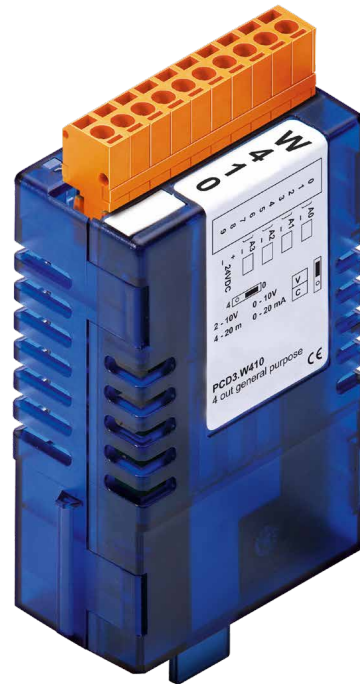


PCD3.W410

Universal analogue module with 4 output channels, resolution 8 bits

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

General purpose module with 4 output channels of 8 bits each. Signals can be selected from 0...10 V, 0...20 mA or 4...20 mA.

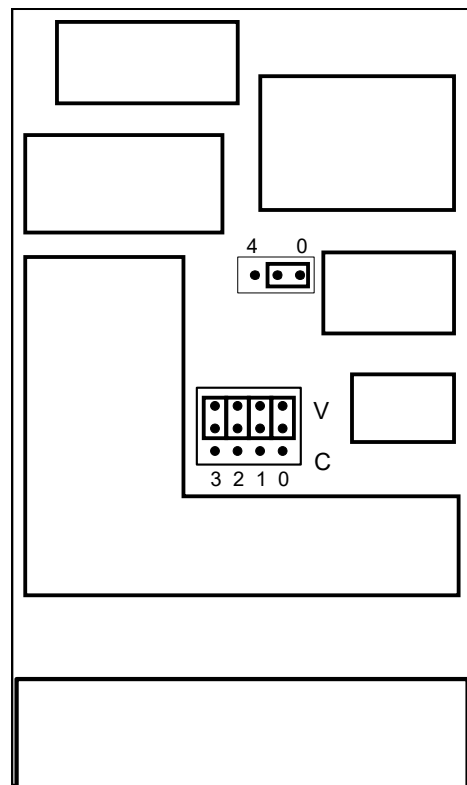


Technical data

Number of outputs	4, short circuit protected
Signal ranges	selectable with jumpers: - 0...10 V*) - 0...20 mA - 4...20 mA
Resolution (digital representation)	8 bits (0...0.255)
Conversion time D/A	< 5 µs
Load impedance:	for 0...10 V: ≥ 3 kΩ for 0...20 mA: 0...500 Ω for 4...20 mA: 0...500 Ω
Accuracy (of output value)	for 0...10 V: 1% ± 50 mV for 0...20 mA: 1% ± 0.2 mA for 4...20 mA: 1% ± 0.2 mA
Residual ripple	for 0...10 V: < 15 mV pp for 0...20 mA: < 50 µA pp for 4...20 mA: < 50 µA pp
Temperature error	typ. 0.2% (across temperature range 0...+55 °C)
Burst protection (IEC 801-4)	± 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 (only for current outputs)
Terminals	Plug-in 10-pole spring terminal block (4 405 4954 0) or pluggable 10-pole screw terminal block (4 405 4955 0), both for wires up to 2.5 mm ²

*) Factory setting

Layout (Opened housing)



Offset jumper J1

Position "0": 0... 10 V or 0... 20 mA
Position "4": 2... 10 V or 4... 20 mA

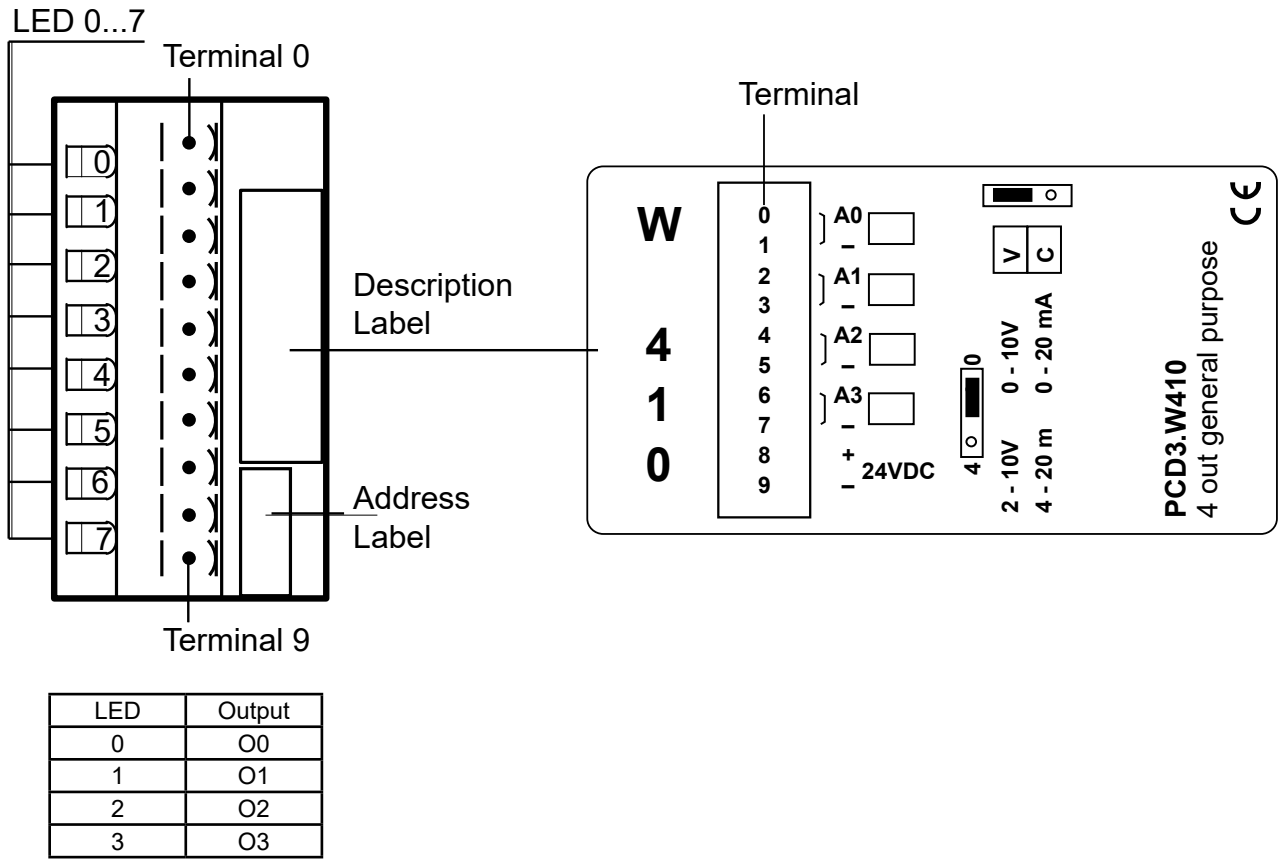
Jumper J2 for current/voltage

Position "V": Voltage output
Position "C": Current output

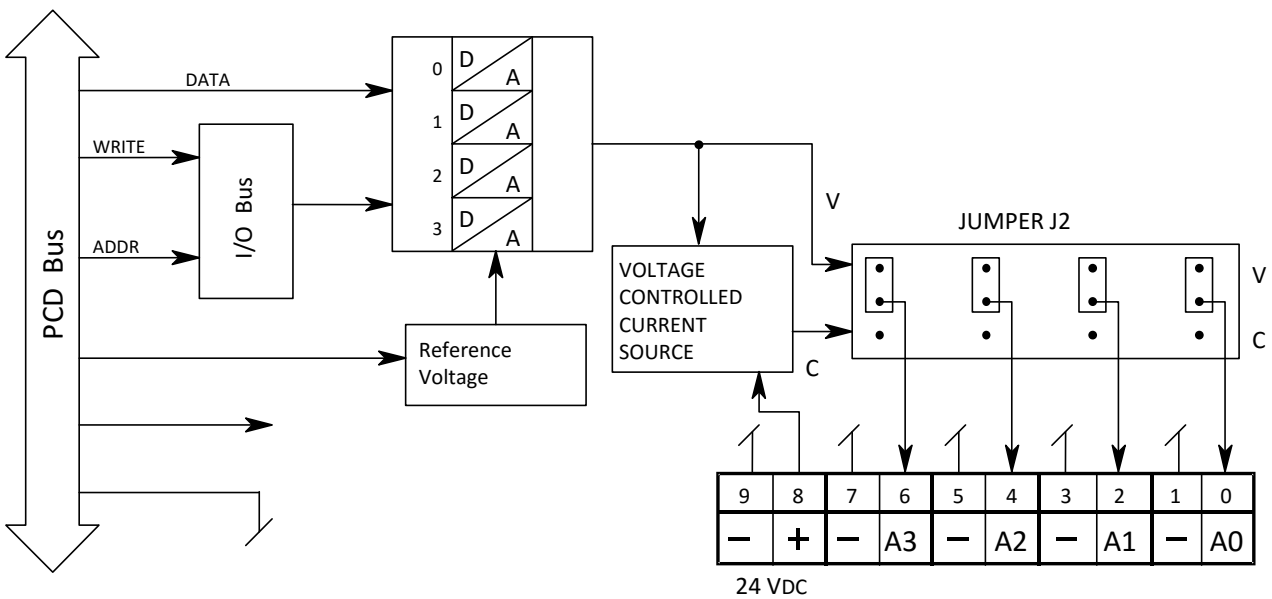
Factory settings

- Position "V": Voltage output
- Position "0": range 0...10 V

LEDs and connection terminals

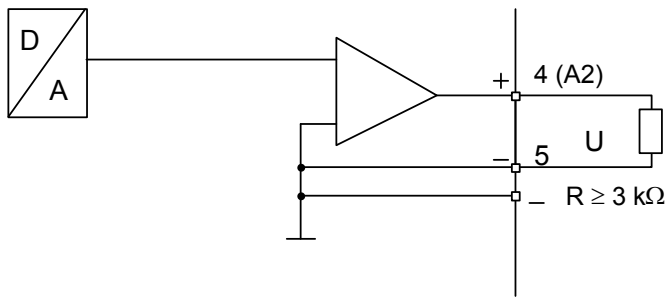


Block diagram

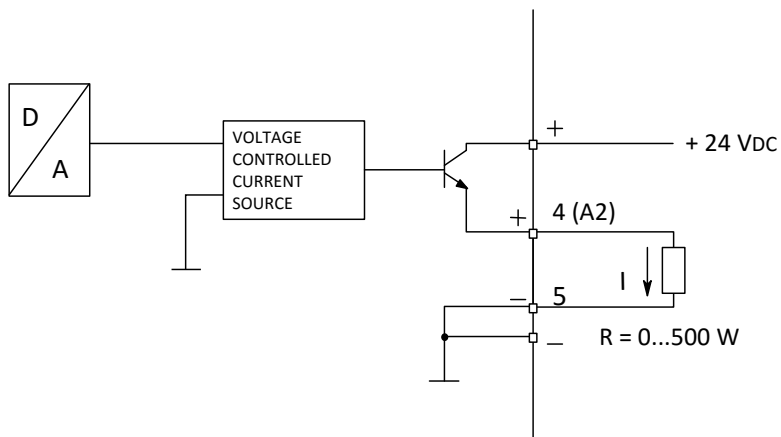


Connection concept

Connection for 0...10 V



Connection for 0...20 mA or 4...20 mA



An external 24 VDC supply is required for current outputs.

Analogue/digital values and jumper positions

Jumper "V/C"			V	C	C
Jumper "0/4"			0	0	0
Signal range			0...10V	0...20 mA	4...20 mA
Digital values					
Classic	xx7	Simatic			
255	255	27648	10.0 V	20 mA	20 mA
128	128	13842	5.0 V*)	10 mA*)	12 mA*)
0	0	0	0V	0 mA	4 mA

*) The exact values are 1/255 higher



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.



Changing the jumpers:

On this circuit board there are components that are sensitive to electrostatic discharges.

Recommendation: Before coming into contact with electrical components, you should at least touch the Minus of the system (cabinet or PGU connector). It is better to use a grounding wrist strap with its cable permanently attached to the Minus of the system.



Watchdog: This module can interact with the watchdog, if it is used on base address 240. In this case, the last input with address 255 cannot be used.

For details, please refer to the "Watchdog" section of the manual 27-600_ENG, which describes the correct use of the watchdog in conjunction with Saia PCD components.



xx7 and RIOs: the firmware reads in the values according to the configuration (I/O Builder or network configurator).

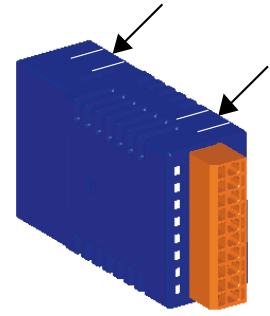


Further information can be found in the Manual on "I/O-modules for PCD1 / PCD2 series and for PCD3 series PCD2 and PCD3" 27-600_ENG.

Open the module housing

Open

On each of the two narrow sides of the housing are two snap-in clips. Lift these gently with your fingernails on one side then the other and separate the two parts of the housing.



Close

To close the housing, lay the bottom part on a flat surface (table etc.). Ensure that the circuit board is precisely located in this part of the housing. Press top part onto bottom until you hear the snap-in clips engage. Ensure that all four clips are correctly engaged.

Ordering information

Type	Short description	Description	Weight
PCD3.W410	Universal analogue module with 4 output channels, resolution 8 bits	Analogue output module, 4 channels, 8 bits, 0...10 V / 0...20 mA / 4...20 mA, jumper selectable (connector type A included)	100 g

Accessories

Type	Short description	Description	Weight
4 405 4954 0	Plug-in, type A	Plug-in screw terminal block, 10-pin (type A) for wires up to 2.5 mm², labelling 0...9	15 g

Saia-Burgess Controls AG

Bahnhofstrasse 18 | 3280 Murten, Switzerland
 T +41 26 580 30 00 | F +41 26 580 34 99
 www.saia-pcd.com

support@saia-pcd.com | www.sbc-support.com