Protrol
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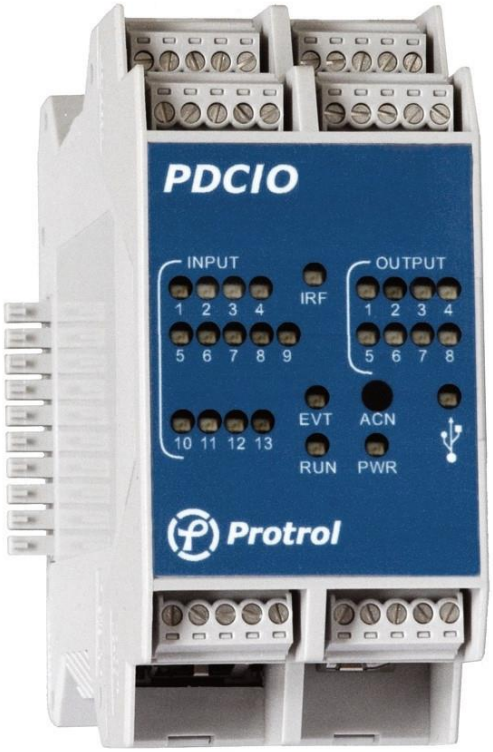
# PDCIO

## *Compact and scalable extended I/O for IPC4020*




**PDCIO is a compact and scalable I/O with functions for supervision and control of small to medium sized secondary substations. It is used to expand IPC4020 fault passage indicators when additional I/O is required.**

The object settings of the PDCIO are configured using the web interface of the IPC4020 fault passage indicator.

D A T A S H E E T

# PDCIO

## Extended I/O, base module PDCIO

PDCIO is a compact DIN mounted sub RTU with scalable architecture. The purpose is to provide additional I/O for IPC4020 fault detectors. The following objects can be transmitted.

| | |
|---|---|
| Binary objects: | Binary inputs<br>Binary outputs<br>Temperature alarm |
| Analog objects: | Temperature<br>Battery supervision signals[1] |

[1] The battery supervision function is optional.

## Other features

### Scalable

The backplane expansion bus allows PDCIO to connect to and identify additional input and output modules. The PDCIO base module powers the expansion modules through the backplane. It is possible to connect three modules for binary inputs and one for analog outputs.

### Physical User Interface

Active binary inputs and outputs are indicated by separate LEDs.

LEDs also provide status for power supply, internal supervision, and activity of the communication ports.

### Web Interface

The PDCIO device has a built-in web interface for local and remote access using TCP/IP. This interface enables the user to access status information and to configure the device. It is also possible to upgrade firmware from the web interface.

Configuration of object settings is made using the web interface of the IPC4020 device that controls PDCIO.

## Technical Data

### General

| | |
|---|---|
| Dimensions[2]: | 45 × 111 × 99 mm<br>(w × h × d) |
| Weight: | 220 g |
| Assembly: | DIN bracket |
| Ambient temp: | -40 – +70 °C |
| Supply voltage: | 24 – 48 VDC |
| Supply current[3]: | appr 30 mA at 24 VDC |
| Standards: | EN 61000-6-2 – Immunity<br>EN 61000-6-4 – Emission Class B<br>EN 61000-6-5 – For installation in medium voltage substations<br>EN 60068-2 – Environmental |
| Tests according to: | EN 61000-4-2<br>EN 61000-4-3<br>EN 61000-4-4<br>EN 61000-4-6<br>EN 60068-2-1<br>EN 60068-2-2<br>EN 60068-2-30 |
| EU directives: | ROHS, EMC |

[2] PDCIO without expansion modules. The width 45 mm is not taking the backplane contact into account.

[3] Without expansion modules.

### Inputs and Outputs:

| | |
|---|---|
| Binary inputs: | One group with 9 BI , 24 – 110 VDC.<br>One group with 4 BI, 24 – 110 VDC. |
| Binary outputs: | Two groups with 4 relays,<br>max 115 VAC / 150 VDC.<br>Breaking current 5 A at 30 VDC. |
| Analog input: | 1 AI, 2- or 3-wire Pt100 |

### Service Port:

| | |
|---|---|
| USB: | Type B |
| Ethernet: | RJ45 10/100Base – TX Full Dupl. |

### Time Synchronisation:

| | |
|---|---|
| Time synch: | Received from IPC4020 |

*Ensto Protrol AB*
Alfagatan 3
431 49 Göteborg



Tel: +46 31 45 82 00
internet: www.protrol.se
email: info@protrol.se

### System Port:

| | |
|---|---|
| RS232/485: | Plugin contact at PxC modem front. 2-wire RS485 communication is supported. 9 600 bps. |


# *Ordering Information*

### Product Code

| | |
|---|---|
| Basic version PDCIO: | 303215 |

### Options

The following extra functionality can be specified upon order.

***Hardware options:***

| | |
|---|---|
| mA input replaces Pt100: | 850101 |
| +-30 V input replaces Pt100: | 850102 |

***Software options:***

| | |
|---|---|
| Battery supervision function[4]: | 807811 |

[4] Also requires hardware option +-30 V input, 850102.

### Accessories

| | |
|---|---|
| PBI, 15 binary inputs: | 303220 |
| PBO, 12 binary inputs: | 303230 |
| PAI, 8 analog inputs, 0/4-20 mA: | 303240 |
| PAI, 8 st analog inputs, 4 x 0/4-20 mA, 1 x 0-30 V, 3 x Pt100: | 303241 |
| PxC, RS485 modem, isolated RS485: | 404330 |
| PxC, RS485 modem, non-isolated RS485: | 404331 |

Binary inputs and outputs of expansion modules have identical technical data as those of PDCIO. The analog inputs are isolated.

*Ensto Protrol AB*
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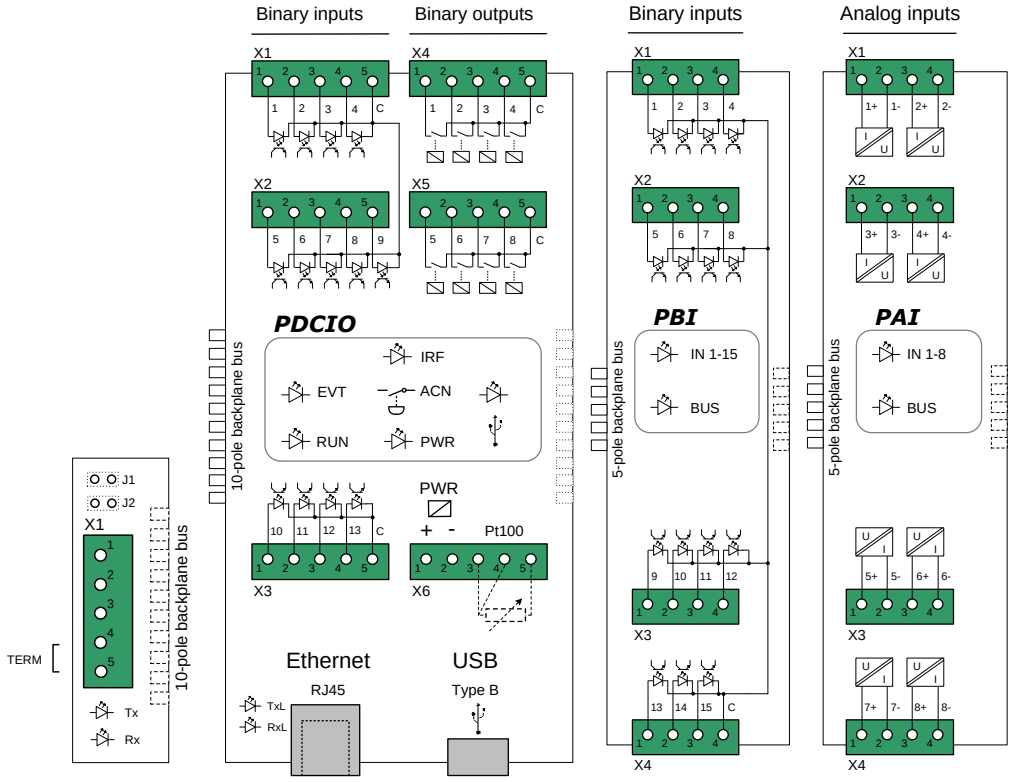
# Overview Diagrams



## *Typical Application*

PDCIO is connected to IPC4020 and IPC4020exp3 with RS485. PDCIO can be expanded with additional modules for inputs and outputs. These interface modules are jacked onto the PDCIO device, thus connecting the added modules to the backplane bus. The grey module to the left in the picture below is the compact RS485 modem PxC. This module also jacks directly onto the backplane bus of PDCIO.


Ensto Protrol AB, Alfagatan 3, SE - 431 49 Mölndal, SWEDEN

Tel: +46 31 45 82 00. E-mail: info@protrol.se

www.protrol.se