Digital Panel Meter
IntraDigit

Series IA-N30O

Technical Information

02/2011

Accessories

THE EXPERT IN LEVEL AND FLOW

Intra-Automation
Technical Information
02/2011

Technical details subject to be changed without notice.

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

# IA-N30O
IntraDigit

Digital Panel Meter

List of Contents:

1 Features

- Measurement: number of pulses, frequency, rotational speed, period, work-time counter
- Two impulse counters, co-operation with encoders
- Counter of actual and total values
- Three-colour display (14 mm high), programmed in three intervals of the measured value
- Meter programming from the keyboard or through the RS-485 interface by means of the free delivered LPConfig program
- Four alarm outputs with signalling by LED diodes, operating in 6 different modes
- Conversion of any measured value into a 0/4…20 mA, or 0…10 V analogue signal
- Storage of minimal and maximwla values for all measured values
- Supply of object transducers (option)
- 21-point individual characteristic for the measured value

2 Application example
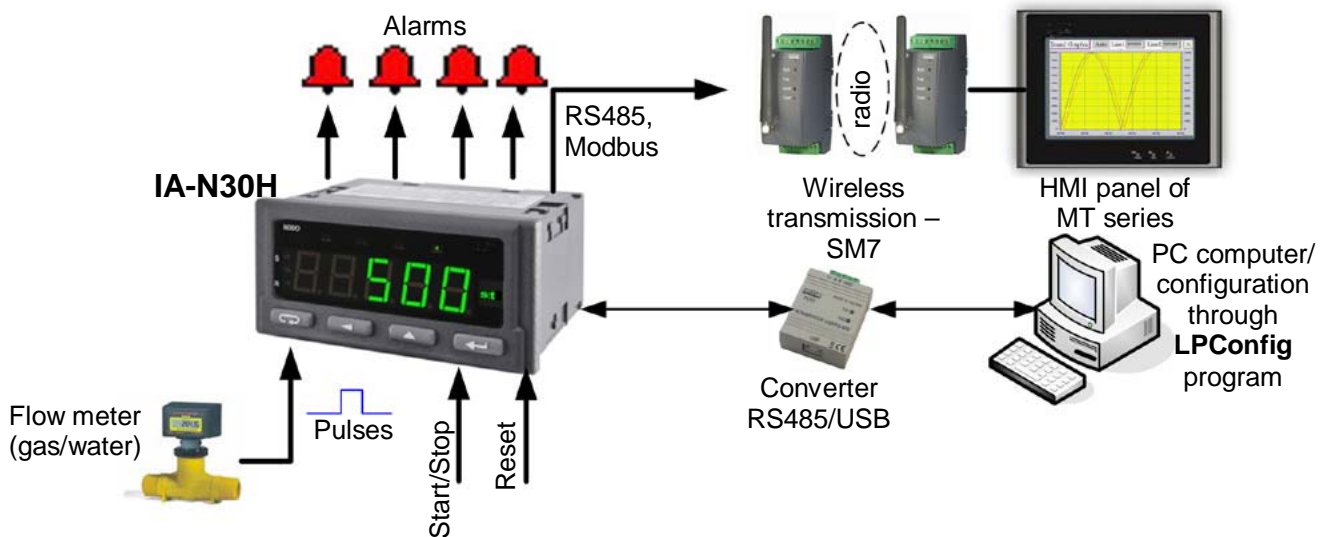
Measurement and visualization of the water/gas flow.
Measured data are transmitted to the operating panel via radio modules.

3 Technical details

Inputs

Signal	Input kind	Indication range	Max. frequency of input signal	Class	Note
Voltage 5…36 V DC	Number of pulses	-19999…99999	100 kHz	-	Duration of control signals must be higher than 10 ms.
	Frequency < 10 kHz	0.05…99999 Hz		0.01	
	Frequency > 10 kHz	1…99999 Hz	1 MHz	0.01	
	Rotational speed	0.05…99999 rpm	100 kHz	0.01	
	Period t < 10s	0.0001…11 s		0.01	
	Period t > 10s	0.0001…3600 s		0.01	
	Work-time counter	0…99999 h		0.5 s/24 h	
	Current time	00.00…23.59		0.5 s/24 h	
	Encoder	-19999…99999			

Outputs

| Kind of output	Properties	Remarks
Relay output	♦ 2x relays , voltageless NO contacts, load-carrying capacity 250 V AC / 0.5 A AC ♦ 2x relays, voltageless switched contacts, load-carrying capacity 250 V AC / 0.5 A AC	
Analogue output	♦ current programmable 0/4…20 mA, load resistance ≤ 500 Ω ♦ voltage programmable 0…10 V, load resistance ≤ 500 Ω ♦ Error of output: 0.2 % of the set range	Additional error from temperature changes: **50 % of class/10 K**
OC output	♦ OC type, passive npn, 30 V DC / 30 mA	
Auxilliar supply	♦ 24 V DC / 30 mA	

Digital interfaces

Interface type	Transmission protocol	Modes	Baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8, 9.6, 19.2, 38.4, 57.6, 115.2 kbit/s

External features

Readout field	5-digit LED display, Indication range: -19999…99999 digit height: 14 mm	Three colour display(colour changes depending on displayed value): red, green, orange
Weight	< 0.2 kg	
Overall dimensions	96 x 48 x 93 mm	Panel cut-out: 90$^{+0.6}$ x 45$^{+0.6}$ mm
Protection:	IP65 (front side)	IP10 (terminal side)

Rated operating conditions

Supply	85..253 VAC (40…400 Hz) or DC 20..40 VAC (40…400 Hz) or DC	Power consumption < 6VA
Temperature	Ambient: -10…<u>23</u>…55 °C	Storage: -25…85 °C
Relative Humidity	< 95 %	Condensation inadmissible
Operating position	Any	
External magnetic field	0…400 A/m	

Safety and compatibility conditions

Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	acc. to EN 61010-1
Pollution grade	2	
Installation category	III	
Maximal phase-to-earth working voltage	for the supply circuit: 300 V	
	for remaining circuits: 50 V	
Altitude above sea level	< 2000 m	

4 Connecting diagrams

Additional output signals (option)   Additional output signals (option)
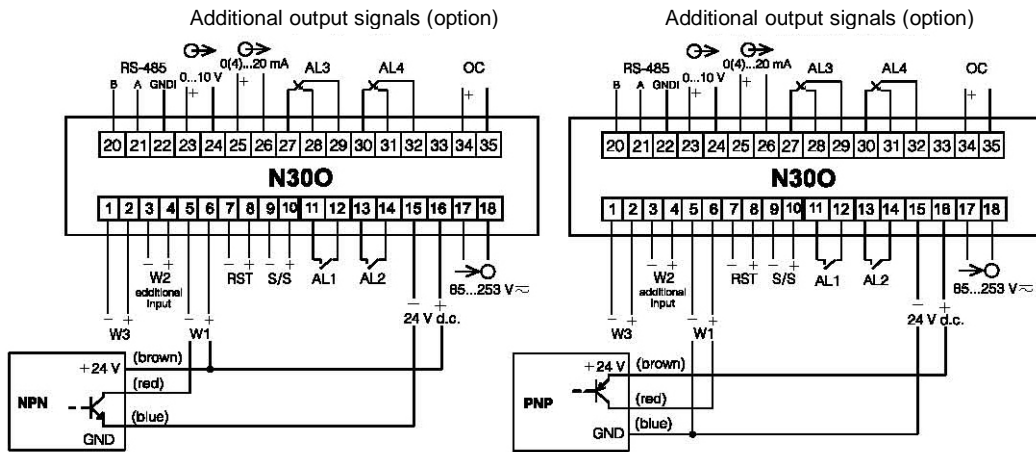
Connections of the transducer with the OC output of NPN and PNP type

5 Order codes

Code	Description						
IA-N30O	Digital panel meter						
	Supply						
	1	85…253 V AC/DC					
	2	20..40 V AC/DC					
		Additional outputs					
		0	without				
		1	OC output, RS485, analogue outputs				
		2	OC output, RS485, analogue outputs, switched-over relay outputs				
			Unit				
			XX	unit acc. to table 1			
				Version			
				00	standard		
				XX	custom-made*		
					Language		
					E	English	
					X	other*	
						Certification	
						0	without additional quality inspection certificate
						1	with additional quality inspection certificate
						X	on request*
IA-N30O							

*Please contact manufacturer

Table 1: Unit codes

Code	Unit	Code	Unit	Code	Unit
00	without	20	kVAh	41	St.
01	V	21	MVAh	41	imp
02	A	22	Hz	42	rps
03	mV	23	kHz	43	m/s
04	kV	24	Ω	44	l/s
05	mA	25	kΩ	45	obr/min
06	kA	26	°C	46	rpm
07	W	27	°F	47	mm/min
08	kW	28	K	48	m/min
09	MW	29	%	49	l/min
10	var	30	%RH	50	m³/min
11	kvar	31	pH	51	St./h
12	Mvar	32	kg	52	m/h
13	VA	33	bar	53	km/h
14	kVA	34	m	54	m³/h
15	MVA	35	l	55	kg/h
16	kWh	36	s	56	l/h
17	MWh	37	h	XX	on order*
18	kvarh	38	m³		
19	Mvarh	39	obr		

*Please contact the manufacturer

ROOM FOR YOUR NOTES

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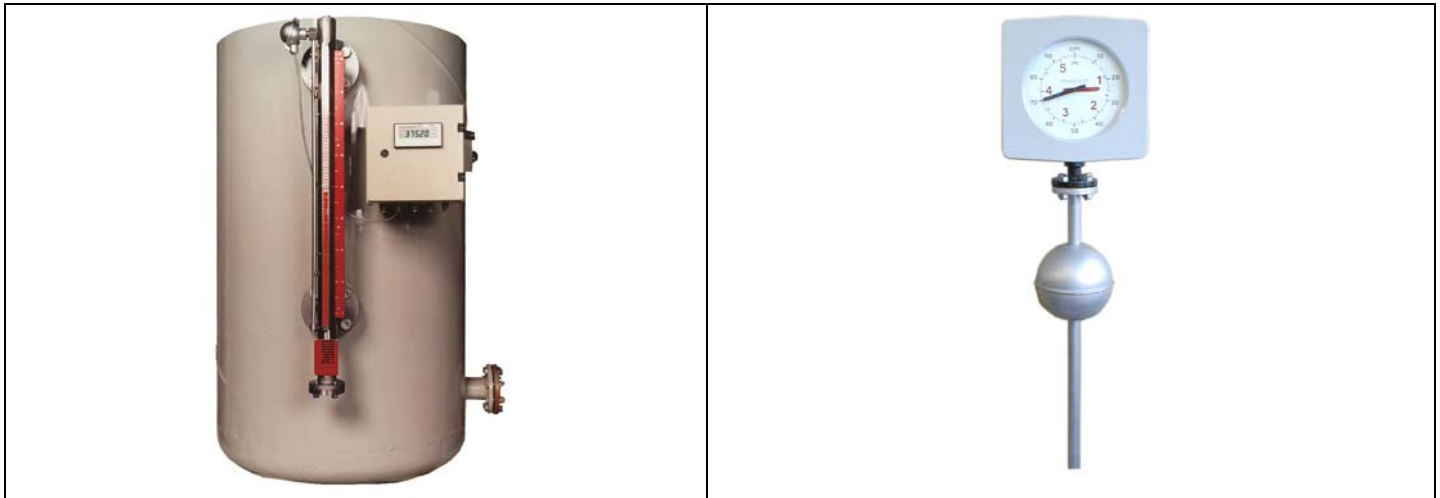
Flow measurement
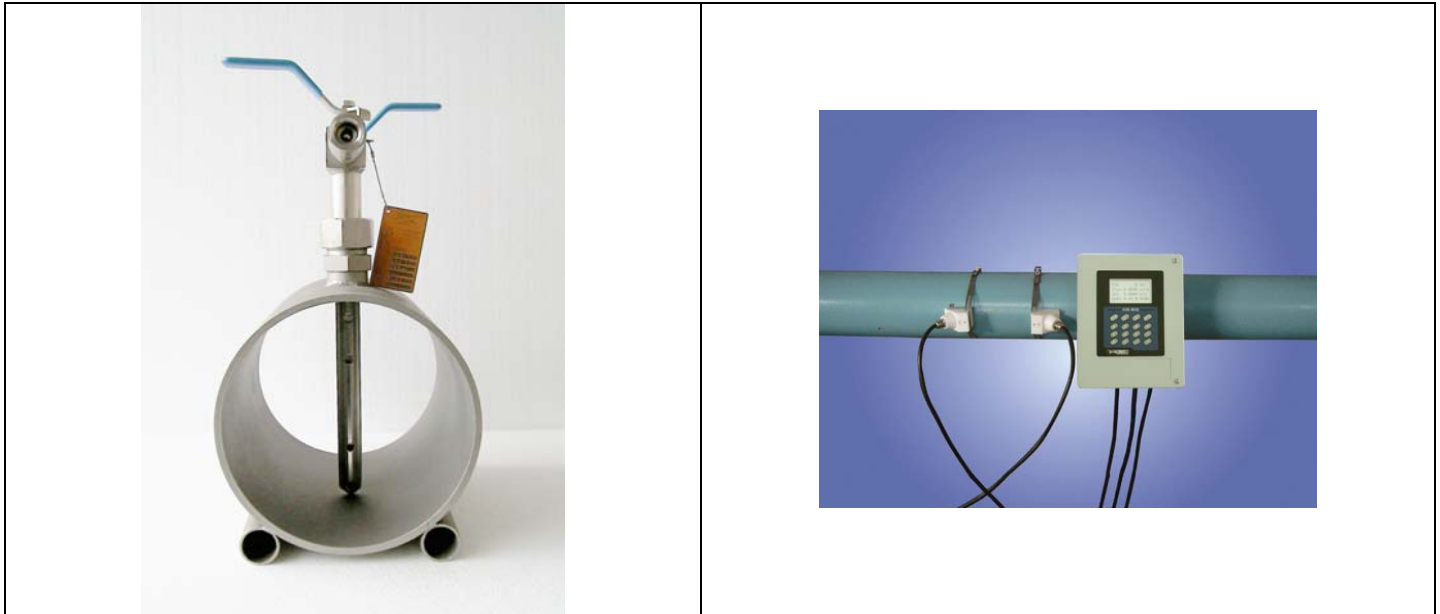
Itabar®-Flow Sensor

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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