

FEATURES:

MOD
BUS

Password
protection

Linear char.

IP50

INPUTS:

DC



0...20
mA



60 mV

Password
protection

-10...10
V

OUTPUTS:

0...20
mA

0...10
V

2x

RS
485

GALVANIC ISOLATION:



RS
485

Supply

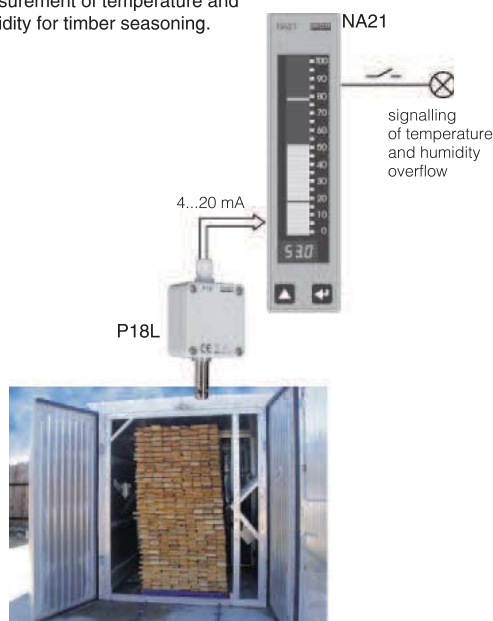
Lack of galvanic isolation
between channels



- Universal input with range of temperature sensors.
- Measurement of d.c. voltage or d.c. current.
- High resolution of bargraphs: 100 segments (NA21), 64 segments (NA22).
- Conversion of measured values into a standard current or voltage signal.
- Communication in SCADA systems (interfejs RS485/ Modbus),
- Signalling of set alarm quantity overflow.

EXAMPLE OF APPLICATION

Measurement of temperature and humidity for timber seasoning.



INPUTS

Kind of input/measuring range	Basic error in % of range ± 1 digit	Code
0...60 mV	0.2%	01
0...150 mV		02
0...200 mV		03
0...300 mV		04
0...1 V		05
0...2 V		06
0...10 V		07
0...20 V		08
0...200 V		09
0...20 mA		10
0...200 mA		11
0...2 A		12
Pt100 (-200...850) $^{\circ}$ C	0.1%	Programmed ranges by means of meter push-buttons. Write code 00 in order.
Ni100 (-60...180) $^{\circ}$ C	0.2%	
Ni100 (-50...180) $^{\circ}$ C	0.2%	
J (Fe-CuNi) -20...999 $^{\circ}$ C	0.1%	
K (NiCr-NiAl) -50...999 $^{\circ}$ C	0.1%	
N (NiCrSi-NiSi) -50...999 $^{\circ}$ C	0.1%	
E (NiCr-CuNi) -20...800 $^{\circ}$ C	0.1%	
R (PtRh13-Pt) -50...999 $^{\circ}$ C	0.5%	
S (PtRh10-Pt) -50...999 $^{\circ}$ C	0.5%	
-5...60 mV, measuring of voltage	0.1%	
0...400 Ω , pot. transmitter	0.1%	

OUTPUTS

Kind of output	Features
Relay output	<ul style="list-style-type: none"> • electromagnetic relay; NOC voltageless contacts, maximal load-carrying capacity: <ul style="list-style-type: none"> - voltage: 250 V a.c. or 220 V d.c. - current: 1 A d.c., a.c. - resistance load: 125 VA, 60 W
Programmable analog output	<ul style="list-style-type: none"> • galvanic isolation with resolution 0.025% of range; current programmable 0/4...20 mA, load resistance $\leq 500 \Omega$ or voltage programmable 0...10 V, load resistance $\geq 500 \Omega$, output response time: 100 ms.
Digital	<ul style="list-style-type: none"> • interface type: RS-485; transmission protocol: MODBUS; baud rate: 2400, 4800, 9600 bit/s.
Additional supply output	<ul style="list-style-type: none"> • 24 V d.c., maximal load 30 mA

EXTERNAL FEATURES

Readout field	NA21	fluorescent display; digits of 5 mm high, indication range -199...999 bargraph of 84 mm long (100 segments) green-blue, bargraph accuracy: ± 1 segment
	NA22	2 displays with 3 LED digit each; digits of 7.6 mm high, indication range -199...999 2 bargraphs of 92 mm long (64 segments), red, green or red-green; bargraph accuracy: ± 1 segment
Weight	< 0.7 kg	
Overall dimensions	36 \times 144 \times 130 mm	panel cut-out: 34 ^{+0,6} \times 137 ⁺¹ mm
Protection grade (acc. to EN 60529)	IP50 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 < 10 VA
Temperature	ambient: -10...23...55°C	Storage: -20...70°C
Relative humidity	< 75%	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	300 V	

CONNECTION DIAGRAMS

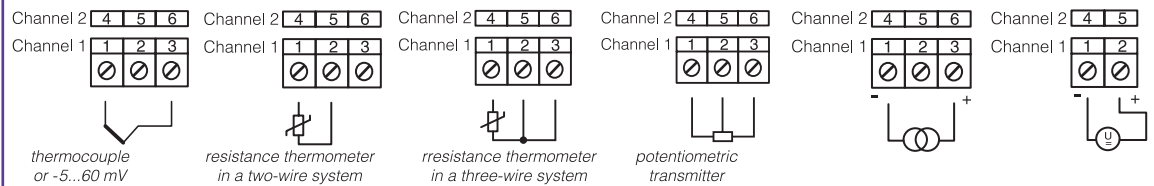
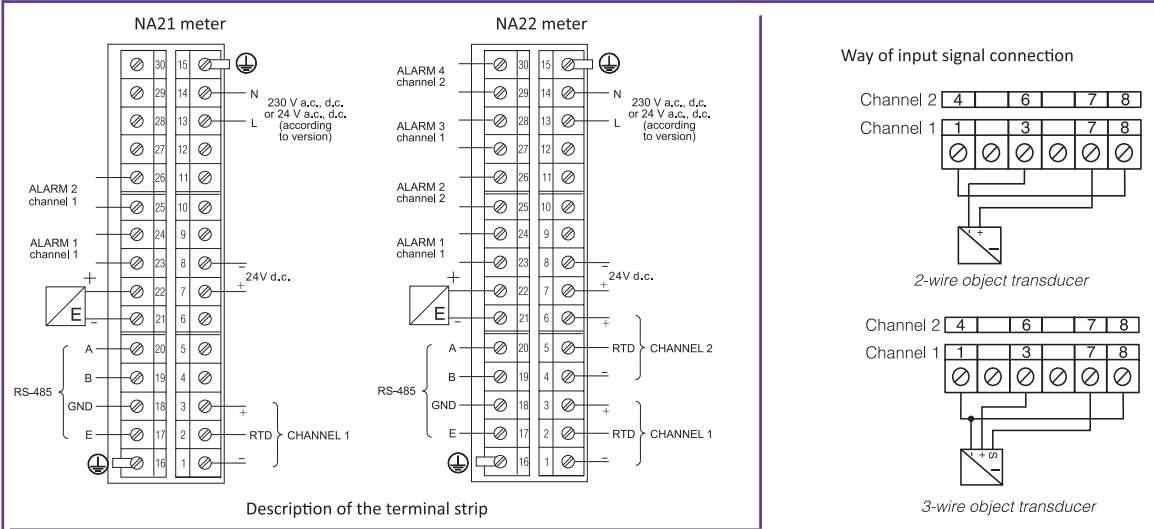


TABLE 1. EXECUTION CODE:

NA2 -	XX	X	XX	X	X	X	X
Number of channels and display colour:							
one channel ¹⁾ - blue-green	1B						
two channels ¹⁾ - green	2G						
two channels ¹⁾ - red	2R						
two channels ¹⁾ - red+ green	2D						
Input:							
d.c. current		I					
d.c. voltage			U				
temperature				T			
Measuring range:							
write the range code from the „INPUTS“ table on order ²⁾			XX				
			99				
Alarm output:							
1 relay per channel						1	
2 relays per channel						2	
Output:							
without output							0
current analog output (0/4...20 mA)							1
voltage analog output (0...10 V)							2
RS-485 interface (LUMBUS transmission protocol)							3
RS-485 interface (MODBUS transmission protocol)							4
Supply:							
95...253 V a.c./d.c.							1
20...40 V a.c./d.c.							2
Acceptance tests:							
without an extra quality inspection certificate							8
with an extra quality inspection certificate							7
acc. to customer's request ²⁾							X

- 1) - One channel - fluorescent display, two-channel-LED displays
- 2) - after agreeing with the manufacturer

Ordering Example:

The code: **NA2 - 1B U 01 1 2 1 8** means:

- NA2** - digital meter with bargraph of NA2 type,
- 1B** - one-channel meter with a blue-green display,
- U** - input: d.c. voltage,
- 01** - measuring range: 0...60 mV,
- 1** - alarm output: 1 relay per channel,
- 2** - output: voltage analog output (0...10 V),
- 1** - supply voltage: 95...253 V a.c./d.c.,
- 8** - without an extra quality inspection certificate.

SEE ALSO:

PROGRAMMABLE TRANSUCER



HCU12

TRANSUCER SUPPLIED FROM A CURRENT LOOP



HC15

DIGITAL ANEL METER



HI20

MICROPROCESSOR CONTROLLER



HR20



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