

## Technical data sheet

### Safety relay

Part no.: 547935

MSI-DT30B-01

#### Contents

- Technical data
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For illustration purposes only



## Technical data

### Basic data

Series	MSI-DT
Application	Moving guards, electro-sensitive protective equipment for controlled stopping (stop category 0 and 1 in accordance with IEC 60204)

### Functions

Functions	Cross circuit monitoring One- or two-channel operation Start/restart interlock (RES) Time-delayed shutdown (STOPP1)
Restart	Automatic Manual

### Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
MTTF <sub>d</sub>	124 years, EN ISO 13849-1
PFH <sub>D</sub>	1,8E-09 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	4, EN ISO 13849-1
STOP category	0, IEC/EN 60204-1
B10 <sub>d</sub> at DC13 (inductive load)	400,000 number of cycles
B10 <sub>d</sub> at AC15 (inductive load)	400,000 number of cycles

### Electrical data

Protective circuit	Short circuit protected
Continuous current per current path, max.	6 A

#### Performance data

Supply voltage U <sub>B</sub>	24 V, AC/DC, -15 ... 10 %
Power consumption, max.	1.8 W

#### Output circuit

Number of outputs, safety-oriented, undelayed, contact-based	2 Piece(s)
Number of outputs, safety-oriented, delayed, contact-based	2 Piece(s)
Number of outputs, signaling function, undelayed, contact-based	0 Piece(s)
Max. thermal continuous current I <sub>th</sub> , release current paths	6 A

#### Control circuit

Executing the switching function of the inputs	Changeover
Nominal output voltage DC	24 V
Voltage permitted at the input	30 V
Test pulse time permitted t <sub>TP</sub>	1 ms
Release time t <sub>R</sub> , time-delayed contacts (tolerance)	0.1 s ... 30 s ± 40 %

### Time behavior

Regression delay	20 ms
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### Connection

Number of connections	1 Piece(s)
<b>Connection 1</b>	
Function	Connection to device Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	16 -pin
<b>Cable properties</b>	
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

### Mechanical data

Dimension (W x H x L)	22.5 mm x 99 mm x 114.5 mm
Housing material	Plastic
Plastic housing	Unreinforced polyamide PA
Net weight	231 g
Housing color	Gray
Type of fastening	Snap-on mounting
Mechanical life time	100,000,000 actuation cycles

### Operation and display

Type of display	LED
Number of LEDs	3 Piece(s)

### Environmental data

Ambient temperature, operation	-20 ... 55 °C
Ambient temperature, storage	-40 ... 70 °C

### Certifications

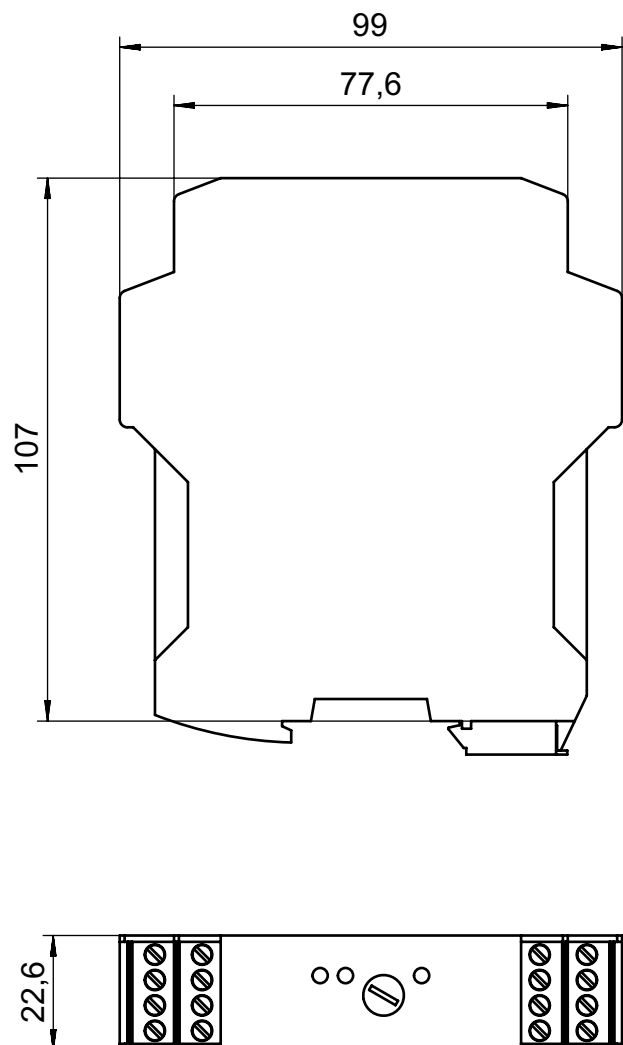
Degree of protection	IP 20 (terminals) IP 40 (housing)
Certifications	c UL US TÜV Rheinland

### Classification

Customs tariff number	85371098
ECLASS 5.1.4	27371800
ECLASS 8.0	27371819
ECLASS 9.0	27371819
ECLASS 10.0	27371819
ECLASS 11.0	27371819
ECLASS 12.0	27371819
ECLASS 13.0	27371819
ECLASS 14.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449
ETIM 8.0	EC001449
ETIM 9.0	EC001449

# Dimensioned drawings

All dimensions in millimeters



## Electrical connection

### Connection 1

Function	Connection to device
	Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	16 -pin

Terminal	Assignment
A1	+24 V
S35	Start circuit
S34	Start circuit
A2	GND
S11	Sensor input 1
S12	Sensor input 1
S21	Sensor input 2
S22	Sensor input 2

## Electrical connection

Terminal	Assignment
13	1 release circuit, undelayed
14	1 release circuit, undelayed
23	2 release circuit, undelayed
24	2 release circuit, undelayed
37	Release circuit 1, delayed
38	Release circuit 1, delayed
47	Release circuit 2, delayed
48	Release circuit 2, delayed

## Operation and display

Display LED 1	Display LED 2	Display LED 3	Meaning
Green, continuous light	Off	Off	Operational readiness
Green, continuous light	Green, continuous light	Green, continuous light	Device is active. Release circuits are closed.
Green, quickly flashing	Off	Off	Internal error - device defective. Replace the device!
Green, slowly flashing	Off	Off	External error - check the wiring and power supply! In event of manual reset: check the time sequence!
Green, slowly flashing	Green, slowly flashing	Off	Configuration error - repeat the configuration! If this cannot be performed: check the wiring and power supply!
Green, slowly flashing	Green, slowly flashing	Green, slowly flashing	Configuration necessary - positioner for delay time was readjusted. Configure again!