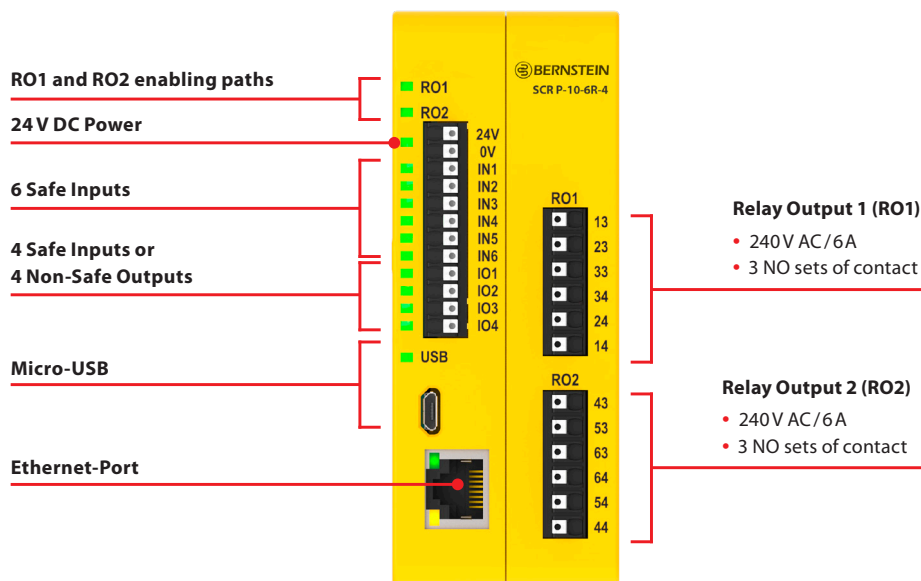


Safety Controller

Series SCR

Description **SCR P-10-6R-4**

Article number **6075133159**



Electrical Data		
Sourcing voltage	Voltage Current	24 V DC \pm 20 % (SELV / PELV) 240 mA maximum, no load (relays on) 530 mA maximum, full load (IO1 to IO4 used as auxiliary outputs)
Convertible E/A	Sourcing current Test Pulses	80 mA maximum (overcurrent protection) \sim 1 ms every 25 to 75 ms
Safety Inputs (and Convertible E/A when used as inputs)		
Input On threshold		> 15 V DC (guaranteed on) 30 V DC maximum
Input Off threshold		< 5 V DC and < 2 mA, -3 V DC minimum
Input On Current		5 mA typical at 24 V DC, 50 mA peak contact cleaning current at 24 V DC
Input lead resistance		300 Ω maximum (150 Ω per lead)
Input requirements for a 4-wire Safety Mat		<ul style="list-style-type: none"> Maximum capacity between plates: 0.22 μF¹ Maximum capacity between bottom plate and ground: 0.22 μF¹ Maximum resistance between the 2 input terminals of one plate: 20 Ω
Response and recovery times		
Response time (from the end of the input to the switching off the output):		see configuration overview in the software, as this may vary
Recovery time input (stop until start):		250 ms typical, 400 ms max
Timeout function for virtual input (muting activation and on/off):		RPI + 200 ms typical
Timeout function for virtual input (manual reset and abort delay):		For details, refer to Virtual non-safety related input devices (SCR P) in the Operation Manual.
Delay Tolerance		\pm (0.02% + 2 scan times)
Mechanical Stress		
Shock		15 g for 11 ms, half sine, 18 shocks total (per IEC 61131-2)
Vibration		3.5 mm occasional / 1.75 mm continuous at 5 Hz to 9 Hz, 1.0 g occasional and 0.5 g continuous at 9 Hz to 150 Hz: all at 10 sweep cycles per axis (per IEC 61131-2)

Mechanical Data		
Operating Conditions	Temperature Storage Temperature Humidity Operating Altitude	0 °C to +55 °C -30 °C to +65 °C 90 % at +50 °C maximum relative humidity (non-condensing) 2000 m maximum (6562 ft maximum)
Protection class		IP20 (NEMA 1), for use in enclosures to IP54 (NEMA 3) or higher
Safety Outputs		3 NO sets of contacts for each output channel (RO1 and RO2). Each normally open output is a series connection of contacts from two forcedguided (mechanically linked) relays. RO1 consists of relays K1 and K2. RO2 consists of relays K3 and K4. See the Instruction Manual for output ratings.
Function for the automatic optimization of connections		Up to three devices connected with user-provided terminal blocks
Network Interface	Protocols Data	Ethernet 10/100 Base-T/TX, RJ45 modular connector Selectable auto negotiate or manual rate and duplex Auto MDI/MDIX (auto cross) EtherNet/IP (with PCCC), Modbus/TCP, and PROFINET 256 virtual Status Outputs; fault diagnostic codes and messages; access to fault log


Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
0,50/20	5,0
0,32/22	3,0
0,20/24	2,0
0,13/26	1,0
0,08/28	0,8
0,05/30	0,5

Overcurrent protection is required to be provided by end product application per the supplied table.
 Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
 Power supply wires < 0.20mm² (24 AWG) must not be connected.
 For additional product support, go to www.bernstein.eu.

Standards
EN ISO 12100
ISO 13857
ISO13850
EN 574
IEC6206
EN ISO 13849-1
ISO 13855
ISO 14119
EN 60204-1
IEC 61496
IEC 60529
IEC 60947-1
IEC 60947-5-1
IEC 60947-5-5
IEC 61508
IEC 62046

Safety Ratings
Category 4, PL e (EN ISO 13849)
SIL CL 3 (IEC 62061, IEC 61508)

Safety characteristics
PFH (1/H) 5,01 x 10 ⁻¹⁰
Proof Test Interval 20 years

EU-Conformity
according to directive 2006/42/EG (Safety-of-Machinery-Directive)
according to directive 2014/30/EU (EMV-Richtlinie)
according to directive 2012/19/EU (EU-WEEE II) 

Approvals

cUL_{US}
 PI (PROFIBUS PROFINET)

Notes

Category - Intuitive, drag-and-drop, icon-based configuration on the PC simplifies device setup and management

- 2x 6 A safety relay outputs each with 3 enabling paths (enable paths)
- 10 inputs, 4 of which can be configured as non-safety related outputs
- Innovative Daisy Chain Diagnosis (DCD)
- Automatic Optimization of Connections (ATO) can increase the number of inputs from 10 to 14
- Bidirectional communication via Industrial Ethernet based protocols
 - 256 virtual non-safety relevant status outputs
 - 80 virtual non-safety relevant inputs (reset, on/off, abort switch-off delay, muting activation)
 - Providing the DCD diagnostic data
- SCR P-FPS type programming stick for quick exchange and fast configuration without PC

Configuration software is required. The software is available at www.bernstein.eu/downloads.

1) If the Safety Mats are used together on a configurable I/O, this is the total capacity of all Safety Mats that may be used.