

Coupling relay - PSR-PC51-1NO-1NC-24DC-SP - 2702523

Technical data

Digital inputs

Current consumption	typ. 20 mA (Input TP1)
	typ. 20 mA (Input TP2)
	typ. 30 mA (Input TP3)
Type of protection	Surge protection
Protective circuit/component	36 V suppressor diode

Relay outputs: enabling current path

Output name	Enabling current path
Output description	safety-related N/O contacts
Number of outputs	1 (undelayed)
Contact 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
Limiting continuous current	3 A (Observe derating, load type, and on-load voltage)
Inrush current	min. 50 mA
	max. 5 A ($\Delta t \# 1$ s)
Sq. Total current	9 A ² (observe derating)
Switching capacity	min. 1 W
Switching frequency	max. 0.5 Hz
Diagnostic threshold	7 Ω ... 20 k Ω (configurable)
Mechanical service life	approx. 5x 10 ⁷ cycles

Relay outputs: return current/signaling current path

Output name	Signaling current path
Output description	non-safety-related N/C contact
Number of outputs	1 (without delay, floating)
Contact type	1 signaling current path
Inrush current	max. 800 mA ($\Delta t \# 100$ ms)
Short-circuit protection	no

Times

Typical pickup time at US	typ. 100 ms (when controlled via A1-A2)
Typical release time at US	typ. 30 ms (when controlled via A1-A2)
Recovery time	1 s (when controlled via A1-A2)

General

Relay type	Electromechanical relay
Nominal operating mode	100% operating factor
Net weight	147.48 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting

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General

Assembly instructions	See derating curve
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing material	Franyl A 63 R V0
Housing color	yellow
Status display	1 x yellow LED, 1 x green LED, 1 x red LED

Connection capacity

Connection method	Push-in spring connection
pluggable	Yes
Conductor cross section solid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG / kcmil	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ² (only together with CRIMPFOX 6)
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ² (only together with CRIMPFOX 6)
Stripping length	8 mm

Safety-related characteristic data

Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Designation	EN 50156-2
Safety Integrity Level (SIL)	3 (Reference IEC 61508)

Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
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')
Degree of pollution	2
Overvoltage category	III
Shock	15g, 11 ms
Vibration (operation)	10 Hz ... 150 Hz, 2g
Conformance	CE-compliant
Environmental simulation test	ISA-S71.04 (G3)

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"