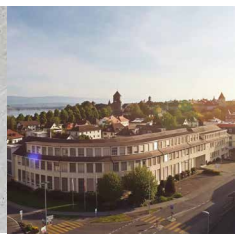
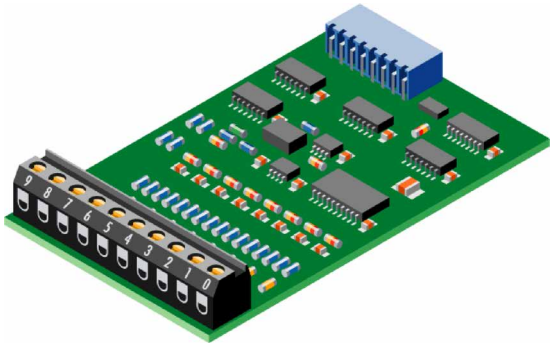
PCD2.W200

Analog input module, 8 channel, 10 bit, 0 … 10 V



Description

With its short conversion time of < 50 µs, this module is universally suitable for recording analogue signals.

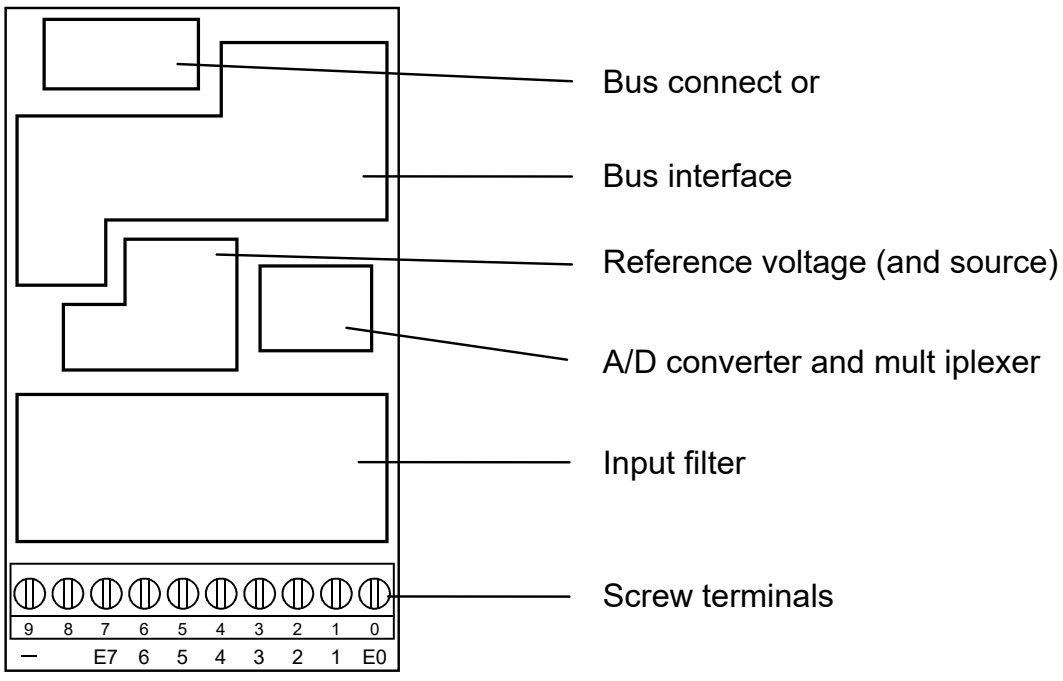


PCD2.W200

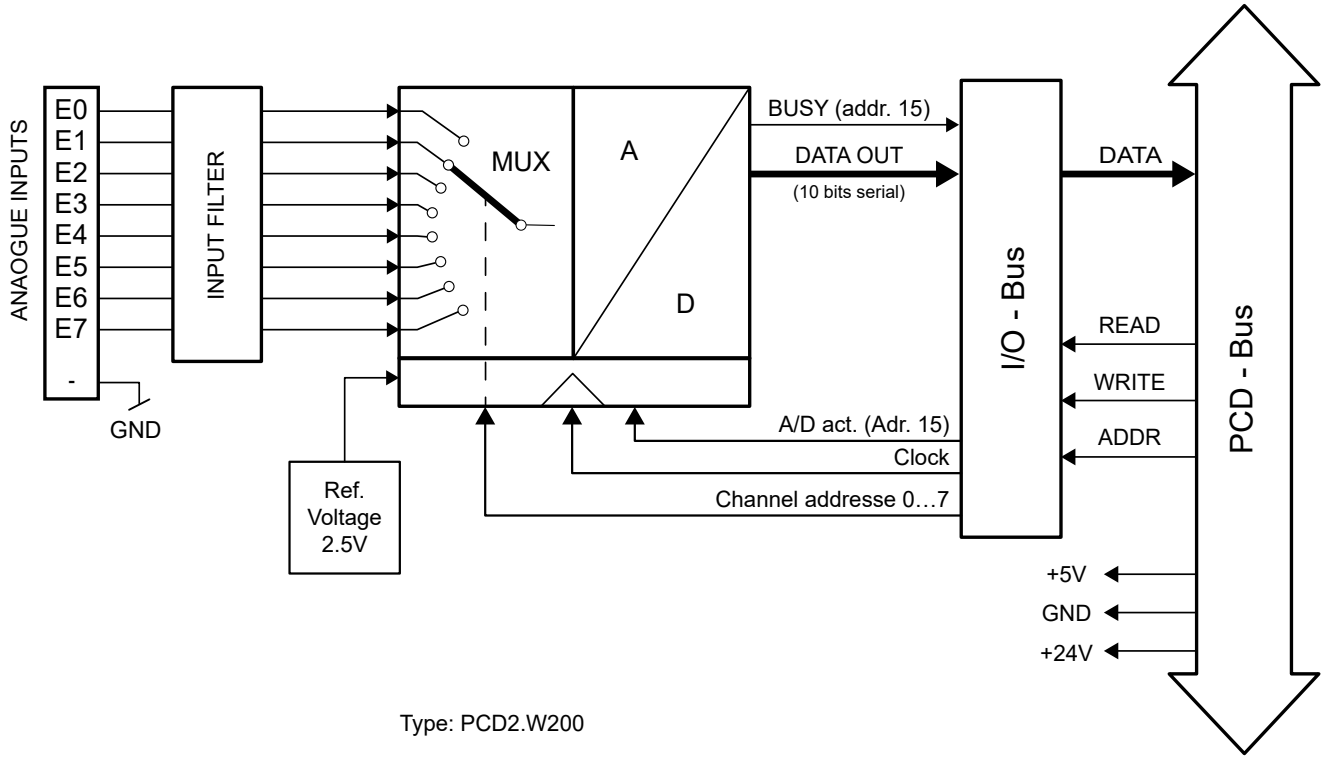
Technical specifications

Number of inputs (channels)	8
Signal range	0 à 10 V
Resolution (representation)	10 bit (0 … 1023)
Resolution per bit	9.775 mV per bit
Galvanic separation	no
Measuring principle	non-differential, single-ended
Input resistance	200 kΩ / 0.15 %
Accuracy (of measured value)	± 3 LSB
Repeating accuracy (under same conditions)	within 1 LSB
Temperature error (0 … +55 °C)	± 0.3 % (± 3 LSB)
Conversion time A/D	≤ 50 µs
Overvoltage protection	± 50 VDC
Burst protection (IEC1000-4-4)	± 1 kV, Leitungen nicht abgeschirmt ± 2 kV, Leitungen abgeschirmt
Time constant of input filter	typisch 5 ms
Internal current consumption (from +5 V bus)	8 mA
Internal current consumption (from V+ bus)	5 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole screw terminal block, for wires up to 1.5 mm². Plug type L (4 405 4847 0).

Indicators and connections



Block diagram

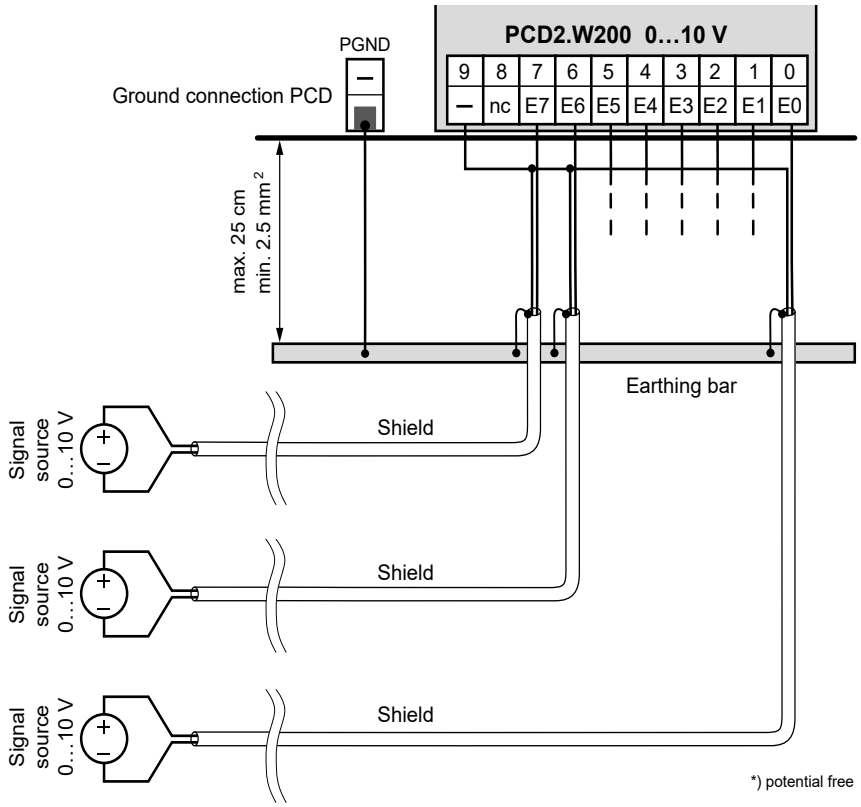


Type: PCD2.W200

Connection concept for voltage inputs

The voltage input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). To minimize the amount of interference coupled into the module via the transmission lines, connection should be made according to the principle explained below.

Connection for 0 … 10 V

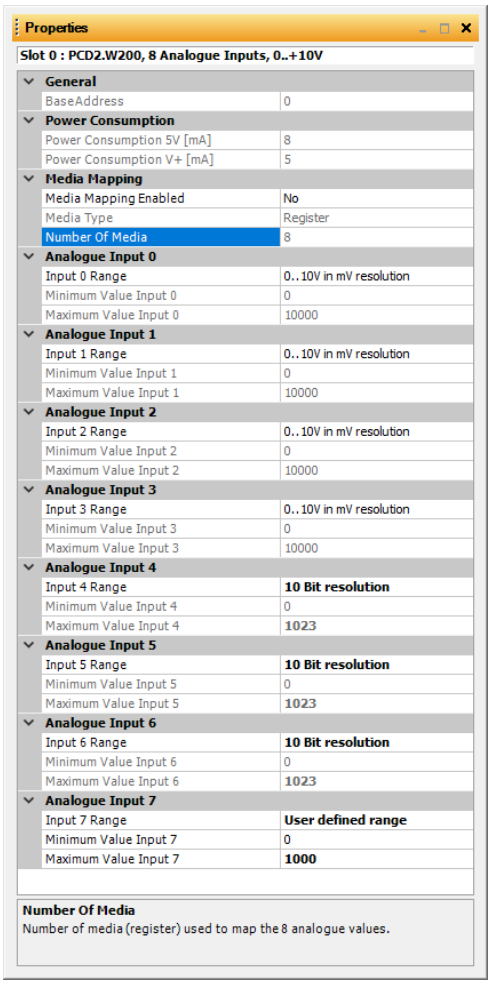


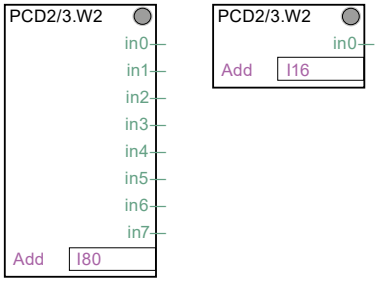
!	The reference potentials of signal sources should be wired to a common GND connection (“–” and “COM” terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.
!	If shielded cables are used, the shielding should be connected to an earthing rail.
!	Input signals with incorrect polarity significantly distort the measurements on the other channels.

Configuration

Saia PG5® Controls Suite

PCD-System	Evaluation
Classic	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator or Network Configurator).
Alternatively	An FBox "PCD2/3.W2" exists for evaluation. FBox for PCD2.W200 (Inputs 0…7 selectable)





Watchdog: This module can interact with the watchdog, if it is used on base address 240.
For details, please refer to the manual "27-600_I/O-modules for PCD1 / PCD2 series and for PCD3" in chapter "A4 Hardware Watchdog", which describes the correct use of the watchdog together with PCD components.

I/O modules and I/O terminal blocks may only be plugged in and removed when the Saia PCD® and the external +24 V are disconnected from the power supply.

Further information can be found in the document:
"27-600 ENG Manual I/O-Modules for PCD1 / PCD2 and PCD3"

ATTENTION

These devices must only be installed by a professional electrician,
otherwise there is the risk of fire or the risk of an electric shock.

WARNING

Product is not intended to be used in safety critical applications,
using it in safety critical applications is unsafe.

WARNING - Safety

The unit is not suitable for the explosion-proof areas and the areas of use excluded in EN 61010 Part 1.

WARNING - Safety

Check compliance with nominal voltage before commissioning the device (see type label).
Check that connection cables are free from damage and that, when wiring up the device, they are not connected to voltage.
Do not use a damaged device!

NOTE

In order to avoid moisture in the device due to condensate build-up, acclimatise the device at room temperature for about half an hour before connecting.

CLEANING

The device can be cleaned in dead state with a dry cloth or cloth soaked in soap solution.
Do not use caustic or solvent-containing substances for cleaning.

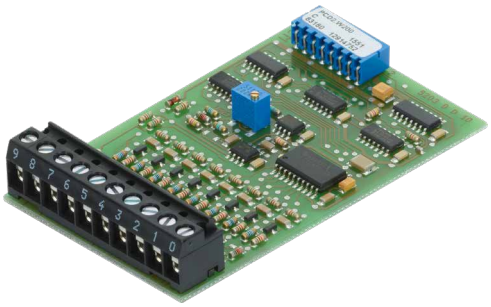
MAINTENANCE

These devices are maintenance-free.
If damaged, no repairs should be undertaken by the user.

Observe this instructions (data sheet) and keep them in a safe place.
Pass on the instructions (data sheet) to any future user.

WEEE Directive 2012/19/EC Waste Electrical and Electronic Equipment directive
The product should not be disposed of with other household waste. Check for the nearest authorized collection centers or authorized recyclers. The correct disposal of end-of-life equipment will help prevent potential negative consequences for the environment and human health.

EAC Mark of Conformity for Machinery Exports to Russia, Kazakhstan or Belarus.



PCD2.W200

4 405 4847 0

Ordering information

Type	Short description	Description	Weight
PCD2.W200	8 analogue inputs 0…10 V, 10 bit	Analogue input module, 8 inputs (channels), resolution 10 bit, signal range 0…10 V, (the channels themselves not separated), connection with pluggable spring terminals, plug-in type L (4 405 4847 0) included	35 g

Ordering information equipment

Type	Short description	Description	Weight
4 405 4847 0	Plug-in, type L	Plug-in screw terminal block 10-pole up to 1.5 mm² for I/O module, labelling 0…9	17 g

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