PSR-MS21-1NO-1DO-24DC-SC - Safety relays

2702192

https://www.phoenixcontact.com/us/products/2702192

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 documentation. Our general terms of use for downloads are valid.



Safety relay for failsafe controllers up to SIL 3, Cat. 4, PL e, 1-channel operation, autostart, 1 enabling current path, U_S = 24 V DC in accordance with IEC 61131-6, fixed screw terminal block

Your advantages

- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061
- Low housing width of just 6.8 mm
- 1-channel control
- 1 enabling current path, 1 digital signal output
- Couples digital output signals from failsafe controllers to I/O devices (valves, etc.) for electrical isolation and power adaptation
- Automatic activation

ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	2702192
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA171
GTIN	4055626010199
Weight per piece (including packing)	79 g
Weight per piece (excluding packing)	69 g
Customs tariff number	85371098
Country of origin	DE

Technical data

Notes

Note on application

Note on application	Only for industrial use

Product properties

Product type	Safety relays
Product family	PSRmini
Application	Controllers
Control	1-channel
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

Insulation characteristics

Overvoltage category	II, III (See the section “Insulation coordination”)
Degree of pollution	2

Times

Typical response time	< 150 ms (automatic start)
Typ. starting time with U_s	< 250 ms (when controlled via A1)
Typical release time	< 20 ms (when controlled via A1)
Restart time	< 1 s (Boot time, after switching on the supply voltage)
Recovery time	< 500 ms (following demand of the safety function)

Electrical properties

Maximum power dissipation for nominal condition	3.1 W (U_S = 30 V, I_L^2 = 36A², $P_{Total\ max}$ = 1.3 W + +1.8 W)
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	See data sheet, section “Insulation coordination”.

Supply

Designation	24V
Rated control circuit supply voltage U_S	24 V DC -20 % / +25 %
Inrush current	< 11.5 A (typ. with U_S, Δt = 25 ns)
Protective circuit	Serial protection against polarity reversal; Suppressor diode
	Short-circuit protection

Input data

Digital: A1

Description of the input	NPN
Number of inputs	1 (safety-related)
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	19.2 V ... 30 V

Input current range "0" signal	0 mA ... 2 mA
Inrush current	< 150 mA (typ. with U_S, Δt = 25 ns)
Filter time	3 ms (Test pulse width of low test pulses)
	1 s (Test pulse rate for low test pulse)
	1 ms (Test pulse width, high test pulse)
	100 ms (Test pulse rate, high test pulse)
	Unless switch-on pulses/light tests are safety-related, they should be disabled.
Max. permissible overall conductor resistance	150 Ω (Input and start circuits at U_S)
Protective circuit	Suppressor diode
Current consumption	typ. 35 mA (at 24 V)

Digital: Start circuit (S35)

Description of the input	NPN
Number of inputs	1 (non-safety-related)
Input voltage range "1" signal	20.4 V ... 26.4 V
Inrush current	< 10 mA
Max. permissible overall conductor resistance	150 Ω
Voltage at input/start and feedback circuit	24 V DC -20 % / +25 %
Current consumption	< 10 mA

Output data

Relay: Enabling current path (13/14)

Output description	2 N/O contacts each in series, safety-related, floating
Number of outputs	1 (undelayed)
Contact switching type	1 enabling current path
Contact material	$AgSnO_2$
Switching voltage	min. 12 V AC/DC
	max. 250 V AC/DC
Switching power	min. 60 mW
Inrush current	min. 3 mA
	max. 6 A
Switching capacity	5 A (AC15)
	4 A (DC13)
Limiting continuous current	6 A
Sq. Total current	36 A^2 (observe derating)
Switching frequency	max. 0.1 Hz
Mechanical service life	10x 10^6 cycles
Output fuse	6 A gL/gG
	4 A gL/gG (for low-demand applications)

Signal: M1

Output description	non-safety-related
Number of outputs	1 (digital, PNP)
Voltage	22 V DC (Us - 2 V DC)

Current	max. 100 mA
Maximum inrush current	500 mA (Δt = 1 ms at U_s)
Protective circuit	Suppressor diode

Connection data

Connection technology

pluggable	no

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	26 ... 12
Stripping length	12 mm
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm

Signaling

Status display	2 x LED (green)
Operating voltage display	1 x LED (green)

Dimensions

Width	6.8 mm
Height	93.1 mm
Depth	102.5 mm

Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	PBT

Characteristics

Safety data

Stop category (EN 60204-1)	0

Safety data: EN ISO 13849

Performance level (PL)	e (4 A DC13; 5 A AC15; 8760 switching cycles/year)

Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	3 (4 A DC13; 5 A AC15; 8760 switching cycles/year)

Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	3

Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3 (4 A DC13; 5 A AC15; 8760 switching cycles/year)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-40 °C ... 60 °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, amplitude 0.15 mm, 2g

Approvals

CE

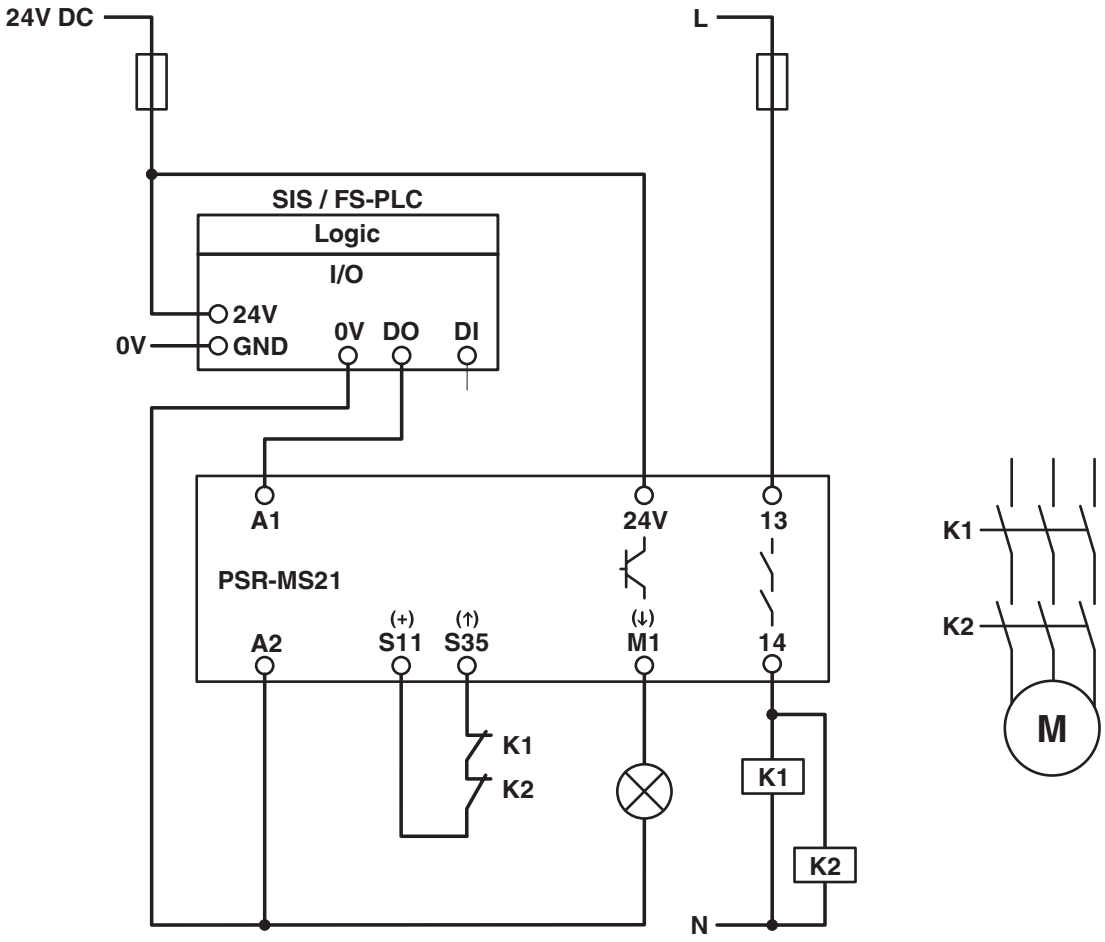
Certificate	CE-compliant

Mounting

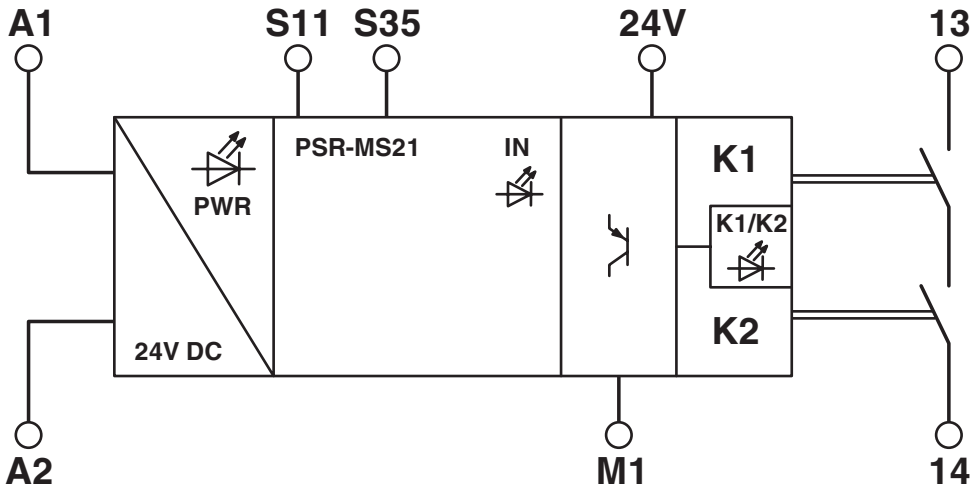
Mounting type	DIN rail mounting
Assembly note	See derating curve
Mounting position	vertical or horizontal

Drawings

Circuit diagram



Block diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2702192

cULus Listed
Approval ID: E140324

Functional Safety
Approval ID: 44 205 15124301

Functional Safety
Approval ID: 44 780 15124301

Classifications

ECLASS

ECLASS-13.0	27371819
ECLASS-15.0	27371819
ECLASS-15.0 ASSET	27250101

ETIM

ETIM 10.0	EC001449

UNSPSC

UNSPSC 21.0	39122200

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(a)-I, 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	d482e8c4-47b3-4f50-a5f5-17993ad7e57b

Phoenix Contact 2026 © - all rights reserved
https://www.phoenixcontact.com

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com