an error.

Features

- Contact extension module
- Basic insulation
- Safe isolation (input/output)
- Housing width 40 mm
- Structure height 56 mm
- Four N/O contacts
- Two N/C contacts



Observe the safety instructions on page 4.



Make sure you always use the latest documentation.
It can be downloaded at www.download.phoenixcontact.com.
A conversion table is available on the Internet at
www.download.phoenixcontact.com/general/7000_en_00.pdf.



This data sheet is valid for all products listed on the following page:

Ordering Data

Safety Relays

Description	Type	Order No.	Pcs./Pkt.
24 V AC/DC			
Universal safety relay with positive-action contacts, screw connection, 4 N/O contacts, 2 N/C contacts, width: 40 mm	PSR-SCF- 24UC/URM/4X1/2X2	2981444	1
Universal safety relay with positive-action contacts, spring-cage connection, 4 N/O contacts, 2 N/C contacts, width: 40 mm	PSR-SPF- 24UC/URM/4X1/2X2	2981457	1
120 V AC/DC			
Universal safety relay with positive-action contacts, screw connection, 4 N/O contacts, 2 N/C contacts, width: 40 mm	PSR-SCF-120UC/URM/4X1/2X2	2981460	1
Universal safety relay with positive-action contacts, spring-cage connection, 4 N/O contacts, 2 N/C contacts, width: 40 mm	PSR-SPF-120UC/URM/4X1/2X2	2981473	1

Documentation

Description	Type	Order No.	Pcs./Pkt.
Application manual for PSR safety relays	UM EN SAFETY RELAY APPLICATION	2888712	1

Technical Data

Input Data	24 V AC/DC	120 V AC/DC
Nominal input voltage U_N	24 V AC/DC	120 V AC/DC
Permissible range	$0.8 - 1.1 \times U_N$	$0.8 - 1.1 \times U_N$
Typical current consumption at U_N	52 mA	12 mA
Typical response time at U_N	10 ms	10 ms
Typical release time at U_N	10 ms	10 ms

Output Data

Contact type: positive-action contacts class A according to EN 50205	4 N/O contacts, 2 N/C contacts	
Contact material	Silver tin oxide (AgSnO ₂)	
Maximum switching voltage	250 V AC/DC	
Minimum switching voltage	15 V AC/DC	
Limiting continuous current ¹		
N/O contact	6 A	
N/C contact	6 A	
Maximum inrush current		
N/O contact	6 A	
N/C contact	6 A	
Minimum switching current	25 mA	
Maximum shutdown power	Ohmic load $\tau = 0$ ms	Inductive load $\tau = 40$ ms
24 V DC	144 W	48 W
48 V DC	288 W	40 W
110 V DC	77 W	35 W
220 V DC	88 W	33 W
250 V AC	1500 VA (750 VA) ¹	
Minimum switching power	0.4 W	
Mechanical service life	10 ⁷ cycles, approx.	

Output Data (Continued)

Switching capacity according to DIN EN 60947-5-1/VDE 0660-200

Cycles		DC13	AC15
360/h:	24 V:	6 A	–
	230 V:	–	5 A
3600/h:	24 V:	3 A	–
	230 V:	–	3 A

Short-circuit protection of the output circuits, external

Enable current paths
Signaling current pathsNEOZED 10 A gL/gK
NEOZED 4 A gL/gK¹ Total current on request.**General Data**

Permissible ambient operating temperature

-20 °C ... +55 °C

Nominal operating mode

100 % ED

Degree of protection according to VDE 0470-1

Housing
Connection terminal blocks
Installation locationIP20
IP20
IP54, minimum

Mounting position

Any

Air and creepage distances between circuits

Basic insulation

According to DIN EN 50178:1998-04 ¹

Impulse voltage withstand level

4 kV ¹

Pollution degree

2

Surge voltage category

III

Dimensions (W x H x D)

40 mm x 56 mm x 111 mm

Conductor cross section

0.2 mm² ... 2.5 mm²

Stripping length

Screw connection
Spring-cage connection7 mm
10 mm

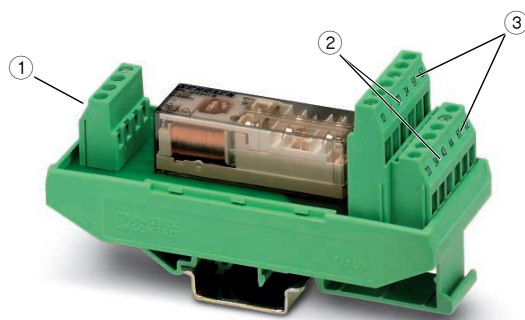
Housing material

Polyamide PA, not reinforced

¹ Safe isolation, reinforced insulation, and 6 kV between the input circuit and the output contact paths.**Tests/Approvals**

UL

applied for

Structure

- 1 A1, A2: Supply voltage connection
- 2 13-14, 23-24, 33-34, 43-44: N/O contacts
- 3 51-52, 61-62: N/C contacts

Figure 1 Structure

Safety Instructions



- During operation, parts of electrical switching devices carry hazardous voltages.
- Before working on the device, disconnect the power.
- Please observe the safety regulations of electrical engineering and industrial safety and liability associations.
Disregarding these safety regulations may result in death, serious personal injury or damage to equipment.
- Startup, assembly, modifications, and upgrades may only be carried out by a skilled electrical engineer.



- In the event of an error, replace the device immediately.
- Repairs, especially if the housing must be opened, may only be carried out by the manufacturer or authorized persons. Otherwise the warranty is invalidated.
- According to EN 50205, only one N/O contact and one N/C contact may be used as positively driven contacts.



When operating relay modules the operator must meet the requirements for noise emission for electrical and electronic equipment (EN 61000-6-4) on the contact side and, if required, take appropriate measures.

Block Diagram

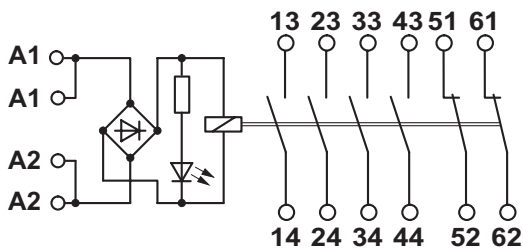


Figure 2 Block diagram

Connection Notes

In order to comply with UL approval, use copper cables that are designed for operating temperatures $> 75^{\circ}\text{C}$.

For reliable and safe-to-touch contacts, strip the cable ends as follows:

Screw connection (PSR-SCF-.../URM/4X1/2X2):
7 mm

Spring-cage connection (PSR-SPF-.../URM/4X1/2X2):
10 mm