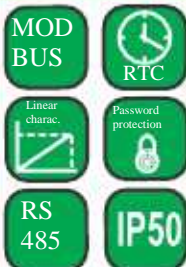
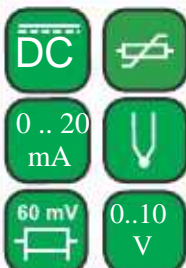


## Features:



## Inputs:



## Outputs:



## Galvanic isolation:



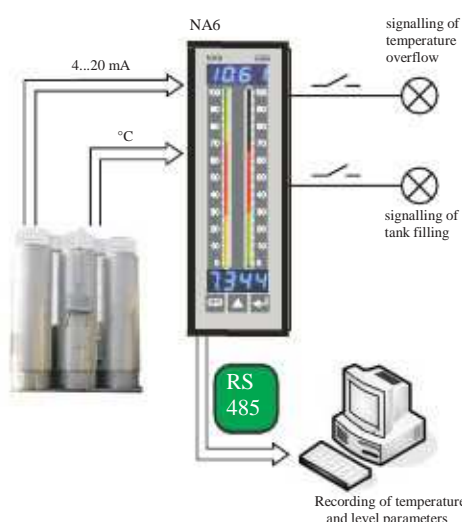
Lack of galvanic isolation between channels



- 2 independent 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 ± 0...600 V, Rinp. > 4.2 MΩ	19 mV, 35 mV, 75 mV, 155 mV, 5 V, 11 V, 22 V,
Current	± 40 mA, Rinp. < 4 Ω ± 5 A, Rinp. = 10 mΩ ± 10%	545 nA, 10 mA, 100 mA, 1 A, 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: - voltage: 250 V a.c., 150 V d.c. - current: 5 A 30 V d.c., 250 V a.c. - 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 × 4 LED displays	7-segment digits of 7 mm high, measuring range -1999...9999
	bargraph	bargraph of 88 mm length: - 48 segments in three-colour version - 27 segments in seven-colour version Bargraph resolution: programmable Bargraph accuracy: ± 0.5 segment
Weight	< 0.4 kg	
Overall dimensions	48 × 144 × 100 mm	panel cut-out: 44 <sup>+0.5</sup> × 137.5 <sup>+0.5</sup> mm
Protection grade (acc. to EN 60529)	IP50 from frontal side	IP20 from terminal side

Supply voltage	95...253 V a.c./d.c., 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

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	

	NA6 - X	XX	X	X	X	X	X	XX XX
<b>Bargraph colour:</b>								
three-colour (R, G, R+G)T								
seven-colour								
(R, G, B, R+G, R+B, G+B, R+G+B)M								
<b>Display colour on channels 1 and 2:</b>								
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						
<b>Input signal:</b>								
universal input								
<b>Analog output signal:</b>								
lack						U		
current programmable 0/4...20 mA								
voltage programmable 0...10 V							0	
<b>Digital output signal:</b>							1	
lack							2	
RS-485 output signal								
<b>Additional output:</b>							0	
lack*							1	
4 relays								
8 outputs of OC type								
<b>Supply:</b>							0	
95...253 V a.c./d.c.							4	
20...40 V a.c./d.c.							8	
<b>Kind of terminals:</b>								
screwed plug-in sockets								
<b>Version:</b>							1	
standard							2	
custom-made**								
<b>Acceptance tests:</b>								0
without an extra quality inspection certificate								
with an extra quality inspection certificate								00
acc. to customer's request**								XX

Figure 1: Pin configuration of the RS-485 module. The diagram shows a 28-pin connector with pins grouped into four categories: 4 relay outputs (A1-A7), 8 I/O outputs (A1-A7 and GND), Analog output (E), and RS-485 (A, B, GND). Pins 19-28 are labeled with their functions: 19 (Supply), 20 (24 V d.c. Supply of object transducers), 21 (Resistance thermometer thermocouples or voltage from about ± 300 mV), 22 (GND), 23 (± 5 A), 24 (± 300 mA), 25 (± 900 V), 26 (± 300 mA), 27 (± 5 A), 28 (GND). Pins 1-18 are labeled with their functions: 1 (Resistance thermometer thermocouples or voltage from about ± 300 mV), 2 (GND), 3 (± 5 A), 4 (± 300 mA), 5 (± 900 V), 6 (± 300 mA), 7 (± 5 A), 8 (GND), 9 (Resistance thermometer thermocouples or voltage from about ± 300 mV), 10 (GND), 11 (± 5 A), 12 (± 300 mA), 13 (± 900 V), 14 (± 300 mA), 15 (± 5 A), 16 (GND), 17 (Resistance thermometer thermocouples or voltage from about ± 300 mV), 18 (GND).

The figure consists of six panels illustrating different transducer connection methods:

- Top Left:** A two-wire system for a resistance thermometer. Channel 2 has terminals 10, 11, 12. Channel 1 has terminals 1, 2, 3. Terminals 1 and 2 are connected to a single point, and terminal 3 is connected to a resistor.
- Top Right:** A three-wire system for a resistance thermometer. Channel 2 has terminals 10, 11, 12. Channel 1 has terminals 1, 2, 3. Terminals 1 and 2 are connected to a single point, and terminal 3 is connected to a resistor.
- Middle Left:** A thermocouple or voltage measurement with  $\pm 300$  mV. Channel 2 has terminals 10, 11. Channel 1 has terminals 2, 3. A voltage source is connected between terminals 2 and 3.
- Middle Right:** An input voltage measurement with  $\pm 600$  V. Channel 2 has terminals 10, 9, 8, 7. Channel 1 has terminals 3, 4, 5, 6. Terminals 3 and 4 are connected to GND, and terminals 5 and 6 are connected to  $\pm 600$  V.
- Bottom Left:** A current input measurement with  $\pm 40$  mA. Channel 2 has terminals 10, 9, 8. Channel 1 has terminals 3, 4, 5. Terminals 3 and 4 are connected to GND, and terminals 5 and 8 are connected to  $\pm 40$  mA.
- Bottom Right:** A current input measurement with  $\pm 5$  A. Channel 2 has terminals 10, 9. Channel 1 has terminals 3, 4. Terminals 3 and 4 are connected to GND, and terminals 9 and 10 are connected to  $\pm 5$  A.



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