

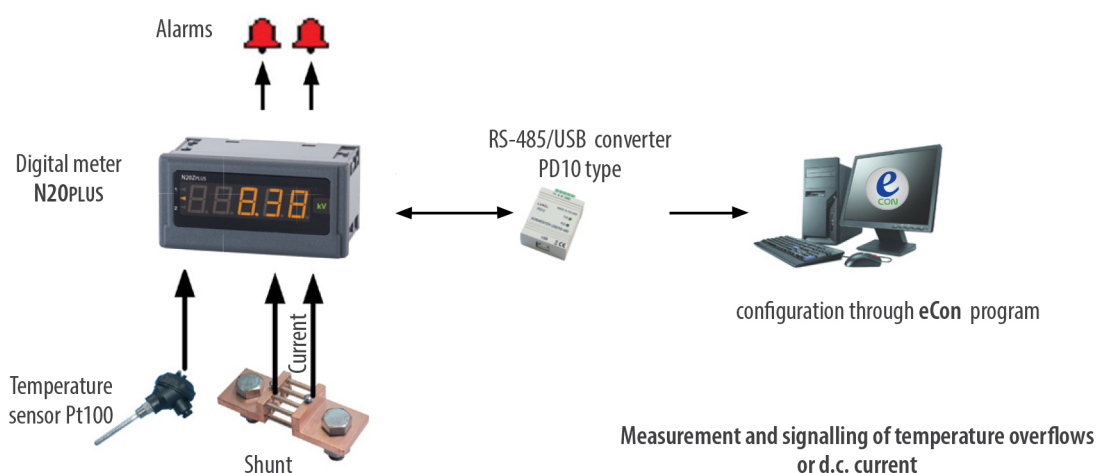


N20PLUS

- DIGITAL PANEL METER WITH RS-485

- Measurement of d.c. current or voltage and temperature (Pt100, J, K).
- Three-colour LED display (5 digits, 14 mm high).
- **Digital output RS-485 - Modbus RTU protocol.**
- Two alarm outputs of OC type.
- Programmable parameters through RS-485 interface using the free eCon software:
 - recounting of indications (individual characteristic),
 - two alarms of OC type operating in 6 working modes,
 - display colour programmable in three intervals,
 - thresholds of displayed overflows,
 - highlight of the unit,
 - automatic or manual compensation: temperature of cold ends (for J, K) or wire resistance (for Pt100),
 - measurement averaging time.
- Additional output 24 V d.c. for supplying of object transducers.

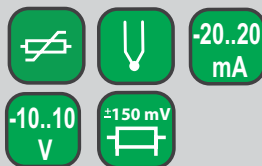
EXAMPLE OF APPLICATION



FEATURES



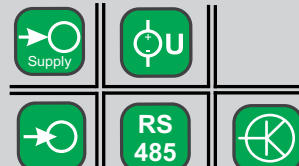
INPUTS



OUTPUTS



GALVANIC ISOLATION



N20PLUS - DIGITAL PANEL METER WITH RS-485

TECHNICAL DATA

INPUTS

Input type	Measuring range	Parameters	Basic error
Voltage input	-1 mV...0 mV...150 mV...165 mV -82.5 mV...-75 mV...75 mV...82.5 mV -1 mV...0 mV...75 mV...82.5 mV -165 mV...-150 mV...150 mV...165 mV -1...0...10...11 V -11...10...10...11 V	Input resistance: > 1 MΩ	± (0.2% of range + 1 digit)
Current input	-1...0...20...22 mA 3.6...4...20...22 mA -22...-20...20...22 mA	Input resistance: 10 Ω ± 1% Input resistance: 10 Ω ± 1% Input resistance: 5 Ω ± 1%	
Temperature measurement Pt100	- 50...400°C		
Temperature measurement through J thermocouple	- 50...1200°C		
Temperature measurement through K thermocouple	- 50...1370°C		

OUTPUTS

Output type	Features
Alarm outputs	• 2 alarm outputs of OC type
Output for external supply of transducers	• 24 V ± 5%, 30 mA

DIGITAL INTERFACE

Interface type	Transmission protocol	Modes	Baudrate
RS-485	MODBUS RTU	8N2, 8E1, 801, 8N1	4.8, 9.6, 19.2, 38.4, 57.6, 115.2 kbit/s

EXTERNAL FEATURES

Readout field	5 digit LED display - indication range: -19999...99999 digit height: 14 mm	Three-colour display (changes of colour depend on the displayed value): red, green, orange.
Weight	< 0.25 kg	
Overall dimensions	96 x 48 x 64 mm	panel cut-out: 92 ^{+0.6} x 45 ^{+0.6} mm
Protection grade (acc. to EN 60529)	from frontal side: IP65	from terminal side: IP 10

RATED OPERATING CONDITIONS

Supply	85...253 V a.c. (45...65 Hz) or d.c., 20...40 V a.c. (45...65 Hz) / 20...60 V d.c.	Power consumption < 6 VA
Temperature	ambient: -10...23...55°C	storage: -25...85°C
Relative humidity	< 95%	condensation inadmissible
Operating position	any	

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Safety requirements		acc. to EN 61010-1

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CONNECTION DIAGRAMS

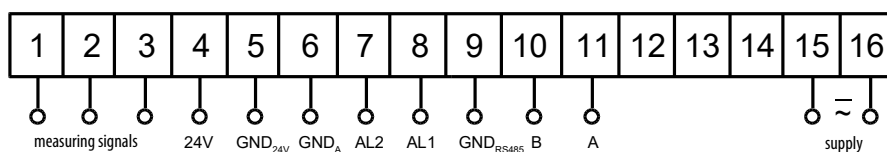


Fig. 1 Electrical connections of the N20PLUS meter.

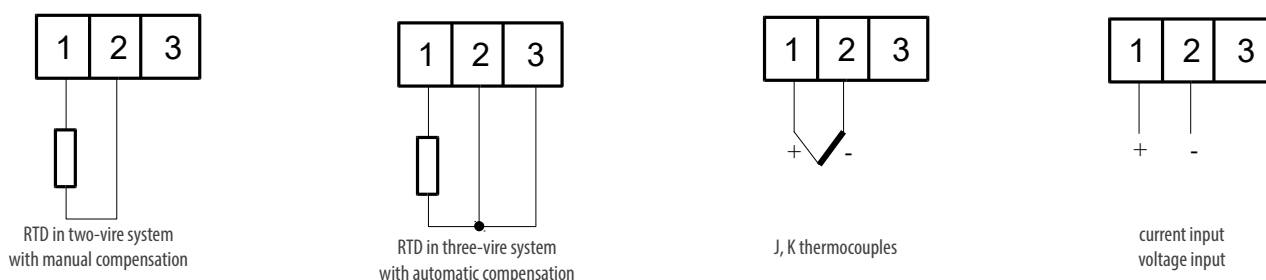


Fig. 2 Connections of measuring signals.

ORDERING

TABLE 1. ORDERING CODE:

N20PLUS	X	X	XX	XX	X	X
Input:						
Pt100: -50...400 °C	1					
Thermocouple J: -50...1200 °C	2					
Thermocouple K: -50...1370 °C	3					
0...20 mA	4					
4...20 mA	5					
± 20 mA	6					
0...75 mV	7					
0...10 V	8					
± 10 V	9					
0...150 mV	A					
± 75 mV	B					
± 150 mV	C					
Supply:						
85...253 V a.c./d.c.	1					
20...40 V a.c./ 20...60 V d.c.	2					
Unit:						
unit code number acc. to table 2			XX			
Version:						
standard				00		
custom-made				XX		
Language:						
Polish					P	
English					E	
Acceptance test:						
without additional quality requirements					0	
with an extra quality inspection certificate					1	
with an extra calibration certificate					2	
acc.to customer's request*					X	

* only after agreeing with the manufacturer

TABLE 2. CODES OF HIGHLIGHTED UNIT:

Code	Unit	Code	Unit	Code	Unit
00	without unit	17	μm	34	bar
01	V	18	mm	35	rad
02	A	19	cm	36	Ω
03	mV	20	m	37	kΩ
04	kV	21	km	38	%
05	MV	22	l	39	°
06	mA	23	l/s	40	obr
07	kA	24	l/h	41	rps
08	MA	25	ms	42	rpm
09	°C	26	s	43	rph
10	°F	27	h	44	m/h
11	K	28	N	45	km/h
12	Hz	29	kN	46	imp
13	kHz	30	Pa		
14	Ah	31	hPa		
15	kAh	32	kPa		
16	m/s	33	MPa		

1) -only after agreeing with the manufacturer

ORDERING EXAMPLE:

The Code N20PLUS_910100E0 - means: N20ZPLUS meter with voltage input on ± 10 V, supply 85... 253 V a.c., standard version, user's manual in English, without additional quality requirements. Unit,V"

N20PLUS-19_en