



## 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.

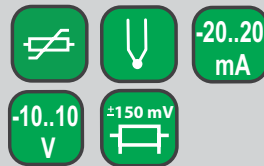


## EXAMPLE OF APPLICATION

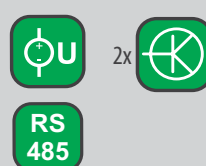
### FEATURES



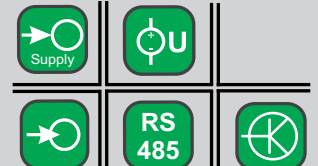
### INPUTS



### 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 <sup>+0.6</sup> x 45 <sup>+0.6</sup> 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

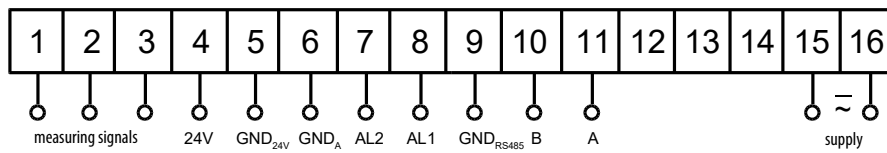


Fig. 1 Electrical connections of the N20PLUS meter.

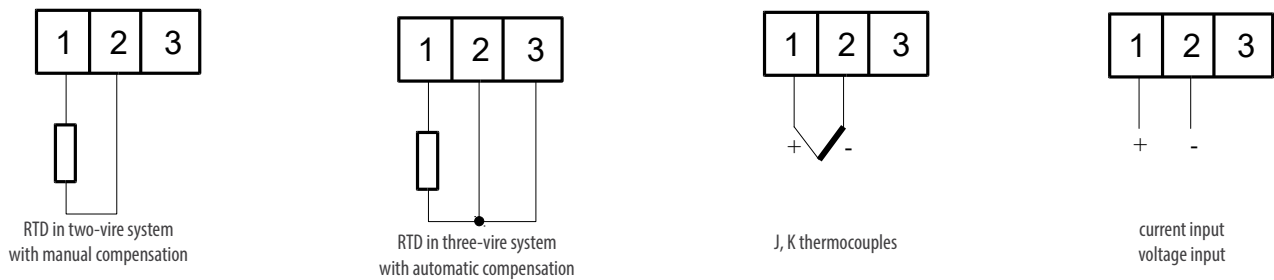


Fig. 2 Connections of measuring signals.

## ORDERING

TABLE 1. ORDERING CODE:

	N20PLUS	X	X	XX	XX	X	X
<b>Input:</b>							
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						
<b>Supply:</b>							
85...253 V a.c./d.c.	1						
20...40 V a.c./ 20...60 V d.c.	2						
<b>Unit:</b>				XX			
unit code number acc. to table 2							
<b>Version:</b>							
standard						00	
custom-made						XX	
<b>Language:</b>							
Polish							P
English							E
<b>Acceptance test:</b>							
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	XX	on order <sup>1)</sup>
15	kAh	32	kPa		
16	m/s	33	MPa		

<sup>1)</sup> -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"