Technical data sheet
Safety relay
Part no.: 547954
MSI-RM2B-01



For Illustration purposes only

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Technical data

Basic data

Series	MSI-RM2B
Application	Signal conversion of electronic safety outputs on potential-free relay contacts

Functions

Functions	Feedback path for EDM integration
Restart	Automatic

Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
Mission time T_M	20 years, EN ISO 13849-1
Category	Up to 4 (depending on the category of the upstream protective device), EN ISO 13849-1
$B10_d$ at DC1 (ohmic load)	10,000,000 number of cycles, (2 A, 24 V)
$B10_d$ at AC1 (ohmic load)	1,300,000 number of cycles, (0.5 A, 230 V)
$B10_d$ at DC13 (inductive load)	10,000,000 number of cycles, (2 A, 24 V)
$B10_d$ at AC15 (inductive load)	1,300,000 number of cycles, (0.5 A, 230 V)
$B10_d$, low load	1,860,000 number of cycles

Electrical data

Protective circuit	Fuse on switching output, upstream
Continuous current per current path, max.	3 A
External contact fuse protection per current path	5 A quick-action, or 3.15 A delay-action
Permissible input line resistance, max.	50 Ω

Performance data

Supply voltage U_B	24 V, DC, -20 ... 20 %
Power consumption, max.	2.5 W

Outputs

Number of safety-related switching outputs (OSSDs)	2 Piece(s)

Safety-related switching outputs

Type	Safety-related switching output OSSD
Voltage type	AC/DC

Safety-related switching output 1

Switching element	Relay, NO

Safety-related switching output 2

Switching element	Relay, NO

Output circuit

Number of outputs, safety-oriented, non-delayed, contact-based	2 Piece(s)
Number of outputs, safety-oriented, delayed, contact-based	0 Piece(s)
Number of outputs, signaling function, non-delayed, contact-based	1 Piece(s)

Time behavior

Pickup delay	20 ms
Regression delay	10 ms

Connection

Number of connections	1 Piece(s)

Connection 1

Function	Connection to device
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	12 -pin

Cable properties

Connection cross sections	0.2 to 2.5 mm²

Mechanical data

Dimension (W x H x L)	17.5 mm x 99 mm x 114.1 mm
Housing material	Plastic
Plastic housing	PA 66
Electrical contact material	AgNi10 + 5 mm Au
Net weight	120 g
Housing color	Gray
Type of fastening	Snap-on mounting
Mechanical life time	10,000,000 actuation cycles

Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)

Environmental data

Ambient temperature, operation	0 ... 50 °C
Ambient temperature, storage	-25 ... 70 °C

Certifications

Degree of protection	IP 20
Protection class	II
Approvals	c UL US
	TÜV NRTL US

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
ECLASS 15.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449
ETIM 8.0	EC001449
ETIM 9.0	EC001449
ETIM 10.0	EC001449

Electrical connection

Connection 1

Function	Connection to device
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	12 -pin

Terminal	Assignment
22	Relay contact 2 IN, NC
24	Relay contact 2 IN, NO
11	Relay contact 1 OUT
Y1	External device monitoring circuit (EDM)
n.c.	n.c.
Y2	External device monitoring circuit (EDM)
A2	0 V
B1	Sensor input channel 1, 24V
B3	Sensor input channel 2, 24V
14	Relay contact 1 IN, NO
21	Relay contact 2 OUT
12	Relay contact 1 IN, NC

Operation and display

LED	Display	Meaning
1	Green, continuous light	Relay K1 picked up
2	Green, continuous light	Relay K2 picked up