

Technical data sheet

Safe I/O module

Part no.: 50132990

MSI-EM-IO84-01

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Circuit diagrams
- Notes



Figure can vary



Technical data

Basic data

Series	MSI-EM
Application	Monitoring of safety functions
Number of safe I/Os	8 IN, 4 OUT

Functions

Functions	Extension module for the MSI 400 configurable safety control Extension with 8 safe inputs and 4 safe outputs (OSSDs)
-----------	---

Characteristic parameters

SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
PFH _D	6E-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.	1.1 W

Output circuit

Number of outputs	4 Piece(s)
Type of digital output	Transistor
Short circuit protection, outputs	Yes
Min. voltage permitted at the output	16.8 V
Max. voltage permitted at the output	30 V
Output current	4 A

Control circuit

Number of inputs	8 Piece(s)
Voltage permitted at the input	30 V
Input current at signal 1	8 mA

Interface

Type	Internal bus (SBUS+)
------	----------------------

Connection

Number of connections	1 Piece(s)
-----------------------	------------

Connection 1

Function	Signal IN Signal OUT Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	16 -pin

Cable properties

Connection cross sections	1 x 0.2 to 2.5 mm ² , wire 1 x 0.2 to 2.5 mm ² , wire 1 x 0.25 to 2.5 mm ² , wire with wire-end sleeve 2 x 0.2 to 1.0 mm ² , wire 2 x 0.2 to 1.0 mm ² , wire 2 x 0.25 to 1.0 mm ² , wire with wire-end sleeve
---------------------------	--

Mechanical data

Dimension (W x H x L)	22.5 mm x 96.5 mm x 120.8 mm
Net weight	180 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

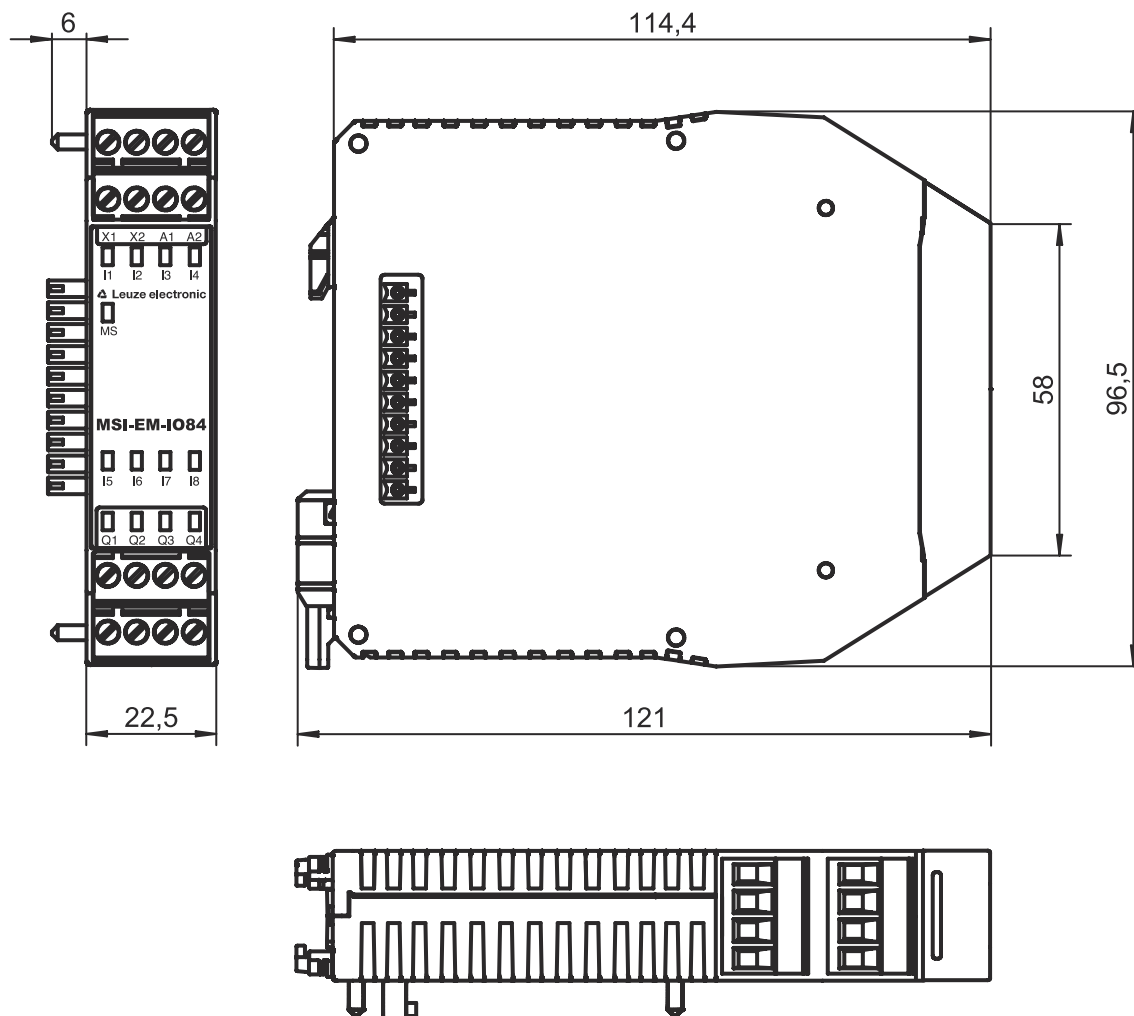
Degree of protection	IP 20 (terminals) IP 40 (housing)
Protection class	III
Certifications	c UL US TÜV Rheinland
Vibration resistance	5 ... 500 Hz
Test procedure for oscillation in accordance with standard	EN 60068-2-6
Shock resistance, single shock	30 g, 11 ms, EN 60068-2-27
Shock resistance, continuous shock	10 g, 16 ms, EN 60068-2-29

Classification

Customs tariff number	85364900
eCl@ss 5.1.4	27242204
eCl@ss 8.0	27242204
eCl@ss 9.0	27242204
eCl@ss 10.0	27242204
eCl@ss 11.0	27242204
ETIM 5.0	EC001419
ETIM 6.0	EC001419
ETIM 7.0	EC001419

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

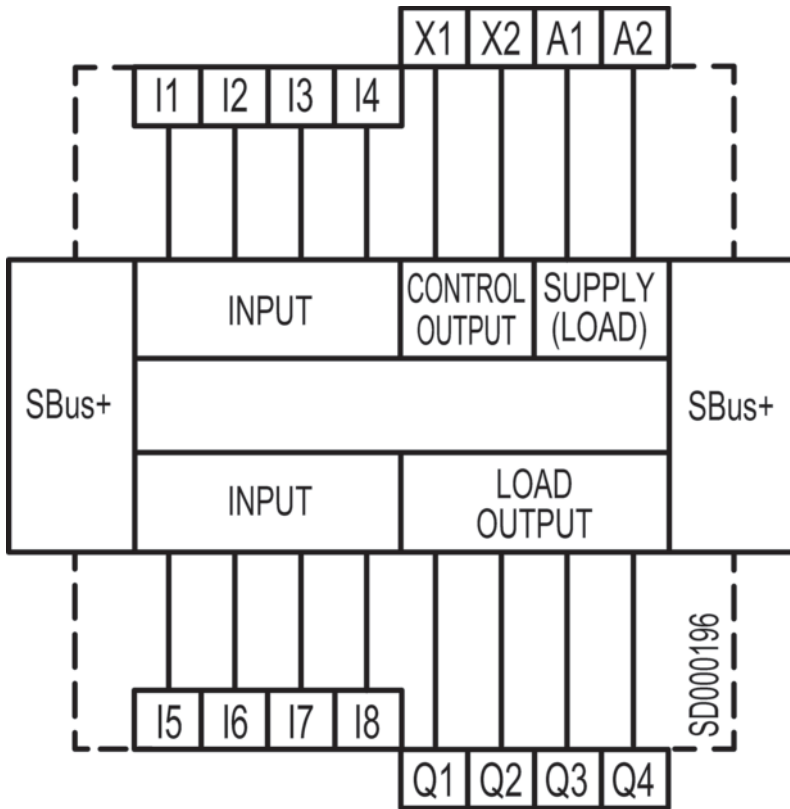
Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	16 -pin

Pin	Pin assignment
1	A1 +24V
2	A2 GND
3	I1 Safe input

Electrical connection

Pin	Pin assignment
	I2
4	Safe input
	I3
5	Safe input
	I4
6	Safe input
	I5
7	Safe input
	I6
8	Safe input
	I7
9	Safe input
	I8
10	Safe input
	Q1
11	Safe output
	Q2
12	Safe output
	Q3
13	Safe output
	Q4
14	Safe output
	X1
15	Test signal output
	X2
16	Test signal output

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.