INTRA-AUTOMATION

MESS- UND REGELINSTRUMENTE / MEASUREMENT AND CONTROL

TÜVRheinland® CERT ISO 9001

Digital Meters with Bargraph
IntraGraph

Series: IA-NA3

Technical Information

02/2011

Accessories

THE EXPERT IN LEVEL AND FLOW

Intra-Automation
Technical Information
02/2011

For comments regarding this brochure, please contact:
info@intra-automation.de

IA-NA3
IntraGraph

Digital Meters with Bargraph

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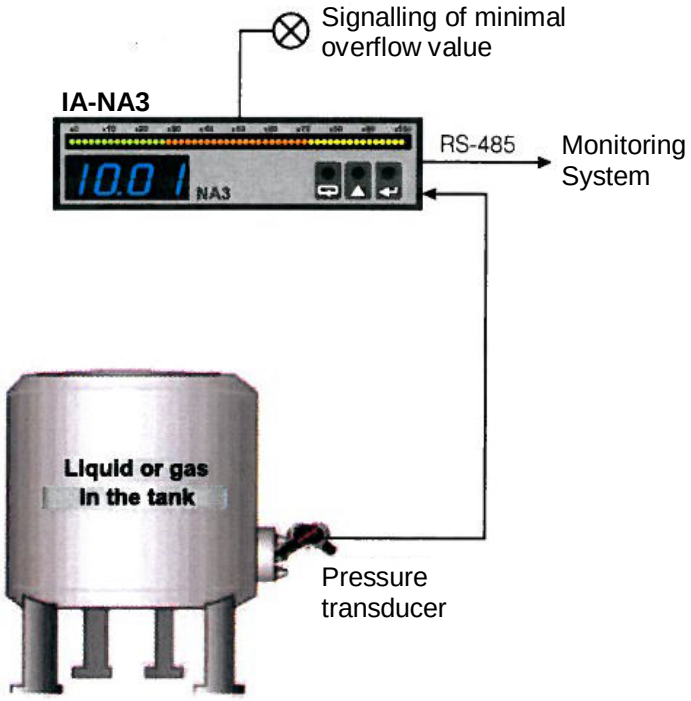
1 Features

- Universal input fort he measurement of DC current, DC voltage and temperature
- 3- or 7-colour bargraph
- Programming of bargraph colour depending on the measured quantity value
- Storage of measured signal in programmed time segments (750 samples)
- Current or voltage analogue output
- Communication in SCADA systems (RS485/MODBUS interface RTU and ASCII)

2 Application example



3 Technical details

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, R_{inp} > 9 MΩ 0…3 V, R_{inp} > 4 MΩ 0…10 V, R_{inp} > 4 MΩ 0…200 V, R_{inp} > 4 MΩ 0…600 V, R_{inp} > 4 MΩ
Current	0…5 mA, R_{inp} = 4 Ω 0…20 mA, R_{inp} = 4 Ω 0…2 A, R_{inp} = 10 mΩ ± 10% 0…5 A, R_{inp} = 10 mΩ ± 10%

Outputs	
Kind of output	**Feature**
Analogue output	♦ galvanic isolation with resolution 0,025 % of range, current programmable 0/4…20 mA, load resistance ≤ 500 Ω or voltage programmable 0…20 V, load resistance ≥ 500 Ω, output response time: 100 ms
Relay output	♦ 1 or 2 relays, NOC voltageless contacts, max. load-carrying capacity: - voltage: 250 V AC / 150 V DC - current: 5 A 30 V DC, 250 V AC - 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 DC
Digital	♦ interface type: RS-485 transmission protocol: MODBUS ASCII (8N1, 7E1, 7O1), RTU (8N2, 8E1, 8N1) baud rate: 2400, 4800, 9600 bit/s

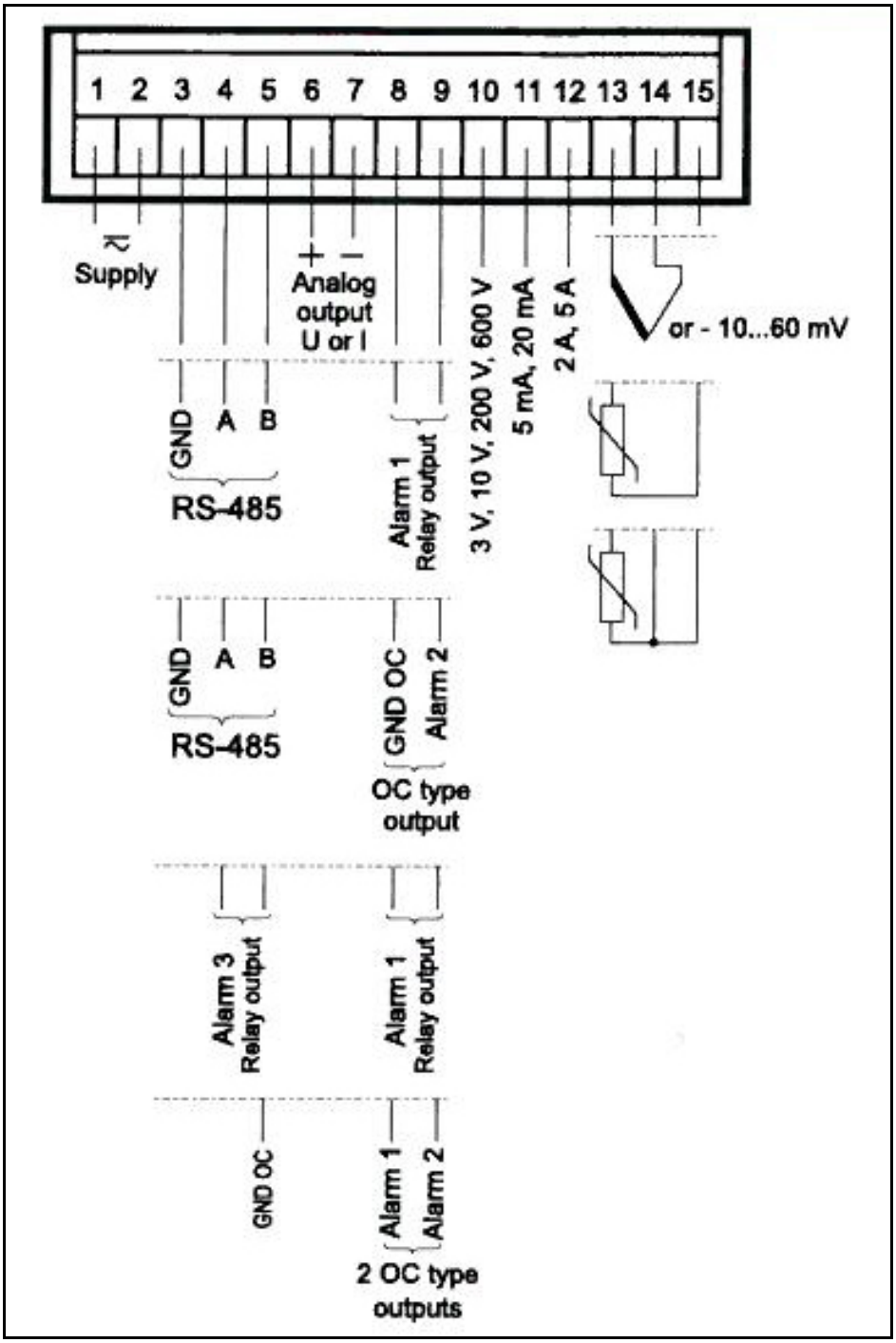
Rated operating conditions		
Supply voltage	95…253 V AC/DC 20…40 V AC/DC	Power consumption < 8 VA
Temperature	ambient: -10...23…55 °C	storage: -25…85 °C
Relative humidity	< 95 %	condensation inadmissable

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

4 Programmable features

INPUT	Input type	tYP	
	Mathematical functions	Func	
	Kind of compensation	Con	
	Measuring averaging time	Cnt	
	Displayed characteristics	Indi	
	Measured value	I_H1	
	Displayed value	D_Y1	
	Measured value	I_H2	
	Displayed value	D_Y2	
BARGRAPH	Bargraph type	tYPb	
	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	
	Colour of the upper threshold alarm index	CurH	
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	
	Colour of the upper threshold alarm index	CurH	
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	
	Colour of the upper threshold alarm index	CurH	
OUTPUT	Output Characteristic	IndO	
	Displayed value	d_H1	
	Value of the analogue output	O_Y1	
	Displayed value	d_H2	
	Value on the analogue output	O_Y2	
	RS-485 baud rate	bAud	
	Kind of RS-485 transmission	trYb	
	Device address	Adr	

5 Electrical connection



External connections of the IA-NA3 meter

6 Order codes

Code	Description
IA-NA3	Digital Meter with Bargraph
	Meter version
	F with a bargraph and digital display
	B with a bargraph*
	D with a digital display
	Bargraph colour
	0 without bargraph (IA-NA3-D)
	T 3-colour bargraph (R, G, R+G)
	M 7-colour bargraph (R, G, B, R+G, G+B, R+G+B)
	Display colour
	0 without display
	R red
	G green
	B blue
	Input signal
	U universal input
	Analogue output signal
	0 without
	1 current programmable 0/4…20 mA
	2 voltage programmable 0…20 V
	Additional output
	0 without*
	1 RS-485 digital output + 1 relay
	2 RS-485 digital output + 1 output of OC type
	3 2 relays*
	4 2 outputs of OC type*
	Supply
	1 95…253 V AC/DC
	2 20…40 V AC/DC
	X on order**
	Kind of terminals
	0 socket-screw plug
	Version
	00 standard
	XX custom-made**
	Acceptance test
	8 without an extra quality insp. certificate
	7 with an extra quality inspection certificate
	X on order**

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* In case of a **NA3-B-X-X-X-X (0, 3 or 4)** please fill in the table “Programmable Parameters” on page 5.
** After agreement with the manufacturer.

Besides the products covered by this brochure, Intra-Automation GmbH also manufactures other high-quality and high precision instruments for industrial measurement tasks. For more information, please contact us (contact details on the backside of this brochure).

Flow measurement

Itabar®-Flow Sensor

IntraSonic IS210 Ultrasonic Flow Meter

Level measurement

ITA-mag. Level Gauge

MAGLINK Level Indicator

Other Measurement Tasks:

DigiFlow Flow and Level Computers

IntraCon Digital Controllers

IntraDigit Digital Indicators / Meters

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