

Extension module - PSR-SCP-42-230UC/ URM4/4NO/2NC - 2702924

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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

Article 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.



Key commercial data

package_quantity	1
GTIN	4055626429106

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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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)
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g
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	typ. 35 mA (42 V DC)
Rated control supply current I_s	typ. 15 mA (230 V AC)
Power consumption at U_s	max. 1.5 W (with DC)
Power consumption at U_s	max. 1.7 W (with AC)
Inrush current	< 38 A ($\Delta t = 50 \mu s$ at U_s)
Typ. starting time with U_s	< 100 ms (when controlled via A1)
Typical release time	< 20 ms (Control via A1 at 42 V DC)
Typical release time	< 200 ms (Control via A1 at 230 V AC)
Recovery time	< 1 s
Maximum switching frequency	0.5 Hz

Output data

Contact type	4 enabling current paths
Contact type	1 confirmation current path
Contact type	1 signaling current path
Contact material	AgSnO ₂
Minimum switching voltage	5 V AC/DC
Maximum switching voltage	250 V AC/DC (Observe the load curve)
Limiting continuous current	6 A (N/O contact, pay attention to the derating)
Limiting continuous current	1 A (N/C contact 51/52)
Limiting continuous current	6 A (N/C contact 61/62)
Inrush current, minimum	10 mA
Maximum inrush current	8 A
Sq. Total current	72 A ² (observe derating)
Interrupting rating (ohmic load) max.	1500 VA (N/O contact, 250 V AC, $\tau = 0$ ms)
Interrupting rating (ohmic load) max.	For additional values, see load curve
Maximum interrupting rating (inductive load)	48 W (N/O contact, 24 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	40 W (N/O contact, 48 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	36 W (N/O contact, 60 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	35 W (N/O contact, 110 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	33 W (N/O contact, 220 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	1500 VA (N/O contact, 250 V AC, $\tau = 40$ ms)
Switching capacity	min. 50 mW
Switching capacity according to IEC 60947-5-1	5 A (24 V (DC13))
Switching capacity according to IEC 60947-5-1	5 A (250 V (AC15))
Output fuse	6 A gL/gG (N/O contact and N/C contact 61/62)
Output fuse	4 A gL/gG (N/O contact and N/C contact 61/62 for low-demand applications)
Output fuse	1 A gL/gG (N/C contact 51/52)

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General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Mechanical service life	10 x 10 ⁶ cycles
Nominal operating mode	100% operating factor
Net weight	199 g
Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Mounting position	vertical or horizontal
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Control	one and two channel
Housing material	PBT
Housing color	yellow

Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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
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

Shock	15g
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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	Safe isolation, reinforced insulation 6 kV:between (A1/A2) and the remaining current pathsbetween (51/52) and the remaining current pathsbetween (61/62) and the remaining current pathsbetween (13/14, 23/24, 33/34, 43/44) and the remaining current paths
Rated surge voltage/insulation	4 kV basic insulation between enabling current paths
Rated surge voltage/insulation	Basic insulation 4 kV between all current paths and housing
Degree of pollution	2
Overvoltage category	III
Vibration (operation)	10 Hz ...150 Hz, 2g
Conformance	CE-compliant

Classifications

eCl@ss

eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 8.0	27371819
eCl@ss 9.0	27371819

ETIM

ETIM 5.0	EC001449
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Approvals

Functional Safety / Functional Safety /

Approval details

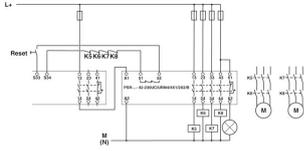
Functional Safety 
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Drawings

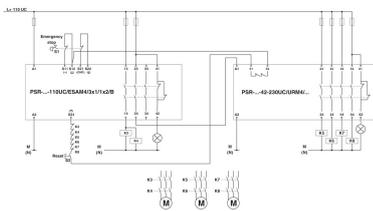
Extension module - PSR-SCP-42-230UC/ URM4/4NO/2NC - 2702924

Application drawing



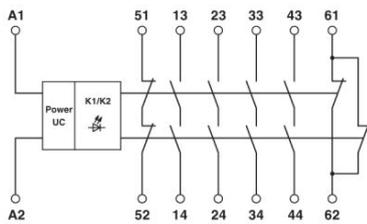
Contact extension

Application drawing



Two-channel emergency stop monitoring with contact extension

Block diagram



Block diagram

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