

NA3 DIGITAL METERS WITH BARGRAPH



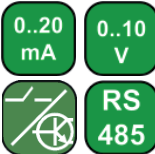
FEATURES:



INPUT:



OUTPUTS:

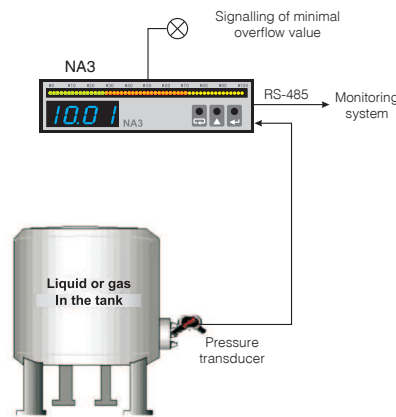


GALVANIC ISOLATION:



- 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 1 or 2 relays; NOC voltageless contacts, maximal load-carrying capacity: <ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> • voltageless of OC type with npn transistor, maximal load: 25 mA, range of appended voltages: 5...24 V d.c.
Digital	<ul style="list-style-type: none"> • 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

	NA3-F	NA3-B	NA3-D
Readout field	4 LED displays with 7 segments, digits of 7 mm high, indication range -1999...9999	multicoloured bargraph of 82 mm long, 45 segments in a 3-colour version or with 25 segments in 7-colour version	multicoloured bargraph 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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NA3 DIGITAL METERS WITH BARGRAPH

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	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)										
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										O
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 customer's request**										X

* - in case of a NA3-B.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 0 8** means:
NA3 - digital meter with bargraph and digital display,
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

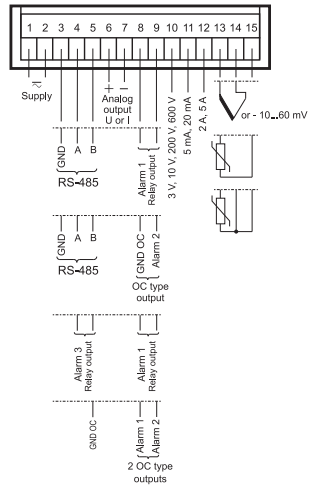


Fig. 1 External connections of the NA3 meter.

Programmable parameters of the NA3 meter Table 2.

Group	Parameter	Code
Input	Input type	tYP
	Mathematical functions	Func
	Kind of compensation	Con
	Measuring averaging time	Cnt
	Displayed characteristic	Indi
	Measured value	L_H1
	Displayed value	d_Y1
	Measured value	L_H2
	Displayed value	d_Y2
	Bargraph	Bargraph type
Bargraph colour		coLr
Lower bargraph threshold		brL
Upper bargraph threshold		brH
Alarm 1	Lower alarm threshold	PrL
	Upper alarm threshold	PrH
	Alarm type	tYPA
	Delay of alarm operation	dLY
	Support of alarm signalling	HOLd
	Colour of the lower threshold alarm index	CurL
Alarm 2	Lower alarm threshold	PrL
	Upper alarm threshold	PrH
	Alarm type	tYPA
	Delay of alarm operation	dLY
	Support of alarm signalling	HOLd
	Colour of the lower threshold alarm index	CurL
Alarm 3	Lower alarm threshold	PrL
	Upper alarm threshold	PrH
	Alarm type	tYPA
	Delay of alarm operation	dLY
	Support of alarm signalling	HOLd
	Colour of the lower threshold alarm index	CurL
Output	Output characteristic	IndO
	Displayed value	d_H1
	Value on the analog output	O_Y1
	Displayed value	d_H2
	Value on the analog output	O_Y2
	RS-485 baud rate	bAud
	Kind of RS-485 transmission	trYb
	Device address	Adr

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.



For more information about RISHABH products visit our website: www.rishabh.co.in

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