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# N20

Universal input digital panel meter for measurements of d.c. voltages, d.c. currents or temperature.

N2042XX
Panel Meter, 2 x OC outputs, 0-20mA input, 20-40V ac/dc



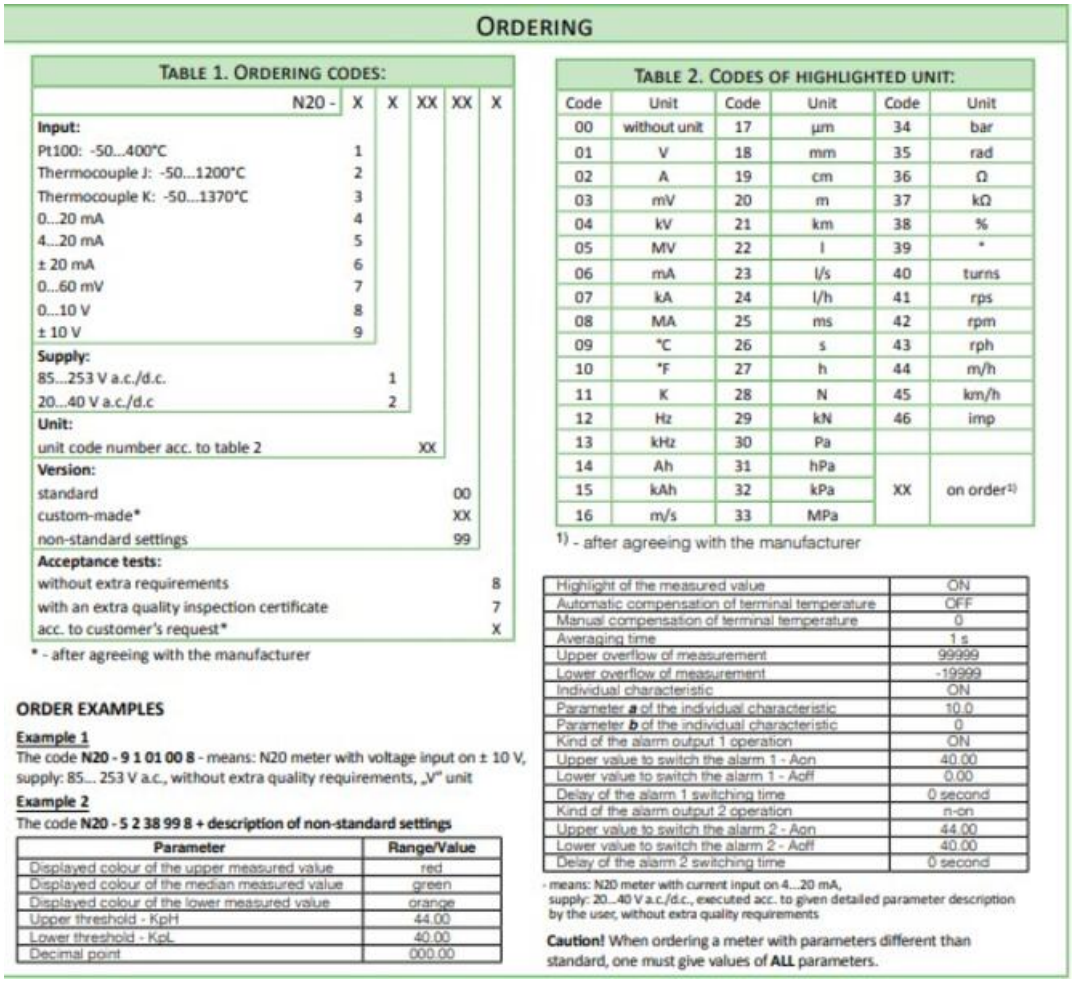

- Universal Input (Programmable)
- Wide voltage, AC/DC control
- 3 Colour, 5 Digit display. Red, green and orange

## PRODUCT DESCRIPTION

**Application**
The N20 meter is a digital programmable panel instrument destined for measurements of d.c. voltages or d.c. currents: uni or bipolar, temperature through thermocouples (J, K) and Pt100 resistance thermometers.

**Features**
– three-colour display: red, orange, green, facilitating the observation of measured value changes,
– readout field: 5-digit LED, 14 mm digit height,
– 2 alarm outputs of OC type (4 types of alarms),
– signaling of alarm states through the highlight of the alarm index,
– housing protection level: IP 65,
– programming possibility of chosen meter parameters with the use of the PD14 programmer and free delivered LPConfig software:
- display colour, individually in three intervals,
- thresholds of displayed overflows
- display precision of the result (decimal point),
- highlight of the unit,
- automatic or manual temperature compensation of ends in measurements with thermocouples,
- averaging time of the measurement,
- two alarms of OC type operating in six working modes.
- recalculation of indications (individual characteristic),

Please refer to the image below for ordering information.



## ORDERING

**TABLE 1. ORDERING CODES:**

| N20 - | X | X | XX | XX | 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...60 mV | 7 | | | | |
| 0...10 V | 8 | | | | |
| ± 10 V | 9 | | | | |
| **Supply:** | | | | | |
| 85...253 V a.c./d.c. | | 1 | | | |
| 20...40 V a.c./d.c | | 2 | | | |
| **Unit:** | | | | | |
| unit code number acc. to table 2 | | | XX | | |
| **Version:** | | | | | |
| standard | | | | 00 | |
| custom-made* | | | | XX | |
| non-standard settings | | | | 99 | |
| **Acceptance tests:** | | | | | |
| without extra requirements | | | | | 8 |
| with an extra quality inspection certificate | | | | | 7 |
| acc. to customer's request* | | | | | X |

* - 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 | turns |
| 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[1)] |
| 15 | kAh | 32 | kPa | | |
| 16 | m/s | 33 | MPa | | |

1) - after agreeing with the manufacturer

| | |
|---|---|
| Highlight of the measured value | ON |
| Automatic compensation of terminal temperature | OFF |
| Manual compensation of terminal temperature | 0 |
| Averaging time | 1 s |
| Upper overflow of measurement | 99999 |
| Lower overflow of measurement | -19999 |
| Individual characteristic | ON |
| Parameter ***a*** of the individual characteristic | 10.0 |
| Parameter ***b*** of the individual characteristic | 0 |
| Kind of the alarm output 1 operation | ON |
| Upper value to switch the alarm 1 - Aon | 40.00 |
| Lower value to switch the alarm 1 - Aoff | 0.00 |
| Delay of the alarm 1 switching time | 0 second |
| Kind of the alarm output 2 operation | n-on |
| Upper value to switch the alarm 2 - Aon | 44.00 |
| Lower value to switch the alarm 2 - Aoff | 40.00 |
| Delay of the alarm 2 switching time | 0 second |

**ORDER EXAMPLES**

**Example 1**

The code **N20 - 9 1 01 00 8** - means: N20 meter with voltage input on ± 10 V, supply: 85... 253 V a.c., without extra quality requirements, „V" unit

**Example 2**

The code **N20 - 5 2 38 99 8 + description of non-standard settings**

| Parameter | Range/Value |
|---|---|
| Displayed colour of the upper measured value | red |
| Displayed colour of the median measured value | green |
| Displayed colour of the lower measured value | orange |
| Upper threshold - KpH | 44.00 |
| Lower threshold - KpL | 40.00 |
| Decimal point | 000.00 |

- means: N20 meter with current input on 4...20 mA, supply: 20...40 V a.c./d.c., executed acc. to given detailed parameter description by the user, without extra quality requirements

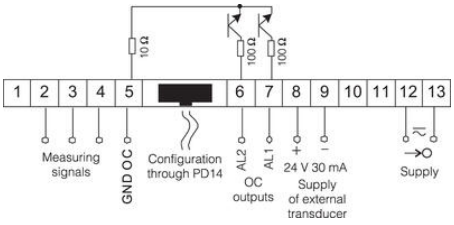
**Caution!** When ordering a meter with parameters different than standard, one must give values of **ALL** parameters.

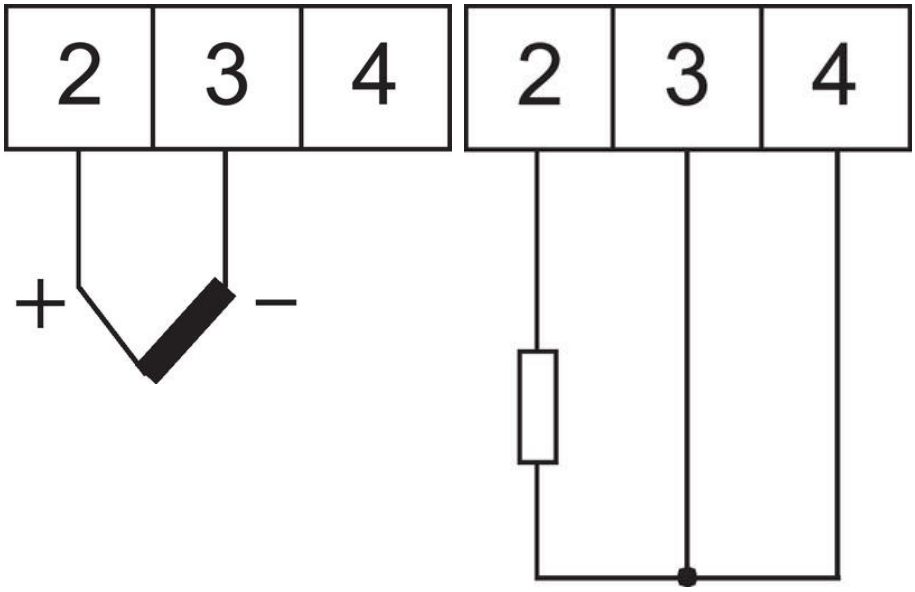
**Part numbers have changed from ending with E0 to M0, please be advised any part numbers below that end in E0 will say M0 in the datasheet. The product is the same.**

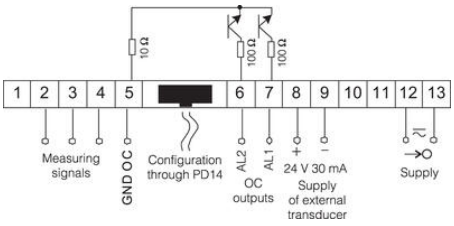
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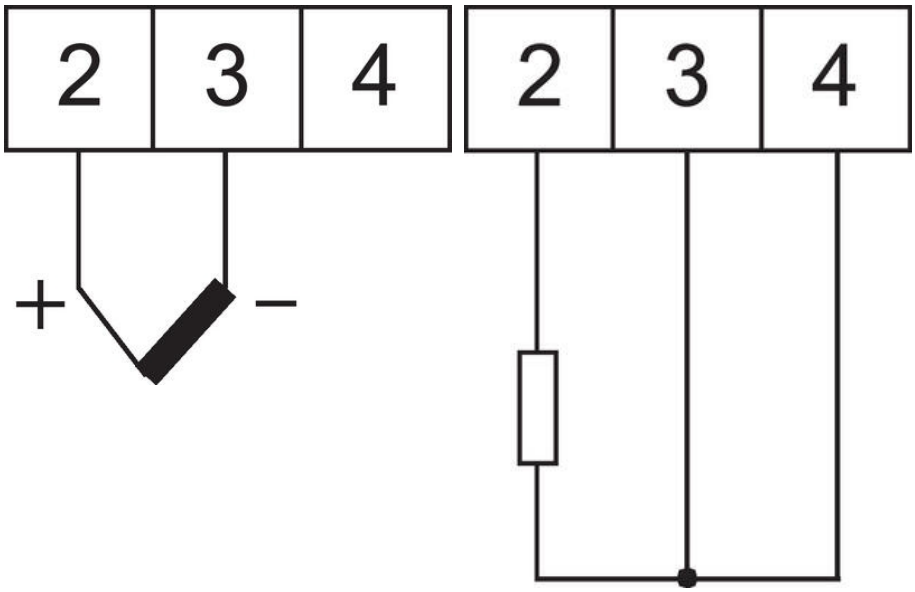
# TECHNICAL DATA

| | |
|---|---|
| **Digit height** | 14 mm |
| **Dimensions** | 96 x 48 x 64 mm Panel cut-out: 92+0,6 45+0,6 mm |
| **Display** | Yes |
| **Input type** | 0-20mA |
| **IP class** | IP65 |
| **Mounting** | Panel mount |
| **Number of rows** | 1 |
| **Power consumption** | 6 VA |
| **Supply voltage** | 20-40V ac/dc |
| **Type** | Without unit,V,A,mV,kV,MV,mA,kA,MA,°C, °F,K,Hz,kHz,Ah,kAh,m/s,µm,mm,cm,m,km,l,l/s,l/h,ms,s,h,N,kN,Pa,hpa,kPa,Mpa,bar,rad,Ω,kΩ,%, °,turns,rps,rpm,rph,m/h,km/h,imp |
| **Weight** | 0.25 kg |


10 Ω
100 Ω
100 Ω
1 2 3 4 5 6 7 8 9 10 11 12 13
Measuring signals
GND OC
Configuration through PD14
AL2
AL1
OC outputs
+
–
24 V 30 mA Supply of external transducer
Supply


2 3 4
+
–
2 3 4


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