

Safety relays - PSR-MC32-3NO-1NC-24-230UC-SP - 2700525

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Safety relay for emergency stop, safety doors, and light grids up to SILCL 3, Cat. 4, PL e, 1 or 2-channel operation, automatic or manual, monitored start, 3 enabling current paths, 1 signaling current path, $U_S = 24 \dots 230 \text{ V AC/DC}$, plug-in spring-cage terminal block


The figure shows a version with a screw connection

Why buy this product

- Up to Cat.4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061
- One or two-channel activation
- 3 enabling current paths, 1 signaling current path
- Manually monitored and automatic activation in a single device
- Cross-circuit detection



Key Commercial Data

Packing unit	1
GTIN	 4 046356 912709
GTIN	4046356912709
Custom tariff number	85371098

Technical data

Note

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

Dimensions

Width	22.5 mm
-------	---------

Safety relays - PSR-MC32-3NO-1NC-24-230UC-SP - 2700525

Technical data

Dimensions

Height	117.4 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °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)

Input data

Rated control circuit supply voltage U_s	24 V AC/DC ... 230 V AC/DC -15 % / +10 %
Rated control supply current I_s	typ. 103 mA (24 V DC)
	typ. 47 mA (48 V DC)
	typ. 38 mA (110 V AC)
	typ. 21 mA (230 V AC)
Power consumption at U_s	2.7 W (with DC)
	2.9 W (with AC)
Inrush current	< 80 A ($\Delta t = 50 \mu s$ at U_s)
Current consumption	< 5 mA (at U_s/I_x to S10/S12/S13/S34/S35)
	> -5 mA (with U_s/I_x to S22)
Voltage at input/start and feedback circuit	24 V DC -20 % / +25 %
Typical response time	< 150 ms (automatic start)
	< 100 ms (manual, monitored start)
Typ. starting time with U_s	< 200 ms (when controlled via A1)
Typical release time	< 20 ms (when actuation is via the sensor circuit)
Concurrence input 1/2	∞
Recovery time	< 500 ms
Status display	3 x green LED
Maximum switching frequency	1 Hz
Max. permissible overall conductor resistance	150 Ω
Filter time	2 ms (at A1 in the event of voltage dips at U_s)
	max. 1.5 ms (to S10-S12; test pulse width; at 24 V DC)
	7.5 ms (to S10-S12; test pulse rate; at 24 V DC)
	Test pulse rate = 5 x Test pulse width

Output data

Safety relays - PSR-MC32-3NO-1NC-24-230UC-SP - 2700525

Technical data

Output data

Contact type	3 enabling current paths
	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)
	6 A (N/C contact)
Inrush current, minimum	10 mA
Maximum inrush current	6 A
Sq. Total current	72 A ² (observe derating)
Interrupting rating (ohmic load) max.	1500 VA (N/O contact, 250 V AC, τ = 0 ms)
	For additional values, see load curve
Maximum interrupting rating (inductive load)	48 W (N/O contact, 24 V DC, τ = 40 ms)
	40 W (N/O contact, 48 V DC, τ = 40 ms)
	36 W (N/O contact, 60 V DC, τ = 40 ms)
	35 W (N/O contact, 110 V DC, τ = 40 ms)
	33 W (N/O contact, 220 V DC, τ = 40 ms)
	1500 VA (N/O contact, 250 V AC, τ = 40 ms)
Switching capacity	min. 50 mW
Switching capacity according to IEC 60947-5-1	5 A (24 V (DC13))
	5 A (250 V (AC15))
Output fuse	6 A gL/gG
	4 A gL/gG (for low-demand applications)

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	235.4 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

Safety relays - PSR-MC32-3NO-1NC-24-230UC-SP - 2700525

Technical data

Connection data

Connection method	Spring-cage connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Designation	EN ISO 13849
Performance level (PL)	e
Category	4 (5 A DC13; 5 A AC15; 8760 switching cycles/year)
Safety Integrity Level Claim Limit (SIL CL)	3

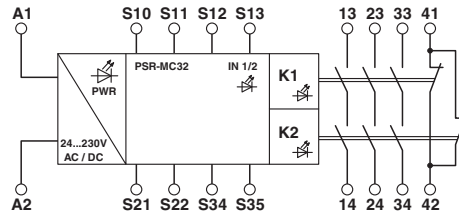
Standards and Regulations

Shock	15g
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178; EN 60947-5-1
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV between enabling current path (23/24) and enabling current path (33/34) and signaling current path (41/42)
	Basic insulation 4 kV between all current paths and housing
	Safe isolation, reinforced insulation 6 kV between all other circuits
Degree of pollution	2
Overvoltage category	III
Vibration (operation)	10 Hz ...150 Hz, 2g
Conformance	CE-compliant

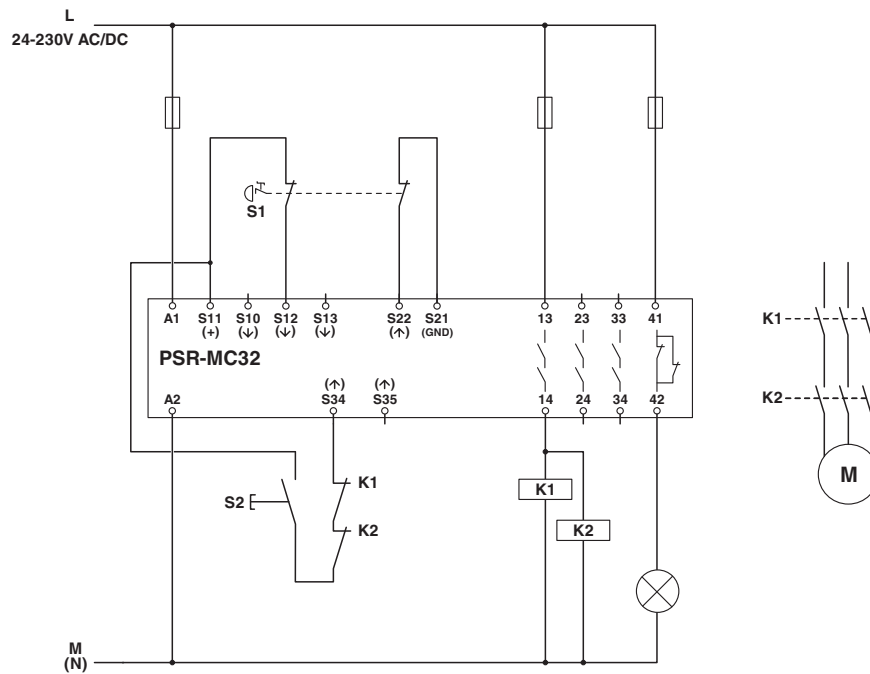
Drawings

Safety relays - PSR-MC32-3NO-1NC-24-230UC-SP - 2700525

Block diagram



Circuit diagram



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 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

Safety relays - PSR-MC32-3NO-1NC-24-230UC-SP - 2700525

Classifications

UNSPSC

UNSPSC 13.2	39121501
-------------	----------

Approvals

Approvals

Approvals

UL Listed / cUL Listed / Functional Safety / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
-----------	--	---	---------------

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
------------	--	---	---------------

Functional Safety			44-205-15124310
-------------------	--	--	-----------------

cULus Listed			
--------------	--	--	--