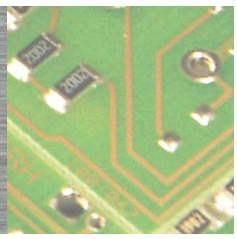
Honeywell

PCD3.K106

Extension cable 0,7 m
HPCD3.M/T/C to HPCD3.Cxxx



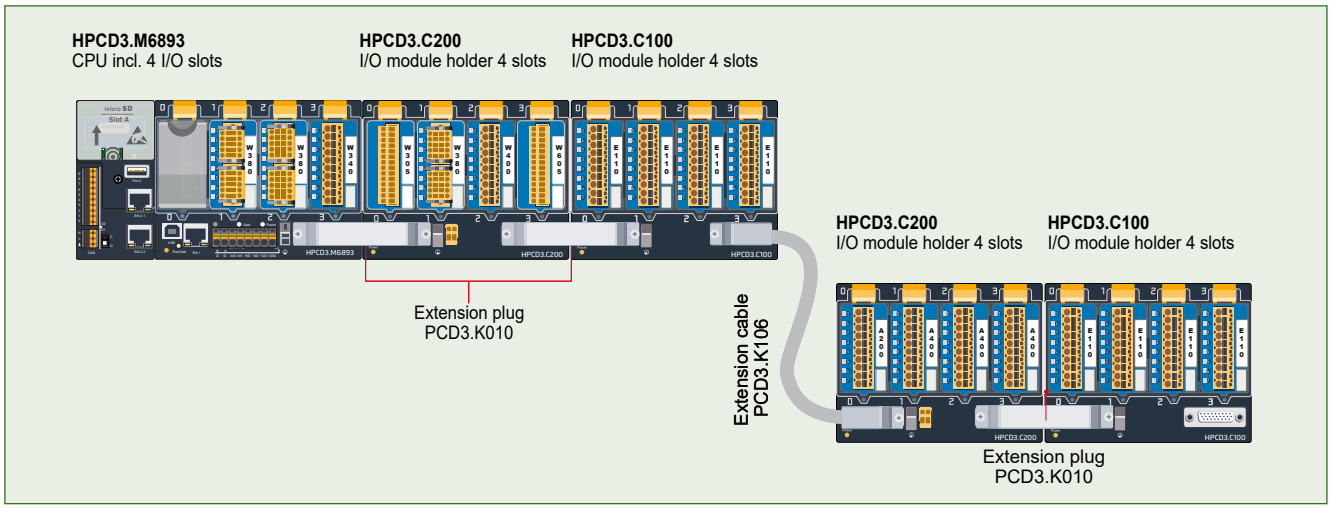
Up to 15 HPCD3.Cxxx module holders can be attached with connection plugs PCD3.K010 and/or cable PCD3.K106 or PCD3.K116 on the HPCD3.M6893.

This allows the user to attach a maximum of 64 I/O modules, or 1,023 digital inputs/outputs.

PCD3.K106

System expansion up to 1,023 I/O with HPCD3

Single- and multiple-row mounting of the module holders



PCD3.K106

Order details

Type	Short description	Description	Weight
PCD3.K106	Extension cable 0,7 m	Connection cable (length 0,7 m) for HPCD3.M/T/C to HPCD3.Cx00	140 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

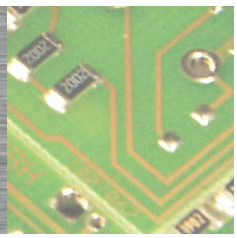
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-75
Rev.2.0
April 2020

Honeywell

PCD3.A210

Digital output module, 4 relays, 250 VAC/2 A, ' break' contact, contact protection



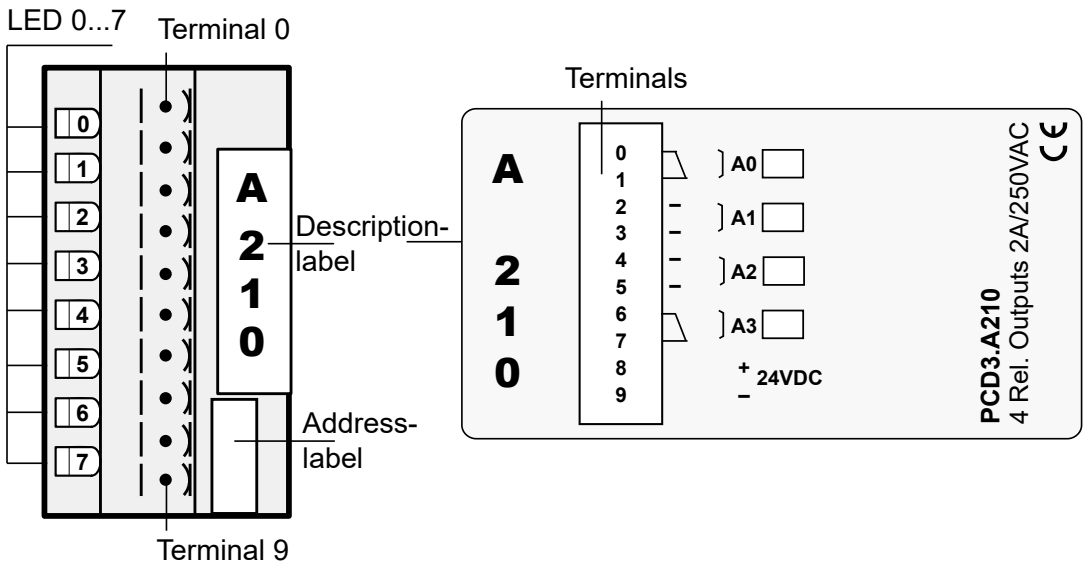
The module contains 4 relays with normally-closed contacts for direct or alternating current up to 2 A, 250 VAC.
The contacts are protected by a varistor. The module is especially suited wherever perfectly isolated AC switching circuits with infrequent switching have to be controlled..

PCD3.A210

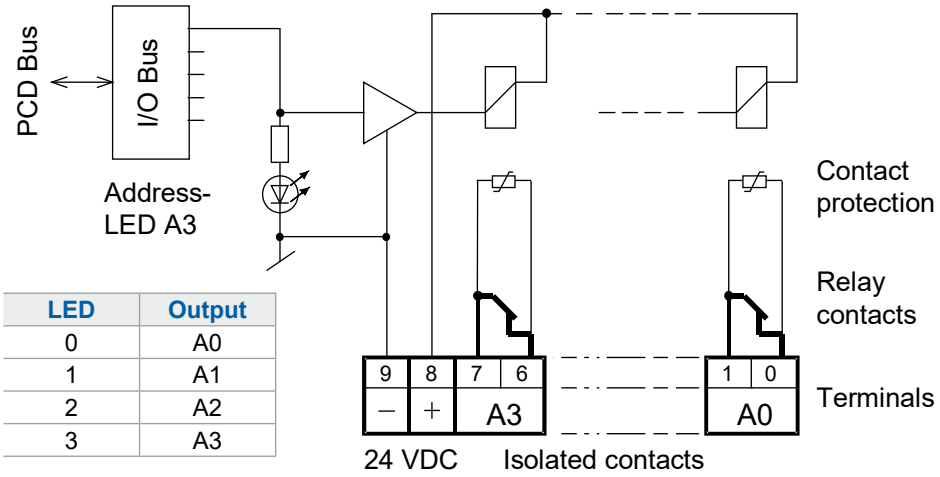
Technical data	
Number of outputs	4, electrically isolated break contacts
Type of relay (typical)	RE 030024, SCHRACK
Switching capacity (contact lifetime)	2 A, 250 VAC AC1 0.7 × 10⁶ operations 1 A, 250 VAC AC11 1.0 × 10⁶ operations 2 A, 50 VDC DC1 0.3 × 10⁶ operations 3) 1 A, 24 VDC DC11 0.1 × 10⁶ operations 1)3)
Relay coil supply 2)	nominal 24 VDC smoothed or pulsed, 9 mA per relay coil
Voltage tolerance, dependent on ambient temperature	20 °C: 17.0 … 35 VDC 30 °C: 19.5 … 35 VDC 40 °C: 20.5 … 32 VDC 50 °C: 21.5 … 30 VDC
Output delay	typically 5 ms bei 24 VDC
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1 … 15 mA typically 10 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 32 mA
Terminals	Type A: Plug-in 10-pole spring terminal block (4 405 4954 0), for wires up to 2.5 mm²

1) With external protective diode
2) With reverse voltage protection
3) These ratings are not UL-listed

LEDs and connection terminals



Output circuits and terminal designation



LED	Output
0	A0
1	A1
2	A2
3	A3

Relay energized (contact closed): LED on
Relay reset (contact open): LED off
24 VDC must be connected to the +/- terminals.

With an open relay contact, the current leakage through the contact protection is **0.7 mA** (at 230 V / 50 Hz).
This should be taken into account for smaller AC loads.

!	**Watchdog:** This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
!	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.A210

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.A210	4 relays with break contacts, with contact protection	Digital output module, 4 relays, 250 VAC/2 A, 'break' contact, contact protection	120 g

Order details 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

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 transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

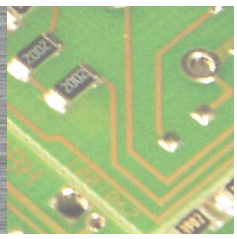
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document number: 51-52-03-56
Rev.4.2
April 2020

Honeywell

PCD3.A400

8 digital outputs, 0.5 A for each

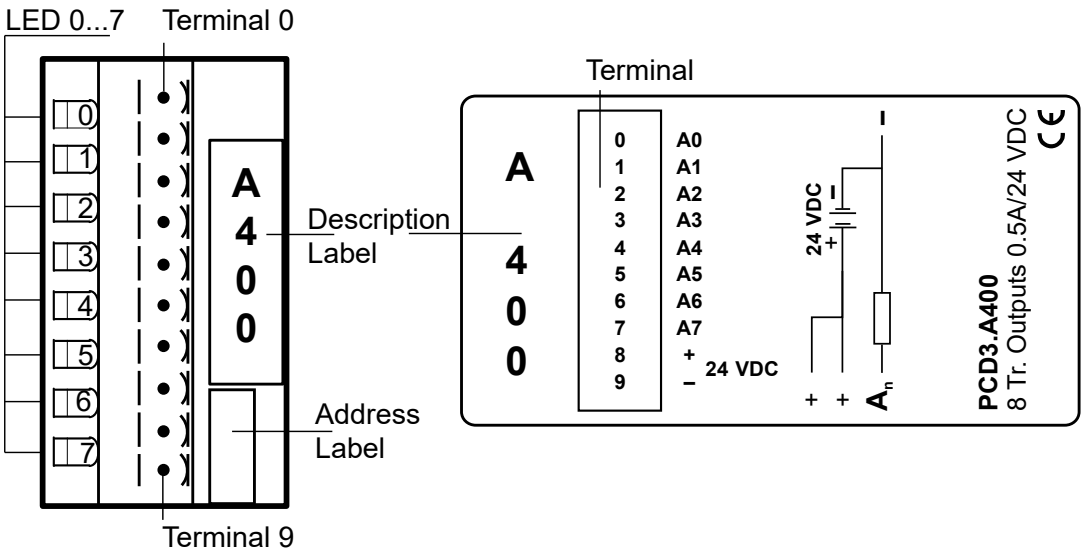


Low cost output module with 8 transistor outputs
5 mA … 0.5 A, without short-circuit protection.
The individual circuits are electrically connected;
the voltage range is 5 … 32 VDC.

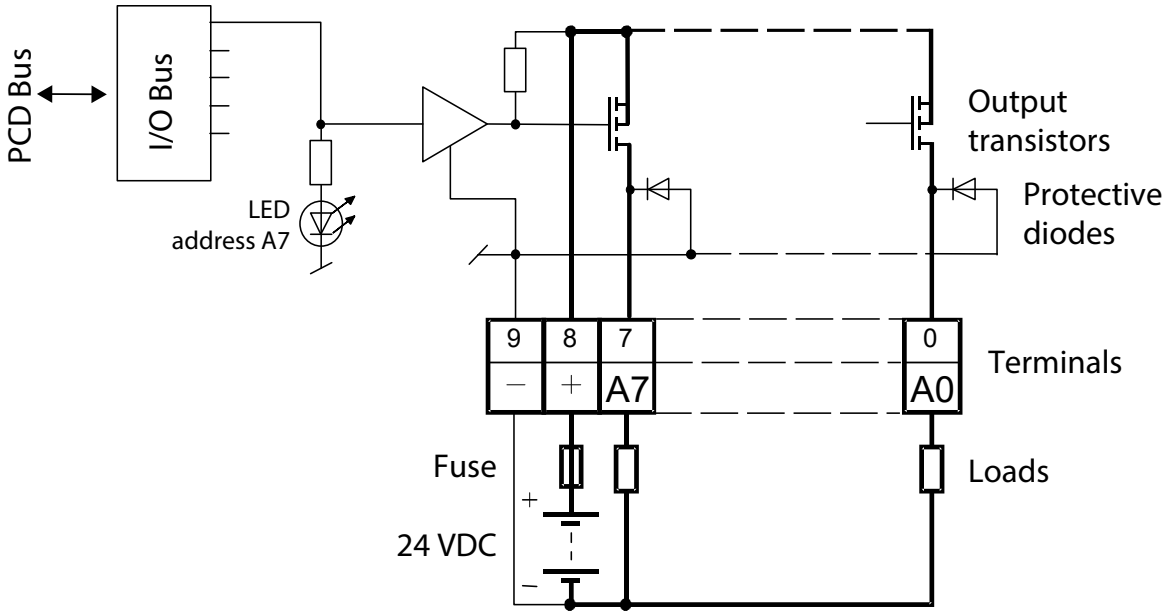
PCD3.A400

Technical data	
Number of outputs	8, electrically connected
Output current	5 mA… 500 mA (leakage current max. 0,1 mA) Within the voltage range 5…24 VDC, the load resistance should be at least 48 Ω
Total current per module	4 A on 100% duty cycle
Operating mode	Source operation (positive switching)
Voltage range	5…32 VDC, smoothed 10…25 VDC, pulsed
Voltage drop	≤ 0.4 V at 0.5 A
Output delay	Switch-on delay typically 10 µs Switch-off delay typically 50 µs (ohmic load 5 mA… 500 mA), longer with inductive load, because of the protective diode.
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1…25 mA, typically 15 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	Load current
Terminals	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm², labelled 0 to 9, connector type A (4 405 4954 0)

LEDs and connection terminals



Output circuits and terminal designation



Fuse:	It is recommended that each module should be separately protected with a fast-blow (S) fuse of max. 4 A.
Watchdog:	This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.A400

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.A400	8 digital outputs for 0.5 A each	Digital output module, 8 outputs, transistors, 5…32 VDC / 0.5 A, Connection with pluggable spring terminals, plug-in type A, (4 405 4954 0) included	100 g

Order details accessories

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 to 9, connector type A	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 during transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

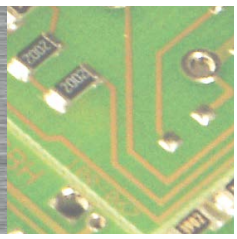
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-60
Rev.2.1
April 2020

Honeywell

PCD3.E110

8 digital inputs, 24 VDC, 8 ms, source- and sinkoperation



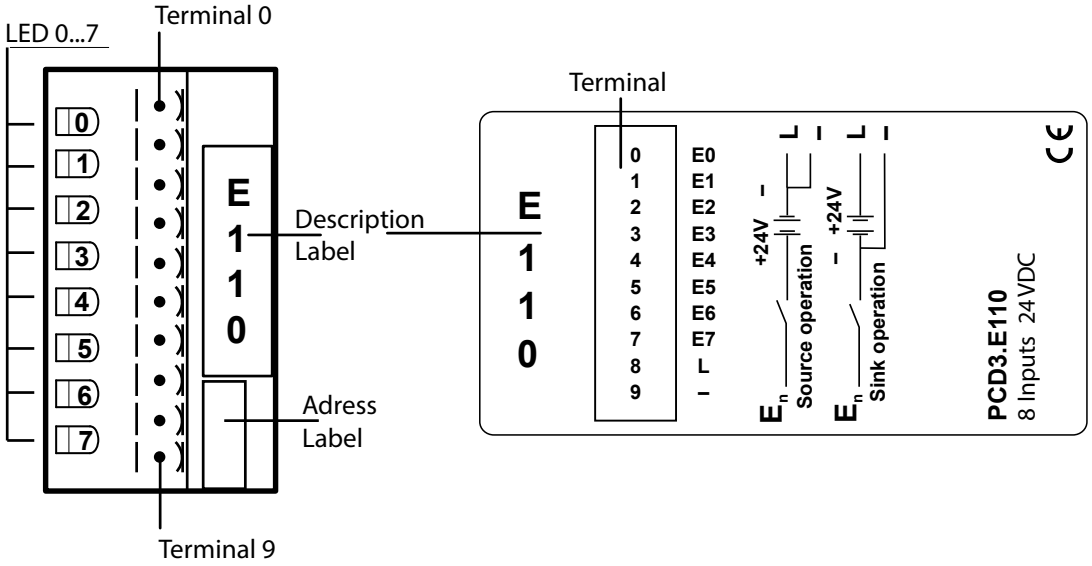
Low-cost input module for source or sink operation with 8 inputs, electrically connected. Suitable for most electronic and electromechanical switching elements at 24 VDC.

PCD3.E110

Technical data	
Number of inputs	8, electrically connected source or sink operation
Input voltage	24 VDC (15 … 30 VDC) smoothed or pulsed
Input current:	6 mA at 24 VDC
Input delay	typically 8 ms
Resistance to interference acc. to IEC 801-4	2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1 … 24 mA, typically 12 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 48 mA (all inputs = 1) from 24 VDC
Terminals	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm², labelled 0 to 9, connector type A

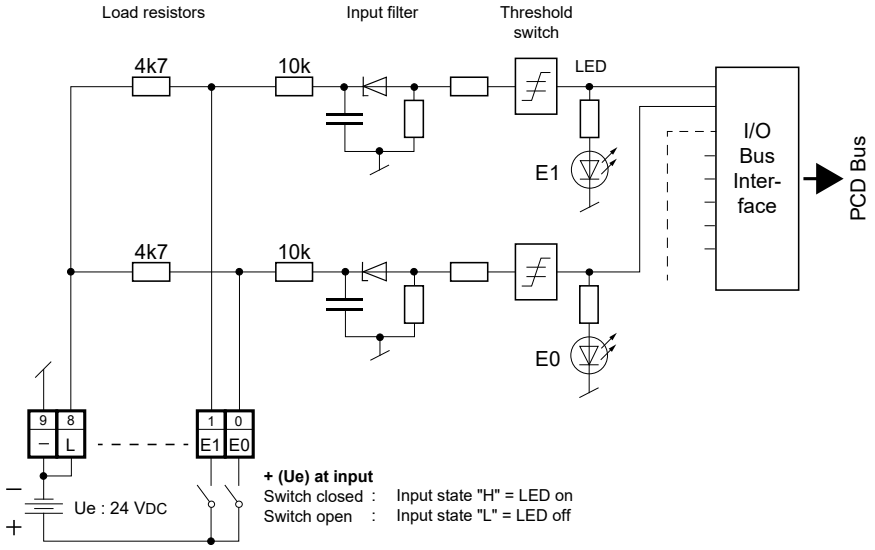
Draft

LEDs and connection terminals

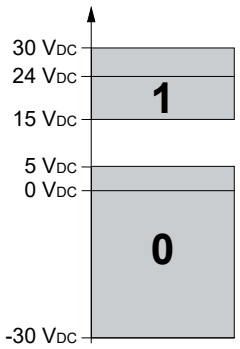


Input circuits and terminal designation

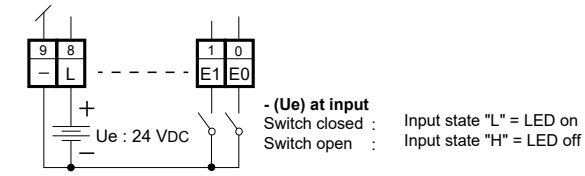
Source operation (positive logic):



Input level



Sink operation (negative logic):



!	**Watchdog:** This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
!	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.E110

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.E110	8 digital inputs module, 24 VDC, 8 ms	Digital input module, 8 inputs, 24 VDC, source and sink operation, 8 ms input delay, connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	80 g

Order details accessories

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 to 9, connector type A	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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

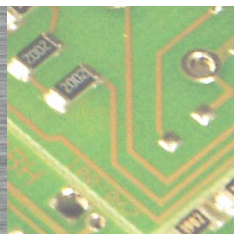
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-65
Rev.2.1
April 2020

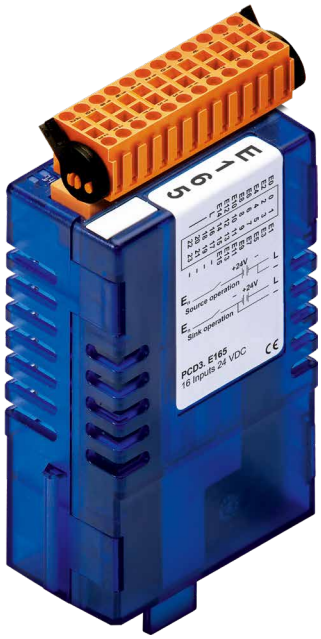
Honeywell

PCD3.E165

16 digital inputs, 24 VDC, 8 ms, source- or sinkoperation



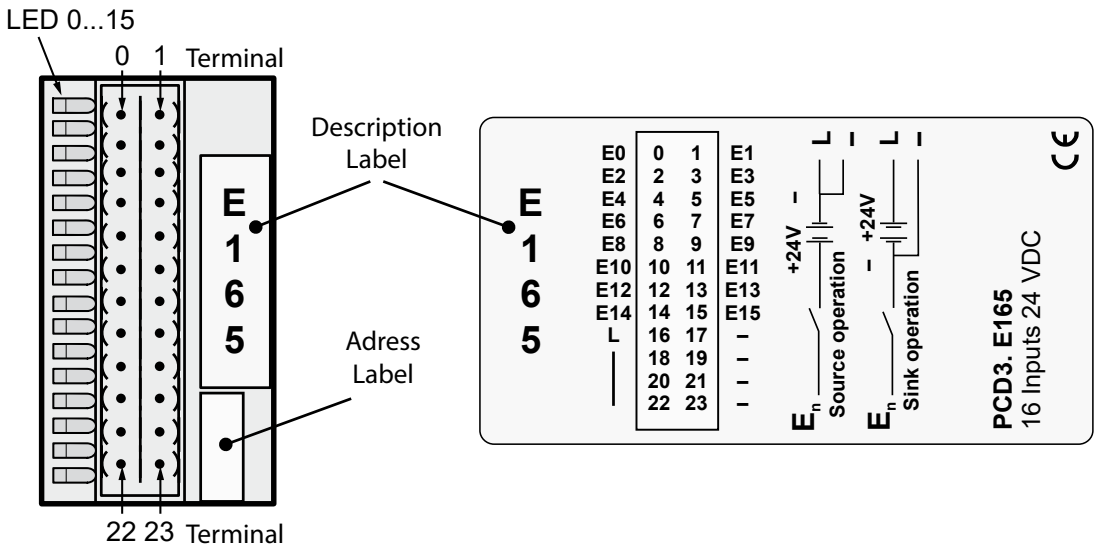
Low-cost input module for source or sink operation with 16 inputs, electrically connected.
Suitable for most electronic and electromechanical switching elements at 24 VDC.



PCD3.E165

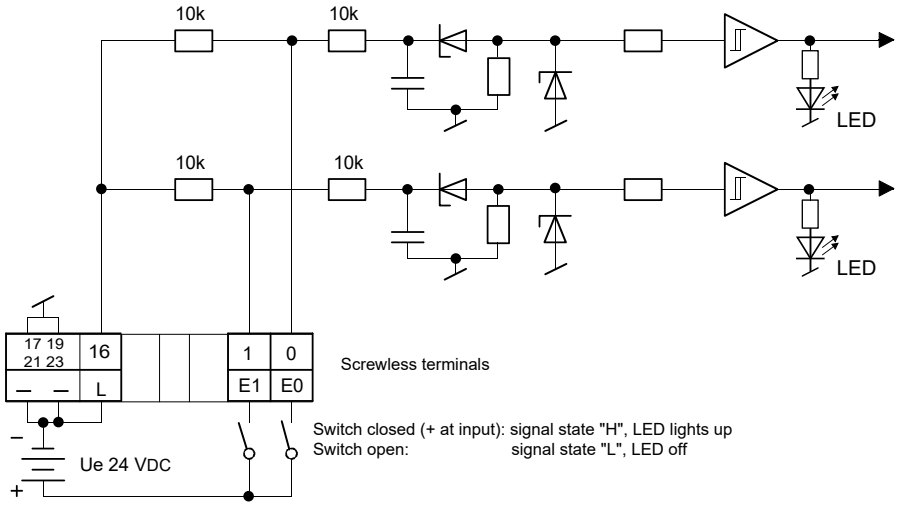
Technical data	
Number of inputs	16 electrically connected, source or sink operation
Input voltage	24 VDC (15 … 30 VDC) smoothed or pulsed
Input current:	4 mA per input at 24 VDC
Input delay	typically 8 ms
Resistance to interference acc. to IEC 801-4	2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1…10 mA typically 8 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 64 mA (all inputs=1) at 24 VDC
Terminals	Pluggable 24-pole spring terminal block (4 405 4956 0), for Ø up to 1 mm²

LEDs and connection terminals

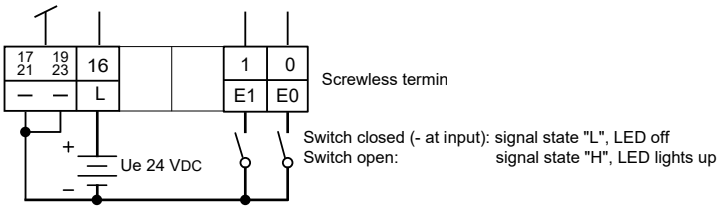


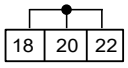
Input circuits and terminal designation

Source operation (positive logic):



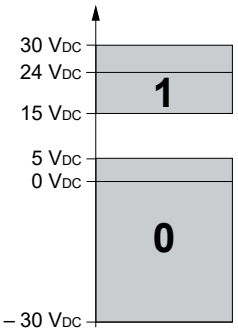
Sink operation (negative logic):





internal connected,
may be used as "distributor",
together max. 500 mA !

Input level



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.

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

PCD3.E165

4 405 4956 0

Order details

Type	Short description	Description	Weight
PCD3.E165	Digital input module, 16 inputs, 24 VDC	Digital input module, 16 inputs, 24 VDC, source and sink operation, 8 ms input delay, (connector type C included)	100 g

Order details accessories

Type	Short description	Description	Weight
4 405 4956 0	Plug-in, type C	Plug-in I/O spring terminal block, 2 × 12-pole up to 1.0 mm², labelled 0 to 23, for modules with 16 I/Os or relay module PCD3.A251, connector type "C"	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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

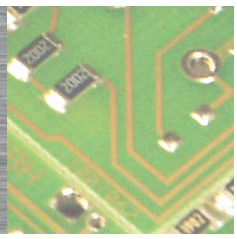
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-67
Rev.2.0
April 2020

Honeywell

PCD3.K010

Connection plug
HPCD3.M/T/C to HPCD3.Cxx0

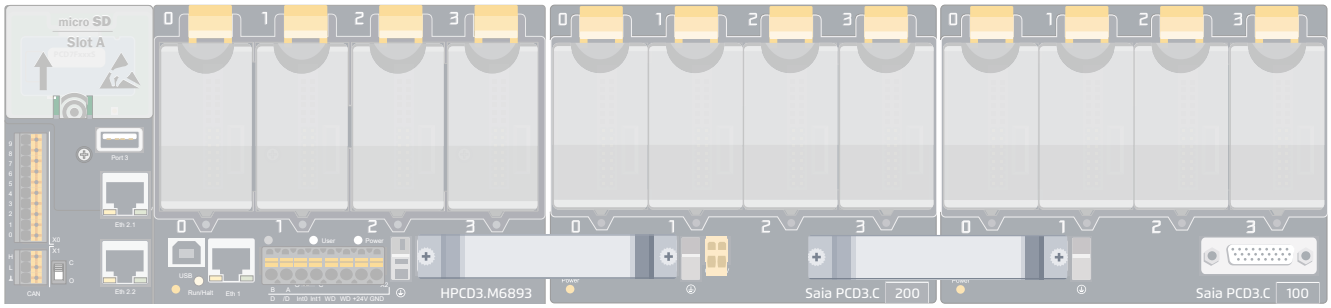


Up to 15 HPCD3.Cxxx module holders can be attached with connection plugs PCD3.K010 and/or cable PCD3.K106 or PCD3.K116 on the HPCD3.M6893.

This allows the user to attach a maximum of 64 I/O modules, or 1,023 digital inputs/outputs.

PCD3.K010

Example with 2 connection plugs for 2 extension module holders



PCD3.K010

Order details

Type	Short description	Description	Weight
PCD3.K010	Connection plug HPCD3.M/T/C to HPCD3.Cx00	Connection plug for HPCD3.M/T/C to HPCD3.Cx00	40 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 during transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

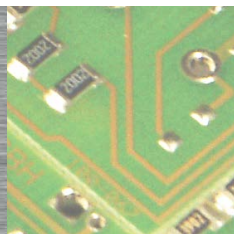
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 31P690 - Rev ENG02 - 2020-04-09

Honeywell

PCD3.S100

Workshop Input/Output simulator unit

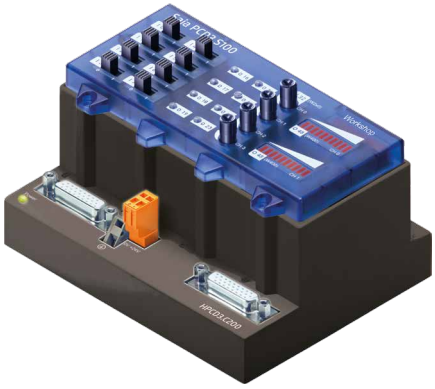


Description

Input/Output Simulator for HPCD3.M/.T/.C
(e.g. for test assembly or workshop models).

The PCD3.S100 workshop simulator unit is only designed for use in workshops and training courses.

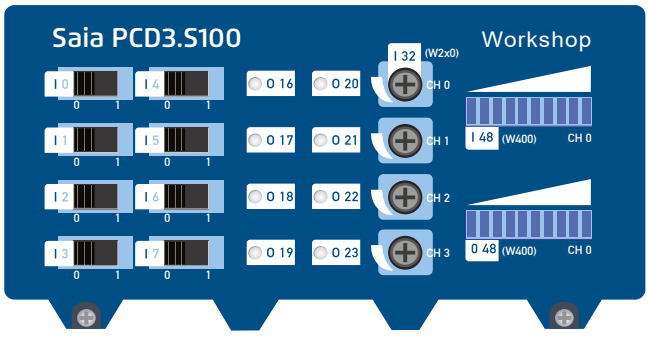
It does not meet the requirements of general applications: it is not approved or calibrated, there are no thorough tests of the mechanical and electrical properties, and no guarantees regarding availability or repair.



PCD3.S100

Scope of functions

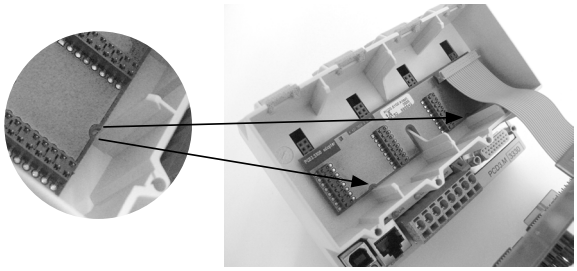
	Address	Corresponds to	Function
Digital inputs	Base address +0	PCD3.E110	8 switches to simulate digital inputs
Digital outputs	Base address +16	PCD3.A400	8 LEDs to display the status of digital outputs
Analogue inputs	Base address +32	PCD3.W200	4 potentiometers (~270° rotation) to simulate analogue inputs, 10 bit resolution
Analogue outputs	Base address +48	PCD3.W400	2 LED histograms with 10 segments, to simulate analogue outputs



Technical data

	Value
Internal current consumption (from +5 V bus)	max. 70 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	--
Terminals	No connections for external wiring

Description

Step-by-step approach		
Step	**Procedure**	
1	Remove or disable power supply to the CPU.	
2	Connect the bus plate to the I/O bus. Ensure that the bus plate is firmly positioned in the I/O bus sockets, and that the grooves line up with the guides; see arrows.	
3	First insert the bus plate, then locate the front plate on the module holder.	
4	Fix with the two screws provided.	

PCD3.S100

Ordering information			
Type	**Short description**	**Description**	**Weight**
PCD3.S100	Input/Output Simulator	Input/Output Simulator for HPCD3.M/.T/.C (for ex. for test assembly or workshop models)	180 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 0used 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.

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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

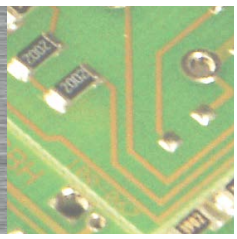
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-77
Rev.1.0
May 2020

Honeywell

PCD3.W220

Analog input module, 8 channel, 10 bit, Pt / Ni1000



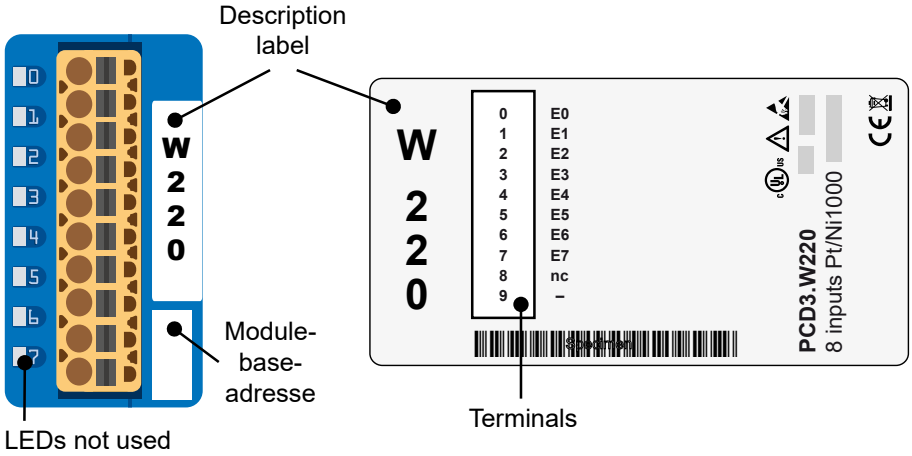
Description

With its short conversion time of <50 µs, this module is universally suitable for recording analogue signals. The only limitations are with weak signals, as with Pt100 resistive temperature sensors, or with thermocouples.

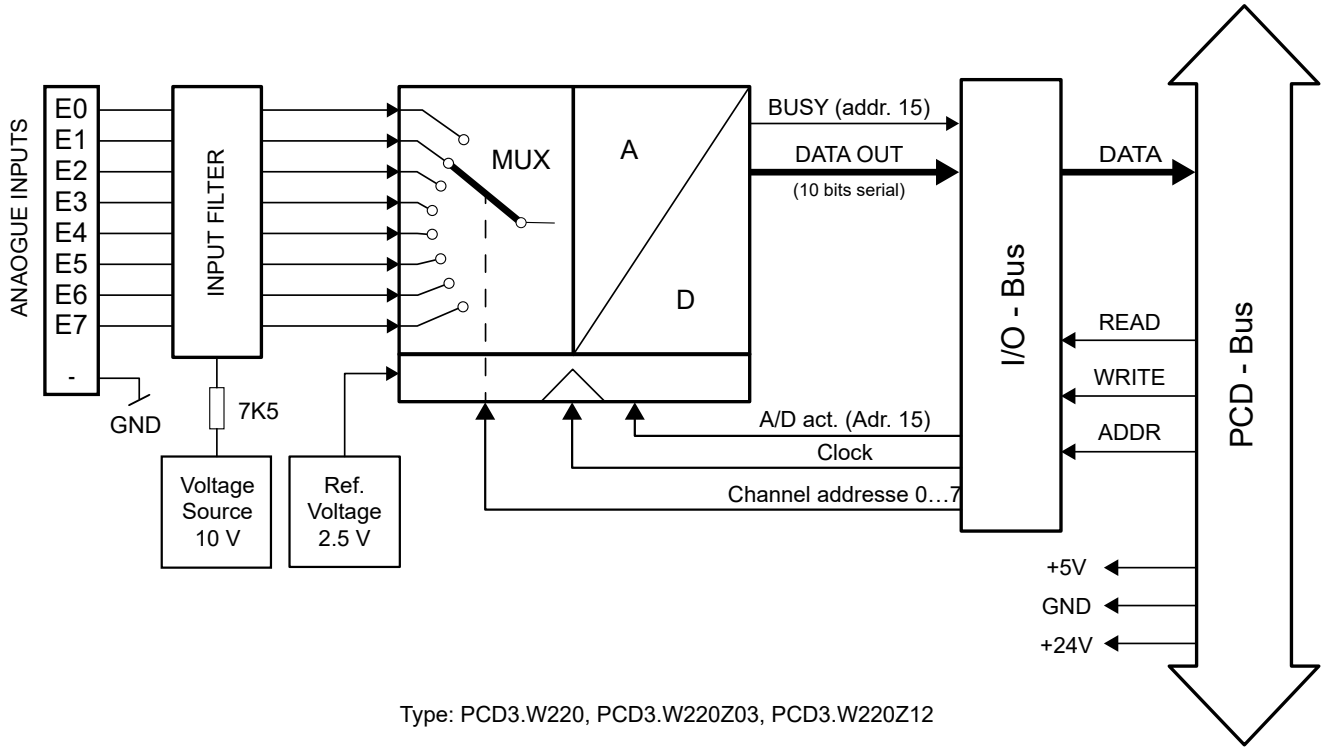
PCD3.W220

Technical specifications	
Number of inputs (channels)	8
Signal range	Pt / Ni1000
Resolution (representation)	10 bit (0 … 1023)
Galvanic separation	no
Measuring principle	non-differential, single-ended
Input resistance	7.5 kΩ / 0.1 %
Accuracy (of measured value)	± 3 LSB
Repeating accuracy (under same conditions)	within 1 LSB
Temperature error (0 … +55 °C)	± 0.3 % (± 3 LSB)
Conversion time A/D	≤ 50 µs
Overvoltage protection	± 50 VDC
Burst protection (IEC1000-4-4)	± 1 kV, with unshielded cables ± 2 kV, with shielded cables
Time constant of input filter	typisch 10 ms
Internal current consumption (from +5 V bus)	8 mA
Internal current consumption (from V+ bus)	16 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A

Indicators and connections



Block diagram

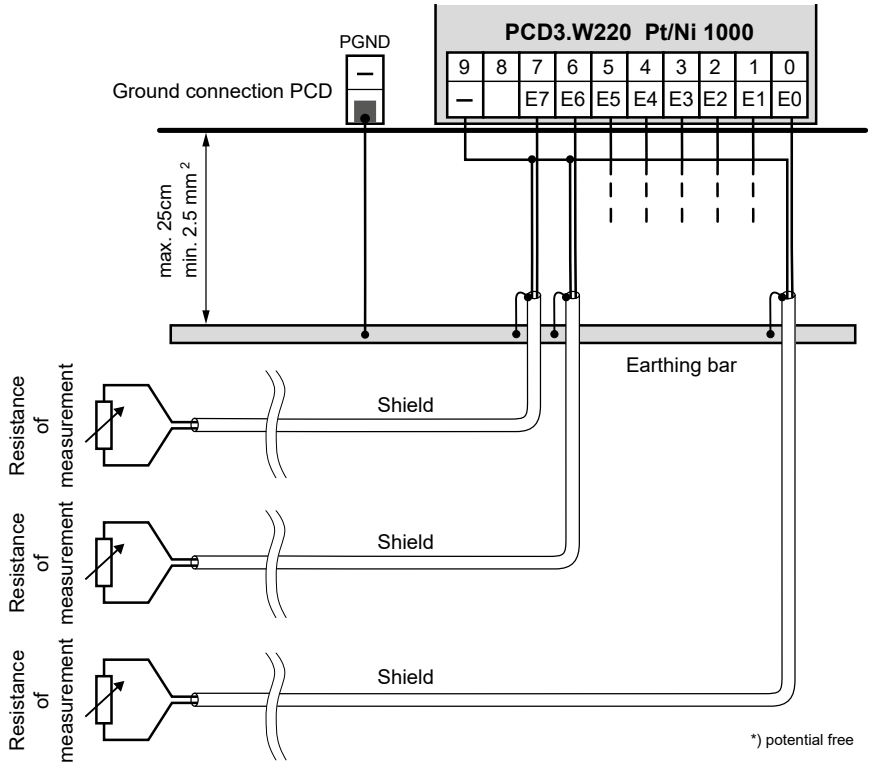


Type: PCD3.W220, PCD3.W220Z03, PCD3.W220Z12

Connection concept for Pt / Ni1000

The voltage input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). To minimize the amount of interference coupled into the module via the transmission lines, connection should be made according to the principle explained below.

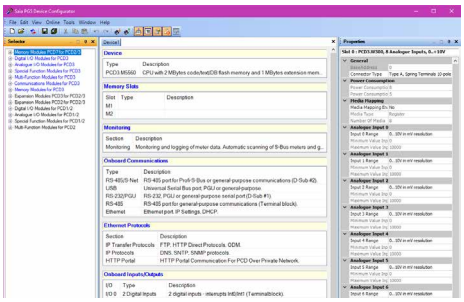
Connection for Pt / Ni1000



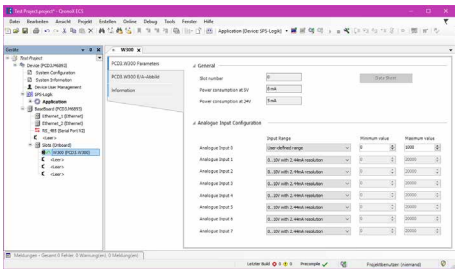
!	The reference potentials of signal sources should be wired to a common GND connection (“–” and “COM” terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.
!	If shielded cables are used, the shielding should be connected to an earthing rail.
!	Input signals with incorrect polarity significantly distort the measurements on the other channels.

Configuration

Saia PCD® Classic

PCD-System	Evaluation
Classic	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator or Network Configurator). 

Saia PCD® IEC-Controller

PCD-System	Evaluation
IEC-Controller	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator) 

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

PCD3.W220

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W220	8 analogue inputs Pt / Ni1000, 10 bit	Analogue input module, 8 inputs (channels), resolution 10 bit, signal range Pt / Ni1000, (the channels themselves not separated), connection with pluggable spring terminals, plug-in type A ((4 405 4954 0) included	80 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 0used 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.

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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

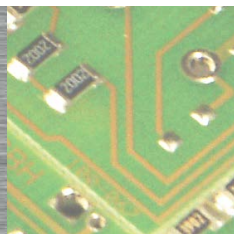
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-80
Rev.2.0
May 2020

Honeywell

PCD3.W305

Analog input module, 7 channel, 12 bit, 0 … 10 V, electrically isolated from the CPU



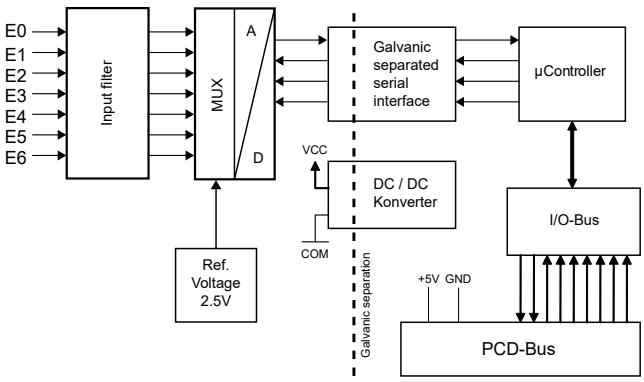
High-speed input modules for general use with 7 channels, each with 12 bit resolution and 0 … 10 V. Electrically isolated from the CPU.

Technical specifications

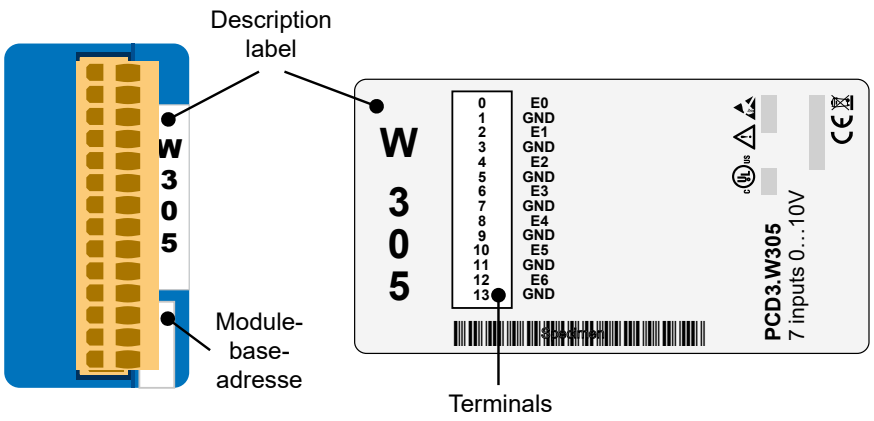
Number of inputs (channels)	7
Signal range	0 … 10 V
Resolution (representation)	12 bit (0 … 4095)
Resolution (value of least significant bit(LSB))	2.5 mV
Galvanic separation	500 V, electrical isolation of outputs to CPU, channels themselves not separated
Measuring principle	non-differential, single-ended
Input resistance	13.5 kΩ / 0.1 %
Accuracy at 25 °C	± 0.15 %
Repeating accuracy (under same conditions)	± 0.05 %
Temperature error (0 … +55 °C)	± 0.25 %
Conversion time A/D	≤ 2 µs
Overvoltage protection [1]	± 40 VDC (permanent)
EMV protection	yes
Time constant of input filter	typisch 2.4 ms
Internal current consumption (from +5 V bus)	< 60 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type E (4 405 4998 0)

[1] No negative input voltage should be applied on these modules !

Block schematic PCD3.W305



Indicators and connections

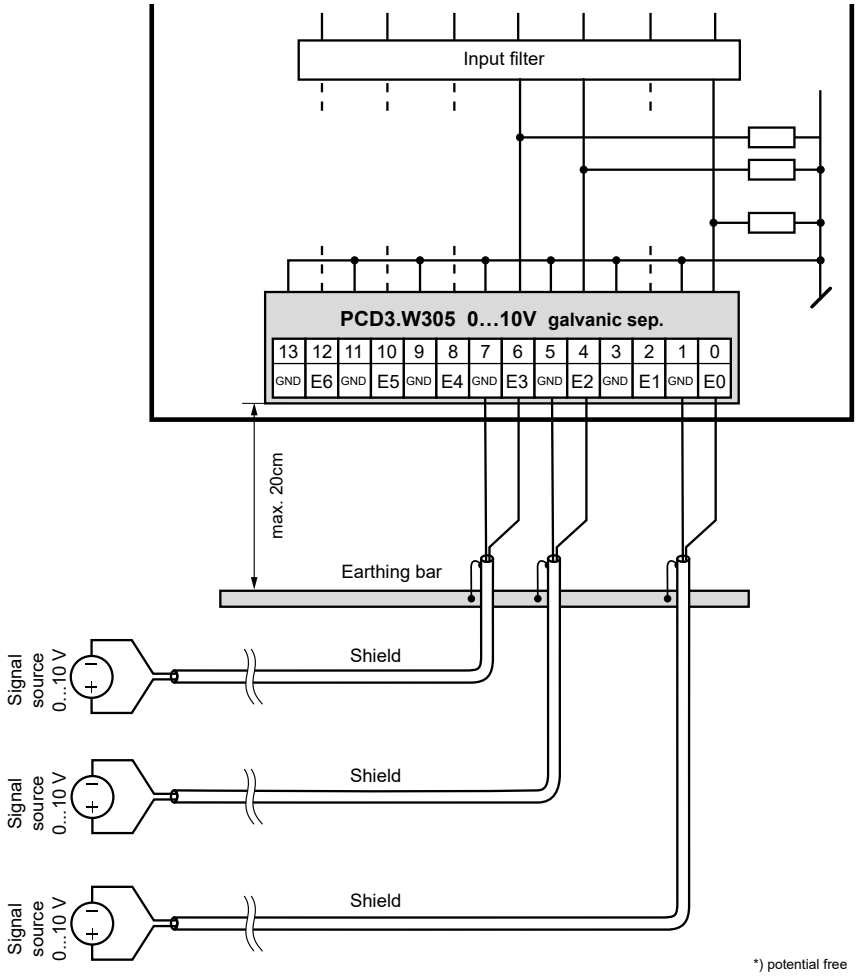


The GND connections are connected together in the module and are galvanically isolated from the CPU. These GNDs must not be connected to the CPU, process GNDs or ground !

Connection concept for voltage inputs

The voltage input signals are connected directly to the 14-pole terminal block (E0 … E6 and GND). 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 GND connections are connected together in the module and are galvanically isolated from the CPU. These GNDs must not be connected to the CPU, process GNDs or ground !

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

Input signals with incorrect polarity significantly distort the measurements on the other channels.

Galvanic separation of inputs to CPU, channels themselves not separated.

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.

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

PCD3.W305

4 405 4998 0

Ordering information

Type	Short description	Description	Weight
PCD3.W305	7 analogue inputs 0…10 V, 12 bit, electrical isolation	Analog input module with electrical isolation, 7 channels (the channels are not isolated from each other), resolution 12 bit, range 0…10 V, connection with pluggable spring terminals, connector type E (4 405 4998 0) supplied	100 g

Ordering information equipment

Type	Short description	Description	Weight
4 405 4998 0	Plug-in, type E	Plug-in I/O spring terminal block, 14-pole up to 1.5 mm², labelled 0 … 13	13 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

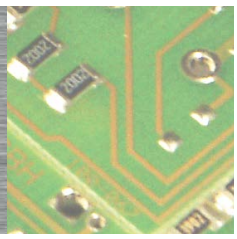
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-82
Rev.3.0
June 2020

Honeywell

PCD3.W325

Analog input module, 7 channel, 12 bit, - 10 …+ 10 V, electrically isolated from the CPU



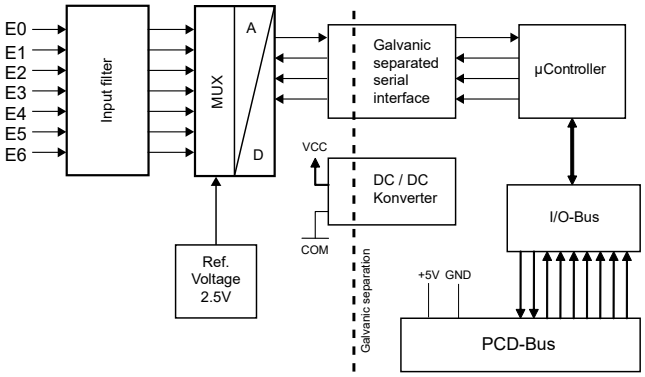
High-speed input modules for general use with 7 channels, each with 12 bit resolution and - 10 …+ 10 V. Electrically isolated from the CPU.

PCD3.W325

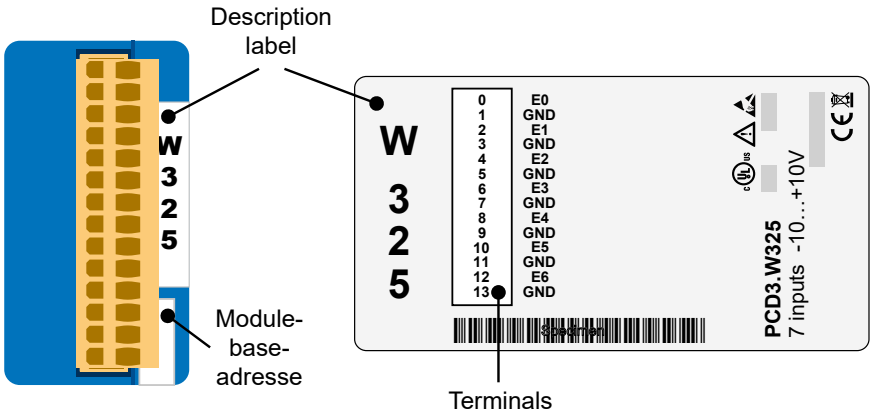
Technical specifications

Number of inputs (channels)	7
Signal range	-10…+10 V
Resolution (representation)	12 bit (0 … 4095)
Resolution (value of least significant bit(LSB))	5 mV
Galvanic separation	500 V, electrical isolation of outputs to CPU, channels themselves not separated
Measuring principle	non-differential, single-ended
Input resistance	13.7 kΩ / 0.1 %
Accuracy at 25 °C	± 0.15 %
Repeating accuracy (under same conditions)	± 0.05 %
Temperature error (0 … +55 °C)	± 0.25 %
Conversion time A/D	≤ 2 ms
Overvoltage protection	± 40 VDC (permanent)
EMV protection	yes
Time constant of input filter	typisch 2.4 ms
Internal current consumption (from +5 V bus)	< 60 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type E ((4 405 4998 0)

Block schematic



Indicators and connections

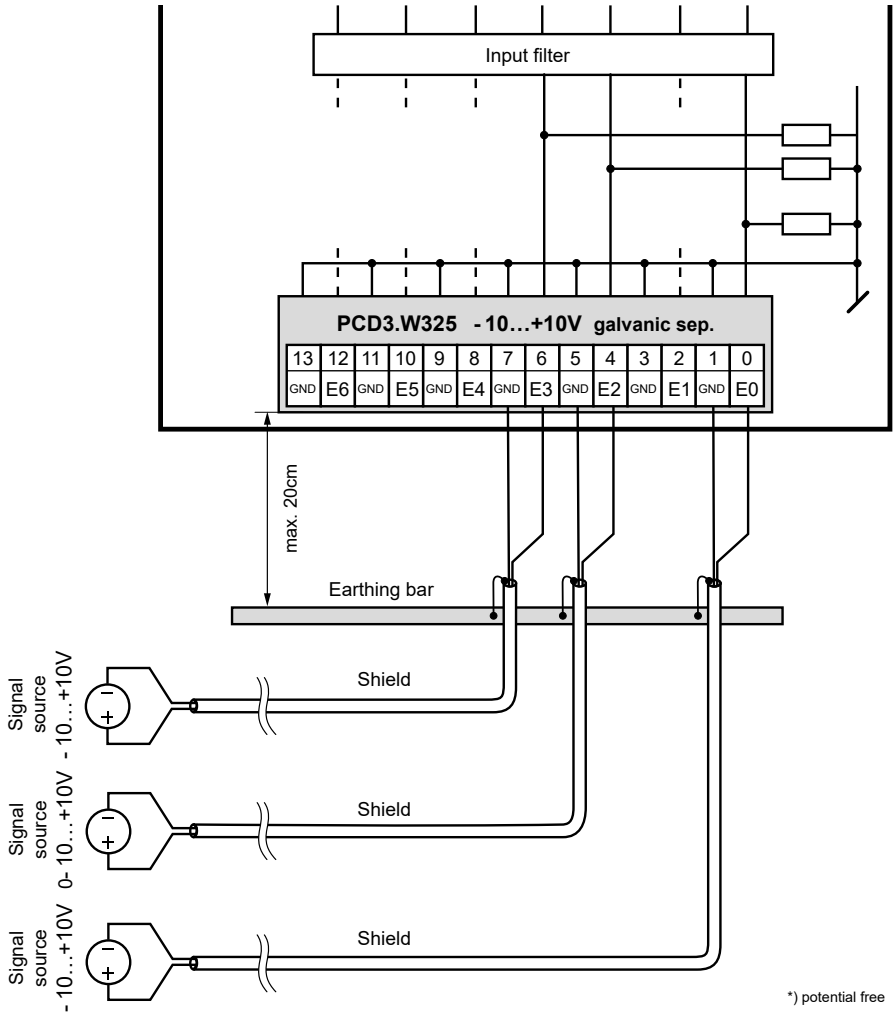


The GND connections are connected together in the module and are galvanically isolated from the CPU. These GNDs must not be connected to the CPU, process GNDs or ground !

Connection concept for voltage inputs

The voltage input signals are connected directly to the 14-pole terminal block (E0 … E6 and GND). 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 -10…+10 V



The GND connections are connected together in the module and are galvanically isolated from the CPU. These GNDs must not be connected to the CPU, process GNDs or ground !

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

Input signals with incorrect polarity significantly distort the measurements on the other channels.

Galvanic separation of inputs to CPU, channels themselves not separated.

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.

PCD3.W325

4 405 4998 0

Ordering information

Type	Short description	Description	Weight
PCD3.W325	7 analogue inputs 0…10 V, 12 bit, electrical isolation	Analog input module with electrical isolation, 7 channels (the channels are not isolated from each other), resolution 12 bit, range 0…10 V, connection with pluggable spring terminals, connector type E (4 405 4998 0) supplied	100 g

Ordering information equipment

Type	Short description	Description	Weight
4 405 4998 0	Plug-in, type E	Plug-in I/O spring terminal block, 14-pole up to 1.5 mm^2, labelled 0 … 13	13 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

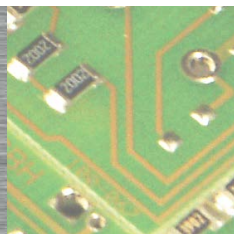
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-85
Rev.3.0
June 2020

Honeywell

PCD7.R-MSD1024

µSD Flash memory card 1024 MByte (included SD Flash adapter)



Description

MicroSD Flash memory card 1 GB, PCD formatted.

PCD7.R-MSD1024

PCD7.R-MSD1024

Ordering information

Type	Short description	Description	Weight
PCD7.R-MSD1024	SD Flash memory card 1 GB	uSD Flash memory card 1024 MByte (included SD Flash adapter)	10 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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

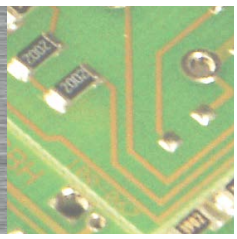
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-101
Rev.1.0
May 2020

Honeywell

PCD3.W200

Analog input module, 8 channel, 10 bit, 0 … 10 V



Description

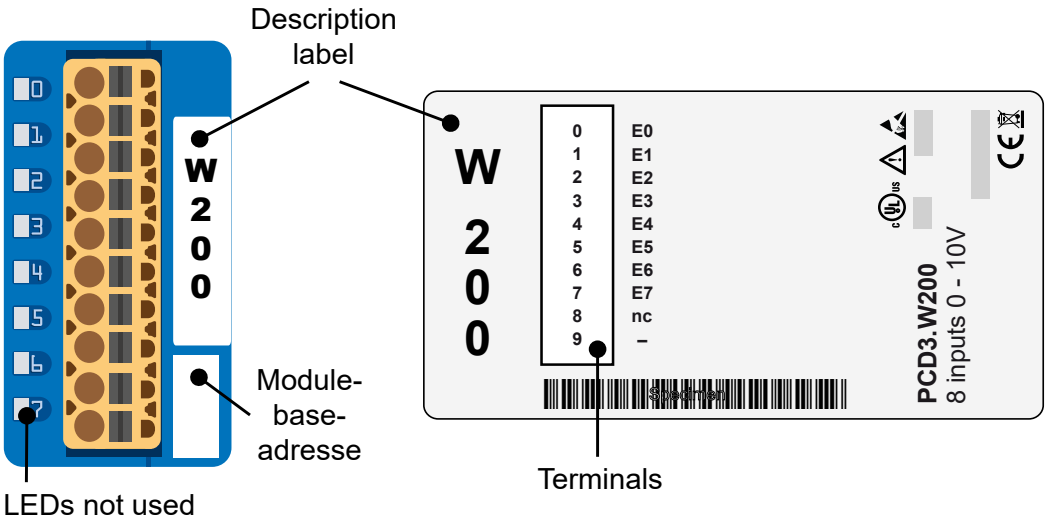
With its short conversion time of <50 µs, this module is universally suitable for recording analogue signals.

PCD3.W200

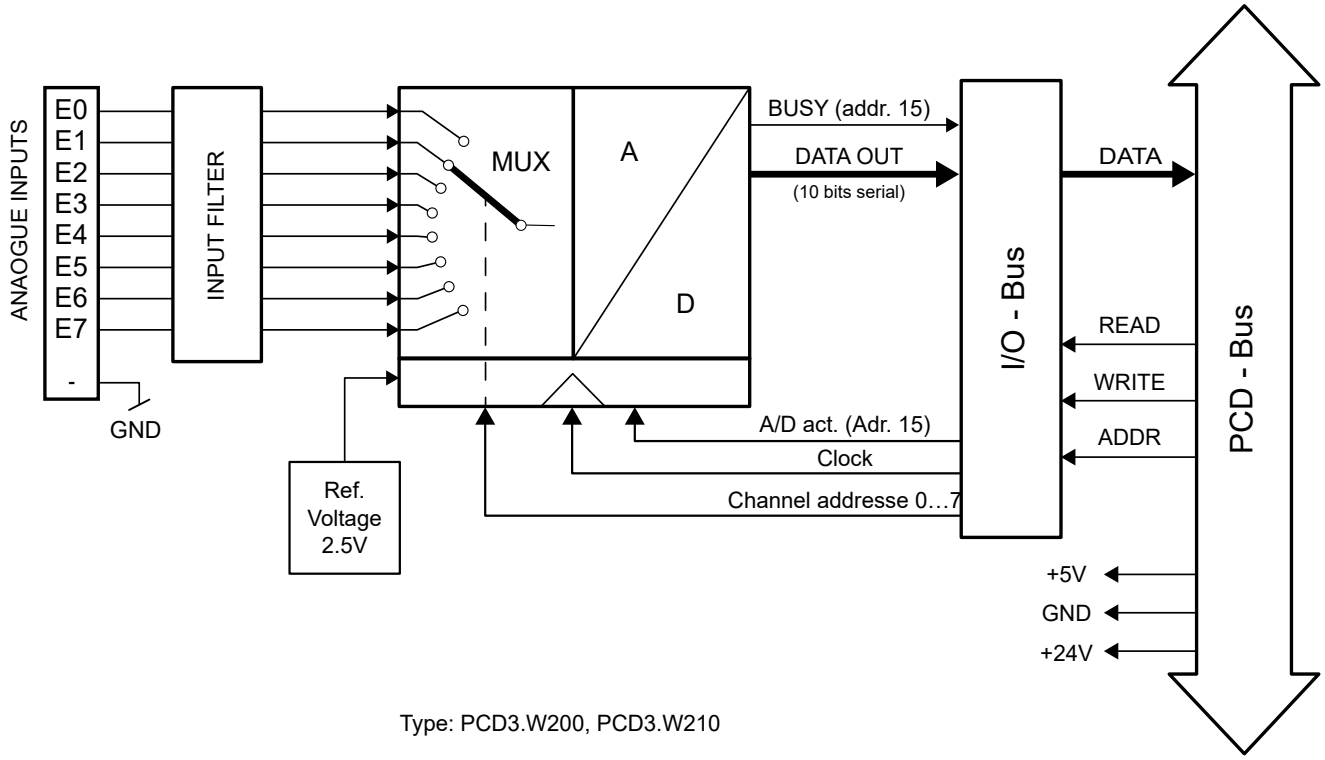
Technical specifications

Number of inputs (channels)	8
Signal range	0 à 10 V
Resolution (representation)	10 bit (0 … 1023)
Resolution per bit	9.775 mV per bit
Galvanic separation	no
Measuring principle	non-differential, single-ended
Input resistance	200 kΩ / 0.15 %
Accuracy (of measured value)	± 3 LSB
Repeating accuracy (under same conditions)	within 1 LSB
Temperature error (0 … +55 °C)	± 0.3 % (± 3 LSB)
Conversion time A/D	≤ 50 µs
Overvoltage protection	± 50 VDC
Burst protection (IEC1000-4-4)	± 1 kV, Leitungen nicht abgeschirmt ± 2 kV, Leitungen abgeschirmt
Time constant of input filter	typisch 5 ms
Internal current consumption (from +5 V bus)	8 mA
Internal current consumption (from V+ bus)	5 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A (4 405 4954 0)

Indicators and connections



Block diagram

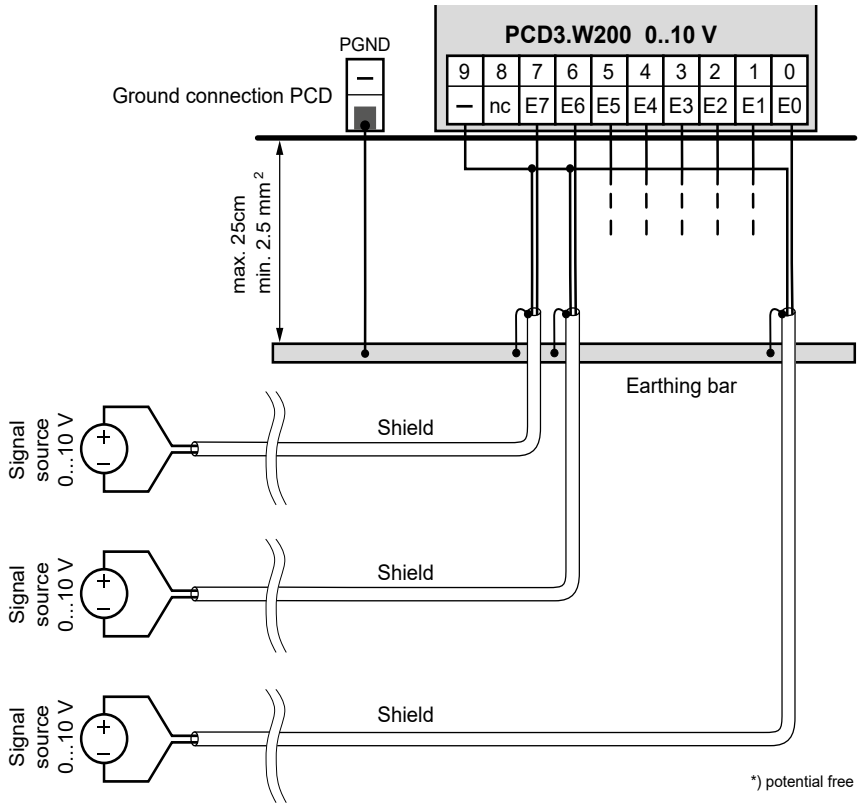


Type: PCD3.W200, PCD3.W210

Connection concept for voltage inputs

The voltage input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). To minimize the amount of interference coupled into the module via the transmission lines, connection should be made according to the principle explained below.

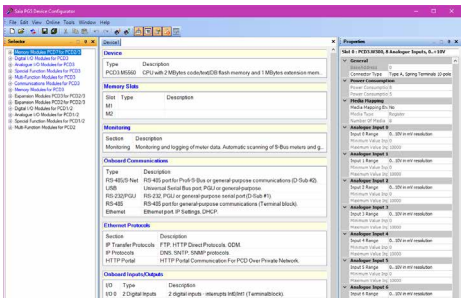
Connection for 0 … 10 V



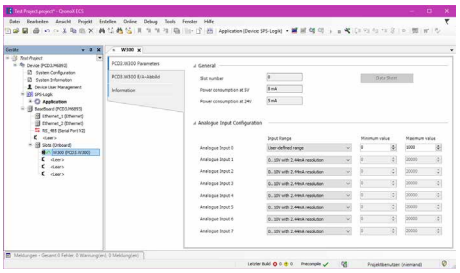
!	The reference potentials of signal sources should be wired to a common GND connection (“–” and “COM” terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.
!	If shielded cables are used, the shielding should be connected to an earthing rail.
!	Input signals with incorrect polarity significantly distort the measurements on the other channels.

Configuration

Saia PCD® Classic

PCD-System	Evaluation
Classic	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator or Network Configurator). 

Saia PCD® IEC-Controller

PCD-System	Evaluation
IEC-Controller	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator) 

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

PCD3.W200

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W200	8 analogue inputs 0…10 V, 10 bit	Analogue input module, 8 inputs (channels), resolution 10 bit, signal range 0…10 V, (the channels themselves not separated), connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	80 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

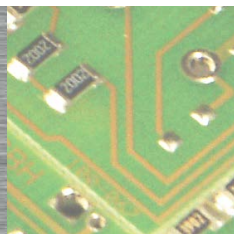
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-78
Rev.2.0
May 2020

Honeywell

PCD3.W310

Analog input module, 8 channel, 12 bit, 0 … 20 mA



Fast, analog 8 channel input module with 0 … 20 mA and 12 bit resolution per channel. Use of a fast on-board micro controller allows decoupling and relief of the PCD regarding intensive computing tasks, such as scaling and filtering of signal data.

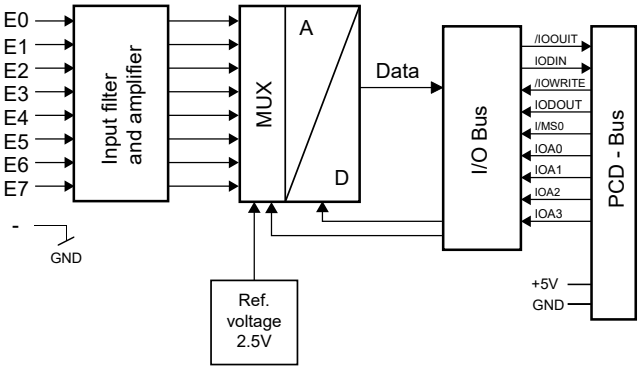
PCD3.W310

Technical specifications

Number of inputs (channels)	8
Signal range	0 … 20 mA
Resolution (representation)	12 bit (0 … 4095)
Resolution	4.884 µA pro bit
Galvanic separation	no
Measuring principle	non-differential, single-ended
Input resistance	125 Ω / 0.1 %
Accuracy at 25 °C	± 0.5 %
Repeating accuracy (under same conditions)	± 0.05 %
Temperature error (0 … +55 °C)	± 0.2 %
Conversion time A/D	≤ 10 µs
Overvoltage protection [1)]	± 40 VDC (permanently)
EMV protection	yes
Time constant of input filter	typisch 10.5 ms
Internal current consumption (from +5 V bus)	< 8 mA
Internal current consumption (from V+ bus)	5 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A (4 405 4954 0)

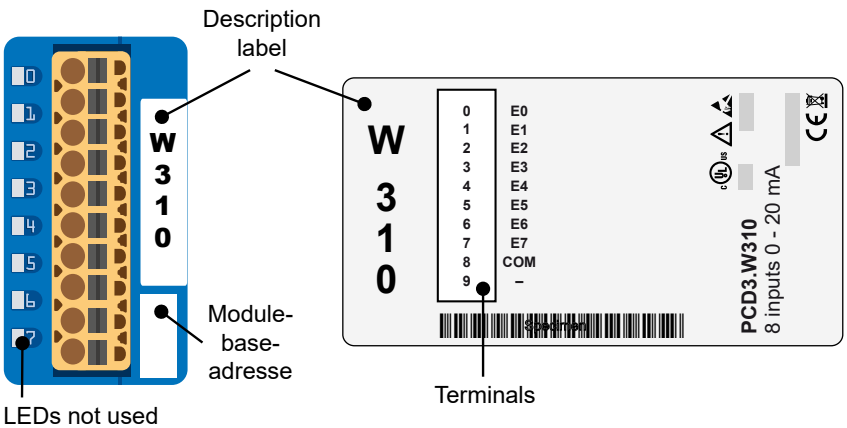
[1)] No negative input voltage should be applied on these modules !

Block schematic



Type: PCD3.W300, PCD3.W310

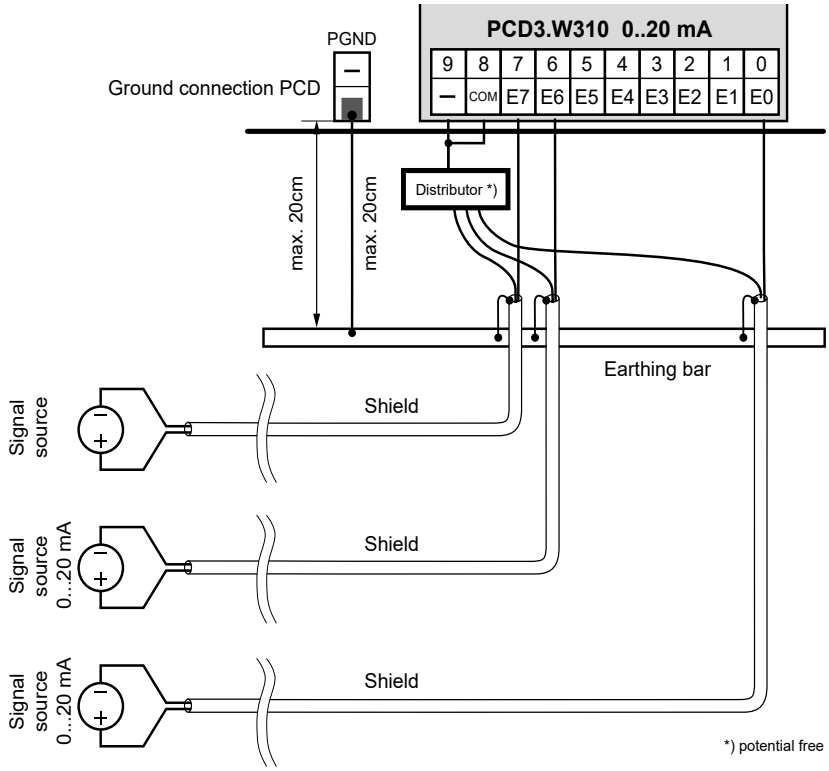
Indicators and connections



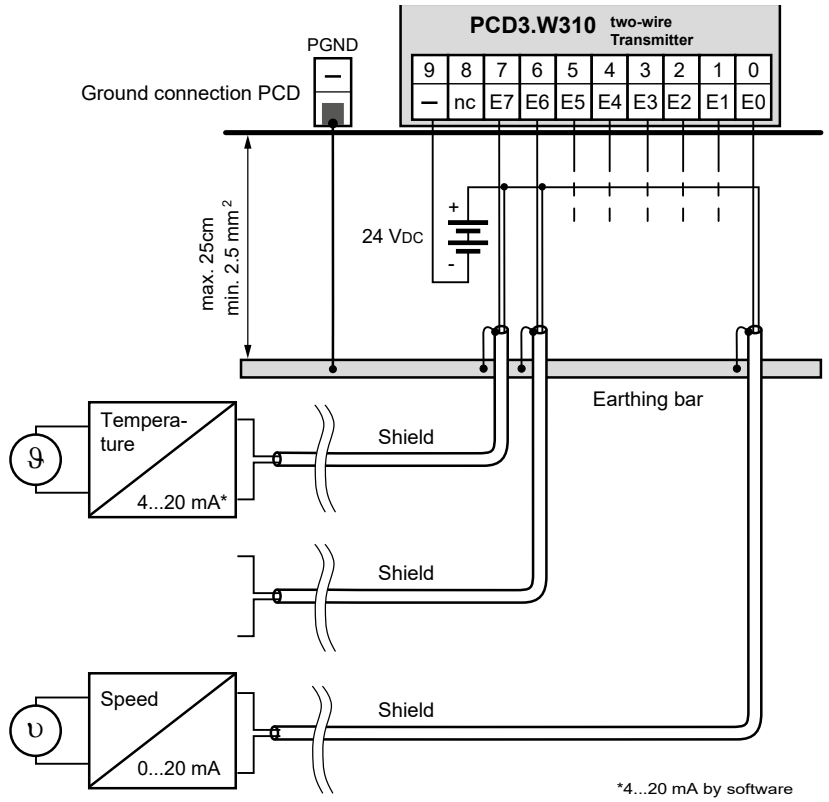
Connection concept for voltage inputs

The voltage input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). 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 … 20 mA



Connection for 0 … 20 mA with two-wire transducers



No negative input voltage should be applied on these modules.

The reference potentials of signal sources should be wired to a common GND connection ("–" and "COM" terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.

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

Input signals with incorrect polarity significantly distort the measurements on the other channels.

Galvanic separation of inputs to HPCD CPUSaia PCD®, channels themselves not separated.

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

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

PCD3.W310

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W310	8 analogue inputs 0…20 mA, 12 bit	Analogue input module, 8 inputs (channels), resolution 12 bit, signal range 0…20 mA, (the channels themselves not separated), connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	80 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 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

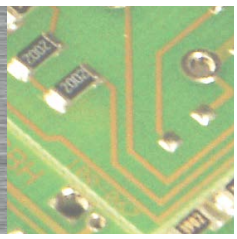
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-83
Rev.2.0
June 2020

Honeywell

PCD3.W315

Analog input module, 7 channel, 12 bit, 0 … 20 mA, electrically isolated from the CPU



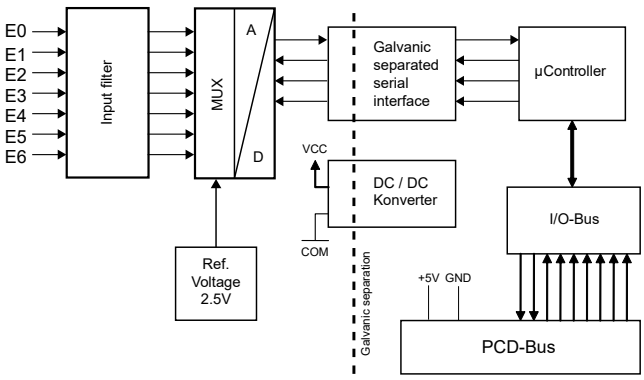
High-speed input modules for general use with 7 channels, each with 12 bit resolution and 0 … 20 mA. Electrically isolated from the CPU.

PCD3.W315

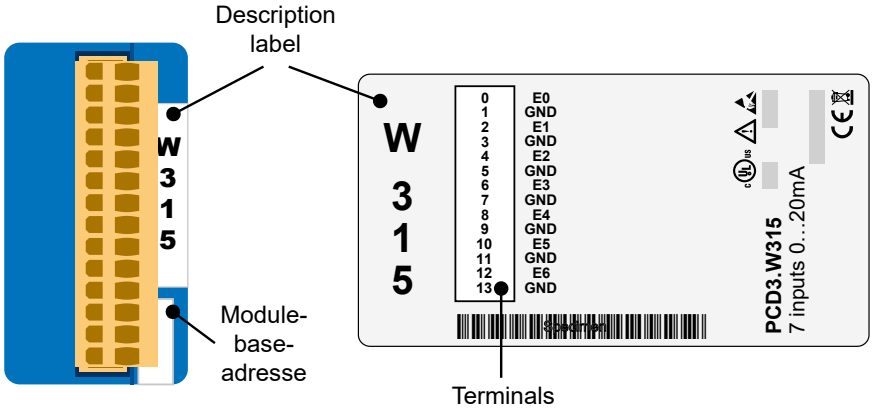
Technical specifications

Number of inputs (channels)	7
Signal range	0…20 mA
Resolution (representation)	12 bit (0 … 4095)
Resolution (value of least significant bit(LSB))	5 µA
Galvanic separation	500 V, electrical isolation of outputs to CPU, channels themselves not separated
Measuring principle	non-differential, single-ended
Input resistance	120 Ω / 0.1 %
Accuracy at 25 °C	± 0.15 %
Repeating accuracy (under same conditions)	± 0.05 %
Temperature error (0 … +55 °C)	± 0.25 %
Conversion time A/D	≤ 2 ms
Overcurrent protection	±35 mA (permanent)
EMV protection	yes
Time constant of input filter	typisch 2.4 ms
Internal current consumption (from +5 V bus)	< 60 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type E (4 405 4998 0)

Block schematic



Indicators and connections

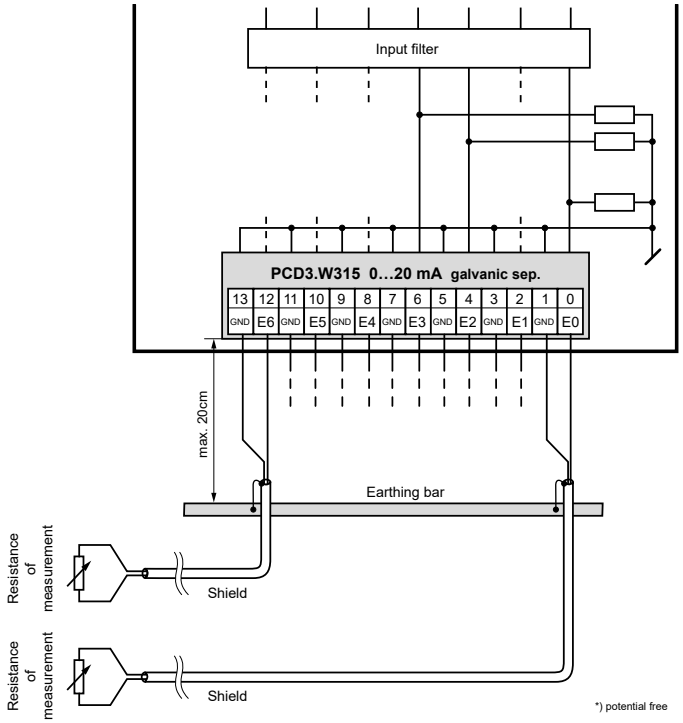


The GND connections are connected together in the module and are galvanically isolated from the CPU. These GNDs must not be connected to the CPU, process GNDs or ground !

Connection concept for voltage inputs

The voltage input signals are connected directly to the 14-pole terminal block (E0 … E6 and GND). To minimize the amount of interference coupled into the module via the transmission lines, connection should be made according to the principle explained below.

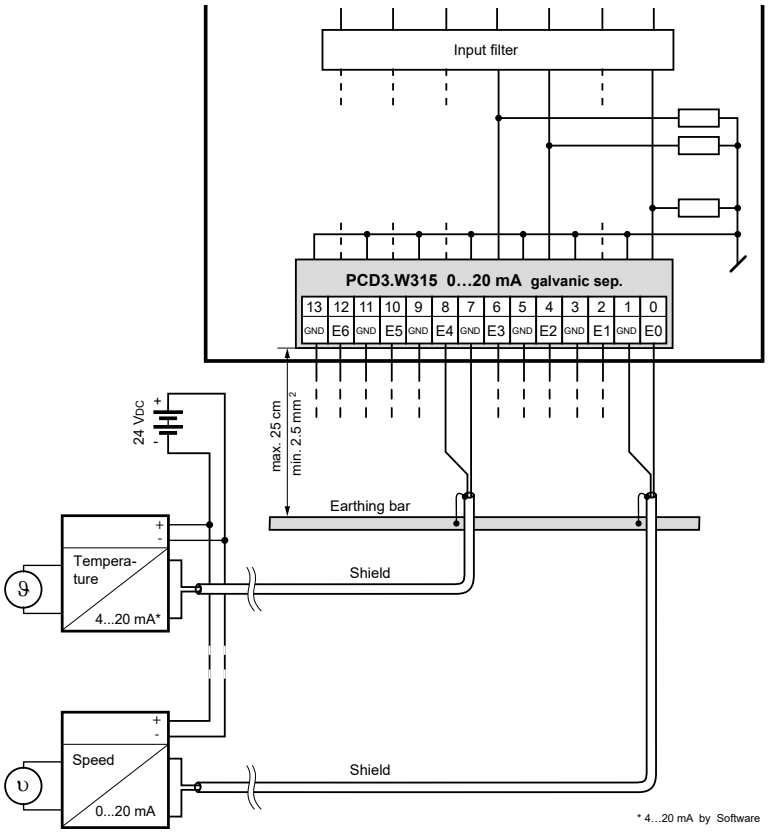
Connection for 0 … 20 mA



The GND connections are connected together in the module and are galvanically isolated from the CPU. These GNDs must not be connected to the CPU, process GNDs or ground !

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

Connection for 0…20 mA with two-wire transducers



Galvanic separation of inputs to CPU, channels themselves not separated.

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.

PCD3.W315

4 405 4998 0

Ordering information

Type	Short description	Description	Weight
PCD3.W315	7 analogue inputs, 0…20 mA, 12 bit, electrical isolation	Analog input module with electrical isolation, 7 channels (the channels are not isolated from each other), resolution 12 bit, range 0…20 mA, connection with pluggable spring terminals, connector type E (4 405 4998 0) supplied	100 g

Ordering information equipment

Type	Short description	Description	Weight
4 405 4998 0	Plug-in, type E	Plug-in I/O spring terminal block, 14-pole up to 1.5 mm², labelled 0 … 13	13 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 0used 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

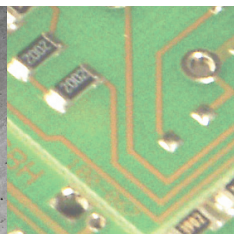
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-84
Rev.2.3
July 2020

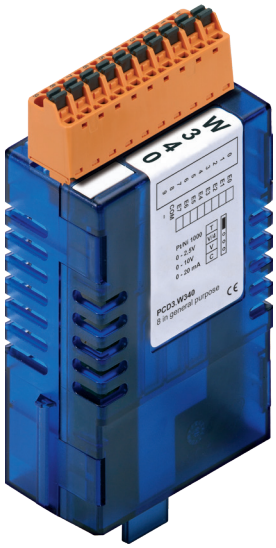
Honeywell

PCD3.W340

Analog input module, 8 channel, 12 bit, 0…10 V, 0…20 mA or Pt/Ni1000



High-speed input module for general use with 8 channels, each with 12 bit resolution. Different variants for voltage 0 … 10 V, current 0 … 20 mA and the use of different resistance thermometers are available.



PCD3.W340

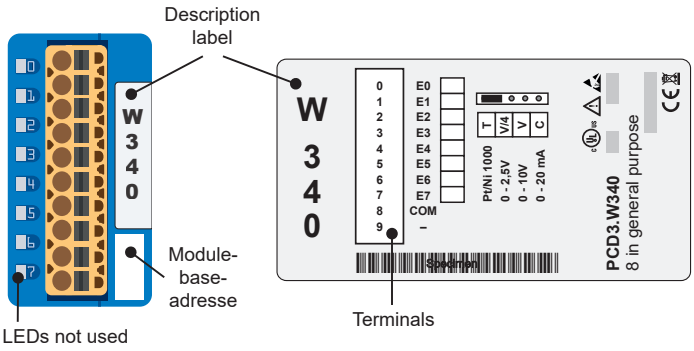
Technical specifications

Number of inputs (channels)	8
Signal range	0 … 2.5 V, 0 … 10 V, 0 … 20 mA Pt/Ni 1000
Resolution (representation)	12 bit (0 … 4095)
Resolution (value of least significant bit(LSB))	2.442 mV (0 … 10 V) 4.884 µA (0 … 20 mA) Pt/Ni 1000 (default) 0.14 … 0.24 °C (Pt 1000 -50 … +400 °C) 0.09 … 0.12 °C (Ni 1000 -50 … +200 °C)
Method of linearization for temperature inputs	by software
Galvanic separation	no
Measuring principle	non-differential, single-ended
Input resistance	U: 200 kΩ / I: 125 Ω
	1.5 mA
Accuracy at 25 °C	± 0.3 %
Repeating accuracy (under same conditions)	± 0.05 %
Temperature error (0 … +55 °C)	± 0.2 %
Conversion time A/D	≤ 10 µs
Overvoltage protection [1)]	± 50 VDC (permanently)
Overcurrent protection	± 40 mA (permanently)
EMV protection	yes
Time constant of input filter	V: typically 7.8 ms C: typically 24.2 ms T: typically 24.2 ms

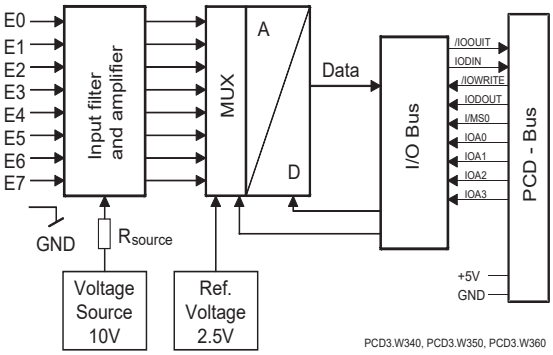
Technical specifications

Internal current consumption (from +5 V bus)	< 8 mA
Internal current consumption (from V+ bus)	< 20 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A ((4 405 4954 0)

Indicators and connections

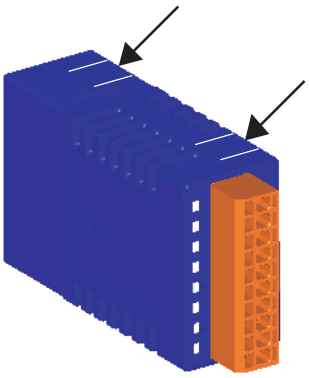


Block schematic



PCD3.W340, PCD3.W350, PCD3.W360

Open and close the module housing



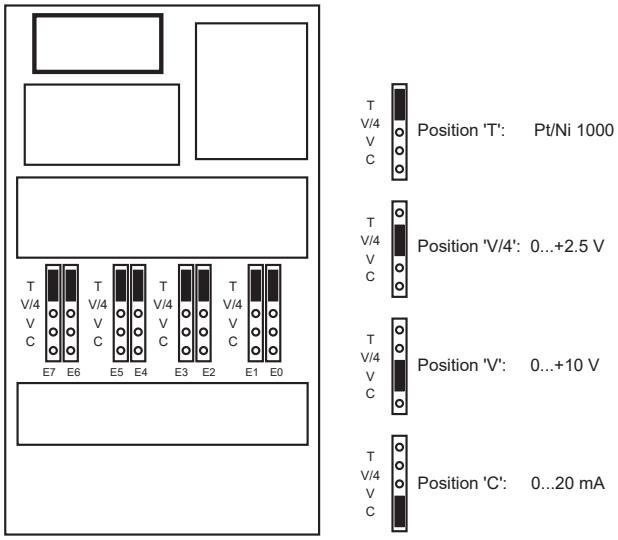
Open

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)



No negative input voltage should be applied on these modules.

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

All inputs set for temperature (position T) must be wired. All unused inputs must be adjusted to current range ‘C’ or voltage range ‘V’.

The reference potentials of signal sources should be wired to a common GND connection (“–” and “COM” terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.

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

Input signals with incorrect polarity significantly distort the measurements on the other channels.

Galvanic separation of inputs to CPU, channels themselves not separated.

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.

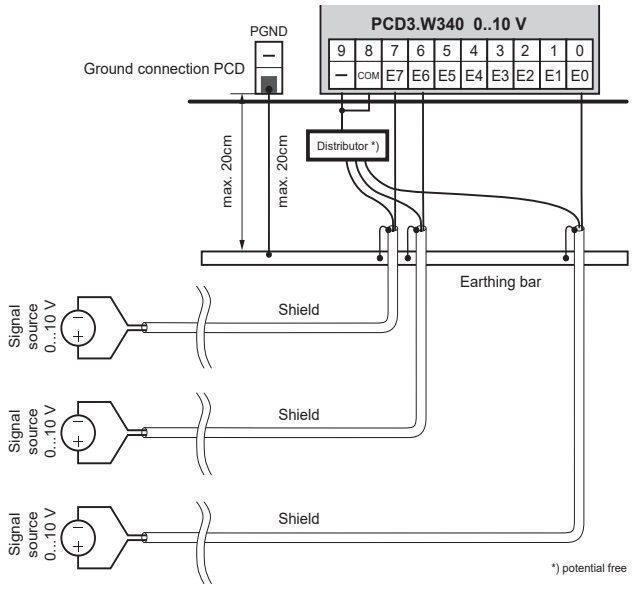
Watchdog ..
.. in classic system
The watchdog with his address 255 can influence this module if it is used at the base address 240.
.. in IEC-controller system
is not affected

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

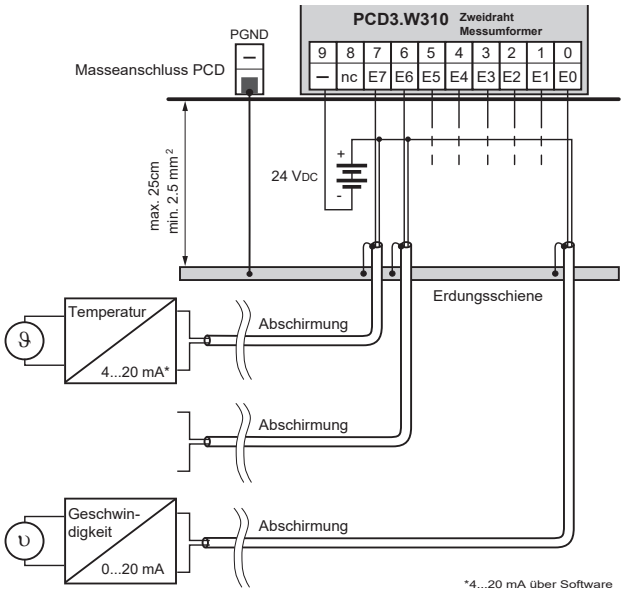
Connection concept

The voltage input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). 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

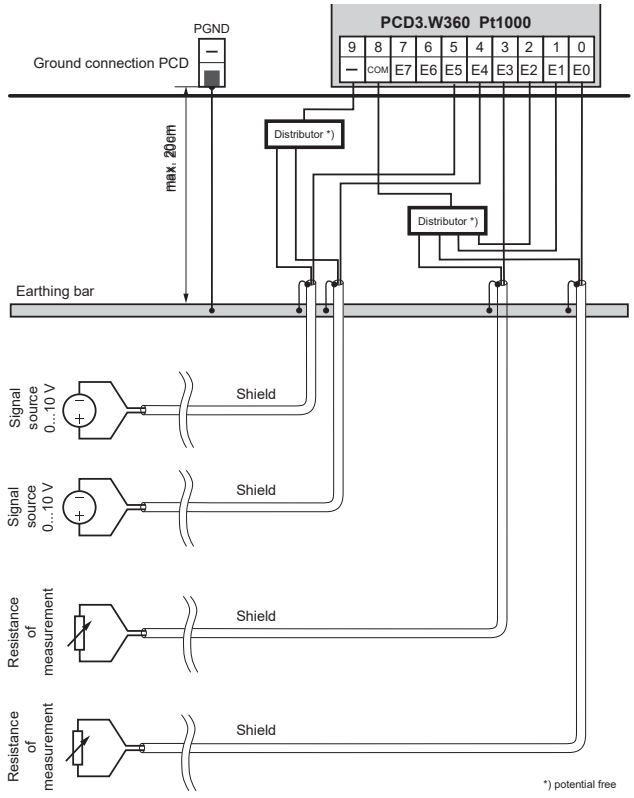


Connection for 0…20 mA with two-wire transducers



Two-wire transducers need a 24 VDC-supply in the measuring trunk.

Connection mixed operation



Formulae for temperature measurement

T = temperature in °C
DV = digital value (0…4095)

For Ni1000

Validity: Temperature range - 50 … + 210 °C
Computational error: ± 0.5 °C

$$T = -188.5 + \frac{260 \cdot DV}{2616} - 4.676 \cdot 10\text{-}6 \cdot (DV - 2784)2$$

For Pi1000

Validity: Temperature range - 50 … + 400 °C
Computational error: ± 1.5 °C

$$T = -366.5 + \frac{450 \cdot DV}{2474} + 18.291 \cdot 10^{-6} \cdot (DV - 2821)^2$$

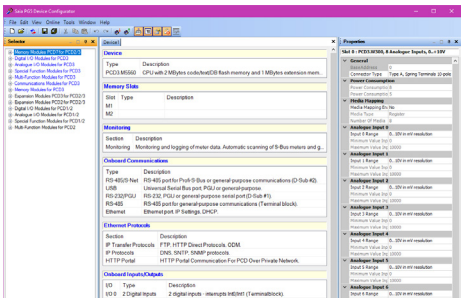
Resistance measurement up to 2.5 kΩ

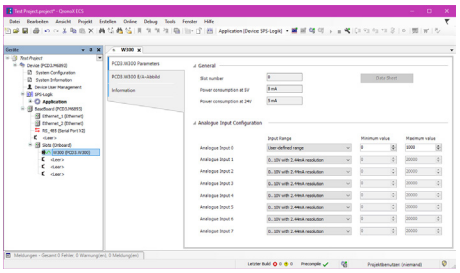
Special temperature sensors or any other resistances up to 2.5 kΩ can be connected to the PCD3.W340. The digital value can be calculated as follows:

$$DV = \frac{16380 \cdot R}{(7500 + R)}$$

where 0 ≤ DV ≤ 4095 and R = the resistance to be measured in Ω.

Configuration

Saia PCD® Classic	
PCD-System	**Evaluation**
Classic	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator or Network Configurator). 

Saia PCD® IEC-Controller	
PCD-System	**Evaluation**
IEC-Controller	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator) 

PCD3.W340

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W340	8 analogue inputs 0…20 mA, 12 bit	Analogue input module, 8 inputs (channels), resolution 12 bit, signal range 0…20 mA, (the channels themselves not separated), connection with pluggable spring terminals, plug-in type A ((4 405 4954 0) included	80 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 0used 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 transportation or storage, 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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

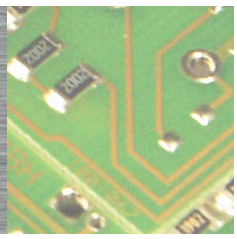
Honeywell

Document No. 51-52-03-86
Rev. 3.0
April 2020

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.

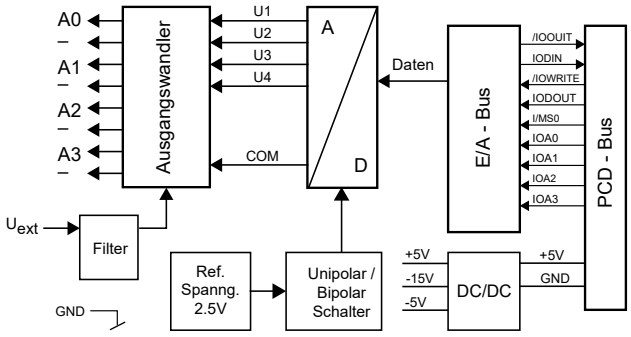
PCD3.W610

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)

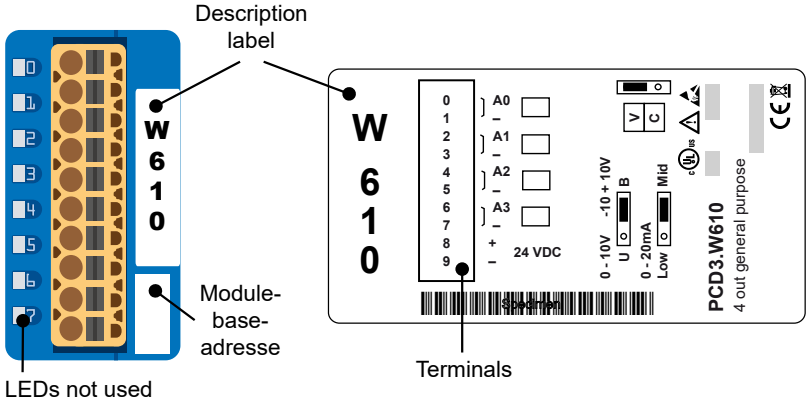
*) Characteristics, see diagram under "Principle diagram of analog outputs"

Block schematic



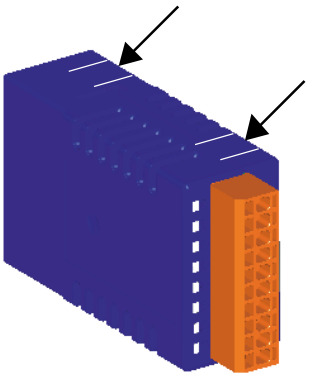
Typ: PCD3.W600, PCD3.W610

Indicators and connections



LED	Output
0	O0
1	O1
2	O2
3	O3

Open and close the module housing



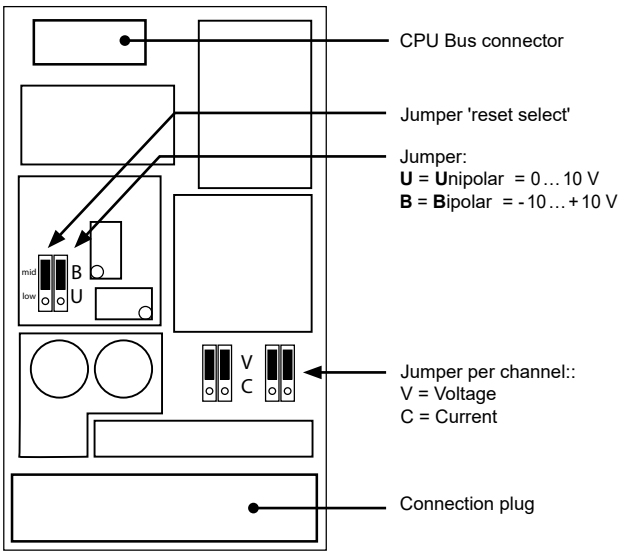
Open

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

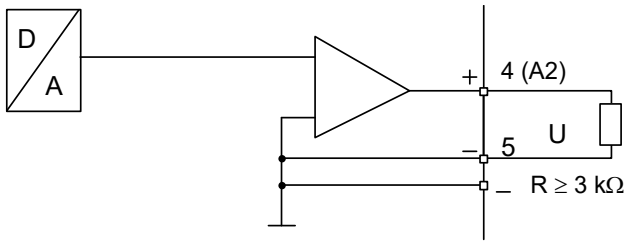
Pro Modul	U/B		**U**nipolarer or **B**ipolarer operation
	Reset select		Reset to **low-** or **mid scale**
	Empf. Einstellung		Unipolar → low-scale Bipolar → mid-scale
Per channel		“V”	Voltage output: 0…+10 V or –10 V…+10 V
		“C”	Current output: 0…20 mA

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.

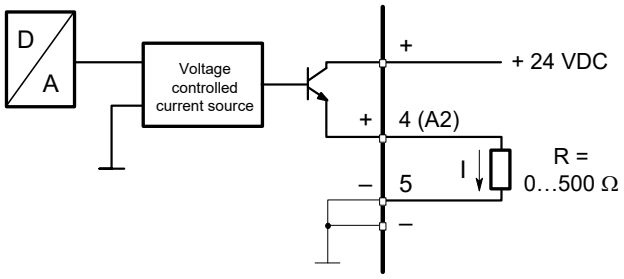
Principle diagram of analog outputs

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

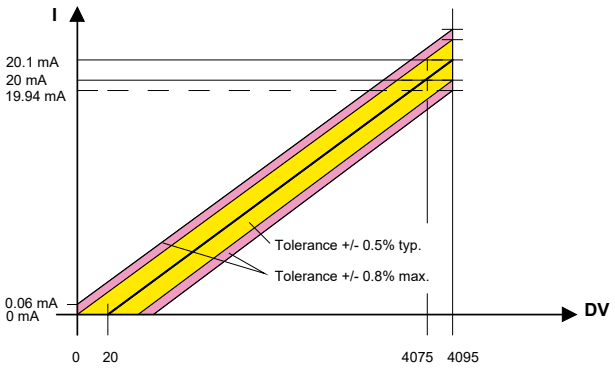


During start-up, a voltage of 5 V is sent to all outputs of the W610 module. The start-up phase lasts 40 ms, then 0 V is sent to the outputs.

Output connection for 0 … 20 mA



Characteristics of the current outputs



Digital/analogue values

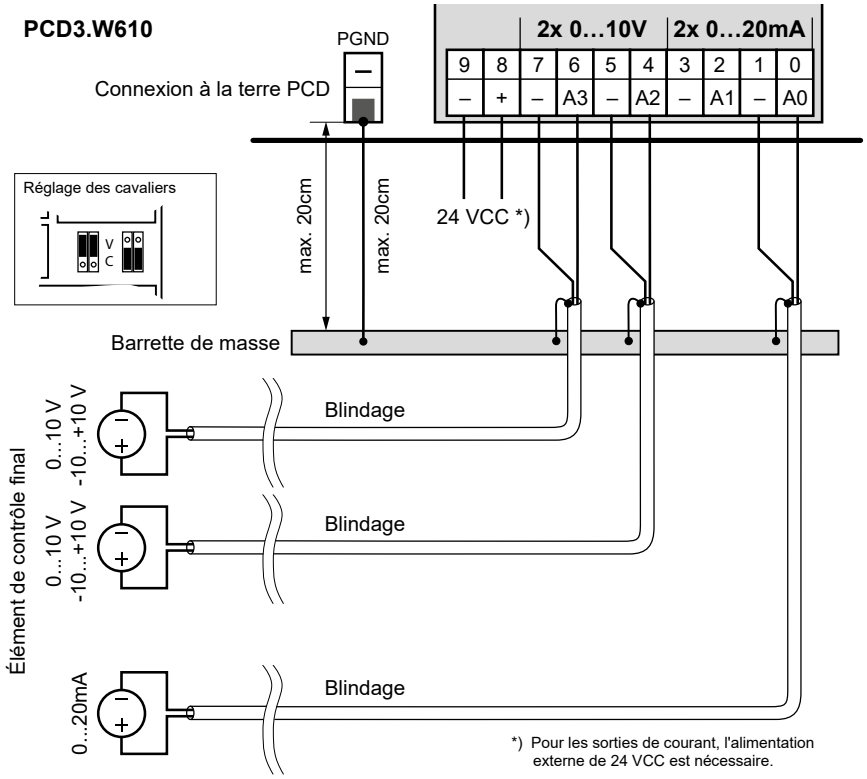
LED	Output signals
4095	+ 20.1 mA
4075	+ 20 mA
2048	+ 10 mA
20	0 mA
0	0 mA

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



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 0used 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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

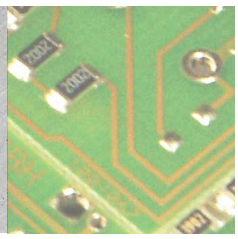
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-94
Rev.1.1
July 2020

Honeywell

PCD3.W625

Analog output module, 6 channels, 10 bit, −10 …+10 V, galvanic isolation to the CPU



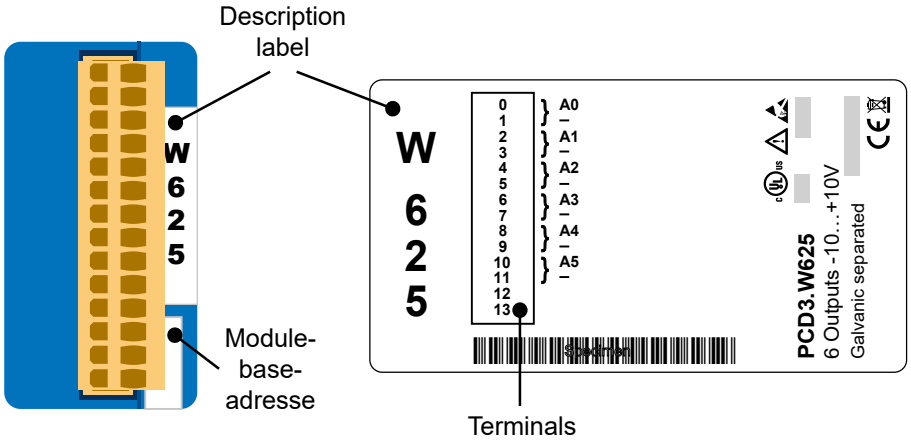
Fast output module with electrical isolation from the CPU for universal use with 6 channels each with −10 …+10 V voltage and 10 bit resolution.

Use of a fast on-board micro controller allows decoupling and relief of the CPU regarding intensive computing tasks, such as scaling and filtering of signal data.

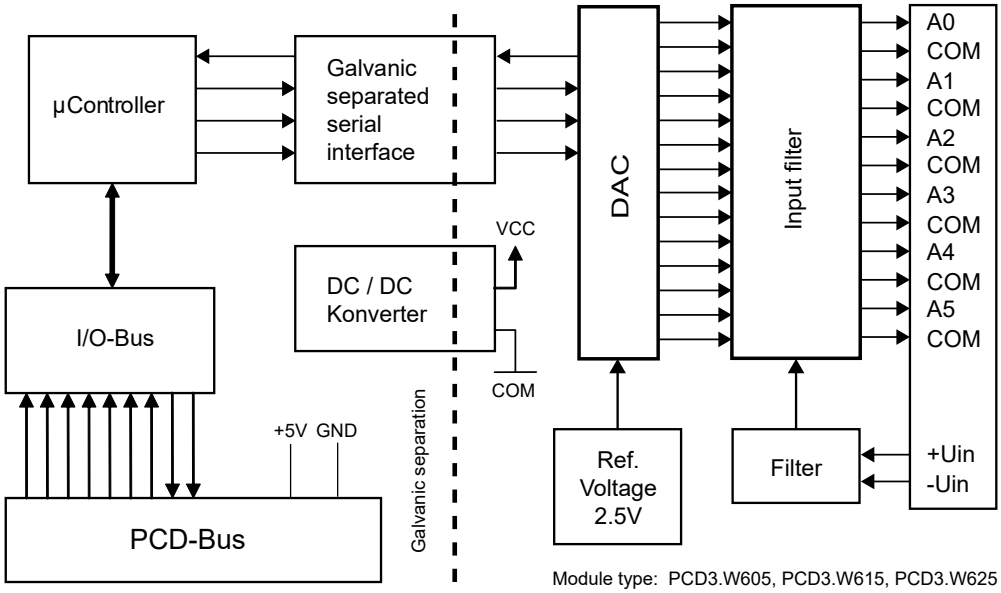
PCD3.W625

Technical data	
Number of outputs (channels)	6
Signal range	−10…+10 V
Resolution (digital representation)	10 bits (0 … 1023)
Resolution	20 mV
Galvanic separation	500 V, electrical isolation of outputs to CPU, channels themselves not separated
Short circuit protection	yes (permanent)
Time constant of output filter	typ. 1 ms
Load resistance	>3 kΩ
Cut off frequency	300 Hz
Accuracy at 25 °C)	±0.4 %
Temperature error (over temperature range 0 … +55 °C)	±0.25 %, 100 ppm/K oder 0.01 %/K
Internal current consumption (from +5 V bus)	max. 110 mA (typ. 80 mA)
Internal current consumption (from V+ bus)	0 mA
EMC protection, according to standards	ENV 50 141, EN 55 022, EN 61000-4-2, EN 61000-4-4, EN 61000-4-5
Terminals	Pluggable 14-pole spring terminal block type E (4 405 4998 0) for Ø up to 1.5 mm²

Indicators and connections



Block diagram

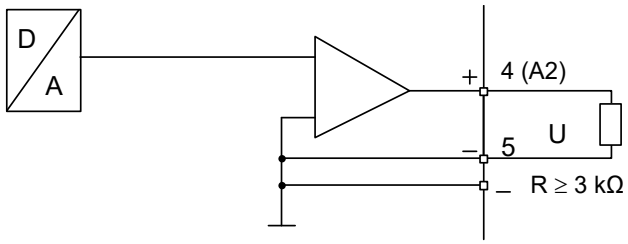


Module type: PCD3.W605, PCD3.W615, PCD3.W625

	Galvanic separation of outputs to CPU, channels themselves not separated.
	E/A-Module und E/A-Klemmenblöcke dürfen nur im spannungslosen Zustand der Modulträger gezogen oder gesteckt werden. Die externe Spannungsversorgung der Module + 24 V muss dabei ausgeschaltet sein.

Principle diagram of analog outputs

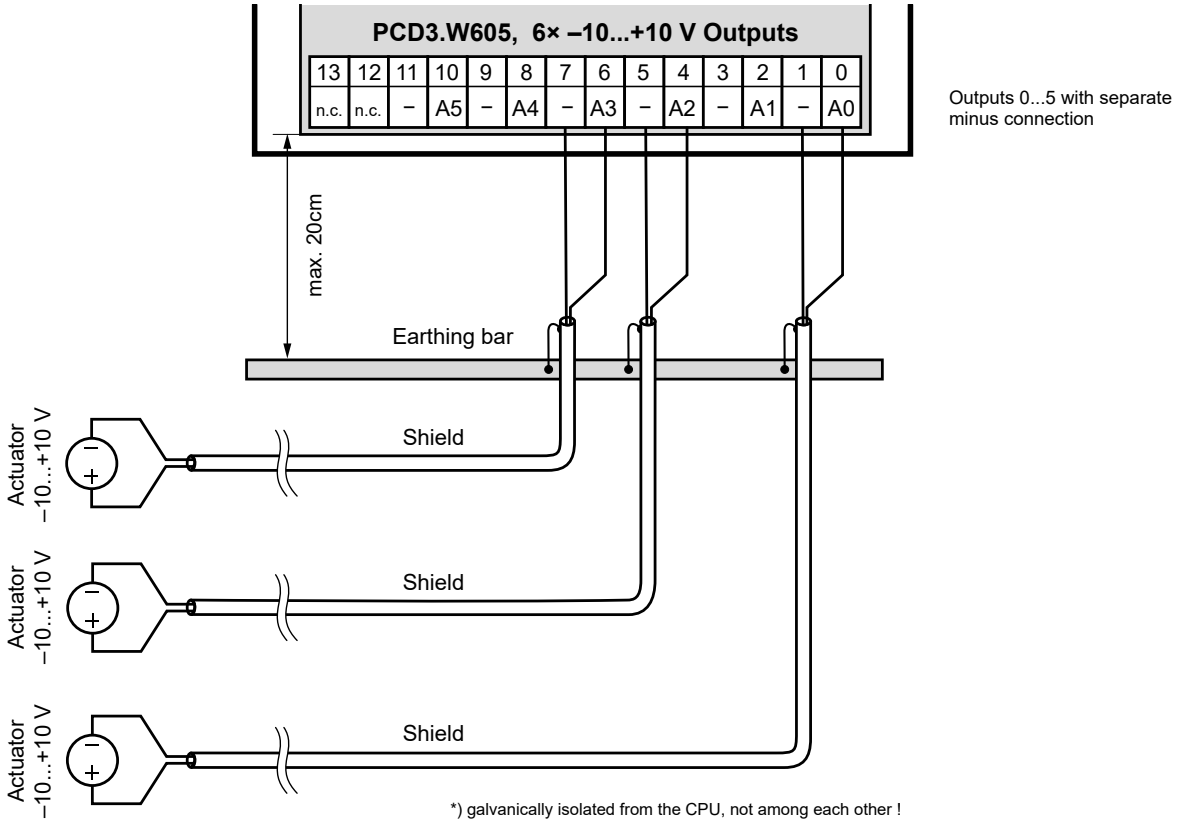
Output for −10 …+10 V



Connection concept (example)

The input signals are connected directly to the 14-pin terminal block. In order to couple as little interference as possible to the module via the lines, the connection should be made according to the principle explained below.

Connection for −10 …+10 V



Notes on the output range

Balancing the offset and the amplification is done for the PCD3.W625 digitally by the µC. As there is no potentiometer, the output range has been slightly enlarged to cover maximum values even in the worst case.

Typical output range (without component tolerances):
–10.62 V … +10.36 V (instead −10 …+10 V)

This range is broken down on a 10 bit scale (1024 steps), as before.
The result is the following LSB resolution: 1 LSB = 20.75 µV

PCD3.W625

4 405 4998 0

Ordering information

Type	Short description	Description	Weight
PCD3.W625	6 outputs 10 bit, electrically isolated, −10…+10 V	Analogue output module with galvanic isolation, 6 channels, 10 bits, −10…+10 V, connector type E (4 405 4998 0) included	100 g

Ordering information Accessories

Type	Short description	Description	Weight
4 405 4998 0	Plug-in, E	Plug-in I/O spring terminal block, 14-pole up to 1.5 mm^2, labelled 0 to 13	13 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 0used 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions

2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

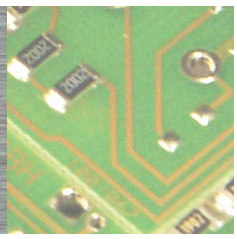
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No. 51-52-03-96
Rev. 3.1
June 2020

Honeywell

HPCD3.C200

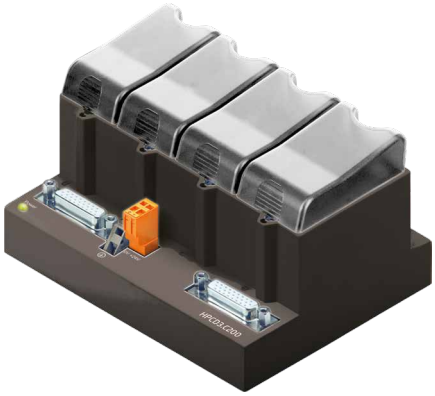
Extension module holder for 4 I/O modules



Description

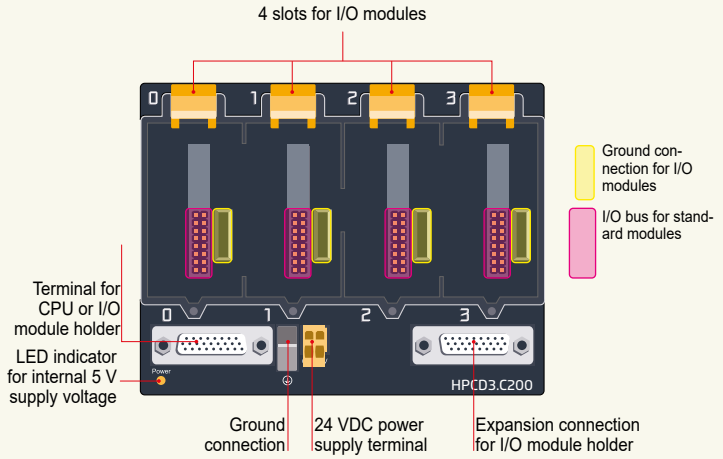
The HPCD3.M6893 controllers can be expanded with HPCD3.Cxxx components, making additional module sockets available. On the HPCD3.M6893, up to 15 HPCD3.Cxxx module holders can be attached. This allows the user to attach a maximum of 64 I/O modules, or 1023 digital inputs/ outputs.

HPCD3.C200 serves as a bus repeater and internally provides + 5 V and V + for a segment of I/O modules.



HPCD3.C200

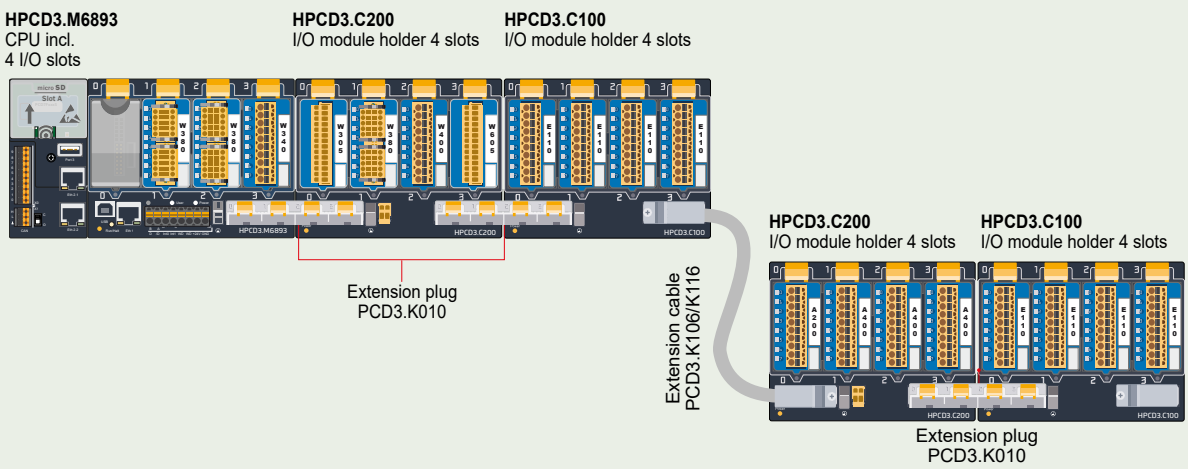
Device design



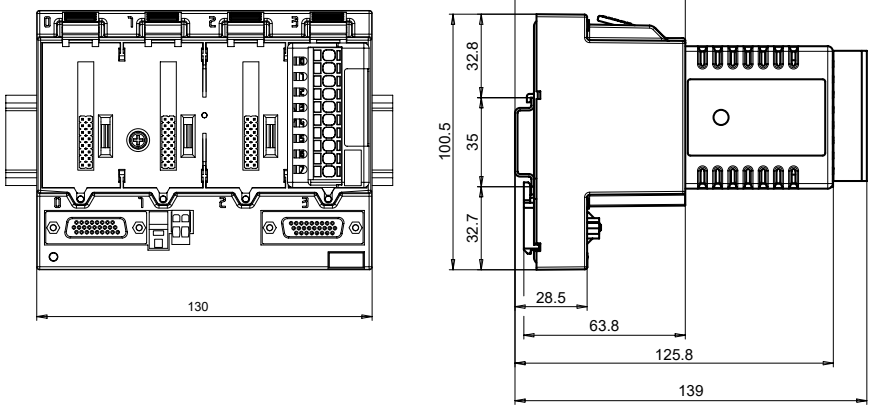
All standard I/O modules can be used in the expansion module holders.

Communication modules or other intelligent modules can only be used in the slots of the Basic CPU.

Example calculation for the current consumption of the internal +5V and +V (24V) bus of the I/O modules



Dimension Drawing
HPCD3.C200



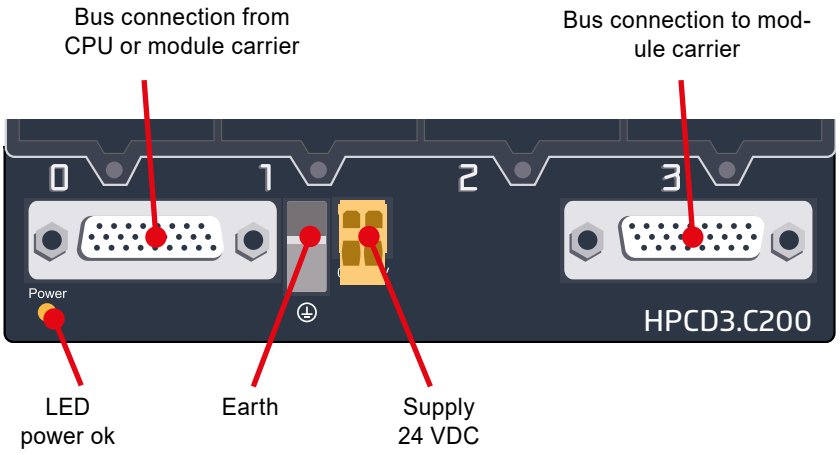
Planning data

►Step files (3D)

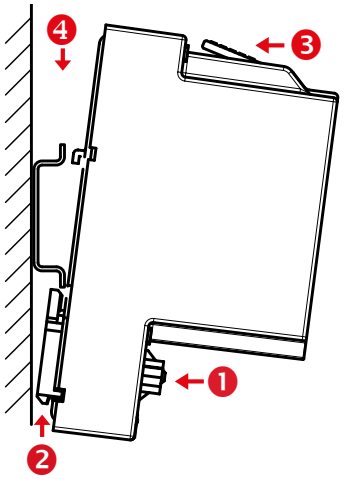
►BIM objects

The data can be downloaded with the following link:
https://sbc-support.com/en/services/bim-building-information-model/

Connections of the HPCD3.C200



Easy assembly of the module holders on DIN rail (1 × 35 mm)



1. Press lower part of housing onto mounting rail
2. Push up against the spring force up to the stop
3. Hook in over the upper edge of the mounting rail and yield to the spring force
4. For safety, push the housing into the mounting rail from top to bottom

Check if the device is securly fixed.

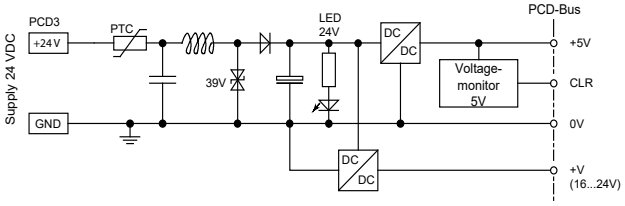
Dismounting from DIN rail

To remove the housing, push upwards and pull out.

Technical data

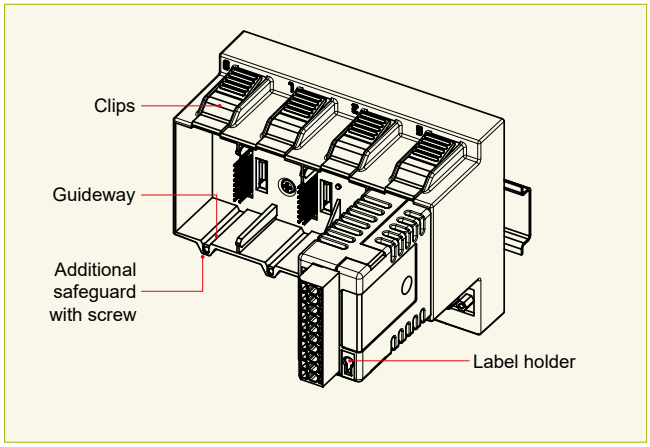
Number of module slots		4	
Description		4 I/O modules	
External power supply (maximum load see below)		24 VDC	
Load capacity from +5 V bus HW versions A and B		1000 mA	
Load capacity from +5 V bus Starting with HW version C		1500 mA	
Load capacity from V+ bus HW versions A and B		100 mA	
Load capacity from V+ bus Starting with HW version C	24 VDC –25...+30%	200 mA	
	24 VDC –20...+25%	310 mA – $\frac{I_{+5V}}{15}$	mA
	24 VDC –10...+10%	630 mA – $\frac{I_{+5V}}{3.8}$	mA

Internal supply of the LIO module carrier HPCD3.C200



When planning HPCD3 systems, it must be checked whether the two internal power supplies are not overloaded. This control is especially important when using analog, counting, and positioning and other special modules, as some of them consume a relatively large amount of power.

Insertion of I/O modules



▲ **Simple exchange of I/O modules**

Over 40 modules available with different functionalities

Types

- ▶ **PCD3.Axxx** Digital output modules
- ▶ **PCD3.Exxx** Digital input modules
- ▶ **PCD3.Fxxx** Communication modules
- ▶ **PCD3.Wxxx** Analogue input/output modules

The HPCD3.C200 is used to extend the I/O bus or for the internal power supply +5V and +V (24V) to a module segment. Please note the following rules:

- **Mandatory:** Insert a HPCD3.C200 after the HPCD3.M6893 and after each cable (at the start of a row).
- Do not use more than six HPCD3.C200 in a single configuration, or the time delay will exceed the I/O access time.
  Use a maximum of five PCD3.K106/K116 cables.
- If an application is mounted in a single row (max. 15 module holders), then after five HPCD3.C100 a HPCD3.C200 must be used to amplify the bus signal (unless the configuration ends with the fifth HPCD3.C100).
- If the application is mounted in multiple rows, the restricted length of cable means that only three module holders (1× HPCD3.C200 and 2× HPCD3.C100) may be mounted in one row.

HPCD3 I/O modules are not hot-plug capable:

- Carefully insert and remove the I/O modules after switching off the power supply (24V).

The following aspects should be considered when planning HPCD3 applications:

- In keeping with lean automation, it is recommended to leave the first slot in the CPU basic module free for any subsequent expansions. This slot can accommodate simple I/O modules but also communication modules.
- The total length of the I/O bus is limited by technical factors; the shorter, the better.

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

Consumption M6893 + C200 + C100

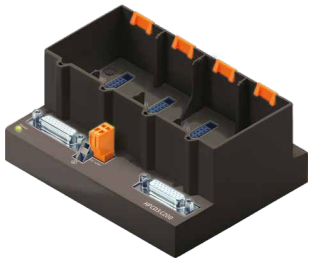
Module	Internal 5V	Internal +V (24V)
Not used		
W380	25 mA	25 mA
W380	25 mA	25 mA
W340	8 mA	20 mA
Total M6893	**58 mA**	**70 mA**
W340	8 mA	20 mA
W340	8 mA	20 mA
W610	110 mA	0 mA
E160	10 mA	
Total C200	**136 mA**	**40 mA**
E160	10 mA	
E160	10 mA	
E160	10 mA	
E160	10 mA	
Total C100	**40 mA**	**0**
Total C200	**176 mA**	**40 mA**

Consumption C200 + C100

Module	Internal 5V	Internal +V (24V)
A200	15 mA	
A810	40 mA	
A810	40 mA	
A860	18 mA	
Total C200	**113 mA**	
A460	10 mA	
A460	10 mA	
A460	10 mA	
W380	25 mA	25 mA
Total C100	**55 mA**	**25 mA**
Total C200	**168 mA**	**25 mA**

Capacity	HPCD3.M6893	HPCD3.C200
Internal 5V	600 mA	1500 mA
Internal +V (24V)	100 mA	200 mA

The calculation example shows that internal capacity is maintained in the CPU basic module HPCD3.M6895 and the holder module HPCD3.C200. The CPU basic module has a sufficient reserve to receive an additional communication module in the empty slot 0. The holder module HPCD3.C200 also has sufficient reserves to connect an additional HPCD3.C100 holder module. The power consumption of the internal +5V and +V (24 V) bus for the I/O modules can be calculated in the Control Edge PCD IO-Calculator Excel sheet.



PCD3.C200

Slot cover
32347605-001

Screw terminal
2-pole
440549520

Connecting plug
PCD3.K010

Extension cable 0.7 / 1.2 m
PCD3.K106 / PCD3.K116

Ordering information

Type	Short description	Description	Weight
HPCD3.C200	PCD3.C100 for 4 modules	Extension module holder for 4 I/O modules	440 g

Accessories

Type	Short description	Description	Weight
32347605-001	Slot cover	Slot cover for unused HPCD3 I/O slots	8 g
440549520	Screw terminal 2-pole	Plug-in screw terminal block, 2-pole up to 2.5 mm² (orange block) for HPCD3.C200	15 g
PCD3.K010	Connection plug	Connection plug HPCD3.M/T/C to HPCD3.Cx00	40 g
PCD3.K106	Extension cable 0.7 m	Extension cable for HPCD3.M/T/C to HPCD3.Cx00 (length 0.7 m)	140 g
PCD3.K116	Extension cable 1.2 m	Extension cable for HPCD3.M/T/C to HPCD3.Cx00 (length 1.2 m)	180 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 0used 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.

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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

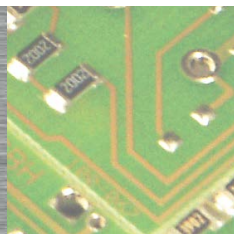
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-51
Rev.2.0
May 2020

Honeywell

PCD3.A200

Digital output module, 4 relays, 250 VAC/2 A, 'make' contact, contact protection



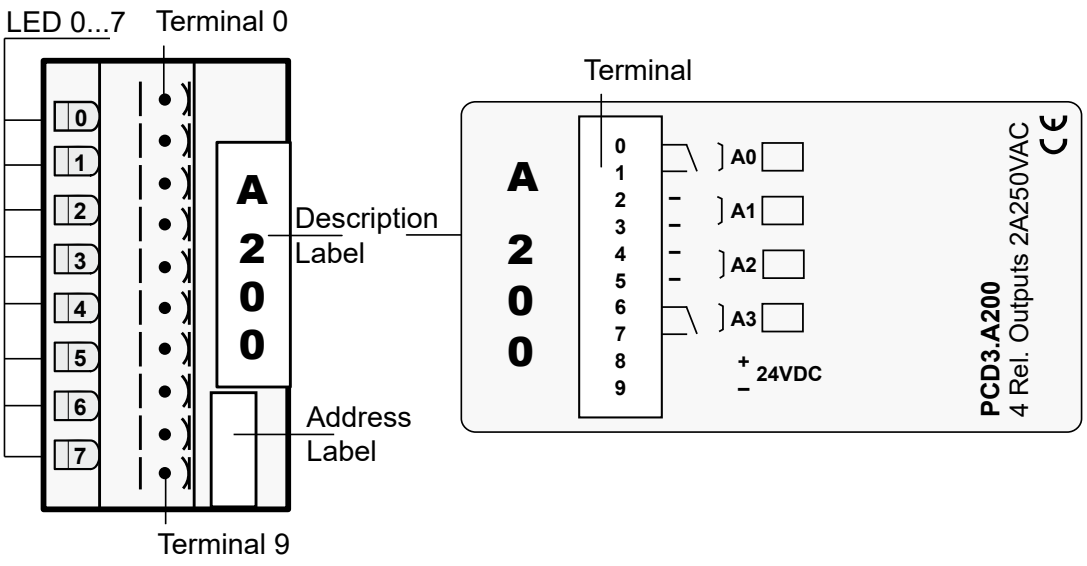
The module contains 4 relays with normally-open contacts for direct or alternating current up to 2 A, 250 VAC. The contacts are protected by a varistor and an RC element. The module is especially suited wherever perfectly isolated AC switching circuits with infrequent switching have to be controlled.

PCD3.A200

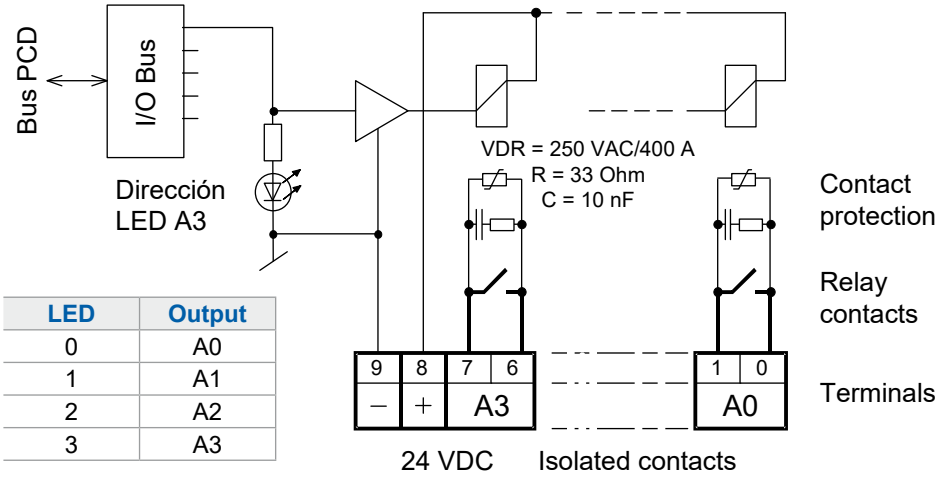
Technical data	
Number of outputs	4, electrically isolated make contacts
Type of relay (typical)	RE 030024, SCHRACK
Switching capacity (contact lifetime)	2 A, 250 VAC AC1 0.7 × 10⁶ operations 1 A, 250 VAC AC11 1.0 × 10⁶ operations 2 A, 50 VDC DC1 0.3 × 10⁶ operations 3) 1 A, 24 VDC DC11 0.1 × 10⁶ operations 1)3)
Relay coil supply 2)	nominal 24 VDC smoothed or pulsed, 8 mA per relay coil
Voltage tolerance, dependent on ambient temperature	20 °C: 17.0 … 35 VDC 30 °C: 19.5 … 35 VDC 40 °C: 20.5 … 32 VDC 50 °C: 21.5 … 30 VDC
Output delay	typically 5 ms bei 24 VDC
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1 … 15 mA typically 10 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 32 mA
Terminals	Type A: Plug-in 10-pole spring terminal block (4 405 4954 0), for wires up to 2.5 mm²

1) With external protective diode
2) With reverse voltage protection
3) These ratings are not UL-listed

LEDs and connection terminals



Output circuits and terminal designation



LED	Output
0	A0
1	A1
2	A2
3	A3

Relay energized (contact closed): LED on
Relay reset (contact open): LED off
24 VDC must be connected to the +/- terminals.

With an open relay contact, the current leakage through the contact protection is **0.7 mA** (at 230 V / 50 Hz).
This should be taken into account for smaller AC loads.
If this is too high, it is recommended to use a PCD3.A220 Module (without contact protection).

!	**Watchdog:** This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
!	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.A200

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.A200	4 relays with make contacts, with contact protection	Digital output module, 4 relays, 250 VAC/2 A, 'make' contact, contact protection	100 g

Order details 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

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 transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

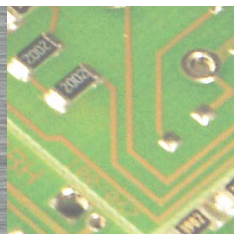
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-55
Rev.4.1
April 2020

Honeywell

PCD3.A410

8 digital outputs, 0.5 A for each, electrically isolated

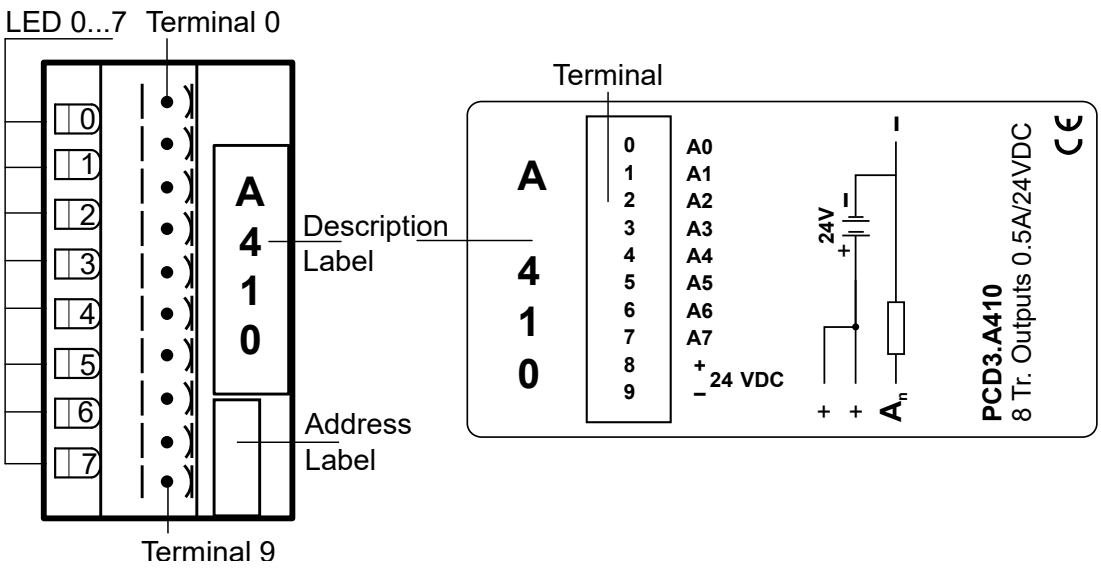


Output module, electrically isolated from the CPU, with 8 MOSFET transistor outputs, without short-circuit protection. Voltage range 1 … 32 VDC.

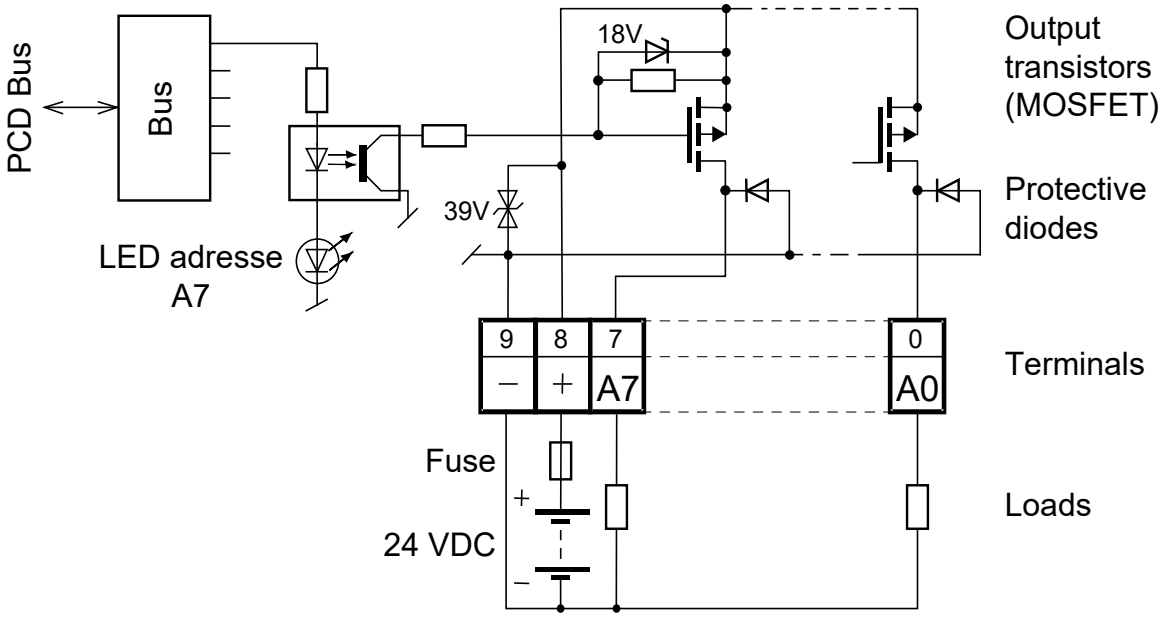
PCD3.A410

Technical data	
Number of outputs	8, electrically isolated
Output current	5 mA… 500 mA (leakage current max. 0,1 mA) Within the voltage range 5…24 VDC, the load resistance should be at least 48 Ω
Total current per module	4 A on 100% duty cycle
Operating mode	Source operation (positive switching)
Voltage range	5…32 VDC, smoothed 10…25 VDC, pulsed
Voltage drop	≤ 0.4 V at 0.5 A
Output delay	Switch-on delay typically 10 µs Switch-off delay typically 50 µs (ohmic load 5 mA… 500 mA), longer with inductive load, because of the protective diode.
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Isolation voltage	1000 VAC, 1 min
Internal current consumption (from +5 V bus)	1…24 mA, typically 15 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	Load current
Terminals	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm², labelled 0 to 9, connector type A (4 405 4954 0)

LEDs and connection terminals



Output circuits and terminal designation



Fuse:	It is recommended that each module should be separately protected with a fast-blow (S) fuse of max. 4 A.
Watchdog:	This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.A410

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.A410	8 digital outputs for 0.5 A each, electrically isolated	Digital output module, 8 outputs, transistors, electrically isolated, 1 … 32 VDC / 0.5 A, connection with pluggable spring terminals, plug-in type A, (4 405 4954 0) included	100 g

Order details accessories

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 to 9, connector type A	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 during transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

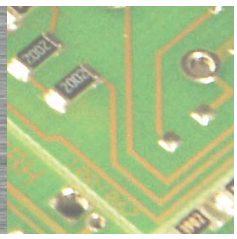
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-61
Rev.2.1
April 2020

Honeywell

PCD3.W300

Analog input module, 8 channel, 12 bit, 0 … 10 V



Modulo di ingresso analogico rapido a 8 canali con risoluzione 0 … 10 V e 12 bit per canale. L'uso di un microcontrollore veloce a bordo permette il disaccoppiamento e lo sgravio del PCD per quanto riguarda i compiti di calcolo intensivo, come il ridimensionamento e il filtraggio dei dati del segnale.

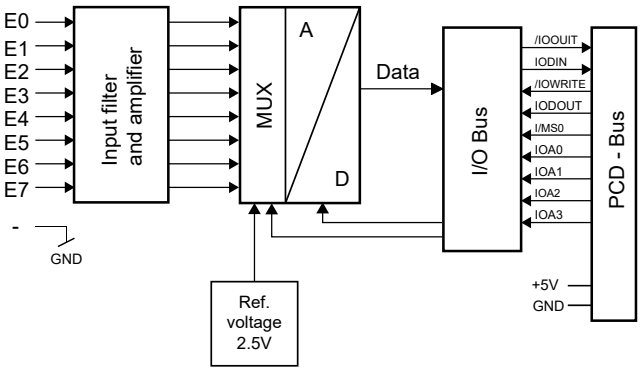
PCD3.W300

Technical specifications

Number of inputs (channels)	8
Signal range	0 … 10 V
Resolution (representation)	12 bit (0 … 4095)
Resolution	2.442 mV pro bit
Galvanic separation	no
Measuring principle	non-differential, single-ended
Input resistance	20 kΩ / 0.15 %
Accuracy at 25 °C	± 0.5 %
Repeating accuracy (under same conditions)	± 0.05 %
Temperature error (0 … +55 °C)	± 0.2 %
Conversion time A/D	≤ 10 µs
Overvoltage protection [1]	± 50 VDC (permanent)
EMV protection	yes
Time constant of input filter	typisch 10.5 ms
Internal current consumption (from +5 V bus)	< 8 mA
Internal current consumption (from V+ bus)	5 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A ((4 405 4954 0)

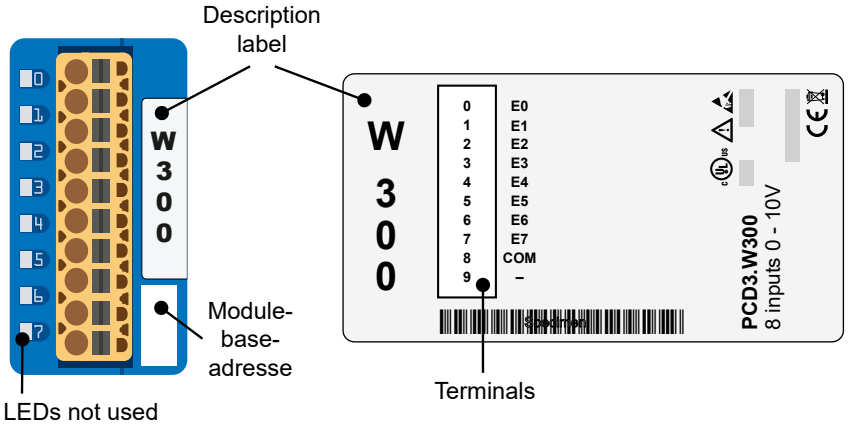
[1] No negative input voltage should be applied on these modules !

Block schematic



Type: PCD3.W300, PCD3.W310

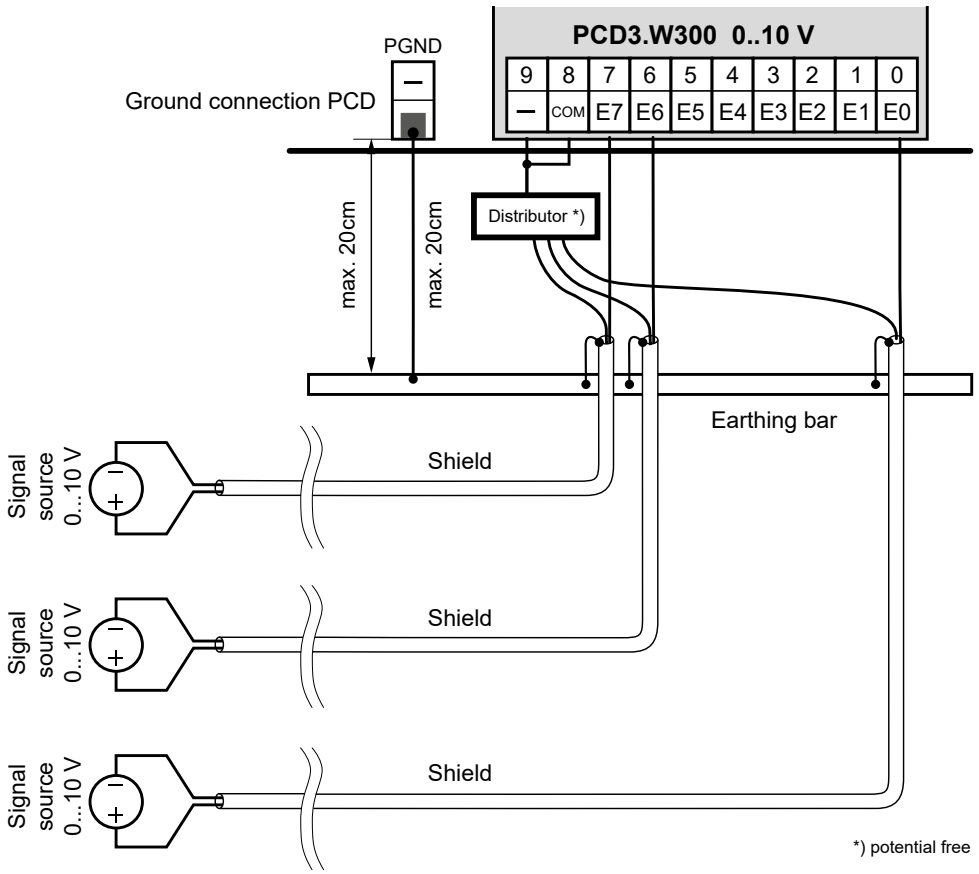
Indicators and connections



Connection concept for voltage inputs

The voltage input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). 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



No negative input voltage should be applied on these modules.

The reference potentials of signal sources should be wired to a common GND connection ("–" and "COM" terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.

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

Input signals with incorrect polarity significantly distort the measurements on the other channels.

Galvanic separation of inputs to CPU, channels themselves not separated.

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.

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

PCD3.W300

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W300	8 analogue inputs 0…10 V, 12 bit	Analogue input module, 8 inputs (channels), resolution 12 bit, signal range 0…10 V, (the channels themselves not separated), connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	80 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 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

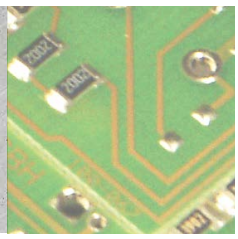
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-81
Rev.2.0
June 2020

Honeywell

PCD3.W615

Analog output module, 4 channels, 10 bit, 0…20 mA, galvanic isolation to the CPU



Fast output module with electrical isolation from the CPU for use with 4 channels each with 0…20 mA voltage and 10 bit resolution.

Use of a fast on-board micro controller allows decoupling and relief of the CPU regarding intensive computing tasks, such as scaling and filtering of signal data.

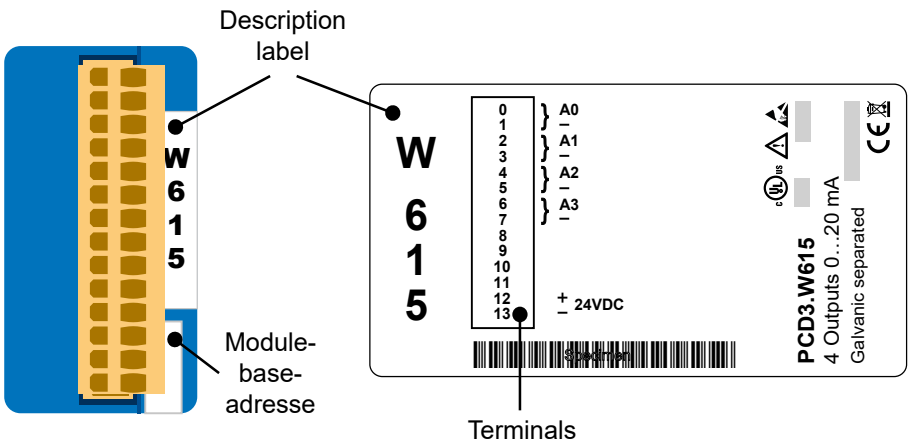
PCD3.W615

Technical data	
Number of outputs (channels)	4
Output range	Current 0…20 mA
Resolution (digital representation)	10 bit (0…1023)
Resolution	20 µA
Galvanic separation	500 V, electrical isolation of outputs to CPU, channels themselves not separated
Short circuit protection	yes (permanent)
Time constant of output filter	typ. 0.3 ms
Load resistance	< 500 Ω*
Cut off frequency	300 Hz
Accuracy at 25 °C)	±0.7 %
Temperature error (over temperature range 0 … +55 °C)	±0.25 %, 100 ppm/K or 0.01 %/K
Internal current consumption (from +5 V bus)	max. 55 mA (typ. 45 mA)
Internal current consumption (from V+ bus)	max. 90 mA, smoothed Voltage range*
EMC protection, according to standards	ENV 50 141, EN 55 022, EN 61000-4-2, EN 61000-4-4, EN 61000-4-5

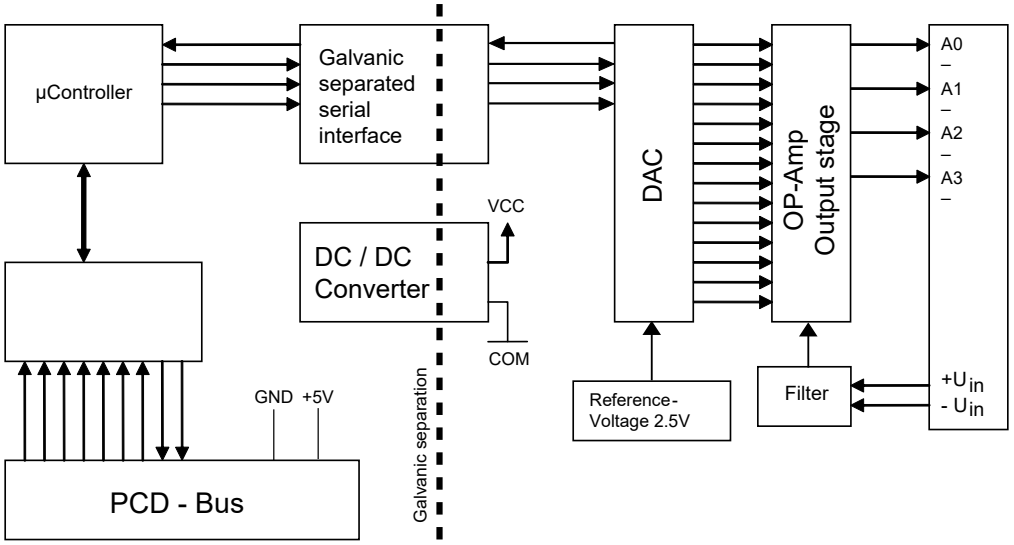
Technical data	
Terminals	Pluggable 14-pole spring terminal block type E (4 405 4998 0) for Ø up to 1.5 mm²

* Voltage range RL•20 mA + 10…20 V
Example: RL = 500 Ω Ue = 20…30 V
RL = 0 Ω Ue = 10…20 V

Indicators and connections



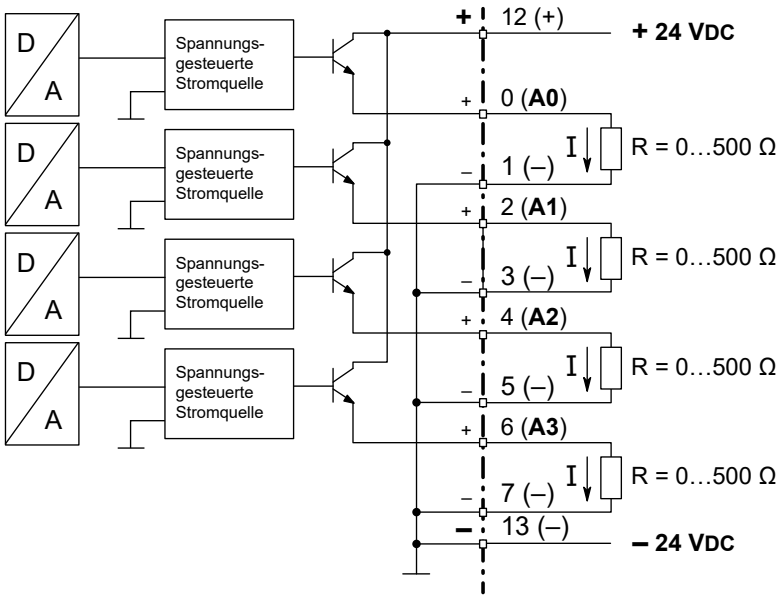
Block diagram



	Galvanic separation of outputs to CPU, channels themselves not separated.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the CPU and the external +24V are disconnected from the power supply.

Principle diagram of analog outputs

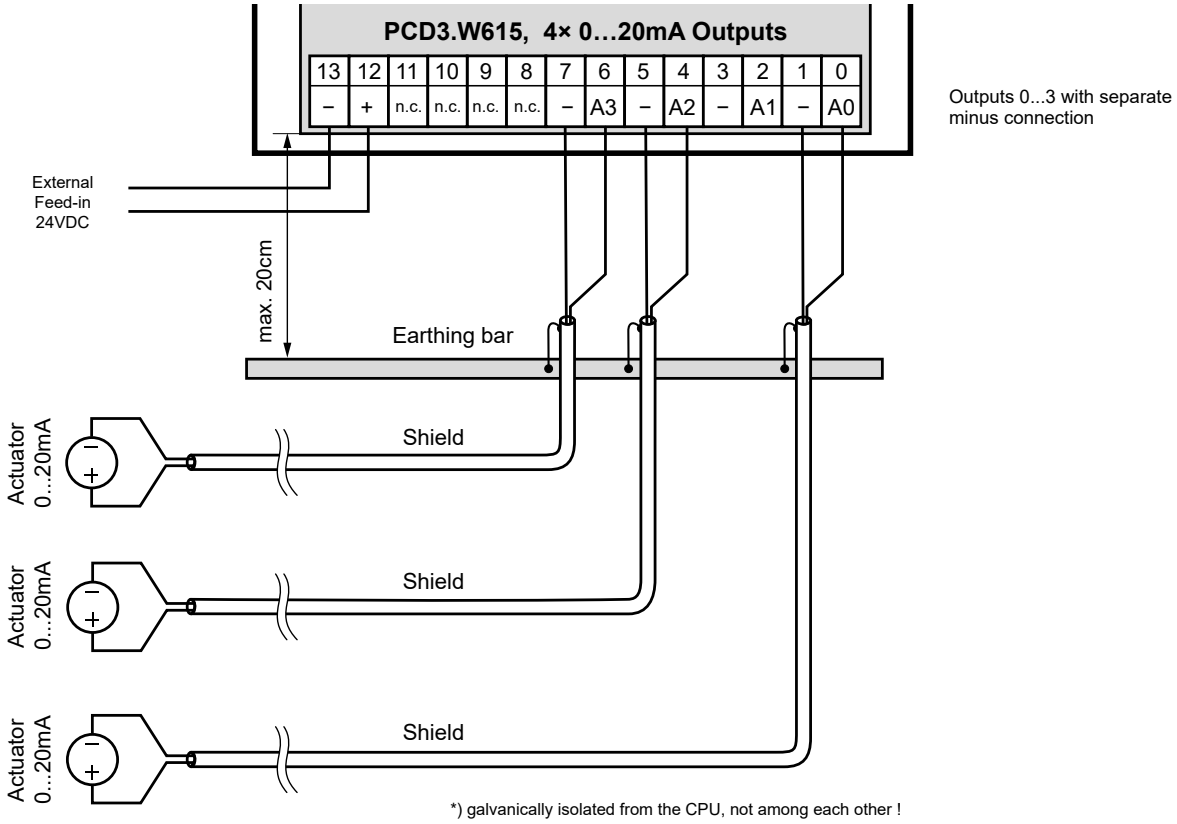
Output for 0 …20 mA



Connection concept (example)

The input signals are connected directly to the 14-pin terminal block. In order to couple as little interference as possible to the module via the lines, the connection should be made according to the principle explained below.

Connection for 0…20 mA



Notes on the output range

Balancing the offset and the amplification is done for the PCD3.W615 digitally by the µC. As there is no potentiometer, the output range has been slightly enlarged to cover maximum values even in the worst case.

Typical output range (without component tolerances):
0 mA … +21.4 mA (instead 0 …+ 20 mA)

This range is broken down on a 10 bit scale (1024 steps), as before.
The result is the following LSB resolution: 1 LSB = 21.7 µA

PCD3.W615

4 405 4998 0

Ordering information

Type	Short description	Description	Weight
PCD3.W615	4 outputs 10 bit, electrically isolated, 0…20 mA	Analogue output module with galvanic isolation, 4 channels, 10 bits, 0…20 mA, connector type E (4 405 4998 0) included	100 g

Ordering information Accessories

Type	Short description	Description	Weight
4 405 4998 0	Plug-in, E	Plug-in I/O spring terminal block, 14-pole up to 1.5 mm^2, labelled 0 to 13	13 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 0used 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell

Honeywell Process Solutions

2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

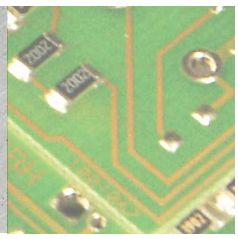
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No. 51-52-03-95
Rev. 2.1
June 2020

Honeywell

PCD3.W745

Universal temperature measurement module for up to 4 measuring inputs, 16 bits, TC Type J & K and 4 wire Pt/Ni 100/1000



Main characteristics

- Four input channels, each with 4 spring terminals, all inputs software configurable
- Electrical isolation between input channels and PCD ground (the channels themselves are not separated against each other)
- Integrated cold junction for thermocouple
- External cold junction compensation can be measured via channel 0
- RTD measurement with 2, 3, or 4-wire connection
- The linearization and all compensation activities as well as the conversion into °C, °F and K is done in the module (Thermocouples types R, S, T, E, N on request)

PCD3.W745

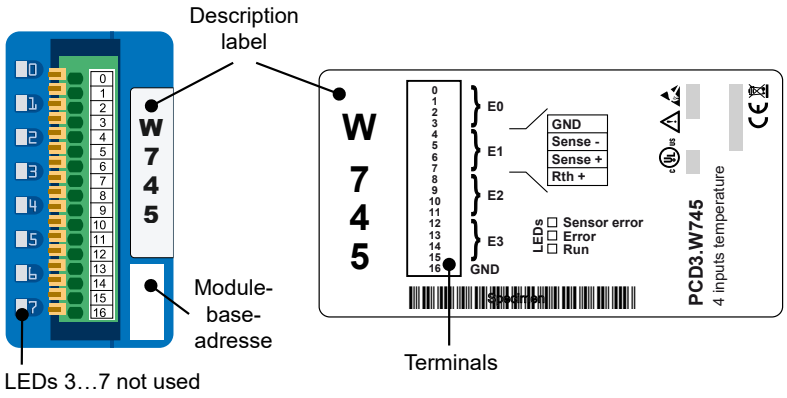
Powerful sensor diagnostics

- Overshoot and undershoot detection in measurement range
- Line breaks detection
- Short-circuit detection for resistance thermometers (RTD)
- 3 LEDs to indicate configuration, data acquisition, connection states, line breaks or short circuits

Hardware configuration

- PCD3.W745 modules are for use with the following units HPCD3.M6893, HPCD3.Txxx and HPCD3.Cxxx
- The functions of the module are defined by the firmware or by the programming environment for the respective CPU.

Indicators and connections



LED	Meaning	Description
0	Run	The Run LED blinks when the data acquisition is running
1	Error	The Error LED indicates that the module has no valid configuration.
2	Sensor Error	Indicates that at least one of the inputs detects: • no connection • line break • short circuit

Technical Data

All specifications at 25 °C ambient temperature, unless otherwise noted.

Sensor types	TC Type J	TC Type K	Pt100 Pt1000	Ni100 Ni1000
Input range for temperature sensors	−210 … 1200 °C [1] DIN IEC 584	−270 … 1372 °C [1] DIN IEC 584	−200 … 850 °C DIN IEC 751	−60 … 250 °C DIN IEC 43760
Measurement range	−75 mV … +75 mV		Pt/Ni100: 0 … 600 Ω Pt/Ni1000: 0 … 5000 Ω	
Resolution	0.1 °C		0,1 °C	
	2.5 µV		0.01 Ω (Range 600 Ω) 0.10 Ω (Range 5000 Ω)	
Measuring error in % of full scale value [2]	0.05 %		0.05 %	
Measuring error in °C	Alternative to the “measuring error in %” specification above:			
	−100 … +100 °C: <0.4 °C −150 … +500 °C: <0.7 °C −150 … +1000 °C: <1.0 °C		−100 … +100 °C: <0.3 °C −150 … +500 °C: <0.4 °C −200 … +850 °C: <0.5 °C	
Temperature coefficient of full scale value [2]	10 ppm/K		80 ppm/K	
Sampling time per channel	250 ms			
Measurement resolution	16 Bit			
50 Hz rejection 60 Hz rejection	>75 dB >60 dB			
Line break detection	✓	✓	✓	✓
Short circuit detection	×	×	✓	✓
Linearization	on Board			
Compensation of cold junction temperature	on Board		N/A	
Cold junction internal	yes [3]		N/A	
Cold junction external	yes		N/A	
Connection techniques for resistors (RTD's)	N/A		2-wire 3-wire 4-wire	
Galvanic isolation	500 VDC between CPU and analogue inputs			
Ambient temperature	Operation: 0 … +50 °C without forced ventilation Storage: −25 … +85 °C			
Power supply	No external power supply necessary			
Internal power consumption from +5 V bus	200 mA			
Wire gauge	max. 0.5 mm² (AWG 20)			
Wire Stripping	Remove 10 mm of isolation			
Internal reference junction (internal cold junction)				
The built-in Reference Junction is used when thermocouples are directly connected to the module				
	Built-in Temperature sensor			
Operating temperature range	0 … 55 °C			
Resolution	0.1 °C			
Measuring error at 25 °C	0.8 °C			
Drift over operating Temperature Range (0 … 55 °C)	0.05 °C / °C			
Stabilization time	5 min.			

[1] For thermocouples, the full measurement range is offered. The specifications of resolution and accuracy are given for temperatures higher than −150 °C. For lower temperatures than −150 °C, the characteristics of thermocouples become worse. If thermocouples are used in this very low temperature range, the tolerance should be calculated using the tolerance specifications for the ±75 mV range and the thermocouple characteristic.

[2] Measuring error in % and temperature coefficient specifications made for the measurement ranges ±75 mV, 600 Ω, 5000 Ω.

[3] Technical data of the internal cold junction are specified in the following section.

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

It is strongly recommended to check the total power consumption of all modules in a system structure with CPU and in all HPCD3.C100 expansions to ensure that the maximum allowable power consumption is not exceeded.

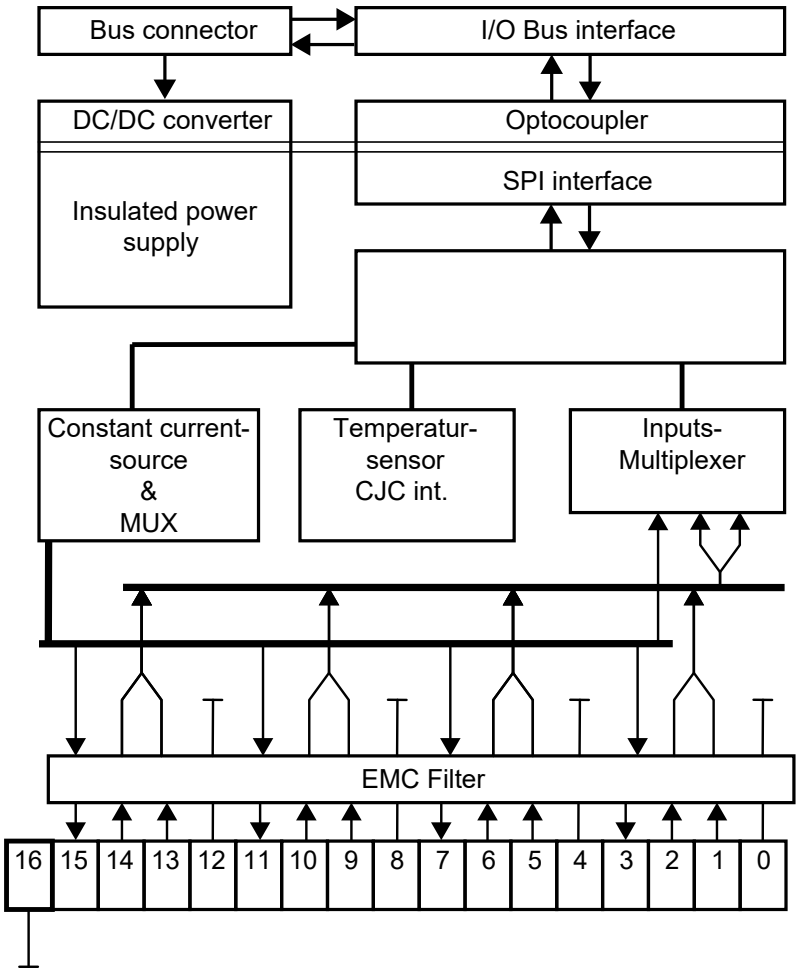
The module racks like CPU and expansion housin provide the following internal power

Module rack	+5 V	V +
HPCD3.M6893	600 mA	100 mA
HPCD3.C200	1000 mA	100 mA

When using expansion units, it is recommended to place the PCD3.W745 modules in the base unit (CPU). This prevents undesirable effects such as a possible voltage drop across the connection cable from the expansion unit to the base unit.

This module includes components that are sensitive to electrostatic discharges.

Block diagram



Module configuration

Sensor types / input ranges

The module has four input channels, which are individually configurable:

Thermocouples (TC)

Type J / K according to IEC584

Resistive Temperature detectors (RTD)

Pt100 / Pt 1000 according to IEC751
Ni100 / Ni1000 according to DIN 43760

Sensor types / input ranges

All specifications at 25 °C ambient temperature, unless otherwise noted.

	Sensortyp	Range	Output value	Units
TC	Typ K (NiCr-Ni)	−270 … +1372 °C −454 … +2501 °F +3 … +1645 K	−2700 … +13720 −4540 … +25010 +30 … +16450	1/10 °C 1/10 °F 1/10 K
	Typ J (Fe-CuNi)	−210 … +1200 °C −346 … +2192 °F +63 … +1473 K	−2100 … +12000 −3460 … +21920 +630 … +14730	
RTD	Pt100	−200 … +850 °C −328 … +1562 °F +73 … +1123 K	−2000 … +8500 −3280 … +15620 +730 … +11230	1/10 °C 1/10 °F 1/10 K
	Pt1000	−200 … +850 °C −328 … +1562 °F +73 … +1123 K	−2000 … +8500 −3280 … +15620 +730 … +11230	
	Ni100	−60 … +250 °C −76 … +482 °F +213 … +523 K	−600 … +2500 −760 … +4820 +2130 … +5230	
	Ni1000	−60 … +250 °C −76 … +482 °F +213 … +523 K	−600 … +2500 −760 … +4820 +2130 … +5230	
mV	±75 mV	−75 … +75 mV	−30000 … +30000	2.5 µV*
Ohm	600 Ω	0 … 600 Ω	0 … 60000	10 mΩ
	5000 Ω	0 … 5000 Ω	0 … 50000	100 mΩ

* mV-range: Output value • 2,5 = voltage in µV

Measurement unit

The measurement unit for temperature sensors can be configured per module:

°C Temperature output in 1/10 °C
°F Temperature output in 1/10 °F
K Temperature output in 1/10 K

For voltage and Ohm input ranges, this configuration takes no effect.

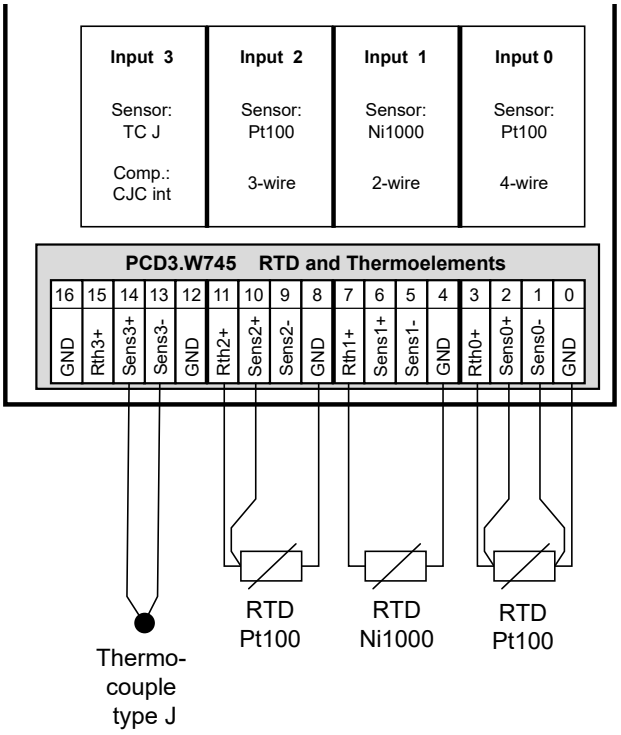
Connection & compensation techniques

	Connection & compensation technique
RTD Ohm	2 – Wire connection
	3 – Wire connection
	4 – Wire connection
TC	Internal reference junction (CJC int.)
	External reference junction (CJC ext.)**
mV	Voltage measurement using sense inputs

** In this operating mode, input 0 is used to measure the temperature of the external reference junction

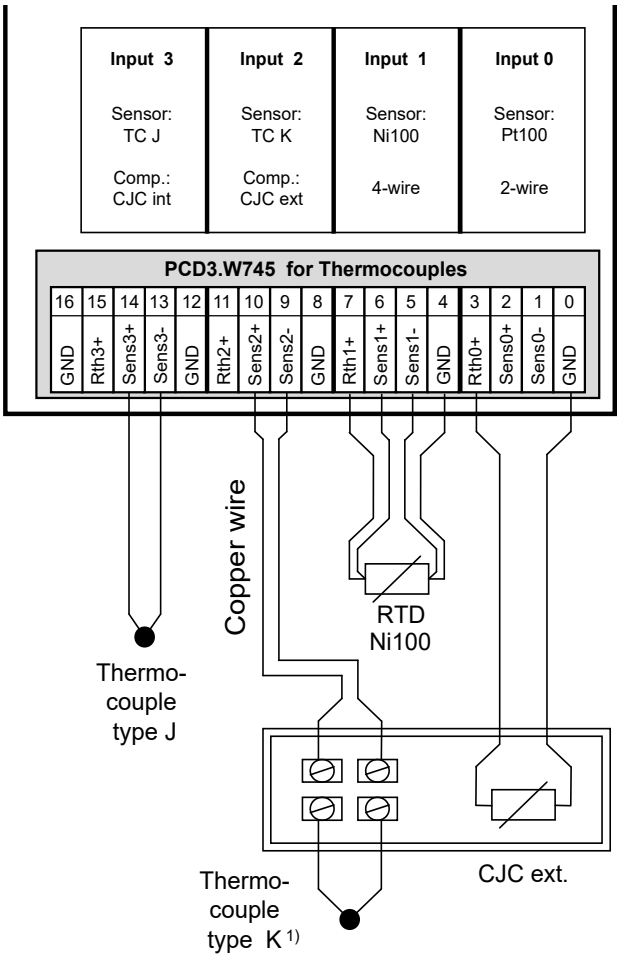
Configuration and connection examples

General example for RTD and thermocouple connection



Designation	Description
RthX+	Constant current output for RTD measurement
SensX+	Positive line of the differential voltage input (Sense +)
SensX−	Negative line of the differential voltage input (Sense –)
GND	Sensor ground, galvanic separated from CPU ground

Use of an external isothermal block (CJCext)



1) Input 2: Thermocouple type K combined with external cold junction CJC ext. (RTD Pt 100, 2 - wire) at input 0 for cold junction compensation.

PCD3.W745

Ordering information

Type	Short description	Description	Weight
PCD3.W745	Temperature measurement module, 4 inputs	Universal temperature measurement module for up to 4 measuring inputs, resolution 16 bits, TC Type J & K and 4 wires Pt/Ni 100/1000 (with soldered I/O spring terminal block)	100 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 0used 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

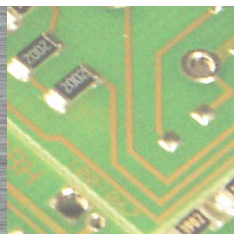
Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-97
Rev.1.1
August 2020

ControlEdge PCD - HPCD3.M6893

IEC Controller
Cyber Secure, IEC 61131-3

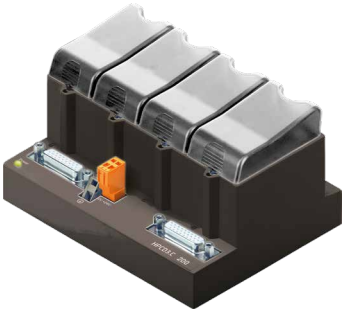


General

HPCD3.M6893

The powerfull HPCD3.M6893 is a cyber secure PLC and programmable in accordance with IEC 61131-3.
The high-level language for structured text (ST) according to IEC 61131-3, has a strong syntax and supports object-oriented methods. The most recent cyber security level (ANSI ISA 62443 – SL3/SL4) enables the use in mission critical and IoT / Cloud applications. This modular PLC provides integrated USB, Ethernet, RS-485 and is compatible to the modular and robust I/O System from the HPS PCD3 family.

Features



HPCD3.C200

Maximum peripheral connections

- Ethernet and USB-port onboard
- One serial interface RS-485 onboard
- One serial interface RS-485 pluggable on Slot A
- Up to 1023 central inputs/outputs with expansion module holder HPCD3.Cx00 (up to 64 modules with max. 16 contact points each). The first module holder must always be a HPCD3.C200
- Additional remote inputs/outputs via Modbus IP with HPCD3 controller and I/O modules

HPCD3 I/O modules in cassette form

More than 40 I/O modules available with different functionalities, see order details

- Status of digital signals indicated via LEDs
- Configurable process image via System Configuration software

HPCD3.C100

Efficient programming tools

Learn more at www.honeywellprocess.com

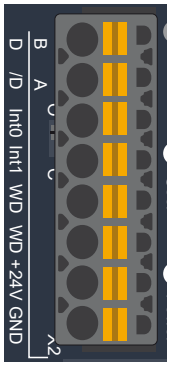
- IEC programming software ControlEdge PCD Builder from HPS with integrated System- and Account Management Configuration and comprehensive application components make programming convenient and efficient
- A coordinating combination of operating system and programming tool achieves maximum speed, reliability and functionality

General technical data / Operating conditions

Power supply	
Supply voltage (according EN/IEC 61 131-2)	24 VDC –20 / +25%, incl. 5% ripples
Current / Power consumption (Without the burden of the I/Os)	typ. 175 mA / 4.2 W, max. 500 mA / 18 W
Load-carrying ability 5 V / 24 V internal	max. 600 mA / 100 mA
Short voltage interruption (according EN/IEC 61 131-2)	≤ 10 ms with interval ≥ 1 s
Electrical data	
2 Interrupt inputs	24 VDC up to 100 Hz
Watchdog relay closing contact	48 VAC or VDC [1], 1 A
Real-time clock (RTC)	Yes
Supercap to support the real-time clock	10 days
Environmental influences	
Storage temperature (according EN/IEC 61 131-2)	–25…+70 °C
Ambient temperature operating (according EN/IEC 61 131-2)	0…+55 °C [2] or 0…+40 °C (depending on mounting situation)
Relative air humidity (according EN/IEC 61 131-2)	10…95 % r.h., non condensing
Mechanical data	
Type of mounting	Top-hat rail according to DIN EN 60 715 TH35 (formerly DIN EN 50 022) (1 × 35 mm)
Protection level	IP 20
Flame resistance	UL 94 V0
Vibration (according EN/IEC 61 131-2)	3.5 mm / 1.0 g sinusoidally
Shock (according EN/IEC 61 131-2)	15 g / 11 ms sinus half wave

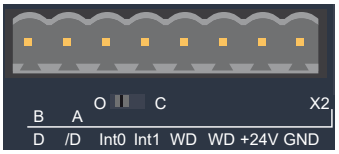
1) mount a free-wheeling diode over the load when switching DC tension

2) when assembling on vertical surface, all other mounting methods 0…40 °C



Pin	Signal	Explanation
1	D	Port #2 RS-485 up to 115.2 kbit/s usable as free user interface
2	/D	
3	Int0	2 interrupt inputs 24 VDC or 1 rapid counter 24 VDC
4	Int1	
5	WD	Watchdog
6	WD	
7	+24V	Voltage supply
8	GND	

RS-485 terminator switch for Port #2

Switch	Switch position	Designation	Explanation
	left	o	without termination resistors
	right	c	with termination resistors

Communication interfaces

Interface	Marking	Port #	Desciption
Ethernet 1	**Eth 1**		Single Port, 10/100 MBit/s
Ethernet 2	**Eth 2.1** **Eth 2.2**		Two ports switched 10/100 MBit/s
USB Device	**USB**		One port with Remote NDIS driver, a virtual IP port for Programming, Commissioning, Service and Web access
USB Host	**Port 3**	**3**	One port for External Hardware Key/Dongle for software licensing
RS-485	**X2** **D + /D**	**2**	One port, not isolated for general purpose, up to 115.2 kbit/s, on board bus termination switch
Slot A	**Slot A** **X0**	**1**	One socket for PCD7.F110S or PCD7.F150S communication interface modules
Micro SD	**micro SD**		One Slot for optional Micro SD card PCD7.R-MSD1024 *
CAN	**X1** **CAN**		One port, galvanic isolated, hardware prepared for CAN 20a and 20b, up to 1 MBit/s, on board bus termination switch (120 Ω)

* The optional file system is requered for application programs handling user defined data

Connections X0 and X1

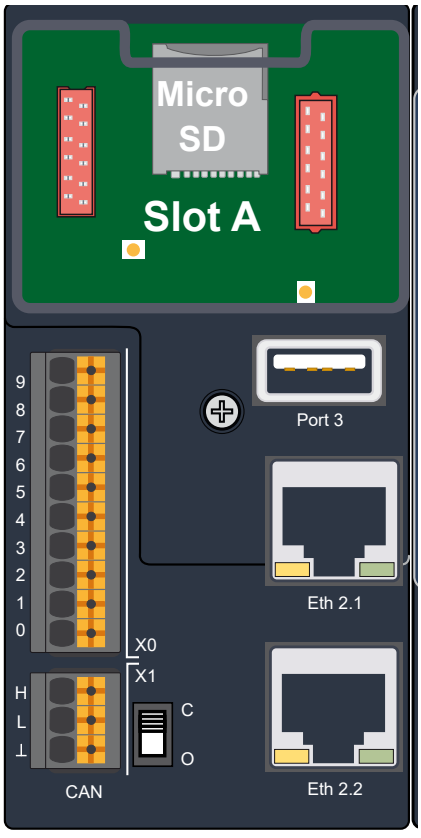
X0 – Communication interfaces: position Slot A

Pin	PCD7.F110S	PCD7.F150S
	RS-485	RS-485*
0	PGND	PGND
1	Rx-Rx	Rx-Rx
2	/Rx-/Tx	/Rx-/Tx
3		
4		
5	PGND	PGND
6		
7		
8		SGND
9		

* galvanic isolation

X1 – CAN bus terminal

Pin	Signal
H	CAN_H
L	CAN_L
⊥	CAN_GND



Protocol overview

Protocol	Interfaces	Application note
Engineering tool	Ethernet 1, 2, USB Device	Programming tool communication encrypted. Defaults: Port 11740 USB via RNDIS Driver, see factory set up
Modbus	Ethernet 1, 2	Modbus TCP Server and Client configurable via software Configurator. A maximum of 32 slaves can be attached to a master.
Profinet	Ethernet 1, 2	Station configurable via Software Configurator. Minimum Communication Cycle time 2 ms
OPC-UA	Ethernet 1, 2	Address space configurable according PLC-Open for IEC 61131-3 controllers. Encryption and Authentication configurable, default enabled
User defined	All	User defined protocols can be implemented via the application program based on system low level drivers like SysCom, …
CAN	CAN	Hardware prepared for CAN 20a, 20b. CAN raw, J1939 and CAN open. Not supported by standard product, available on demand.

Application notes

PLC program

- Program size: 10 MBytes
- Program Memory: 50 MBytes
- Program Memory, persistent none volatile: 128 KBytes

PCD3 I/O Process Image

I/O update via process image within one program,

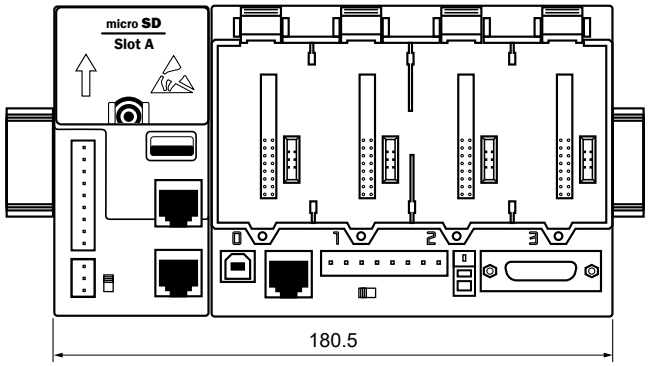
- Bus cycle task configurable, min. 2 ms
- Digital Inputs / Outputs: Update cycle 2 ms
- Analogue Input / Outputs: Update cycle per module (8 channels), multiple analogue module in parallel 50…100 ms

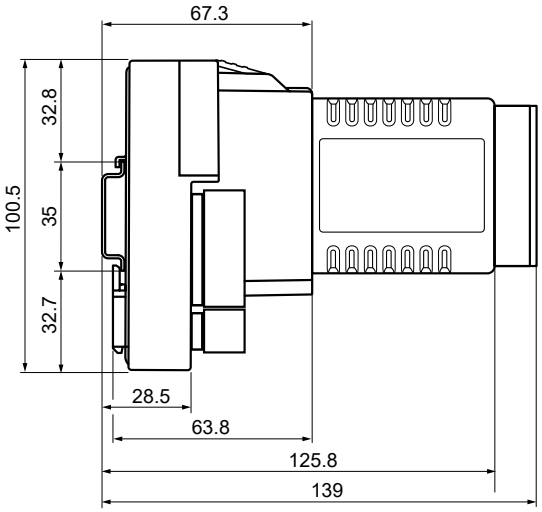
Factory set up

- USB Device RNDIS driver enabled, Firewall open for engineering tool IP address 169.254.1.1, Subnet 255.254.0.0
- Ethernet 1 Disabled
- Ethernet 2 Disabled
- Serial Com Port 2 Disabled
  Serial Com. Port on slot A Disabled

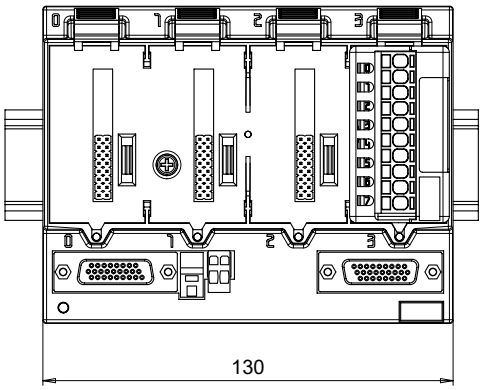
Dimension Drawing

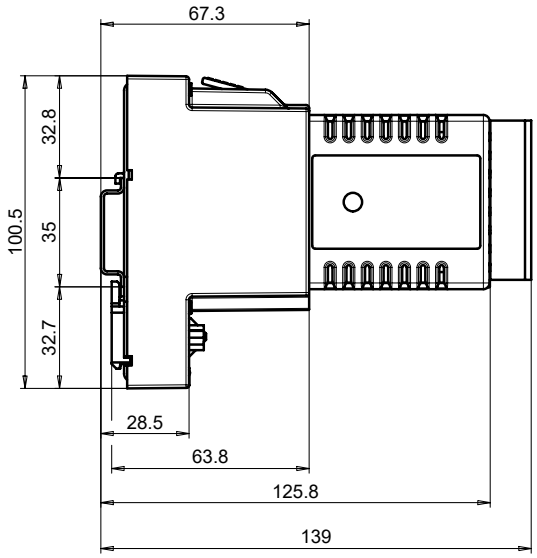
HPCD3.M6893



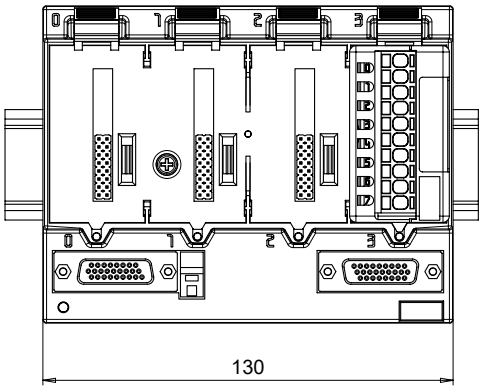


HPCD3.C200





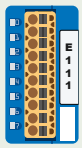
HPCD3.C100



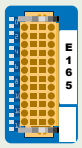
Dimensions like HPCD3.C200
(see drawing above)

Connecting plugs/terminals

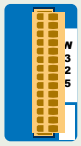
Type A
10-pin
2.5 mm²



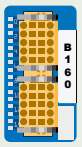
Type C
24-pin
1.0 mm²



Type E
14-pin
1.5 mm²



Type K
10-pin
1.0 mm²



▲ Spare terminals, ribbon connectors with system cables and separate terminals are ordered as accessories.

Compatibility note

Minimum required firmware package for all I/O modules: 3.0.0

Digital input modules

Type	Number of inputs	Input		Electrical isolation	Internal current draw		I/O connector type [3]
		voltage	delay		5 V-Bus [1]	V-Bus [2]	
PCD3.E110 PCD3.E111	8 8	15…30 VDC 15…30 VDC	8 ms 0.2 ms	---	24 mA 24 mA	---	A A
PCD3.E165 PCD3.E166	16 16	15…30 VDC 15…30 VDC	8 ms 0.2 ms	---	10 mA 10 mA	---	C C
PCD3.E500	6	80…250 VAC *	20 ms	●	1 mA	---	A
PCD3.E610 PCD3.E613	8 8	15…30 VDC 30…60 VDC	10 ms 9 ms	● ●	24 mA 24 mA	---	A A

* These ratings are not UL-listed

Digital output modules

Type	Number of outputs	Output switching capacity		Electrical isolation	Internal current draw		I/O connector type [3]
		DC	AC		5 V-Bus [1]	V-Bus [2]	
PCD3.A200 PCD3.A210	4, relay (make)* 4, relay (break)*	2 A/50 VDC** 2 A/50 VDC**	2 A/250 VAC 2 A/250 VAC	● ●	15 mA 15 mA	---	A A
PCD3.A220	6, relay (make)	2 A/50 VDC**	2 A/250 VAC	●	20 mA	---	A
PCD3.A251	8, relay (6 changeover + 2 make)	2 A/50 VDC***	2 A/48 VAC	●	25 mA	---	C
PCD3.A300	6, transistor	2 A/10…32 VDC	---	---	20 mA	---	A
PCD3.A400	8, transistor	0.5 A/5…32 VDC	---	---	25 mA	---	A
PCD3.A410	8, transistor	0.5 A/5…32 VDC	---	●	24 mA	---	A
PCD3.A465	16, transistor	0.5 A/10…32 VDC	---	---	10 mA	---	C

* With contact protection
** For UL61010 compliant operation the following switching capacity applies: 2 A/35 VDC
*** For UL61010 compliant operation the following switching capacity applies: 2 A/30 VDC

Analogue input modules

Type	Number of channels	Signal ranges/description	Resolution	Electrical isolation	Internal current draw		I/O connector type [3]
					5 V-Bus [1]	+ V-Bus [2]	
PCD3.W200	8 In	0…+10 V	10 Bit	---	8 mA	5 mA	A
PCD3.W210	8 In	0…20 mA [4]	10 Bit	---	8 mA	5 mA	A
PCD3.W220	8 In	Pt1000: –50 °C…400 °C Ni1000: –50 °C…+200 °C	10 Bit	---	8 mA	16 mA	A
PCD3.W300	8 In	0…+10 V	12 Bit	---	8 mA	5 mA	A
PCD3.W310	8 In	0…20 mA [4]	12 Bit	---	8 mA	5 mA	A
PCD3.W340	8 In	0…+10 V/0…20 mA [4] Pt1000: –50 °C…400 °C Ni1000: –50 °C…+200 °C	12 Bit	---	8 mA	20 mA	A
PCD3.W350	8 In	Pt100: –50 °C…+600 °C Ni100: –50 °C…+250 °C	12 Bit	---	8 mA	30 mA	A
PCD3.W360	8 In	Pt1000: –50 °C…+150 °C	12 Bit	---	8 mA	20 mA	A
PCD3.W380	8 In	–10 V…+10 V, –20 mA…+20 mA, Pt/Ni1000, Ni1000 L&S, NTC10k/NTC20k (configuration using software)	13 Bit	---	25 mA	25 mA	2× K
PCD3.W305	7 In	0…+10 V	12 Bit	●	60 mA	0 mA	I
PCD3.W315	7 In	0…20 mA [4]	12 Bit	●	60 mA	0 mA	I
PCD3.W325	7 In	–10 V…+10 V	12 Bit	●	60 mA	0 mA	I
PCD3.W745	4 In	Temperature module for TC type J, K and 4-wire Pt/Ni 100/1000	16 Bit	●	200 mA	0 mA	[5]

Analogue output modules

Type	Number of channels	Signal ranges/description	Resolution	Electrical isolation	Internal current draw		I/O connector type [3]
					5 V-Bus [1]	+ V-Bus [2]	
PCD3.W400 PCD3.W410	4 Out 4 Out	0…+10 V 0…+10 V/0…20 mA/4…20 mA jumper-selectable	8 Bit 8 Bit	---	1 mA 1 mA	30 mA 30 mA	A A
PCD3.W600 PCD3.W610	4 Out 4 Out	0…+10 V 0…+10 V/–10 V…+10 V/ 0…20 mA/4…20 mA jumper-selectable	12 Bit 12 Bit	---	4 mA 110 mA	20 mA 0 mA	A A
PCD3.W605 PCD3.W615 PCD3.W625	6 Out 4 Out 6 Out	0…+10 V 0…20 mA/4…20 mA parameters can be set –10 V…+10 V	10 Bit 10 Bit 10 Bit	● ● ●	110 mA 55 mA 110 mA	0 mA 0 mA 0 mA	I I I

Overview of the internal bus capacity of the module holders

	HPCD3.M6893	HPCD3.C200
1) Internal 5V	600 mA	1500 mA
2) Internal +V (24 V)	100 mA	200 mA

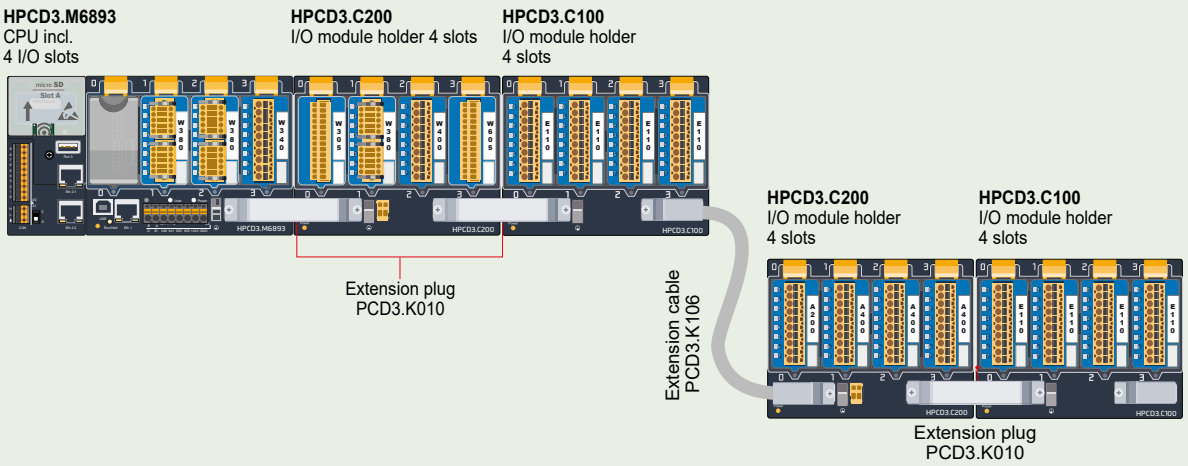
The electrical requirement of the internal +5V and +V bus for the I/O modules can be calculated in the Control Edge PCD IO-Calculator (Excel sheet)

3) Plug-in I/O terminal blocks are included with I/O modules.
Spare terminals, ribbon connectors with system cables and separate terminals have to be ordered as accessories.
4) 4 … 20 mA via user program
5) With soldered spring terminal block

Information for project planning with HPCD3 module holders

The internal load current taken by the I/O modules from the +5V and +V (24V) supply must not exceed the maximum supply current specified for the CPUs, RIOs or HPCD3.C200 module holders.

Example calculation for the current consumption of the internal +5V and +V (24V) bus of the I/O modules



Consumption M6893 + C200 + C100

Module	Internal 5V	Internal +V (24V)
Not used		
W380	25 mA	25 mA
W380	25 mA	25 mA
W340	8 mA	20 mA
Total M6893	**58 mA**	**70 mA**
W340	8 mA	20 mA
W340	8 mA	20 mA
W610	110 mA	0 mA
E160	10 mA	
Total C200	**136 mA**	**40 mA**
E160	10 mA	
E160	10 mA	
E160	10 mA	
E160	10 mA	
Total C100	**40 mA**	**0**
Total C200	**176 mA**	**40 mA**

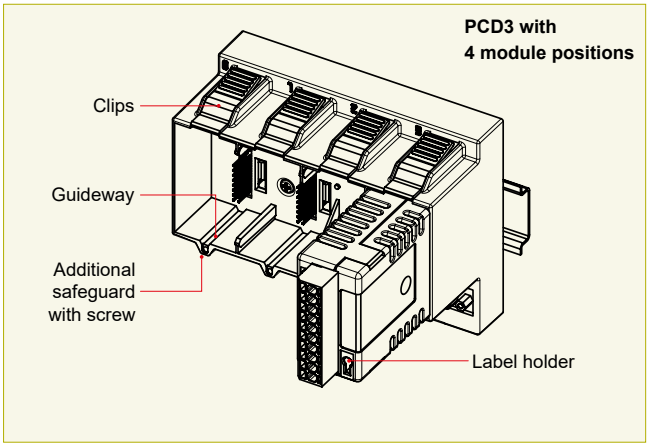
Consumption C200 + C100

Module	Internal 5V	Internal +V (24V)
A200	15 mA	
A810	40 mA	
A810	40 mA	
A860	18 mA	
Total C200	**113 mA**	
A460	10 mA	
A460	10 mA	
A460	10 mA	
W380	25 mA	25 mA
Total C100	**55 mA**	**25 mA**
Total C200	**168 mA**	**25 mA**

Capacity	HPCD3.M6893	HPCD3.C200
Internal 5V	600 mA	1500 mA
Internal +V (24V)	100 mA	200 mA

The calculation example shows that internal capacity is maintained in the CPU basic module HPCD3.M6895 and the holder module HPCD3.C200. The CPU basic module has a sufficient reserve to receive an additional communication module in the empty slot 0. The holder module HPCD3.C200 also has sufficient reserves to connect an additional HPCD3.C100 holder module. The power consumption of the internal +5V and +V (24 V) bus for the I/O modules can be calculated in the Control Edge PCD IO-Calculator Excel sheet.

Insertion of I/O modules



▲ **Simple exchange of I/O modules**

Over 40 modules available with different functionalities

Types

- ▶ **PCD3.Axxx** Digital output modules
- ▶ **PCD3.Exxx** Digital input modules
- ▶ **PCD3.Wxxx** Analogue input/output modules

The HPCD3.C200 is used to extend the I/O bus or for the internal power supply +5V and +V (24V) to a module segment. Please note the following rules:

- **Mandatory:** Insert a HPCD3.C200 after the HPCD3.M6893 and after each cable (at the start of a row).
- Do not use more than six HPCD3.C200 in a single configuration, or the time delay will exceed the I/O access time.
  Use a maximum of five PCD3.K106/K116 cables.
- If an application is mounted in a single row (max. 15 module holders), then after five HPCD3.C100 a HPCD3.C200 must be used to amplify the bus signal (unless the configuration ends with the fifth HPCD3.C100).
- If the application is mounted in multiple rows, the restricted length of cable means that only three module holders (1× HPCD3.C200 and 2× HPCD3.C100) may be mounted in one row.

The following aspects should be considered when planning HPCD3 applications:

- In keeping with lean automation, it is recommended to leave the first slot in the CPU basic module free for any subsequent expansions. This slot can accommodate simple I/O modules but also communication modules.
- The total length of the I/O bus is limited by technical factors; the shorter, the better.

The following aspects should be considered for UL conform applications:

- The HPCD3.M6893 base module may only be used with I/O modules listed in UL61010.
- The HPCD3.M6893 base module is to be powered by an UL Class 2 certified power supply.
- Use only 60°/75° copper conductors.
- This device shall be installed in an industrial control panel or other suitable rated enclosure.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

HPCD3 I/O modules are not hot-plug capable:

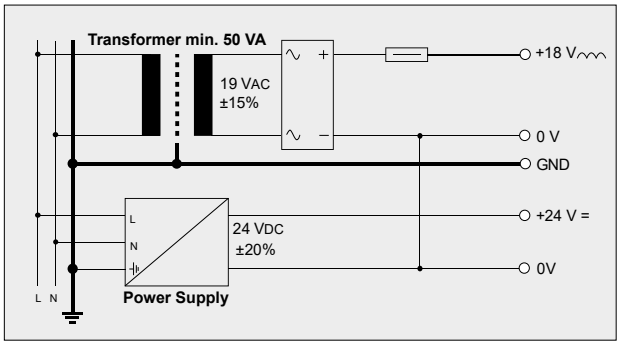
- Carefully insert and remove the I/O modules after switching off the power supply (24V).

Power supply and connection concept

External power supply

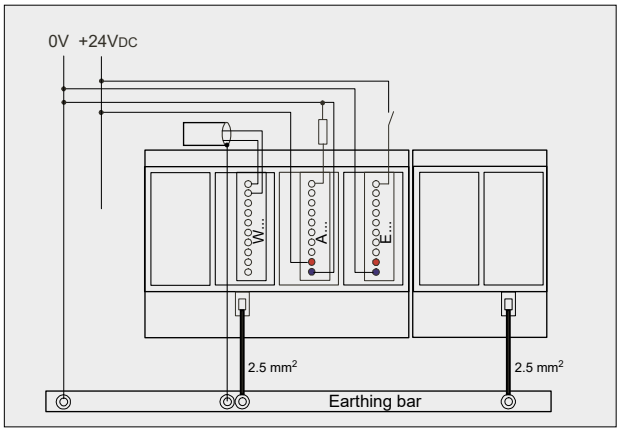
A two-way rectified supply can be used for most modules.

It is generally recommended to use robust and interference-resistant power supply units with 24 VDC output.



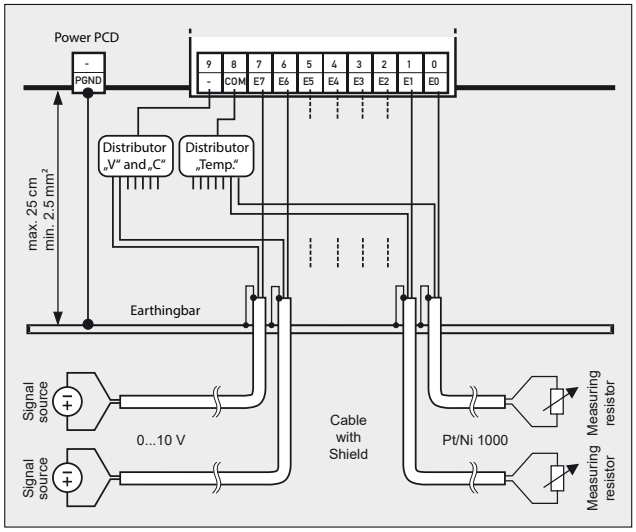
Grounding and connection plan

- The zero potential (GND) of the 24 V supply is connected to the GND and the controller's grounding terminal. If possible, this should be connected to the ground bar with a short wire (<25 cm) with a cross section of 1.5 mm^2. The same applies to the negative connection to the PCD3.F1xx or the interrupt terminal.
- Any shielding of analogue signals or communication cables should also be brought to the same grounding potential, either via a negative terminal or via the ground bar.
- All negative connections are linked internally.
  For flawless operation, these connections should be reinforced externally by short wires with a cross section of 1.5 mm^2.



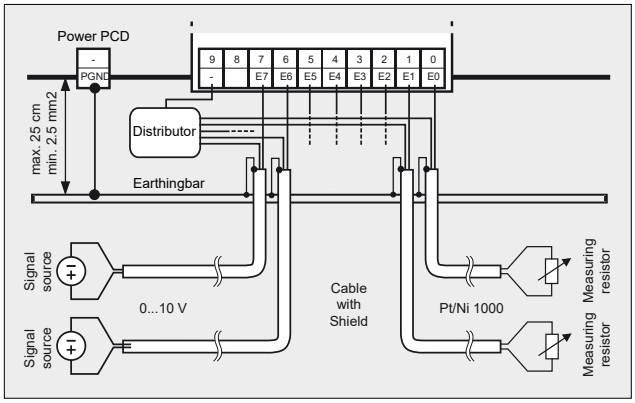
Grounding and connection concept analogue inputs that are not electrically isolated (PCD3.W2x0, PCD3.W3x0)

Signal sources (such as temperature sensors) should be connected direct to the input module wherever possible.
To obtain optimum measurement results, avoid connection to a ground bar. Additional external GND connections to the sensor signals may result in equalising currents which distort the measurement.
If shielded cables are used, the shielding should be continued to a ground bar.



Connection concept for PCD3.W3x0

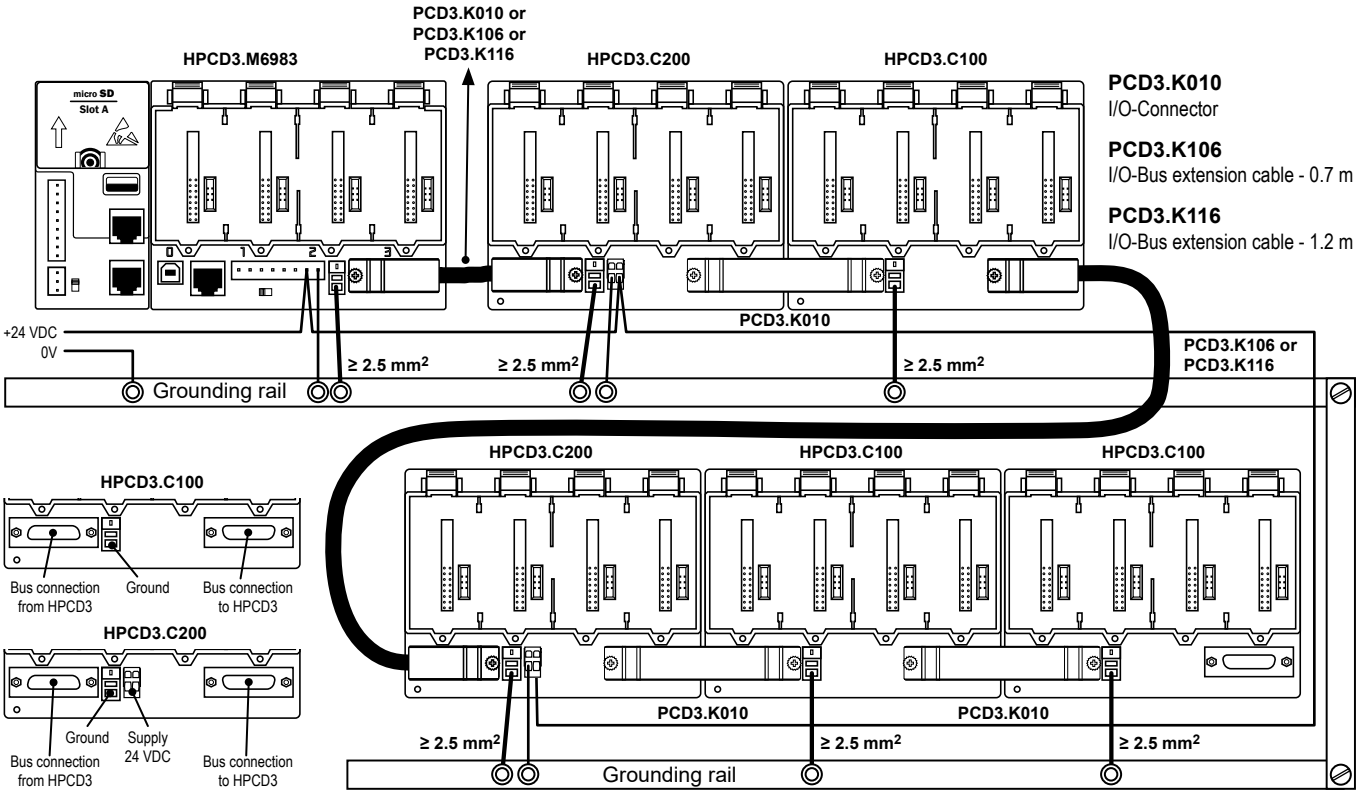
The reference potential of voltage and current inputs must be wired to a common GND distributor at the "–" terminal. Temperature sensors must be wired to a common GND distributor at the "COM" terminal. The module PCD3.W380 has a 2-wire connection for the inputs and requires no external GND distributor.



Connection concept for PCD3.W2x0

The reference potential of signal sources must be wired to a common GND distributor at the "–" terminal

Extension module holders HPCD3.C200 and HPCD3.C100



The HPCD3.C200 module holders provide the following internal supply currents to the modules plugged in or connected to them:

	HPCD3.C200
5V Bus	1500 [mA]
+V Bus	630 [mA]

Any shielding of analog signals or communication cables should also be brought to the same grounding potential, either via a negative terminal or via the ground bar.

All negative connections are linked internally. For flawless operation, these connections should be reinforced externally by short wires with a cross section of 1.5 mm^2.

It is recommended to wire the I/O modules from a cable duct.

The following aspects should be considered when planning HPCD3 applications:

- Insert a HPCD3.C200 after each cable (at the start of a row)
- The total length of the I/O bus is limited by technical factors; the shorter, the better.
- Do not use more than six HPCD3.C200s in a single configuration,
  or the time delay will exceed the I/O access time.

Conformity to CE directive	
This system is developed according to the international standard EN/IEC61131-2:2007 and so complies with European directives concerning EMC Directive 2014/30/EU, Low voltage Directive 2014/35/EU and Restricted of Hazardous substances (ROHS) 2011/65/EU.	CE

Certificates	
EAC	EAC Mark of Conformity for Machinery Exports to Russia, Kazakhstan or Belarus

UL Compliance, according to the following conditions	
This device is suitable for use in a 55 °C maximum ambient!	c UL us 2D85 LISTED IND.CONT.EQ.
Use of 60/75 °C copper (CU) wire only.	
If use of Screw Terminal Maximum tightening torque 0.5 Nm.	

WEEE Directive 2012/19/ EC Waste Electrical and Electronic Equipment directive

WEEE Directive:

At the end of their useful life the packaging and product should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.
Do not burn.

This symbol on our product shows a crossed-out “wheelie-bin” as required by law regarding the Waste of Electrical and Electronic Equipment (WEEE) disposal. This indicates your responsibility to contribute in protecting the environment by proper disposal of this waste, i.e., not disposing of this product with your other wastes. To know the right disposal mechanism, please check the applicable law.

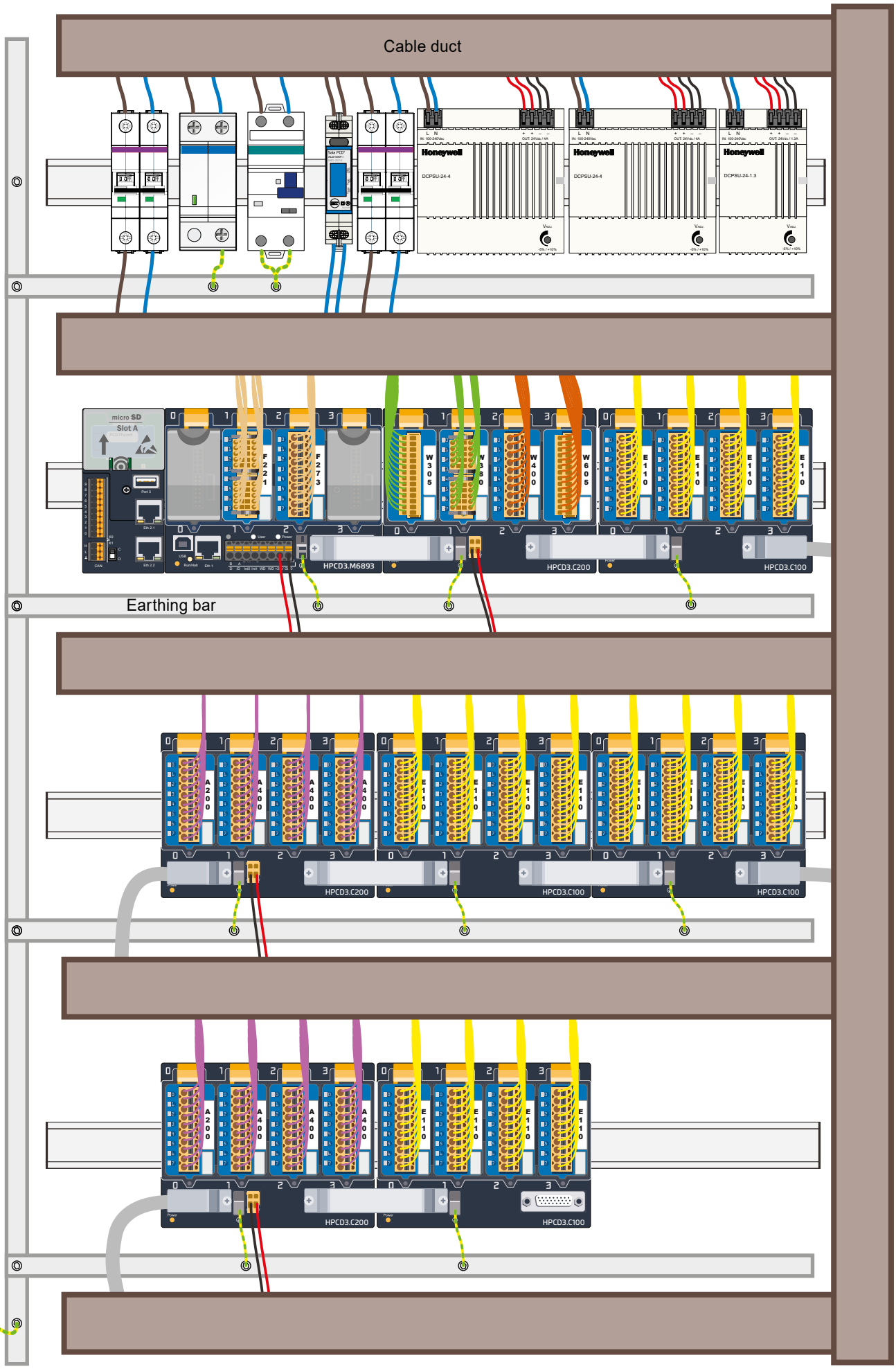
Further information and support

Further information and ControlEdge PCD Builder are available on www.honeywellprocess.com.

Disclaimer

The plant engineer contributes his share to the reliable operation of an installation. He is responsible for ensuring that controller use conforms to the technical data and that no excessive stresses are placed on it, e.g. with regard to temperature ranges, over voltages and noise fields or mechanical stresses. In addition, the plant engineer is also responsible for ensuring that a faulty product in no case leads to personal injury or even death, nor to the damage or destruction of property. The relevant safety regulations must always be observed. Dangerous faults must be recognized by additional measures and any consequences prevented. Consistent use of the diagnostic elements of the HPCD, such as the watchdog, exception organization blocks (XOB) and test or diagnostic instructions shall be made.

An example of power supply and connection concept



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.

GUARANTEE

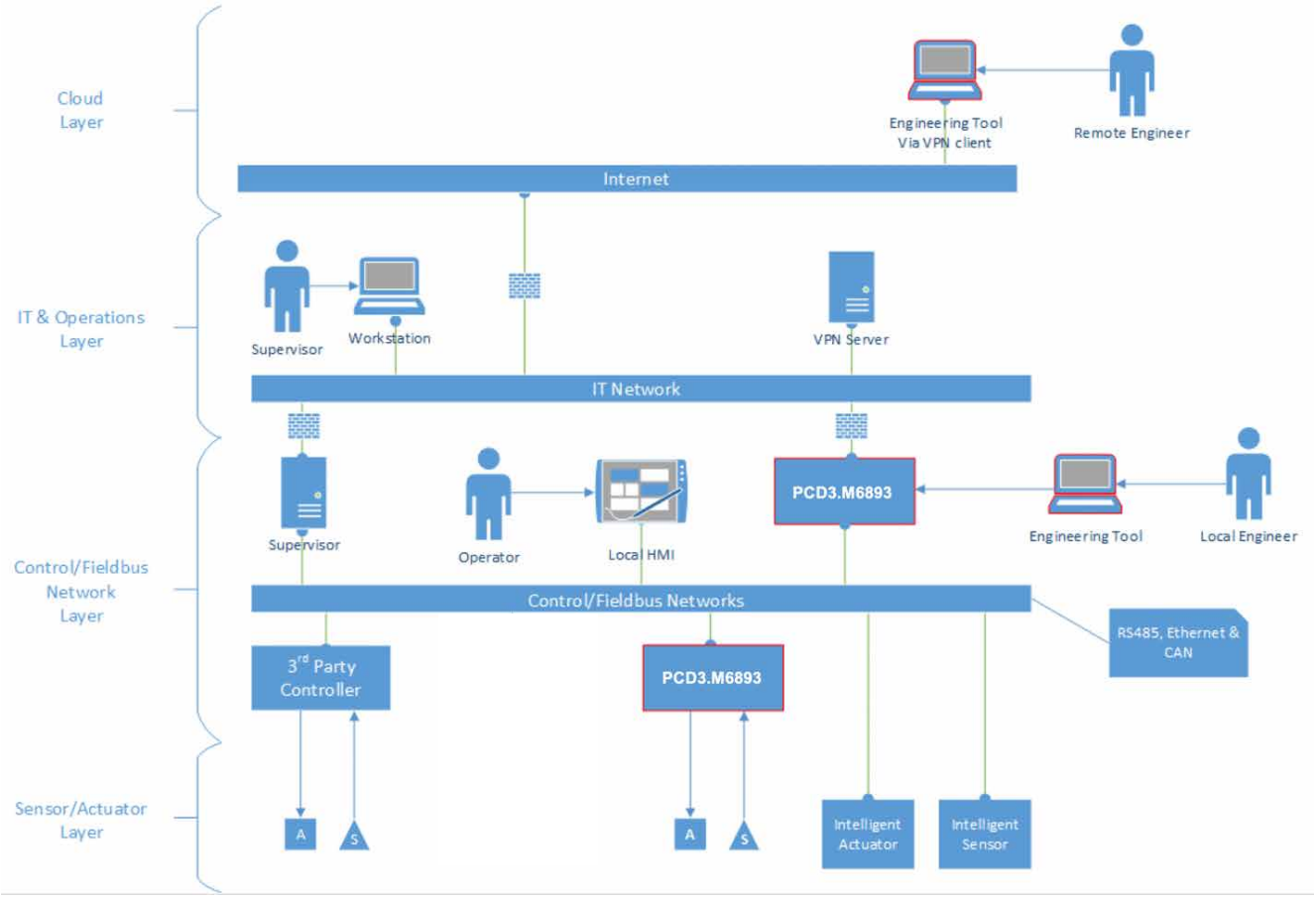
Opening the module invalidates the guarantee.

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.

Safety instructions for the PLC HPCD3.M6893



The HPCD3.M6893 can be used in a highly networked environment and as such must be securely configured to reduce the risk of unauthorized access.

Internet Connection

The device must not be connected directly to the internet without having proper precaution like a firewall between the Internet and the HPCD3.M6893.

Network Segmentation

The HPCD3.M6893 is equipped with multiple network interfaces. The system traffic does not route between the interfaces. The system should be constructed as in the picture above. Having different networks for control and IT networks. Separate critical from non-critical elements by connecting them to different segments.
If networks cannot physically be separated, they at least must be firewalled off each other.

Selection of Protocols

Wherever possible select encrypted and authenticated protocols.

Firewall

While the HPCD3.M6893 is equipped with a built-in firewall it is better to used dedicated firewall between the networks.

Remote Access

In order to perform remote access to the system, a VPN must be used to tunnel network traffic securely from the remote engineering workstation into the IT network of the control infrastructure. The IT network should be configured in such a way that only the engineering tool communication protocol is allowed to pass from VPN network to the controller.

Secure Remote Update

To update the firmware of a HPCD3.M6893 controller, a VPN connection as outlined in section “Remote Access” is required. Once the VPN Server and Client are securely configured the use the firmware downloader in the engineering tool as usual to install the latest firmware for the HPCD3.M6893.

Physical Access Control

Fieldbus networks are inherently insecure, also the HPCD3.M6893 is not secured against physical modification like manipulating I/O modules and commonly used IT protocols like DHCP cannot be secured. It is therefore mandatory that the complete control infrastructure, including IT infrastructure and all equipment is physically protected against unauthorized access.

Selection of Equipment

Only use equipment develop according to secure practices.

Secure Development Practices

The HPCD3.M6893 is freely programmable via IEC applications in the programming tool. Via SysXxxx and CAA libraries it is possible to access system resources of the operating system like file systems, serial interfaces, network interfaces, etc.(see help.codeys.com) While this level of access gives nearly unlimited flexibility it also requires discipline to develop IEC application in a secure manner.
This section of the manual outlines secure development practices that must be followed in order to have to keep the system secure. The secure practices outlined here are not comprehensive, be sure to consult specialized documentation like the OWASP (https://www.owasp.org/index.php/OWASP_Secure_Coding_Practices_-_Quick_Reference_Guide).

Input Data Validation
Treat all data from external entities as untrusted. This is especially the case when receiving data from an external interface like a serial line or a network interface. Validate all input data by type, length and use white list of acceptable values.

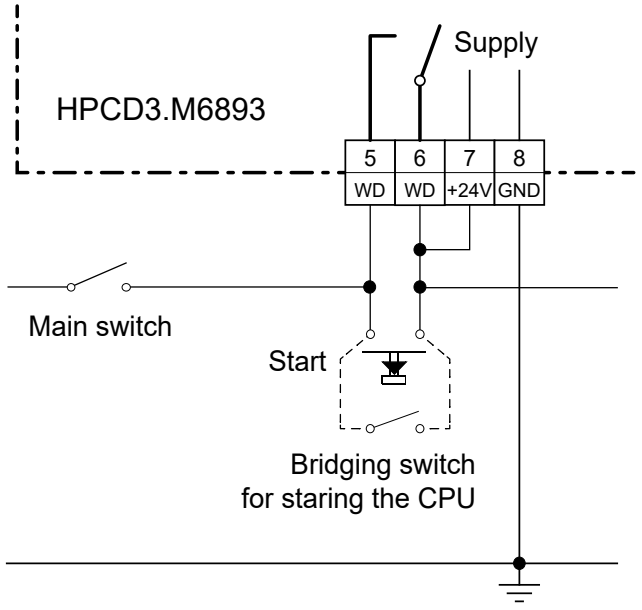
Output Encoding
When storing data to a file or transmitting it over a network ensure proper escaping related to the output format.

Communication Protocols
Implementing communication protocols requires special care. If the protocol allows use encrypted communication. If using TLS make sure you are using TLS 1.2 or higher only.
If session identifiers are used, ensure that session ids are completely random, not reused and delete after a session has been terminated.
Terminate the communication session if an invalid session id is used.

Use of Watchdog
The system is equipped with two user programmable watchdogs. Watchdogs can be used to bring a system into a defined state when a task is running out of defined bounds.

Cycle Time Watchdog
In the 'Task Configuration' of an IEC application the Cycle Time watchdog can be programmed. Use this watch to protect against programming errors in individual tasks. If a task is exceeding the maximum allowed time, it will be killed by the runtime system.

Watchdog Relay
The system is equipped with a physical relays contact. The watchdog relays can be programmed in such a way, that the contact opens if it is not triggered in a configurable interval. By having the watchdog contact in line with the power supply as outlined below, it will allow to shut down the system completely in case the watchdog is not triggered in the defined interval.



Use of Task Priority
Cyclic tasks in IEC application can be assigned to different priorities, form background task to real-time tasks. Be sure to structure the task in such a manner, that only time critical tasks are running with real-time priority. No real-time task should have long running loops or should call synchronous SysXxxx functions as this my block the whole system.

Use of IEC libraries
Only use libraries from trusted sources. Use the library manager to check that the library is correctly signed. Don't use libraries that are not signed or libraries of which the signature is invalid.

Creating and distributing Libraries
Follow the guidelines part of the CODESYS manual. Ensure that the libraries are distributed as 'compiled' library otherwise the source code of the library is accessible for everyone having access to the library. Sign the library with your X.509 certificate.

Secure Device Configuration
Follow the following guidelines to ensure a secure configuration of the HPCD3.M6893 controller

Network Ports
Disable all network ports that are not in use.

Firewall
The HPCD3.M6893 is equipped with a built in IP packet filter firewall. The firewall is by default configured so, that the programming tool on the USB service port is able to communicate with the device. All other traffic, in- our outbound is blocked by default. You must explicitly add rules to allow traffic to get in or out of the device. It is important that the firewall rules are as strict as possible. The firewall must be kept enabled, in order to add a layer of defense.

Internet Detector
This device is not designed to be directly connected to the Internet. In order to protect against accidental Internet connection or misconfiguration of the firewall, the HPCD3.M6893 is equipped with an Internet Detector service that disables the connecting port. This service is enabled by default and should be disabled if the device is located behind a properly configured firewall and Internet services must be consumed.

Account management
The unified account management on the HPCD3.M6893 provides a role-based account management that is used for all services on the device. Each service on the device allows fine grained access control for all data points and actions. Ensure that accounts are given permission on the principle of least privilege. That means, each account should only be given access to elements it really needs having access to in order that it can perform the desire operations.
If an account is only supposed to be used for a limited time period, e.g. because the account is for an employee with limited contract term, make sure that is reflected in the account.
Enable account lockout to prevent against brute force attacks.
Delete accounts that are no longer in use.
Enable min. and max. password life time to force user to periodically change their password.

Special Roles
Accounts with role 0 are Device Administrator accounts.
Such accounts have full access on the device.
Accounts with role 1 are User Administrator accounts.
Such accounts manage other accounts as long as the managed accounts have the same or less roles than the device administrator account.

Certificate Management

General

The HPCD3.M6893 is equipped with three services, CODESYS, HTTPS server and OPC UA, that uses digital encryption certificates to ensure the identity its communication party and/or to prove the device's own identity. At first startup, or factory reset, these services generate a self-signed certificate. While this helps commissioning the system it is not secure and must be changed before the system is put into operation.

Do not put the HPCD3.M6893 into operation with Self-signed certificates

The use of self-signed certificates is handy when in development, but products should not be shipped to customers with self-signed certificates. You should be either creating an initial certificate for your product or you should have a mechanism for the end customer to provision the product and allow them to assign a corporate signed certificate to the device.
You must inform you customer of the certificate management requirements of your product.

CODESYS

The HPCD3.M6893 uses a CODESYS RTS for the PLC functionality. The communication between QronoX ECS and the controller is always encrypted. The device generates an initial self-signed certificate. This certificate be exchanged by a custom certificate via the PLC shell inside of QronoX ECS. Consult the tools help for further information.

HTTPs/Web Server

The HTTPs/Web Server of HPCD3.M6893 supports custom certificates. The Web Server system configuration page in the programming tool allows installing a new certificate. The recommended way of doing so is to let the device generate a Certificate Signing Request (CSR). The CSR can be submitted to a trusted Certificate Authority (CA) which in turn issues the device certificate. This certificate can be installed via the Web Server system configuration page of the tool.
Consult the tool's help for further information.

OPC UA

The OPC UA server of HPCD3.M6893 can meet the strict security requirements of the OPC UA specification. This is only achievable if security in the system configuration is enabled and is used (the default is to have security enabled). As a product developer we strongly recommend ensuring secure channel communication is turned on in your product and the None-None-Anonymous security profile and the Accept all certificates option are only enabled if absolutely certain this is a requirement. Having security enabled and not having the None-None-Anonymous security profile as well as Accept all certificates off means all OPC UA clients connecting to your product must do so in a secure manner.
Please also check the available security profiles to ensure the type of security required matches what you are configuring for your environment.
OPC UA server certificates, issuer certificates as well as trusted client certificates is done via the Files tab in the CODESYS Devices object

Data Privacy

Stored data on the device

The HPCD3.M6893 stores the following data elements:

- Device configuration: IP address, Firewall rules, NTP configuration…
- User Management: Accounts, passwords, roles, permissions etc.
- Audit log: System log messages, all actions from all users…
- CODESYS: PLC application and CODESYS runtime system configuration.
- SD Card: Backups & user data

All data on the device is stored encrypted and is bound to the device. The only exception is backup files, which are encrypted but can be transferred to other devices and be restored there.

Stored project data

Use project encryption to store project data. To do this, use the 'Security Screen' and set the project file encryption technology to 'Encryption'. Choose between password, dongle or certificates.

Device Configuration

The device configuration can be changed with the programming tool by accounts with the appropriate access rights.

Administration of Accounts

A device or account administrator can manage accounts on the device using the Device User Management node in the programming tool. The user management can only be uploaded and downloaded as one piece.

Roles

Create roles to define permissions to the system. Available system functionalities can be enabled/disabled, or access rights can be set.

Profiles

Create profiles to set up password and account settings. Assign roles to a profile to set the profile permissions.

Accounts

Assign a profile to an account. Accounts can be locked or set to active/inactive for a certain period. A user or system has to login with a specific account to access the device.

Deleting Audit Log

Device administrator accounts can delete the complete audit log by using the programming tool audit log viewer.
Programming tool projects.

CODESYS

The PLC application can be changed and loaded with the programming tool. Only device administrators can do that.

SD Card

That data on the user file system, as well as the backup files on the SD card can be managed via the File System Explorer in the programming tool. Access to the SD card data is restricted to Device Administrator accounts.

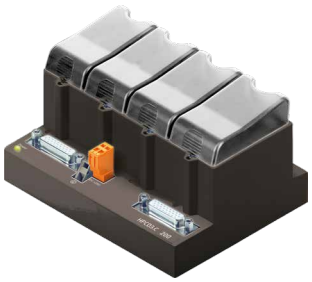
Erase All Data/Factory Reset

All data on the device can be delete by pressing the service button for 30 seconds when during system power up.

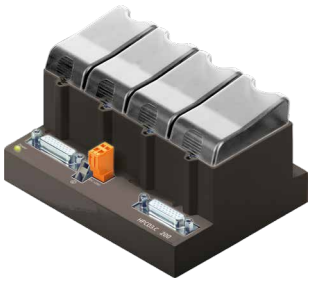
Data Privacy Statement

Honeywell's privacy statement can be found here: https://www.honeywell.com/en-us/privacy-statement.

HPCD3.M6893



HPCD3.C200



HPCD3.C100

Order details

Type	Short description	Description	Weight
HPCD3.M6893	CPU base units for 4 plug-in I/O modules	HPCD3 controller without battery with 1 GByte RAM and 2 GByte Flash for operating system and user program, 1 Socket for user data micro-SD card, max. 32 GByte, 2 Ethernet, 1 RS-485, 1 socket for communication modules, 1 USB Device port for programming and service, 1 USB host, 1 CAN port (20a and 20b on demand) 2 interrupt inputs, 1 watch dog relay, extendable up to 1023 I/O. Supported HPCD3 - I/O Modules: PCD3.Ax, PCD3.Ex, PCD3.W2x, PCD3.W3x, PCD3.W4x, PCD3.W6x, PCD3.W745, PCD3.S100	560 g
HPCD3.C200	Extension module holder	Extension module holder for 4 I/O modules with terminal connectors for external 24 VDC power supply	440 g
HPCD3.C100	Extension module holder	Extension module holder for 4 I/O modules	420 g
PCD7.R-MSD1024	Micro SD card 1024 MB	uSD Flash memory card 1024 MByte (included SD Flash adapter)	10 g

Input/Output Simulator
PCD3.S100

10-pin
Connector type “A”
4 405 4954 0

24-pin
Connector type “C”
4 405 4954 0

10-pin
Connector type “K”
4 405 5048 0

Connecting plug
PCD3.K010

Extension cable 0.7 / 1.2 m
PCD3.K106 / PCD3.K116

Accessories

Type	Short description	Description	Weight
PCD3.S100	Input/Output Simulator	Input/Output Simulator for HPCD3.M/.T/.C (for ex. for test assembly or workshop models)	180 g
4 405 4954 0	Connector type “A”	Plug-in screw terminal block, 10-pin (type A) for wires up to 2.5 mm², labelling 0…9	15 g
4 405 4956 0	Connector type “C”	Plug-in I/O spring terminal block, 2 × 12-pole up to 1.0 mm², labelled 0 to 23 for modules with 16 I/Os or relay module ..A251, connector type “C”	15 g
4 405 5048 0	Connector type “K”	Plug-in spring terminal block, 2 × 5-pole up to 1.0 mm² (orange block), labelled 0 to 9, connector type “K”	6 g
PCD3.K010	Connection plug	Connection plug HPCD3.M/T/C to HPCD3.Cx00	40 g
PCD3.K106	Extension cable 0.7 m	Extension cable for HPCD3.M/T/C to HPCD3.Cx00 (length 0.7 m)	140 g
PCD3.K116	Extension cable 1.2 m	Extension cable for HPCD3.M/T/C to HPCD3.Cx00 (length 1.2 m)	180 g

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions, (TAC)
hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or (TAC)
hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or (TAC)
hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

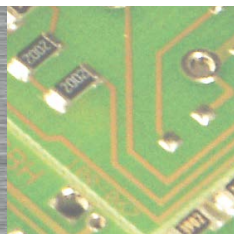
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-52
Rev.3.1
September 2020

Honeywell

PCD3.A251

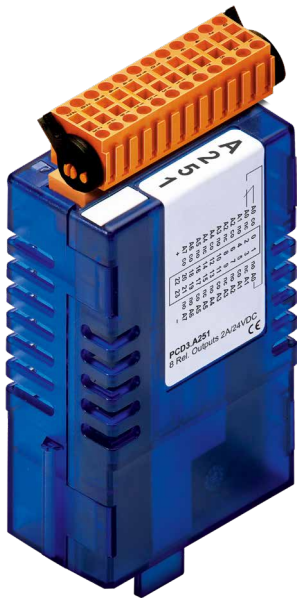
Digital output module, 8 relays, 6 with changeover contacts, 2 with make contacts



Technical data

Number of outputs	6 changeover contacts and 2 make contacts
Type of relay (typical)	RE 014024, SCHRACK
Operating mode	> 12 V, > 100 mA
Switching capacity: *) (contact lifetime)	2 A, 48 VAC AC1 0.7 × 10^6 operations 1 A, 48 VAC AC11 1.0 × 10^6 operations 2 A, 50 VDC DC1 0.3 × 10^6 operations 3) 1 A, 24 VDC DC11 0.1 × 10^6 operations 1)3)
Relay coil supply 2)	nominal 24 VDC smoothed or pulsed, 8 mA per relay coil
Voltage tolerance, dependent on ambient temperature	20 °C: 17.0 … 35 VDC 30 °C: 19.5 … 35 VDC 40 °C: 20.5 … 32 VDC 50 °C: 21.5 … 30 VDC
Output delay	typically 5 ms bei 24 VDC
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1 … 25 mA typically 15 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 64 mA
Terminals	Pluggable 24-pole spring terminal block (4 405 4956 0), for Ø up to 1 mm²

1) With external protective diode
2) With reverse voltage protection
3) These ratings are not UL-listed
*) Higher voltages are not allowed for this module because clearances between circuit paths are too small.



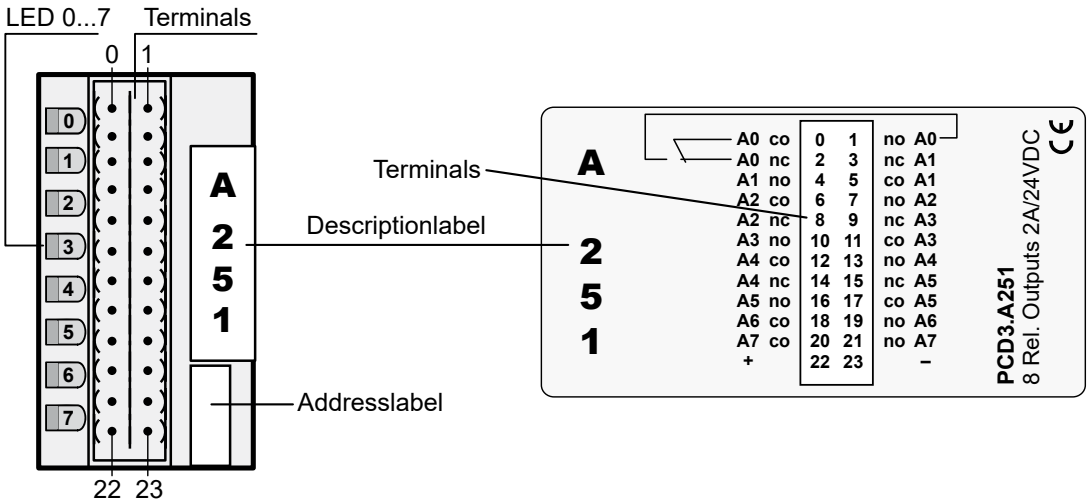
PCD3.A251

The module contains 8 relays for direct or alternating current up to 2 A, 48 VAC. 6 of them have changeover contacts and 2 of them make contacts.

The module is especially suited wherever AC switching circuits with infrequent switching have to be controlled.

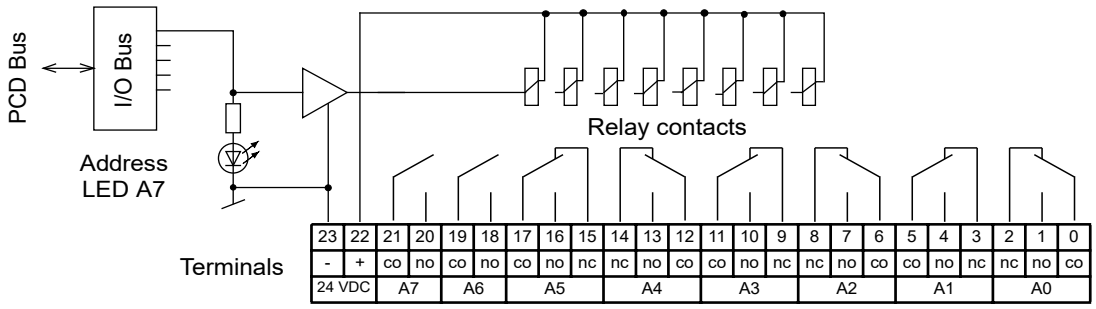
For space reasons, there is no integrated contact protection.

LEDs and connection terminals



Output circuits and terminal designation

LED	Output
0	A0
1	A1
2	A2
3	A3
4	A4
5	A5
6	A6
7	A7



Relay energized (contact closed): LED on
Relay reset (contact open): LED off
24 VDC must be connected to the +/- terminals.

Watchdog: This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.

Installation instructions:
For reasons of safety it is not permissible to connect low voltages (up to 50 V) and higher voltages (50 … 250 V) to the same module.

If a module out of the PCD3 famliy is connected to a higher voltage (50 … 250 V), approved components for this voltage must be used for all elements that are electrically connected to the system.

Using higher voltage (50 … 250 V), all connections to the relay contacts must be connected on the same circuit, i.e. in such a way that they are all protected against one AC phase by one common fuse. Each load circuit may also be protected individually.

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

PCD3.A251

4 405 4956 0

Order details

Type	Short description	Description	Weight
PCD3.A251	8 relays, 6 change-over contacts and 2 make-contacts	Digital output module, 8 relays, 48 VAC/2 A or 50 VDC/2 A	120 g

Order details accessories

Type	Short description	Description	Weight
4 405 4956 0	Connector type "C"	Plug-in I/O spring terminal block, 2 × 12-pole up to 1.0 mm², labelled 0 to 23 for modules with 16 I/Os or relay module ..A251, connector type "C"	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 during transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

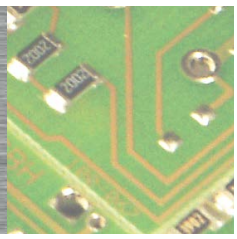
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-58
Rev.3.1
April 2020

Honeywell

PCD3.A300

6 digital outputs, 2 A for each



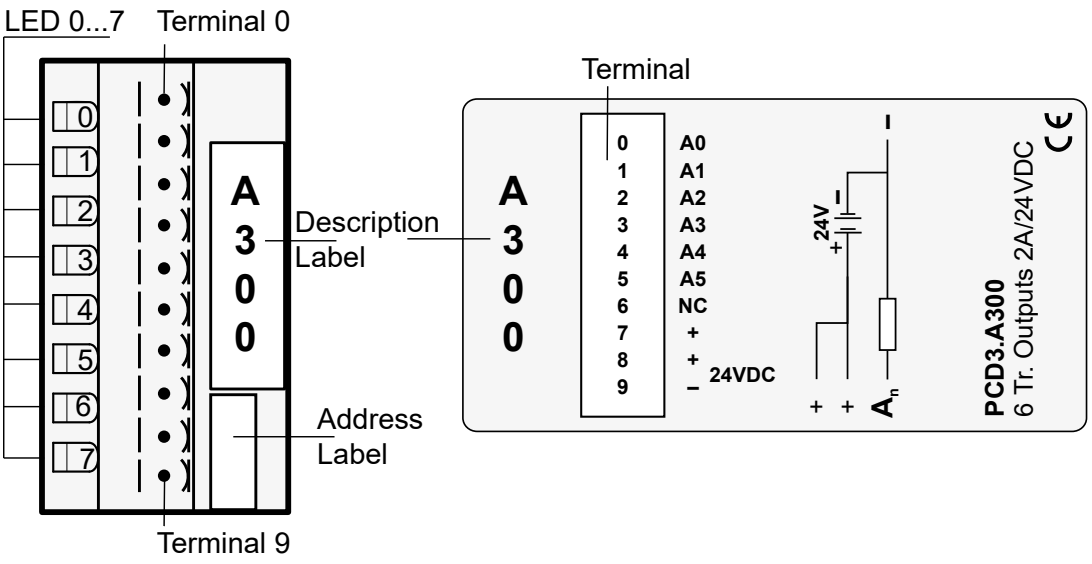
Low cost output module with 6 transistor outputs 5 mA … 2 A, without short-circuit protection.

The individual circuits are electrically connected, the voltage range is 10 … 32 VDC.

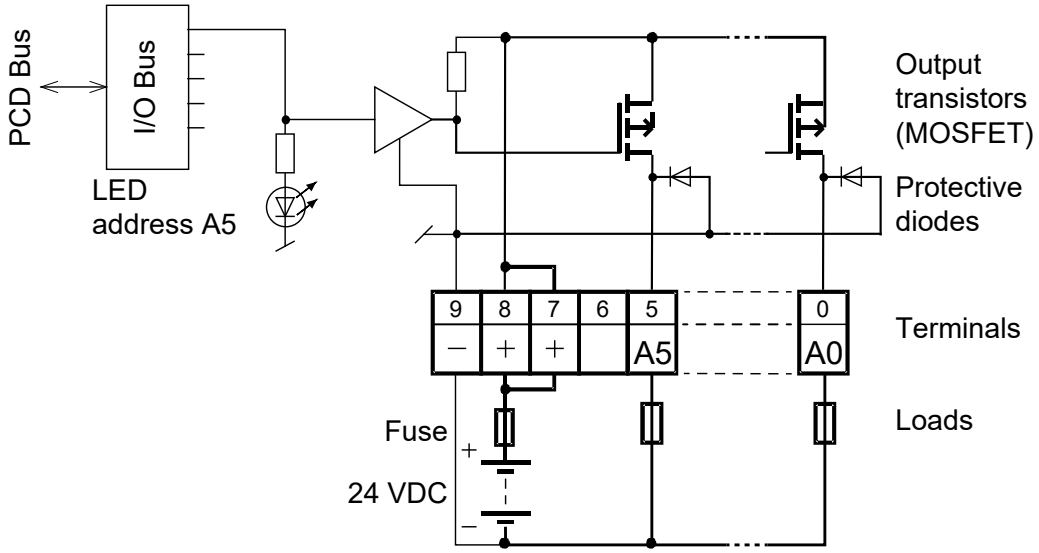
PCD3.A300

Technical data	
Number of outputs	6, electrically connected
Output current	5 mA … 2 A (leakage current max. 0,1 mA)
Total current per module	6×2 A = 12 A (on 100% duty cycle)
Operating mode	Source operation (positive switching)
Voltage range	10…32 VDC, smoothed 10…25 VDC, pulsed
Voltage drop	0.2 V at 2 A
Output delay	Switch-on delay <1 µs Switch-off delay <200 µs with inductive loads the delay is longer, because of the protective diode.
Isolation voltage	1000 VAC, 1 min
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1…20 mA (all outputs = 1), typically 12 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	Load current
Terminals	Type A: Plug-in 10-pole spring terminal block (4 405 4954 0), for wires up to 2.5 mm²

LEDs and connection terminals



Output circuits and terminal designation



Fuse:	It is recommended that each module should be separately protected with a fast-blow (S) fuse of max. 12.5 A.
Watchdog:	This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.A300

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.A300	6 digital outputs for 2 A each	Digital output module, 6 outputs, transistors, 10 … 32 VDC / 2 A, Connection with pluggable spring terminals, plug-in type A, (4 405 4954 0) included	100 g

Order details 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

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 transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

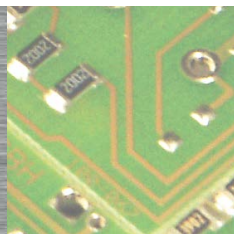
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-59
Rev.2.1
April 2020

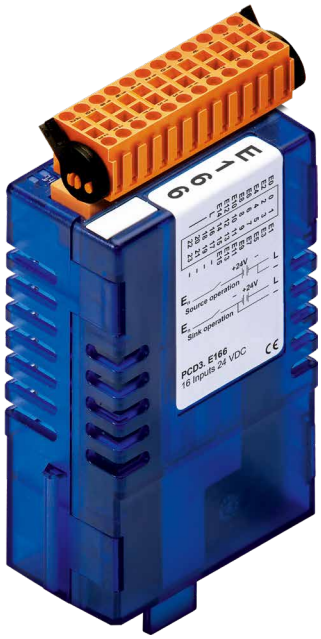
Honeywell

PCD3.E166

16 digital inputs, 24 VDC, 0,2 ms, source- or sinkoperation



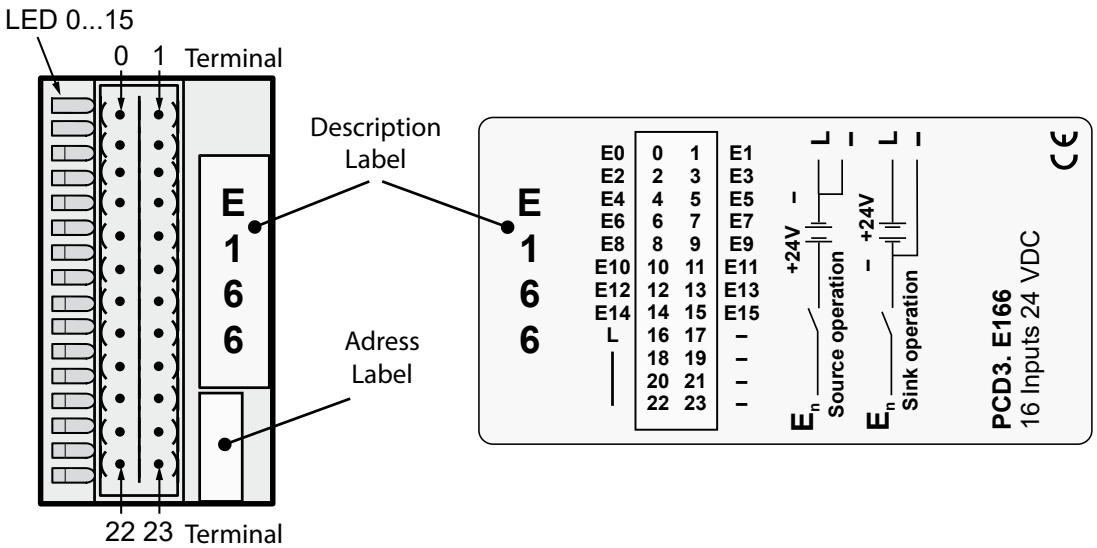
Low-cost input module for source or sink operation with 16 inputs, electrically connected.
Suitable for most electronic and electromechanical switching elements at 24 VDC.



PCD3.E166

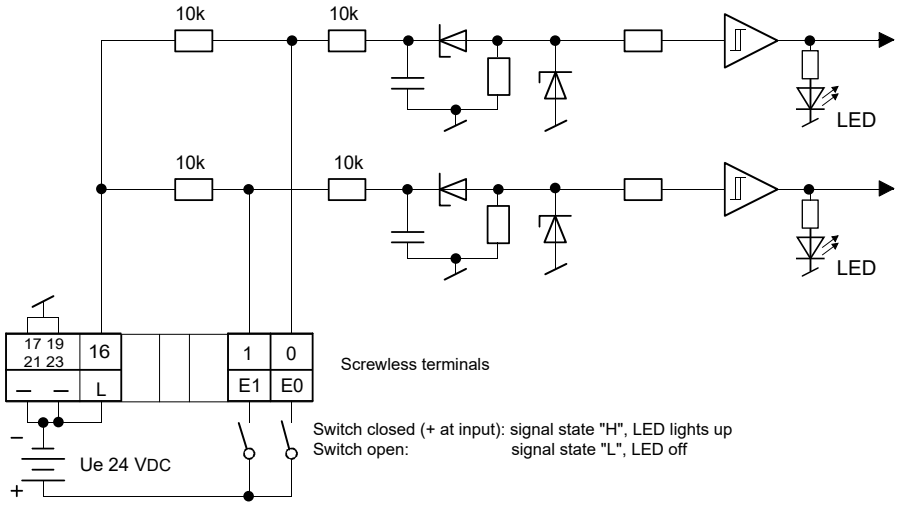
Technical data	
Number of inputs	16 electrically connected, source or sink operation
Input voltage	24 VDC (15 … 30 VDC) smoothed or pulsed
Input current:	4 mA per input at 24 VDC
Input delay	typically 0,2 ms
Resistance to interference acc. to IEC 801-4	2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1…10 mA typically 8 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 64 mA (all inputs=1) at 24 VDC
Terminals	Pluggable 24-pole spring terminal block (4 405 4956 0), for Ø up to 1 mm²

LEDs and connection terminals

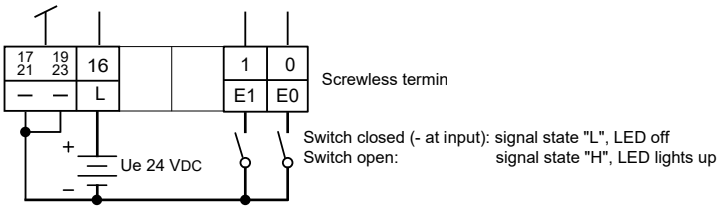


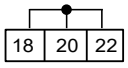
Input circuits and terminal designation

Source operation (positive logic):



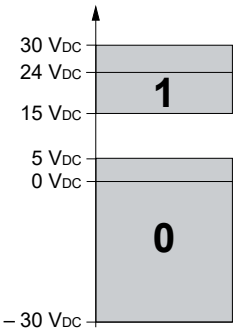
Sink operation (negative logic):





internal connected,
may be used as "distributor",
together max. 500 mA !

Input level



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.

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

PCD3.E166

4 405 4956 0

Order details

Type	Short description	Description	Weight
PCD3.E166	Digital input module, 16 inputs, 24 VDC	Digital input module, 16 inputs, 24 VDC, source and sink operation, 0,2 ms input delay, (connector type C included)	100 g

Order details accessories

Type	Short description	Description	Weight
4 405 4956 0	Plug-in, type C	Plug-in I/O spring terminal block, 2 × 12-pole up to 1.0 mm², labelled 0 to 23, for modules with 16 I/Os or relay module PCD3.A251, connector type "C"	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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

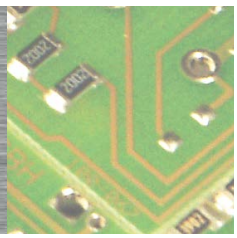
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-68
Rev.2.0
April 2020

Honeywell

PCD3.E500

6 digital inputs, electrically isolated, 230 VAC, 10/20 ms, source-operation

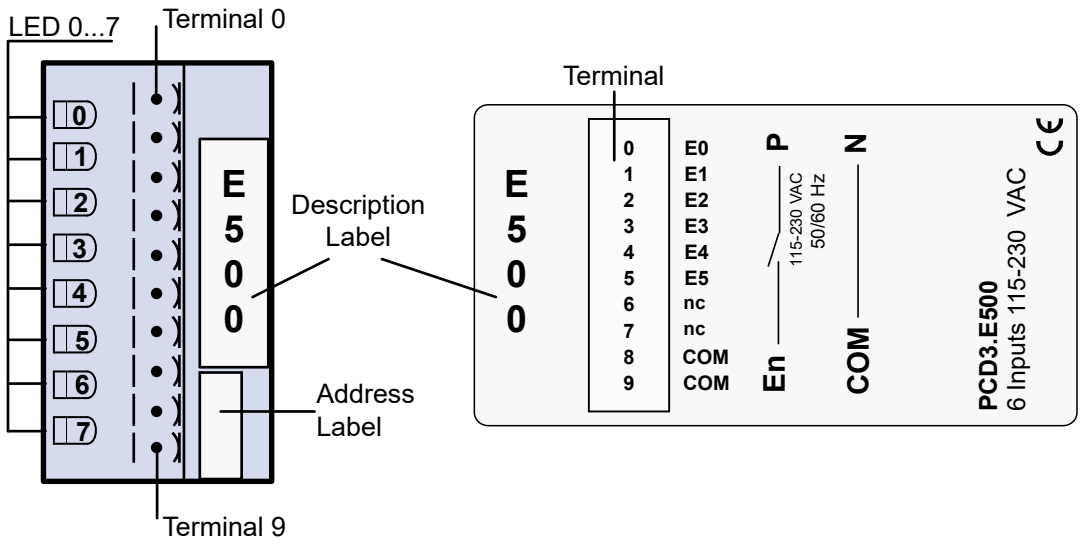


Module with 6 electrically isolated inputs for alternating current. The inputs are set up for source operation and have one common "COM" terminal. Only the positive half-wave of the alternating current is used.

PCD3.E500

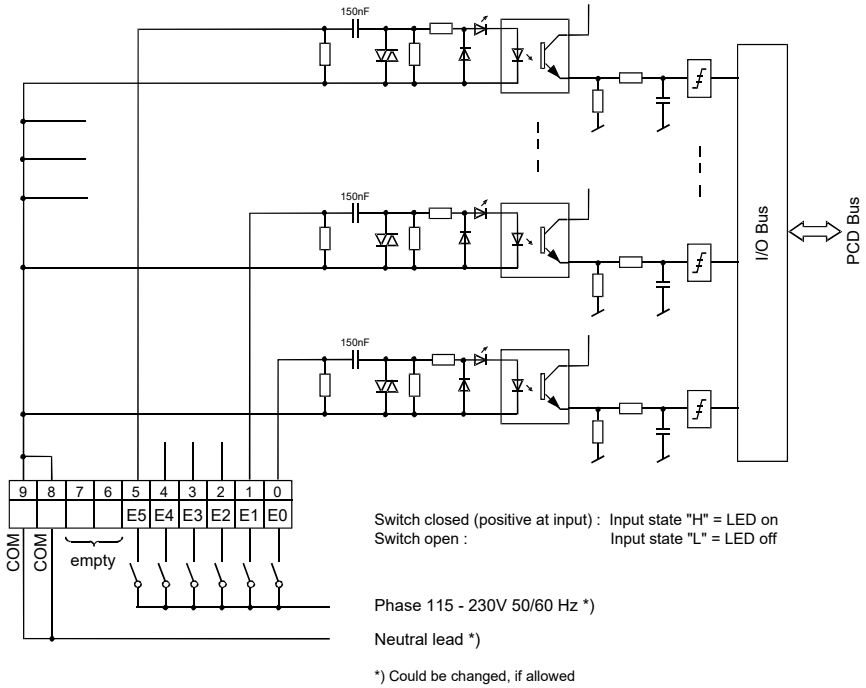
Technical data	
Number of inputs	6 electrically isolated from the CPU, source operation, all inputs to the module in the same phase
Input voltage	115/230 VAC 50/60 Hz, sinusoidal (80 … 250 VAC)
Input current	115 VAC: 5 … 6 mA (wattless current) 230 VAC: 10 … 12 mA (wattless current)
Input delay switch-on switch-off	 typical 10 ms; max. 20 ms typical 20 ms; max. 30 ms
LED	supplied directly from input current
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Electrical isolation voltage	2000 VAC, 1 min
Electrical isolation resistance	100 MΩ/500 VDC
Optocoupler isolation voltage	2.5 kV
Internal current consumption (from +5 V bus)	< 1 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	0 mA
Terminals	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm2, labelled 0 to 9, connector type A

LEDs and connection terminals



Input circuits and terminal designation

Source operation (positive logic):



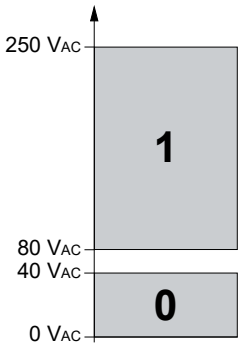
Switch closed (positive at input) : Input state "H" = LED on
Switch open : Input state "L" = LED off

Phase 115 - 230V 50/60 Hz *)

Neutral lead *)

*) Could be changed, if allowed

Input level



Watchdog: This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.

I/O modules and I/O terminals may only be plugged in or out when the PCD Control Edge is not powered on.
The external module power supply must also be switched off.

Installation instructions

For reasons of safety it is not permissible to connect low voltages (up to 50 V) and higher voltages (50 … 250 V) to the same module.

If a module is connected to a higher voltage (50 … 250 V), approved components for this voltage must be used for all elements that are electrically connected to the system.

Using higher voltage (50 … 250 V), all connections to the relay contacts must be connected on the same circuit, i.e. in such a way that they are all protected against one AC phase by one common fuse. Each load circuit may however be fused individually.

PCD3.E500

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.E500	6 digital inputs 110 … 240 VAC, 20 ms	Digital input module, 6 inputs 110 … 240 VAC, source operation, with galvanic isolation, 20 ms input delay, connection with pluggable spring terminals, plug-in type A, (4 405 4954 0) included	100 g

Order details accessories

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 to 9, connector type A	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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

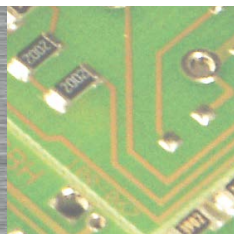
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-69
Rev.2.0
May 2020

Honeywell

PCD3.E613

8 digital inputs, 48 VDC, 9 ms, electrically isolated, source- or sinkoperation



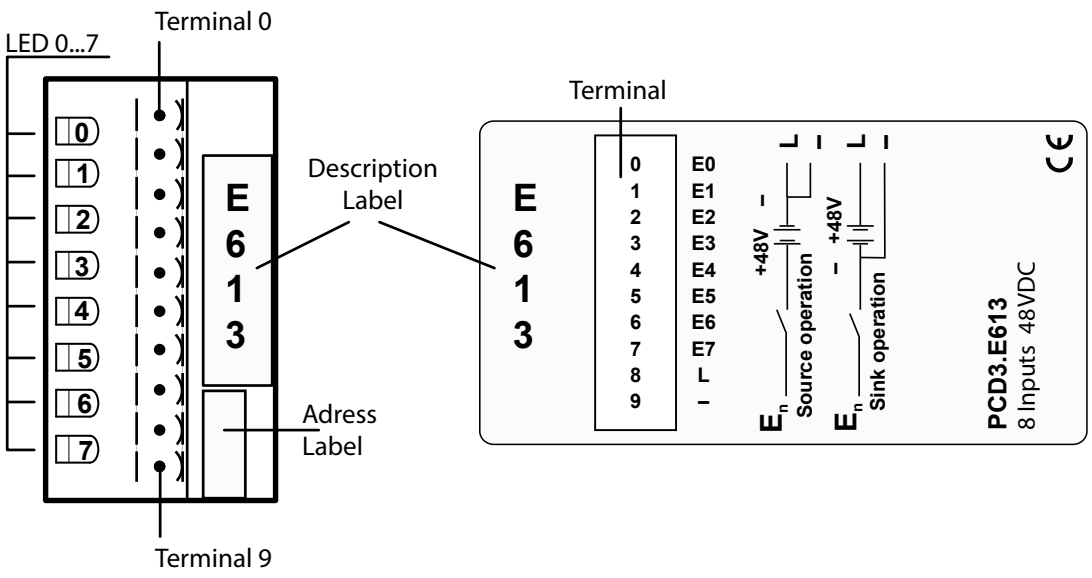
Input module for source or sink operation with 8 inputs, electrically isolated by optocoupler. Suitable for most electronic and electromechanical switching elements at 48 VDC.

PCD3.E613

Technical data

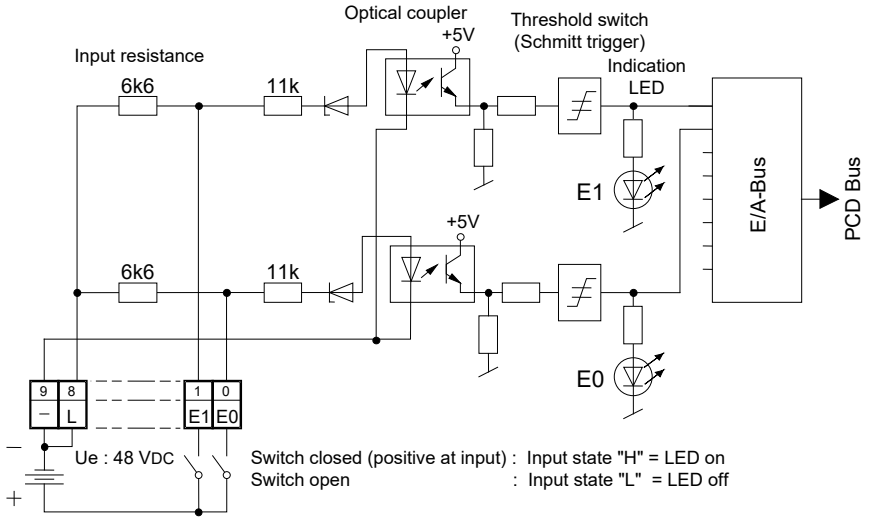
Number of inputs	8 electrically isolated by optocoupler, source or sink operation, all inputs to the model in the same phase, the channels are not isolated from each other
Input voltage	48 VDC (30 … 60 VDC) smoothed or pulsed
Supply voltage - for source operation - for sink operation	 min. 30 VDC min. 36 VDC
Input current at input voltage 48 VDC - for source operation: - for sink operation:	 2 mA 1.5 mA
Input delay - off > on - on > off	 9 ms 9 ms
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Isolation voltage: - Electrical isolated - Optocoupler	 1 000 VAC, 1 min. 2,5 kV
Consommation interne - à partir du bus +5 V - à partir du bus V+	 1 … 24 mA, typical 12 mA 0 mA
External current consumption	max. 40 mA (source operation) max. 18 mA (sink operation)
Terminals	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm², labelled 0 to 9, connector type A

LEDs and connection terminals

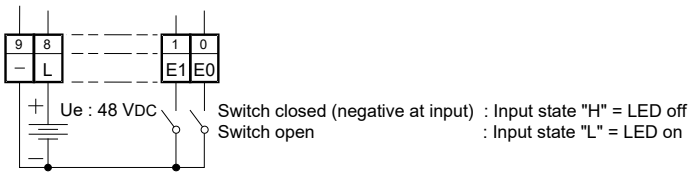


Input circuits and terminal designation

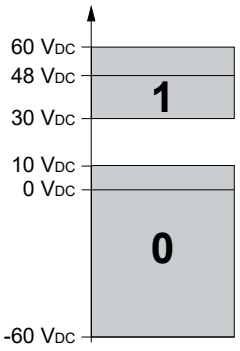
Source operation (positive logic):



Sink operation (negative logic):



Input level



	Watchdog: This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.
	The channels are not isolated from each other.

PCD3.E613

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.E613	8 digital inputs module with galvanic isolation, 48 VDC, 9 ms	Digital input module, 8 inputs, 48 VDC, with galvanic isolation, source and sink operation, 9 ms input delay connection with pluggable spring terminals, plug-in type A included	80 g

Order details accessories

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 to 9, connector type A	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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

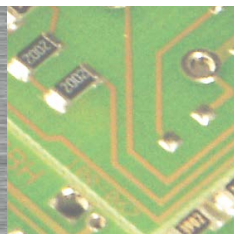
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-71
Rev.2.0
April 2020

Honeywell

PCD3.E613

8 digital inputs, 48 VDC, 9 ms, electrically isolated, source- or sinkoperation



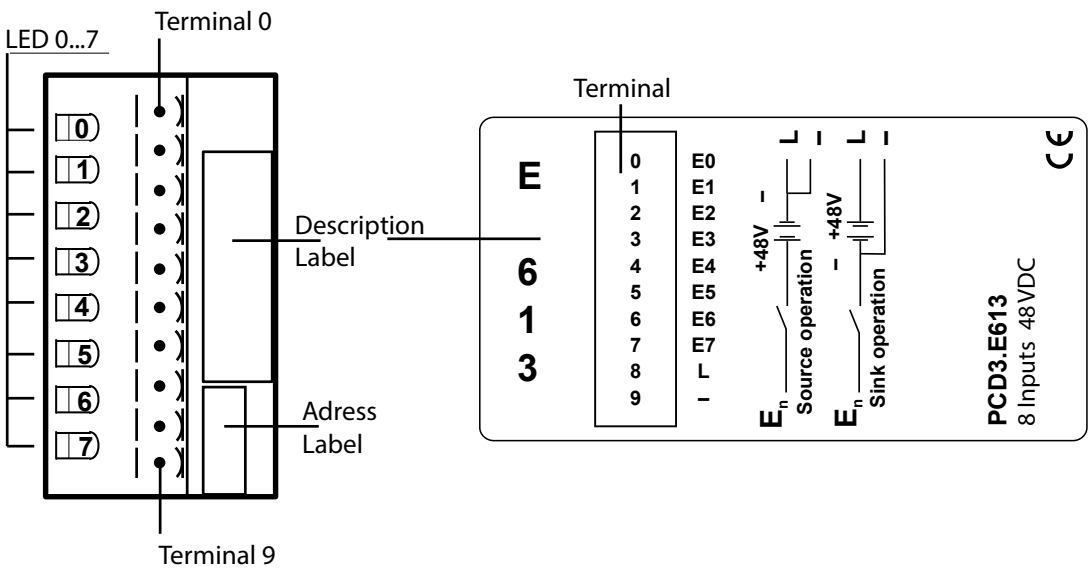
Input module for source or sink operation with 8 inputs, electrically isolated by optocoupler. Suitable for most electronic and electromechanical switching elements at 48 VDC.

PCD3.E613

Technical data

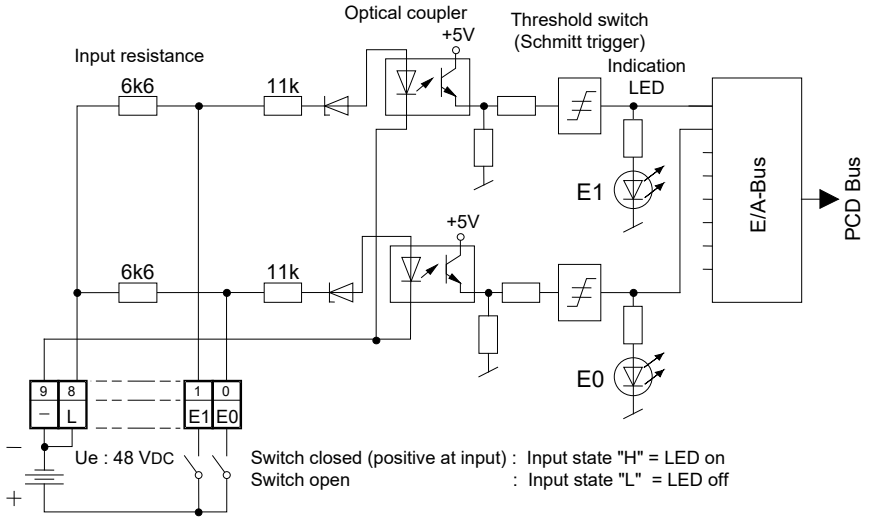
Number of inputs	8 electrically isolated by optocoupler, source or sink operation, all inputs to the model in the same phase, the channels are not isolated from each other
Input voltage	48 VDC (30 … 60 VDC) smoothed or pulsed
Supply voltage - for source operation - for sink operation	 min. 30 VDC min. 36 VDC
Input current at input voltage 48 VDC - for source operation: - for sink operation:	 2 mA 1.5 mA
Input delay - off > on - on > off	 9 ms 9 ms
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Isolation voltage: - Electrical isolated - Optocoupler	 1 000 VAC, 1 min. 2,5 kV
Consommation interne - à partir du bus +5 V - à partir du bus V+	 1 … 24 mA, typical 12 mA 0 mA
External current consumption	max. 40 mA (source operation) max. 18 mA (sink operation)
Terminals	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm², labelled 0 to 9, connector type A

LEDs and connection terminals

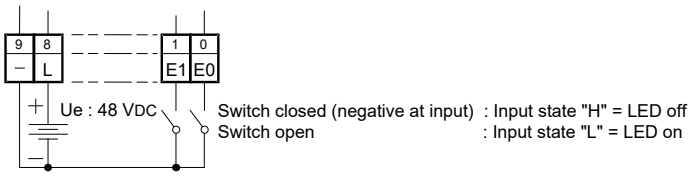


Input circuits and terminal designation

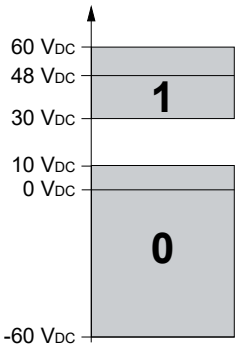
Source operation (positive logic):



Sink operation (negative logic):



Input level



	Watchdog: This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.
	The channels are not isolated from each other.

PCD3.E613

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.E613	8 digital inputs module with galvanic isolation, 48 VDC, 9 ms	Digital input module, 8 inputs, 48 VDC, with galvanic isolation, source and sink operation, 9 ms input delay connection with pluggable spring terminals, plug-in type A included	80 g

Order details accessories

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 to 9, connector type A	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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

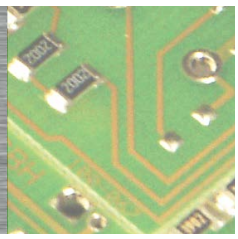
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-71
Rev.2.0
April 2020

Honeywell

PCD3.W410

Analog output module, 4 channels, 8 bit, 0 … 10 V, 0 … 20 mA, 4 … 20 mA



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.

PCD3.W410

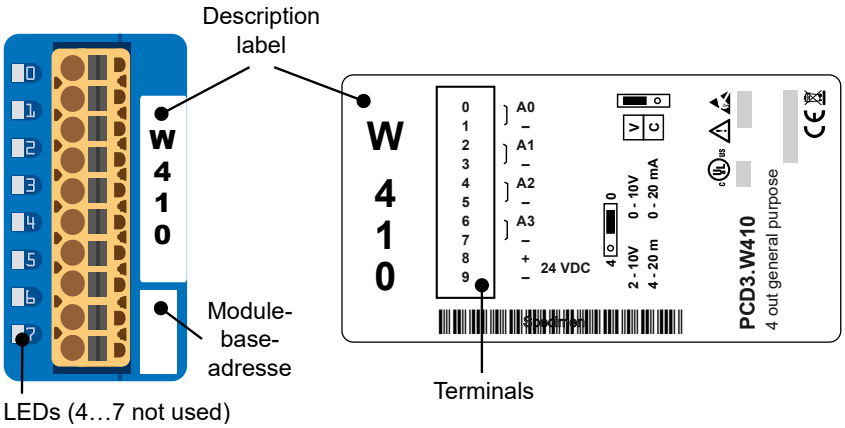
Technical specifications

Number of outputs (channels)	4, short circuit protected
Signal range selectable with jumpers	voltage 0 … 10 V *) current 0 … 20 mA 4 … 20 mA
Resolution (digital representation)	8 bits (0 … 255)
Conversion time D/A	≤ 5 µs
Galvanic separation	no
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 (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 A ((4 405 4954 0)

*) Factory setting

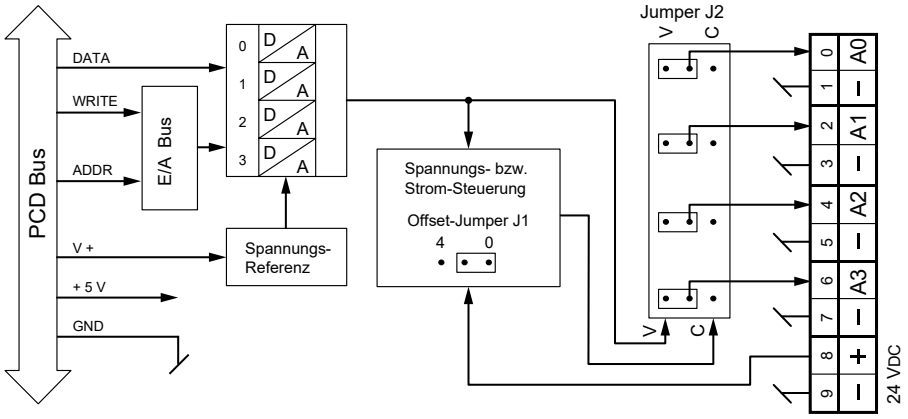
I/O modules and I/O terminal blocks may only be plugged in and removed when the CPU and the external +24 V are disconnected from the power supply.

Indicators and connections

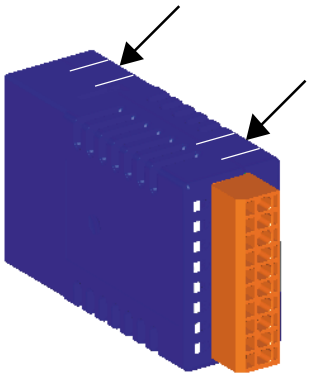


LED	Output
0	O0
1	O1
2	O2
3	O3

Block schematic



Open and close the module housing



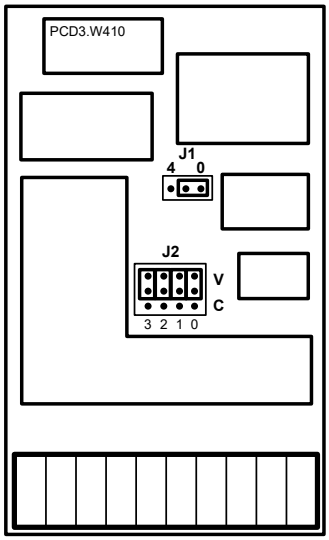
Open

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)



J1 Offset-Jumper

Position"0"	0…10 V or 0…20 mA
Position"4"	2…10 V or 4…20 mA

J2 Jumper for Voltage/Current

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

Factory setting

Position"V"	Voltage output
Position"0"	Range 0…10 V

Changing the jumpers

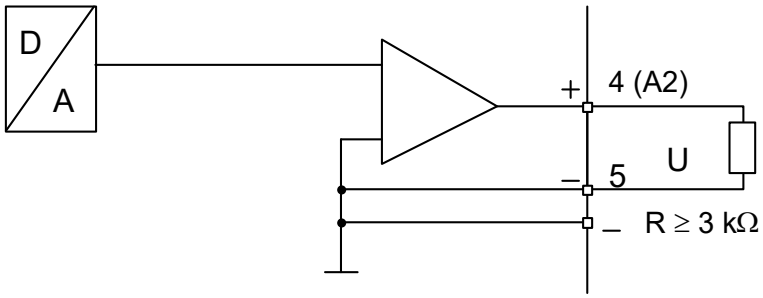
On this circuit board there are components that are sensitive to electrostatic discharges.

Analogue/digital values and jumper positions			
J1 Jumper “0/4”	0	0	4
J2 Jumper “V/C”	V	C	C
Signal range	0…10 V	0…20 mA	4…20 mA
Digital values			
255 128 0	10.0 V 5.0 V*) 0	20 mA 20 mA*)	20 mA 12 mA*) 0

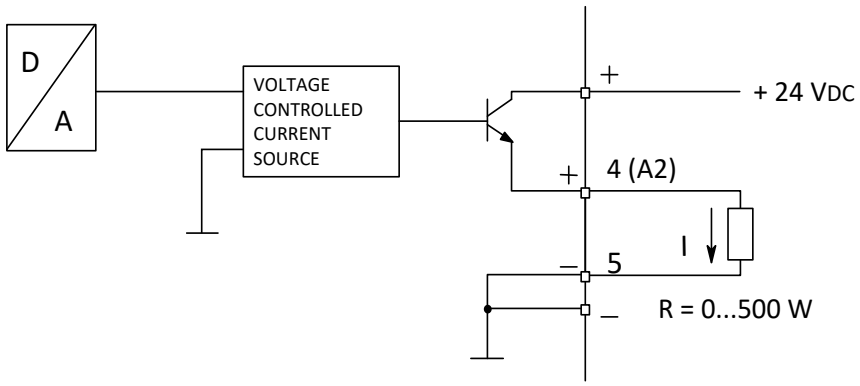
*) The exact values are 1/255 higher

Principle diagram of analog outputs

Output connection for 0 … 10 V



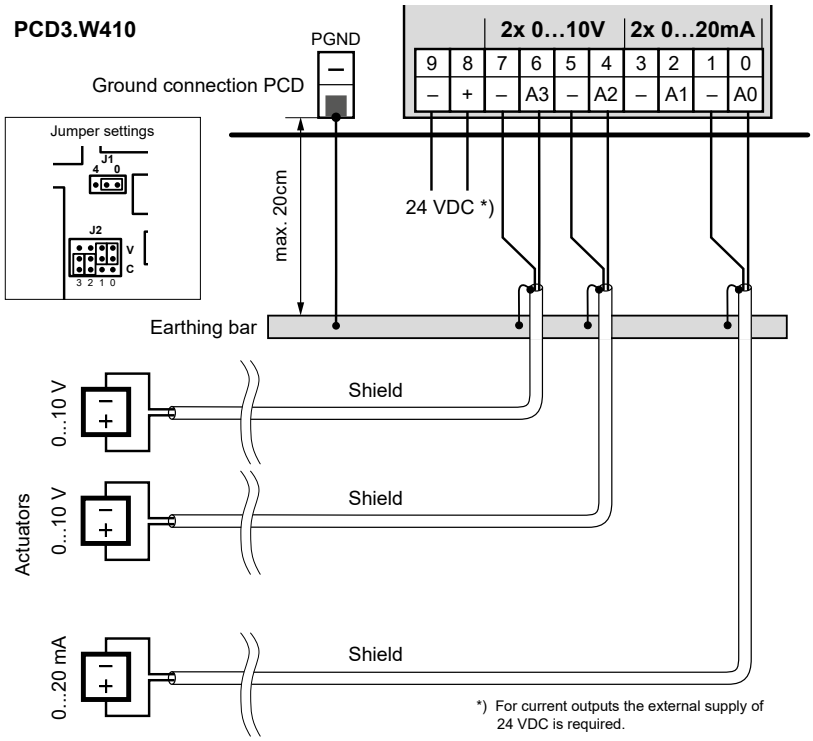
Output connection for 0 … 20 mA



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 and 0 … 20 mA



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

PCD3.W410

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W410	4 analogue outputs, 8 bits, 0…10 V / 0…20 mA / 4…20 mA	Analogue output module, 4 output (channels), resolution 8 bits, signal range Bereich 0…10 V / 0…20 mA / 4…20 mA, per channel with jumper selectable, 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 0used 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 transportation or storage, 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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions

Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

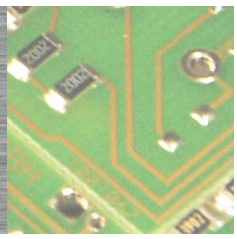
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No. 51-52-03-91
Rev. 3.1
May 2020

Honeywell

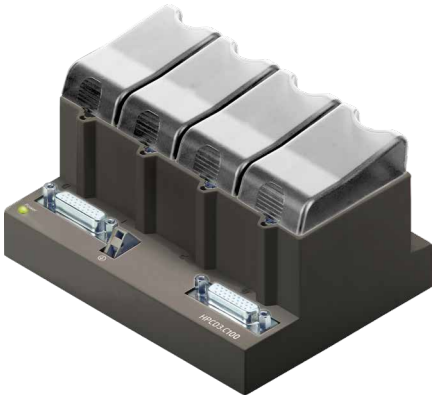
HPCD3.C100

Extension module holder for 4 I/O modules



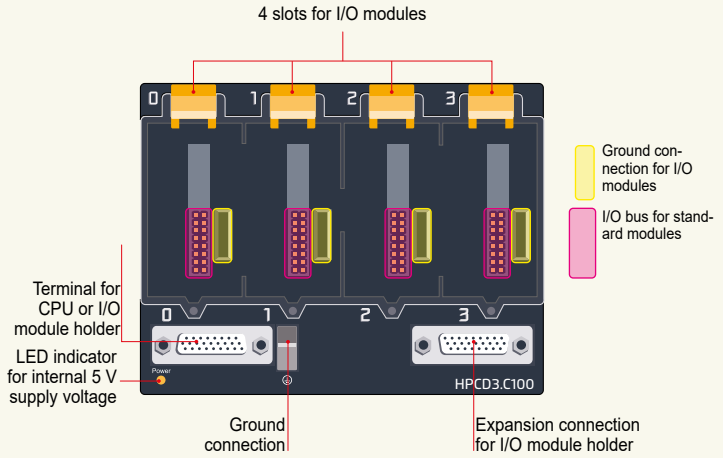
Description

The HPCD3.M6893 controllers can be expanded with HPCD3.Cxxx components, making additional module sockets available. On the HPCD3.M6893, up to 15 HPCD3.Cxxx module holders can be attached. This allows the user to attach a maximum of 64 I/O modules, or 1023 digital inputs/ outputs.



HPCD3.C100

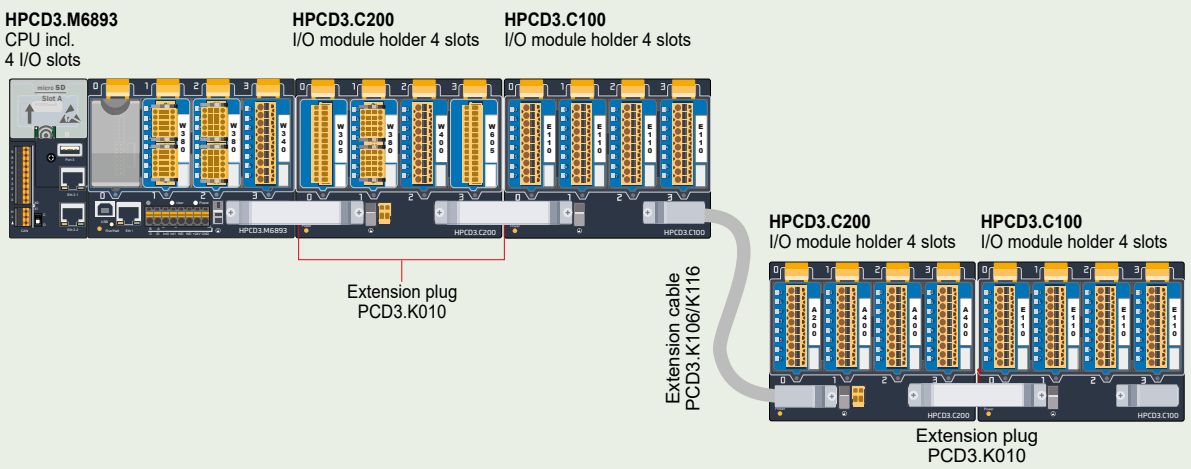
Device design



All standard I/O modules can be used in the expansion module holders.

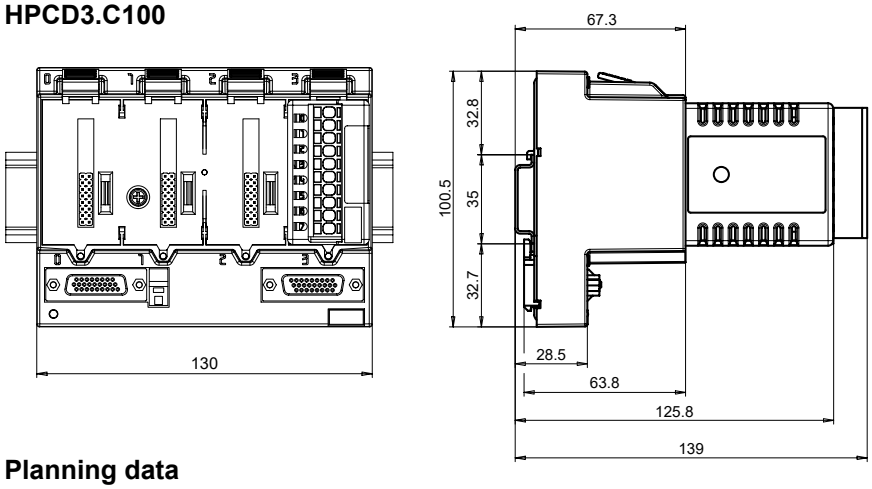
Communication modules or other intelligent modules can only be used in the slots of the Basic CPU.

Example calculation for the current consumption of the internal +5V and +V (24V) bus of the I/O modules



Dimension Drawing

HPCD3.C100

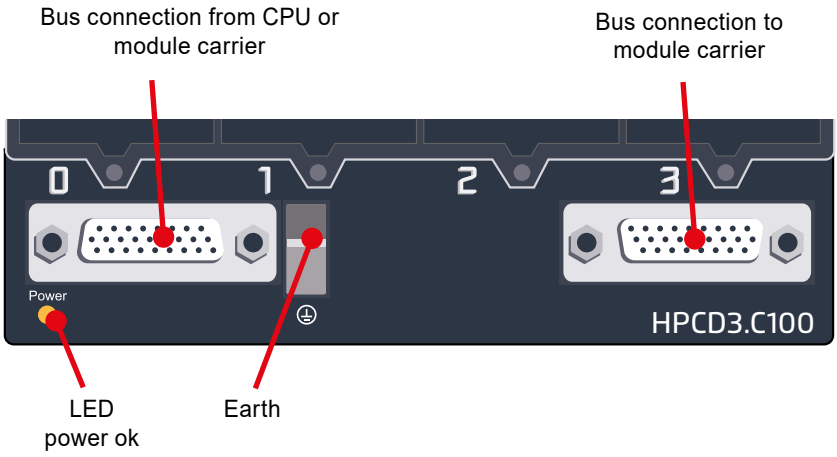


Planning data

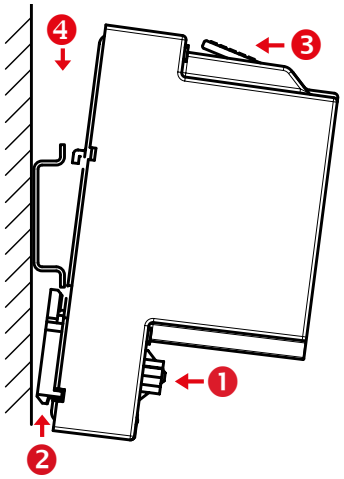
- ▶Step files (3D)
- ▶BIM objects

The data can be downloaded with the following link:
https://sbc-support.com/en/services/bim-building-information-model/

Connections of the HPCD3.C100



Easy assembly of the module holders on DIN rail (1 × 35 mm)



1. Press lower part of housing onto mounting rail
2. Push up against the spring force up to the stop
3. Hook in over the upper edge of the mounting rail and yield to the spring force
4. For safety, push the housing into the mounting rail from top to bottom

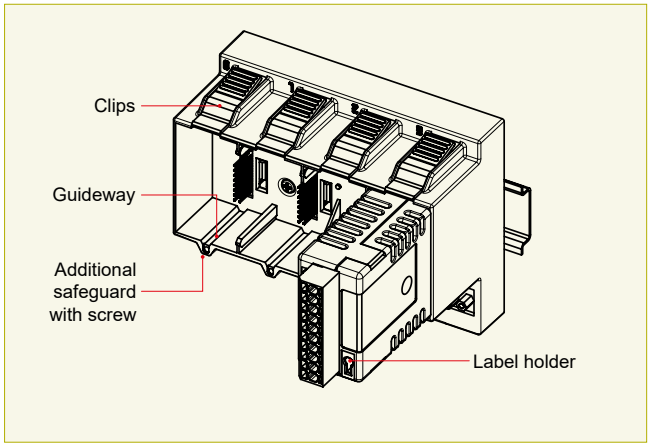
Check if the device is securly fixed.

Dismounting from DIN rail

To remove the housing, push upwards and pull out.

Technical data	
Number of module slots	4
Description	4 I/O modules
Internal current consumption (from +5 V bus)	10 mA
Internal current consumption (from V+ bus)	---

Insertion of I/O modules



▲ **Simple exchange of I/O modules**

Over 40 modules available with different functionalities

Types

- ▶ **PCD3.Axxx** Digital output modules
- ▶ **PCD3.Exxx** Digital input modules
- ▶ **PCD3.Fxxx** Communication modules
- ▶ **PCD3.Wxxx** Analogue input/output modules

The HPCD3.C200 is used to extend the I/O bus or for the internal power supply +5V and +V (24V) to a module segment. Please note the following rules:

- **Mandatory:** Insert a HPCD3.C200 after the HPCD3.M6893 and after each cable (at the start of a row).
- Do not use more than six HPCD3.C200 in a single configuration, or the time delay will exceed the I/O access time.
  Use a maximum of five PCD3.K106/K116 cables.
- If an application is mounted in a single row (max. 15 module holders), then after five HPCD3.C100 a HPCD3.C200 must be used to amplify the bus signal (unless the configuration ends with the fifth HPCD3.C100).
- If the application is mounted in multiple rows, the restricted length of cable means that only three module holders (1× HPCD3.C200 and 2× HPCD3.C100) may be mounted in one row.

HPCD3 I/O modules are not hot-plug capable:

- Carefully insert and remove the I/O modules after switching off the power supply (24V).

The following aspects should be considered when planning HPCD3 applications:

- In keeping with lean automation, it is recommended to leave the first slot in the CPU basic module free for any subsequent expansions. This slot can accommodate simple I/O modules but also communication modules.
- The total length of the I/O bus is limited by technical factors; the shorter, the better.

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

Consumption M6893 + C200 + C100

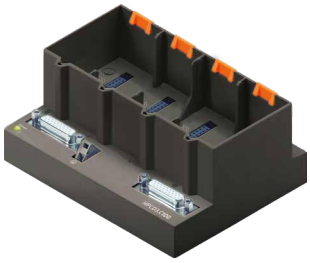
Module	Internal 5V	Internal +V (24V)
Not used		
W380	25 mA	25 mA
W380	25 mA	25 mA
W340	8 mA	20 mA
Total M6893	**58 mA**	**70 mA**
W340	8 mA	20 mA
W340	8 mA	20 mA
W610	110 mA	0 mA
E160	10 mA	
Total C200	**136 mA**	**40 mA**
E160	10 mA	
E160	10 mA	
E160	10 mA	
E160	10 mA	
Total C100	**40 mA**	**0**
Total C200	**176 mA**	**40 mA**

Consumption C200 + C100

Module	Internal 5V	Internal +V (24V)
A200	15 mA	
A810	40 mA	
A810	40 mA	
A860	18 mA	
Total C200	**113 mA**	
A460	10 mA	
A460	10 mA	
A460	10 mA	
W380	25 mA	25 mA
Total C100	**55 mA**	**25 mA**
Total C200	**168 mA**	**25 mA**

Capacity	HPCD3.M6893	HPCD3.C200
Internal 5V	600 mA	1500 mA
Internal +V (24V)	100 mA	200 mA

The calculation example shows that internal capacity is maintained in the CPU basic module HPCD3.M6895 and the holder module HPCD3.C200. The CPU basic module has a sufficient reserve to receive an additional communication module in the empty slot 0. The holder module HPCD3.C200 also has sufficient reserves to connect an additional HPCD3.C100 holder module. The power consumption of the internal +5V and +V (24 V) bus for the I/O modules can be calculated in the Control Edge PCD IO-Calculator Excel sheet.



PCD3.C100

Slot cover
32347605-001

Connecting plug
PCD3.K010

Extension cable 0.7 / 1.2 m
PCD3.K106 / PCD3.K116

Ordering information

Type	Short description	Description	Weight
HPCD3.C100	PCD3.C100 for 4 modules	Extension module holder for 4 I/O modules	420 g

Accessories

Type	Short description	Description	Weight
32347605-001	Slot cover	Slot cover for unused HPCD3 I/O slots	8 g
PCD3.K010	Connection plug	Connection plug HPCD3.M/T/C to HPCD3.Cx00	40 g
PCD3.K106	Extension cable 0.7 m	Extension cable for HPCD3.M/T/C to HPCD3.Cx00 (length 0.7 m)	140 g
PCD3.K116	Extension cable 1.2 m	Extension cable for HPCD3.M/T/C to HPCD3.Cx00 (length 1.2 m)	180 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 0used 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.

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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

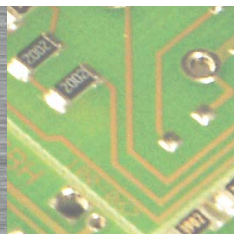
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-50
Rev.2.1
May 2020

Honeywell

PCD3.A465

16 digital outputs, 0.5 A for each

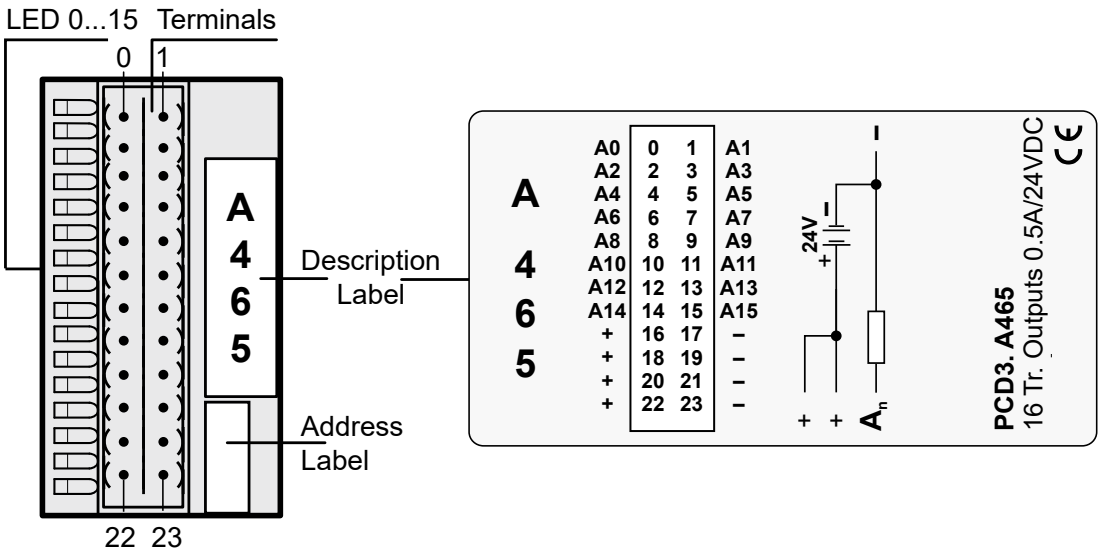


Low cost output module with 16 transistor outputs
5 … 500 mA, with short-circuit protection.
The individual circuits are electrically connected; the voltage range is 10 … 32 VDC.

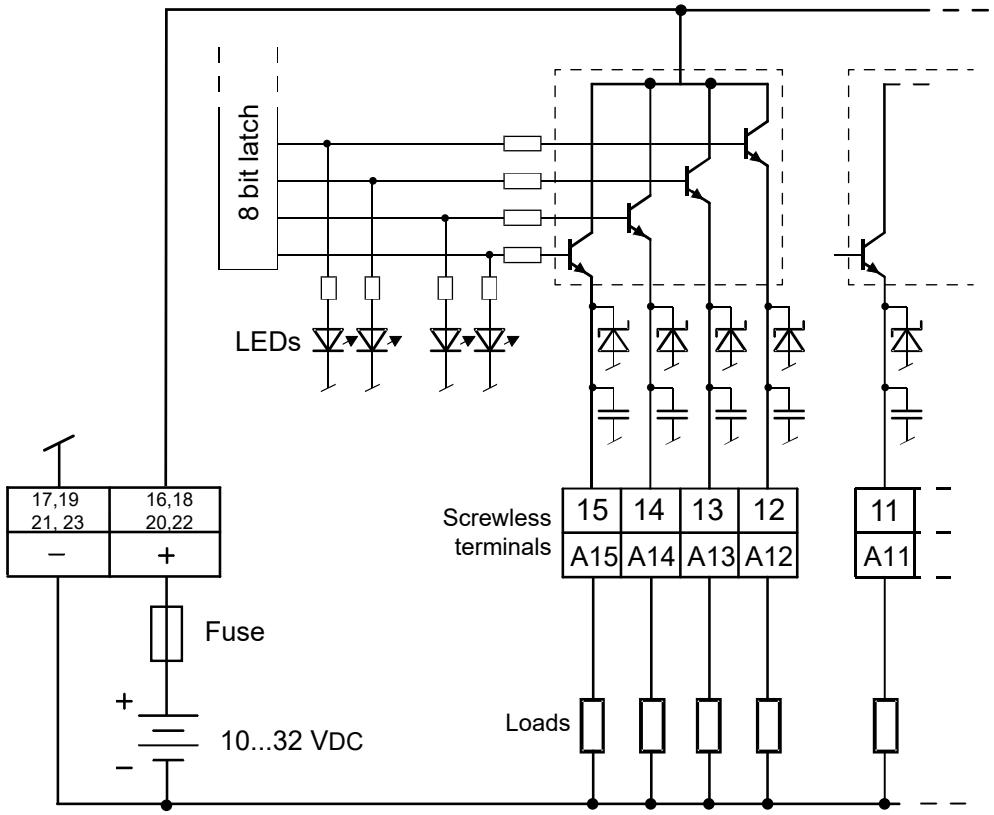
PCD3.A465

Technical data	
Number of outputs	16, electrically connected
Output current	5 mA… 500 mA (leakage current max. 0,1 mA). Within the voltage range 5 … 24 VDC, the load resistance should be at least 48 Ω
Short circuit protection	yes
Total current per module	8 A on 100 % duty cycle
Operating mode	Source operation (positive switching)
Voltage range	10…32 VDC, smoothed, max. 10 % residual ripple
Voltage drop	≤ 0,3 V at 0,5 A
Output delay	typically 50 µs, max. 100 µs for resistive load
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	max 10 mA (all outputs = “1”) typically 8 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	Load current
Terminals	Pluggable 24-pole spring terminal block (4 405 4956 0), for Ø up to 1 mm²

LEDs and connection terminals



Output circuits and terminal designation



Fuse:	It is recommended that each module should be separately protected with a fast-blow (S) fuse of max. 4 A.
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.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.A465

4 405 4956 0

Order details

Type	Short description	Description	Weight
PCD3.A465	16 digital outputs for 0.5 A each	Digital output module, 16 outputs, transistors, 10…32 VDC/0.5 A, connection with spring terminals	80 g

Order details accessories

Type	Short description	Description	Weight
4 405 4956 0	Plug-in, type C	Plug-in I/O spring terminal block, 2 × 12-pole up to 1.0 mm², labelled 0 to 23, for modules with 16 I/Os or relay module PCD3.A251, connector type "C"	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 during transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

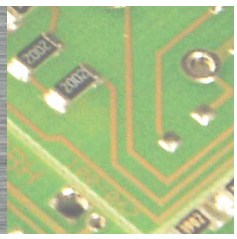
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-62
Rev.3.1
April 2020

Honeywell

PCD3.K116

Extension cable 1,2 m
HPCD3.M/T/C to HPCD3.Cxxx



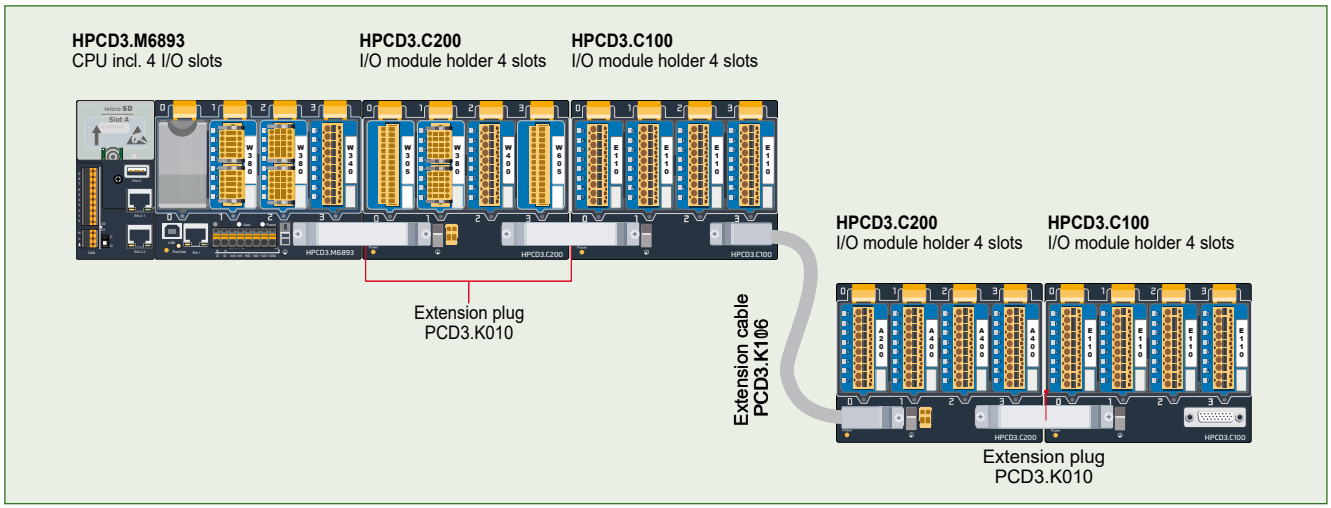
Up to 15 HPCD3.Cxxx module holders can be attached with connection plugs PCD3.K010 and/or cable PCD3.K106 or PCD3.K116 on the HPCD3.M6893.

This allows the user to attach a maximum of 64 I/O modules, or 1,023 digital inputs/outputs.

PCD3.K116

System expansion up to 1,023 I/O with HPCD3

Single- and multiple-row mounting of the module holders



PCD3.K116

Order details

Type	Short description	Description	Weight
PCD3.K116	Extension cable 1,2 m	Connection cable (length 1,2 m) for HPCD3.M/T/C to HPCD3.Cx00	180 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

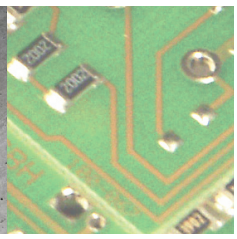
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-76
Rev.2.0
April 2020

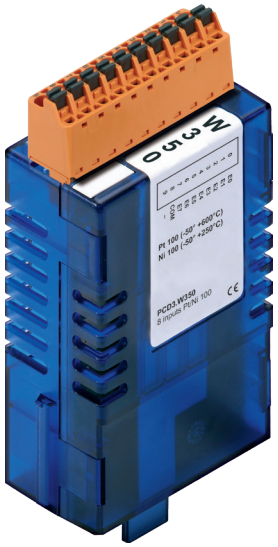
Honeywell

PCD3.W350

Analog input module, 8 channel, 12 bit, Pt100 / Ni100



Fast, analog 8 channel input module with Pt100 / Ni100 and 12 bit resolution per channel. Use of a fast on-board micro controller allows decoupling and relief of the PCD regarding intensive computing tasks, such as scaling and filtering of signal data..



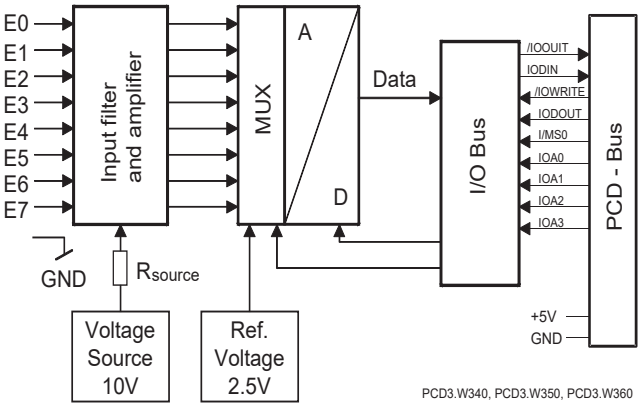
PCD3.W350

Technical specifications

Number of inputs (channels)		8
Signal range	Pt100 Ni100	-50 … +600 °C -50 … +250 °C
Resolution (representation)		12 bit (0 … 4095)
Resolution *)	Pt100 Ni100	0.14 … 0,20 °C 0.06 … 0.12 °C
Method of linearization for temperature inputs		by software
Galvanic separation		no
Measuring principle		non-differential, single-ended
Input resistance		nicht relevant
Maximum measurement current for temperature probes		1.5 mA
Accuracy at 25 °C		± 0.3 %
Repeating accuracy (under same conditions)		± 0.05 %
Temperature error (0 … +55 °C)		± 0.2 %
Conversion time A/D		≤ 10 µs
EMV protection		yes
Time constant of input filter		typically 16.9 ms
Internal current consumption (from +5 V bus)		< 8 mA
Internal current consumption (from V+ bus)		< 30 mA
External current consumption		0 mA
Terminals		Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A ((4 405 4954 0)

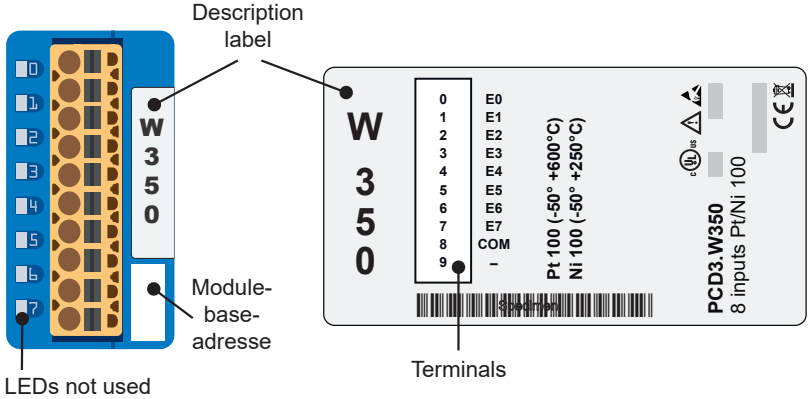
*) value of least significant bit(LSB)

Block schematic



PCD3.W340, PCD3.W350, PCD3.W360

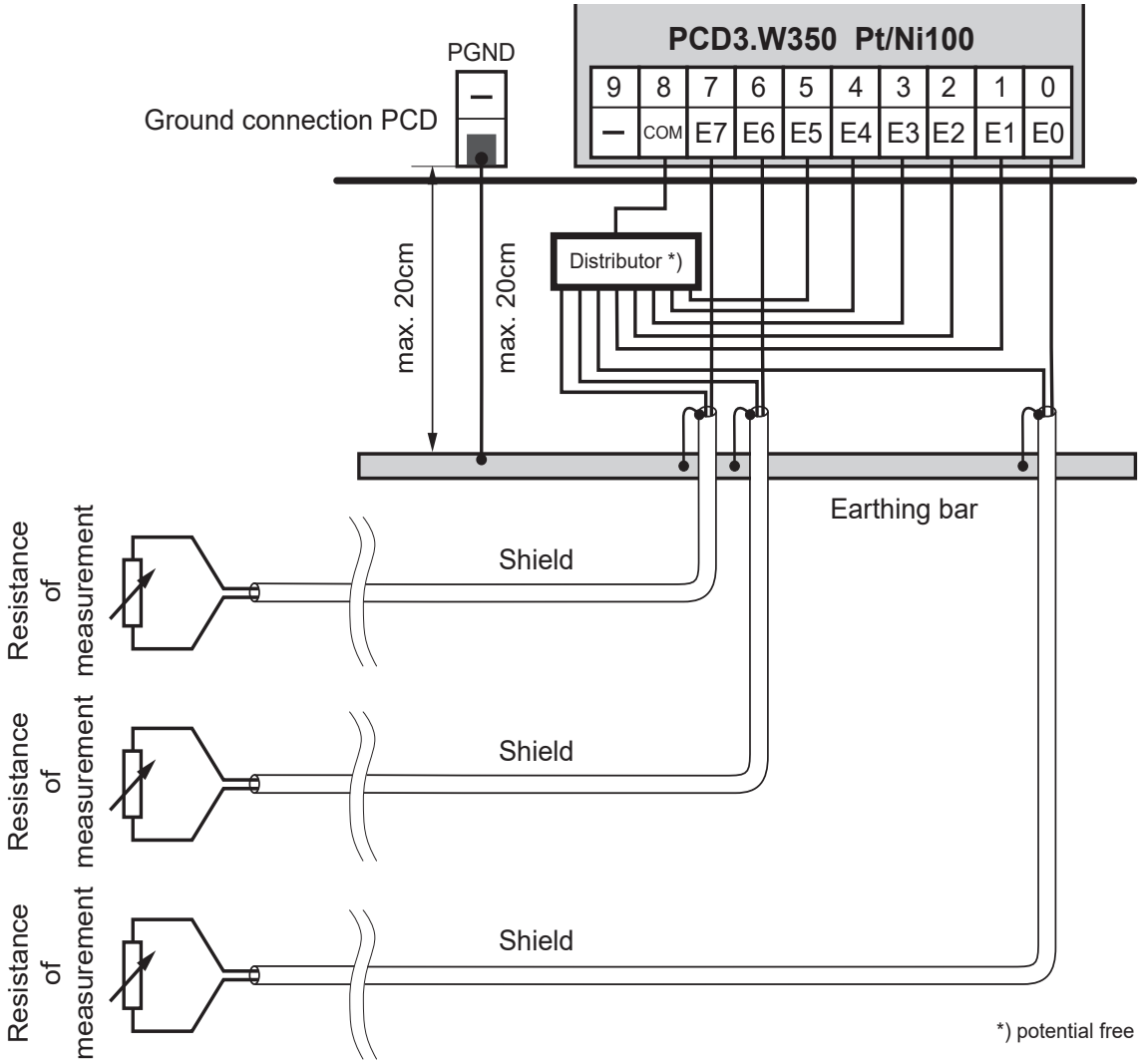
Indicators and connections



Connection concept

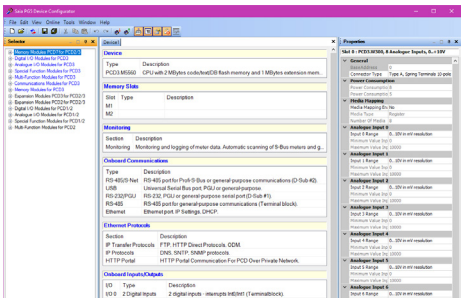
The voltage input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). To minimize the amount of interference coupled into the module via the transmission lines, connection should be made according to the principle explained below.

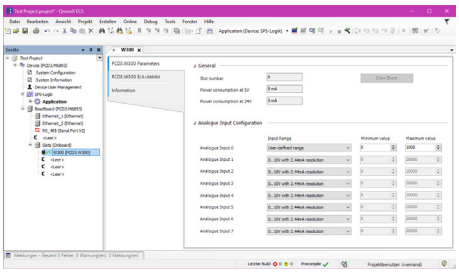
Connection for Pt100 / Ni100



	The reference potentials of signal sources should be wired to a common GND connection (“–” and “COM” terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.
	If shielded cables are used, the shielding should be connected to an earthing rail.
	Input signals with incorrect polarity significantly distort the measurements on the other channels.

Configuration

Saia PCD® Classic	
PCD-System	**Evaluation**
Classic	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator or Network Configurator). 

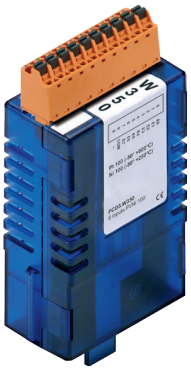
Saia PCD® IEC-Controller	
PCD-System	**Evaluation**
IEC-Controller	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator) 

Formulae for temperature measurement

Sensors		T = temperature in °C DV = digital value (0 … 4095)
Ni 100 Validity: Computational error:	Temperature range - 50 … + 250 °C ± 1.65 °C	$T = -28.7 + \frac{300 \cdot DV}{3628} - 7.294 \cdot 10^{-6} \cdot (DV - 1850)^2$
Pt100 Validity: Computational error:	Temperature range - 50 … + 600 °C ± 1 °C	$T = -99.9 + \frac{650 \cdot DV}{3910} + 6.625 \cdot 10^{-6} \cdot (DV - 2114)^2$

Good to now

!	Galvanic separation of inputs to CPU, channels themselves not separated.
!	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
i	**Further information** This can be found in the Manual "27-600_I/O-modules for PCD1 / PCD2 series and for PCD3".



PCD3.W350

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W350	8 analogue inputs, 12 bit, Pt100 / Ni100	Analogue input module, 8 inputs (channels), resolution 12 bit, signal range Pt100 / Ni100, (the channels themselves not separated), connection with pluggable spring terminals, plug-in type A ((4 405 4954 0) included	80 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 0used 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 transportation or storage, 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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

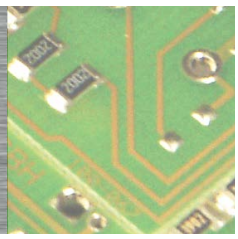
Honeywell

Document No. 51-52-03-87
Rev. 1.0
April 2020

Honeywell

PCD3.W400

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



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.

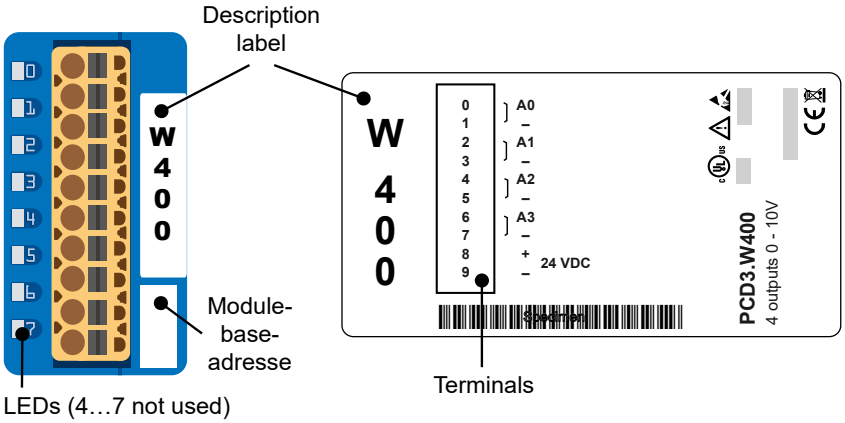
PCD3.W400

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 A ((4 405 4954 0)

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.

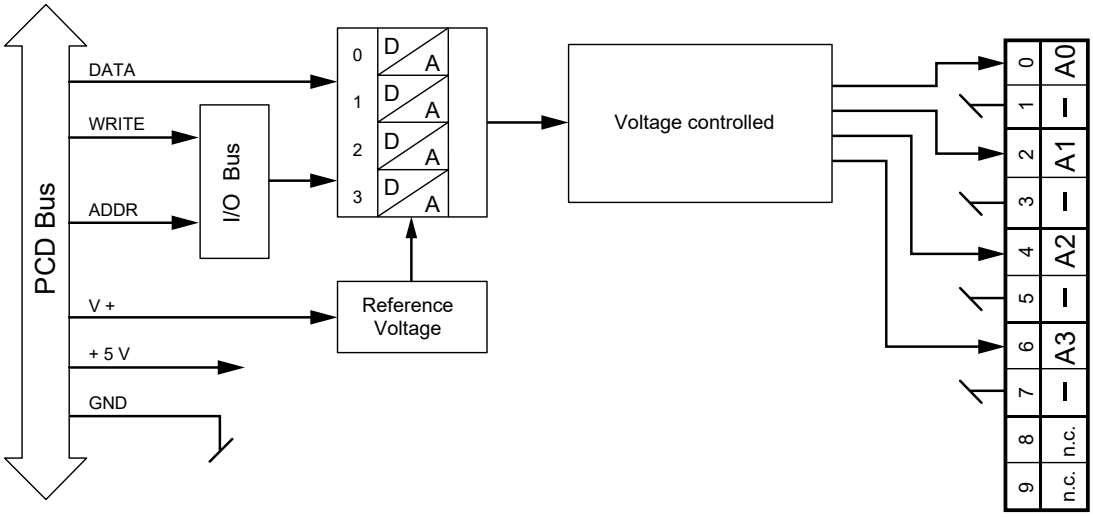
Indicators and connections



LED	Output
0	O0
1	O1
2	O2
3	O3

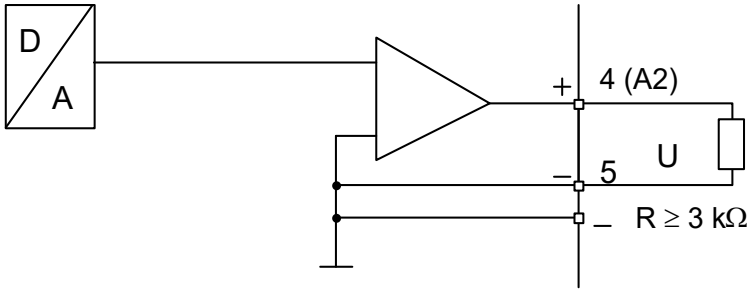
The external 24 VDC power supply is not required.

Block schematic



Principle diagram of analog outputs

Output connection for 0 … 10 V

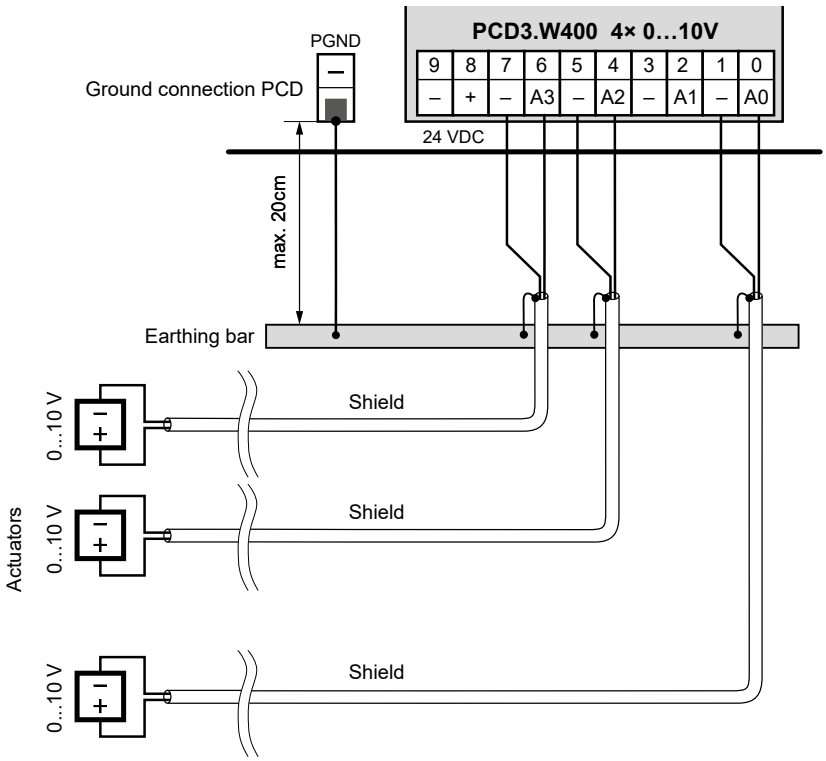


Digital- / analogue values	
Signal range	0 … 10 V
Digital values	Analogue values
255	10.0 V
128	5.0 V*)
0	0

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



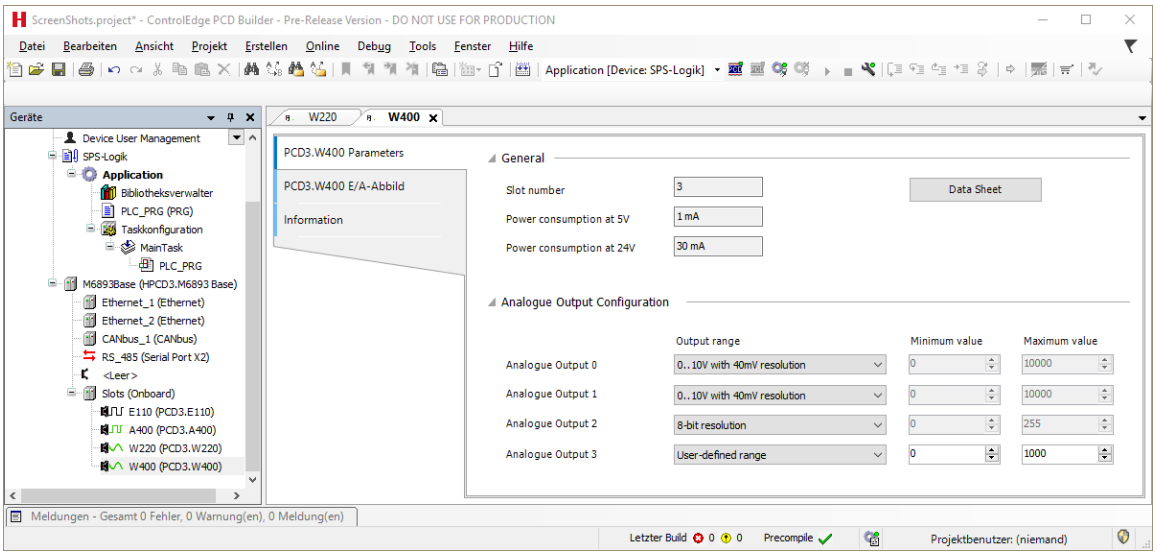
The external 24 VDC power supply is not required.

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

Configuration

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.W400

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W400	4 analogue outputs, 8 bits, 0…10 V	Analogue output module, 4 output (channels), resolution 8 bits, signal range Bereich 0…10 V, per channel with jumper selectable, connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	80 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 0used 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions

2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

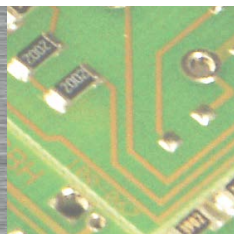
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-90
Rev. 4.0
November 2020

Honeywell

PCD7.F110S

Serial interface module RS-422 / RS-485



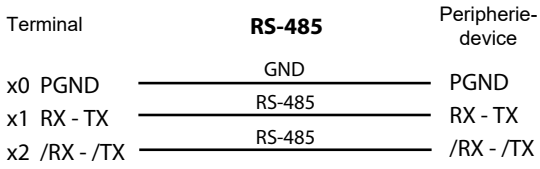
Description

In addition to the onboard interfaces, the interface functions can also be expanded in a modular way using the various slots. The interface module PCD7.F110S supports the RS-485 and RS-422 industry standards.

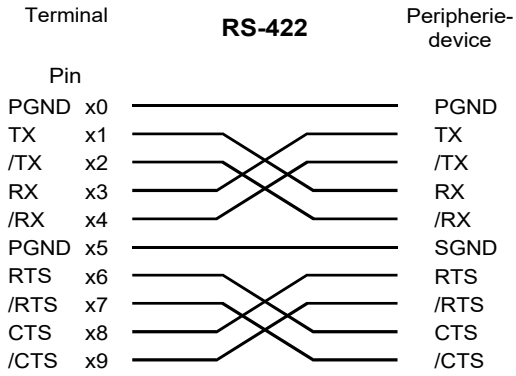
PCD7.F110S

RS-485 connection

(Electrically connected RS-485 interface)



RS-422 connection

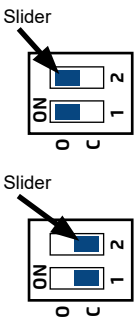


The line terminator in RS-422 mode occurs at 150 Ω in all cases.

Bus termination

PCD7.F110S

RS-485 terminator

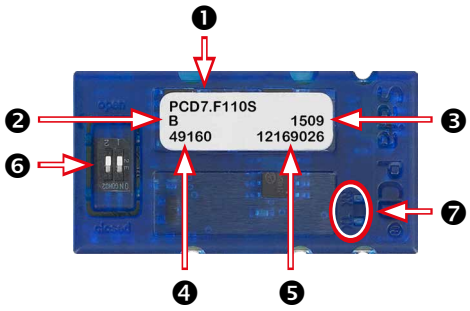


Open, not terminated (factory setting)

Closed, terminated

The terminating connectors can be linked using slide switches (CLOSED) or isolated (OPEN).

What is where ?



1. Order number
2. Hardware version
3. Manufacturing date
4. Production number
5. Production batch
6. DIP-switchs terminators if available (not for RS-422)
7. Rx/Tx LEDs

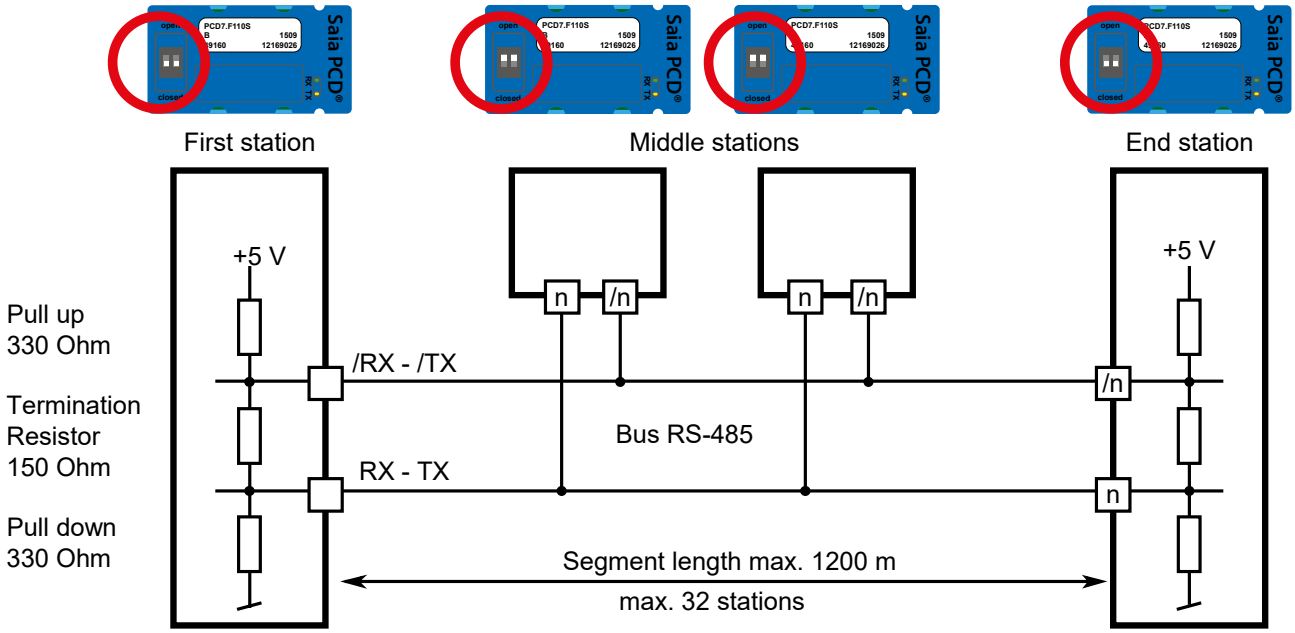
LEDs

The both LEDs 7 Rx and Tx have the following meaning:

- LED Rx Receive data detection
- LED Tx Transmission data detection

Bus termination:

The bus termination must be made at the cable ends of the RS-485 cable. For this, the necessary terminating resistors in the PCD7.F110S must be connected by means of switches on the respective module.



First station and Last station = ‘close’, all other stations = ‘open’.

PCD7.F110S

Ordering information

Type	Short description	Description	Weight
PCD7.F110S	Serial interface modules	Serial interface module RS-422 / RS-485	7 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

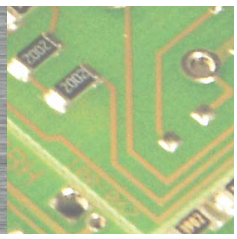
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-98
Rev.1.1
May 2020

Honeywell

PCD3.A220

Digital output module, 2 × 3 relays, 250 VAC/2 A, 'make' contact, without contact protection



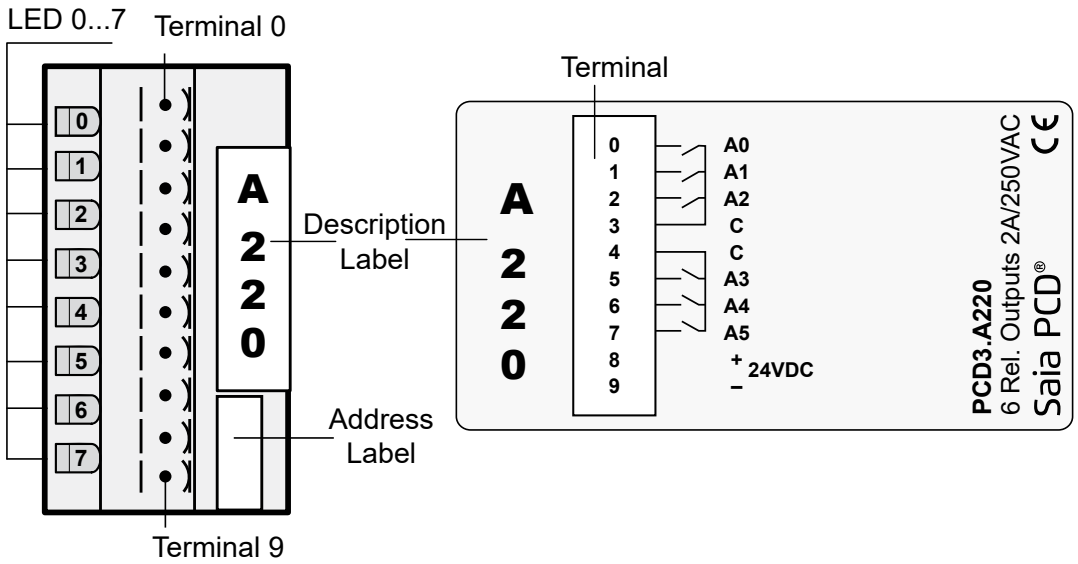
The module contains 6 relays with normally-open contacts for direct or alternating current up to 2 A, 250 VAC. The module is especially suited wherever AC switching circuits with infrequent switching have to be controlled.
For space reasons, there is no integrated contact protection.
Each group of 3 relays has a common connection.

PCD3.A220

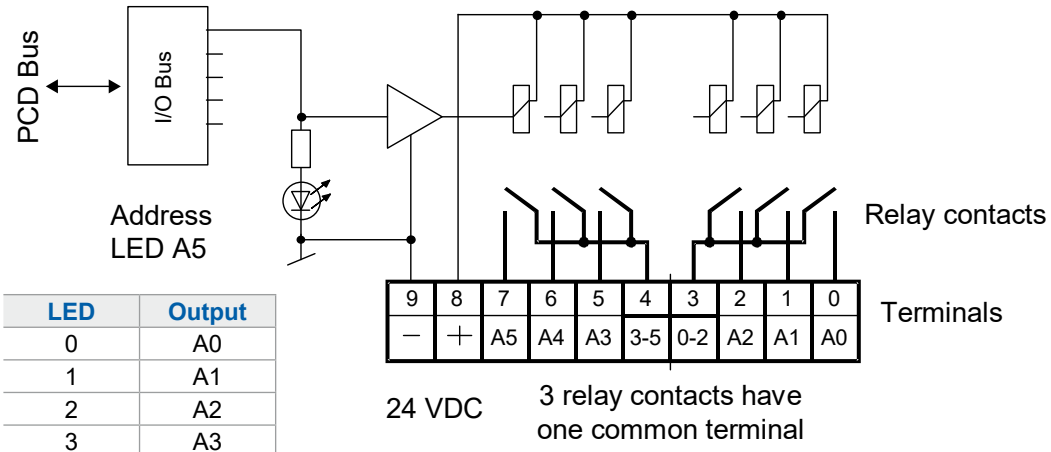
Technical data	
Number of outputs	3 + 3 make contacts with common terminal
Type of relay (typical)	RE 030024, SCHRACK
Switching capacity (contact lifetime)	2 A, 250 VAC AC1 0.7 × 10^6 operations 1 A, 250 VAC AC11 1.0 × 10^6 operations 2 A, 50 VDC DC1 0.3 × 10^6 operations 3) 1 A, 24 VDC DC11 0.1 × 10^6 operations 1)3)
Relay coil supply 2)	nominal 24 VDC smoothed or pulsed, 8 mA per relay coil
Voltage tolerance, dependent on ambient temperature	20 °C: 17.0 … 35 VDC 30 °C: 19.5 … 35 VDC 40 °C: 20.5 … 32 VDC 50 °C: 21.5 … 30 VDC
Output delay	typically 5 ms bei 24 VDC
Resistance to interference acc. to IEC 801-4	4 kV under direct coupling 2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1 … 20 mA typically 10 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 48 mA
Terminals	Type A: Plug-in 10-pole spring terminal block (4 405 4954 0), for wires up to 2.5 mm²

1) With external protective diode
2) With reverse voltage protection
3) These ratings are not UL-listed

LEDs and connection terminals



Output circuits and terminal designation



LED	Output
0	A0
1	A1
2	A2
3	A3
4	A4
5	A5

Relay energized (contact closed): LED on
Relay reset (contact open): LED off
24 VDC must be connected to the +/- terminals.

Watchdog: This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.

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

PCD3.A220

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.A220	6 relays with make contacts, without contact protection	Digital output module, 2 × 3 relays, 250 VAC/2 A, 'make' contact, without contact protection	100 g

Order details 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

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 transportation or storage, 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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

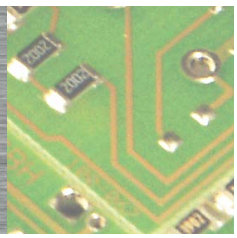
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-57
Rev.4.1
April 2020

Honeywell

PCD3.E111

8 digital inputs, 24 VDC, 0,2 ms, source- and sinkoperation

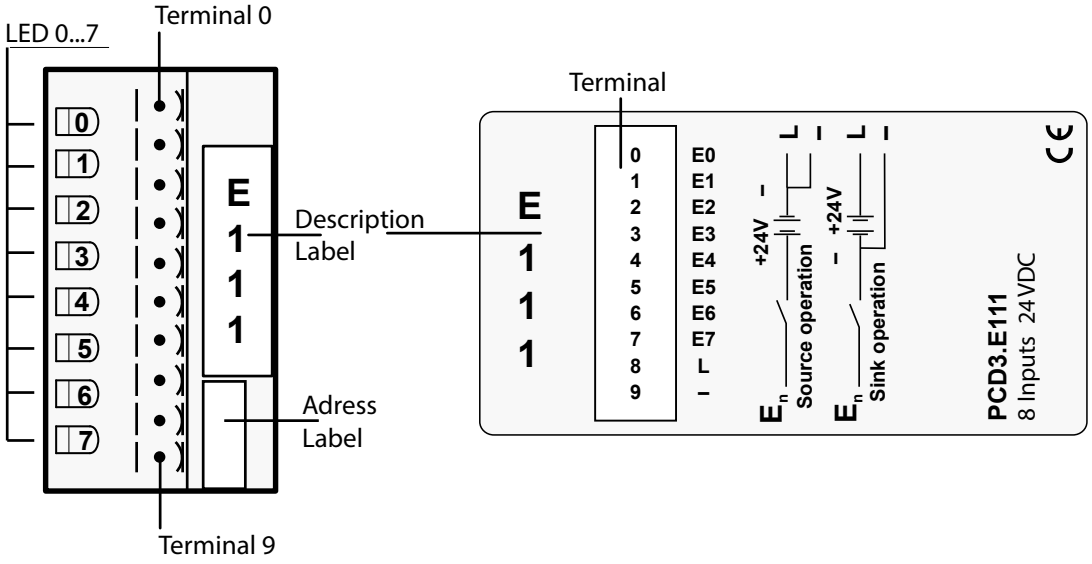


Low-cost input module for source or sink operation with 8 inputs, electrically connected. Suitable for most electronic and electromechanical switching elements at 24 VDC.

PCD3.E111

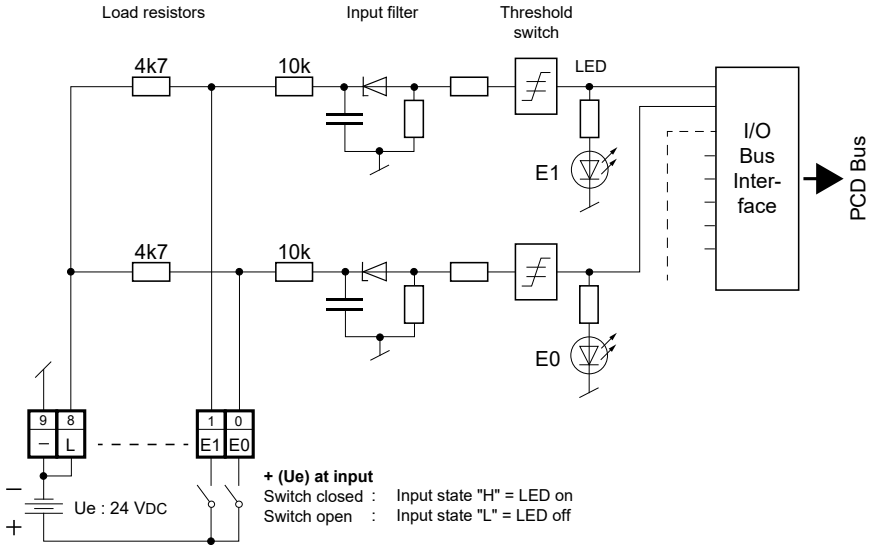
Technical data	
Number of inputs	8, electrically connected source or sink operation
Input voltage	24 VDC (15 … 30 VDC) smoothed or pulsed
Input current:	6 mA at 24 VDC
Input delay	typicalli 0.2 ms
Resistance to interference acc. to IEC 801-4	2 kV under capacitive coupling (whole trunk group)
Internal current consumption (from +5 V bus)	1 … 24 mA, typically 12 mA
Internal current consumption (from V+ bus)	0 mA
External current consumption	max. 48 mA (all inputs = 1) from 24 VDC
Terminals	Plug-in I/O spring terminal block, 10-pole up to 2.5 mm^2, labelled 0 to 9, connector type A

LEDs and connection terminals

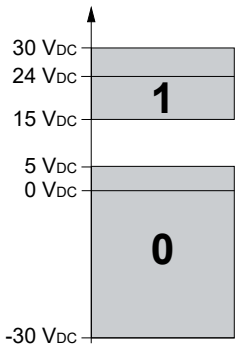


Input circuits and terminal designation

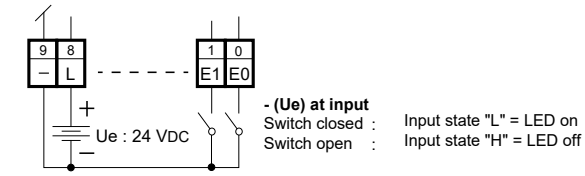
Source operation (positive logic):



Input level



Sink operation (negative logic):



	Watchdog: This module can be used on all base addresses; there is no interaction with the watchdog on the CPUs.
	I/O modules and I/O terminal blocks may only be plugged in and removed when the Control Edge PCD and the external +24 V are disconnected from the power supply.

PCD3.E111

4 405 4954 0

Order details

Type	Short description	Description	Weight
PCD3.E111	8 digital inputs module, 24 VDC, 0,2 ms	Digital input module, 8 inputs, 24 VDC, source and sink operation, 0,2 ms input delay, connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	80 g

Order details accessories

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 to 9, connector type A	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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

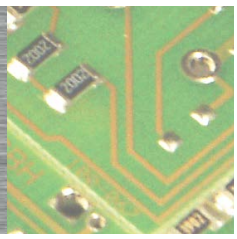
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-66
Rev.2.0
April 2020

Honeywell

PCD3.W210

Analog input module, 8 channel, 10 bit, 0…20 mA (4…20 mA via software)



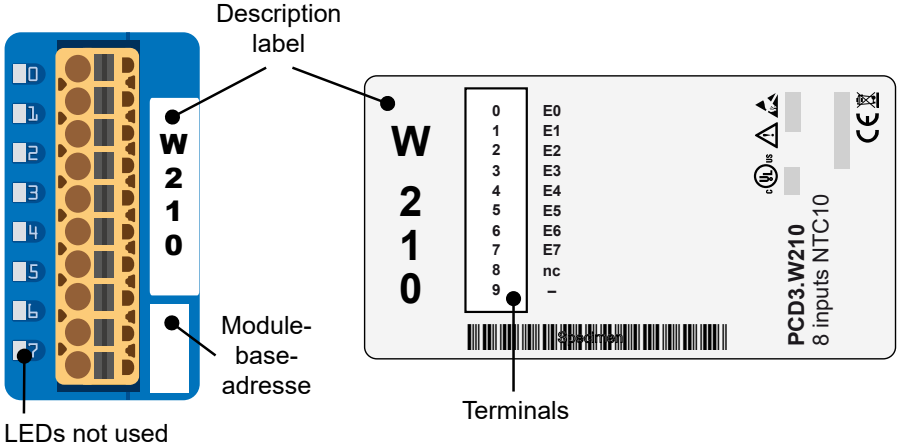
Description

Fast, analog 8 channel input module with 0…20 mA (4…20 mA via software) and 10 bit resolution per channel. With its short conversion time of <50 µs, this module is universally suitable for recording analogue signals.

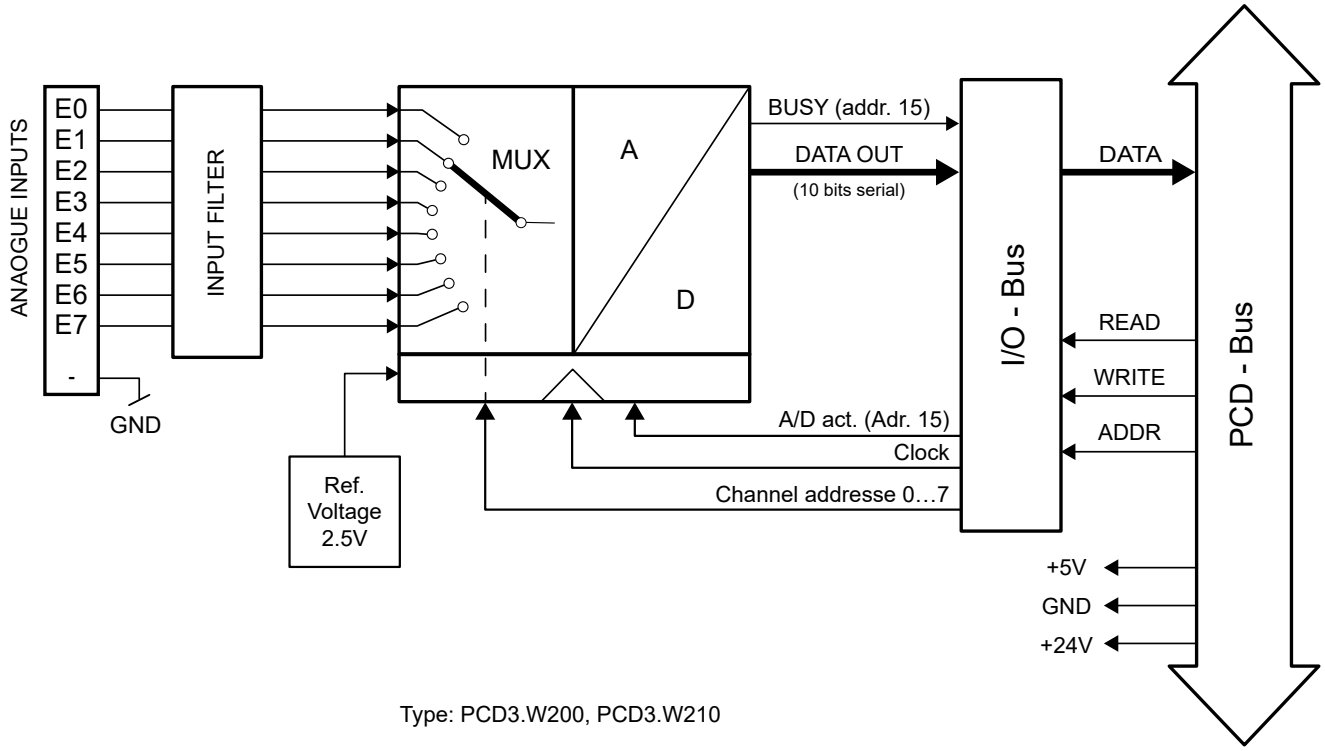
PCD3.W210

Technical specifications	
Number of inputs (channels)	8
Signal range	0…20 mA (4…20 mA via Software)
Resolution (representation)	10 bit (0 … 1023)
Galvanic separation	no
Measuring principle	non-differential, single-ended
Input resistance	125 Ω / 0.1 %
Accuracy (of measured value)	± 3 LSB
Repeating accuracy (under same conditions)	within 1 LSB
Temperature error (0 … +55 °C)	± 0.3 % (± 3 LSB)
Conversion time A/D	≤ 50 µs
Overcurrent protection	± 40 mA
Burst protection (IEC1000-4-4)	± 1 kV, with unshielded cables ± 2 kV, with shielded cables
Time constant of input filter	typically 1 ms
Internal current consumption (from +5 V bus)	8 mA
Internal current consumption (from V+ bus)	5 mA
External current consumption	0 mA
Terminals	Pluggable 10-pole spring terminal block for Ø up to 2.5 mm², plug type A

Indicators and connections



Block diagram

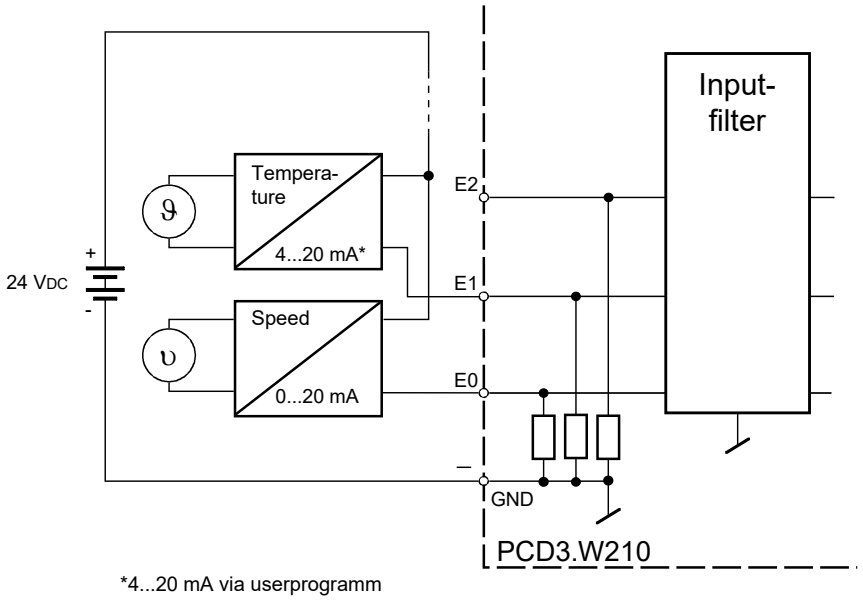


Type: PCD3.W200, PCD3.W210

Connection concept for two-wire transmitter

The input signals are connected directly to the 10-pole terminal block (E0 … E7 and COM). 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...20 mA two-wire transmitter



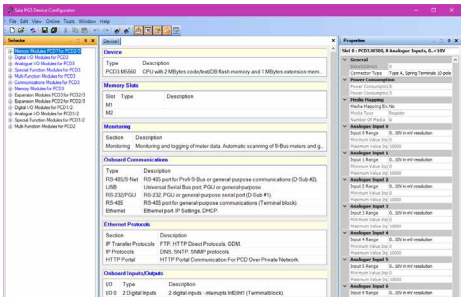
*4...20 mA via userprogramm

!	The reference potentials of signal sources should be wired to a common GND connection (“–” and “COM” terminals). To obtain optimum measurement results, any connection to an earthing bar should be avoided.
!	If shielded cables are used, the shielding should be connected to an earthing rail.
!	Input signals with incorrect polarity significantly distort the measurements on the other channels.

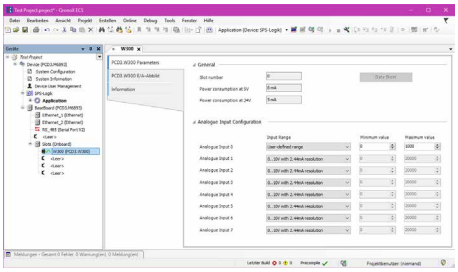
Two-wire transducers (0…20 mA and 4…20 mA transmitters) need a 24 VDC supply in the measuring trunk.

Configuration

Saia PCD® Classic

PCD-System	Evaluation
Classic	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator or Network Configurator). 

Saia PCD® IEC-Controller

PCD-System	Evaluation
IEC-Controller	The evaluation is performed by the firmware. It reads the values according to the configuration (Device Configurator) 

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

PCD3.W210

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W210	8 analogue inputs 0…20 mA, 10 bit	Analogue input module, 8 inputs (channels), resolution 10 bit, signal range 0…20 mA (4…20 mA via software), the channels themselves not separated, connection with pluggable spring terminals, plug-in type A ((4 405 4954 0) included	80 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 0used 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.

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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

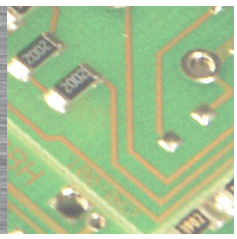
Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Document No.: 51-52-03-79
Rev.2.1
May 2020

Honeywell

PCD3.W600

Analog output module, 4 channel, 12 Bit, 0 … 10 V



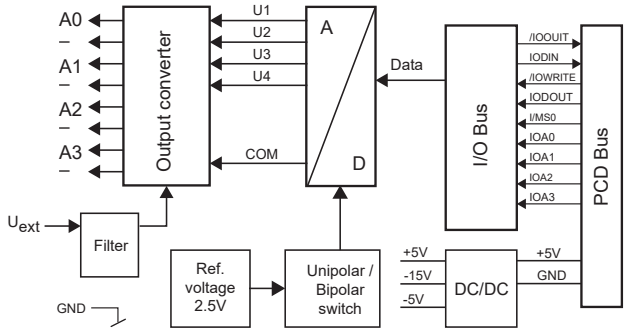
High-speed output module for general use with 4 channels, each with 12 bit resolution and voltage 0 … 10 V.

PCD3.W600

Technical specifications

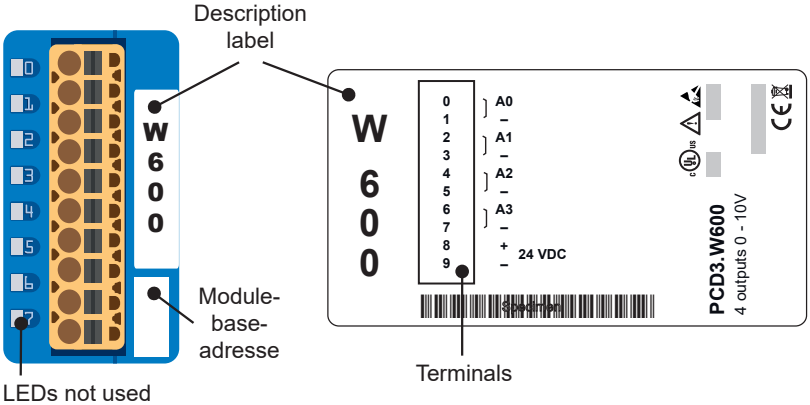
Number of outputs (channels)	4, short circuit protected
Signal range	0…10 V
Resolution (value of least significant bit(LSB))	2.442 mV
Galvanic separation	no
Resolution (representation)	12 bit (0 … 4095)
Conversion time A/D	typically 10 µs
Load impedance	Voltage: > 3 kΩ
Repeating accuracy (under same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

Block schematic



Typ: PCD3.W600, PCD3.W610

Indicators and connections

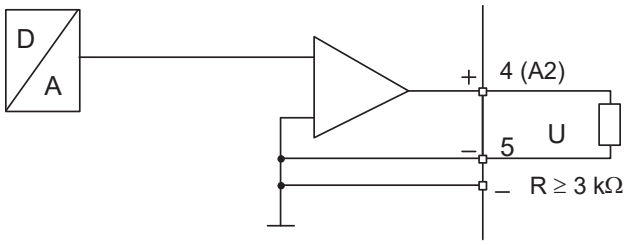


LED	Output
0	O0
1	O1
2	O2
3	O3

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



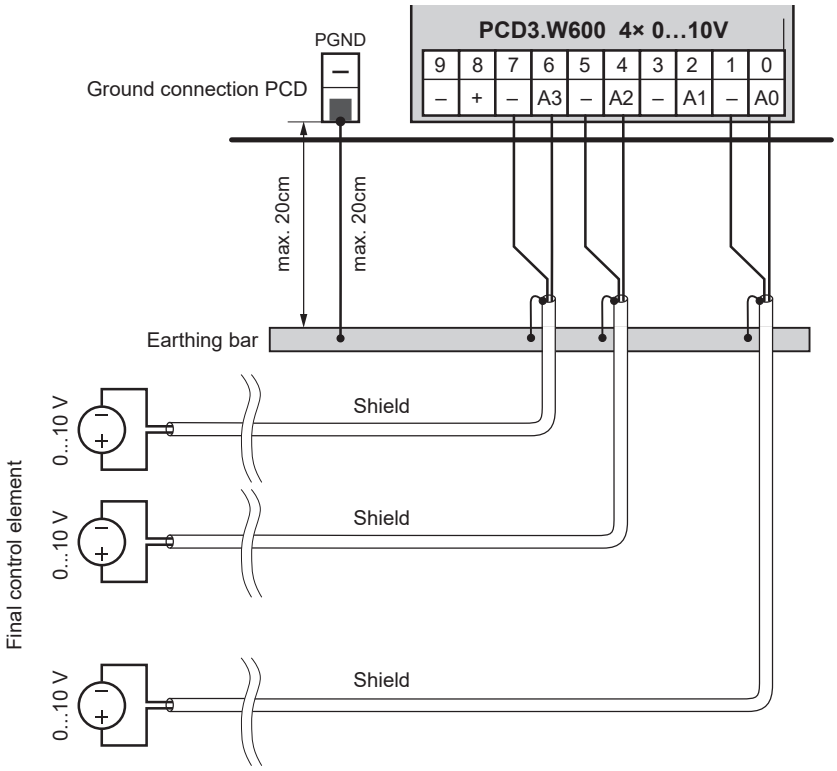
During start-up, a voltage of 5 V is sent to all outputs of the W600 module. The start-up phase lasts 40 ms, then 0 V is sent to the outputs.

The external power supply of 24 VDC at terminals 8 and 9 is not required.

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



PCD3.W600

4 405 4954 0

Ordering information

Type	Short description	Description	Weight
PCD3.W600	4 analogue outputs, 12 bit. 0 … 10 V	Analogue output modules, 4 inputs (channels), resolution 12 bit, signal range 0 … 10 V. The channels themselves not separated. Connection with pluggable spring terminals, plug-in type A (4 405 4954 0) included	80 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 0used 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.

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.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

Specifications are subject to change without notice.

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

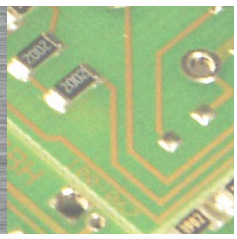
Honeywell

Document No. 51-52-03-92
Rev. 1.0
June 2020

Honeywell

PCD7.F150S

Serial interface module RS-485 with galvanic isolation



Description

In addition to the onboard interfaces, the interface functions can also be expanded in a modular way using the various slots. The interface module PCD7.F150S supports the RS-485 industry standard.

Electrical isolation is achieved using three optical couplers and a DC/DC converter.

PCD7.F150S

RS-485 connection

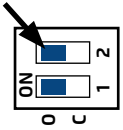
Terminal	RS-485	Peripherie-device
x0 PGND	GND	PGND
x1 RX - TX	RS-485	RX - TX
x2 /RX - /TX	RS-485	/RX - /TX

Bus termination

PCD7.F150S

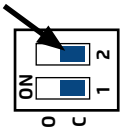
RS-485 terminator

Slider



Open, not terminated (factory setting)

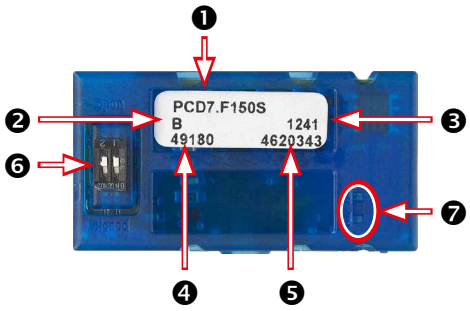
Slider



Closed, terminated

The terminating connectors can be linked using slide switches (CLOSED) or isolated (OPEN).

What is where ?



1. Order number
2. Hardware version
3. Manufacturing date
4. Production number
5. Production batch
6. DIP-switchs terminators if available
7. Rx/Tx LEDs

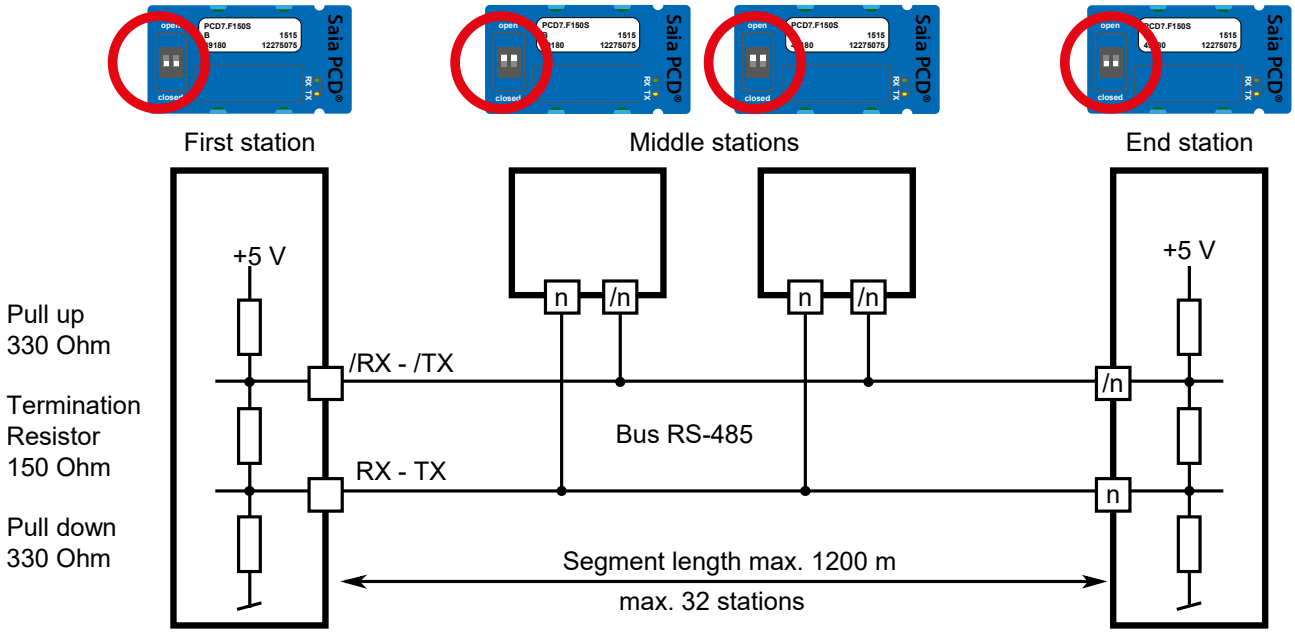
LEDs

The both LEDs 7 Rx and Tx have the following meaning:

- LED Rx Receive data detection
- LED Tx Transmission data detection

Bus termination:

The bus termination must be made at the cable ends of the RS-485 cable. For this, the necessary terminating resistors in the PCD7.F150S must be connected by means of switches on the respective module.



First station and Last station = ‘close’, all other stations = ‘open’.

PCD7.F150S

Ordering information

Type	Short description	Description	Weight
PCD7.F150S	Serial interface modules	Serial interface module RS-485 with galvanic isolation	7 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.

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.

Sales and Service

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

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) hfs-tac-support@honeywell.com

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: +80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC) hfs-tac-support@honeywell.com

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.

Honeywell Process Solutions
2101 CityWest Blvd, Houston TX 77042
Honeywell House, Skimped Hill Lane

Bracknell, Berkshire, England RG12 1EB UK
Building #1, 555 Huanke Road,

Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

Document No.: 51-52-03-100
Rev.1.0
May 2020