

## Technical data sheet

### Safety control

Part no.: 547803

MSI201



Figure can vary

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## Technical data

### Basic data

Series	MSI 200
Application	Monitoring of safety functions
Number of safe I/Os	20 IN, 4 OUT

### Functions

Functions	<p>Freely configurable safety main module</p> <p>Monitoring of all safe functions in machines and systems</p> <p>Safety-oriented expandability with additional input/output modules</p> <p>Transfer of diagnostic data via MSI-FB fieldbus module (optional)</p>
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### Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
MTTF <sub>d</sub>	8,324 years, EN ISO 13849-1
PFH <sub>D</sub>	1.4E-08 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

### Electrical data

Protective circuit	<p>Overvoltage protection</p> <p>Short circuit protected</p>
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#### Performance data

Supply voltage U <sub>B</sub>	24 V, DC, -15 ... 10 %
Current consumption (without load), max.	200 mA
Overvoltage category	III

#### Input data logic

Diagnostics display	4 LEDs (green, red)
Reaction time, max.	30 ms
Nominal input voltage U <sub>N</sub>	24 V DC, -15 ... 10 %, (A1/A2)
Typ. current consumption at U <sub>N</sub> (A1/A2)	110 mA
Bridging of voltage drops	20 ms

#### Inputs

Number of safe inputs	20 Piece(s), (up to SIL 3 / IEC 62061)
Status indicator	20 LEDs (green)
Nominal voltage U <sub>N</sub>	24 V DC, (to ground A1/A2)
Typ. current consumption at U <sub>N</sub>	4 mA
Signal level at "0", max.	5 V
Signal level at "1", min.	11 V

#### Outputs

Number of signal outputs	4 Piece(s)
Number of safe semiconductor outputs	4 Piece(s), (Cat. 4 / EN ISO 13849-1 / EN 954)
Number of ground-switching outputs	2 Piece(s)
Number of cycle outputs	2 Piece(s)

#### Output data

Nominal voltage	24 V DC, -15 ... 10 %, (24 V / 0 V)
Status indicator	4 LEDs (green)
Limiting continuous current	2 A

### Clock outputs

Nominal voltage	24 V DC, (A1/A2)
Limiting continuous current	100 mA

### Signal outputs

Nominal voltage	24 V DC, (A1/A2)
Limiting continuous current	100 mA

### Timing

Readiness delay	4,000 ms
Recovery time, restart, max.	5 ms

### Service interface

Type	USB
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#### USB

Function	Configuration via software
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### Connection

Number of connections	3 Piece(s)
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#### Connection 1

Function	<p>Connection to device</p> <p>Signal IN</p> <p>Signal OUT</p> <p>Voltage supply</p>
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	40 -pin

#### Connection 2

Function	Configuration interface
Type of connection	USB
Connector type	USB 2.0 Mini-A

#### Connection 3

Function	Internal communication interface
Type of connection	TBUS DIN rail

#### Cable properties

Connection cross sections	0.2 to 2.5 mm <sup>2</sup>
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### Mechanical data

Dimension (W x H x L)	67.5 mm x 99 mm x 114.5 mm
Housing material	Plastic
Plastic housing	Unreinforced polyamide PA
Net weight	430 g
Housing color	Gray
Type of fastening	Snap-on mounting
Number of possible safe extension modules	10 Piece(s)

### Environmental data

Ambient temperature, operation	-5 ... 45 °C
Ambient temperature, storage	-20 ... 70 °C

### Certifications

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

## Technical data

Customs tariff number	85371091
ECLASS 5.1.4	27371800
ECLASS 8.0	27371819
ECLASS 9.0	27371819
ECLASS 10.0	27371819
ECLASS 11.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449

## Electrical connection

### Connection 1

<b>Function</b>	Connection to device
	Signal IN
	Signal OUT
	Voltage supply
<b>Type of connection</b>	Terminal
<b>Type of terminal</b>	Screw terminal
<b>No. of pins</b>	40 -pin

### Terminal

### Assignment

A1	Supply for logic- or signal output
A1	Supply for logic- or signal output
A2	Supply for logic- or signal output
A2	Supply for logic- or signal output
T0	Test pulse output
T0	Test pulse output
T1	Test pulse output
T1	Test pulse output
24 V	Supply for safe output
0 V	Supply for safe output
O0-	Ground-switching output
O1-	Ground-switching output
M0	Signal output
M1	Signal output
M2	Signal output
M3	Signal output
I0	Safe input
I1	Safe input
I2	Safe input
I3	Safe input
I4	Safe input
I5	Safe input
I6	Safe input
I7	Safe input
I8	Safe input
I9	Safe input
I10	Safe input
I11	Safe input
O0	Safe output
O1	Safe output
O2	Safe output
O3	Safe output
I12	Safe input
I13	Safe input

# Electrical connection

Terminal	Assignment
I14	Safe input
I15	Safe input
I16	Safe input
I17	Safe input
I18	Safe input
I19	Safe input

**Connection 2**





Function	Configuration interface
Type of connection	USB
Connector type	USB 2.0 Mini-A

**Connection 3**

Function	Internal communication interface
Type of connection	TBUS DIN rail

## Accessories

### Start-up/diagnosis

	Part no.	Designation	Article	Description
   	50117011	KB USB A - USB miniB	Service line	Suitable for interface: USB Connection 1: USB Connection 2: USB Shielded: Yes Cable length: 1,500 mm Sheathing material: PVC

**Note**



A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.