# Product data sheet

Specifications

## Expansion modules, Modicon MCM, 2 analog input pairs, screw

XPSMCMAI0200

## Main

| | |
|---|---|
| **Range of product** | Modicon MCM |
| **Product or component type** | Safe input expansion module |
| **Device short name** | XPSMCM |
| **Electrical connection** | Screw terminal |
| **[Us] rated supply voltage** | 24 V - 20...20 % DC |
| **Input type** | 2 analog |
| **Function of module** | Analogue input current for analog input<br>Analogue input voltage for analog input current |

## Complementary

| | |
|---|---|
| **Power consumption in W** | 3 W |
| **Power dissipation in W** | 3 W |
| **Integrated connection type** | Backplane expansion bus |
| **Number of terminal blocks** | 4 |
| **Connections - terminals** | 4 captive screw clamp terminals, removable terminal block |
| **Voltage state 0 guaranteed** | 0...10 V for analog input<br>0...10 V for analog input voltage<br>0...10 V for analogue input<br>0...10 V for analogue input circuit<br>0...10 V for analogue input signals<br>0...10 V for temperature sensor |
| **Current state 0 guaranteed** | 0...20 mA (analog input)<br>0...20 mA (analog input current)<br>0...20 mA (analogue input)<br>0...20 mA (analogue input circuit)<br>0...20 mA (analogue input signals)<br>0...20 mA (temperature sensor) |
| **Safety level** | Can reach category 4 conforming to ISO 13849-1<br>Can reach PL = e conforming to ISO 13849-1<br>Can reach SIL 3 conforming to IEC 61508<br>SILCL 3 conforming to IEC 62061 |
| **Quality labels** | CE |
| **Discrete input voltage** | 24 V DC |
| **Local signalling** | 1 LED green with PWR marking for power ON<br>1 LED green with RUN marking for RUN (status)<br>1 LED red with E IN marking for internal error<br>1 LED red with E EX marking for external error<br>2 LEDs orange with ADDR marking for node address<br>4 LEDs green/red with IN marking for input status |

| | |
|---|---|
| **Cable cross section** | 0.2…1.5 mm² - AWG 24...AWG 16 flexible cablewithout cable end<br>0.2…2.5 mm² - AWG 24...AWG 14 flexible cablewithout cable end<br>0.25…1 mm² - AWG 23...AWG 18 flexible cablewith cable end, without bezel<br>0.25…2.5 mm² - AWG 23...AWG 14 flexible cablewith cable end, with bezel<br>0.25…2.5 mm² - AWG 23...AWG 14 flexible cablewith cable end, without bezel<br>0.5…1.5 mm² - AWG 20...AWG 16 flexible cablewith cable end, with double bezel<br>0.2…1 mm² - AWG 24...AWG 18 solid cablewithout cable end<br>0.2…2.5 mm² - AWG 24...AWG 14 solid cablewithout cable end |
| **Mounting support** | Omega 35 mm DIN rail conforming to EN 50022 |
| **Depth** | 114.5 mm |
| **Height** | 99 mm |
| **Width** | 22.5 mm |
| **Product weight** | 0.127 kg |

# Environment

| | |
|---|---|
| **Standards** | IEC 62061<br>IEC 61508<br>ISO 13849-1<br>IEC 61800-5-1 |
| **Product certifications** | RCM<br>cULus<br>TÜV |
| **IP degree of protection** | IP20 (enclosure) |
| **Ambient air temperature for operation** | -10…55 °C |
| **Ambient air temperature for storage** | -20…85 °C |
| **Relative humidity** | 10…95 % |
| **Pollution degree** | 2 |
| **[Uimp] rated impulse withstand voltage** | 4 kV conforming to IEC 61800-5-1 |
| **Safety reliability data** | DC > 99 %<br>MTTFd = 186.69 years<br>PFHD = 9.54E-8 1/h high |
| **Insulation** | 250 V AC between power supply and housing conforming to IEC 61800-5-1 |
| **Overvoltage category** | II |
| **Electromagnetic compatibility** | Electrostatic discharge immunity test - test level: 6 kV (on contact) conforming to IEC 61000-4-2<br>Electrostatic discharge immunity test - test level: 20 kV (on air) conforming to IEC 61000-4-2<br>Susceptibility to electromagnetic fields - test level: 10 V/m (80...1000 MHz) conforming to IEC 61000-4-3<br>Susceptibility to electromagnetic fields - test level: 30 V/m (1.4 GHz...2 GHz) conforming to IEC 61000-4-3 |
| **Vibration resistance** | +/-0.35 mm (f= 10…55 Hz) conforming to IEC 61496-1 |
| **Shock resistance** | 10 gn (duration = 16 ms) for 1000 shocks on each axis conforming to IEC 61496-1 |
| **service life** | 20 year(s) |

# Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 4.600 cm |
| **Package 1 Width** | 12.900 cm |
| **Package 1 Length** | 16.700 cm |

| | |
|---|---|
| **Package 1 Weight** | 234.000 g |
| **Unit Type of Package 2** | S01 |
| **Number of Units in Package 2** | 4 |
| **Package 2 Height** | 15.000 cm |
| **Package 2 Width** | 15.000 cm |
| **Package 2 Length** | 40.000 cm |
| **Package 2 Weight** | 1.228 kg |

## Contractual warranty

| | |
|---|---|
| **Warranty (in months)** | 18 |

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Total lifecycle Carbon footprint | **115 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **7 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **0 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0.2 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **108 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **0.3 kg CO2 eq.** |
| Environmental Disclosure | **Product Environmental Profile** |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **No** |
| Packaging without single use plastic | **No** |
| EU RoHS Directive | **Compliant** |
| REACh Regulation | **Free of Substances of Very High Concern above the threshold** |

## Use Longer

### Lifetime extension

| | |
|---|---|
| Repair | **No** |

## Use Again

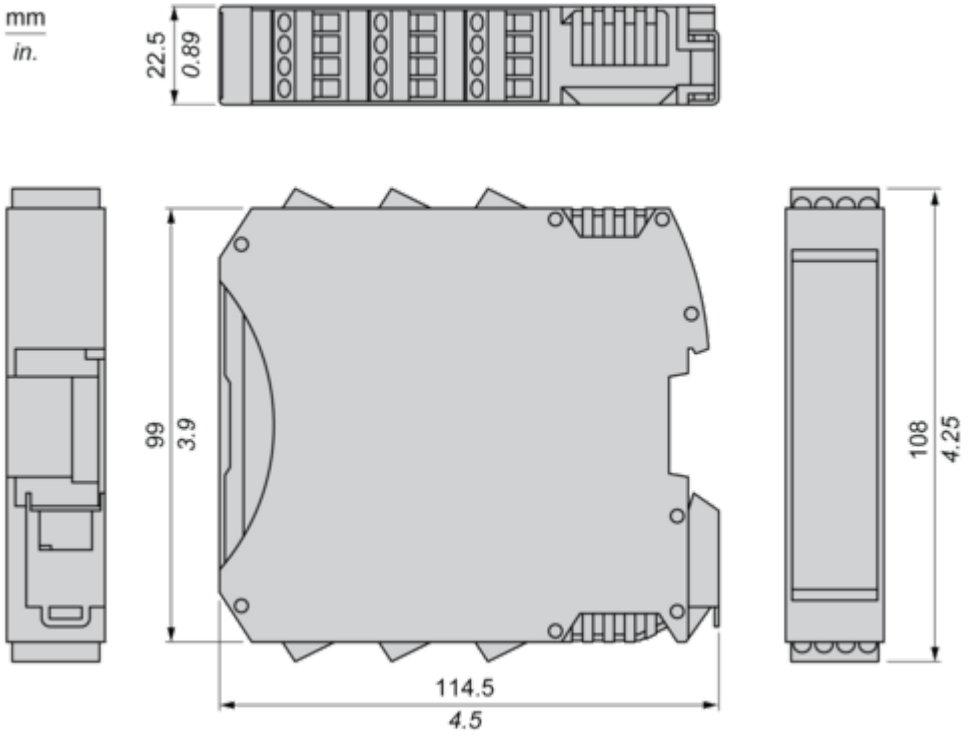
### Repack and remanufacture

| | |
|---|---|
| End of life manual availability | **End of Life Information** |
| Take-back | **No** |
| WEEE Label | **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins** |

Dimensions Drawings

## Dimensions

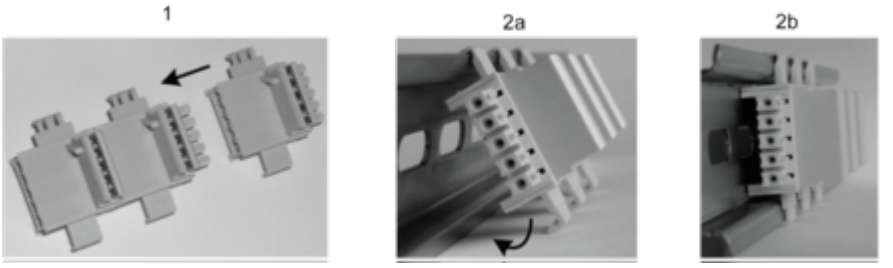
### Screw Terminal



## Mounting and Clearance

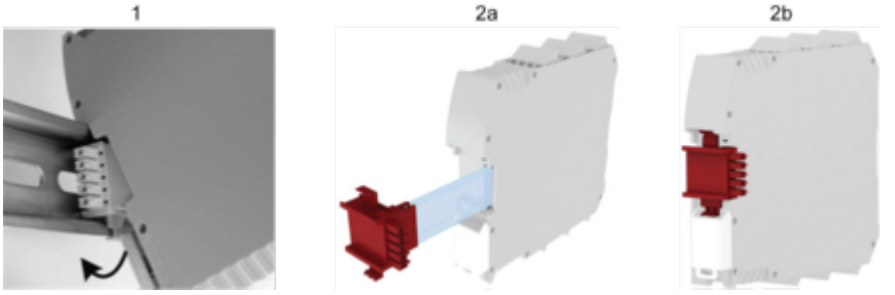
### Mounting Safety Controller CPU with Module(s)

#### Mount BackPlane Connector on Rail




**1 :** Connect as much Backplane Connector as module to be install.
**2 :** Fix the connectors to the rail (Top first).

#### Mount Safety Controller CPU with Other Module(s)

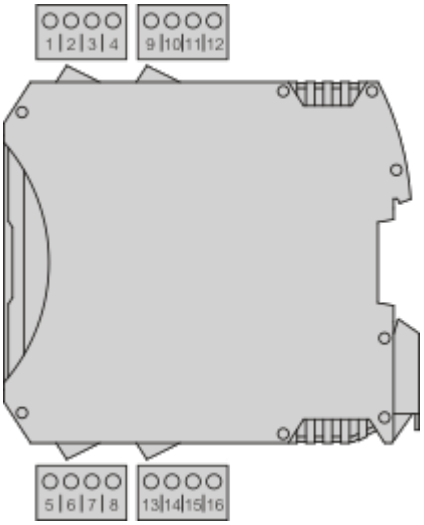



**1 :** Mount controller CPU and modules on rail.
**2 :** Make sure that the controller CPU or the module(s) are plugged on the BackPlane connector.

Connections and Schema

## Connections & Schema

### Terminal Designation




| Terminal | Signal | LED | Type | Description | Operation |
|---|---|---|---|---|---|
| 1 | 24 VDC | PWR | - | 24 Vdc power supply | - |
| 2 | NODE_ADDR0 | ADDR0 | Input | Node selection | Input type 3 according to EN 61131-2. Maximum resistance 1.2 kΩ. |
| 3 | NODE_ADDR1 | ADDR1 | | | |
| 4 | 0 VDC | PWR | - | 0 Vdc power supply | - |
| 9 | 24VDC_S1 | CH 1 | Output | Sensor 1 connections | Isolated 24 Vdc power supply for sensor 1 |
| 10 | IN_S1 | | Input | | 0/20 mA sensor 1 input(1) |
| | NEG_S1 | | Input | | 0/10 V sensor 1 negative input(2) |
| 11 | OUT_S1 | | Output | | 0/20 mA sensor 1 input(1) |
| | POS_S1 | | Input | | 0/10 V sensor 1 negative input(2) |
| 12 | 0 VDC_S1 | | Output | | Isolated 0 Vdc reference for sensor 1 |
| 13 | 24VDC_S2 | CH 2 | Output | Sensor 2 connections | Isolated 24 Vdc power supply for sensor 2 |
| 14 | IN_S2 | | Input | | 0/20 mA sensor 2 input(1) |
| | NEG_S2 | | Input | | 0/10 V sensor 2 negative input(2) |
| 15 | OUT_S2 | | Output | | 0/20 mA sensor 2 output(1) |
| | POS_S2 | | Input | | 0/10 V sensor 2 positive input(2) |

| | | | | | |
|---|---|---|---|---|---|
| 16 | 0 VDC_S2 | | Output | | Isolated 0 Vdc reference for sensor 2 |
| **(1)** Input impedance (channel configured as current input) = 200<br>**(2)** Input impedance (channel configured as voltage input) = 250 kΩ according to EN 61131-2. | | | | | |

Technical Illustration

**Dimensions**

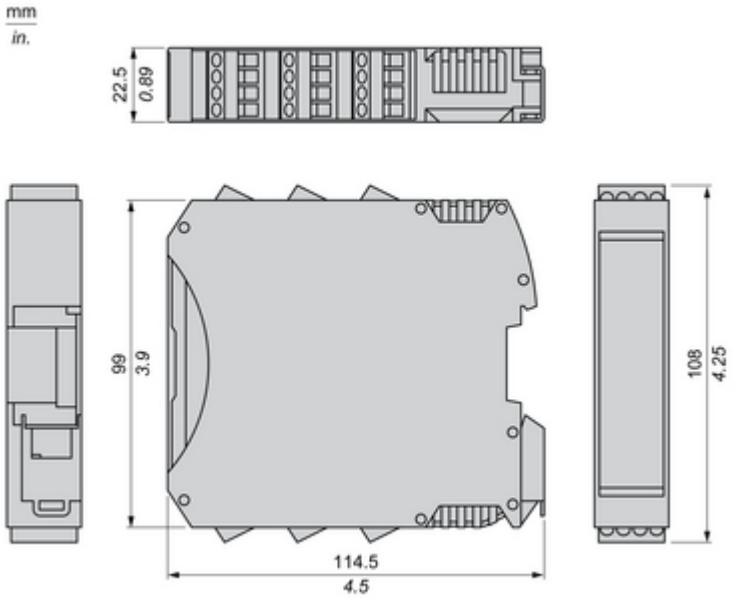
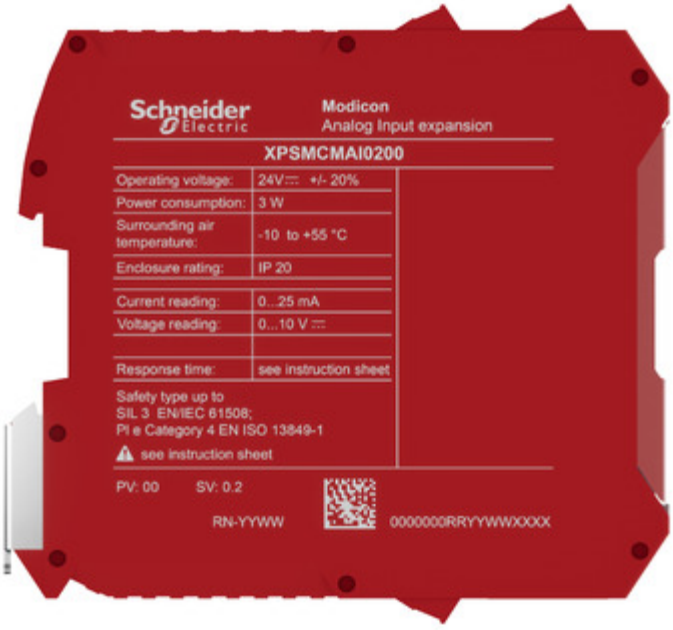
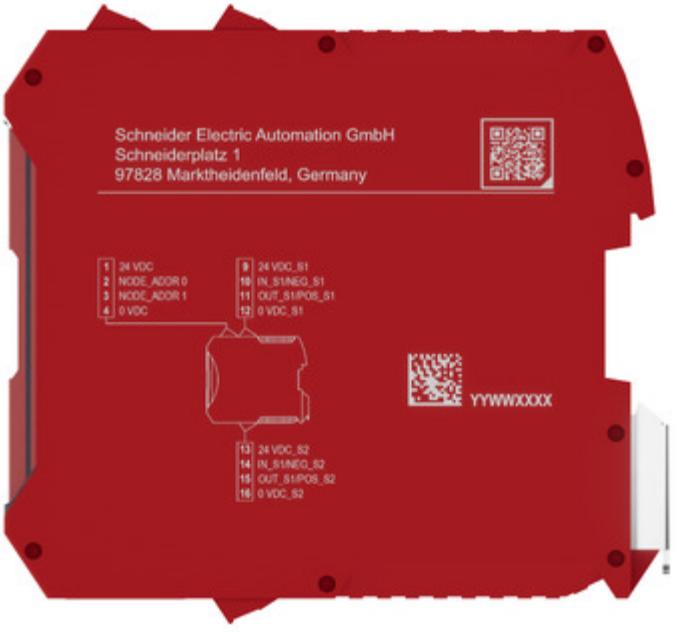


Image of product / Alternate images

**Alternative**


Schneider Electric
Modicon
Analog Input expansion
XPSMCMAI0200
Operating voltage: 24V ⎓ +/- 20%
Power consumption: 3 W
Surrounding air temperature: -10 to +55 °C
Enclosure rating: IP 20
Current reading: 0...25 mA
Voltage reading: 0...10 V ⎓
Response time: see instruction sheet
Safety type up to SIL 3 EN/IEC 61508; PI e Category 4 EN ISO 13849-1
see instruction sheet
PV: 00 SV: 0.2
RN-YYWW
0000000RRYYWWXXXX


Modicon
PWR
RUN
E IN
E EX
0
1
ADDR
AI02
1
2
CH
Schneider Electric


Schneider Electric Automation GmbH
Schneiderplatz 1
97828 Marktheidenfeld, Germany
1 24 VDC
2 NODE_ADDR 0
3 NODE_ADDR 1
4 0 VDC
9 24 VDC_S1
10 IN_S1/NEG_S1
11 OUT_S1/POS_S1
12 0 VDC_S1
13 24 VDC_S2
14 IN_S1/NEG_S2
15 OUT_S1/POS_S2
16 0 VDC_S2
YYWWXXXX