M12 I/O connection sockets

Signal status display

Labelling areas

Power supply status display: Box supply (Us)

Auxiliary voltage (UP)

IP3202-Bxxx

4-wire 3-wire 2-wire

I/O connection

1 | RL+
2 | R+
3 | RL-
4 | R-
5 | Shield

1 | + 24 V DC Us
2 | + 24 V DC UP
3 | GNDs
4 | GNDP

Connector assignment

IP3202-Bxxx | 4-channel analog input PT100 (RTD)

The IP3202 analog input module allows resistance sensors to be connected directly. The module's circuitry can operate the sensors using 2-, 3- or 4-wire connection techniques. Linearisation over the full temperature range is realised with the aid of a microprocessor. The temperature range can be selected freely. The module can also be used for simple resistance measurement with the output in ohms. The module's standard settings are: resolution 0.1 °C in the temperature range of PT100 sensors in 4-wire connection. Sensor malfunctions such as broken wires are indicated by error LEDs.

The module is quite versatile, but the default values are selected in such a way that in most cases it is not necessary to perform configuration. The input filter and associated conversion times can be set within a wide range; several data output formats may be chosen. If required, the inputs can be scaled differently. Automatic limit monitoring is also available. Parameterisation may be carried out either via the fieldbus or using the KS2000 software tool.

Technical data	IP3202-Bxxx
Number of inputs	4
Connection method	screw type M12 for 2-, 3- and 4-wire connections, presetting: 4-wire
Sensor types	PT100, PT200, PT500, PT1000, Ni100, Ni120, Ni1000 resistance measurement (e.g. potentiometer)
Measuring range	-200…+850 °C (PT sensors); -60…+250 °C (Ni sensors)
Resolution	0.1 °C per digit
Measuring error	< ±1 °C
Conversion time	approx. 250 ms (configurable up to 65 ms)
Nominal voltage	24 V DC (-15 %/+20 %)
Measuring current	typ. 0.5 mA
Input filter	5 variations, configurable
Current consumption from Us (without sensor current)	see documentation
Power supply connection	feed: 1 x M8 male socket, 4-pin; downstream connection: 1 x M8 female socket, 4-pin
Bit width in the process image	input: 4 x 16 bit data, optional: 4 x 8 bit control/status
Electrical isolation	channels/control voltage: 500 V, between the channels: no, control voltage/fieldbus: depends on the bus system
Operating/storage temperature	0…+55 °C/-25…+85 °C
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. class/installation pos.	IP 65/66/67 (conforms to EN 60529)/variable
Approvals	CE, UL