



Part no.: 50134312
MSI 410.F50-03
Safety control



Figure can vary

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Technical data

| Basic data | |
|---|---|
| Series | MSI 410 |
| Application | Monitoring of safety functions and press sequence control |
| Number of safe I/Os | 20 IN, 4 OUT |
| Functions | |
| Functions | Additional functionality for the sequence control of eccentric and hydraulic presses Additional I/O extensions available (optional) Configurable safety control Configuration via MSI.designer software Removable program memory (must be ordered separately, part no. 50132996) Transfer of diagnostic data via external fieldbus modules, e.g. MSI-FB-PROFIBUS (optional) USBmini interface |
| 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 | 0.0000000043 per hour |
| 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 | 4 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 | 20 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+) |
| Service interface | |
| Type | USB |

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USB

| | |
|----------|----------------------------|
| Function | Configuration via software |
|----------|----------------------------|

Connection

| | |
|-----------------------|------------|
| Number of connections | 2 Piece(s) |
|-----------------------|------------|

Connection 1

| | |
|--------------------|---|
| Type of connection | Terminal |
| Function | Signal IN Signal OUT Voltage supply |
| Type of terminal | Spring-cage terminal |
| No. of pins | 31 -pin |

Connection 2

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

Cable properties

| | |
|---------------------------|--|
| Connection cross sections | 2 x 0.2 to 1.5 mm ² , wire 2 x 0.2 to 1.5 mm ² , wire 2 x 0.25 to 1.5 mm ² , 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 |

Operation and display

| | |
|-----------------------|---------------|
| Type of display | LED indicator |
| 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 |

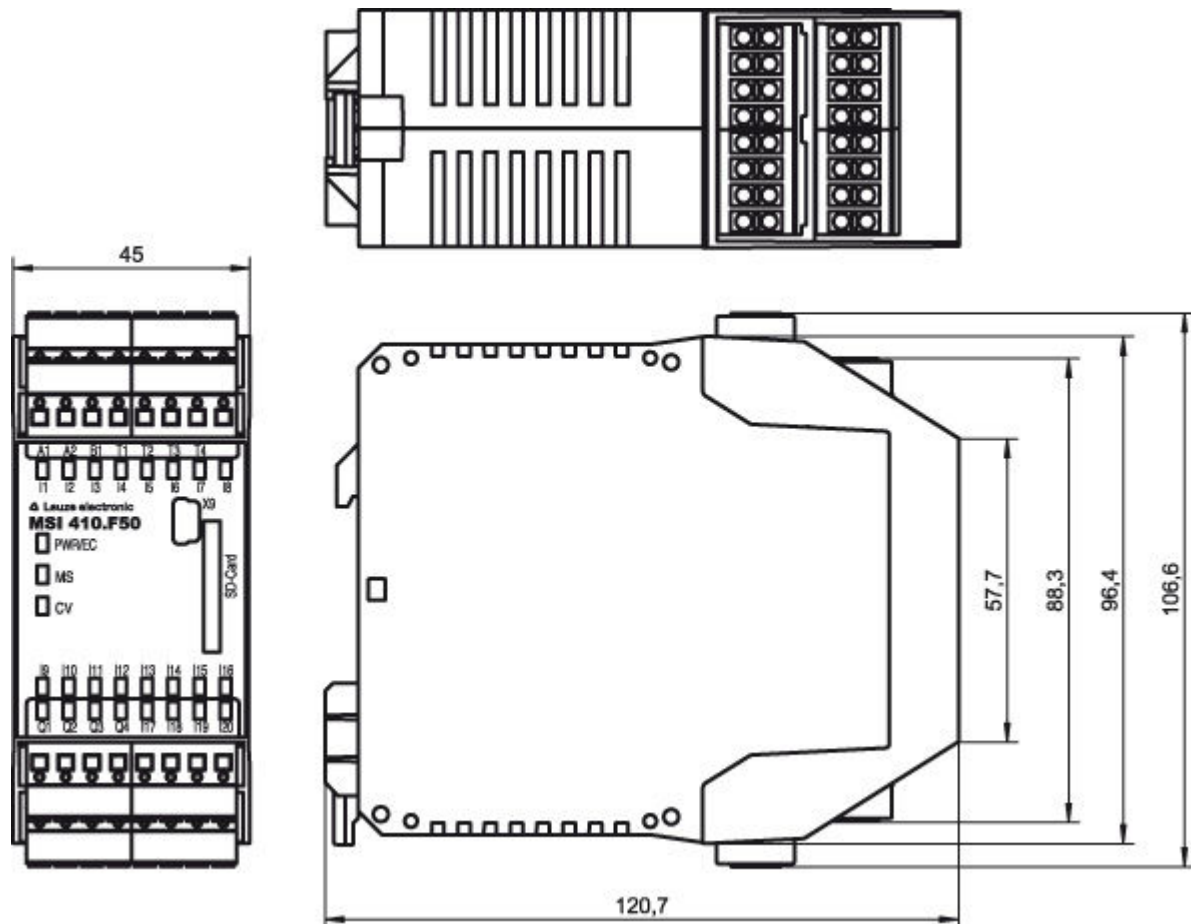
Classification

| | |
|-----------------------|----------|
| 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 | |
|--------------------|---|
| Type of connection | Terminal |
| Function | Signal IN Signal OUT Voltage supply |
| Type of terminal | Spring-cage terminal |
| No. of pins | 31 -pin |

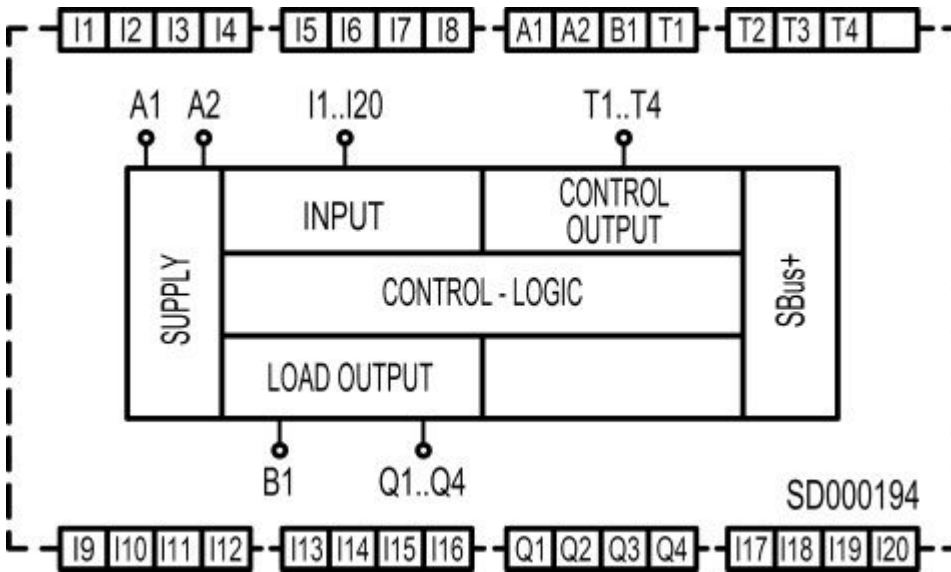
| Terminal | Assignment |
|----------|-------------------------|
| A1 | +24V |
| A2 | GND |
| B1 | +24 V (outputs Q1 - Q4) |

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| Terminal | Assignment |
|----------|--------------------|
| 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 |
| I12 | Safe input |
| I13 | Safe input |
| I14 | Safe input |
| I15 | Safe input |
| I16 | Safe input |
| I17 | Safe input |
| I18 | Safe input |
| I19 | Safe input |
| I20 | Safe input |
| 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 |

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 |

General



| | Part no. | Designation | Article | Description |
|---|------------|-------------|----------------|-------------|
|  | 50132996 * | MSI-SD-CARD | Program memory | |

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| | Part no. | Designation | Article | Description |
|---|----------|--------------|---------|----------------------------|
|  | 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 for "Safety Engineering" | 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. |