

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

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 emergency stop, safety doors, light grids up to SIL 3, Cat. 4, PL e, 1- or 2-channel operation, cross-circuit detection, can be retriggered, off-/on delay of 0.2 s to 300 s, 5 enabling current paths,  $U_S = 24$  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 only 22.5mm
- 1- and 2-channel control
- 5 enabling current paths, 1 digital signal output
- Manually monitored and automatic activation in a single device

## Commercial data

Item number	1015533
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA
Product key	DNA181
Catalog page	Page 227 (C-6-2019)
GTIN	4055626496740
Weight per piece (including packing)	254.53 g
Weight per piece (excluding packing)	155.43 g
Customs tariff number	85371098
Country of origin	DE

## Technical data

### Product properties

Product type	Safety relays
Product family	PSRmini
Application	Emergency stop
	Safety door
	Light grid
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

### Times

Typical response time	< 50 ms (automatic start)
	< 50 ms (manual, monitored start)
Typ. starting time with $U_s$	500 ms (with $U_s$ when controlled via A1)
Typical release time	< 25 ms (when controlled via S12 and S22 (only for undelayed contacts))
	< 10 ms (when controlled via A1; applicative deactivation via A1/A2 is not permitted)
Delay time range	0.2 s ... 300 s $\pm 5\%$ (can be set for 47/48/58)
Restart time	< 1 s (Boot time)
Recovery time	500 ms (following demand of the safety function)

### Electrical properties

Maximum power dissipation for nominal condition	8.1 W (At $U_s = 30\text{ V}$ , $I_L^2 = 108\text{ A}^2$ )
Nominal operating mode	100% operating factor

### Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV between all current paths and housing
	Safe isolation, reinforced insulation 6 kV between (A1, A2, S11, S12, S21, S22, S34, M1) and enabling current path (13/14) and enabling current path (23/24/34) and enabling current path (47/48/58)

### Supply

Designation	A1/A2
Rated control circuit supply voltage $U_s$	19.2 V DC ... 30 V DC
Rated control circuit supply voltage $U_s$	24 V DC -20 % / +25 %
Rated control supply current $I_s$	typ. 80 mA
Power consumption at $U_s$	typ. 1.92 W
Inrush current	typ. 28 A ( $\Delta t = 30\ \mu\text{s}$ at $U_s$ )
Filter time	1 ms (For the logic. At A1 in the event of voltage dips at $U_s$ )
Protective circuit	Serial protection against polarity reversal; Suppressor diode

### Input data

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

## General

Limit frequency	min. 0 Hz
	max. 1 Hz

## 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
Input voltage range "1" signal	11 V DC ... 30 V DC
Input current range "0" signal	0 mA ... 2 mA
Inrush current	< 11 mA (typically with $U_S$ )
Filter time	max. 3 ms (Test pulse width of low test pulses)
	min. 21 ms (Test pulse rate for low test pulse)
Concurrence	$\infty$
Limit frequency	min. 0 Hz
	max. 1 Hz
Max. permissible overall conductor resistance	150 $\Omega$
Protective circuit	Varistor
Current consumption	< 4.5 mA (typically with $U_S$ )

## Digital: Start circuit (S34)

Description of the input	non-safety-related
Number of inputs	1
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Input current range "0" signal	0 mA ... 2 mA
Inrush current	< 8.6 mA (typically with $U_S$ )
Filter time	max. 1 ms (Test pulse width of low test pulses)
	min. 21 ms (Test pulse rate for low test pulse)
Limit frequency	min. 0 Hz
	max. 1 Hz
Max. permissible overall conductor resistance	150 $\Omega$
Protective circuit	Varistor
Current consumption	< 3.2 mA (typically with $U_S$ )

## Output data

### Relay: Enabling current paths (13/14, 23/24/34, 47/48/58)

Output description	2 N/O contacts each in series, safety-related, floating
Number of outputs	3 (undelayed: 13/14, 23/24/34)
	2 (delayed: 47/48/58)
Contact switching type	5 enabling current paths
Contact material	AgCuNi +0.2 $\mu\text{m}$ ... 0.4 $\mu\text{m}$ Au / AgSnO <sub>2</sub> +0.2 $\mu\text{m}$ Au
Switching voltage	min. 12 V AC/DC
	max. 250 V AC/DC (Observe the load curve)

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

Switching capacity	min. 60 mW
Inrush current	min. 5 mA max. 6 A
Switching capacity in accordance with IEC 60947-5-1	4 A (24 V (DC13)) 3 A (230 V (AC 15))
Limiting continuous current	6 A
Sq. Total current	108 A <sup>2</sup> (observe derating)
Switching frequency	0.5 Hz (depending on the set delay time)
Mechanical service life	10x 10 <sup>6</sup> cycles
Output fuse	6 A gL/gG 4 A gL/gG (for low-demand applications)

## Signal: M1

Output description	PNP non-safety-related
Number of outputs	1
Voltage	approx. 23 V DC ( $U_S - 1$ V)
Current	max. 100 mA
Maximum inrush current	500 mA ( $\Delta t = 10$ ms at $U_S$ )
Protective circuit	Suppressor diode
Short-circuit protection	Yes

## Clock: S11, S21

Output description	PNP non-safety-related
Number of outputs	2
Voltage	corresponds to $U_S$
Current	max. 100 mA
Maximum inrush current	500 mA ( $\Delta t = 10$ ms at $U_S$ )
Protective circuit	Suppressor diode
Short-circuit protection	Yes

## Connection data

### Connection technology

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

### Conductor connection

Connection method	Screw connection
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

## Signaling

Status display	5 x bi-color LED
----------------	------------------

## Dimensions

Width	22.5 mm
Height	112.2 mm
Depth	114.5 mm

## Material specifications

Housing material	Polyamide
------------------	-----------

## Characteristics

### Safety data

Stop category	0
	1

### Safety data: EN ISO 13849

Category	4
Performance level (PL)	e (4 A DC13; 3 A AC15; 8760 switching cycles/year)

### Safety data: IEC 61508 - High demand

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)	-35 °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	10g (operation), 15g (transport)
Vibration (operation)	10 Hz ... 150 Hz, 2g

## Approvals

### CE

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

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

## Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	EN 60664-1
-----------------------	------------

## Mounting

Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Mounting position	vertical or horizontal
Connection method	Screw connection

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays

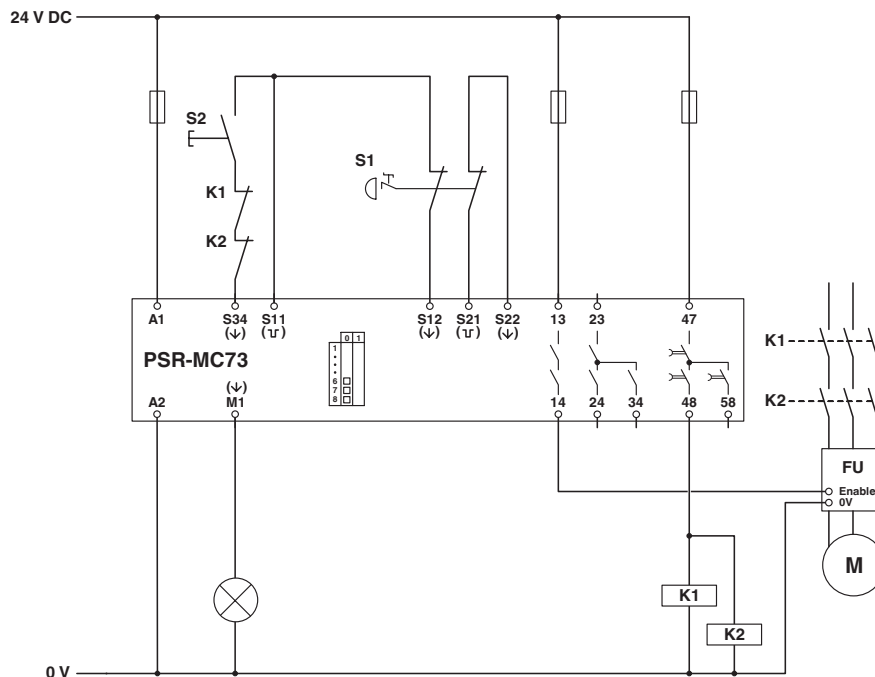


1015533

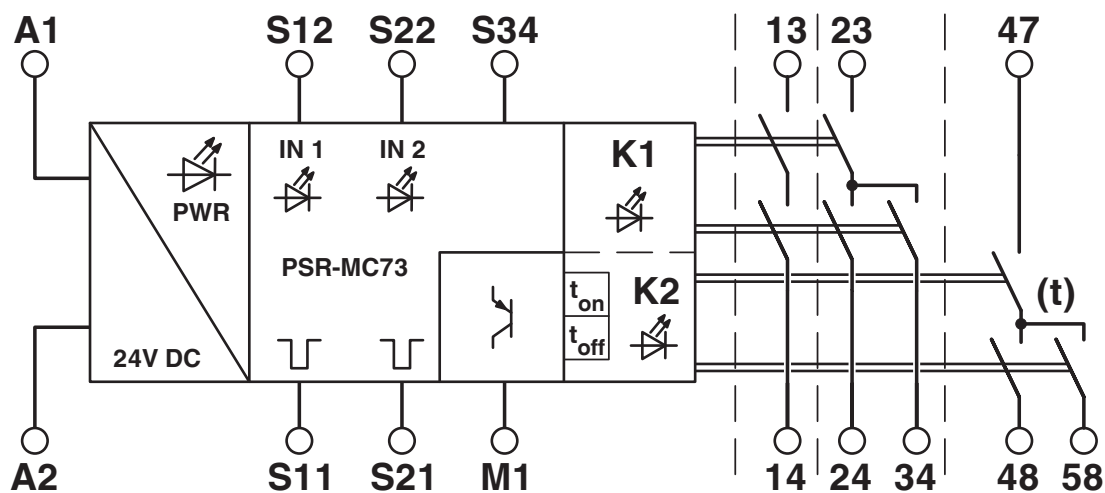
<https://www.phoenixcontact.com/ae/products/1015533>

## Drawings

Circuit diagram



Block diagram



Block diagram

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays





1015533


<https://www.phoenixcontact.com/ae/products/1015533>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/ae/products/1015533>

 **UL Listed**  
Approval ID: FILE E 140324

 **cUL Listed**  
Approval ID: FILE E 140324

 **EAC**  
Approval ID: RU\*-DE\*B.00606/20

 **Functional Safety**  
Approval ID: 01/205/5486.01/19

**cULus Listed**



# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

## Classifications

### ECLASS

ECLASS-11.0	27371819
ECLASS-13.0	27371819
ECLASS-12.0	27371819

### ETIM

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

### UNSPSC

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

# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

1015533

<https://www.phoenixcontact.com/ae/products/1015533>

## Accessories

### CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/ae/products/1734634>

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



---

### CR-MSTB - Coding section

1734401

<https://www.phoenixcontact.com/ae/products/1734401>

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



# PSR-MC73-5NO-1DO-24DC-SC - Safety relays



1015533

<https://www.phoenixcontact.com/ae/products/1015533>

## CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/ae/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

---

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT Middle East FZ LLC  
1201N-1206N, Dubai Science Park Towers – North  
P.O. Box 345002, Dubai, United Arab Emirates  
(+971) 4 437-0324  
[info-me@phoenixcontact.com](mailto:info-me@phoenixcontact.com)