



DATA LOGGER

PD22 TYPE



APPLICATION

The PD22 logger is destined for telemetering computer systems as an intermediate element in the data exchange between the object side and the master system.

The logger speeds up the data exchange between devices and the master system. Moreover, it allows to increase the number of devices connected to the system.

Two serial ports are used for communication. The first port (Port 1) having two RS-485 interface systems, destined to communicate with devices working in the object. The second port (Port 2) has RS-485, RS-232C and USB interfaces, destined to communicate with the master system through wire links.

An asynchronous MODBUS character communication protocol has been implemented on the serial link. The logger has a real time clock.

Parameter set of the logger serial link:

- address - 1... 247
- baud rate - 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bit/s,
- working mode - ASCII, RTU,
- information unit - ASCII: 8N1, 7E1, 7O1; 7N2
- RTU: 8N2, 8E1, 8O1, 8N1

The data logger realizes following functions:

- readout of process parameters values from devices which are accessible as logger parameters,
- archiving of process data with a defined frequency, which are made available on demand for the master system (390000 records),
- archiving of emergency events (44400 events),
- data exchange consisting in transmission of demands from the master system to the specific device, eg. readout or parameter record,

An exemplary network topology with the use of data loggers is shown on the Fig.1.

TECHNICAL DATA

Serial port I:

- baud rate 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bit/s
- information unit 1 start bit, 7 or 8 data bits, 1 bit for even/odd parity; 1 or 2 stop bits
- interface 2 × RS-485

Serial port II:

- baud rate 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bit/s
- information unit 1 start bit, 7 or 8 data bits, 1 bit for even, odd parity; 1 or 2 stop bits
- interface RS-485
RS-232
USB 1.1 - cable no longer than 3 m

Transmission protocol

MODBUS

Power consumption

≤ 4 VA

Rated operation conditions:

- supply voltage 20...24...50 V a.c./d.c. or 85...230...253 V a.c./d.c.
- supply voltage frequency 45...50...66 Hz
- ambient temperature 0...23...50°C
- relative air humidity < 95% (condensation inadmissible)
- external magnetic field < 400 A/m
- working position any

Storage and transport conditions:

- ambient temperature - 20... 70°C
- relative air humidity < 95% (condensation inadmissible)

Ensured protection class by the housing:

- from the frontal plate IP 40
- from the terminal side IP 20

Dimensions

45 × 120 × 100 mm

Weight

0.25 kg

Fixing

the housing is adapted to be mounted on a 35 mm rail

Electromagnetic compatibility:

- immunity EN 61000-6-2
- emission EN 61000-6-4

Safety requirements acc. to EN 61010-1:

- installation category III
- pollution degree 2

Maximal phase-to-earth working voltage:

- for the supply circuit 300 V
- for other circuits 50 V

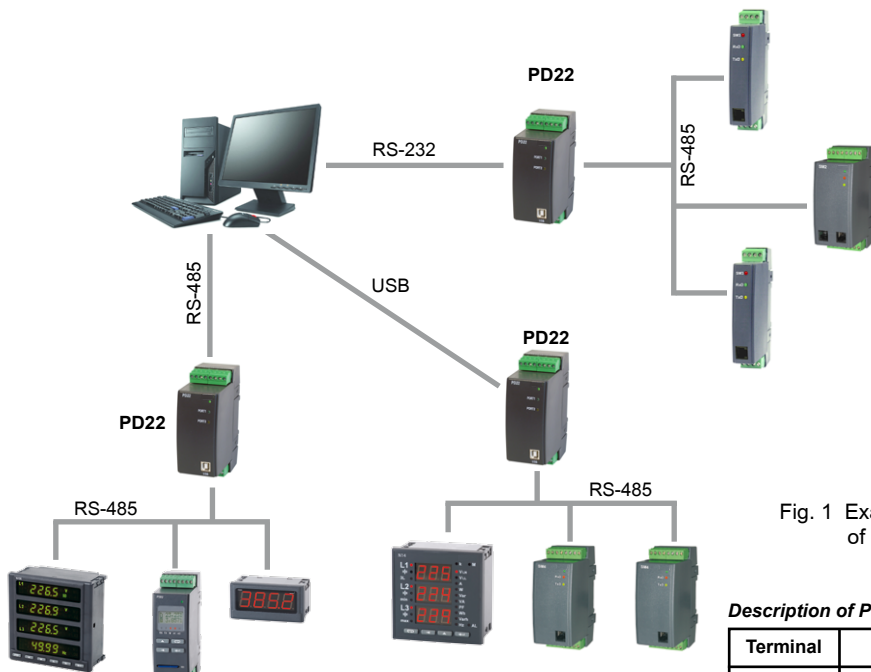
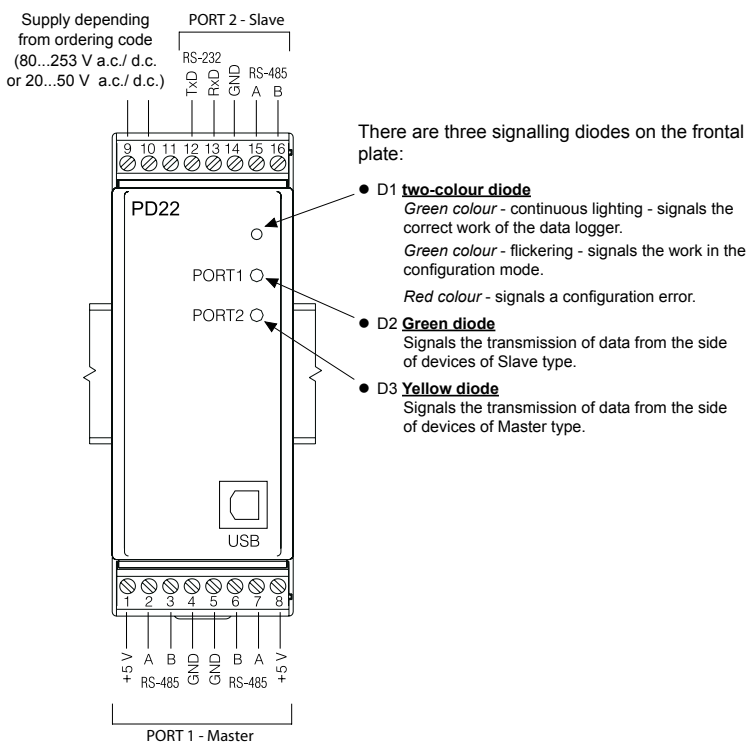


Fig. 1 Exemplary network topology with the application of PD22 data loggers

ELECTRICAL CONNECTIONS OF PD22 DATA LOGGER



Description of PD22 data logger leads

Terminal	Terminal description
1	Output + 5V (for bus polarisation)
2	Line A of the first RS485 interface of Port 1
3	Line B of the first RS485 interface of Port 1
4	Line GND of RS485 interface of Port 1
5	Line GND of RS485 interface of Port 1
6	Line B, second RS485 interface of Port 1
7	Line A of the second RS485 interface of Port 1
8	Output + 5V (for bus polarisation)
9, 10	Data logger supply lines
11	Not used
12	Output TxD of the RS232 interface of Port 2
13	Input RxD of the RS232 interface of Port 2
14	Line GND of the RS232 and RS485 interface of Port 2
15	Line A of the RS485 interface of Port 2
16	Line B of the RS485 interface of Port 2

EXECUTION CODES AND ORDERING WAY

DATA LOGGER	PD22 -	X	XX	X
Supply voltage:				
85... 253 V a.c./d.c.	1			
20... 50 V a.c./d.c.	2			
on order ¹⁾	X			
Kind of version:				
standard.....	00			
custom-made ¹⁾	XX			
Additional acceptance tests:				
without an extra quality inspection certificate	8			
with an extra quality inspection certificate	7			
acc. customer's agreement ¹⁾	X			

¹⁾ The version code is established by the manufacturer

Example of coding

The code **PD22 - 1- 00-7** means:

- PD22** – PD22 data logger,
- 1** – supply voltage: 85...253 V a.c./d.c.,
- 00** – standard version,
- 7** – with a quality inspection certificate.