

## Technical data sheet

### Safety relay

Part no.: 50133030

MSI-SR-SM42OS-01

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For illustration purposes only



## Technical data

### Basic data

Series	MSI-SR-SM42OS
Application	Zero-speed relays

### Functions

Restart	Automatic
	Manual

### Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
PFH <sub>D</sub>	1,1E-09 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	4, EN ISO 13849-1

### Electrical data

#### Supply circuit

Nominal voltage U <sub>N</sub>	24 V DC
Max. rated control supply voltage at DC	30 V
Min. rated control supply voltage at DC	16.8 V
Rated power DC	1.8 W
Galvanic isolation between supply and control circuit	No

#### Output circuit

Number of outputs, signaling function, non-delayed, contact-based	2 Piece(s)
Release current paths	Semiconductor (PNP), safety-oriented
Signaling current paths	Semiconductor (PNP), not safety-oriented
Short circuit protection (NO contact)	Short-circuit proof
Nominal switching voltage, release current paths DC	30 V
Max. thermal continuous current I <sub>th</sub> , release current paths	2 A
Max. total current I <sup>2</sup> of all current paths	4 A <sup>2</sup>

#### Control circuit

Nominal output voltage DC	24 V
Input current at the control inputs (safety circuit/reset circuit)	3 mA
Max. peak current at the control inputs (safety circuit/reset circuit)	3.8 mA
Minimum switch-on time	100 ms

### Connection

Number of connections	1 Piece(s)
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#### Connection 1

Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	16 -pin

#### Cable properties

Connection cross sections	1 x 0.2 to 2.5 mm <sup>2</sup> , wire
	1 x 0.2 to 2.5 mm <sup>2</sup> , wire
	1 x 0.25 to 2.5 mm <sup>2</sup> , wire with wire-end sleeve
	2 x 0.2 to 1.0 mm <sup>2</sup> , wire
	2 x 0.2 to 1.0 mm <sup>2</sup> , wire
	2 x 0.25 to 1.0 mm <sup>2</sup> , wire with wire-end sleeve

### Mechanical data

Dimension (W x H x L)	22.5 mm x 96.5 mm x 121 mm
Net weight	160 g
Housing color	Gray
Type of fastening	Snap-on mounting

### Certifications

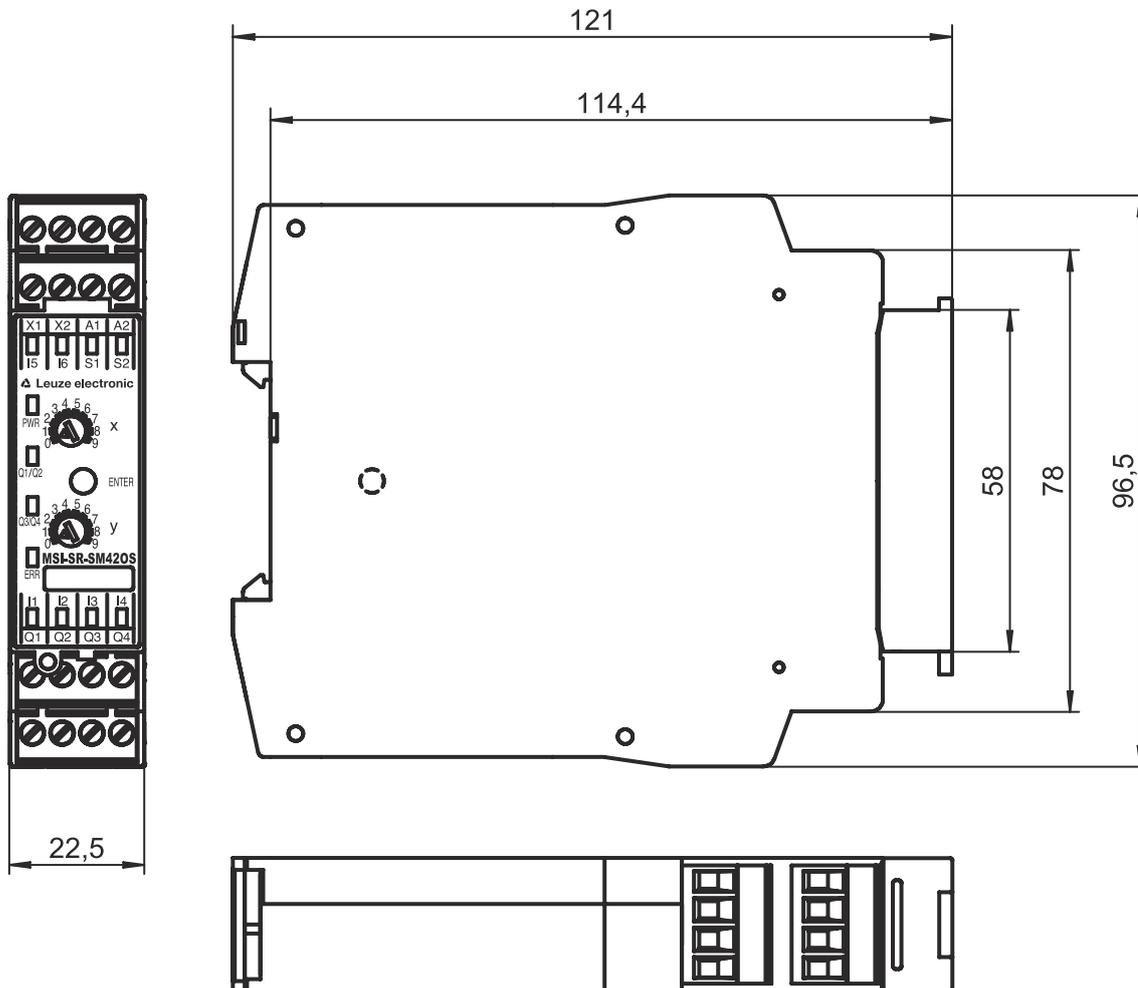
Approvals	c UL US
	TÜV Rheinland

### Classification

Customs tariff number	85364190
ECLASS 8.0	27371811
ECLASS 9.0	27371811
ETIM 5.0	EC001448
ETIM 6.0	EC001448

# Dimensioned drawings

All dimensions in millimeters



## Electrical connection

### Connection 1

Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	16 -pin

### Terminal

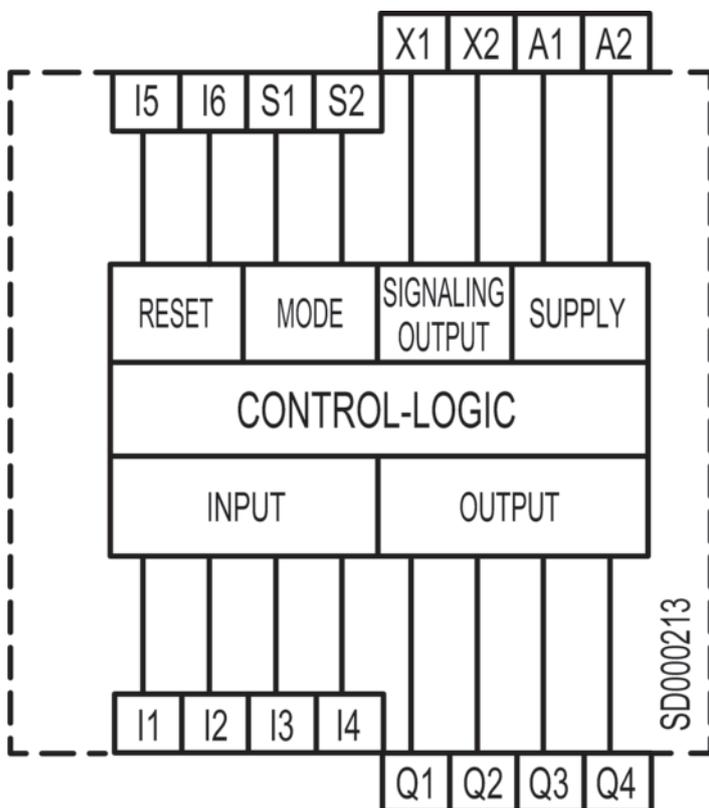
### Assignment

A1	+24 V
A2	GND
I1	Input for sensor transmitter or function selection (operating mode)
I2	Input for sensor transmitter or function selection (operating mode)
I3	Input for sensor transmitter or function selection (operating mode)

# Electrical connection

Terminal	Assignment
I4	Input for sensor transmitter or function selection (operating mode)
I5	Input for reset function
I6	Input for consent/start-up bridging
Q1	Safe output
Q2	Safe output
Q3	Safe output (inverted)
Q4	Safe output (inverted)
S1	Input for function selection (operating mode)
S2	Input for function selection (operating mode)
X1	Signal output for the display and evaluation of operating and error states
X2	Signal output for the display and evaluation of operating and error states

## Circuit diagrams



## Notes

**Observe intended use!**

The product may only be put into operation by competent persons.

Only use the product in accordance with its intended use.