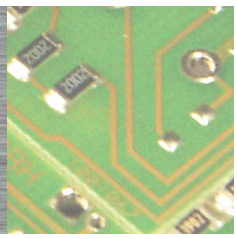
Honeywell

PCD3.W610

Analog output module, 4 channel, 12 Bit, 0 … 10 V, - 10 …+ 10 V, 0 … 20 mA



High-speed output module for general use with 4 channels, each with 12 bit resolution. Different variants for voltage 0 … 10 V, - 10 …+ 10 V and current 0 … 20 mA are available.

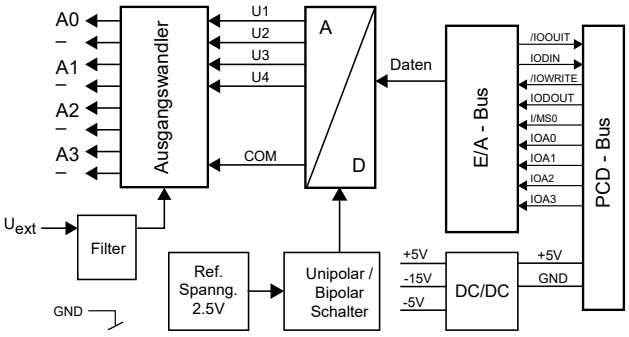
PCD3.W610

Technical specifications

Number of outputs (channels)	4, short circuit protected
Signal range	0…10 V, -10…+10 V, 0…20 mA (durch Jumper wählbar)
Resolution (value of least significant bit(LSB))	2.442 mV (0…10 V) 4.884 mV (-10…+10 V) 4.884 µA (0…20 mA)
Galvanic separation	no
Resolution (representation)	12 bit (0 … 4095)
Conversion time A/D	typically 10 µs
Load impedance	Voltage: > 3 kΩ Current: < 500 Ω
Repeating accuracy (under same conditions)	Voltage: ± 0.5 % Strom: ± 0.8 % *)
Temperature error (over temperature range 0 … +55 °C)	Voltage: ± 0.1 % Current: ± 0.2 %
Internal current consumption (from +5 V bus)	max. 110 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 100 mA (for current outputs)
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A (4 405 4954 0)

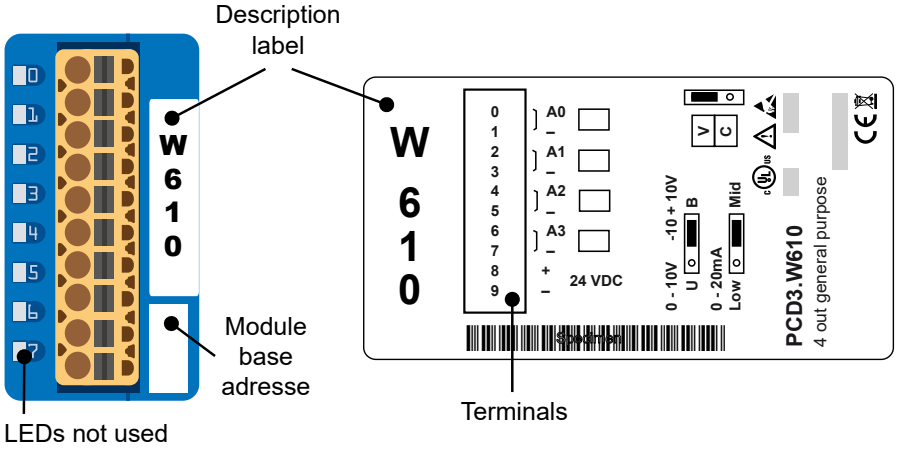
*) Characteristics, see diagram under "Principle diagram of analog outputs"

Block schematic



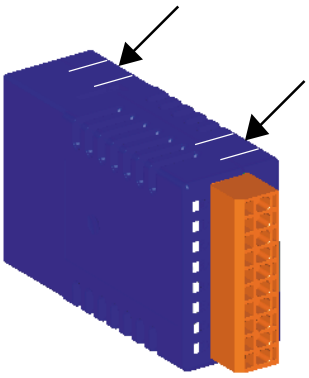
Typ: PCD3.W600, PCD3.W610

Indicators and connections



LED	Output
0	O0
1	O1
2	O2
3	O3

Open and close the module housing



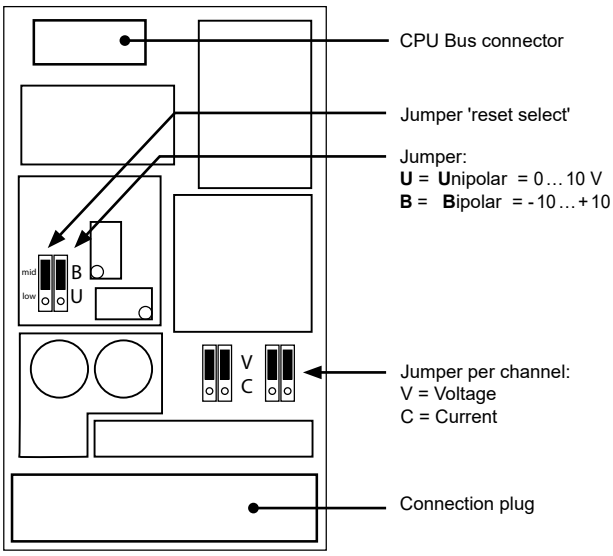
Open

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.

Topology (open housing)



Changing the jumpers

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

Range selection(

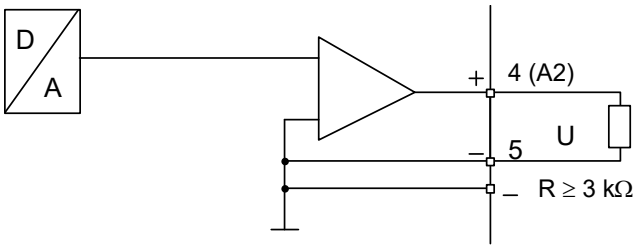
Jumpers, factory settings	A0…A3	“V”	(voltage)
	U/B	“B”	(bipolar)
	Reset select	“mid“	(reset to mid-scale, i.e. 0V in bipolar mode)
Ranges depending on application			
Pro Modul	U/B		**U**nipolarer or **B**ipolarer operation
	Reset select		Reset to **low-** or **mid scale**
	Empf. Einstellung		Unipolar → low-scale Bipolar → mid-scale
Per channel		“V”	Voltage output: 0…+10 V or –10 V…+10 V
		“C”	Current output: 0…20 mA

Current outputs have been laid out for unipolar mode. Bipolar mode is possible, but for the negative half of this operation the output is 0 mA.

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.

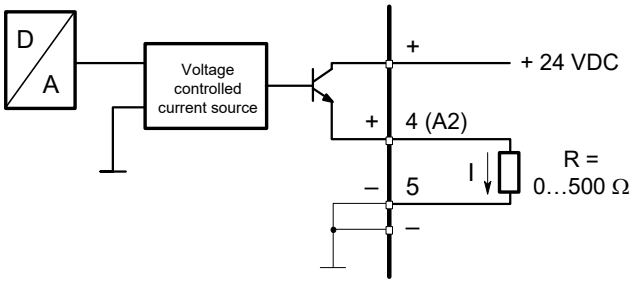
Principle diagram of analog outputs

Output connection for 0 … 10 V, -10 … +10 V

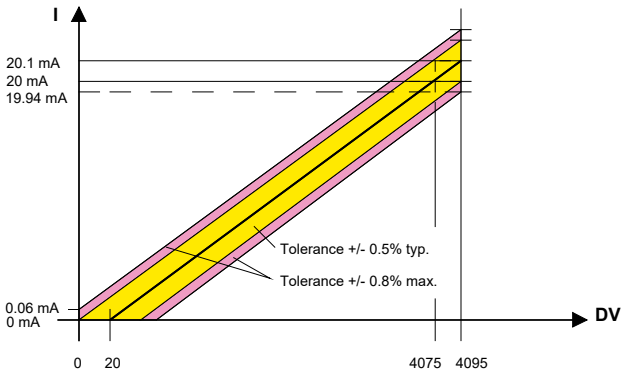


During start-up, a voltage of 5 V is sent to all outputs of the W610 module. The start-up phase lasts 40 ms, then 0 V is sent to the outputs.

Output connection for 0 … 20 mA



Characteristics of the current outputs



Digital/analogue values

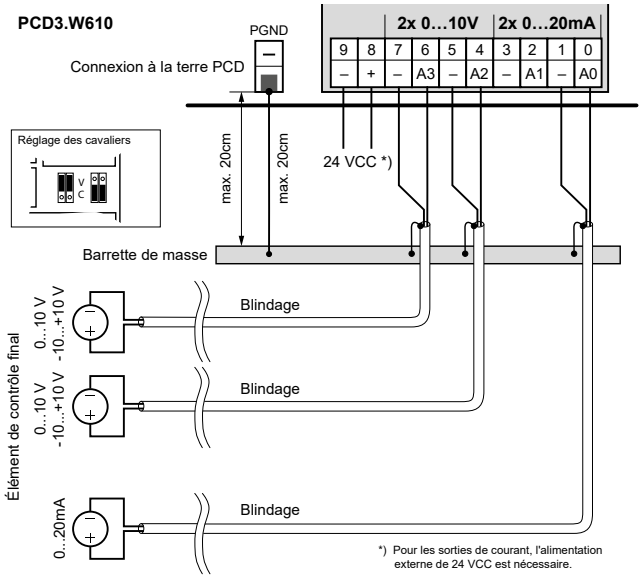
LED	Output signals
4095	+ 20.1 mA
4075	+ 20 mA
2048	+ 10 mA
20	0 mA
0	0 mA

For current outputs, an external supply of 24 VDC is required at terminals 8 and 9.

Connection concept

The voltage input signals 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.

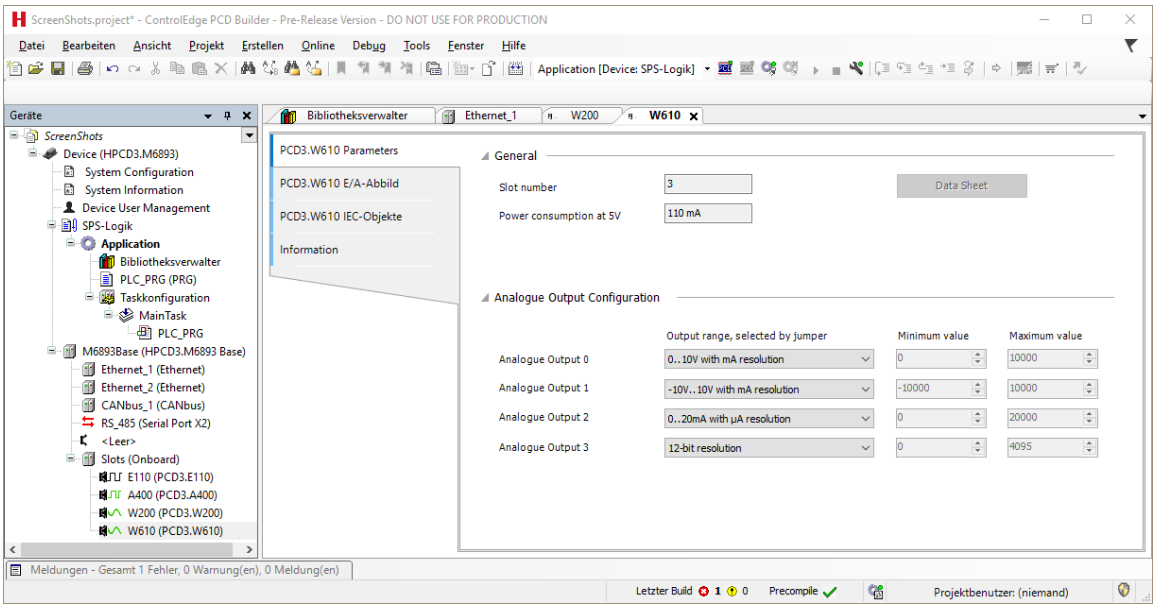
Connection for 0 … 10 V, -10 … +10 V, 0 … 20 mA



Configuration

HPS
ControlEdge PCD Builder

HPCD-System	Evaluation
HPCD3.M6893	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator)



PCD3.W610

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W610	4 analogue outputs, 12 bit. 0 … 10 V, – 10 … + 10 V, 0 … 20 mA	Analogue output modules, 4 inputs (channels), resolution 12 bit, signal range 0 … 10 V, – 10 … + 10 V, 0 … 20 mA. The channels themselves not separated. Connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	100 g

Ordering information equipment

Type	Short description	Description	Weight
4 405 4954 0	Plug-in, type A	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm², labelled 0 … 9	15 g

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.

Sales and Service

For application assistance, current specifications, pricing, or name of the nearest Authorized Distributor, contact one of the offices below.

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WARRANTY / REMEDY
Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.** Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.
While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications are subject to change without notice.

For more information

Learn more about ControlEdge PCD, visit our website www.honeywellprocess.com/ControlEdgePCD or contact your Honeywell account manager.

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