

NA3 DIGITAL METERS WITH BARGRAPH

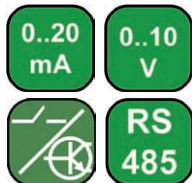
FEATURES:



INPUT:



OUTPUTS:

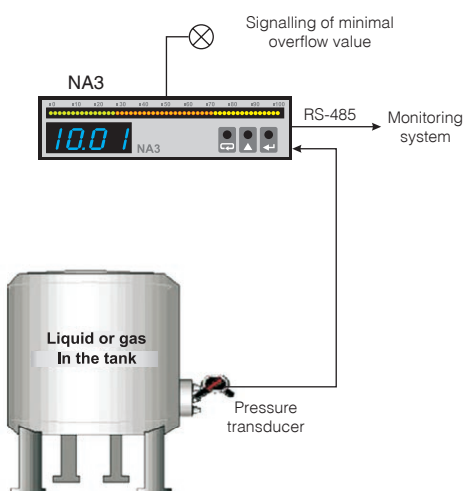


GALVANIC ISOLATION:



- Universal input for the measurement of d.c. current, d.c. voltage and temperature,
- 3 or 7-colour bargraph,
- Programming of bargraph colour depending on the measured quantity value,
- Signalling of set alarm value overflow,
- Storage of measured signal in programmed time segments (750 samples),
- Current or voltage analog output,
- Communication in SCADA systems (RS485/Modbus interface RTU and ASCII).

EXAMPLE OF APPLICATION



INPUTS

Kind of input	Measuring range
Pt100	-200...850°C
Pt500	-200...850°C
Pt1000	-200...850°C
J (Fe-CuNi)	-30...1100°C
K (NiCr-NiAl)	-50...1370°C
N (NiCrSi-NiSi)	-100...1300°C
E (NiCr-CuNi)	-20...850°C
R (PtRh13-Pt)	0...1760°C
S (PtRh10-Pt)	0...1760°C
T (Cu-CuNi)	-50...400°C
Resistance	0...400 Ω, 0...4000 Ω
Voltage	0...60 mV, Rinp. > 9 MΩ
	0...3 V, Rinp. > 4 MΩ
	0...10 V, Rinp. > 4 MΩ
	0...200 V, Rinp. > 4 MΩ
Current	0...5 mA, Rinp. = 4 Ω
	0...20 mA, Rinp. = 4 Ω
	0...2 A, Rinp. = 10 mΩ ± 10%
	0...5 A, Rinp. = 10 mΩ ± 10%

OUTPUTS

Kind of output	Features
Analog output	• galvanic isolation 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	• 1 or 2 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...24 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.

EXTERNAL FEATURES

Readout field	NA3-F	4 LED displays with 7 segments, digits of 7 mm high, indication range -1999...9999
	NA3-B	multicoloured bargraph of 82 mm long, 45 segments in a 3-colour version or with 25 segments in 7-colour version
	NA3-D	4 LED displays with 7 segments, digits of 14 mm high, 3 alarm diodes, indication range as above.
Weight	< 0.3 kg	
Overall dimensions	96 × 24 × 125 mm	panel cut-out: 92 ^{+0.5} × 22.2 ^{+0.5} mm
Protection grade (acc. to EN 60529)	IP40 from frontal side	IP20 from terminal side

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RATED OPERATING CONDITIONS

Supply voltage	95...253 V a.c./d.c., 20...40 V a.c./d.c.	Power consumption < 8 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
Safety requirements		acc. to EN 61010-1

TABLE 1. EXECUTION CODE:

	NA3 -	X	X	X	X	X	X	X	X	XX	X
Meter version:											
with a bargraph and digital display	F										
with a bargraph*	B										
with a digital display	D										
Bargraph colour:											
without bargraph (NA3D)	0										
3-colour bargraph (R, G, R+G)	T										
7-colour bargraph (R, G, B, R+G, R+B, G+B, R+G+B)	M										
Display colour:											
without display	0										
red	R										
green	G										
blue	B										
Input signal:											
universal input	U										
Analog output signal:											
lack	0										
current programmable 0/4...20 mA	1										
voltage programmable 0...10 V	2										
Additional output:											
lack*	0										
RS-485 digital output + 1 relay	1										
RS-485 digital output + 1 output of OC type	2										
2 relays*	3										
2 outputs of OC type*	4										
Supply:											
95...253 V a.c./d.c.	1										
20...40 V a.c./d.c.	2										
on order**	X										
Kind of terminals:											
socket-screw plug	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 customers's request**	X										

* - in case of a NA3-B X X X X (0, 3 or 4), one must fill the table 2
 ** - after agreeing with the manufacturer

Ordering Example:

The code: **NA3 - F T R U 0 1 1 0 00 8** means:
NA3 - digital meter with bargraph of NA3 type,
F - with a bargraph and digital display,
T - with a 3-colour display,
R - red display colour,
U - universal input,
0 - lack of analog output signal,
1 - additional output: RS-485 digital output + 1 relay,
1 - supply voltage: 95...253 V a.c./d.c.,
0 - socket-screw plug,
00 - standard version,
8 - without extra quality requirements.

CONNECTION DIAGRAMS

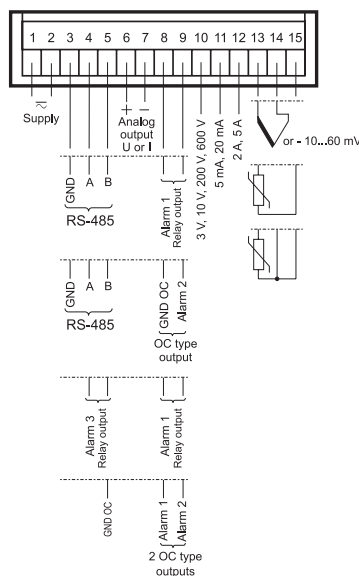


Fig. 1 External connections of the NA3 meter.

Programmable parameters of the NA3 meter Table 2.

Input	Bargraph	Alarm 1	Alarm 2	Alarm 3	Output
Input type	Bargraph type	Lower alarm threshold	Lower alarm threshold	Lower alarm threshold	Output characteristic
Mathematical functions	Bargraph colour	Upper alarm threshold	Upper alarm threshold	Upper alarm threshold	Displayed value
Kind of compensation	Lower bargraph threshold	Alarm type	Alarm type	Alarm type	Value on the analog output
Measuring averaging time	Upper bargraph threshold	Delay of alarm operation	Delay of alarm operation	Delay of alarm operation	Displayed value
Displayed characteristic		Support of alarm signalling	Support of alarm signalling	Support of alarm signalling	Value on the analog output
Measured value		HOLd	HOLd	HOLd	RS-485 baud rate
Displayed value		Colour of the lower threshold alarm index	Colour of the lower threshold alarm index	Colour of the lower threshold alarm index	Kind of RS-485 transmission
Measured value		CurL	CurL	CurL	Device address
Displayed value		Colour of the upper threshold alarm index	Colour of the upper threshold alarm index	Colour of the upper threshold alarm index	
Displayed value		CurH	CurH	CurH	

SEE ALSO:



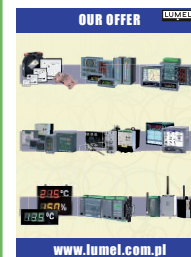
Temperature and humidity transducers P18 i P18L types.



Programmable transducer of temperature, resistance, voltage from shunt and standard signals - P20.



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



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