# МОДУЛИ ДЛЯ ПЕРЕДАЧИ ДАННЫХ
## Технические характеристики
## HPCD3.C200

# 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

4 slots for I/O modules

Ground connection for I/O modules

I/O bus for standard modules

Terminal for CPU or I/O module holder

LED indicator for internal 5 V supply voltage

Ground connection

24 VDC power supply terminal

Expansion connection for I/O module holder

HPCD3.C200
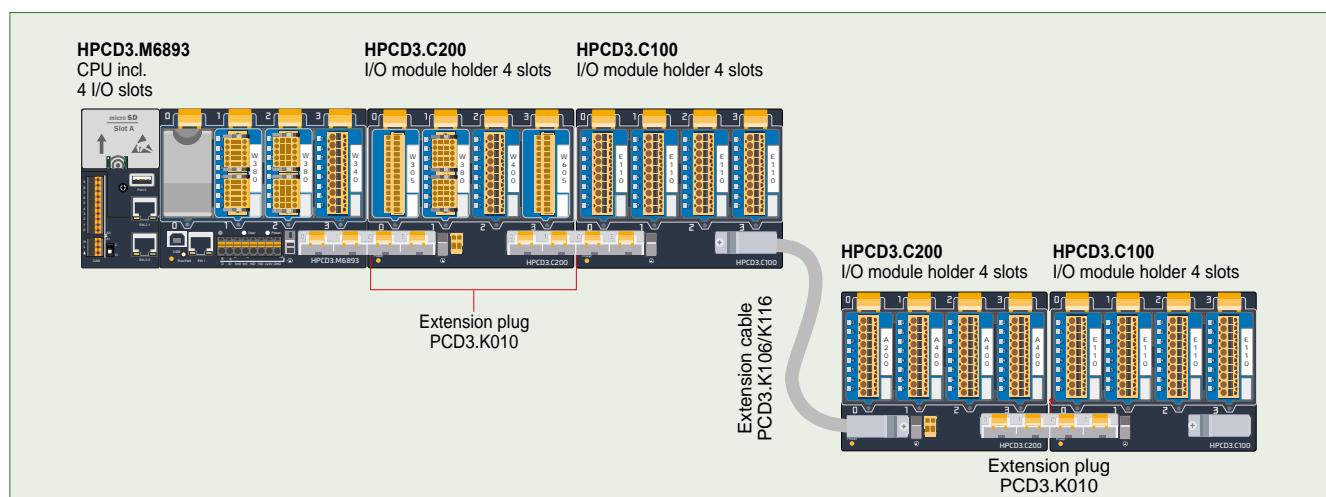
All standard I/O modules can be used in the expansion module holders.
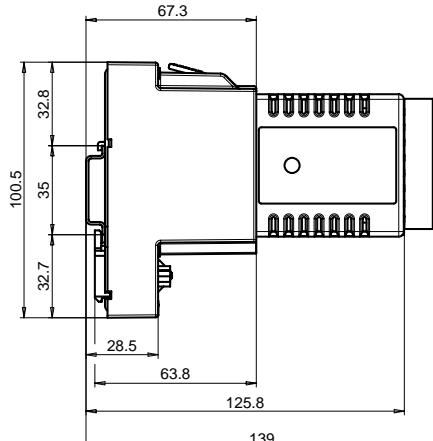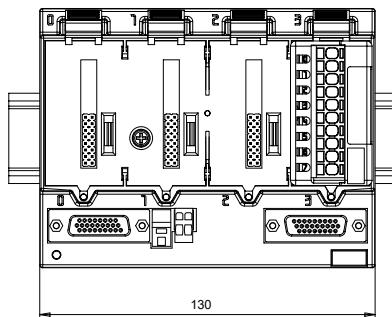
Communication modules or other intelligent modules can only be used in the slots of the Basic CPU.

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

HPCD3.M6893
CPU incl.
4 I/O slots

HPCD3.C200
I/O module holder 4 slots

HPCD3.C100
I/O module holder 4 slots

Extension plug
PCD3.K010

Extension cable
PCD3.K106/K116

HPCD3.C200
I/O module holder 4 slots

HPCD3.C100
I/O module holder 4 slots

Extension plug
PCD3.K010
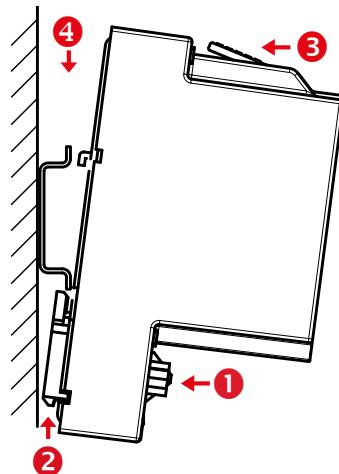
## Dimension Drawing
### HPCD3.C200



**Planning data**

← Step files (3D)

← BIM objects

## Connections of the HPCD3.C200

Bus connection from CPU or module carrier

Bus connection to module carrier



LED power ok

Earth

Supply 24 VDC

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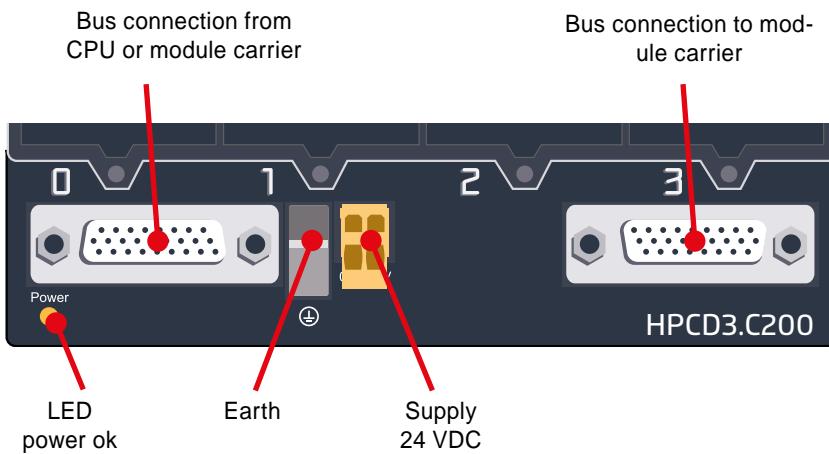


❶ Press lower part of housing onto mounting rail

❷ Push up against the spring force up to the stop

❸ Hook in over the upper edge of the mounting rail and yield to the spring force

❹ For safety, push the housing into the mounting rail from top to bottom

Check if the device is securely fixed.
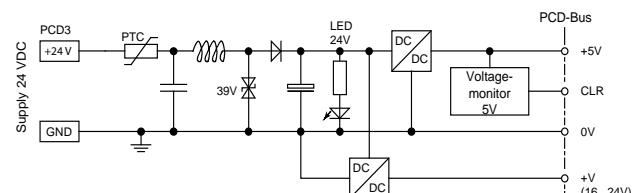
### Dismounting from DIN rail
To remove the housing, push upwards and pull out.

## Technical data
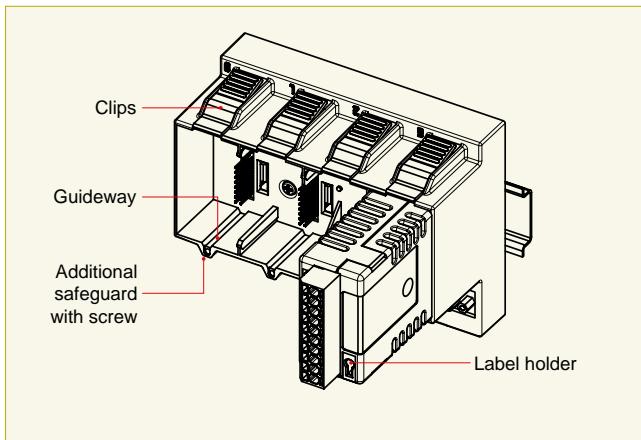
| Technical data | | |
|---|---|---|
| Number of module slots | 4 | |
| Description | 4 I/O modules | |
| External power supply (maximum load see below) | 24 VDC | |
| Load capacity from +5 V bus HW versions A and B | 1000 mA | |
| Load capacity from +5 V bus Starting with HW version C | 1500 mA | |
| 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% | $310\ mA - \dfrac{I+5V}{15}\ mA$ |
| | 24 VDC −10...+10% | $630\ mA - \dfrac{I+5V}{3.8}\ mA$ |

## 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 |

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