

1017064  
<https://www.phoenixcontact.com/us/products/1017064>

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.



Coupling relay for electrical isolation and power adaptation for SIL 3 F&G applications, low demand, load diagnostics in the Off and On state for wire break and short circuit, 1 enabling current path, test pulse filter, plug-in Push-in terminal block, width: 17.5 mm

Your advantages

- Earth leakage monitoring
- Suitable for low-demand applications up to SIL 3 in accordance with IEC 61508, IEC 61511, and EN 50156
- Configurable Off and On state diagnostics
- Active error acknowledgment via A1 at DO
- Integrated DCS test pulse filter
- 1 enabling current path, 1 signaling current path

Commercial data

Item number	1017064
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA182
Catalog page	Page 253 (C-6-2019)
GTIN	4055626674032
Weight per piece (including packing)	245.2 g
Weight per piece (excluding packing)	244.5 g
Customs tariff number	85364190
Country of origin	DE

# PSR-PC52-1NO-1NC-24DC-SP - Coupling relay



1017064

<https://www.phoenixcontact.com/us/products/1017064>

## Technical data

### Notes

#### Note on application

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

#### Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
------------	---

### Product properties

Product type	Coupling relay
Product family	PSRmini
Application	Safe switch on
	Low demand
	Ex
Control	1 and 2 channel
Relay type	Electromechanical relay

#### Insulation characteristics

Overvoltage category	III
Degree of pollution	2

#### Times

Typ. starting time with $U_s$	typ. 100 ms (when controlled via A1-A2)
Typical release time	typ. 30 ms (when controlled via A1-A2)
Recovery time	1 s (when controlled via A1-A2)
	3 s (Availability time for diagnostics after $U_D$ is applied)

### Electrical properties

Maximum power dissipation for nominal condition	3.8 W (at $U_B = 26.4$ V DC, $U_{BD} = 26.4$ V DC, $I_L = 3$ A)
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV between all current paths and housing
	Safe isolation, 6 kV reinforced insulation from (A1/A2, 24V/0V, 21/22, and TP1/TP2/TP3) to the enabling current path (L, L', LO, LO', NI, NI', N, N')

#### Supply

Designation	A1/A2
Rated control circuit supply voltage $U_S$	24 V DC -15 % / +10 %
Rated control supply current $I_S$	typ. 75 mA
Power consumption at $U_S$	typ. 2 W (at $U_S/U_D$ ; On state)
Inrush current	max. 100 mA
Filter time	2 ms (at A1-A2 in the event of voltage dips at $U_S$ )
	max. 2 ms (at A1-A2; low test pulse width)

# PSR-PC52-1NO-1NC-24DC-SP - Coupling relay



1017064

<https://www.phoenixcontact.com/us/products/1017064>

Protective circuit	≥ 100 ms (at A1-A2; low test pulse rate)
	max. 17 ms (at A1-A2; high test pulse width)
	≥ 800 ms (at A1-A2; high test pulse rate)
	Surge protection; 36 V suppressor diode
	Reverse polarity protection

## Supply

Designation	24V/0V
Diagnostic supply voltage $U_D$	24 V DC -20 % / +25 %
Input current at $U_D$	35 mA (at $U_D$ = 24 V)
	45 mA (at $U_D$ = 19 V)
	25 mA (at $U_D$ = 30 V)
Inrush current at $U_D$	1.5 A ( $\Delta t < 10 \mu s$ )
Power consumption at $U_D$	typ. 0.9 W (at $U_D$ ; Off state)
Protective circuit	Surge protection; 33 V suppressor diode
	Reverse polarity protection

## Input data

Digital: Test points for proof test (T1, T2, T3)

Number of inputs	3
Inrush current	typ. 200 mA
Protective circuit	Surge protection; 36 V suppressor diode
Current consumption	typ. 20 mA (Input TP1)
	typ. 20 mA (Input TP2)
	typ. 30 mA (Input TP3)

## Output data

Relay: Enabling current path (L-LO-NI-N / L'-LO'-NI'-N')

Output description	safety-related N/O contacts
Number of outputs	1 (undelayed)
Contact switching type	1 enabling current path
Contact material	AgNi, gold-flashed, Ag alloy
Switching voltage	min. 16 V AC/DC
	max. 250 V AC
	max. 125 V DC
Switching capacity	min. 1 W
Inrush current	min. 50 mA
	max. 5 A ( $\Delta t \leq \text{[symbol]} s$ )
Limiting continuous current	3 A (Observe derating, load type, and on-load voltage)
Sq. Total current	9 A <sup>2</sup> (observe derating)
Switching frequency	max. 0.5 Hz
Mechanical service life	approx. 5x 10 <sup>7</sup> cycles

Relay: Signaling current path (21/22)

# PSR-PC52-1NO-1NC-24DC-SP - Coupling relay



1017064

<https://www.phoenixcontact.com/us/products/1017064>

Output description	non-safety-related N/C contact
Number of outputs	1 (without delay, floating)
Contact switching type	1 signaling current path
Switching current	max. 100 mA
Inrush current	$\leq 800 \text{ mA}$ ( $\Delta t \leq \text{[symbol]} \text{ ms}$ )
Short-circuit protection	no

## Connection data

### Connection technology

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

### Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

## Signaling

Status display	1 x LED (green)
Operating voltage display	1 x LED (yellow)
Error indication	1 x LED (red)

## Dimensions

Width	17.5 mm
Height	117.4 mm
Depth	114.5 mm

## Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	Franyl A63 RV0

## Characteristics

Safety data: EN 50156-2

Safety Integrity Level (SIL)	3 (Reference IEC 61508)
------------------------------	-------------------------

Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	3
------------------------------	---

## Environmental and real-life conditions

### Ambient conditions

# PSR-PC52-1NO-1NC-24DC-SP - Coupling relay



1017064

<https://www.phoenixcontact.com/us/products/1017064>

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-25 °C ... 60 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 65 °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, 11 ms
Vibration (operation)	10 Hz ... 150 Hz, 2g
Air pressure (operation)	79 kPa ... 106 kPa
Air pressure (storage/transport)	79 kPa ... 106 kPa

## Approvals

### ATEX

Identification	Ex II 3G Ex ec nC IIC T4 Gc
Certificate	DEMKO 19 ATEX 2240X

### IECEX

Identification	Ex ec nC IIC T4 Gc
Certificate	IECEX ULD 19.0023X

### UL, USA/Canada

Identification	cULus
Certificate	E140324

### UL Ex, USA / Canada

Identification	Class I, Zone 2, AEx ec nC IIC T4 / Ex ec nC IIC Gc T4 X
	Class I, Div. 2, Groups A, B, C, D, T4
Certificate	E360692

### CE

Identification	CE-compliant
----------------	--------------

### Environmental simulation test

Identification	G3
Certificate	ISA-S71.04

### CCC / China-Ex

Identification	Ex ec nC IIC T4 Gc
Certificate	2022122304115696

## Mounting

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

# PSR-PC52-1NO-1NC-24DC-SP - Coupling relay

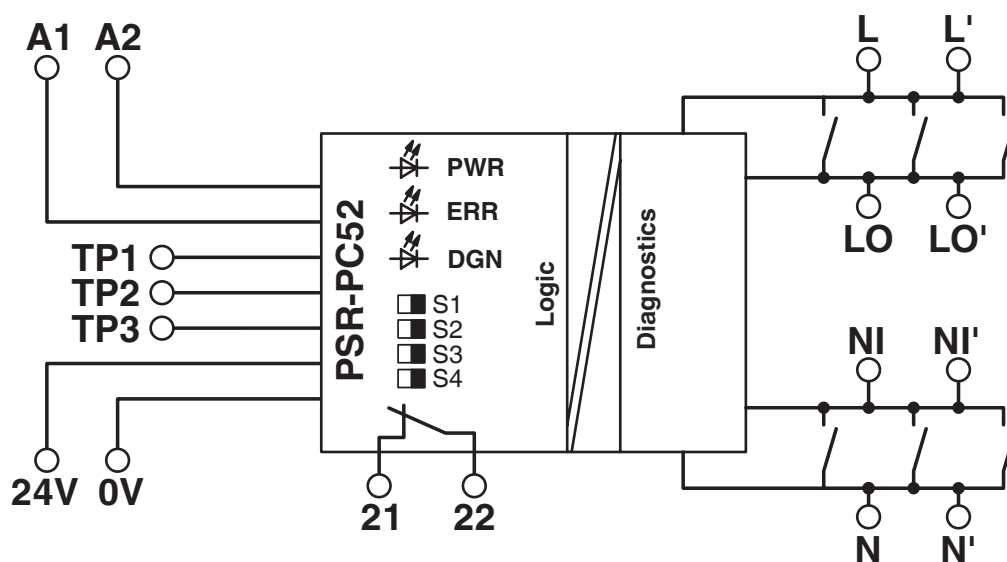


1017064

<https://www.phoenixcontact.com/us/products/1017064>

## Drawings

Block diagram



Block diagram

# PSR-PC52-1NO-1NC-24DC-SP - Coupling relay



1017064

<https://www.phoenixcontact.com/us/products/1017064>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1017064>



### Functional Safety

Approval ID: 968/FSP 1486.02/22



### cULus Listed

Approval ID: E140324



### IECEx

Approval ID: IECEx ULD 19.0023X



### ATEX

Approval ID: DEMKO 19 ATEX 2240X



### cULus Listed

Approval ID: E360692



### CCC

Approval ID: 2022122304115696

# PSR-PC52-1NO-1NC-24DC-SP - Coupling relay



1017064

<https://www.phoenixcontact.com/us/products/1017064>

## Classifications

### ECLASS

ECLASS-13.0	27371819
-------------	----------

### ETIM

ETIM 9.0	EC001449
----------	----------

### UNSPSC

UNSPSC 21.0	39122200
-------------	----------



1017064

<https://www.phoenixcontact.com/us/products/1017064>

## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 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	118daeb7-8af5-4fe7-9f3a-62daa1a4b725

Phoenix Contact 2025 © - 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](mailto:info@phoenixcon.com)