

Technical data sheet

Safety relay

Part no.: 50133000

MSI-SR-LC21DT03-01

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Circuit diagrams
- Notes



Figure can vary



Technical data

Basic data

Series	MSI-SR-LC21DT
Application	Base device for E-Stop and safety door applications

Functions

Functions	Monitoring of E-Stop circuits Monitoring of optoelectronic protective devices Monitoring of position switches Monitoring of proximity switches
Restart	Automatic Manual

Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
PFH _D	0.00000003 per hour
Mission time T _M	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

Electrical data

Supply circuit

Nominal voltage U _N	24 V DC
Min. rated control supply voltage U _S at DC	20.4 V
Max. rated control supply voltage at DC	26.4 V
Min. rated control supply voltage at DC	20.4 V
Rated power DC	2.6 W
Galvanic isolation between supply and control circuit	No

Output circuit

Number of outputs, safety-oriented, undelayed, contact-based	2 Piece(s)
Number of outputs, safety-oriented, delayed, contact-based	1 Piece(s)
Release current paths	NO
Release current paths, time-delayed	NO contact, off-delay
Contact material	Ag alloy, gold-plated
Usage category AC-15 (NO contact)	Ue 230V, Ie 3A
Usage category DC-13 (NO contact)	Ue 24V, Ie 2A
Short circuit protection (NO contact)	gG class safety fuse 6A, melting integral
Nominal switching voltage, release current paths AC	230 V
Max. thermal continuous current I _{th} , release current paths	6 A
Max. total current I ² of all current paths	5 A ²
Mechanical life time	100,000,000 switching cycles

Control circuit

Evaluation of the inputs	Two-channel
Nominal output voltage DC	22 V
Input current at the control inputs (safety circuit/reset circuit)	25 mA
Max. peak current at the control inputs (safety circuit/reset circuit)	2,500 mA
Max. cable resistance, per channel	≤ (5 + (1.176 × U _B / U _N - 1) × 100) Ω
Minimum switch-on time	200 ms
Response time (automatic start t _{A2})	700 ms
Response time (manual start t _{A1})	30 ms
Test pulse time permitted t _{TP}	1 ms
Release time t _R	25 ms
Release time t _R , time-delayed contacts (tolerance)	0.15 s ... 3 s ± 16 %
Synchronous time monitoring t _S	500 ms
Recovery time t _W	500 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 × 0.2 to 2.5 mm ² , wire 1 × 0.2 to 2.5 mm ² , wire 1 × 0.25 to 2.5 mm ² , wire with wire-end sleeve 2 × 0.2 to 1.0 mm ² , wire 2 × 0.2 to 1.0 mm ² , wire 2 × 0.25 to 1.0 mm ² , wire with wire-end sleeve
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Mechanical data

Dimension (W x H x L)	22.5 mm x 96.5 mm x 114 mm
Net weight	200 g
Housing color	Gray
Type of fastening	Snap-on mounting

Certifications

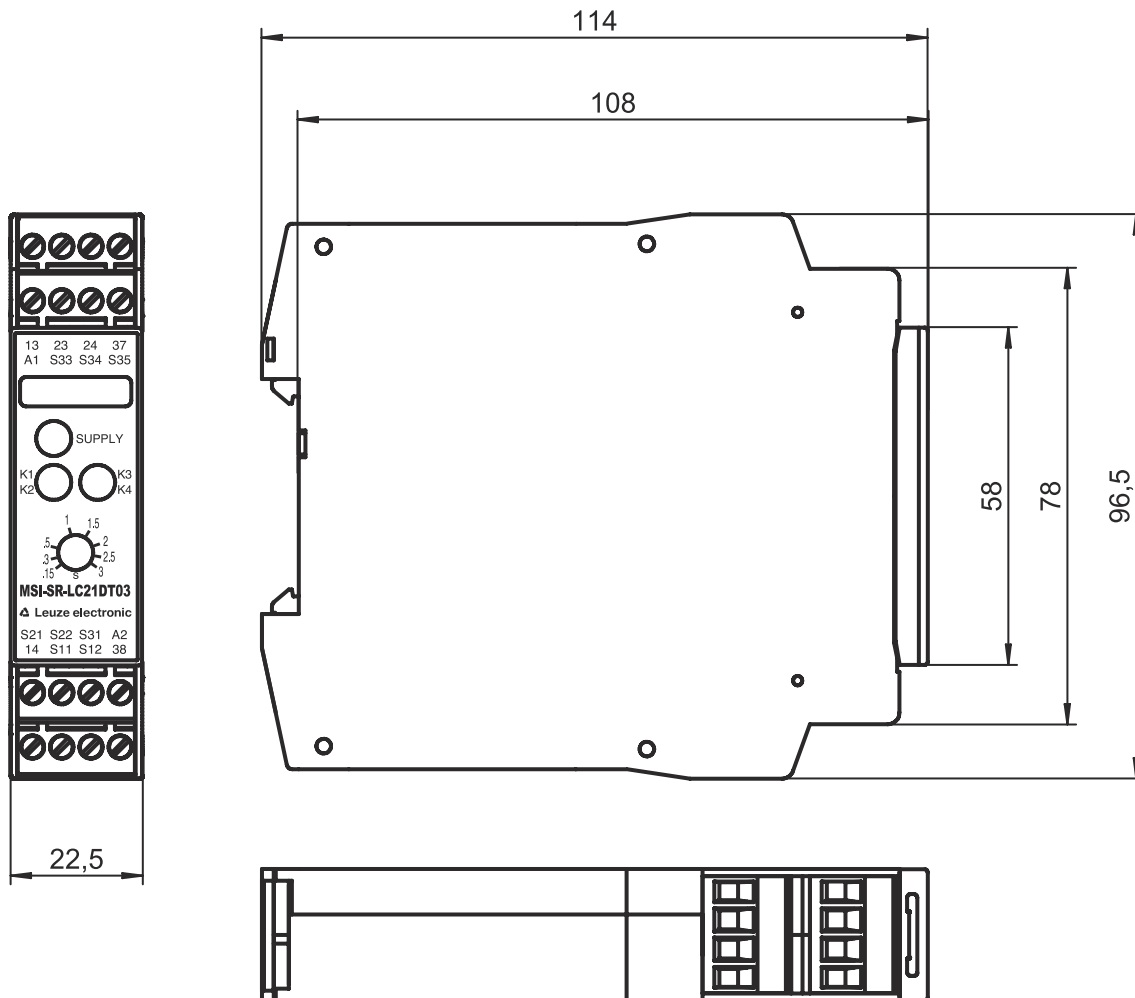
Certifications	c UL US TÜV Rheinland
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Classification

Customs tariff number	85364900
eCl@ss 8.0	27371819
eCl@ss 9.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

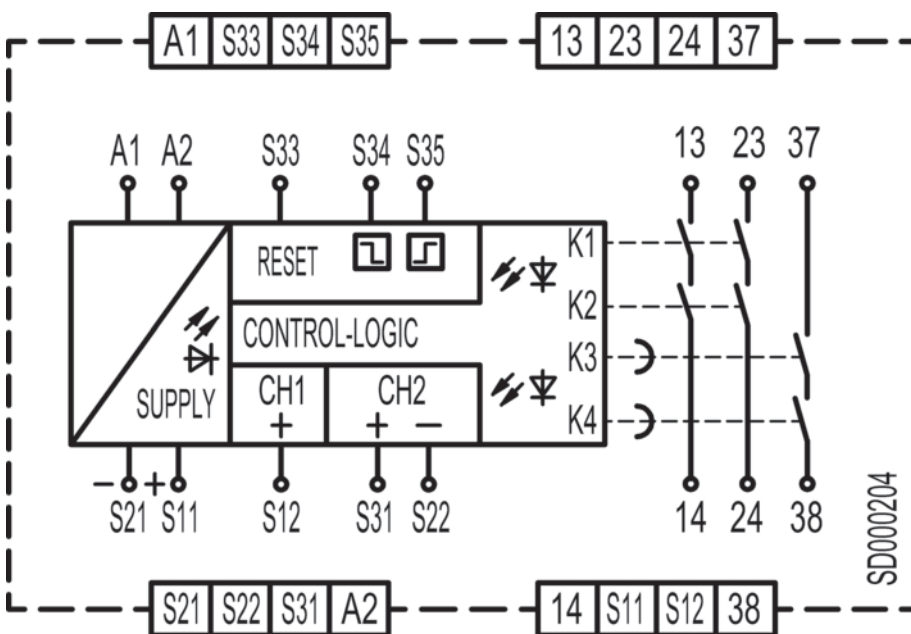
Function	Signal IN Signal OUT Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	16 -pin

Pin	Pin assignment
1	13 Release current path 1 (NO contact)
2	14 Release current path 1 (NO contact)
3	23 Release current path 2 (NO contact)
	24

Electrical connection

Pin	Pin assignment
4	Release current path 2 (NO contact) 37
5	Release current path 3 (NO contact) 38
6	Release current path 3 (NO contact) A1
7	+24V A2
8	GND S11
9	Control circuit 1 S12
10	Control circuit 1 S21
11	Control circuit 2 S22
12	Control circuit 2 S31
13	Control circuit 2 S33
14	Control circuit of reset button S34
15	Control circuit of reset button S35
16	Control circuit of reset button

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.