

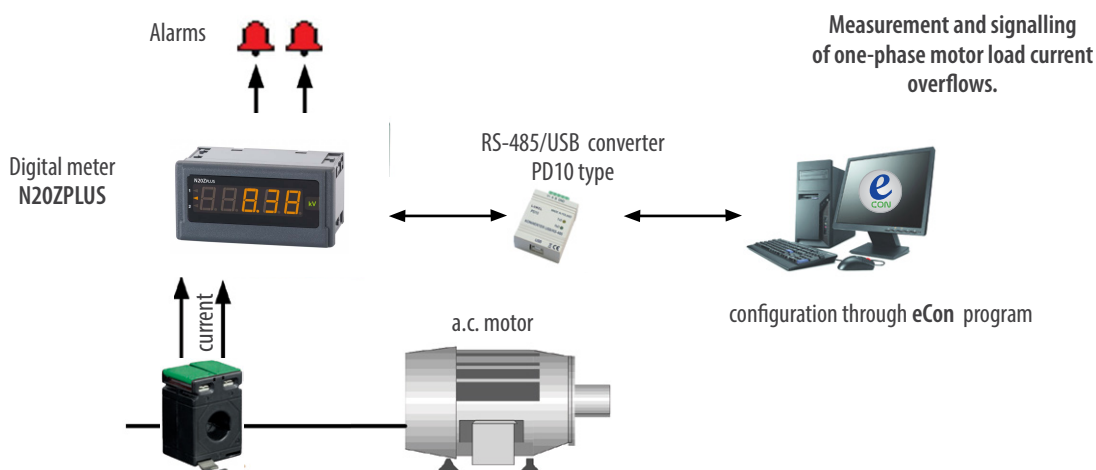


## N20ZPLUS - DIGITAL PANEL METER WITH RS-485

- Measurement of voltage, a.c. current or frequency,
- 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,
  - kind of measured signal: a.c. or a.c. + d.c. (True RMS),
  - display colour programmable in three intervals,
  - precision of displayed results (decimal point),
  - thresholds of displayed overflows,
  - highlight of the unit,
  - measurement averaging time.



### EXAMPLE OF APPLICATION



#### FEATURES



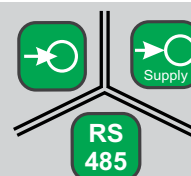
#### INPUTS



#### OUTPUTS



#### GALVANIC ISOLATION



### TECHNICAL DATA

#### INPUTS

| Input type                                         | Measuring range   | Parameters                                                     | Basic error                 |
|----------------------------------------------------|-------------------|----------------------------------------------------------------|-----------------------------|
| Voltage input                                      | 1...100...120 V   | Input resistance >2 MΩ                                         | ± (0.5% of range+ 1 digit)  |
|                                                    | 2.5...250...300 V |                                                                |                             |
|                                                    | 4...400...480 V   |                                                                |                             |
| Current input                                      | 0.01...1...1.2 A  | Input resistance: 50 mΩ ± 10%<br>Input resistance: 10 mΩ ± 10% | ± (0.5% of range+ 1 digit)  |
|                                                    | 0.05...5...6 A    |                                                                |                             |
| Frequency<br>(in the range of voltages 24...480 V) | 20...500 Hz       | Input resistance: >2 MΩ                                        | ± (0.02% of range+ 1 digit) |

# N20ZPLUS - DIGITAL PANEL METER WITH RS-485

## TECHNICAL DATA

### OUTPUTS

|               |                              |
|---------------|------------------------------|
| Output type   | Features                     |
| Alarm outputs | • 2 alarm outputs of OC type |

### DIGITAL INTERFACE

|                |                       |                    |                                          |
|----------------|-----------------------|--------------------|------------------------------------------|
| Interface type | Transmission protocol | Modes              | Baudrate                                 |
| RS-485         | MODBUS RTU            | 8N2, 8E1, 8O1, 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: $92^{+0.6} \times 45^{+0.6}$ 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. / d.c., 20...40 V a.c. / 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   |

## CONNECTION DIAGRAMS

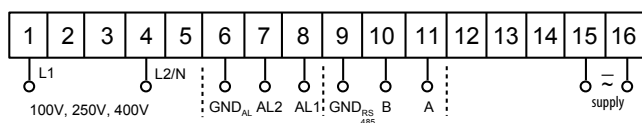


Fig. 1 Electrical connections of the N20ZPLUS meter with the measurement of voltage and frequency.

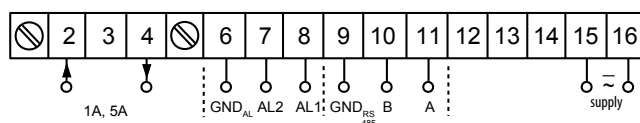


Fig. 2 Electrical connections of the N20Z meter with the measurement of current.

## ORDERING

TABLE 1. ORDERING CODE:

|                                              | N20ZPLUS - | X | X | XX | XX | X  | X |
|----------------------------------------------|------------|---|---|----|----|----|---|
| Input:                                       |            |   |   |    |    |    |   |
| 100 V                                        | 1          |   |   |    |    |    |   |
| 250 V                                        | 2          |   |   |    |    |    |   |
| 400 V                                        | 3          |   |   |    |    |    |   |
| 1 A                                          | 4          |   |   |    |    |    |   |
| 5 A                                          | 5          |   |   |    |    |    |   |
| frequency 20...500 Hz                        | 6          |   |   |    |    |    |   |
| 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  | XX   | on order <sup>1)</sup> |
| 16   | m/s          | 33   | MPa  |      |                        |

<sup>1)</sup> -only after agreeing with the manufacturer

#### ORDERING EXAMPLE:

The Code N20ZPLUS - 3 1 01 00 P 0 - means: N20ZPLUS meter with voltage input on 400V, supply 85...253 V a.c., standard version, user's manual in English, without additional quality requirements. Unit, V"

N20ZPLUS-19\_en