

## Technical data sheet Safety control

Part no.: 50142625

MSI 420.TMC-03

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Figure can vary



## Technical data

### Basic data

Series	MSI 420
Application	TMC 66 Legacy

### Functions

Functions	Pre-configured safety control for use as TMC66 substitute. Software functionality acc. to ISO 13849-1 (SRASW).
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### Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	c, EN ISO 13849-1, System response time: 35.6 ms
PFH <sub>D</sub>	4,3E-09 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

### Electrical data

#### Performance data

Supply voltage U <sub>B</sub>	24 V, DC, -30 ... 25 %
Power consumption, max.	3.3 W

#### Output circuit

Number of outputs	8 Piece(s)
Max. number of integrated digital outputs	8 Piece(s)
Type of digital output	Transistor
Short circuit protection, outputs	Yes
Min. voltage permitted at the output	16.2 V
Max. voltage permitted at the output	30 V
Output current	4 A

#### Control circuit

Number of inputs	16 Piece(s)
Voltage permitted at the input	30 V
Max. rated control supply voltage at DC	30 V
Min. rated control supply voltage at DC	15.6 V
Input current at signal 1	2.3 mA

### Interface

Type	Internal bus (SBUS+)
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### Service interface

Type	Ethernet, USB
<b>Ethernet</b>	
Function	Configuration via software
<b>USB</b>	
Function	Configuration via software

### Connection

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

Function	Signal IN Signal OUT Voltage supply
Type of connection	Terminal
Type of terminal	Spring-cage terminal
No. of pins	22 -pin

### Connection 2

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

### Connection 3

Function	Configuration interface
Type of connection	RJ45

### Cable properties

Connection cross sections	2 x 0.2 to 1.5 mm <sup>2</sup> , wire 2 x 0.2 to 1.5 mm <sup>2</sup> , wire 2 x 0.25 to 1.5 mm <sup>2</sup> , wire with wire-end sleeve (pressed in trapezium shape)
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### Mechanical data

Dimension (W x H x L)	45 mm x 107 mm x 121 mm
Net weight	290 g
Housing color	Gray
Type of fastening	Snap-on mounting

### Environmental data

Ambient temperature, operation	-25 ... 65 °C
Ambient temperature, storage	-25 ... 70 °C
Relative humidity (non-condensing)	10 ... 95 %

### Certifications

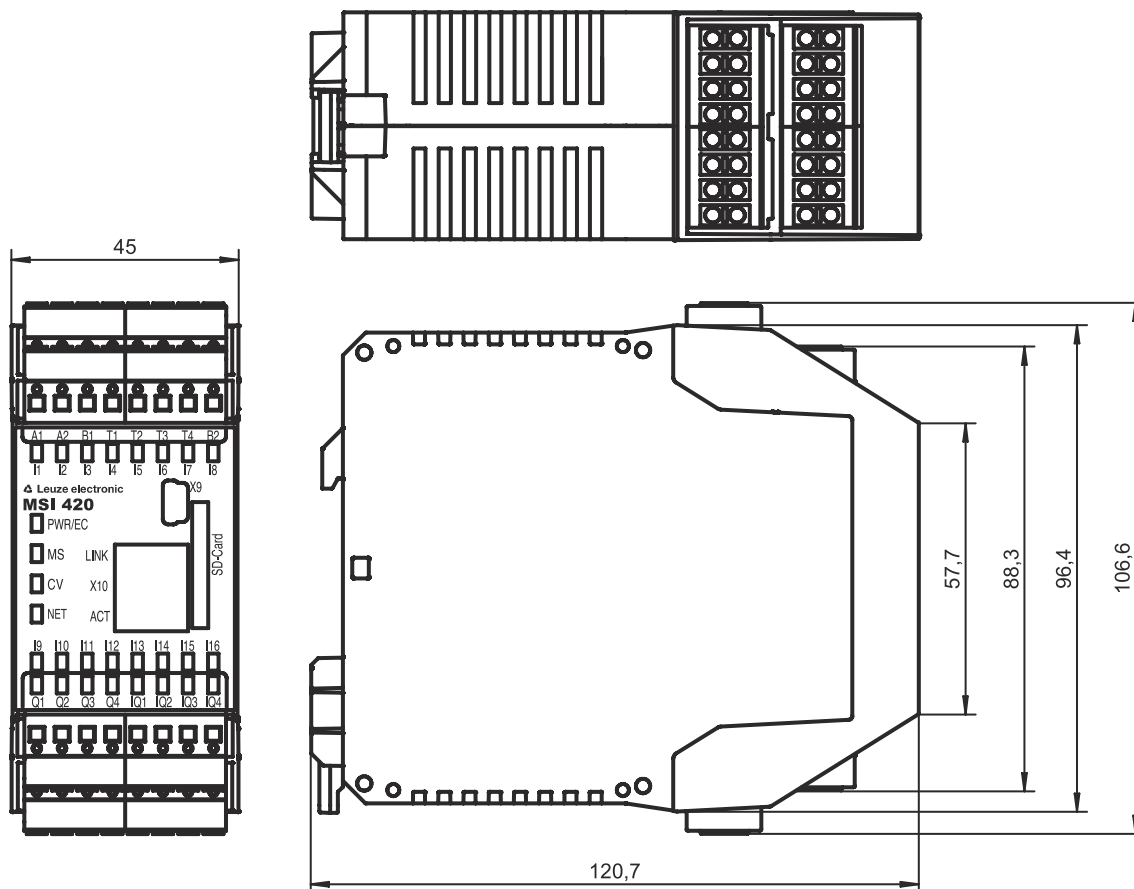
Degree of protection	IP 20
Protection class	III
Certifications	c UL US TÜV Rheinland
Vibration resistance	5 ... 150 Hz
Test procedure for oscillation in accordance with standard	EN 60068-2-6
Shock resistance, single shock	30 g, 11 ms, EN 60068-2-27
Shock resistance, continuous shock	10 g, 16 ms, EN 60068-2-29

### Classification

Customs tariff number	85371091
eCl@ss 8.0	27243101
eCl@ss 9.0	27243101
ETIM 5.0	EC002538
ETIM 6.0	EC002538

# Dimensioned drawings

All dimensions in millimeters



## Electrical connection

### Connection 1

<b>Function</b>	Signal IN
	Signal OUT
	Voltage supply
<b>Type of connection</b>	Terminal
<b>Type of terminal</b>	Spring-cage terminal
<b>No. of pins</b>	22 -pin

Pin	Pin assignment
1	A1 +24V
2	A2 GND
3	B1 +24 V (outputs Q1 - Q4)
4	B2 +24 V (outputs IQ1 - IQ4)
5	I1 SLS

# Electrical connection

Pin	Pin assignment
	I2
6	Start/activation input
	I3
7	Contacting monitoring input
	I4
8	Start 1 edge
	I5
9	Start 2 edge
	I6
10	Control 1
	I7
11	Control 2
	I10
12	Selection of operating mode
	I11
13	Selection of operating mode
	I12
14	Selection of operating mode
	IQ1
15	"Error" signal output
	IQ2
16	"Safety ON" signal output
	IQ3
17	Start 1 active
	IQ4
18	Start 2 active
	Q1
19	Safety output 1
	Q2
20	Safety output 2
	Q3
21	Indicator light 1
	Q4
22	"Error indication" signal output

## Connection 2

## X9

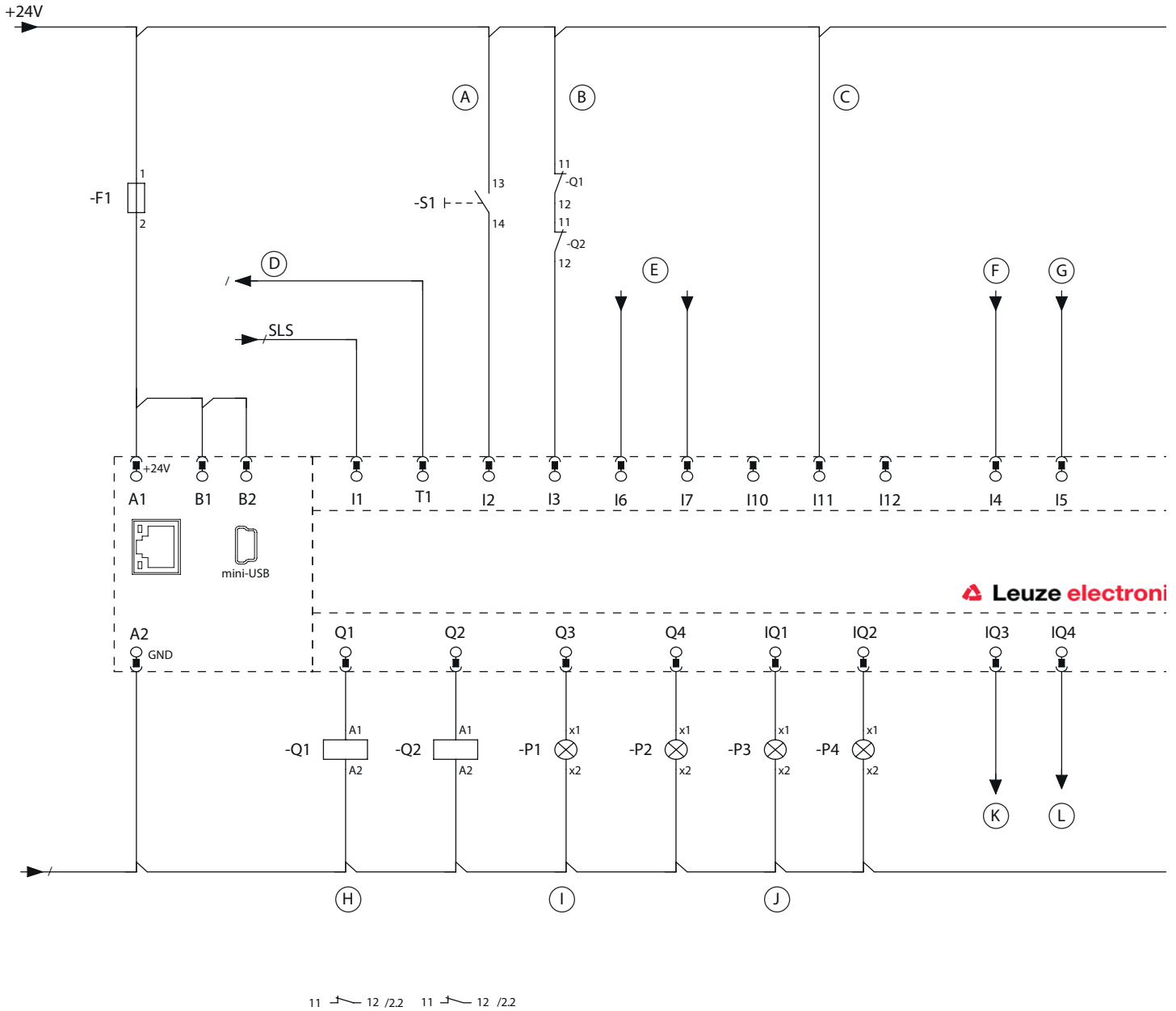
Function	Configuration interface
Type of connection	USB
Connector type	USB 2.0 Mini-A

## Connection 3

## X10

Function	Configuration interface
Type of connection	RJ45

# Circuit diagrams



- |                          |                  |                       |
|--------------------------|------------------|-----------------------|
| A Start/activation input | E Control 1-2    | I Indicator light 1   |
| B Contactor monitoring   | F Start 1 edge   | J Diagnostics display |
| C Operating mode 3       | G Start 2 edge   | K Start 1 active      |
| D SLS activation         | H Safety outputs | L Start 2 active      |

## 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.