

NA5 Digital Meter With Bargraph

Feature

MOD BUS

RTC

Linear charac.

Password protection

IP50

Inputs

DC

⚡

0..20 mA

⚡

60 mV

Password protection

0..10 V

outputs

0..20 mA

0..10 V

⚡

⚡

RS 485

Galvanic Isolation

⚡

⚡

⚡

⚡

Supply

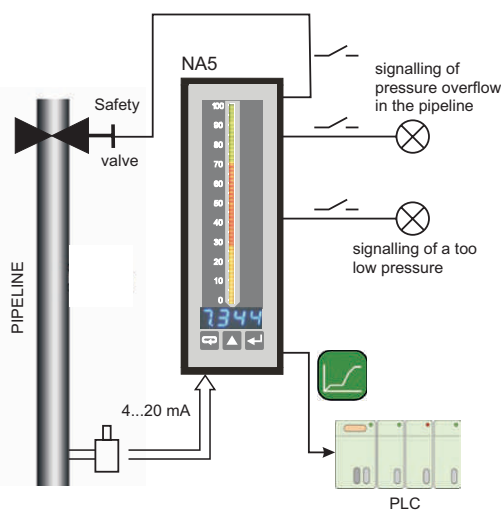
RS 485



- 3 or 7-colour bargraph with programmable colour switching over,
- Recording of 750 measuring segments, released temporary,
- Universal input,
- Programmable indication characteristic and bargraph magnifier,
- Up to 8 programmable alarm outputs,
- Communication in SCADA systems (RS485/Modbus interface),
- Conversion of measured quantity into an analog standard signal for automation systems.

Example of application

Measurement of pressure in a pipeline



Inputs

Kind of input	Measuring range	Measurementsub-range
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	± 3 00 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, 45 V, 90 V, 180 V, 360 V
Current	± 40 mA, Rinp. < 4 Ω ± 5 A Rinp. = 10mΩ ± 10%	5 mA, 11 mA, 23 mA, 1.8 A, 3.8 A

Intensity of current flowing through the resistance thermometer: < 400µ A
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 ?me : 100 ms.
Relay output	• 4 electro magnetic relays; NOC voltage less 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	• voltage less 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 : MODBUSASCII (8N1, 7E1, 7O1), RTU (8N2, 8E1, 8O1, 8N1), baud rate : 2400, 4800, 9600 bit/s
Additional supply output	• 24 V d.c., maximal load 30 mA

external features

Readout field	4 LED displays	7 - segment digits of 7 mm high, measuring range - 1999...9999
	bargraph	bargraph of 88 mm length : - 55 segments in three - colour version - 29 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 ^{+0.5} 137.5 ^{+0.5} 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 < 12 VA
Temperature	ambient : -10...23 ...55°C	Storage: -25...85°C
Relative humidity	< 95%	Condensation inadmissible

Safety and compatibility requirements

Electro magnetic compatibility	noise immunity	acc. to EN61000 - 6 - 2
	noise emissions	acc. to EN61000 - 6 - 4
Pollution grade	2	acc. to EN61010 - 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	

Table 1. Execution code :

Digital Panel Meter with Bargraph - RNA5	X	X	X	X	X	X	X	X	XX	X
Bargraph colour:										
Three-color (R, G, R+G)		T								
Seven-color (R, G, B, R+G, R+B, G+B, R+G+B)		M								
Display colour:										
Lack of 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	
Digital output signal:										
Lack									0	
RS485 digital output									1	
Additional output:										
lack*									0	
4 relays									4	
8 outputs of O type									8	
Supply:										
95...253 V AC / DC									1	
20...40 V AC / DC									2	
Kind of terminals:										
Screwed plug-in sockets									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 meters without displays, one must order an RS - 485 digital output
 ** - after agreeing with the manufacturer

Ordering Example:

The code: **NA5 - M G U 1 1 4 1 0 0 0 8** means:
NA5 - digital meter with bargraph of NA5 type,
M - with a seven-colour bargraph,
G - green display colour,
U - with an universal input signal,
1 - analog programmable output signal,
1 - RS-485 output current signal,
4 - additional digital output signal: 4 relays,
1 - supply voltage : 95... 253 V a.c./d.c.,
0 - terminals of plug-in socket type,
00 - standard version,
8 - without extra quality requirements.

Connection diagrams

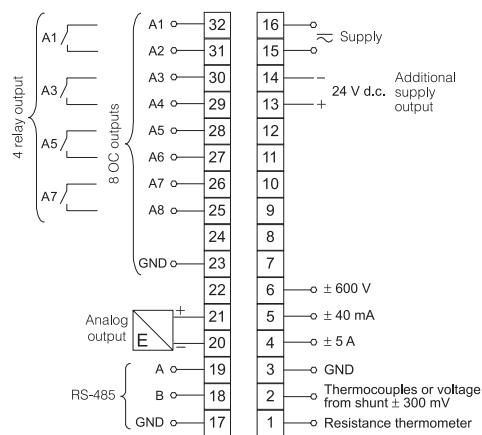


Fig. 1 Description of the terminal strip.

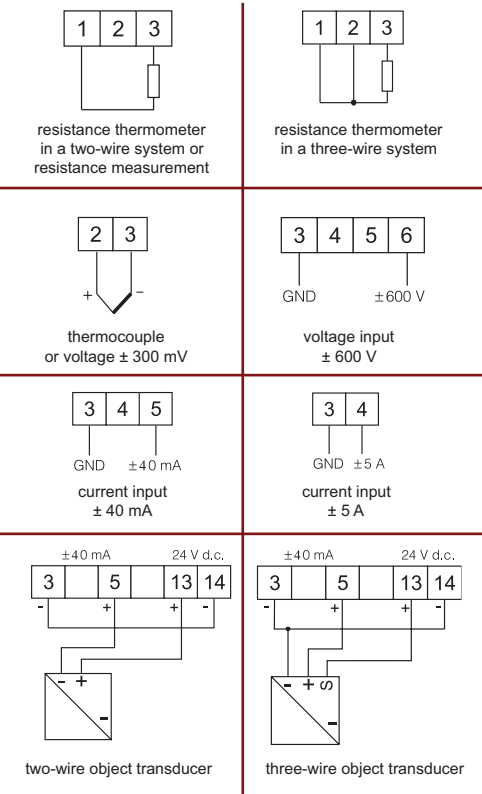


Fig. 2 Connection way of input signals.

See Also



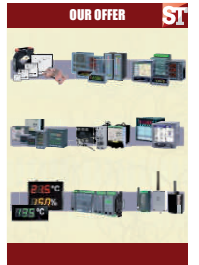
Temperature and humidity transducers P18 i P18L types.



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



N30 digital meters with a 3-colour display and free LP Con fig program.



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