

**Part no.: 50132989**  
**MSI 430-03**  
**Safety relay**



Figure can vary

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Part no.: 50132989 – MSI 430-03 – Safety relay

## Technical data

| <b>Basic data</b>                         |                                       |
|---|---------------------------------------|
| Series                                    | MSI 430                               |
| <b>Characteristic parameters</b>          |                                       |
| SIL                                       | 3, IEC 61508                          |
| SILCL                                     | 3, IEC/EN 62061                       |
| Performance Level (PL)                    | Up to and including e, EN ISO 13849-1 |
| PFH <sub>D</sub>                          | 0.0000000043 per hour                 |
| Mission time T <sub>M</sub>               | 20 years, EN ISO 13849-1              |
| Category                                  | 4, EN ISO 13849                       |
| <b>Electrical data</b>                    |                                       |
| <b>Performance data</b>                   |                                       |
| Supply voltage                            | 24 V, DC, -30 ... 25 %                |
| Power consumption, max.                   | 3.3 W                                 |
| <b>Output circuit</b>                     |                                       |
| 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                                   |
| <b>Control circuit</b>                    |                                       |
| 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                                |
| <b>Interface</b>                          |                                       |
| Type                                      | Internal bus (SBUS+)                  |
| <b>Service interface</b>                  |                                       |
| Type                                      | Ethernet                              |
| <b>Ethernet</b>                           |                                       |
| Function                                  | Configuration via software            |
| Type                                      | USB                                   |
| <b>USB</b>                                |                                       |
| Function                                  | Configuration via software            |
| <b>Connection</b>                         |                                       |
| Number of connections                     | 3 Piece(s)                            |

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### Connection 1

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

### Connection 2

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

### Connection 3

|                    |         |
|--------------------|---------|
| Type of connection | RJ45    |
| Function           | BUS OUT |

### 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) |
|---------------------------|--|

### Mechanical data

|                   |                         |
|-------------------|-------------------------|
| Width             | 45 mm x 107 mm x 121 mm |
| Net weight        | 290 g                   |
| Housing color     | Gray                    |
| Type of fastening | Snap-on mounting        |

### Operation and display

|                       |                |
|-----------------------|----------------|
| Type of display       | LED indicators |
| Type of configuration | Software       |

### Environmental data

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

### Certifications

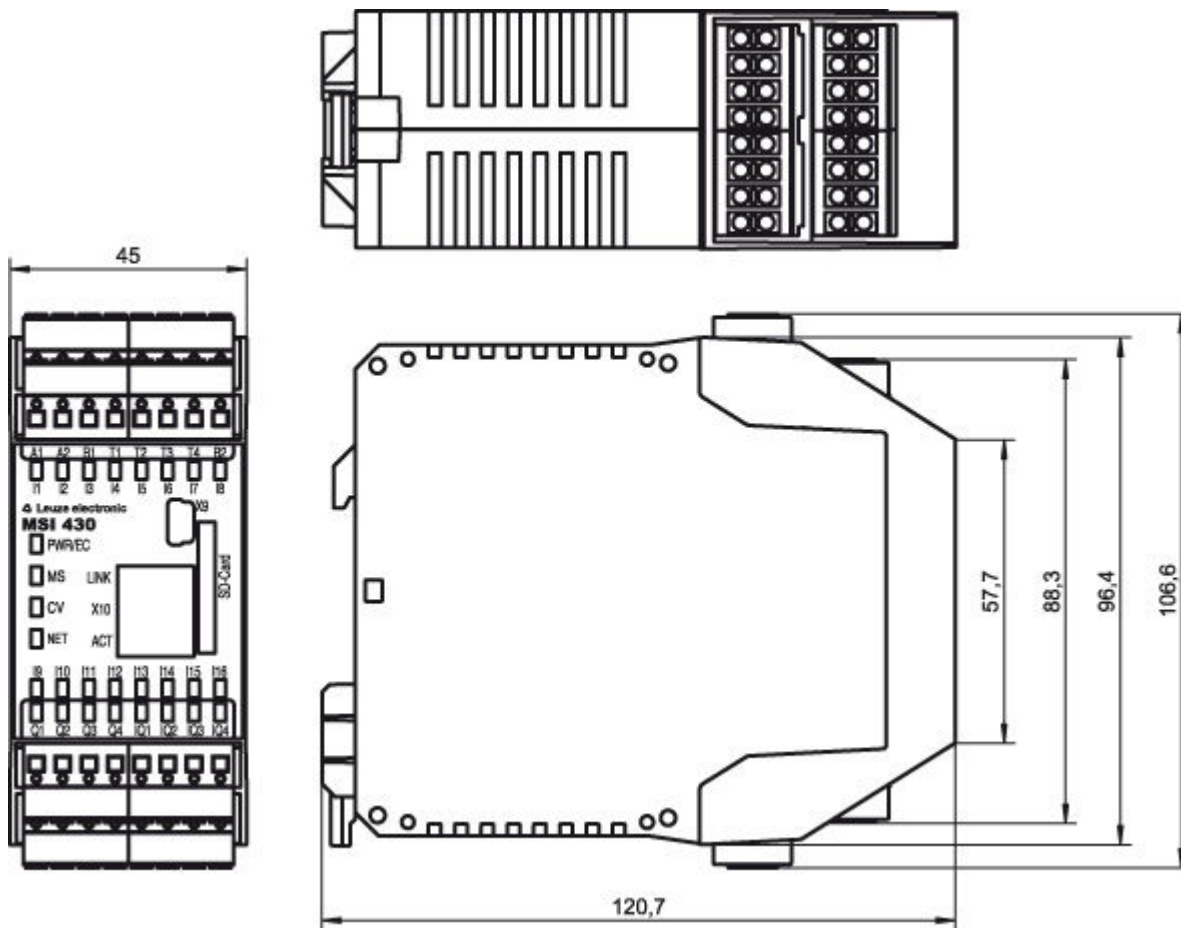
|  |                            |
|--|----------------------------|
| Degree of protection                                       | IP 20                      |
| Protection class   | III                        |
| Certifications   | c UL US, TÜV Rheinland     |
| Vibration resistance                                       | 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

|            |          |
|------------|----------|
| eCl@ss 8.0 | 27243101 |
| eCl@ss 9.0 | 27243101 |
| ETIM 5.0   | EC002538 |

## Dimensioned drawings

All dimensions in millimeters



## Electrical connection

| Connection 1       |                                       |
|--------------------|---------------------------------------|
| Type of connection | Terminal                              |
| Function           | Signal IN, Signal OUT, Voltage supply |
| Type of terminal   | Spring-cage terminal                  |
| No. of pins        | 32 -pin                               |

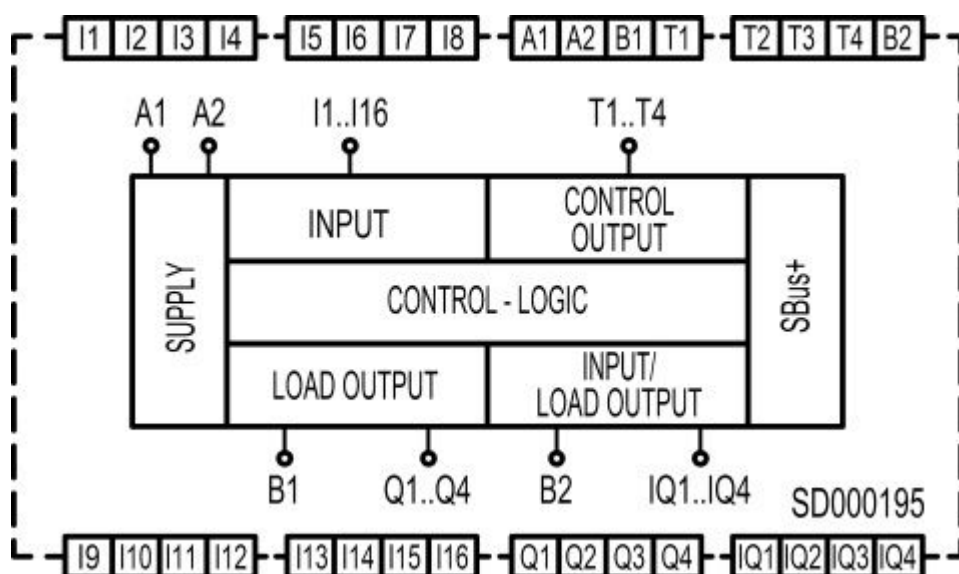
| Terminal | Assignment                |
|----------|---------------------------|
| A1       | +24V                      |
| A2       | GND                       |
| B1       | +24 V (outputs Q1 - Q4)   |
| B2       | +24 V (outputs IQ1 - IQ4) |
| I1       | Safe input                |
| I2       | Safe input                |
| I3       | Safe input                |
| I4       | Safe input                |
| I5       | Safe input                |
| I6       | Safe input                |
| I7       | Safe input                |
| I8       | Safe input                |
| I9       | Safe input                |
| I10      | Safe input                |

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

| Connection 3       | X10     |
|--------------------|---------|
| Type of connection | RJ45    |
| Function           | BUS OUT |


## Circuit diagrams



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## Accessories

### General

|   | Part no. | Designation  | Article      | Description |
|---|----------|--------------|--------------|-------------|
|  | 50132996 | MSI-SD-CARD  | Safety relay |             |
|  | 50133002 | MSI-SD-COVER | Safety relay |             |

## 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.