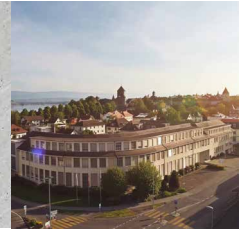


PCD3.B160

Digital input/output module with 16 I/O, configurable either as inputs or as outputs in groups of four (4)



Via plug-in I/O modules, you can expand the functions of the Saia PCD3 and adapt them to your individual needs. The combined digital input and output modules can easily be plugged into the Saia PCD3 base device or a suitable I/O module holder. A combined input/output module with 16 configurable inputs and outputs grouped into blocks of 4 are available.

Inputs : 24 VDC, source operation, delay 0.2/8 ms
Outputs : breaking capacity 5...30 VDC/0.5 A



PCD3.B160

General technical data on inputs and outputs

Internal current consumption: (from +5 V bus)	120 mA
Internal current consumption: (from V+ bus)	4 mA
External current consumption	22 mA (for driver) at 24 V (without load current)
Terminals	2× Type K (Part No. 4 405 5048 0)

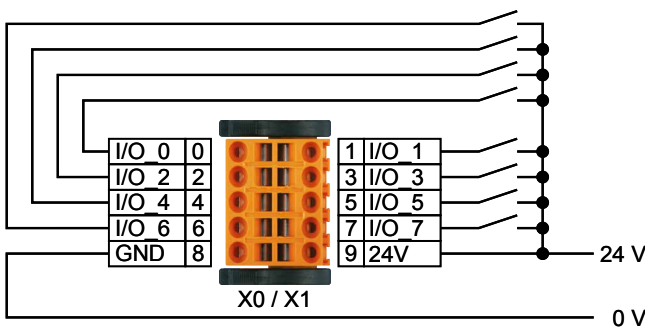
Technical data on inputs

Number of inputs	16, source operation, not isolated (in groups of 4)
Input voltage	typ. 24 VDC
Input current	typ. 3 mA at 24 VDC
Input delay	8 ms (default) or 0.2 ms (configurable)
Overvoltage protection	Transient Suppressor Diode 39 V

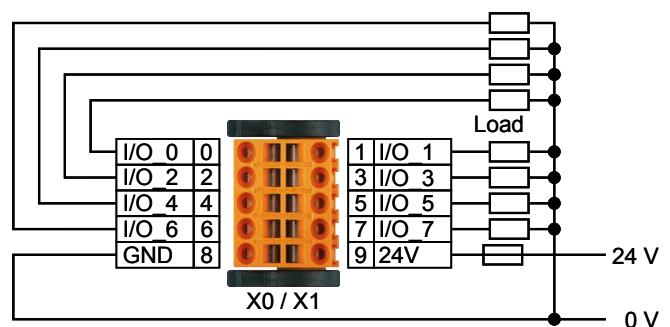
Technical data on outputs

Number of outputs	16, source operation, not isolated (in groups of 4)
Voltage range	18...30 VDC
Output current	250 mA per channel
Total module current	2 A
Output delay (on/off)	typ. 2 μs
Inductive loads	Transient Suppressor Diode 39 V
Short circuit proof	Yes

Input wiring



Output wiring

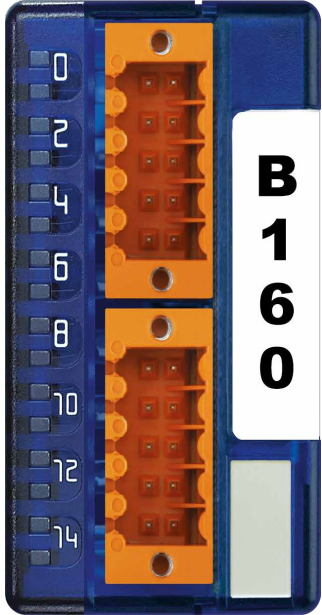


The supply pins of each connector must be powered.
Be careful of the power polarity.



It is recommended that each supply connection should be separately protected with a fast-blow (S) fuse. The value depends on the application.

I/O connection

PCD3		Description	
		Connector X0 Type K	
		I/O_0 0	1 I/O_1
		I/O_2 2	3 I/O_3
		I/O_4 4	5 I/O_5
		I/O_6 6	7 I/O_7
		GND 8	9 24 V
		Connector X1 Type K	
		I/O_8 0	1 I/O_9
		I/O_10 2	3 I/O_11
		I/O_12 4	5 I/O_13
		I/O_14 6	7 I/O_15
		GND 8	9 24 V

LED signalization

The module has 16 LEDs.
Each channel has its own LED.

X0		X1		Description
0	IO_0	0	IO_8	Mixed In-/Output
1	IO_1	1	IO_9	Mixed In-/Output
2	IO_2	2	IO_10	Mixed In-/Output
3	IO_3	3	IO_11	Mixed In-/Output
4	IO_4	4	IO_12	Mixed In-/Output
5	IO_5	5	IO_13	Mixed In-/Output
6	IO_6	6	IO_14	Mixed In-/Output
7	IO_7	7	IO_15	Mixed In-/Output
8	GND	8	GND	GND extern
9	24 V	9	24V	+24 V extern

Good to now



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 in classic system

The watchdog with his address 255 can influence this module if it is used at the base address 240.

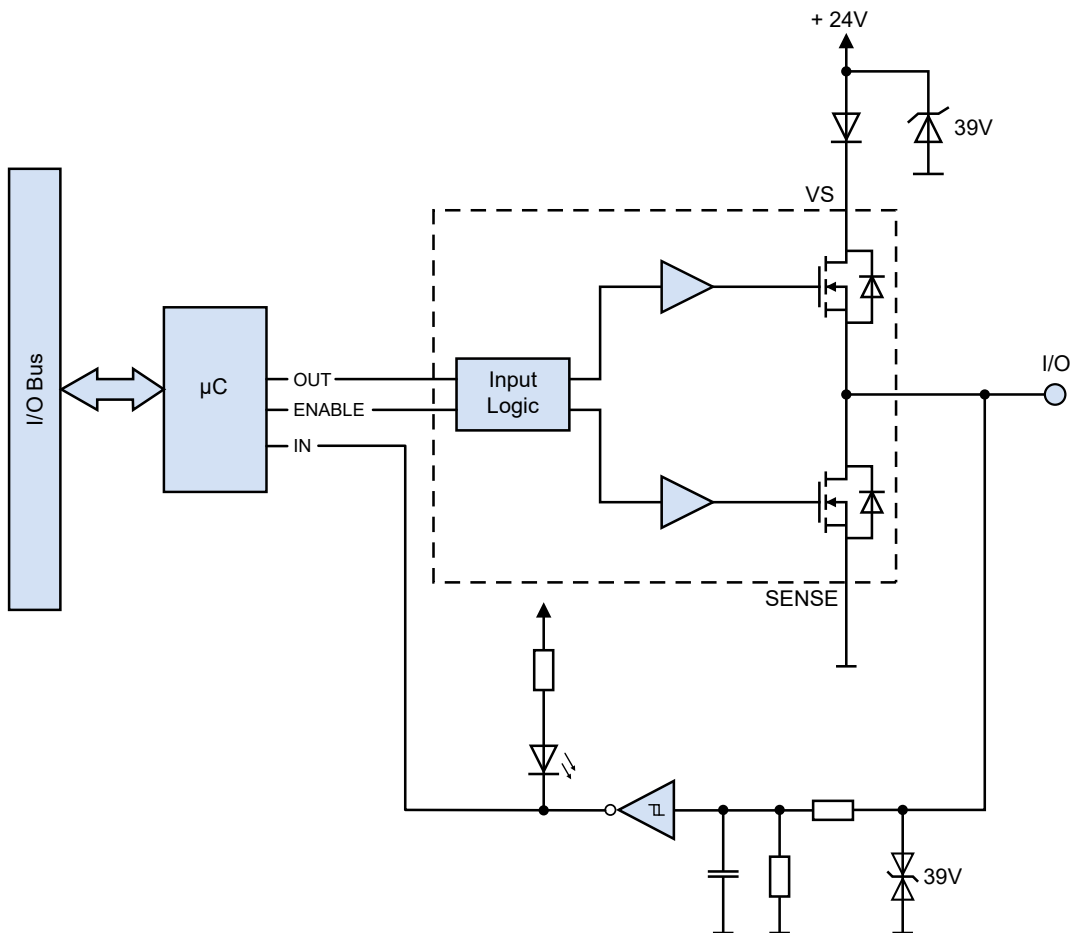
.. in IEC-controller system
is not affected



Further information

More details, also about the watchdog, can be found in the manual:
"27-600_I/O-modules for PCD1 / PCD2 series and for PCD3".

Bloc Diagram



Hardware

The configuration of the I/O is done in groups of four.

Following combinations are possible:
16O/0I, 12O/4I, 8O/8I, 4O/12I, 0O/16I

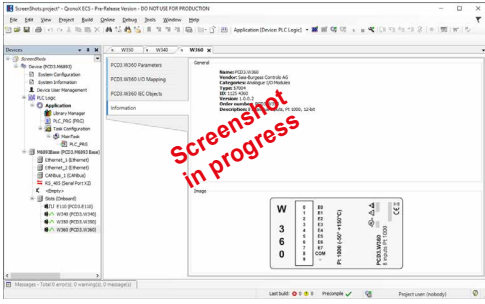
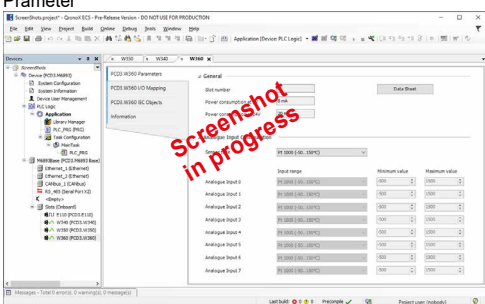
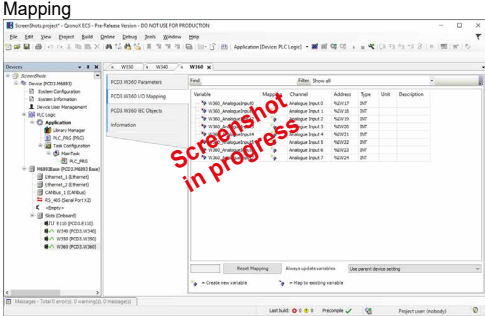
The I/O module can be placed on any slot of a PCD3.M and their corresponding IO-Extension modules (except slot 15 because of the watch dog - I/O address 255).

Configuration

Saia PG5® Controls Suite

PCD-System	Evaluation
Classic	<p>The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator or Network Configurator).</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>Properties</p> <p>Slot 0 : PCD3.B160, 16 Selectable In- or Outputs</p> <ul style="list-style-type: none"> General <ul style="list-style-type: none"> BaseAddress 0 Connector Type Type K, Spring Terminals 10-pole Power Consumption <ul style="list-style-type: none"> Power Consumption 5V [mA] 120 Media Mapping Read Digital I/O <ul style="list-style-type: none"> Media Mapping Enabled Yes Media Type Flag Number Of Media 16 Media Mapping Read Error Output Detection <ul style="list-style-type: none"> Media Type Flag Number Of Media 16 Media Mapping Write Digital Outputs <ul style="list-style-type: none"> Media Type Flag Number Of Media 16 Channels Direction <ul style="list-style-type: none"> Direction Channels 0 To 3 Input Direction Channels 4 To 7 Input Direction Channels 8 To 11 Input Direction Channels 12 To 15 Input Filter <ul style="list-style-type: none"> Input Filter Enabled Yes </div> <div style="margin-top: 10px;"> <p>Base Address First address of I/O card, depends on slot position.</p> </div>

Saia Qronox ECS Engineering and Commissioning Suite

PCD-System	Evaluation
IEC-Controller	<p>The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator)</p> <div style="margin-top: 10px;"> <p>Information</p>  <p style="color: red; font-weight: bold; transform: rotate(-45deg); position: absolute; top: 50px; left: 50px; opacity: 0.5;">Screenshot in progress</p> </div> <div style="margin-top: 10px;"> <p>Parameter</p>  <p style="color: red; font-weight: bold; transform: rotate(-45deg); position: absolute; top: 50px; left: 50px; opacity: 0.5;">Screenshot in progress</p> </div> <div style="margin-top: 10px;"> <p>Mapping</p>  <p style="color: red; font-weight: bold; transform: rotate(-45deg); position: absolute; top: 50px; left: 50px; opacity: 0.5;">Screenshot in progress</p> </div>

Good to now



Further information

More details about this module can be found in the manual: "27-600_I/O-modules for PCD1 / PCD2 series and for 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 during, no repairs should be undertaken by the user.

**GUARANTEE**

Opening the module invalidates the guarantee.

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.



PCD3.B160



4 405 5048 0

Ordering information

Type	Short description	Description	Weight
PCD3.B160	Digital input/output module with 16 I/O	Digital input/output module with 16 I/O, configurable either as inputs or as outputs in groups of four (4). Inputs : 24 VDC, source operation, delay 0.2/8 ms Outputs : breaking capacity 5 ... 30 VDC/0.5 A (2 connectors type K (4 405 5048 0) included)	100 g

Ordering information equipment

Type	Short description	Description	Weight
4 405 5048 0	Plug-in, type K	Plug-in spring terminal block, 2x5-pole up to 1.0 mm ² (orange block), labelled 0 to 9, connector type "K"	6 g

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