# NA6 Digital Meter With Bargraph

## Feature

MOD BUS · RTC · Linear charac. · Password protection · RS 485 · IP50

## Inputs

DC · 0..20 mA · 60 mV · 0..10 V

## outputs

0..20 mA · 0..10 V · OU

## Galvanic Isolation

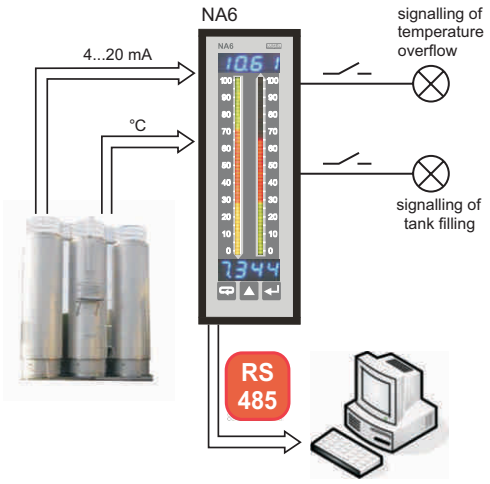
Supply · RS 485

Lack of galvanic isola?on between channels

- 2 independend measuring channels with an universal input,
- 3 or 7-colour bargraph with programmable colour switching over,
- Recording of 750 measuring segments, released temporary,
- Programmable indication characteristic and bargraph magnifier,
- Up to 8 programmable alarm outputs,
- Mathematical operations on channels,
- Communication in SCADA systems (RS485/Modbus interface),
- Conversion of measured quantity into an analog standard signal for automation systems.

## Example of application

Measurement of level and temperature in a tank




## Inputs

| Kind of input | Measuring range | Measurement subrange |
|---|---|---|
| Pt100 | -200...850°C | 320°C |
| Pt500 | -200...850°C | 230°C |
| Pt1000 | -200...850°C | 290°C |
| J (Fe-CuNi) | -100...1100°C | 350°C, 700°C |
| K (NiCr-NiAl) | -100...1370°C | 450°C, 950°C |
| N (NiCrSi-NiSi) | -100...1300°C | 550°C, 1000°C |
| E (NiCr-CuNi) | -100...850°C | 250°C, 520°C |
| R (PtRh13-Pt) | 0...1760°C | |
| S (PtRh10-Pt) | 0...1760°C | |
| T (Cu-CuNi) | -50...400°C | |
| Resistance | 0...10 kΩ | 110 Ω, 220 Ω, 460 Ω, 950 Ω, 2100 Ω, 5000 Ω, |
| Voltage | ± 300 mV, Rinp. > 9 MΩ<br>± 0...600 V, Rinp. > 4.2 MΩ | 19 mV, 35 mV, 75 mV, 155 mV, 5 V, 11 V, 22 V, 45 V, 90 V, 180 V, 360 V |
| Current | ± 40 mA, Rinp. < 4 Ω<br>± 5 A, Rinp. = 10 mΩ ± 10% | 5 mA, 11 mA, 23 mA, 1.8 A, 3.8 A |

Intensity of current flowing through the resistance thermometer: < 400 µA
Resistance of wires connecting the resistance thermometer with the meter: < 20 Ω/1 wire

## Outputs

| Kind of output | Features |
|---|---|
| Analog output | • galvanically isolated with resolution 0.025% of range; current programmable 0/4...20 mA, load resistance ≤ 500 Ω or voltage programmable 0...10 V, load resistance ≥ 500 Ω, output response time: 100 ms. |
| Relay output | • 4 electromagnetic relays; NOC voltageless contacts, maximal load-carrying capacity:<br>- voltage: 250 V a.c., 150 V d.c.<br>- current: 5 A 30 V d.c., 250 V a.c.<br>- resistance load: 1250 VA, 150 W |
| Open collector (OC) type | • voltageless of OC type with npn transistor, maximal load: 25 mA, range of appended voltages: 5...30 V d.c. |
| Digital | • **interface type**: RS-485; **transmission protocol:** MODBUS ASCII (8N1, 7E1, 7O1), RTU (8N2, 8E1, 8O1, 8N1); **baud rate:** 2400, 4800, 9600 bit/s |
| Additional supply output | • 24 V d.c., maximal load 20 mA |

## external features

| | | |
|---|---|---|
| Readout field | **2 X 4 LED displays** | 7-segment digits of 7 mm high, measuring range -1999...9999 |
| | **bargraph** | bargraph of 88 mm length:<br>- 48 segments in three-colour version<br>- 27 segments in seven-colour version |
| | | Bargraph resolution: programmable |
| | | Bargraph accuracy: ± 0.5 segment |
| Weight | < 0.4 kg | |
| Overall dimensions | 48 X 144 X 100 mm | panel cut-out: $44^{+0,5}$ ´ $137.5^{+0,5}$ mm |
| Protection grade (acc. to EN 60529) | IP50 from frontal side | IP20 from terminal side |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# NA6 Digital Meter With Bargraph

## Rated operating conditions

| | | |
|---|---|---|
| Supply voltage | 95...253 V a.c./d.c.,<br>20...40 V a.c./d.c. | Power consumption < 13 VA |
| Temperature | ambient: -10...23...55°C | Storage: -25...85°C |
| Relative humidity | < 95% | Condensation inadmissible |

## Safety and compatibility requirements

| | | |
|---|---|---|
| Electromagnetic compatibility | noise immunity | acc. to EN 61000-6-2 |
| | noise emissions | acc. to EN 61000-6-4 |
| Pollution grade | 2 | acc. to EN 61010-1 |
| Installation category | III | |
| Maximal phase-to-earth operating voltage | input: 600 V | |
| | supply: 300 V | |
| | relays: 300 V | |
| | analog output: 50 V | |
| | RS-485: 50 V | |

## Table 1. Execution code

| Digital Panel Meter with Bargraph - NA6 | X | XX | X | X | X | X | X | X | XX | X |
|---|---|---|---|---|---|---|---|---|---|---|
| **Bargraph colour:** | | | | | | | | | | |
| Three-colour (R, G, R+G) | T | | | | | | | | | |
| Seven-colour (R, G, B, R+G, R+B, G+B, R+G+B) | M | | | | | | | | | |
| **Display colour on channels 1 and 2:** | | | | | | | | | | |
| Without display* | | 00 | | | | | | | | |
| Red-red | | RR | | | | | | | | |
| Red-green | | RG | | | | | | | | |
| Red-blue | | RB | | | | | | | | |
| Green-red | | GR | | | | | | | | |
| Green-green | | GG | | | | | | | | |
| Green-blue | | GB | | | | | | | | |
| Blue-red | | BR | | | | | | | | |
| Blue-green | | BG | | | | | | | | |
| Blue-blue | | BB | | | | | | | | |
| **Input signal:** | | | | | | | | | | |
| Universal input | | | U | | | | | | | |
| **Analog output signal:** | | | | | | | | | | |
| Lack | | | | 0 | | | | | | |
| Current programmable 0/4...20 mA | | | | 1 | | | | | | |
| Voltage programmable 0...10 V | | | | 2 | | | | | | |
| **Digital output signal:** | | | | | | | | | | |
| Lack | | | | | 0 | | | | | |
| RS-485 output signal | | | | | 1 | | | | | |
| **Additional output:** | | | | | | | | | | |
| Lack* | | | | | | 0 | | | | |
| 4 relays | | | | | | 4 | | | | |
| 8 outputs of OC type | | | | | | 8 | | | | |
| **Supply:** | | | | | | | | | | |
| 95...253 V AC / DC | | | | | | | 1 | | | |
| 20...40 V AC / DC | | | | | | | 2 | | | |
| **Kind of terminals:** | | | | | | | | | | |
| Screwed plug-in sockets | | | | | | | | 0 | | |
| **Version:** | | | | | | | | | | |
| Standard | | | | | | | | | 00 | |
| Custom-made** | | | | | | | | | XX | |
| **Acceptance tests:** | | | | | | | | | | |
| Without an extra quality inspection certificate | | | | | | | | | | 8 |
| With an extra quality inspection certificate | | | | | | | | | | 7 |
| Acc. to customer's request** | | | | | | | | | | X |

* - in case of meters without displays, one must order an RS-485 digital output
** - after agreeing with the manufacturer

## Connection diagrams

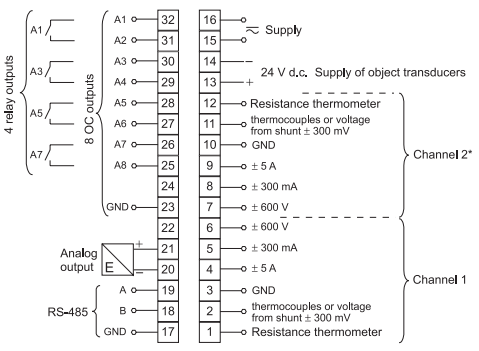



Fig. 1 Description of the terminal strip.

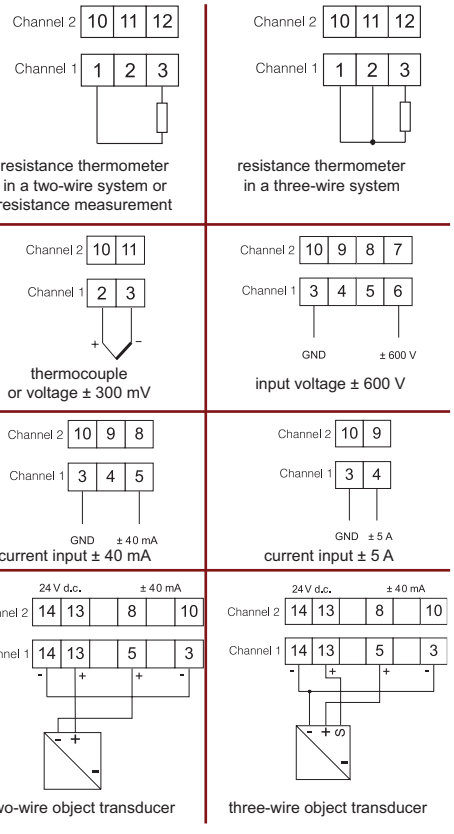



Fig. 2 Connection way of input signals.

## Ordering Example:

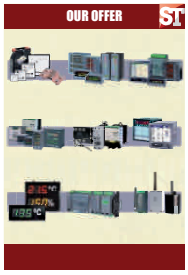
The code: **NA6 - M GB U 1 1 4 1 0 00 8** means:

**NA6** - digital meter with bargraph of NA6 type,
**M** - with a seven-color bargraph,
**GB** - green-blue display color on channel 1 and 2,
**U** - with an universal input signal,
**1** - analog programmable output signal: 0/4...20 mA,
**1** - RS-485 output signal,
**4** - with additional 4 relays digital output signal,
**1** - supply voltage: 95...253 V a.c./d.c.,
**0** - terminals of plug-in socket type,
**00** - standard version,
**8** - without extra quality requirements.

## See Also

Temperature and humidity transducers P18 i P18L types.

N30 digital meters with a 3-colour display and free LPCon fig program.

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