PD 100A

Printing data system

Version 1.01 of 1st December 2006

File pd100a_eng_v1.01.pdf

PT

EVERY CONTROL S.r.l.

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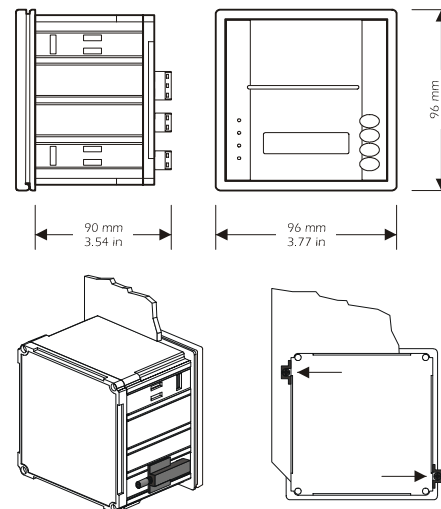Phone 0039-0437-852468 ▪ Fax 0039-0437-83648

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ENGLISH

1   PREPARATIONS

1.1   How to install the device

Panel mounting, panel cut out 92 x 92 mm (3.62 x 3.62 in), with

screw brackets (they are supplied by the builder).

90 mm
3.54 in

96 mm
3.77 in

96 mm
3.77 in

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installation with screw brackets (position the brackets as indicated); you have to moder-

ate the clamping torque, in order not to damage the box and screw brackets.

2   OPERATION

2.1   How to turn the device ON/OFF

▪ press   (on/off)

During the normal operation the device prints and/or stores the

values the main probes are reading and the events.

During the OFF mode the device stores the values the main

probes are reading and the events.

2.2   How to feed the paper by hand

▪ press   (feed)

2.3   How to change the roll of paper

▪ turn the device OFF

▪ press   (👆)   to open the panel at the

                                                    front of the device

▪ slip the roll of paper into the lower side of the roller

▪ press   (feed)   as long as the roller drags

                                                    the roll of paper
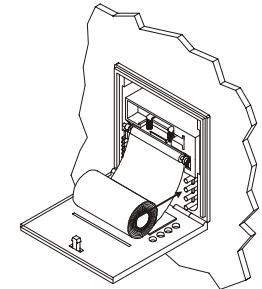
▪ put the roll of paper into its box
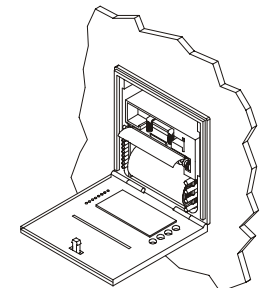
▪ close the panel at the front of the device.

3 PRINTING MODES

3.1 Off Line Report

The device stores the events; as soon as the acquisition interval you have set with parameter `Acq. Time` passes, the device will also store the values the main probes will be reading.

In order to print the data the device has stored:

▪ press ⏷ the device will show **Print Report?**

▪ press ⏶ within 10 s ⟳ [1] .

In order to activate this printing mode parameter `Report Setup` must have value OffLine.

Parameter `Report Type` allows to choose the data to print.

[1] if parameter `Remote Print` has value Yes, you can print the data the device has stored by using the digital input for remote print as well.

3.2 Daily Report

The device stores the events; as soon as the acquisition interval you have set with parameter `Acq. Time` passes, the device will also store the values the main probes will be reading.

The device will print the data it has stored at the time you have set with parameters `Print Hour` and `Print Minute` [2] .

In order to activate this printing mode parameter `Report Setup` must have value Daily.

Parameter `Report Type` allows to choose the data to print.

[2] the device will print the data it has stored during the interval between two times you have set with parameters `Print Hour` and `Print Minute`

3.3 Periodic Report

The device stores the events; as soon as the acquisition interval you have set with parameter `Acq. Time` passes, the device will also store the values the main probes will be reading.

As soon as the print interval you have set with parameter `Print Period` passes, the device will print the data it has stored [3] .

In order to activate this printing mode parameter `Report Setup` must have value Periodic.

Parameter `Report Type` allows to choose the data to print.

[3] the device will print the data it has stored during the last interval you have set with parameter `Print Period`

3.4 On Line Report

The device prints and stores the events; as soon as the acquisition interval you have set with parameter `Acq. Time` passes, the device will also print and store the values the main probes will be reading.

In order to activate this printing mode parameter `Report Setup` must have value OnLine.

4 CONFIGURATION PARAMETERS

4.1 How to set the configuration parameters

Configuration parameters are arranged on two levels.

In order to gain access the procedure:

▪ press ⏶ the device will show **password**

▪ press ⏶ and ⏷ the device will show **<>**

In order to gain access level "User" :

▪ press ⏶ or ⏷ to set " **19** "

▪ press ⏶ and ⏷ the device will show **Report Setup**

In order to gain access level "Installer" :

▪ press ⏶ or ⏷ to set " **-19** "

▪ press ⏶ and ⏷ the device will show **Report Setup**

In order to select a parameter:

▪ press ⏶ or ⏷

In order to change the value of the parameter:

▪ press ⏶ and ⏷ the device will show **<>** and ...

▪ press ⏶ or ⏷ then ...

▪ press ⏶ and ⏷

In order to quit the setting procedure:

▪ do not operate for the time you have set with parameter **Timeout Setup**

The modification will take effect as soon as the device will quit the setting procedure.

Year Setup	2000	2050	year	2003	real year

LABEL	MIN.	MAX.	U.M.	DEF.	NETWORK OF INSTRUMENTS
N. Channel	1	8	—	1	number of instruments in the network
Baud rate	2400	19200	baud	9600	baud rate (2400 = 2.400 baud, 4800 = 4.800 baud, 9600 = 9.600 baud, 19200 = 19.200 baud) [8]
N. Com Err	1	10	—	5	number of attempts to communicate with an instrument before activating the alarm communication device-instrument
Family Type	—	—	—	—	reserved

[4] as soon as the power supply recovers the device stores the values the main probes are reading immediately

[5] if you modify the value of the parameter, this will erase the data the device has stored

[6] as soon as you will quit the configuration parameters setting procedure, the parameter will automatically get value No

[7] if the parameter has value Yes, the device will print the set up as soon as you will quit the configuration parameters setting procedure

[8] assign every instrument in the network the same baud rate (it is usually parameter L4).

9 ELECTRICAL CONNECTION

9.1 Electrical connection

up to 8 instruments (the maximum distance between instruments is 100 m, 328 ft) [9]
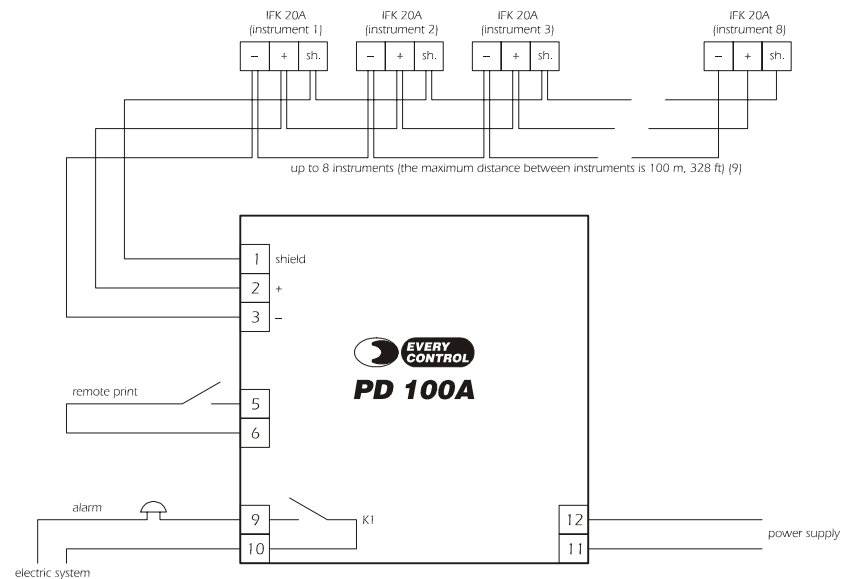
[9] the network uses the standard RS 485: in order to realize the network of instruments you need as many IFK 20A as the instruments in the network are (IFK 20A is the hardware driver you need to interface instruments belonging to the FK series, with serial port, with a RS 485 network); realize the network of instruments by using a twisted pair. In order to reduce the reflections on the signal transmitted through the cable, plug in the terminating resistor of the last instrument of the network. Assign every instrument in the network an address (it is usually parameter L1) univocally (to modify the value of the parameter look at the data sheet); assign the addresses in succession (for example, if you are using three instruments, assign the addresses 1, 2 and 3).

Report Type	—	—	—	All	data to print by using the printing modes Off Line Report, Daily Report and Periodic Report (All = historical of temperatures and historical of alarms, Historic = historical of temperatures, Alarm = historical of alarms, it is important if `Report Setup` ≠ OnLine)
Print Hour	0	23	h	8	if `Report Setup` = Daily, printing time (hours) by using the printing mode Daily Report (look at `Print Minute` as well); if `Report Setup` = Periodic, time (hours) the device begins counting the print interval (that is parameter `Print Period`) by using the printing mode Periodic Report (look at `Print Minute` as well)
Print Minute	0	59	min	30	if `Report Setup` = Daily, printing time (minutes) by using the printing mode Daily Report (look at `Print Hour` as well); if `Report Setup` = Periodic, time (minutes) the device begins counting the print interval (that is parameter `Print Period`) by using the printing mode Periodic Report (look at `Print Hour` as well)
Print Period	1	250	h	24	print interval by using the printing mode Periodic Report (it is important if `Report Setup` = Periodic)
Remote Print	Yes	No	—	No	enabling the input for remote print (it is important if `Report Setup` = OffLine)

LABEL	MIN.	MAX.	U.M.	DEF.	GENERIC SETTINGS
Acq. Time	1	360	min	15	acquisition interval
PF Alarm	0	60	min	1	lack of power supply alarm exclusion time [4]

LABEL	MIN.	MAX.	U.M.	DEF.	ERASING THE DATA THE DEVICE HAS STORED
Memory Type	0	1	—	0	controlling the data when the device is running out of memory (0 = the device will not print and store any data, 1 = the device will erase the oldest data in order to store the newest) [5]
Delete Memory?	Yes	No	—	No [6]	erasing the data the device has stored
Reset Alarm?	Yes	No	—	No [6]	erasing the historical of alarms

LABEL	MIN.	MAX.	U.M.	DEF.	PRINTING THE DEVICE SET UP
Print Setup?	Yes	No	—	No	printing the device set up [7]
Timeout Setup	5	100	s	10	time without operating with the buttons in order that the device can quit the configuration parameters setting procedure

LABEL	MIN.	MAX.	U.M.	DEF.	CLOCK
Min Setup	0	59	min	0	real minute
Hour Setup	0	23	h	0	real hour
Day Setup	1	31	day	1	real day (of the month)
Month Setup	1	12	month	1	real month

5 SIGNALS

5.1 Signals

LED	MEANING
on/off	ON/OFF LED / if it is tit, the device will be in the ON mode
alarm	Alarm LED / if it flashes, an alarm will be running
set	Set LED / if it is lit, a configuration parameters setting procedure will be running / if it flashes, a configuration parameter modification will be running
timer	Timer LED / if it is lit, the printing mode Daily Report will be running

INDICATION	MEANING
Printing...	the printing mode On Line Report is running
Recording...	the printing mode Off Line Report or Periodic Report is running
CH1...8 Def	a defrost is running on instrument 1...8
Memory 90% ... 99%	the device is running out of memory
CH1...8 Unknown	instrument 1... 8 does not belong to the list of instruments that can be connected with the network

6 ALARMS

6.1 Alarms

CODE	REASONS	REMEDIES	EFFECTS
CH1...8 Probe Err (main probe alarm on instrument 1...8)	a main probe alarm on instrument 1...8 is running; look at the data sheet of instrument 1...8	look at the data sheet of instrument 1...8	• if the printing mode Off Line Report, Daily Report or Periodic Report is running, the device will store the event; if the printing mode On Line Report is running, the device will print and store the event
CH1...8 AH (upper alarm on instrument 1...8)	an upper alarm on instrument 1...8 is running; look at the data sheet of instrument 1...8	look at the data sheet of instrument 1...8	• if the printing mode Off Line Report, Daily Report or Periodic Report is running, the device will store the event; if the printing mode On Line Report is running, the device will print and store the event • the alarm output will be activated
CH1...8 AL (lower alarm on instrument 1...8)	a lower alarm on instrument 1...8 is running; look at the data sheet of instrument 1...8	look at the data sheet of instrument 1...8	• if the printing mode Off Line Report, Daily Report or Periodic Report is running, the device will store the event; if the printing mode On Line Report is running, the device will print and store the event • the alarm output will be activated
CH1...8 COM Err (alarm communication device-instrument 1...8)	• the connection device-instrument 1...8 is wrong • the connection instrument 1...8-power supply is wrong	• test the connection device-instrument 1...8 • test the connection instrument 1...8-power supply	• if the printing mode Off Line Report, Daily Report or Periodic Report is running, the device will store the event; if the printing mode On Line Report is running, the device will print and store the event

			▪ the alarm output will be activated
Memory Full memory full alarm	the device has run out of memory	erase the data the device has stored (look at parameters Delete Memory? and Memory Type)	the device will not print and store any data

7   TECHNICAL DATA

7.1   Technical data

Box: self-extinguishing grey.

Size: 96 x 96 x 90 mm (3.77 x 3.77 x 3.54 in).

Installation: panel mounting, panel cut out 92 x 92 mm (3.62 x 3.62 in), with screw brackets (they are supplied by the builder).

Frontal protection: IP 30.

Connections: extractable terminal blocks with pitch 5 mm (0.19 in) for cables up to 2.5 mm² (0.38 sq in, input and RS 485 connection) and with pitch 7.5 mm (0.29 in) for cables up to 2.5 mm² (0.38 sq in, power supply).

Ambient temperature: from 0 to 55 °C (32 to 131 °F, 10 ... 90% of relative humidity without condensate).

Power supply: 110-240 Vac, 50/60 Hz (standard) or 12-36 Vac/dc, 50/60 Hz (by request); the maximum power consumption is 12 W.

Clock data maintenance without power supply: typically more than 3 years.

Capacity of memory: if you connect 8 instruments with the network, the acquisition interval is 15 min, without alarms; the capacity of the memory will be 60 days.

Instruments that can be connected with the network: FK 202A, FK 202T, FK 203A and FK 203T.

You can connect up to 8 instruments (the maximum distance between instruments is 100 m, 328 ft).

Digital inputs: 1 for remote print (NO contact) without voltage (it works with 5 mA).

Display: one green LCD (2 lines per 16 characters) 11.5 mm (0.45 in) high, device mode indicators.

Maximum size of the roll of paper: 58 x Ø 30 mm (2.28 x Ø 1.18 in).

Print width: 48 mm (1.88 in).

Dot number (for every line): 384.

Print density: 8 dot per mm.

8   CONFIGURATION PARAMETERS

8.1   Parameters belonging to level "User" (password 19)

LABEL	MIN.	MAX.	U.M.	DEF.	PASSWORD
Password	-99	99	—	0	password

LABEL	MIN.	MAX.	U.M.	DEF.	PRINTING MODE
Report Setup	—	—	—	OffLine	printing mode (OffLine = Off Line Report, Daily = Daily Report, Periodic = Periodic Report, OnLine = On Line Report)
Report Type	—	—	—	All	data to print by using the printing modes Off Line Report, Daily Report and Periodic Report (All = historical of temperatures and historical of alarms, Historic = historical of temperatures, Alarm = historical of alarms, it is important if Report Setup ≠ OnLine)
Print Hour	0	23	h	8	if Report Setup = Daily, printing time (hours) by using the printing mode Daily Report (look at Print Minute as well); if Report Setup = Periodic, time (hours) the device begins counting the print interval (that is parameter Print Period) by using the printing mode Periodic Report (look at Print Minute as well)
Print Minute	0	59	min	30	if Report Setup = Daily, printing time (minutes) by using the printing mode Daily Report (look at Print Hour as well); if Report Setup = Periodic, time (minutes) the device begins counting the print interval (that is parameter Print Period) by using the printing mode Periodic Report (look at Print Hour as well)
Print Period	1	250	h	24	print interval by using the printing mode Periodic Report (it is important if Report Setup = Periodic)
Remote Print	Yes	No	—	No	enabling the input for remote print (it is important if Report Setup = OffLine)

LABEL	MIN.	MAX.	U.M.	DEF.	GENERIC SETTINGS
Acq. Time	1	360	min	15	acquisition interval
PF Alarm	0	60	min	1	lack of power supply alarm exclusion time [4]

8.2   Parameters belonging to level "Installer" (password -19)

LABEL	MIN.	MAX.	U.M.	DEF.	PASSWORD
Password	-99	99	—	0	password

LABEL	MIN.	MAX.	U.M.	DEF.	PRINTING MODE
Report Setup	—	—	—	OffLine	printing mode (OffLine = Off Line Report, Daily = Daily Report, Periodic = Periodic Report, OnLine = On Line Report)