

# PDC

## Protrol Distribution Controller



### Introduction

PCD is a compact DIN rail mounted controller specially developed for super-vision of transformer substations. Its scalable architecture makes it suitable for both secondary and primary substations. The basic controller contains power supply and basic I/O to comply with the requirements of small secondary substations. The controller expansion bus allows an extension of up to 14 I/O modules for additional binary and analogue signals.

### Technical data

#### General data

Physical size:	99 x 115 x 22.5 mm.
Mounting:	DIN-rail
Operating temperature:	-40 - +60 °C
Power supply:	24 - 48 VDC
Tot. power consumption:	18-50 mA at 24 VDC
Standards:	EN61000-4-x, Level 3 EN61000-6-4, Class B

#### PDC basic RTU-functions

Number of BI:	7, 20-125 VDC
Input caption time:	10 ms

Time resolution:	1 ms, max 30 ppm
Time synchronization:	PPM, PPS, or protocol
Pulses:	2 BI selectable as pulse inputs.
Number of BO:	2 relays, with 5 Amp breaking capacity 1 bi-stable relay, with 5 Amp breaking capacity. <i>Breaking capacity at 24 VDC and L/R=40.</i>
Number of AI:	1 ununs. 0-20 (4-20) mA

#### Communication interfaces:

- 1, RS232 settable between 300 - 57600 bps
- 1, USB (Mini type B) for configuration of objects and protocol data with Protrol Tools.

#### Communication protocol:

- RP570/571/07
- IEC60870-5-101

### Controller expansion

The PDC bus is a 2 wire serial bus with a 100 kHz throughput. The extension modules act as slaves to the PDC on this bus. The bus also supplies the expansion modules with power.

The expansion modules are:

PBI (max 6): 15 binary inputs (20-125 VDC)

PBO (max 4): 12 binary outputs

PAI (max 4): 8 analogue inputs (0/4-20 mA)

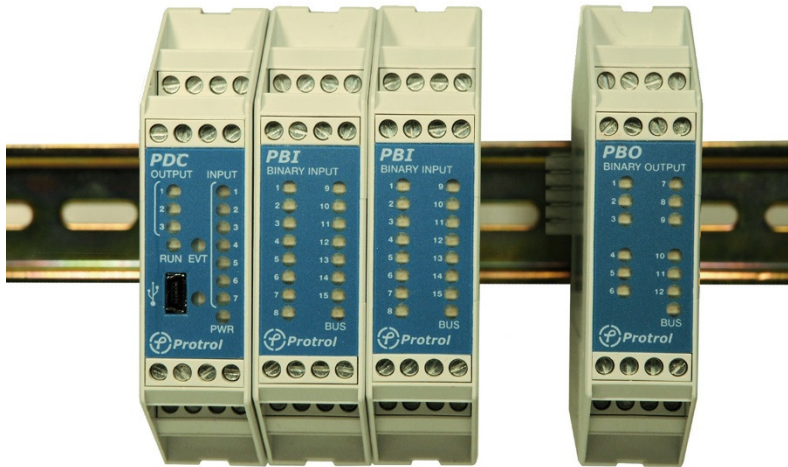


Figure 1: Expansion principles.

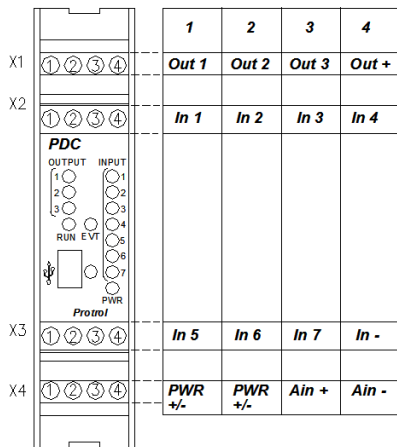


Figure 2: Terminal designation.

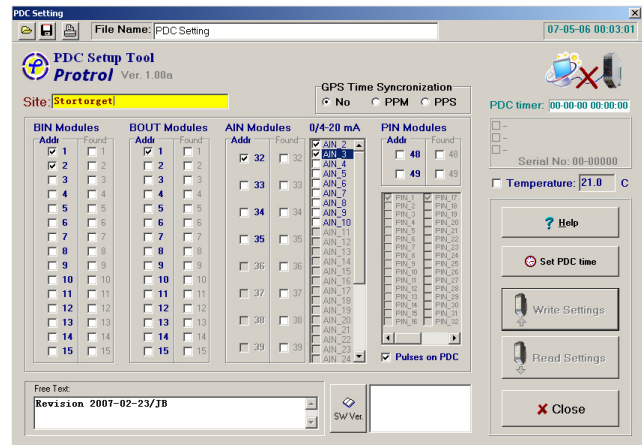


Figure 3: PDC setup dialogue.

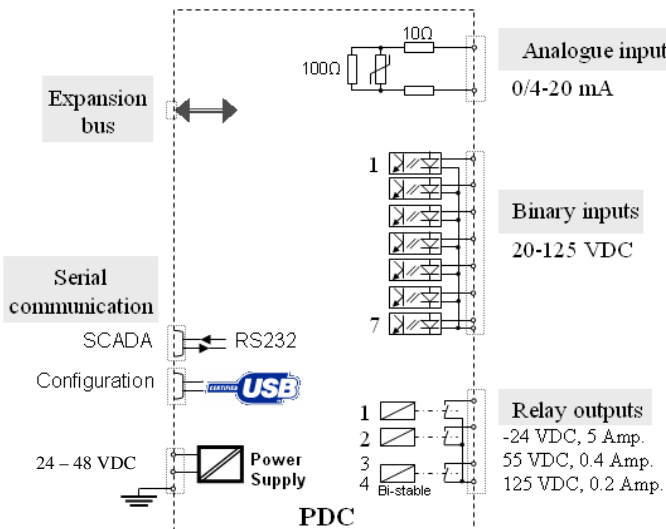


Figure 4: Schematic overview.

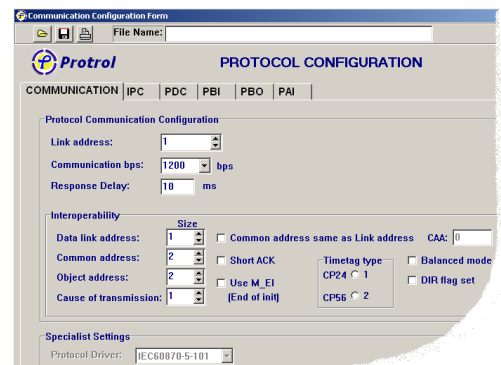


Figure 5: Protocol configuration dialogue.