

Technical data sheet

Safety relay

Part no.: 547935

MSI-DT30B-01

Contents

- Technical data
- Electrical connection
- Operation and display



Figure can vary



Technical data

Basic data

Series	MSI-DT
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Functions

Functions	Cross circuit monitoring
	One- or two-channel operation
	Start/restart interlock (RES), selectable
	Time-delayed shutdown (STOP1)
Restart	Automatic
	Manual

Characteristic parameters

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

Electrical data

Protective circuit	Short circuit protected
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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 _{TP}	1 ms
Release time t _R , time-delayed contacts (tolerance)	0.1 s ... 30 s ± 40 %

Connection

Number of connections	1 Piece(s)
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Connection 1

Function	Connection to device
	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 ² , wire
	1 x 0.2 to 2.5 mm ² , wire

Mechanical data

Dimension (W x H x L)	22.5 mm x 99 mm x 114.5 mm
Housing material	Plastic, 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
eCl@ss 8.0	27371819
eCl@ss 9.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449

Electrical connection

Connection 1

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

Electrical connection

Pin	Pin assignment
	A1
1	+24V
	S35
2	Start circuit
	S34
3	Start circuit
	A2
4	GND
	S11
5	Sensor input 1
	S12
6	Sensor input 1
	S21
7	Sensor input 2
	S22
8	Sensor input 2
	13
9	1 release circuit, undelayed
	14
10	1 release circuit, undelayed
	23
11	2 release circuit, undelayed
	24
12	2 release circuit, undelayed
	37
13	Release circuit 1, delayed
	38
14	Release circuit 1, delayed
	47
15	Release circuit 2, delayed
	48
16	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!