



DATASHEET

Issue 1.0



**NEW
PRODUCT**



Multifunction Meters

Transducers & Isolators

Temperature Controllers

Converters & Recorders

Digital Panel Meters

Current Transformers

Analogue Panel Meters

Shunts

Digital Multimeters

Clamp Meters

Insulation Testers

NA6PLUS DIGITAL METER WITH BARGRAPH

Features

- 3 or 7-colour bargraph with programmable colour switching over.
- I-Logging of the measured signal in programmed time intervals (800 samples).
- 2 independent measuring channels with universal input.
- Programmable indication characteristic (21-point rescaling) and bargraph magnifier.
- Up to 8 programmable alarm outputs.
- Alarm triggered by the rate of change of the measured signal over time.
- Mathematical operations on channels.
- Communication in Scada systems (RS485/modbus interfaces).
- Conversion of any measured value into a current or voltage analog signal.

SUBJECT TO CHANGE WITHOUT NOTICE

This manual superseded all previous versions – please keep for future reference

Features

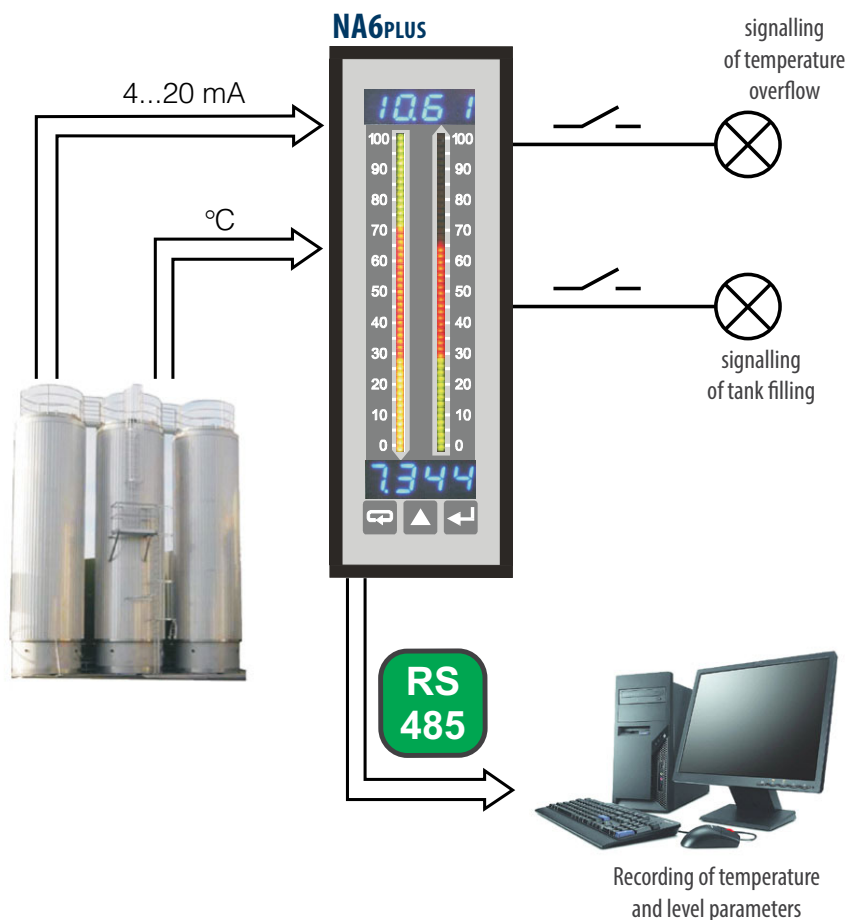
- 3 or 7-colour bargraph with programmable colour switching over.
- Logging of the measured signal in programmed time intervals (800 samples).
- 2 independent measuring channels with universal input.
- Programmable indication characteristic (21-point rescaling) and bargraph magnifier.
- Up to 8 programmable alarm outputs.
- Alarm triggered by the rate of change of the measured signal over time.
- Mathematical operations on channels.
- Communication in Scada systems (RS485/modbus interfaces).
- Conversion of any measured value into a current or voltage analog signal.

**NEW
PRODUCT**

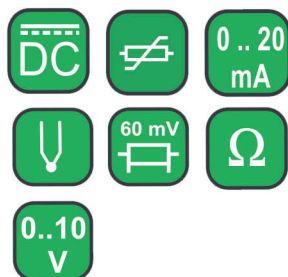
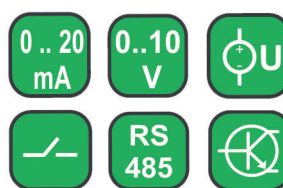
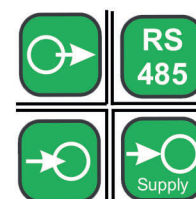


Example of application

Level and temperature measurement in the tank.



Features

Inputs

Outputs

Galvanic Isolation

Technical data

INPUTS				OUTPUTS	
Input type	Measurement range	Basic error	Additional error	Output type	Features
Pt100	-200...850°C	0.1%	compensation of temperature changes of reference welds $\leq \pm 1^\circ\text{C}$ compensation of cable resistance changes - when changing the resistance of wires $< 100\Omega$ the error is $\leq \pm 0.5^\circ\text{C}$ - when changing the resistance of wires $< 20\Omega$ the error is $\leq \pm 1^\circ\text{C}$	Current analog output	1 or 2 programmable 0/4...20 mA; load resistance $\leq 500\Omega$
Pt500	-200...850°C			Voltage analog output	1 or 2 programmable 0-10 V; load resistance $\geq 500\Omega$
Pt1000	-200...850°C			Relay output	4 relays; NOC voltageless contacts, maximal load: - voltage: 250 V a.c., 150 V d.c. - current: 5 A 30 V d.c., 250 V a.c.
J (Fe-CuNi)	-100...1100°C			Open collector (OC) type	8 outputs of OC type: maximal load: - voltage: 5...30V d.c. - current: 25mA d.c.
K (NiCr-NiAl)	-100...1370°C			Digital interface	interface type: RS-485; transmission protocol: MODBUS, RTU (8N2, 8E1, 8O1, 8N1) baud rate: 2400, 4800, 9600, 19200, 57600, 115200 b/s
N (NiCrSi-NiSi)	-100...1300°C	0.2%	change in ambient temperature $\leq \pm 0.1\%$ of the range	Additional supply output	24 V d.c., maximal load 30 mA
E (NiCr-CuNi)	-100...850°C				
R (PtRh13-Pt)	0...1760°C	0.1%			
S (PtRh10-Pt)	0...1760°C				
T (Cu-CuNi)	-50...400°C				
Resistance	0...10 k Ω	0.1%			
Voltage	$\pm 75\text{ mV}$, $R_{\text{imp.}} > 100\text{ k}\Omega$ $\pm 300\text{ mV}$, $R_{\text{imp.}} > 100\text{ k}\Omega$ $\pm 0...600\text{ V}$, $R_{\text{imp.}} > 3.5\text{ M}\Omega$				
Current	$\pm 40\text{ mA}$, $R_{\text{imp.}} < 4\Omega$ $\pm 5\text{ A}$, $R_{\text{imp.}} = 10\text{ m}\Omega \pm 10\%$				

 Intensity of current flowing through the resistance thermometer: $< 400\text{ }\mu\text{A}$

 Resistance of wires connecting the resistance thermometer with the meter: $< 20\Omega/1\text{ wire}$
EXTERNAL FEATURE

Readout field	2 x 4 - digits LED display	7-segment digits of 7 mm high, measuring range -1999...9999
	bargraph	bargraph of 100 mm length: - 55 segments in three-colour version - 28 segments in seven-colour version Bargraph resolution: programmable
Overall dimensions	48 x 144 x 100 mm	
Weight	$< 0.4\text{ kg}$	panel cut-out: $44+0.5 \times 137.5+0.5\text{ mm}$
Protection grade (acc. to EN 60529)	from frontal side: IP50	from terminal side: IP20

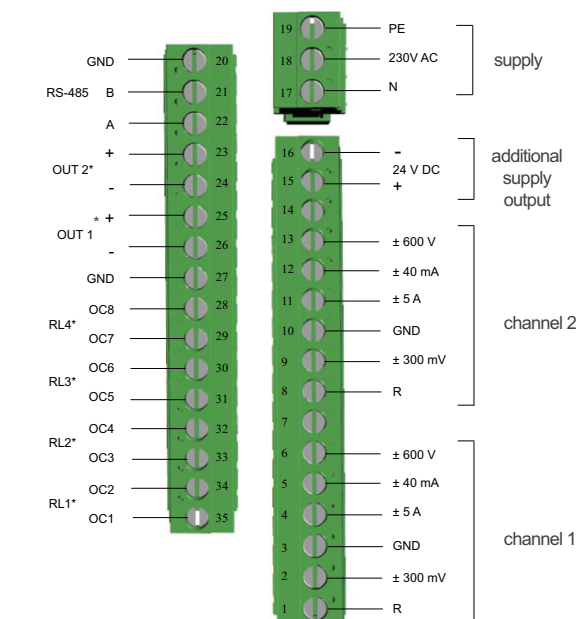
RATED OPERATING CONDITIONS

Supply voltage	95...253 V a.c. 40...400 Hz; 90...300 V d.c. 20...40 V a.c. 40...400 Hz, 20...60 V d.c.	power consumption $\leq 13\text{ VA}$
Temperature	ambient: -10...23...55°C	storage: -25...85°C
Relative humidity	$< 95\%$	Condensation inadmissible

SAFETY AND COMPATIBILITY REQUIREMENTS

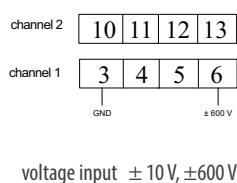
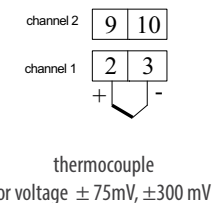
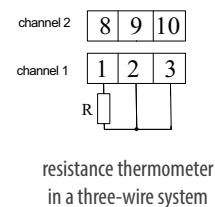
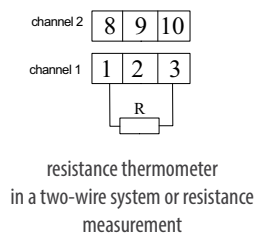
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Pollution grade	2	acc. to EN 61010-1
Installation category	III	
Maximal phase-to-earth operating voltage	- for input circuit: 600 V - for supply circuit: 300 V - for other circuits: 50 V	
Altitude above sea level	$< 2000\text{ m}$	

Electrical Connections

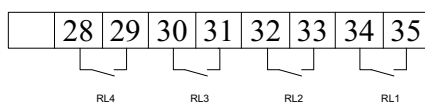


*-optional elements depend on the meter's version

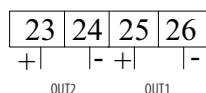
Fig. 1 Description of the terminal strip.



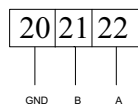
8 open collector outputs (OC)



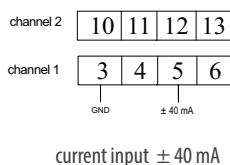
4 relay outputs



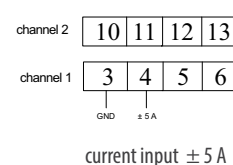
analog outputs
(voltage/ current)



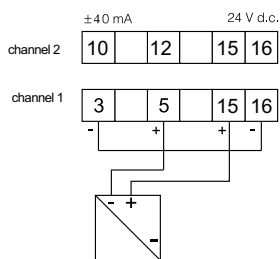
interface RS-485 (Modbus)



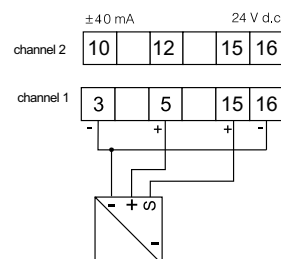
current input ± 40 mA



current input ± 5 A



two-wire object transducer



three-wire object transducer

Fig.3. Connection way of output signals depending on the execution code.

Fig. 2 Connection way of input signals.

Ordering

NA6PLUS -	X	XX	X	X	X	X	XX	X	X
Bargraph colour:									
3-colour(R, G, R+G)	T								
7-colour (R, G, B, R+G, R+B, G+B, R+G+B)	M								
Display colour on channels 1 and 2:									
red-red	RR								
red-green	RG								
green-red	GR								
green-green	GG								
Input signal:									
universal input	U								
custom-made*	X								
Analog output:									
lack		0							
0/4...20mA		1							
0...10 V		2							
2 x 0/4...20 mA		3							
2 x 0...10 V		4							
1 x 0/4...20 mA, 1 x 0...10 V		5							
Additional output:									
lack		0							
4 relays		4							
8 outputs of OC type		8							
Supply voltage:									
95...253 V a.c./d.c.		1							
20...40 V a.c., 20...60 V d.c.		3							
Version:									
standard		00							
custom-made**		XX							
Language:									
English		U							
other*		X							
Acceptance tests:									
without extra requirements		0							
with an extra quality inspection certificate		1							
acc. to customer's request**		X							

* - after agreeing with the manufacturer

Ordering example:

The code **NA6PLUS-TRRU18100E0** means:

NA6PLUS - NA6PLUS meter

T - bargraph RG

RR - red display colour

U - universal inputs

1 - current output 0/4...20 mA

8 - 8 outputs of OC type

1 - supply 95...253V a.c./ 90...300 V d.c.

00 - standard version

E - english version

0 - without extra requirements