Technical data sheet
Safety control
Part no.: 50132989
MSI 430-03

For Illustration purposes only

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Technical data

Basic data

Series	MSI 430
Type	Safety control
Application	Monitoring of safety functions
Number of safe I/Os	16 IN, 4 OUT, 4 programmable I/O

Functions

Functions	24 safe I/Os
	3 Industrial Ethernet protocols on-board: PROFINET, EtherNet IP, Modbus TCP
	4 configurable safe I/Os (via software)
	40 certified function modules
	Configuration via mini USB or Ethernet (TCP/IP)
	Expandable with up to 12 I/O modules
	Freely configurable with MSI.designer (license-free)
	Modularly expandable safety control
	Program memory in SD card format (512 MB)
	Switching current 4 A per output
	Transfer of diagnostic data via external fieldbus gateways
	Up to 300 function modules in a project

Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	Up to and including e, EN ISO 13849-1
PFH_D	4,3E-09 per hour
Mission time T_M	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

Electrical data

Performance data

Supply voltage U_B	24 V, DC, -30 ... 25 %
Power consumption, max.	3.3 W

Output circuit

Number of outputs	4 Piece(s)
Max. number of integrated digital outputs	8 Piece(s)
Number of configurable inputs/ outputs	4 Piece(s)
Type of digital output	Transistor
Short circuit protection, outputs	Yes

Control circuit

Number of inputs	16 Piece(s)

Service interface

Type	Ethernet, USB

Ethernet

Function	Configuration via software

USB

Function	Configuration via software

Connection

Number of connections	3 Piece(s)

Connection 1

Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Terminal
Type of terminal	Spring-cage terminal
No. of pins	32 -pin

Connection 2

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

Connection 3

Function	BUS OUT
Type of connection	RJ45

Cable properties

Connection cross sections	2 x 0.2 to 1.5 mm², wire
	2 x 0.2 to 1.5 mm², wire
	2 x 0.25 to 1.5 mm², wire with wire-end sleeve (pressed in trapezium shape)

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

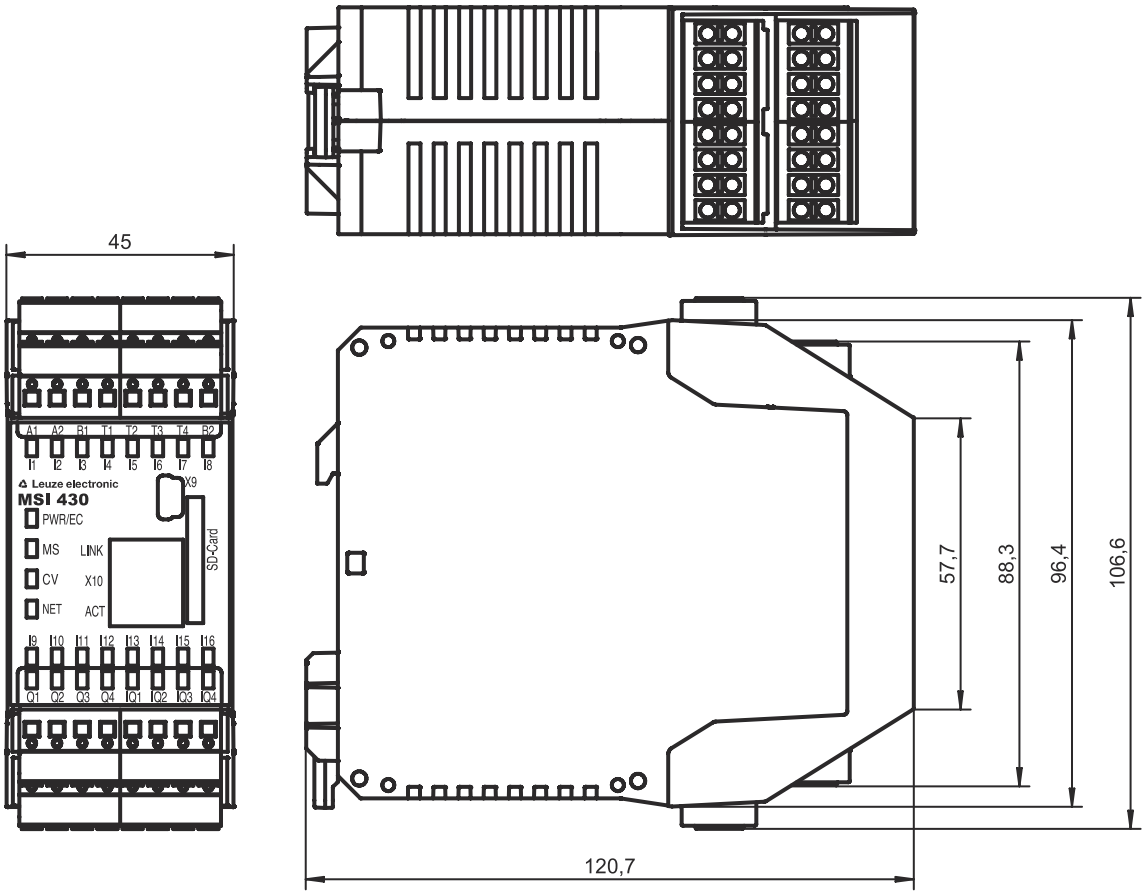
Degree of protection	IP 20
Protection class	III
Certifications	c UL US
	TÜV Rheinland
Vibration resistance	5 ... 150 Hz
Test procedure for oscillation in accordance with standard	EN 60068-2-6
Shock resistance, single shock	30 g, 11 ms, EN 60068-2-27
Shock resistance, continuous shock	10 g, 16 ms, EN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

Classification

Customs tariff number	85371091
ECLASS 5.1.4	27243001
ECLASS 8.0	27243101
ECLASS 9.0	27243101
ECLASS 10.0	27243101
ECLASS 11.0	27243101
ECLASS 12.0	27243101
ECLASS 13.0	27243101
ETIM 5.0	EC002538
ETIM 6.0	EC002538
ETIM 7.0	EC002538
ETIM 8.0	EC002538

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Terminal
Type of terminal	Spring-cage terminal
No. of pins	32 -pin

Terminal	Assignment
A1	+24 V
A2	GND
B1	+24 V (outputs Q1 - Q4)
B2	+24 V (outputs IQ1 - IQ4)
I1	Safe input
I2	Safe input
I3	Safe input
I4	Safe input
I5	Safe input
I6	Safe input

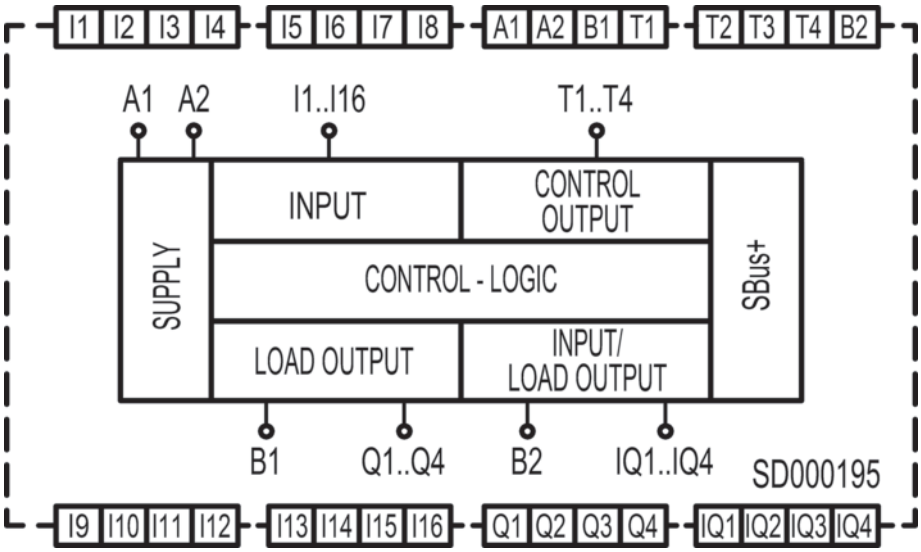
Electrical connection

Terminal	Assignment
I7	Safe input
I8	Safe input
I9	Safe input
I10	Safe input
I11	Safe input
I12	Safe input
I13	Safe input
I14	Safe input
I15	Safe input
I16	Safe input
IQ1	Safe input/output (configurable)
IQ2	Safe input/output (configurable)
IQ3	Safe input/output (configurable)
IQ4	Safe input/output (configurable)
Q1	Safe output
Q2	Safe output
Q3	Safe output
Q4	Safe output
T1	Test signal output
T2	Test signal output
T3	Test signal output
T4	Test signal output

Connection 2	X9
Function	Configuration interface
Type of connection	USB
Connector type	USB 2.0 Mini-A

Connection 3	X10
Function	BUS OUT
Type of connection	RJ45

Circuit diagrams



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.

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

Accessories

General

	Part no.	Designation	Article	Description
	50132996 *	MSI-SD-CARD	Program memory	
	50133002	MSI-SD-COVER	Cover	Contains: 10x MSI-SD-COVER

* Necessary accessories, please order separately

Services

	Part no.	Designation	Article	Description
	S981043	CS40-E-312	Hourly rate	Details: Location and content to be agreed upon. Conditions: Price not including travel costs and, if applicable, accommodation expenses. Restrictions: Travel costs and accommodation expenses charged separately and, if applicable, according to expenditure.
	S981029	CS40-T-110	Product training	Details: Location and content to be agreed upon, duration: max. 10 hours. Conditions: Price not including travel costs and, if applicable, accommodation expenses. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure. Maximum number of participants: 12 people

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