

2700569

https://www.phoenixcontact.com/au/products/2700569

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Safety relay for emergency stop, safety doors, and light grids up to SIL 3, Cat. 4, PL e, 1 or 2-channel operation, automatic or manual, monitored start, 3 enabling current paths, $U_S = 24 \text{ V DC}$, plug-in 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 12.5 mm
- · 2 channel control
- 3 enabling current paths, 1 digital signal output
- · Manually monitored and automatic activation in a single device

Commercial data

Item number	2700569
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA181
Product key	DNA181
Catalog page	Page 223 (C-6-2019)
GTIN	4046356912570
Weight per piece (including packing)	173.866 g
Weight per piece (excluding packing)	172.9 g
Customs tariff number	85371098
Country of origin	DE



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Power consumption at U_S

Inrush current

Technical data

Notes

Note on application	Only for industrial use
luct properties	
Product type	Safety relays
Product family	PSRmini
Application	Emergency stop
	Safety door
	Light grid
	Magnetic switch
	Transponder
Control	2-channel
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3
sulation characteristics	
Overvoltage category	III
Degree of pollution	2
nes	
Typical response time	< 175 ms (automatic start)
	< 175 ms (manual, monitored start)
Typ. starting time with U _s	< 250 ms (when controlled via A1)
Typical release time	< 20 ms (on demand via the sensor circuit)
	< 20 ms (on demand via A1)
Restart time	< 1 s (Boot time)
Recovery time	< 500 ms
Start pulse length	≥ 500 ms (manual start)
trical properties	
Maximum power dissipation for nominal condition	$4.8 \text{ W} (U_S = 26.4 \text{ V}, I_L^2 = 48 \text{ A}^2, P_{\text{Total max}} = 2.4 \text{ W} + 2.4 \text{ W})$
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	See data sheet, section "Insulation coordination".
pply	
Designation	A1/A2
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 %

typ. 1.92 W

typ. 5 A (Δt = 200 μs at U_s)



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Filter time	1 ms (at A1 in the event of voltage dips at U _s)
Protective circuit	Serial protection against polarity reversal; Suppressor diode

Input data

Digital: Sensor circuit (S12, S22)

Description of the input	safety-related sensor inputs
Number of inputs	2
Input voltage range "0" signal	0 V DC 5 V DC (for safe Off; at S12 and S22)
Input current range "0" signal	0 mA 2 mA (for safe Off; at S12 and S22)
Inrush current	< 20 mA (typ. with U _S at S12)
	< 5 mA (typ. with U _S at S22)
Filter time	max. 1.5 ms (Test pulse width of low test pulses)
	Test pulse rate = 5 x Test pulse width
Concurrence	ω
Max. permissible overall conductor resistance	150 Ω
Protective circuit	Suppressor diode
Current consumption	< 5 mA (typ. with U _S)

Digital: Start circuit (S34)

Description of the input	non-safety-related
Number of inputs	1
Input voltage range "1" signal	20.4 V DC 26.4 V DC
Inrush current	typ. 200 mA (typ. with U _S)
Max. permissible overall conductor resistance	150 Ω
Protective circuit	Suppressor diode
Current consumption	< 10 mA (typ. with U _S at S34/24 V)
	> -5 mA (typ. with U _S at S34/0 V)

Output data

Relay: Enabling current paths (13/14, 23/24, 33/34)

Output description	2 N/O contacts each in series, safety-related, floating
Number of outputs	3 (undelayed)
Contact switching type	3 enabling current paths
Contact material	$AgSnO_2$
Switching voltage	min. 12 V AC/DC
	max. 250 V AC/DC
Switching capacity	min. 60 mW
Inrush current	min. 3 mA
	max. 6 A
Limiting continuous current	6 A
Sq. Total current	48 A ² (observe derating)
Switching frequency	0.1 Hz
Mechanical service life	10x 10 ⁶ cycles
Output fuse	6 A gL/gG



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	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 (U _s - 2 V)
Current	max. 100 mA
Maximum inrush current	500 mA (Δt = 1 ms at U _s)
Protective circuit	Suppressor diode
onnection data	
Connection technology	
pluggable	yes
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	24 12
Stripping length	7 mm
Screw thread	M3
Tightening torque	0.5 Nm 0.6 Nm
ignaling	
Status display	3 x LED (green)
Operating voltage display	1 x LED (green)
imensions	
Width	12.5 mm
Height	112.2 mm
Depth	114.5 mm
aterial specifications	
Color (Housing)	yellow (RAL 1018)
Housing material	PA
haracteristics	
Cofeb data	
Safety data Stop category	0
Safety data: EN ISO 13849	
Safety data: EN ISO 13849 Category	4



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Safety Integrity Level (SIL)	3	
Safety data: IEC 61508 - Low demand		
Safety Integrity Level (SIL)	3	
Safety data: EN IEC 62061		
Safety Integrity Level (SIL)	3	

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-40 °C 55 °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

Identification	CE-compliant
Mounting	
Mounting type	DIN rail mounting

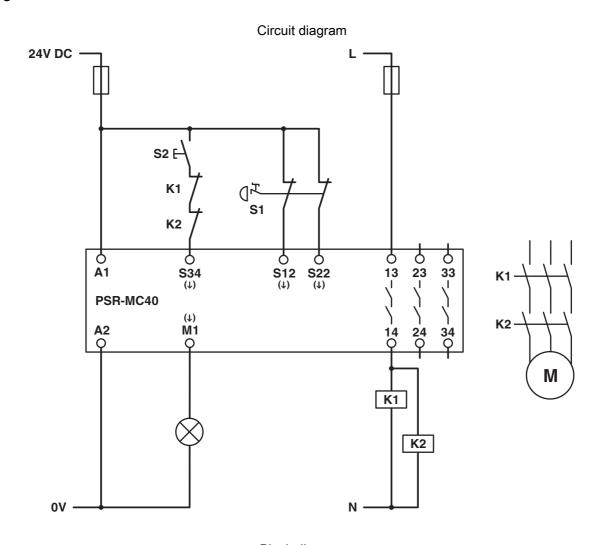
Mounting type	DIN rail mounting
Assembly note	See derating curve
Mounting position	vertical or horizontal

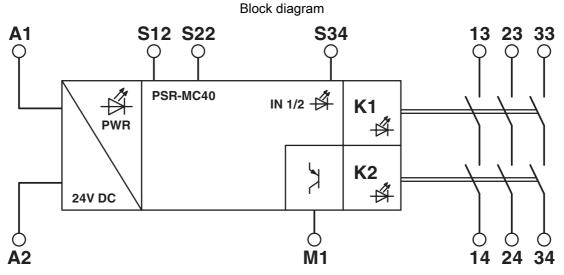


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Drawings



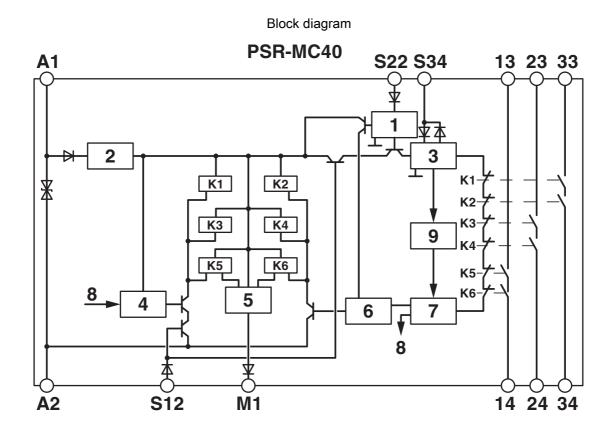


Block diagram



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Key:

- 1 = Input circuit
- 2 = Voltage limitation
- 3 = Start circuit
- 4 = Control circuit channel 1
- 5 = Control circuit signal output
- 6 = Control circuit channel 2
- 7 = Start channel 1 and 2
- 8 = Channel 1
- 9 = Diagnostics
- K1, K2 ... K6 = Force-guided elementary relays



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Approvals

🌣 To download certificates, visit the product detail page: https://www.phoenixcontact.com/au/products/2700569









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Classifications

ECLASS				
	ECLASS-13.0	27371819		
ETIM				
	ETIM 9.0	EC001449		
UNSPSC				
	UNSPSC 21.0	39122200		



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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-l
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	b16af40d-7e43-456e-8c88-d89e2cff39b9

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PHOENIX CONTACT PTY Ltd Unit 7, 2-8 South Street Rydalmere NSW 2116 1300 786 411 customerservice@phoenixcontact.com.au