PSR-SCP-42-230UC/URM4/4X1/2X2B - Extension module

2902935

https://www.phoenixcontact.com/pc/products/2902935

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1- or 2-channel contact extension with wide range input, 4 N/O contacts, 1 N/C contact, 1 confirmation current path, together with basic device up to Cat. 4, PL e in accordance with EN ISO 13849, plug-in screw terminal block, width: 22.5 mm

Product description

The URM4 contact extension device enables safety-related signals to be further processed as floating contacts for an input voltage range of 42 to 230 V AC/DC. The contact extension device specifically covers the operating range above a nominal voltage of 24 V.
The new device is approved in accordance with EN 50156 and can therefore be used in furnaces without any additional effort. In particular when used in conjunction with the corresponding PSR safety relay as a basic device, safety circuits up to PL e or SIL 3 can be implemented.

Commercial data

Item number	2902935
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DNA152
Catalog page	Page 49 (C-8-2015)
GTIN	4046356697965
Weight per piece (including packing)	239 g
Weight per piece (excluding packing)	239 g
Customs tariff number	85371098
Country of origin	DE

Technical data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area

Product properties

Product type	Safety relays
Product family	PSRclassic
Application	Extension module
Mechanical service life	10x 10^6 cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

Electrical properties

Maximum power dissipation for nominal condition	1.8 W
Nominal operating mode	100% operating factor

Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV: between all current paths and housing Safe isolation, reinforced insulation 6 kV: between A1/A2 and 13/14, 23/24, 33/34, 43/44 between 51/52, 61/62 and 13/14, 23/24, 33/34, 43/44 between A1/A2 and 51/52, 61/62

Input data

General

Power consumption at U_S	typ. 1.68 W (42 V DC)
	typ. 4.6 W (230 V AC)
Control supply voltage range	42 V AC/DC ... 230 V AC/DC -15 % ... +10 % (Rated control circuit supply voltage U_S)
Rated control supply current I_S	40 mA (42 V DC)
	20 mA (230 V AC)
Inrush current	15 A (Δt = 100 µs at U_s)
Typ. starting time with U_s	< 55 ms (when controlled via A1)
Typical release time	< 20 ms (Control via A1 at 42 V DC)
	< 30 ms (Control via A1 at 48 V DC)
	< 40 ms (Control via A1 at 60 V DC)
	< 60 ms (Control via A1 at 110 V AC)
	< 150 ms (Control via A1 at 230 V AC)
Recovery time	< 1 s
Maximum switching frequency	0.5 Hz

Protective circuit	Surge protection; Suppressor diode and varistors
Operating voltage display	1 x green LED

Output data

Contact switching type	4 enabling current paths
	1 confirmation current path
	1 signaling current path
Contact material	$AgSnO_2$
Maximum switching voltage	250 V AC/DC (Observe the load curve)
Minimum switching voltage	5 V AC/DC
Limiting continuous current	6 A (N/O contact, pay attention to the derating)
	6 A (N/C contact)
Maximum inrush current	8 A
Inrush current, minimum	10 mA
Sq. Total current	36 A^2 (observe derating)
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms)
	288 W (48 V DC, τ = 0 ms)
	180 W (60 V DC, τ = 0 ms)
	77 W (110 V DC, τ = 0 ms)
	88 W (220 V DC, τ = 0 ms)
	1500 VA (250 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	42 W (24 V DC, τ = 40 ms)
	40 W (48 V DC, τ = 40 ms)
	36 W (60 V DC, τ = 40 ms)
	35 W (110 V DC, τ = 40 ms)
	33 W (220 V DC, τ = 40 ms)
Switching capacity min.	50 mW
Switching capacity (360/h cycles)	4 A (24 V DC)
	4 A (230 V AC)
Switching capacity (3600/h cycles)	2.5 A (24 V (DC13))
	3 A (230 V (AC15))
Output fuse	10 A gL/gG (N/O contact)
	6 A gL/gG (N/C contact)

Connection data

Connection technology

pluggable	yes

Conductor connection

Connection method	Screw connection
Conductor cross section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12
Stripping length	7 mm

Screw thread	M3

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Color	yellow
Housing material	Polyamide

Characteristics

Safety data

Stop category	0

Safety data: EN ISO 13849

Category	4 (In conjunction with suitable evaluating device)
Performance level (PL)	e (In conjunction with suitable evaluating device)

Safety data: EN 50156

Safety Integrity Level (SIL)	3

Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)

Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)

Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m (Above sea level)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g

Approvals

CE

Certificate	CE-compliant

Standards and regulations

Air clearances and creepage distances between the power circuits

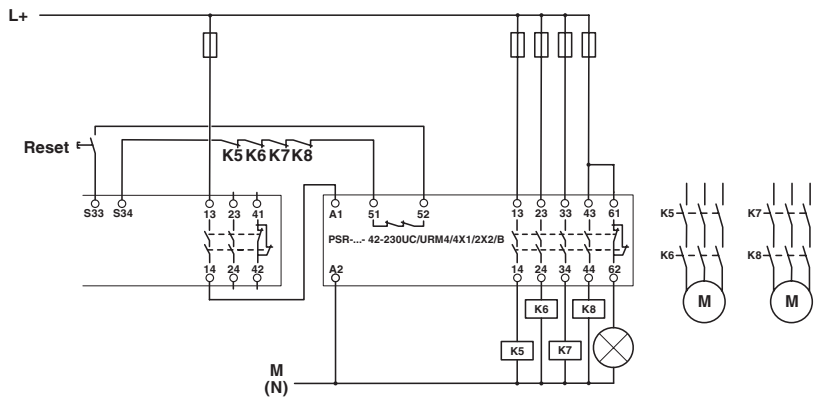
Standards/regulations	DIN EN 50178/VDE 0160

Mounting

Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Mounting position	vertical or horizontal
Connection method	Screw connection

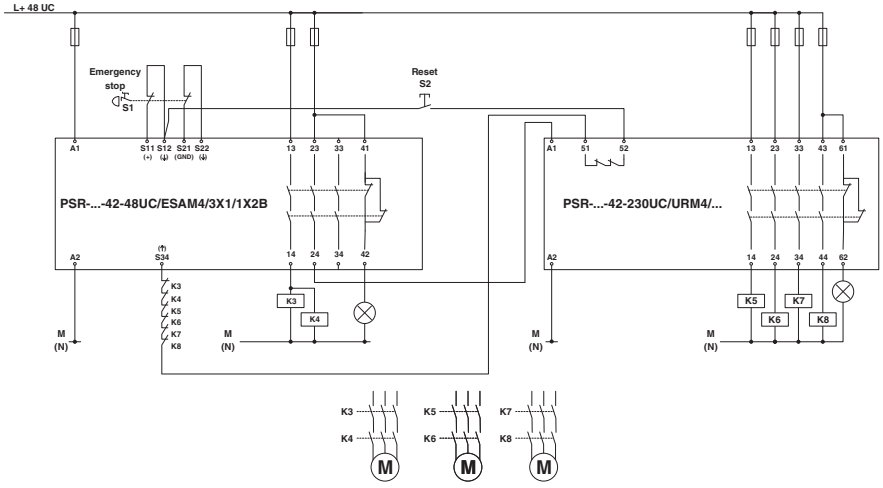
Drawings

Application drawing



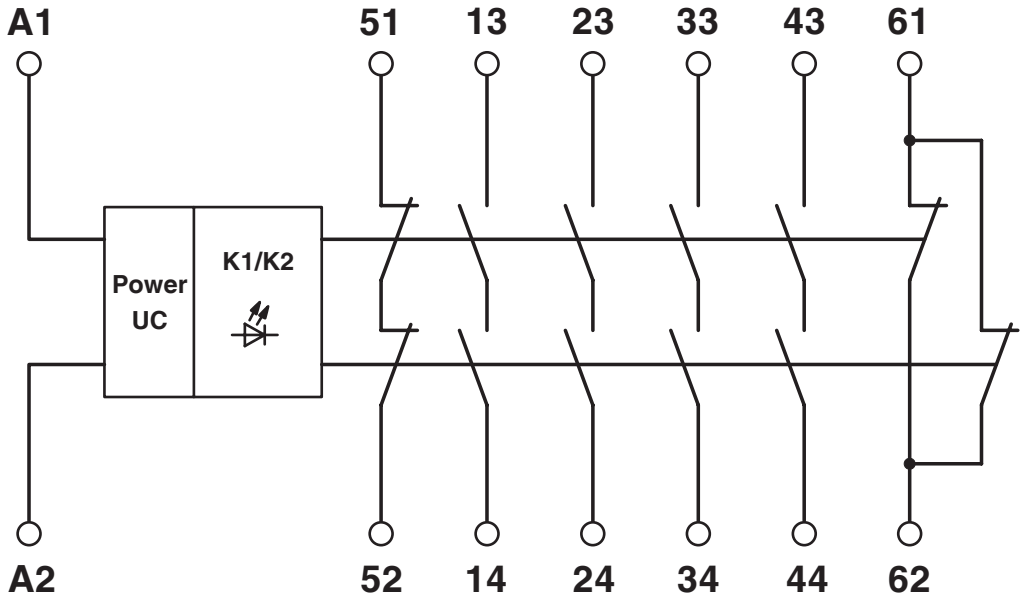
Contact extension

Application drawing



Two-channel emergency stop monitoring with contact extension

Block diagram



Block diagram

Environmental product compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

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