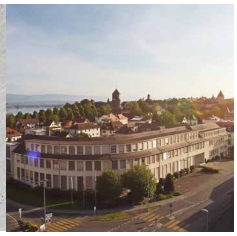
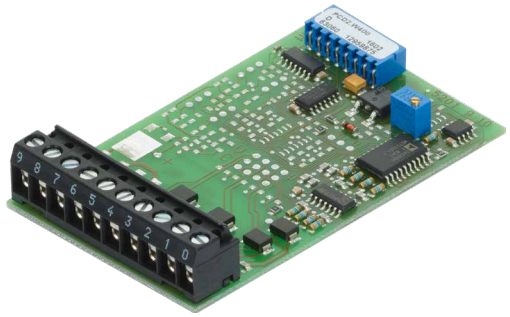
PCD2.W400

Analog output module, 4 channels, 8 bit, 0 … 10 V



Description

High-speed output module with 4 output channels of 8 bits each. Suitable for processes in which a large number of actuators have to be controlled, such as in the chemical industry and building automation.



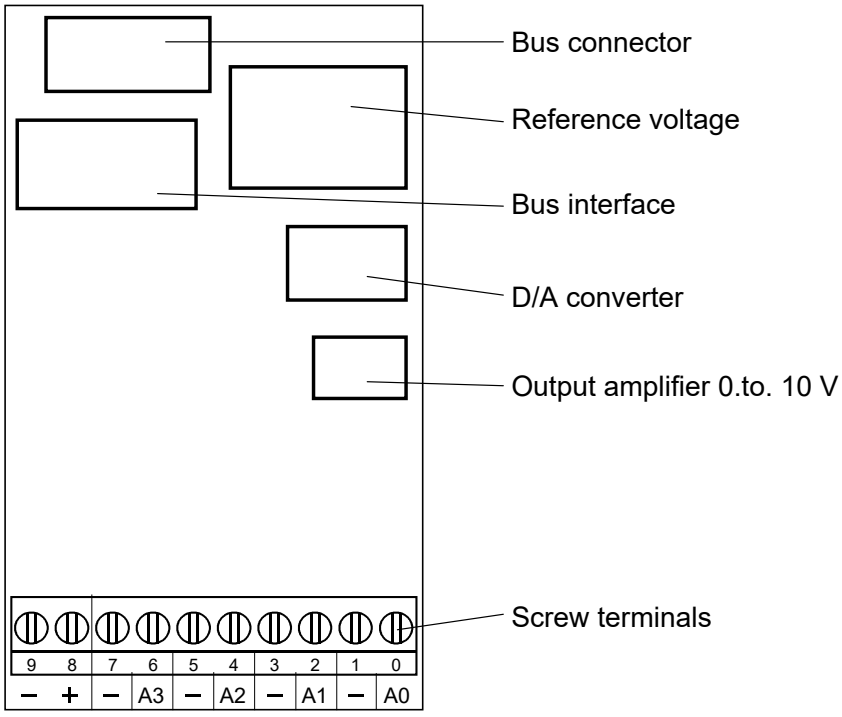
PCD2.W400

Technical specifications

Number of outputs (channels)	4, short circuit protected
Signal range selectable with jumpers	voltage 0 … 10 V
Resolution (digital representation)	8 bits (0 … 255)
Conversion time D/A	≤ 5 µs
Galvanic separation	no
Load impedance	for 0 … 10 V ≥ 3 kΩ
Accuracy (of output value)	for 0 … 10 V 1 % ± 50 mV
Residual ripple	for 0 … 10 V < 15 mV pp
Temperature error (across temperature range 0 … +55 °C)	typ. ± 0.2 %
Burst protection (IEC 801-41)	± 1 kV, with unshielded cables ± 2 kV, with shielded cables
Internal current consumption (from +5 V bus)	1 mA
Internal current consumption (from V+ bus)	30 mA
External current consumption	max. 0.1 A
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type L (4 405 4847 0)

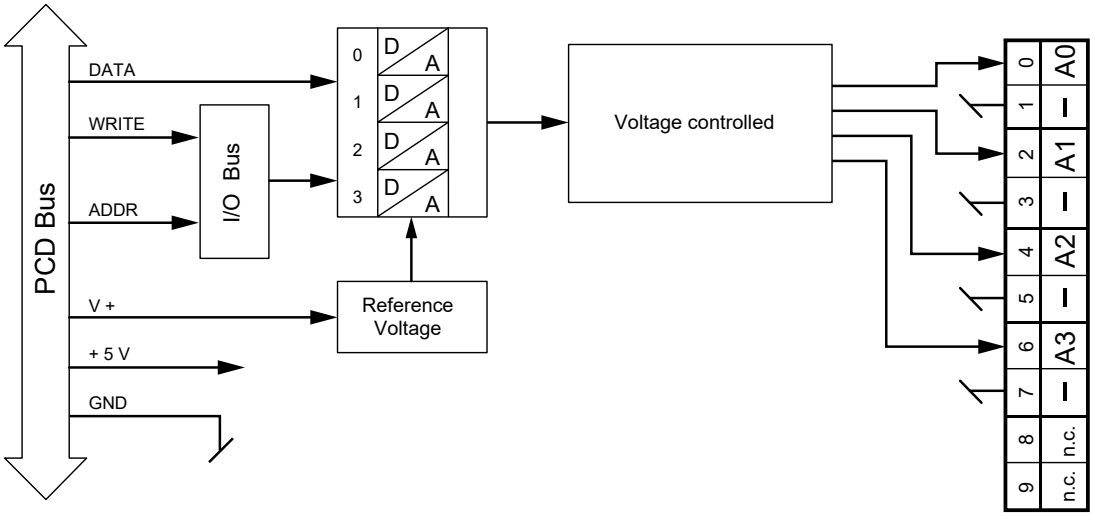
The external 24 VDC power supply is not required.

Indicators and connections



LED	Output
0	O0
1	O1
2	O2
3	O3

Block schematic



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

Watchdog

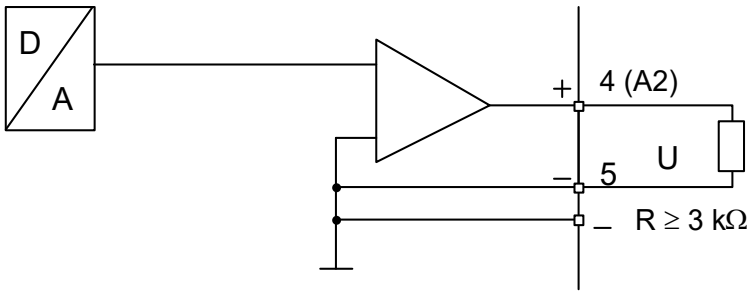
This module can interact with the watchdog, if it is used on base address 240.

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.

This does not apply when used in PCD3.M6893.

Principle diagram of analog outputs

Output connection for 0 … 10 V

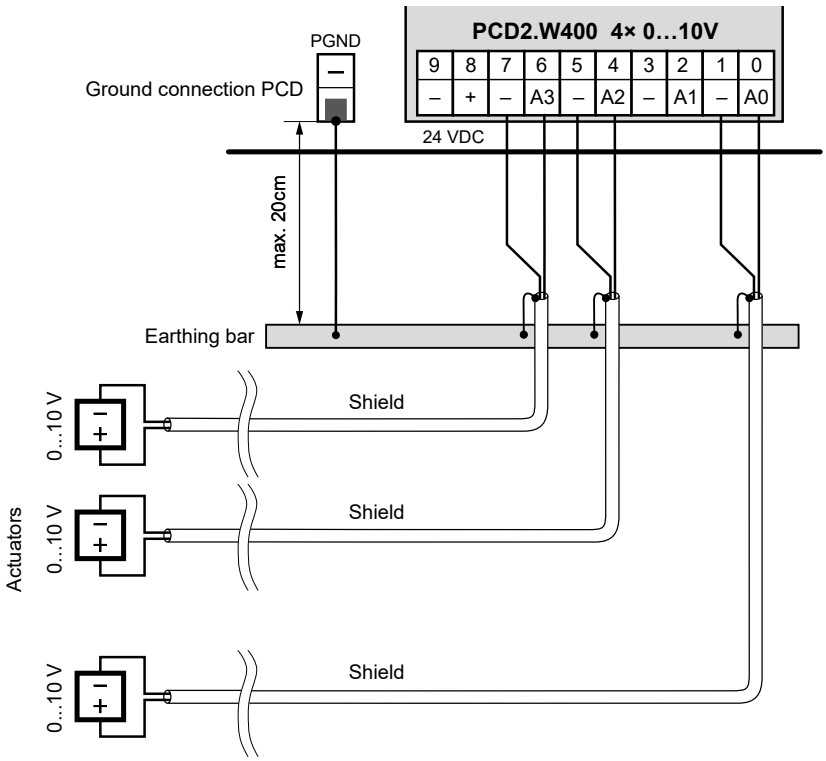


Digital- / analogue values	
Signal range	0 … 10 V
Digital values	Analogue values
255 128 0	10.0 V 5.0 V*) 0

Connection concept for voltage outputs

The actuators are connected directly to the 10-pole terminal block. 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



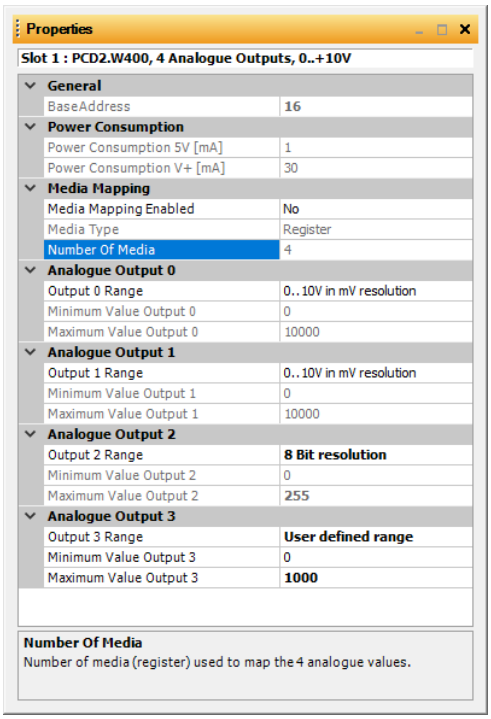
The external 24 VDC power supply is not required.

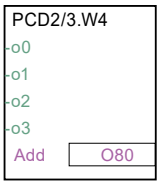
If shielded cables are used, the shielding should be connected to an earthing rail.

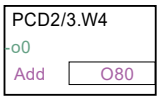
Configuration

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.W4" exists for evaluation. FBox for PCD2.W400 (Outputs 0…3 selectable)







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.

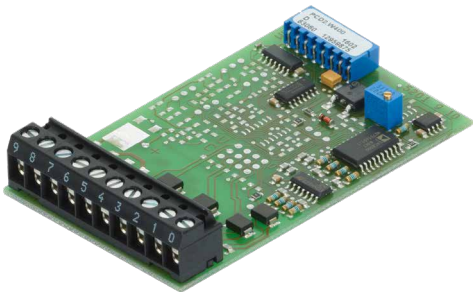
MAINTENANCE

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.W400

4 405 4847 0

Ordering information

Type	Short description	Description	Weight
PCD2.W400	4 analogue outputs, 8 bits, 0…10 V	Analogue output module, 4 output (channels), resolution 8 bits, signal range 0…10 V, per channel with jumper selectable, connection with pluggable spring terminals, plug-in type L (4 405 4847 0) included	40 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	7 g

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