PHŒNIX CONTACT

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

RoHS

PL EN ISO 13849

SILCL IEC 62061

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 697965
GTIN	4046356697965

Technical data

Note

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

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Maximum altitude	≤ 2000 m (Above sea level)

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Input data

Rated control circuit supply voltage U_S	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)
Power consumption at U_S	typ. 1.68 W (42 V DC)
	typ. 4.6 W (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
Operating voltage display	1 x green LED
Protective circuit	Surge protection Suppressor diode and varistors
Maximum switching frequency	0.5 Hz

Output data

Contact 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)

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Output data

Switching capacity min.	50 mW
Mechanical service life	$10x\ 10^6$ cycles
Switching capacity (360/h cycles)	4 A (24 V DC)
	4 A (230 V AC)
Output fuse	10 A gL/gG (N/O contact)
	6 A gL/gG (N/C contact)

General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Nominal operating mode	100% operating factor
Net weight	239 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing material	PBT
Housing color	yellow

Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Designation	EN ISO 13849
Performance level (PL)	e (In conjunction with suitable evaluating device)
Category	4 (In conjunction with suitable evaluating device)
Designation	EN 62061

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Safety-related characteristic data

Safety Integrity Level Claim Limit (SIL CL)	3 (In conjunction with suitable evaluating device)
Designation	EN 50156
Safety Integrity Level (SIL)	3

Standards and Regulations

| Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
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
Degree of pollution	2
Overvoltage category	III
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g
Conformance	CE-compliant

Environmental Product Compliance

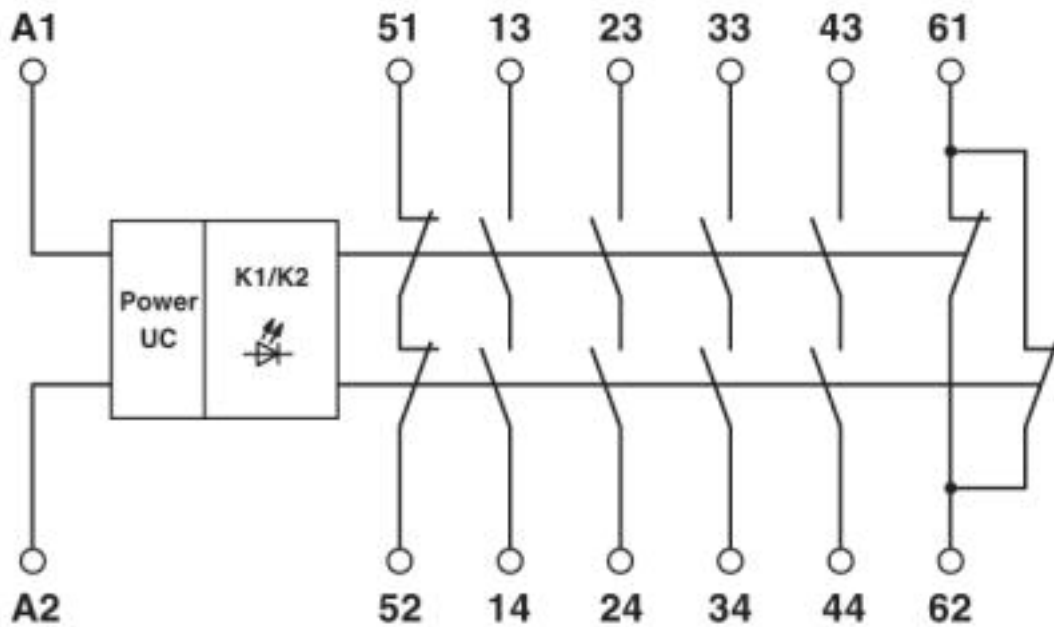| China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Extension module - PSR-SCP-42-230UC/URM4/4X1/2X2B - 2902935

Application drawing
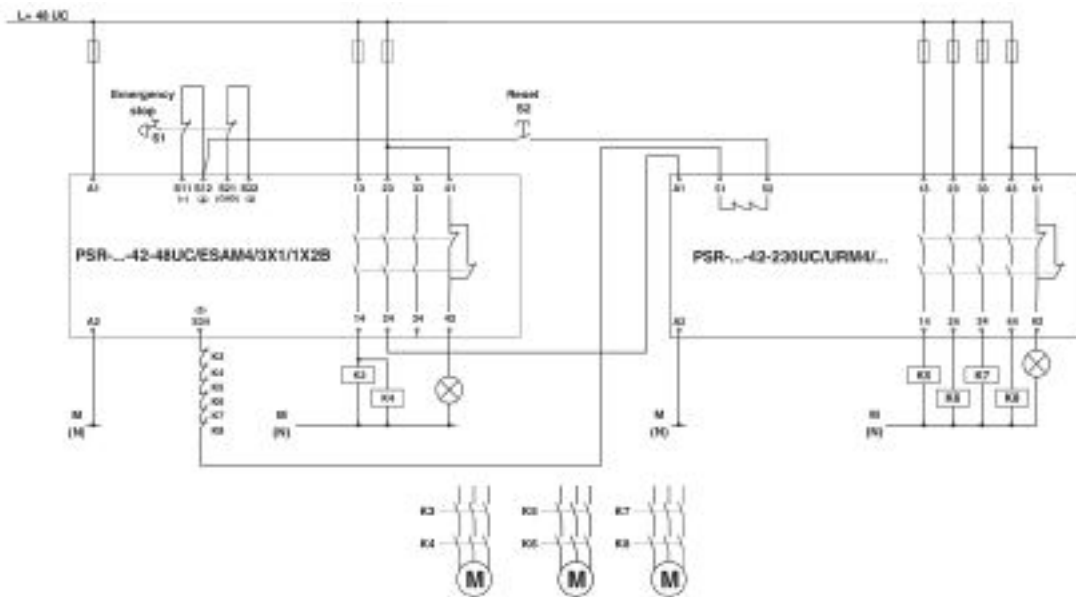
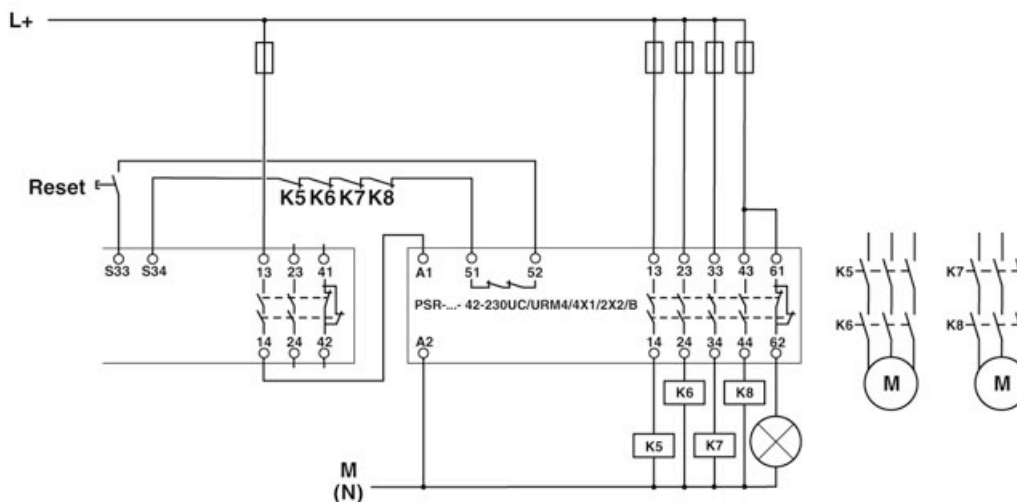Two-channel emergency stop monitoring with contact extension

Block diagram

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Application drawing

Contact extension