

PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

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 module for sensor-free zero-speed monitoring for 3- and 1-phase motors up to SIL 3, Cat. 3, PL e, 2-channel evaluation of the residual voltage of AC, three-phase, and DC motors, plug-in screw terminal block, width: 12.5 mm

Your advantages

- Monitoring of 1 and 3-phase AC or DC motors
- No additional sensors required
- Adjustable delay time from 0.5 s ... 20 s
- Adjustable switching threshold from 50 mV... 500 mV
- 1 enabling current path, 2 digital signal outputs
- Low housing width of just 12.5 mm
- Up to Cat. 3/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061

Commercial data

Item number	2702355
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA241
Catalog page	Page 243 (C-6-2019)
GTIN	4055626133201
Weight per piece (including packing)	150 g
Weight per piece (excluding packing)	152.5 g
Customs tariff number	90328900
Country of origin	DE

Technical data

Notes

Note on application

Note on application	Only for industrial use
---------------------	-------------------------

Product properties

Product type	Safety device
Application	Zero-speed safety relay

Data management status

Article revision	03
------------------	----

Times

Typ. starting time with U_s	< 1 s
Response time	typ. 20 ms (at 50 Hz input frequency)
Delay time range	0.5 s ... 20 s ± 1 % (K1, K2 can be parameterized)

Electrical properties

Nominal operating mode	100% operating factor
Interfaces	Without sensor

Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC
	250 V AC
	400 V AC with isolation paths between (L1/L2/L3) and the remaining current paths
	690 V AC (with isolation paths within L1/L2/L3)
Rated surge voltage/insulation	Basic insulation 4 kV: between all current paths and housing
	Basic insulation 8 kV: between L1 and L2 between L1 and L3 between L2 and L3
	Safe isolation, reinforced insulation 6 kV: between A1/A2 and 13/14 between MO/FO and 13/14
	Safe isolation, reinforced insulation 8 kV: between L1/L2/L3 and A1/A2 between L1/L2/L3 and MO/FO between L1/L2/L3 and 13/14

Supply

Rated control circuit supply voltage U_s	20.4 V DC ... 26.4 V DC
Rated control circuit supply voltage U_s	24 V DC -15 % / +10 %
Rated control supply current I_s	typ. 50 mA
Power consumption at U_s	typ. 1.2 W
Inrush current	5.6 A ($\Delta t = 400 \mu s$ at U_s)

PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

Filter time	1 ms (at A1 in the event of voltage dips at U_s)
Protective circuit	Surge protection; Suppressor diode
	Protection against polarity reversal for rated control circuit supply voltage

Input data

Measurement

Voltage input signal	max. 690 V AC/DC (at L1/L2/L3)
Limit frequency	max. 3 kHz (At voltages $> 2 V_{RMS}$)
Current consumption	max. 0.35 mA (at L1/L2/L3)

Output data

Relay: Enabling current path

Output description	safety-related N/O contacts
Number of outputs	1 (undelayed)
Contact switching type	1 enabling current path
Contact material	AgSnO ₂
Switching voltage	min. 24 V AC/DC
	max. 250 V AC/DC (Observe the load curve)
Switching capacity	min. 72 mW
Inrush current	min. 3 mA
	max. 5 A
Limiting continuous current	5 A (observe derating)
Sq. Total current	25 A ² (observe derating)
Switching frequency	max. 0.5 Hz
Mechanical service life	10x 10 ⁶ cycles
Output fuse	5 A gL/gG

Signal

Number of outputs	2 (digital, PNP)
Voltage	23 V DC ($U_s - 1 V$)
Current	max. 100 mA
Maximum inrush current	500 mA
Short-circuit protection	Yes

Connection data

Connection technology

pluggable	yes
-----------	-----

Conductor connection

Connection method	Screw connection
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm ² ... 2.5 mm ²

PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3

Signaling

Status display	4 x LED Bi-Colour
----------------	-------------------

Dimensions

Width	12.5 mm
Height	112.2 mm
Depth	114.5 mm

Material specifications

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

Characteristics

Safety data

Stop category	0
---------------	---

Safety data: EN ISO 13849

Category	3
Performance level (PL)	e (4 A DC13; 5 A AC15; 17520 switching cycles/year)

Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	3 (4 A DC13; 5 A AC15; 17520 switching cycles/year)
------------------------------	---

Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3 (4 A DC13; 5 A AC15; 17520 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)	-20 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	max. 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

PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

CE

Certificate	CE-compliant
-------------	--------------

Standards and regulations

Air clearances and creepage distances between the power circuits

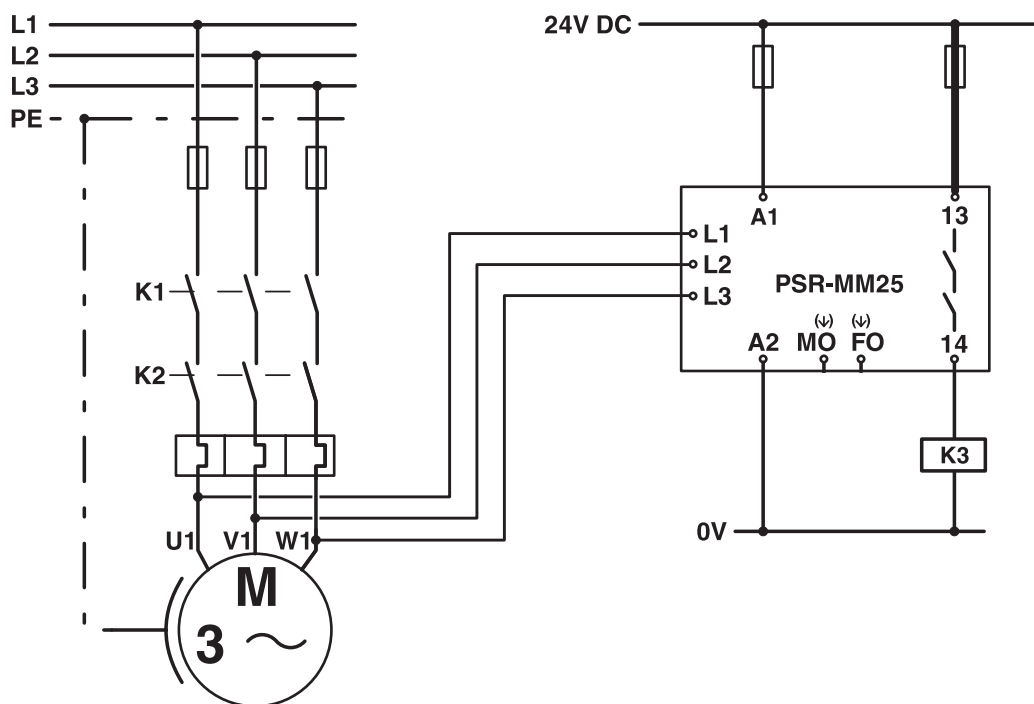
Standards/regulations	DIN EN 50178
-----------------------	--------------

Mounting

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

Drawings

Circuit diagram



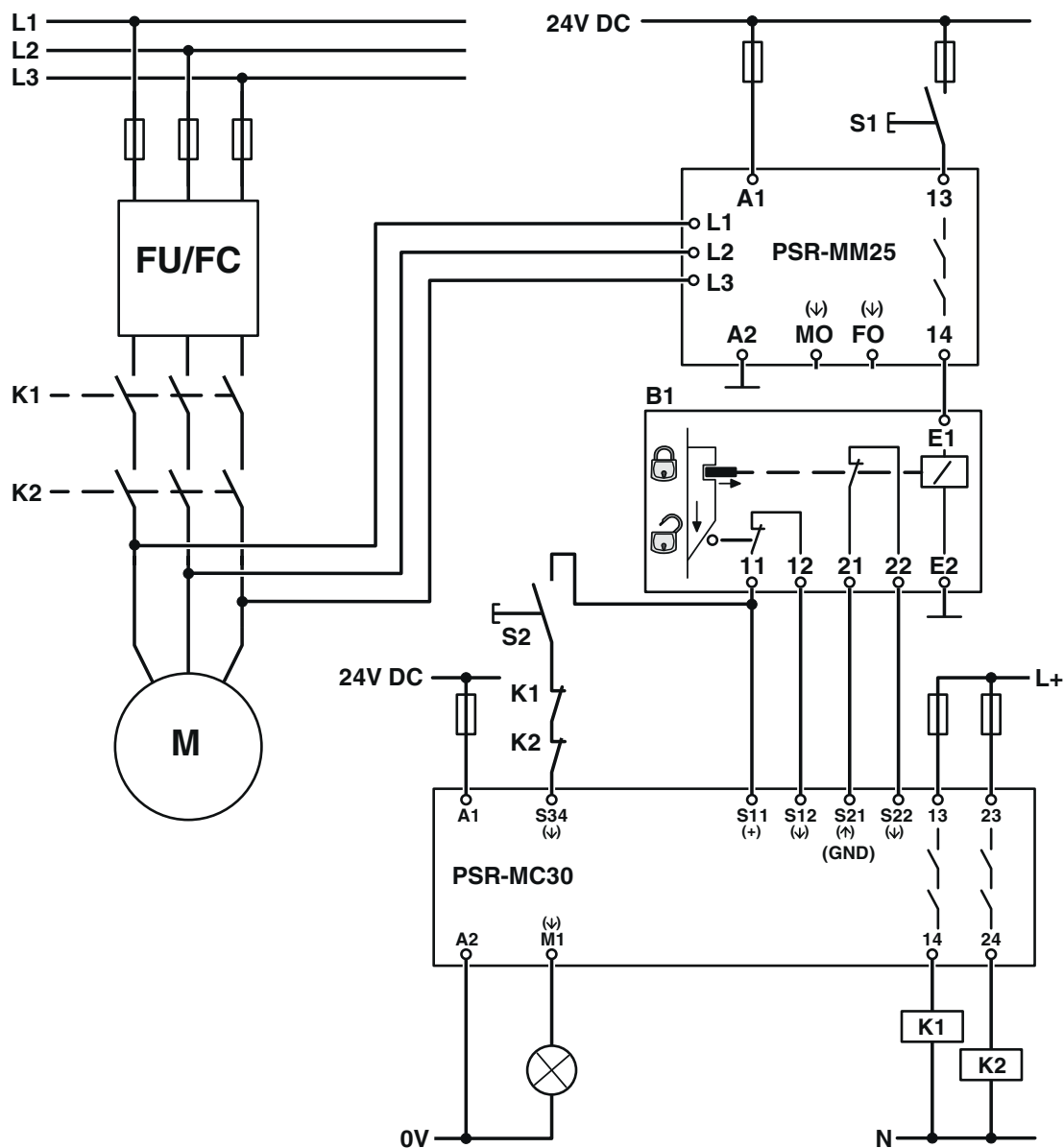
PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

Circuit diagram



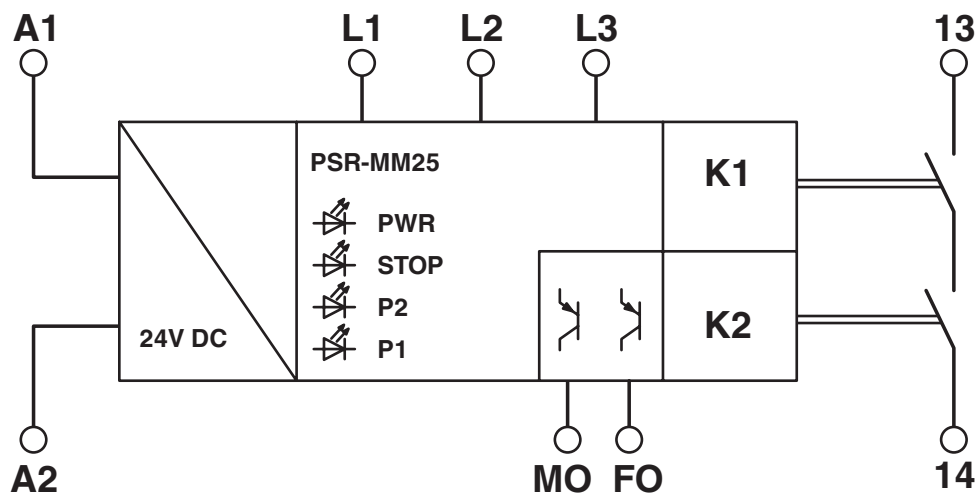
PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

Block diagram



Block diagram

PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2702355>



UL Listed
Approval ID: E140324



cUL Listed
Approval ID: E140324



Functional Safety
Approval ID: 01/205/5492.01/21



Functional Safety
Approval ID: 968/FSP 1226.02/21

cULus Listed

PSR-MM25-1NO-2DO-24DC-SC - Safety relay module



2702355

<https://www.phoenixcontact.com/us/products/2702355>

Classifications

ECLASS

ECLASS-11.0	27371811
ECLASS-12.0	27371811
ECLASS-13.0	27371811

ETIM

ETIM 9.0	EC001448
----------	----------

UNSPSC

UNSPSC 21.0	39122300
-------------	----------

Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
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.)	No substance above 0.1 wt%