SAIA BURGESS CONTROLS

SBC System catalogue

2014 | 2015

Electronic instrumentation, control and automation technology
for machines, facilities and real estate

1.3 Saia PCD2 programmable controllers

Overview of Saia PCD2 device series

Saia PCD2.M5 controllers

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Base units with 8 slots for I/O modules

- PCD2.M5440 Basic
- PCD2.M5540 Extended with Ethernet switch

Up to 4 integrated communication interfaces, can be expanded to max. 15 communication interfaces with plug-in modules. Integrated Automation Server in all CPUs.

Saia PCD2 module holder for I/O expansion

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Module holder for I/O modules

- PCD2.C1000 4 I/O slots
- PCD2.C2000 8 I/O slots

Expansion to max. 1,023 I/Os

Saia PCD2 input/output modules

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Modules with various functions with plug-in terminals

- PCD2.Exxx Digital input modules
- PCD2.Axxx Digital output modules
- PCD2.Bxxx Combined digital input/output modules
- PCD2.Wxxx Analog input/output modules

Saia PCD2 interface modules

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Plug-in modules to expand the communication interfaces (up to 4 modules or 8 interfaces)

- PCD7.F1xxS 1 serial interface RS-232, RS-422/485, Belimo MP-Bus
- PCD2.F2xxx 2 serial interfaces RS-232, RS-422/RS-485
- PCD2.F2150 BACnet® MSTP
- PCD2.F2610 DALI
- PCD2.F27x0 M-Bus
- PCD2.F2180 Belimo MP-Bus

Saia PCD2 memory modules

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Plug-in memory modules for data and program backup

- PCD2.R6xx Basic module for SD flash memory card for slots 0…3
- PCD7.R-SD SD flash memory cards for PCD3.R6xx
- PCD7.R5xx Flash memory module for slots M1 & M2

Consumables and accessories for Saia PCD2 controllers

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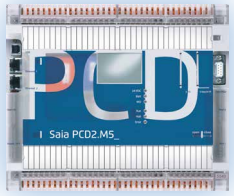
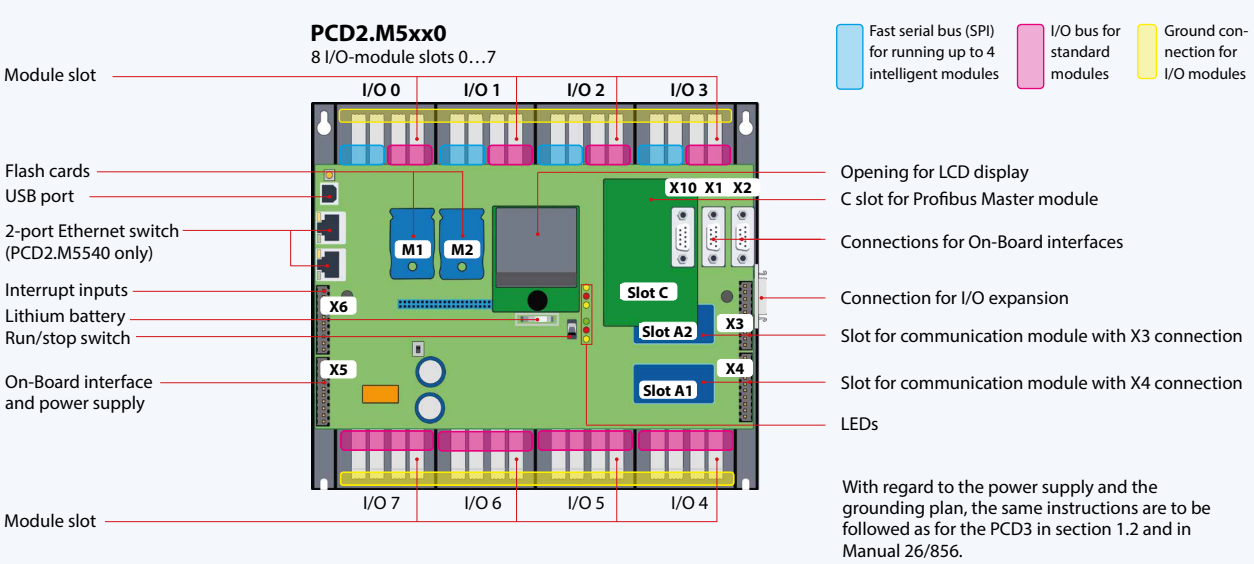
Housing covers, plug-in screw terminal blocks, I/O bus connection, battery, system cables and adapters

Saia PCD2.M5xxx controllers



Due to its flat housing design, the Saia PCD2.M5xxx is especially suitable for space-saving applications. The powerful CPU enables the control and regulation functions of complex applications with up to 1,023 central data points. The PCD2 can be expanded by means of plug-in memory modules to become a LON IP® or BACnet®-enabled controller. The PCD2 has communication interfaces such as USB, Ethernet, RS-485 and Automation Server On-Board.



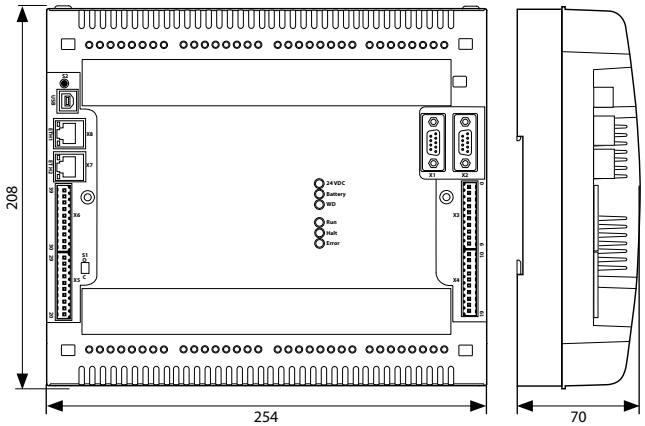
System properties

- Up to 15 communication interfaces (RS-232, RS-485, etc.)
- 8 I/O slots that can be expanded by means of module holders to max. 64 slots (1,023 central data points)
- Local I/O expansion with RIO-PCD3.T66x (Ethernet) or PCD3.T760 (Profi-S-IO)
- 1 MByte of program memory
- Automation Server On-Board
- Data memory with flash memory modules that can be expanded to 4 GByte
- 6 fast interrupt/counter inputs on the CPU
- Compatible with all PCD3 module holders

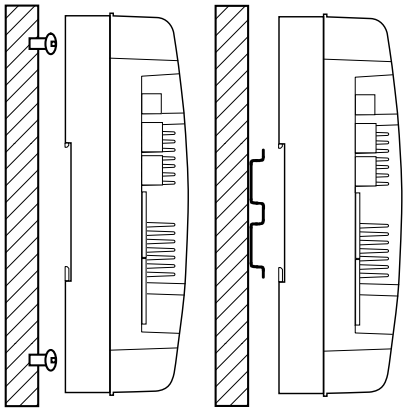
On-Board interfaces of the Saia PCD2.M5xxx

Type	Connection	Port	Transmission rate
RS-232 (serial) or RS-485 (serial)	X2 (D-Sub) X5 (terminal)	0 0	≤ 115.2 kbit/s ≤ 115.2 kbit/s
RS-485 (serial) for free protocols or Profi-S-Net / Profibus-DP Slave	X1 (D-Sub) X1 (D-Sub)	3 10	≤ 115.2 kbit/s ≤ 1.5 Mbit/s
Ethernet (2 port switch) (PCD2.M5540 only)	Ethernet	9	10/100 Mbit/s
USB 1.1 (PGU)	USB	---	≤ 12 Mbit/s

Dimensions

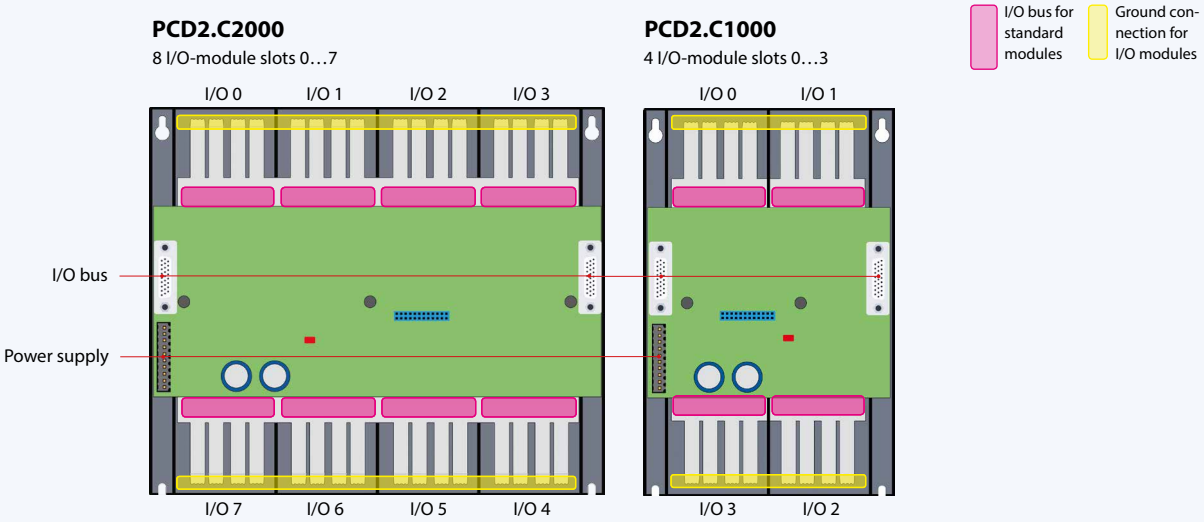


Mounting



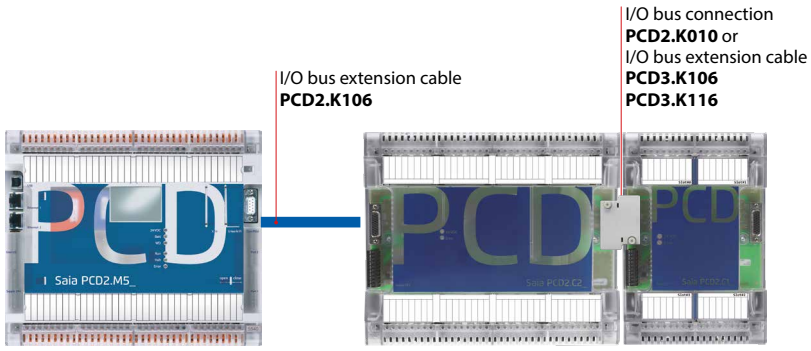
Saia PCD2.Cxxxx module holder

Up to 7 Saia PCD2.C1000 or Saia PCD2.C2000 module holders can be connected to the Saia PCD2.M5xxx. This makes it possible to connect up to 64 I/O modules or 1023 digital inputs/outputs. A module holder has space for 4/8 I/O modules. In addition to Saia PCD2.Cxxxx module holders, all Saia PCD3 module holders can also be connected.



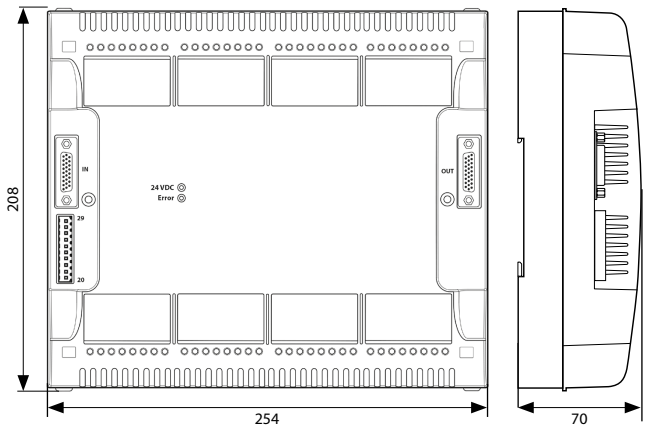
System properties

- Up to 1,023 central data points
- Numerous module variants can be plugged in
- Mounting is quick and easy
- Can be combined with Saia PCD3.Cxxx module holders
- Connections for a power supply on each module holder
- Can be connected below or next to each other

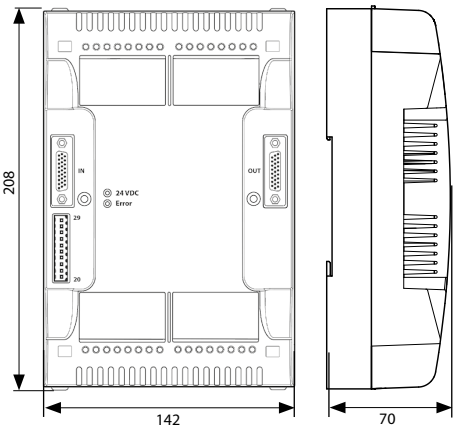


A maximum of 7 module holders can be connected to a PCD2.M5xxx.
In this case, no more than 5 extension cables may be used.
PCD3.Kxxx cables required for connection between two module carriers.

Dimensions of PCD2.C2000



Dimensions of PCD2.C1000



Technical data and ordering information for PCD2.M5xxx controllers

Automation Server integrated in the base unit

Technical overview

Technical data

Number of digital inputs/outputs On-Board	6 digital inputs (24 V, 4× interrupts) 2 digital outputs (2× PWM, 24 V 100 mA)
Number of digitale inputs/outputs ind the base unit	128
resp. /O module slots in the base unit	8
Number of digital inputs/outputs with 7 PCD2.C2000 module holder	896
resp. I/O-module slots	56
Processing time [µs]	bit operation 0,3…1,5 µs word operation 0,9 µs
Real time clock (RTC)	yes

Memory On-Board

Main memory (RAM) for program and DB/TEXT	1 MByte
Flash memory (S-RIO, configuration and backup)	2 MByte
User flash file system (INTFLASH)	No
Data backup	1…3 years with lithium battery

Communication interfaces On-Board

RS-232, RS-485 / PGU	≤ 115 kbit/s
RS-485 Profibus-DP–Slave, Profi-S-Net (S-IO, S-Bus)	≤ 1,5 Mbit/s
USB 1.1 (PGU)	≤ 12 Mbit/s
Ethernet, 2 port switch (PCD2.M5540 only)	≤ 10/100 Mbit/s (full duplex, auto-sensing/auto-crossing)

Genera data

Supply voltage (according to EN/IEC 61131-2)	24 VDC –20/+25 % max. incl. 5% ripple
Loading capacity 5 V / + V internal	max. 1400 mA / 800 mA
Automation Server	Flash memory, file system, FTP and web server, e-mail, SNMP

Ordering information

Saia PCD2

Type	Description
PCD2.M5440	Programmable controller, 1024 kByte of RAM
PCD2.M5540	Programmable controller, 1024 kByte of RAM, Ethernet interface

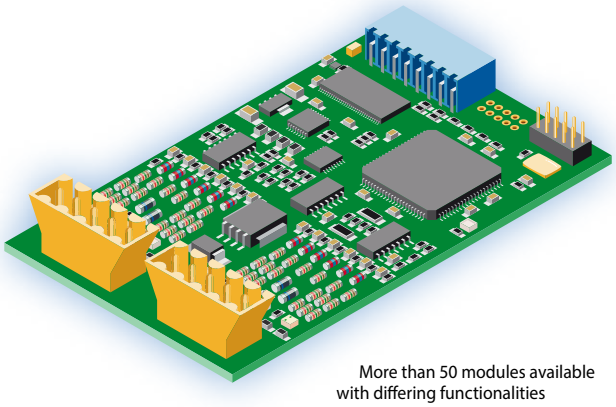
Saia PCD2 I/O-module holder

Type	Description
PCD2.C1000	Extension module holder with 4 I/O slots
PCD2.C2000	Extension module holder with 8 I/O slots
PCD2.K010	I/O bus connector
PCD2.K106	I/O bus extension cable Length 0.9 m (Connection between PCD2.M5xxx and PCD2.Cxxxx)
PCD3.K106	I/O bus extension cable Length 0.7 m (Connection between two module holder)
PCD3.K116	I/O bus extension cable Length 1.2 m (Connection between two module holder)

Additional accessories such as connectors, covers, etc. are described on the last page of this section.

Saia PCD2 Plug-in I/O modules: Overview

The functions of Saia PCD2 can be expanded as required using a wide range of plug-in I/O modules and can be adapted to the specified needs. This not only ensures that a project can be implemented quickly but also provides the option of expanding the system at any time during operation.



More than 50 modules available with differing functionalities

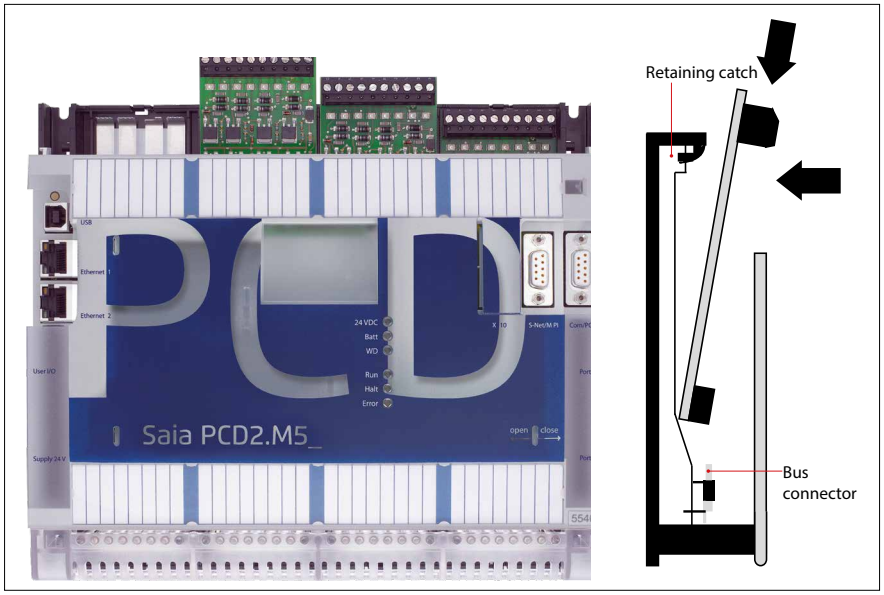
System properties

- Numerous variants available
- Slot directly in the Saia PCD2.M5xxxx, PCD1.M2xxx or in the module holder
- Full integration into the Saia PCD2 housing
- Compact design
- Up to 16 I/Os per module
- Modules with an input delay of 0.2 ms

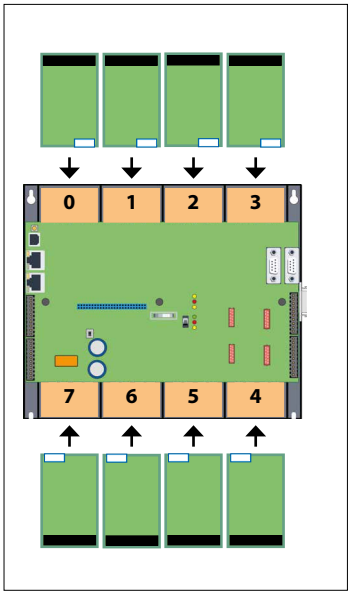
General type key

- PCD2.Axxx Digital output modules
- PCD2.Bxxx Digital combined input/output modules
- PCD2.Exxx Digital input modules
- PCD2.Fxxx Communication modules
- PCD2.Hxxx Fast counter modules
- PCD2.Rxxx Memory modules
- PCD2.Wxxx Analog input/output modules

Insertion in housing

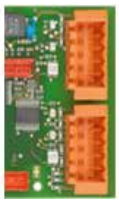


Slots for I/O modules



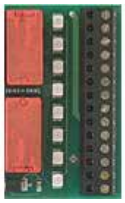
Differences between the terminals of the I/O modules

Type K
2×5-pin connector



Type L
10-pin connection terminal plug-in

Type M
14-pin connection terminal plug-in



Type N
20-pin connection terminal

Type O
34-pin ribbon connector

Type P
14-pin connection terminal

Type R
17-pin connection terminal

The screw terminal blocks and connectors can also be ordered individually as accessories.

Saia PCD2 Digital input and output modules

The digital I/O modules can be easily plugged into Saia PCD2 and Saia PCD1 base units or an appropriate I/O-module holder. In addition to inputs for various voltage levels, digital outputs are provided with both transistor construction and as mechanical relays. This means that electrical isolation from the switching electrical circuit can be achieved easily and reliably.

Digital input modules

Type	Number of inputs	Input voltage	Breaking capacity DC	Breaking capacity AC	Input filter	Electrical isolation	Current draw 5 V bus [1]	Current draw +V bus [2]	I/O connector type [3]
PCD2.E110	8 I	15…30 VDC	---	---	8 ms	---	24 mA	---	L
PCD2.E111	8 I	15…30 VDC			0.2 ms		24 mA		L
PCD2.E112	8 I	7.5…15 VDC			9 ms		24 mA		L
PCD2.E116	8 I	3.5…7 VDC			0.2 ms		24 mA		L
PCD2.E160	16 I	15…30 VDC	---	---	8 ms	---	72 mA	---	O
PCD2.E161	16 I	15…30 VDC			0.2 ms		72 mA		O
PCD2.E165	16 I	15…30 VDC			8 ms		72 mA		N
PCD2.E166	16 I	15…30 VDC			0.2 ms		72 mA		N
PCD2.E500	6 I	80…250 VAC	---	---	20 ms	•	1 mA	---	L
PCD2.E610	8 I	15…30 VDC	---	---	10 ms	•	24 mA	---	L
PCD2.E611	8 I	15…30 VDC			0.2 ms	•	24 mA		L
PCD2.E613	8 I	30…60 VDC			9 ms	•	24 mA		L
PCD2.E616	8 I	3.5…7 VDC			0.2 ms	•	24 mA		L

Digital output modules

Type	Number of outputs	Input voltage	Breaking capacity DC	Breaking capacity AC	Input filter	Electrical isolation	Current draw 5 V bus [1]	Current draw +V bus [2]	I/O connector type [3]
PCD2.A200	4 O, relay (make)	---	2 A/50 VDC	2 A/250 VAC	---	•	15 mA	---	L
PCD2.A210	4 O, relay (break with contact protection)		2 A/50 VDC	2 A/250 VAC		•	15 mA		L
PCD2.A220	6 O, relay (make with contact protection)	---	2 A/50 VDC	2 A/250 VAC	---	•	20 mA	---	L
PCD2.A250	8 O, relay (make)	---	2 A/50 VDC	2 A/48 VAC	---	•	25 mA	---	M
PCD2.A300	6 O, transistor	---	2 A/10…32 VDC	---	---	---	20 mA	---	L
PCD2.A400	8 O, transistor	---	0.5 A/5…32 VDC	---	---	---	25 mA	---	L
PCD2.A410	8 O, transistor	---	0.5 A/5…32 VDC	---	---	•	24 mA	---	L
PCD2.A460	16 O, transistor (with short circuit protection)	---	0.5 A/10…32 VDC	---	---	---	74 mA	---	O
PCD2.A465	16 O, transistor (with short circuit protection)		0.5 A/10…32 VDC				74 mA		N

Digital input/output modules

Type	Number of I/Os	Input voltage	Breaking capacity DC	Breaking capacity AC	Input filter	Electrical isolation	Current draw 5 V bus [1]	Current draw +V bus [2]	I/O connector type [3]
PCD2.B100	2 I + 2 O + 4 selectable I or O	15…32 VDC	0.5 A/5…32 VDC		8 ms		25 mA		L
PCD2.B160	16 I/O (in blocks of 4 (configurable))	24 VDC	0.25 A/18...30 VDC		8 ms or 0.2 ms		120 mA		2× K

Fast counter modules (only for I/O slots with fast SPI bus)

Type	Number of counters	Inputs per counter	Outputs per counter	Counting range	Selectable digital filter	Current draw 5 V bus [1]	Current draw +V bus [2]	I/O connector type [3]
PCD2.H112 [4]	2	2 I + 1 configurable I	1 CCO	0…16 777 215 (24-bit)	10 kHz…150 kHz	50 mA	4 mA	K
PCD2.H114 [4]	4	2 I + 1 configurable I	1 CCO	0…16 777 215 (24 bit)	10 kHz…150 kHz	50 mA	4 mA	2× K

The internal load current drawn by the I/O modules from the +5V and +V bus supply must not exceed the maximum supply current specified for the PCD2.M5xxx, PCD2.Cxxxx and PCD1.M2xxx.

Capacity of the PCD2 controllers and module holders

Capacity	PCD1.M2xxx	PCD2.M5xxx	PCD2.C1000	PCD2.C2000
[1] Internal 5V bus	500 mA	1400 mA	1400 mA	1400 mA
[2] Internal +V bus 2)	200 mA	800 mA	800 mA	800 mA

The electrical requirement of the internal +5V and +V bus for the I/O modules is calculated in the PG5 2.0 Device Configurator.

[3] Plug-in terminal blocks are included with I/O modules.
Spare parts are listed on the last page of this section (page 52).
Ribbon cables are not included in the scope of delivery and are listed in section 1.7 (page 78).

[4] Delivery on demand

More information on counting modules, stepper motor control and positioning modules:
Webcode scen13046

Saia PCD2 Analog input and output modules

The numerous analog modules allow complex control tasks or measurements. Depending on the speed of the AD converter, the resolution is between 8 and 16-bit. The digitized values can be processed further directly in the project in PCD2 and PCD1. The large number of different modules means that suitable modules can be found to cover nearly every requirement.

Analog input modules

Type/ Order no.	Total channels	Signal range	Resolution	Electrical isolation	Current draw 5 V bus [1]	Current draw + V bus [2]	I/O connector type [3]
PCD2.W200	8 I	0…+10 V	10-bit	---	8 mA	5 mA	L
PCD2.W210	8 I	0…20 mA (4…20 mA via user program)	10-bit		8 mA	5 mA	L
PCD2.W220	8 I	Pt 1000: –50 °C…400 °C/Ni 1000: –50 °C…+200 °C	10-bit		8 mA	16 mA	L
PCD2.W220Z02	8 I	NTC 10 temperature sensor	10-bit		8 mA	16 mA	L
PCD2.W220Z12	4 I + 4 I	4 I: 0…10 V and 4 I: Pt 1000: –50 °C…400 °C/Ni 1000: –50 °C…+200 °C	10-bit		8 mA	11 mA	L
PCD2.W300	8 I	0…+10 V	12-bit	---	8 mA	5 mA	L
PCD2.W310	8 I	0…20 mA (4…20 mA via user program)	12-bit		8 mA	5 mA	L
PCD2.W340	8 I	0…+10 V/0…20 mA (4…20 mA via user program) Pt 1000: –50 °C…400 °C/Ni 1000: –50 °C…+200 °C	12-bit		8 mA	20 mA	L
PCD2.W350	8 I	Pt 100: –50 °C…+600 °C/Ni 100: –50 °C…+250 °C	12-bit		8 mA	30 mA	L
PCD2.W360	8 I	Pt 1000: –50 °C…+150 °C	12-bit		8 mA	20 mA	L
PCD2.W380	8 I	–10 V…+10 V, –20 mA…+20 mA, Pt/Ni1000, Ni1000 L&S, NTC10k/NTC20k (configuration via user program)	13-bit		25 mA	25 mA	2× K
PCD2.W305	7 I	0…+10 V	12-bit	•	60 mA	0 mA	P
PCD2.W315	7 I	0…20 mA (4…20 mA via user program)	12-bit	•	60 mA	0 mA	P
PCD2.W325	7 I	–10 V…+10 V	12-bit	•	60 mA	0 mA	P
PCD2.W720	2 I	Weighing module with 2 systems for up to 6 weighing cells	≤ 18 bit	---	60 mA	100 mA	P
PCD2.W745	4 I	Temperature module for TC type J, K and 4-wire Pt/Ni 100/1000	16 bit	•	200 mA	0 mA	R

Analog output modules

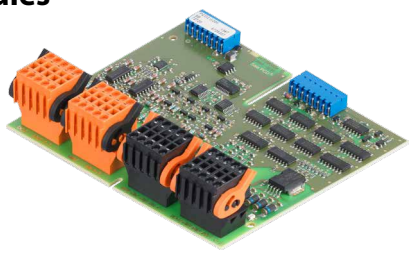
Type/ Order no.	Total channels	Signal range	Resolution	Electrical isolation	Current draw 5 V bus [1]	Current draw + V bus [2]	I/O connector type [3]
PCD2.W400	4 O	0…+10 V	8-bit	---	1 mA	30 mA	L
PCD2.W410	4 O	0…+10 V/0…20 mA/4…20 mA jumper-selectable	8-bit		1 mA	30 mA	L
PCD2.W600	4 O	0…+10 V	12-bit	---	4 mA	20 mA	L
PCD2.W610	4 O	0…+10 V/–10 V…+10 V/0…20 mA/4…20 mA jumper-selectable	12-bit		110 mA	0 mA	L
PCD2.W605	6 O	0…+10 V	10-bit	•	110 mA	0 mA	P
PCD2.W615	4 O	0…20 mA/4…20 mA, parameters can be set	10-bit	•	55 mA	0 mA	P
PCD2.W625	6 O	–10 V…+10 V	10-bit	•	110 mA	0 mA	P

Analog input/output modules

Type/ Order no.	Total channels	Signal range	Resolution	Electrical isolation	Current draw 5 V bus [1]	Current draw + V bus [2]	I/O connector type [3]
PCD2.W525	4 I + 2 O	I:0…10 V, 0(4)…20 mA, Pt 1000, Pt 500 or Ni 1000 (selectable by DIP switch) O:0…10 V or 0(4)…20 mA (selectable by software)	I: 14-bit O: 12-bit	•	40 mA	0 mA	P

Saia PCD2 mixed digital and analoge input and output modules

With the multi-function I/O module PCD2.G200 a total of 24 digital and analog inputs and outputs is achieved. Thus, the need for additional module holders can be avoided, and sophisticated small applications can be implemented cost-effectively.



Multifunction input/output modules

Type/ Order no.	Total channels	Signal range	Resolution	Input filter	Electrical isolation	Current draw 5 V bus [1]	Current draw + V bus [2]	I/O connector type [3]
PCD2.G200	4 I	Digital: 15…30 VDC		8 ms	---	12 mA	35 mA	KB black
	4 O	Digital: 0.5 A/10…32 VDC			---			KB black
	2 I 2 I 4 I	Analog: 0…10 V Analog: Pt1000 or Ni1000 Analog: universal, 0…10 V, 0…20 mA, Ni/Pt1000 (selectable by DIP switch)	12 bit 12 bit 12 bit	10 ms 20 ms 10 ms Ni/Pt 20 ms	---			K orange
	8 O	Analog: 0…10 V	10 Bits		---			K orange

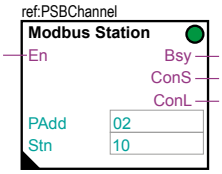
[1] [2] [3] See page 46

Communication interfaces of the Saia PCD2.M5xxx controllers

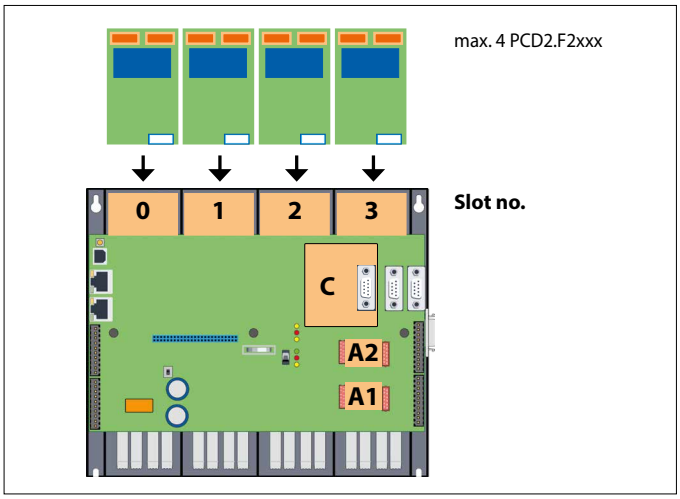
In addition to the On-Board interfaces of Saia PCD2, the interface functions can also be extended in a modular way by means of the various slots. Numerous protocols are therefore supported by the PCD2.M5xxx series. The physical bus specifications are offered for the majority of protocols as a plug-in module. If this is not the case, the bus can be connected via an external converter.

Protocols supported by the PCD2.M5xxx via FBoxes

- Modem communication with the PCD
- HMI editor applications with PCD7.Dxxx text terminals
- Serial S-Net (S-Bus)
- Modbus
- JCI N2-Bus
- KNX® S-Mode/EIB (with external converter)
- DALI
- EnOcean (with external converter)
- M-Bus
- BACnet®



Saia FBoxes for Modbus



Slots for interface modules

Physical interfaces that can be freely programmed

PCD7.F150S

PCD2.F2150
mit PCD7.F150S

Module	Specifications	Electrical isolation	Current draw 5 V bus	Current draw + V bus	Slot	I/O connector type [1]
PCD7.F110S	RS-422 with RTS/CTS or RS-485, with line termination resistors capable of activation.	---	40 mA	---	A1 / A2	
PCD7.F121S	RS-232 with RTS/CTS, DTR/DSR, DCD	---	15 mA	---	A1 / A2	
PCD7.F150S	RS-485 with line termination resistors capable of activation	•	130 mA	---	A1 / A2	
PCD2.F2100	RS-422 / RS-485 plus PCD7.F1xxS as option	---	110 mA	---	I/O 0-3	2× K
PCD2.F2210	RS-232 plus PCD7.F1xxS as option	---	90 mA	---	I/O 0-3	2× K

Physical interfaces for specific protocols

PCD2.F2210

PCD2.F2150

PCD2.F2810

Module	Specifications	Electrical isolation	Current draw 5 V bus	Current draw + V bus	Slot	I/O connector type [1]
PCD7.F180S	Belimo MP-Bus, for connecting up to 8 drives on one line	---	15 mA	15 mA	A1 / A2	
PCD2.F2150	BACnet® MS/TP	---	110 mA	---	I/O 0-3	2× K
PCD2.F2400*	LonWorks®-Interface-Modul	---	90 mA	---	I/O 0-3	L9
PCD2.F2610	DALI	---	90 mA	---	I/O 0-3	L
PCD2.F2700	M-Bus 240 nodes	---	70 mA	8 mA	I/O 0-3	L
PCD2.F2710	M-Bus 20 nodes	---	70 mA	8 mA	I/O 0-3	L
PCD2.F2720	M-Bus 60 nodes	---	70 mA	8 mA	I/O 0-3	L
PCD2.F2730	M-Bus 120 nodes	---	70 mA	8 mA	I/O 0-3	L
PCD2.F2810	Belimo MP-Bus with slot for PCD7.F1xxS modules	---	90 mA	15 mA	I/O 0-3	2× K
PCD7.F7500	Profibus-DP Master	---	200 mA	---	C	
PCD2.T814	Analog modem 33.6 kbit/s (RS-232 and TTL interface)	---	250 mA	---	I/O 4 + A1	

[1] Plug-in I/O terminal blocks are included with I/O modules.
Spare terminals, ribbon connectors with system cables and separate terminals are ordered as accessories (see pages 34 and 78).
*) In preparation, see section C2 Product status

System properties of PCD2.F2xxx modules:

The following points must be observed when using the PCD2.F2xxx interface modules:

- For each PCD2 system, up to 4 PCD2.F2xxx modules (8 interfaces) can be used in slots 0…3.
- The PCD2 system has a processor to look after both the application and the serial interfaces. Processing of the interface modules requires the appropriate CPU capacity.
- To determine the maximum communication capacity for each PCD2.M5 system, consult the information and examples provided in Manual 26/856 for PCD2.M5.

Memory modules of the Saia PCD2.M5xxx controllers

The functions of the Saia PCD2 can be expanded by means of flash memory. Memory cards with file systems and data backup are available for this. The various protocols whose firmware is installed on the flash cards can also be used by simply inserting the relevant card. The controller thus becomes BACnet® or Lon IP-enabled, for example.
More information about memory management and memory structure are listed Chapter 1.1 "Saia PCD® system description".

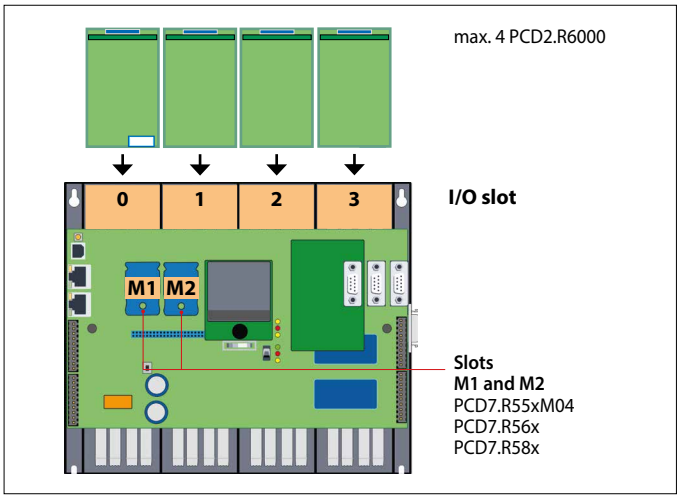
System properties

User memory On-Board:

- 1024 kByte RAM for program + DB/text
- 2 MByte flash memory (S-RIO, configuration and backup)

Expansion options:

- Two slots (M1 and M2) for memory cards integrated into the CPU
- Additional SD memory cards can be inserted in the I/O slots 0 to 3 using adapters



Slots for memory modules

Flash memory with file system, program and data backup, BACnet®

Type	Description	Slot
PCD7.R550M04	4 MByte flash card with file system	M1 & M2
PCD7.R560	Flash card with BACnet®	M1 & M2
PCD7.R562	Flash card with BACnet® and 128 MByte file system	M1 & M2
PCD7.R580	Flash card with Lon IP	M1 & M2
PCD7.R582	Flash card with Lon IP and 128 MByte file system	M1 & M2
PCD7.R610 *	Support module for micro SD card	M1 & M2
PCD7.R-MSD1024 *	SD flash micro memory card 1 GB, PCD formatted	PCD7.R610

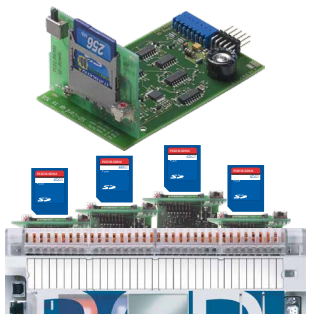
*) In preparation, see section C2 Product status

PCD7.R55xM04

PCD7.R610

PCD2 SD flash memory cards for I/O slots

Type	Description	Slot
PCD2.R6000	Basic module with slot for SD flash memory cards (Up to 4 modules in I/O slots 0 to 3 on a CPU)	I/O 0-3
PCD7.R-SD512	SD flash memory card, 512 MByte with file system	---
PCD7.R-SD1024	SD flash memory card, 1024 MByte with file system	---



Battery for data backup

Type	Description
4 507 4817 0	Lithium battery for PCD processor unit (RENATA button battery type CR 2032)

System properties of PCD7.R5xx modules

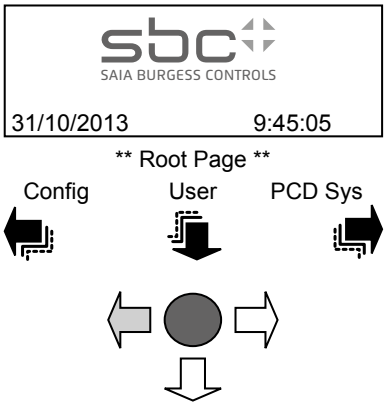
- Only 1 BACnet® or Lon IP module can be run for each PCD2.M5xxx.

Saia PCD7.D3100E Integral e-display

With the Saia PCD7.D3100E, Saia has expanded the concept of "seamless control", which has only one HMI project for all devices from the small control unit to any device with a browser (Explorer, Mozilla, etc.), to include on-site display of the automation device. This is a new way of having on-site automation device control available anywhere in the network on the PC or PDA. The web project is created with Saia Web Editor for Micro-Browser and Microsoft® Explorer applications.

System properties

- Graphical display can be integrated directly in PCD2.Mxxxx
- 4 grey shades
- Resolution of 128 × 88 pixels
- LED backlighting
- Display size of 35.8 × 24.8 mm
- Dimensions of 47 × 67 mm
- Joystick for navigation
- Functionality: Sub-set of a Micro-Browser



Predefined configuration units
Together with the possibility of editing user defined projects with Saia Web Editor (version for e-display), a variety of predefined configuration screens for e-display and the PCD system are also available to the user. This makes it easy to implement initial on-site diagnosis and control.

PCD2.M5xxx: Parameters that can be edited and are displayed

- CPU type and serial number
- HW version
- FW version
- MAC address
- Program name
- TCP/IP parameters
- S-Bus address
- PCD status, time and date

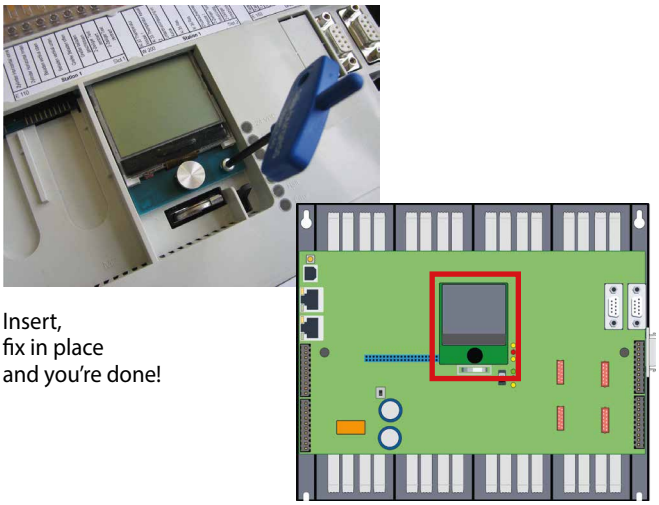
Configurable display functions

- User start page
- Setup timeout
- Backlighting timeout
- Contrast
- Inactivity timeout
- Sleep timeout
- Sleep refresh time

Operation

5 way button use for configuration, editing user projects and for PCD system settings, such as CPU type, date and time, TCP/ IP address, etc.

Assembly



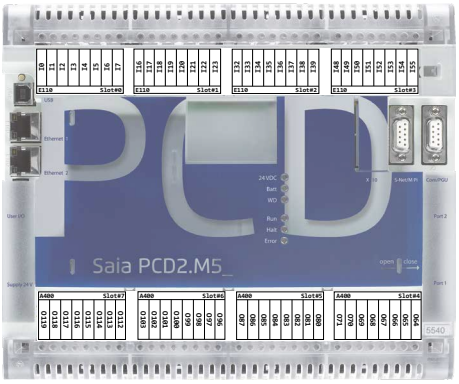
Insert,
fix in place
and you're done!

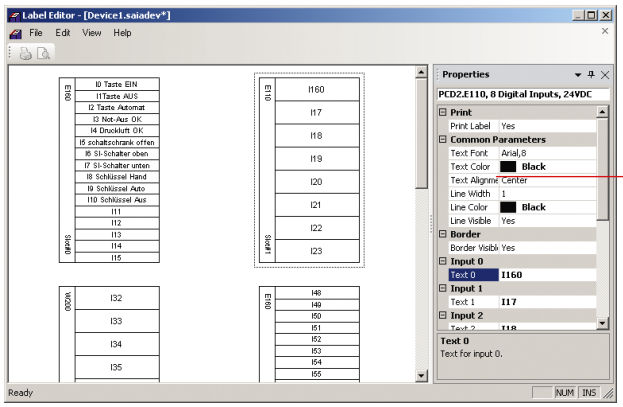
Accessories and consumables for the Saia PCD2.M5xxx controllers

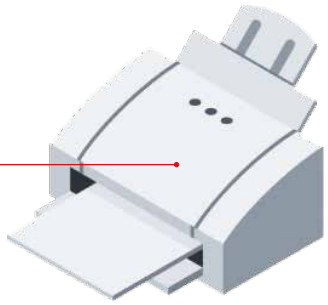
Fast labeling of I/O modules with Saia LabelEditor

The software tool is used to efficiently label the PCD2 labeling strip. The unique data point text can be entered in the tool by the user In the tool, the unique data point text to be entered by the user. These can then be printed on A4 paper. For the different types of PCD2 modules, the user selects appropriate distance formats. The entered text can be saved as templates and reused.

SBC Label Editor is supplied with Saia PG5 Controls Suite.







EPLAN macros

For project planning and engineering EPLAN macros are available

ePLAN® electric P8 macros are available from the support page.

Macros and product data may also be obtained from the ePLAN® data portal.

Download area:
www.sbc-support.com

Consumables and accessories for Saia PCD2 controllers

Saia PCD2 housing covers

Type	Description
4 104 7719 0	Cover for PCD2.M5x40 without logo (neutral housing cover)
4 104 7758 0	Cover for PCD2.C1000 without logo (neutral housing cover)
4 104 7720 0	Cover for PCD2.C2000 without logo (neutral housing cover)

Saia PCD2 plug-in screw terminal blocks for On-Board I/Os

Type	Description
4 405 4916 0	Plug-in screw terminal block, 10-pin, labeling 0…9
4 405 4917 0	Plug-in screw terminal block, 10-pin, labeling 10…19
4 405 4918 0	Plug-in screw terminal block, 10-pin, labeling 20…29
4 405 4919 0	Plug-in screw terminal block, 10-pin, labeling 30…39
4 405 4920 0	Plug-in screw terminal block, 10-pin, labeling 40…49

Plug-in screw terminal blocks and connectors for Saia PCD2 I/O modules

Type	Description
4 405 5109 0	Plug-in screw terminal block, 9-pin for PCD2.F2400, for wires up to 1,5 mm²
4 405 4847 0	Plug-in screw terminal block, 10-pin (type L) for wires up to 1,5 mm², labeling 0…9
4 405 4869 0	Plug-in screw terminal block, 14-pin (type M) for wires up to 0,6 mm²
4 405 5048 0	Plug-in spring terminal block 2 × 5-pin (type K) for wires up to 1,0 mm², orange
4 405 5054 0	Plug-in spring terminal block 2 × 5-pin (type K) for wires up to 1,0 mm², black

I/O bus connection

Type	Description
PCD2.K010	I/O bus connector
PCD2.K106	I/O bus extension cable

Battery

Type	Description
4 507 4817 0	Lithium battery for PCD2.M5xxx

System cables for digital modules with 16 I/Os[1)]

PCD2.K221	Sheathed, round cable with 32 strands, each 0.25 mm², 1.5 m long, PCD side: 34-pin ribbon connector type D, process side: strand ends free, color coded
PCD2.K223	Sheathed, round cable with 32 strands, each 0.25 mm², 3.0 m long, PCD side: 34-pin ribbon connector type D, process side: strand ends free, color coded

System cables for adapters PCD2.K520/…K521/…K525[1)]

PCD2.K231	Sheathed, half-round cable with 34 strands, each 0.09 mm², 1.0 m long, with 34-pin ribbon connector type D at both ends
PCD2.K232	Sheathed, half-round cable with 34 strands, each 0.09 mm², 2.0 m long, with 34-pin ribbon connector type D at both ends

System cables for 2 adapters PCD2.K510/…K511 or 1 adapter and relay interface PCD2.K551[1)]

PCD2.K241	Sheathed, half-round cable with 34 strands, each 0.09 mm², 1.0 m long, PCD side: 34-pin ribbon connector type D, process side: two 16-pin ribbon connectors
PCD2.K242	Sheathed, half-round cable with 34 strands, each 0.09 mm², 2.0 m long, PCD side: 34-pin ribbon connector type D, process side: two 16-pin ribbon connectors

"Ribbon connector ←→ screw terminal" adapters

PCD2.K510	for 8 inputs/outputs, with 20 screw terminals, without LED
PCD2.K511	for 8 inputs/outputs, with 20 screw terminals and LED (for source operation only)
PCD2.K520	for 16 inputs/outputs, with 20 screw terminals, without LED
PCD2.K521	for 16 inputs/outputs, with 20 screw terminals and LED (for source operation only)
PCD2.K525	for 16 inputs/outputs, with 3 × 16 screw terminals and LED (for source operation only)
PCD2.K551	Relay interface for 8 PCD transistor outputs with 24 screw terminals and LED
PCD2.K552	Relay interface PCD2.K552 for 8 PCD transistor outputs with 24 screw terminals, LED and manual control mode (switch on-off-auto) and 1 output as feedback for the manual control mode

[1)] For details, see Section 1.7

1.4 Saia PCD1

The Saia PCD1 systems are the smallest programmable Saia PCD® controllers in a flat design. Alongside the standard communication interfaces, integrated data memory and web/IT functionality, all controllers also have at least 18 integrated I/Os. The PCD1 controllers are ideally suited to small-scale automation tasks, whose challenges and issues can be successfully mastered by the powerful CPU.

The many communication options are another advantage:
Ethernet TCP/IP, USB port, the onboard RS-485 interface and the expansion options with BACnet® or LON IP, for instance, are a small example of the performance capability of PCD1.

1.4.1 Saia PCD1.M2 series

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Saia PCD1.M2xxx are compact and may be modular extended.

Types:
- PCD1.M2160 with Ethernet TCP/IP and expanded memory
- PCD1.M2120 with Ethernet TCP/IP
- PCD1.M2020 without Ethernet TCP/IP

18 integrated I/Os
2 free I/O slots

Possible use in primary switch cabinet

1.4.2 Saia PCD1.Room (PCD1.M2110R1)

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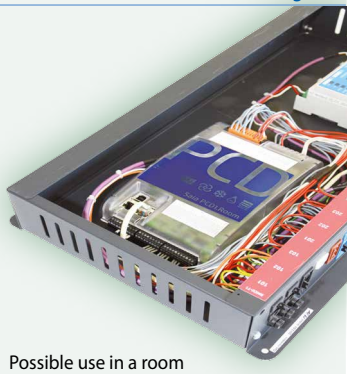
Saia PCD1.Room is for applications in the field of room automation and HeaVAC.

Type:
- PCD1.M2110R1 with Ethernet TCP/IP for room automation applications

24 integrated I/O
1 free I/O slot



Possible use in a room (Example in a Room Box)

1.4.3 Saia PCD® E-Controller (PCD1.M0160E0)

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E-Controller for installation in electrical cabinet.
In the default setup, there are S-Monitoring (energy) functionalities that can be adjusted with Saia PG5.

Type:
- PCD1.M0160E0 with S-Monitoring function

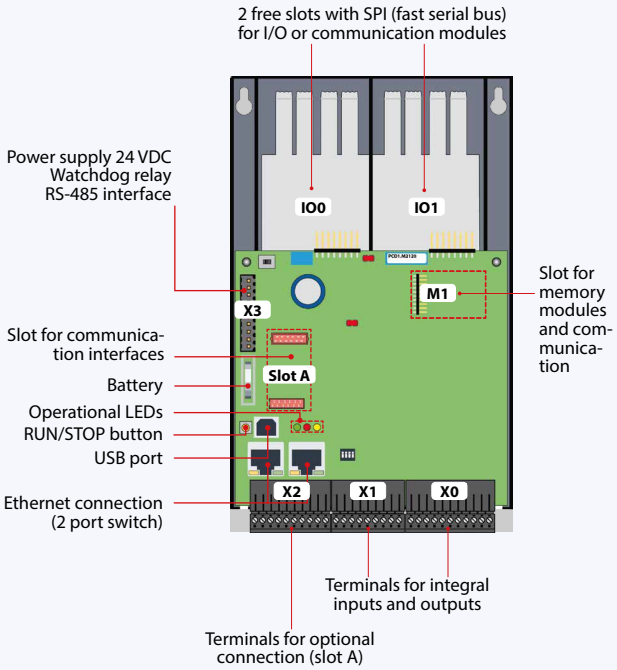
18 integrated I/Os
no free I/O slots

Possible use in a electrical cabinet

1.4.1 Saia PCD1.M2xxx

The Saia PCD1.M2xxx series is a compact controller with onboard I/Os and in addition two I/O-slots for PCD2 I/O-modules or communication interface-modules. The Web/IT functionality, the onboard memory, the range of standard communication interfaces and the expansion options offer good solutions for small to medium installations.

Layout



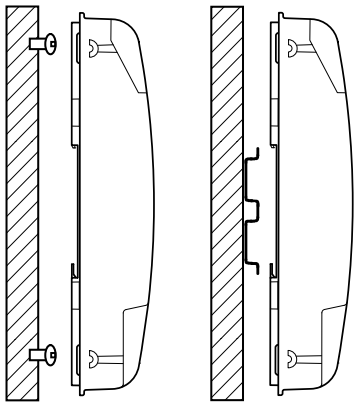
System characteristics

- Up to 50 inputs / outputs
  may be expanded locally with RIO PCD3.T66x or PCD3.T76x
- Up to 8 communication interfaces
- USB and Ethernet interface onboard
- Large onboard memory for programs (up to 1 MByte) and data (up to 128 MByte file system)
- Automation Server for integration into Web/IT systems

Types

- PCD1.M2160 with Ethernet TCP/IP and expanded memory
- PCD1.M2120 with Ethernet TCP/IP
- PCD1.M2020 without Ethernet TCP/IP

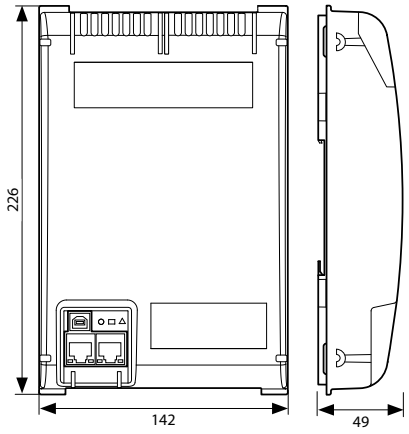
Mounting



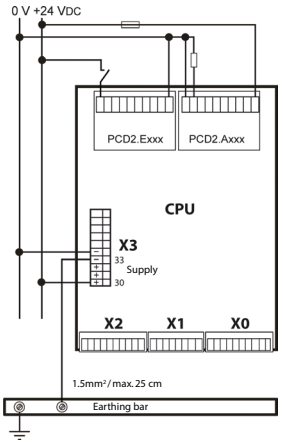
On a flat surface

On two top-hat rails (2 × 35 mm pursuant to DIN EN 60 715 TH35)

Dimensions



Power supply and connection plan



Further information is provided in the Saia PCD3 power supply and connection plan section and in Manual 26-875.

Overview of Saia PCD1.M2xxx

Technical data

Memory and file system — Types:	PCD1.M2160	PCD1.M2120	PCD1.M2020
Program memory, DB/text (Flash)	1 MByte	512 kByte	512 kByte
User memory, DB/text (RAM)	1 MByte	128 kByte	128 kByte
User flash file system onboard	128 MByte	8 MByte	8 MByte
Integrated communication			
Ethernet connection (2 port switch) 10/100 Mbit/s, full-duplex, auto-sensing, auto-crossing	yes	yes	no
USB connection USB 1.1 device, 12 Mbit/s	yes	yes	yes
RS-485 (terminal X3), up to 115 kbit/s	yes	yes	yes

General data

Supply voltage	24 VDC, –20/+25 % max. incl. 5% ripple (according to EN/IEC 61131-2)
Battery for data backup (exchangeable)	Lithium battery with a service life of 1 to 3 years
Operating temperature	0…55 °C
Dimensions (W × H × D)	142 × 226 × 49 mm
Type of mounting	2× top-hat rails according to DIN EN60715 TH35 (2 × 35 mm) or on a flat surface
Protection level	IP 20
Capacity 5V/+V(24 V) internal	max. 500 mA/200 mA
Power consumption	typically 12 W

On-Board inputs/outputs

Inputs

6 Digital inputs (4 + 2 interrupts)	15…30 VDC, 8 ms input filter (0.2 ms for the interrupts)	Terminal X1
2 Analog inputs, selectable via DIP switch	–10…+10 VDC, 0…+/–20 mA, Pt1000, Ni1000 L&S, 0…2.5 kΩ, 12 bit resolution	Terminal X1

Outputs

4 Digital outputs	24 VDC / 0.5 A	Terminal X0
1 PWM output	24 VDC / 0.2 A	Terminal X0

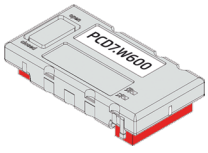
selectable/configurable via PG5

4 Digital inputs or outputs	24 VDC / data as digital inputs resp. outputs	Terminal X0
1 Watchdog relay or make contact	48 VAC or VDC, 1 A mount a free wheeling diode over the load when switching DC-tension	Terminal X3

Analogue output module Saia PCD7.W600 *)

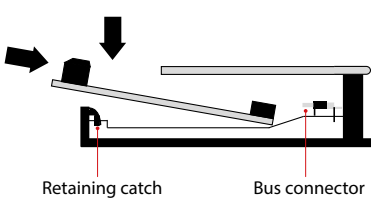
This new analogue outputs (range 0 to +10 V) with 12 bits resolution has been especially developed for the new PCD1 CPU (PCD1.M2xxx, PCD1.M0160E0, PCD1.M2110R1). It can be plugged in the slot A instead of a communication interface.

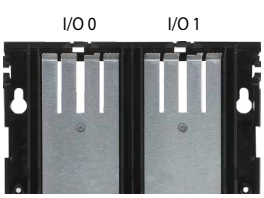
*) In preparation, see section C2 Product status

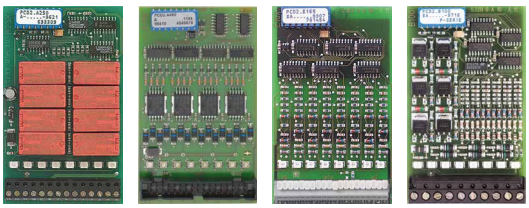


Plug-in I/O modules for slots I/O 0 and I/O 1

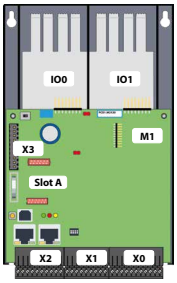
The modules that have already been listed in the PCD2.M5 series are used for the Saia PCD1 series.







Saia PCD1.M2xxx interface options



In addition to the onboard interfaces, the interface functions can also be extended in a modular way by means of the various slots. Numerous protocols are therefore supported by the Saia PCD1.M2 series. Detailed information and an overview can be found in the section BA communication systems.

Communication		Electrical isolation	Internal current draw 5V	+V (24V)	Slot	I/O connector type [1]
PCD7.F110S	RS-485/RS-422	---	40 mA	–	Slot A	
PCD7.F121S	RS-232 with RTC/CTS, DTR/DSR, DCD suitable for modem, EIB connection	---	15 mA	–	Slot A	
PCD7.F150S	RS-485 with activatable termination resistors	•	130 mA	–	Slot A	
PCD7.F180S	Belimo MP-Bus, for connecting up to 8 drives on one line	---	15 mA	15 mA	Slot A	
PCD2.F2100	RS-422/RS-485 plus PCD7.F1xxS as option	---	110 mA	–	IO 0/1	2× K
PCD2.F2150	BACnet® MS/TP RS-485 plus PCD7.F1xxS as option	---	110 mA	–	IO 0/1	2× K
PCD2.F2210	RS-232 plus PCD7.F1xxS as option	---	90 mA	–	IO 0/1	2× K
PCD2.F2400*	LonWorks®-Interface-Modul	---	90 mA	–	IO 0/1	L9
PCD2.F2610	DALI master for up to 64 DALI-devices	---	90 mA	–	IO 0/1	L
PCD2.F27x0	M-Bus master with 2 M-Bus interfaces	---	70 mA	8 mA	IO 0/1	L
PCD2.F2810	Belimo MP-Bus plus PCD7.F1xxS as option	---	90 mA	15 mA	IO 0/1	2× K

[1] Plug-in I/O terminal blocks are included with I/O modules.
Spare terminals, ribbon connectors with system cables and separate terminals are ordered as accessories (see pages 34, 52 and 78).

The use of external modem modules such as Q.M716-KS1 is recommended.
The PCD2.T8xx modem modules can only be used together with a PCD7.F121S module.
External wiring is therefore required.

System properties of PCD2.F2xxx modules

The following points must be observed when using the PCD2.F2xxx interface modules:

- For each PCD1.M2 system, up to 2 PCD2.F2xxx modules (4 interfaces) can be used in slots I/O 0/1.
- To determine the maximum communication capacity for each PCD1.M2 system, consult the information and examples provided in Manual 26/875 for PCD1.M2.

Memory modules

The onboard memory of the Saia PCD1.M2xxx can be extended by means of a Saia PCD7.Rxxx module in slot M1. In addition, the Saia PCD1.M21x0 can be extended with BACnet® IP or LON IP.

More information about the memory management and construction are listed in Chapter 1.1 Saia PCD® basic properties.

Memory extension and communication		
PCD7.R550M04	Flash memory module with 4 MByte file system (for user program backup, web pages, etc.)	M1
PCD7.R560	Flash memory module for BACnet® firmware	M1
PCD7.R562	Flash memory module for BACnet® firmware with 128 MByte file system	M1
PCD7.R580	Flash memory module for Lon IP firmware	M1
PCD7.R582	Flash memory module for Lon IP firmware with 128 MByte file system	M1
PCD7.R610*	Base module for Micro SD Flash Card	M1
PCD7.R-MSD1024*	Micro SD Flash Card 1024 MB, PCD formatted	PCD7.R610

*) In preparation, see section C2 Product status

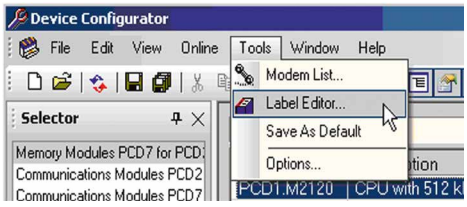
PCD7.R55xM04

PCD7.R610

Accessories and consumables for Saia PCD1.M2xxx

Labeling

The self-adhesive labels can be printed directly with the SBC LabelEditor from the PG5 Device Configurator



EPLAN macros

For project planning and engineering EPLAN macros are available.

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Macros and product data may also be obtained from the ePLAN® data portal.

Battery for data backup

Type	Description
4 507 4817 0	Lithium battery for PCD processor unit (RENATA button battery type CR 2032)

Plug-in screw terminal blocks

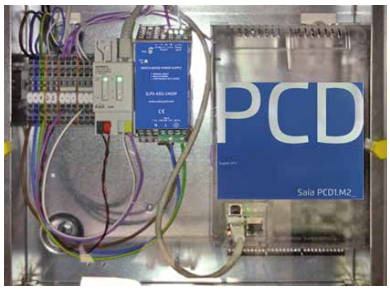
4 405 5089 0	Plug-in screw terminal block, 11-pole, labeling 0…10	Terminal X0
4 405 5087 0	Plug-in screw terminal block, 9-pole, labeling 11…19	Terminal X1
4 405 5088 0	Plug-in screw terminal block, 10-pole, labeling 20…29	Terminal X2
4 405 4919 0	Plug-in screw terminal block, 10-pole, labeling 30…39	Terminal X3

Cover

4 104 7759 0	Housing cover for PCD1.M2xxx without logo can be individually designed on site with a foil

Range of uses

- For small and medium installations
- Modernization and enhancement of existing installations through the compact design, for example
- Various interface options, including to existing installations as a gateway.
  For example, optimization of a cooling system by setting all the free parameters



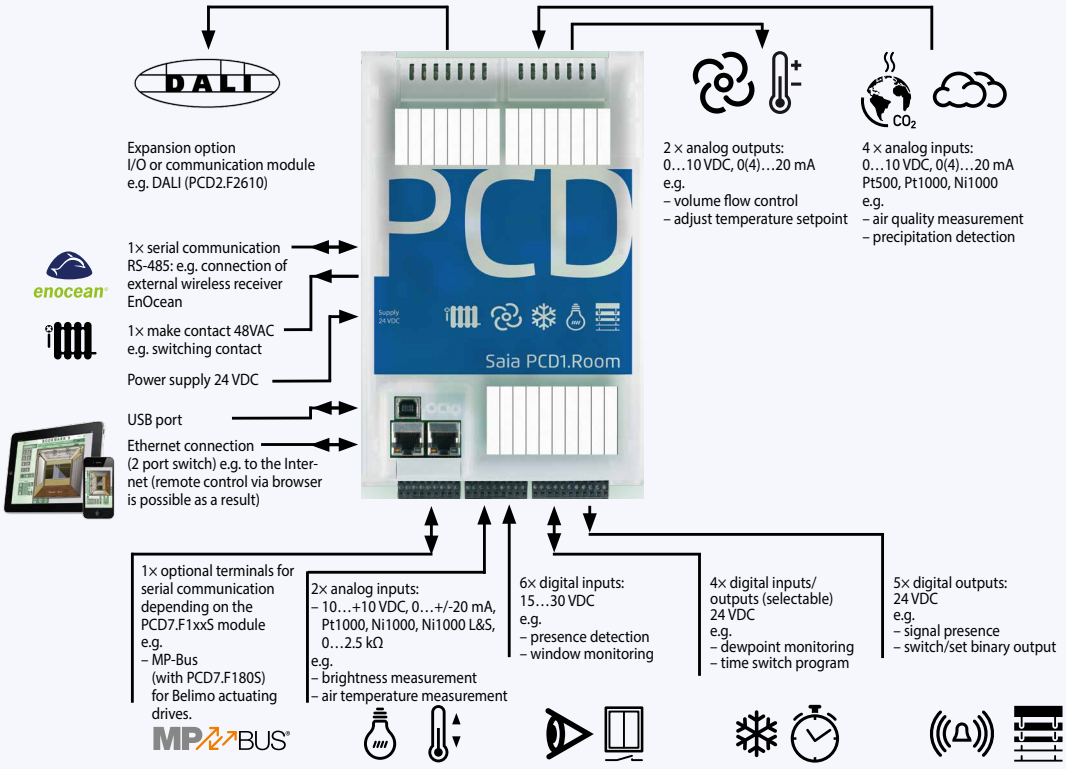
Connection to an existing EIB/KNX installation providing conference rooms with a web connection

Use as communication interface with M-Bus in a district heating network

1.4.2 Saia PCD1.Room (PCD1.M2110R1)

Saia PCD1.Room (PCD1.M2110R1) is a programmable room controller for sophisticated solutions with many communication options. In addition to the I/Os that are already integrated, the controller offers a free I/O slot for an individual expansion with inputs/outputs or communication options. Web/IT functions for mobile operation, for instance, are also already onboard.
Furthermore, Saia PCD1.Room offers various possibilities for integrating other systems in the room through standard communication interfaces. (Energy) efficient and individual room automation can be easily implemented as a result.
The controller also provides a good basis for achieving the energy efficiency classes according to EN 15232:2012.

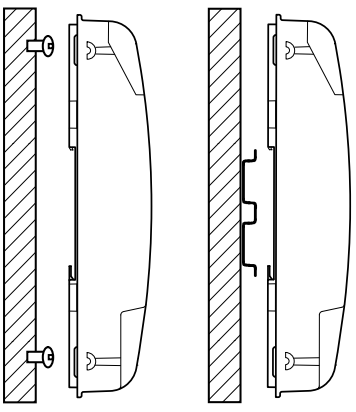
Layout with connection example



Lighting, sun blinds and single room control can be optimally harmonized with this controller. This example showing possible assignments was compiled on the basis of applications according to the VDI 3813 list of room automation functions and the DIN EN 15232 list of building automation functions.

The Smart RIO Manager function is not supported!

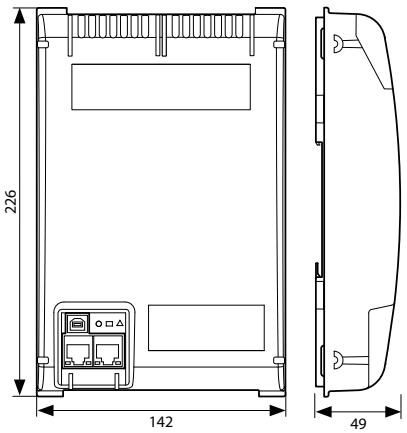
Mounting



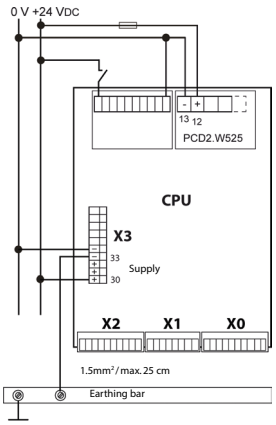
On a flat surface

On two top-hat rails
(2 × 35 mm pursuant to
DIN EN 60 715 TH35)

Dimensions



Power supply and connection plan



Further information is provided in the Saia PCD3 power supply and connection plan section and in Manual 26-875.

Overview of Saia PCD1.Room (PCD1.M2110R1)

Technical data

Memory and file system	Type:	PCD1.M2110R1
Program memory, DB/text (Flash)		256 kByte
User memory, DB/text (Flash)		128 kByte
User flash file system onboard		8 MByte
Integrated communication		
Ethernet connection (2 port switch)	10/100 Mbit/s, full-duplex, auto-sensing, auto-crossing	yes
USB connection	USB 1.1 device, 12 Mbit/s	yes
RS-485	(terminal X3), up to 115 kbit/s	yes

General data

Supply voltage	24 VDC, –20/+25 % max. incl. 5% ripple (according to EN/IEC 61131-2)
Battery for data backup (exchangeable)	Lithium battery with a service life of 1 to 3 years
Operating temperature	0…55 °C
Dimensions (W×H×D)	142 × 226 × 49 mm
Type of Mounting	2× top-hat rails according to DIN EN60715 TH35 (2 × 35 mm) or on a smooth surface
Protection type	IP 20
Capacity 5V/+V(24V) internal	max. 500 mA/200 mA
Power consumption	typically 12 W
Automation Server	Flash memory, Filesystem, FTP and Web-Server, E-Mail, SNMP

On-Board inputs/outputs

Inputs

6	Digital inputs (4 + 2 interrupts)	15…30 VDC, 8 ms / 0.2 ms input filter	Terminal X1
2	Analog inputs, selectable via DIP switch	–10…+10 VDC, 0…+/–20 mA, Pt1000, Ni1000, Ni1000 L&S, 0…2.5 kΩ, 12 Bit resolution	Terminal X1
4	Analog inputs, selectable via DIP switch	0…10 VDC, 0(4)…20 mA, Pt1000, Pt 500, Ni1000 14 Bit resolution	EA 1

Outputs

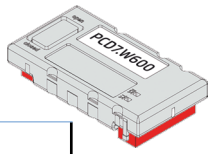
4	Digital outputs	24 VDC / 0.5 A	Terminal X0
1	PWM output	24 VDC / 0.2 A	Terminal X0
2	Analog outputs, selectable via PG5	0…10 VDC or 0(4)…20 mA, 12 Bit resolution	EA 1

Selectable/configurable via PG5

4	Digital inputs or outputs	24 VDC / data as digital inputs resp. outputs	Terminal X0
1	Watchdog relay or as make contact	48 VAC or VDC, 1 A mount a free wheeling diode over the load when switching DC-tension	Terminal X3

Analogue output module Saia PCD7.W600 *)

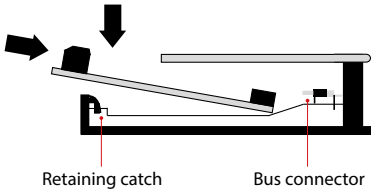
This new analogue outputs (range 0 to +10 V) with 12 bits resolution has been especially developed for the new PCD1 CPU (PCD1.M2xxx, PCD1.M0160E0, PCD1.M2110R1). It can be plugged in the slot A instead of a communication interface.

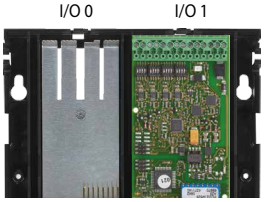


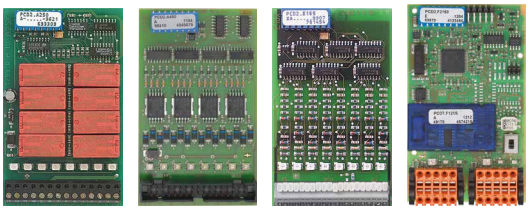
*) In preparation, see section C2 Product status

Plug-in I/O modules for slot I/O 0

The modules that have already been listed in the PCD2.M5 series are used for the Saia PCD1 series.

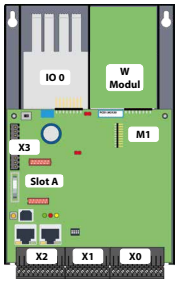






Only a PCD2.W525 module that is already supplied together with the controller in the default set up works in slot I/O 1.
If the module is removed, the controller stops.

Saia PCD1.Room (PCD1.M2110R1) interface options



In addition to the onboard interfaces, the interface functions can also be extended in a modular way by means of the various slots. Numerous protocols are therefore supported by the Saia PCD1.M2110R1.
A detailed list of all the protocols can be found in the section BA communication systems.

Communication		Electrical isolation	Internal current draw 5V	+V (24V)	Slot	I/O connector type [1]
PCD7.F110S	RS-485/RS-422 not electrically isolated	---	40 mA	–	Slot A	
PCD7.F121S	RS-232 with RTC/CTS, DTR/DSR, DCD suitable for modem, EIB connection	---	15 mA	–	Slot A	
PCD7.F150S	RS-485 electrically isolated, with activatable termination resistors	•	130 mA	–	Slot A	
PCD7.F180S	Belimo MP-Bus, for connecting up to 8 drives on one line	---	15 mA	15 mA	Slot A	
PCD2.F2100	RS-422/RS-485 (not electrically isolated) plus PCD7.F1xxS as option	---	110 mA	–	IO 0/1	2× K
PCD2.F2150	BACnet® MS/TP RS-485 plus PCD7.F1xxS as option	---	110 mA	–	IO 0/1	2× K
PCD2.F2210	RS-232 plus PCD7.F1xxS as option	---	90 mA	–	IO 0/1	2× K
PCD2.F2400*	LonWorks®-Interface-Modul	---	90 mA	–	IO 0/1	L9
PCD2.F2610	DALI master for up to 64 DALI-devices	---	90 mA	–	IO 0/1	L
PCD2.F27x0	M-Bus master with 2 M-Bus interfaces	---	70 mA	8 mA	IO 0/1	L
PCD2.F2810	Belimo MP-Bus plus PCD7.F1xxS as option	---	90 mA	15 mA	IO 0/1	2× K

[1] Plug-in I/O terminal blocks are included with I/O modules.
Spare terminals, ribbon connectors with system cables and separate terminals are ordered as accessories (see pages 34, 52 and 78).

System properties of PCD2.F2xxx modules

The following points must be observed when using the PCD2.F2xxx interface modules:

- For each PCD1.M2120R1 Room Edition, up to 1 PCD2.F2xxx module (2 interfaces) can be used in slot I/O 0.
- To determine the maximum communication capacity for each PCD1.M2 system, consult the information and examples provided in Manual 27/619 für PCD1.M2110R1.

Memory modules

The onboard memory can be extended by means of a PCD7.Rxxx module in slot M1. In addition, BACnet® IP or LON IP can be activated.

For more information about memory management and construction, see Chapter 1.1 Saia PCD® System description.

Memory extension and communication		
PCD7.R550M04	Flash memory module with 4 MByte file system (for user program backup, web pages, etc.)	M1
PCD7.R560	Flash memory module for BACnet® firmware	M1
PCD7.R562	Flash memory module for BACnet® firmware with 128 MByte file system	M1
PCD7.R580	Flash memory module for Lon IP firmware	M1
PCD7.R582	Flash memory module for Lon IP firmware with 128 MByte file system	M1
PCD7.R610*	Base module for Micro SD Flash Card	M1
PCD7.R-MSD1024*	Micro SD Flash Card 1024 MB, PCD formatted	PCD7.R610

*) In preparation, see section C2 Product status

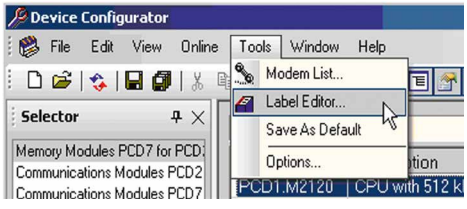
PCD7.R55xM04

PCD7.R610

Accessories and consumables for Saia PCD1.Room (PCD1.M2110R1)

Labeling

The self-adhesive labels can be printed directly with the SBC LabelEditor from the PG5 Device Configurator



EPLAN macros

For project planning and engineering EPLAN macros are available

ePLAN® electric P8 macros are available from the support page.

Macros and product data may also be obtained from the ePLAN® data portal.

Battery for data backup

Type	Description
4 507 4817 0	Lithium battery for PCD processor unit (RENATA button battery type CR 2032)

Plug-in screw terminal blocks

4 405 5089 0	Plug-in screw terminal block, 11-pole, labeling 0…10	Terminal X0
4 405 5087 0	Plug-in screw terminal block, 9-pole, labeling 11…19	Terminal X1
4 405 5088 0	Plug-in screw terminal block, 10-pole, labeling 20…29	Terminal X2

Cover

4 104 7759 0	Housing cover for PCD1.M2xxx without SBC-Logo can be individually designed on site with a foil

Range of uses

Applications

Options for programmable applications:

- Radiators
- Fan-coil applications
- Cooling ceiling
- VAV – variable air volume
- Air quality control
- Signal contacts (occupancy control, presence detection, window monitoring)
- Lighting control
- Blind control
- etc.

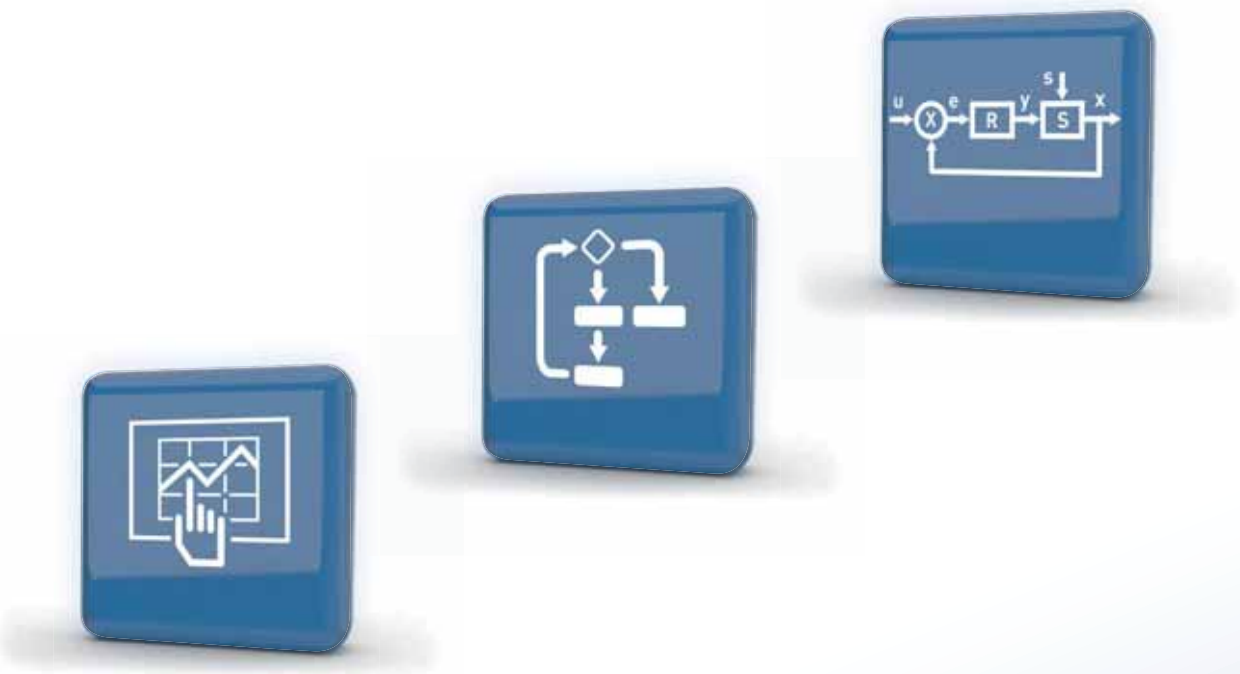
Room control units

Connection options via the following:

- Analog signals (onboard)
- S-Bus (onboard)
- Modbus (onboard)
- Internet access, web server (onboard)
- BACnet® with PCD7.R56x (slot M1)
- BACnet® MS/TP with PCD2.F2150* (slot I/O 0)
- LON IP with PCD7.R58x (slot M1)
- LON FTT 10 with PCD2.F2400 * (slot I/O 0)
- KNX over IP (IP onboard)
- KNX TP with an external coupler
- EnOcean with external receiver

Applications should be examined closely taking account of the number of I/Os. Depending on the application, coupling relays (for example: PCD7.L252) or S-Bus RIOs (PCD7.L200/L210) may be required. The S-Bus and Modbus stations are limited to a maximum of 10 units.

* In preparation, see chapter C2 "Product status"



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P+P26/215 EN11 11.2013