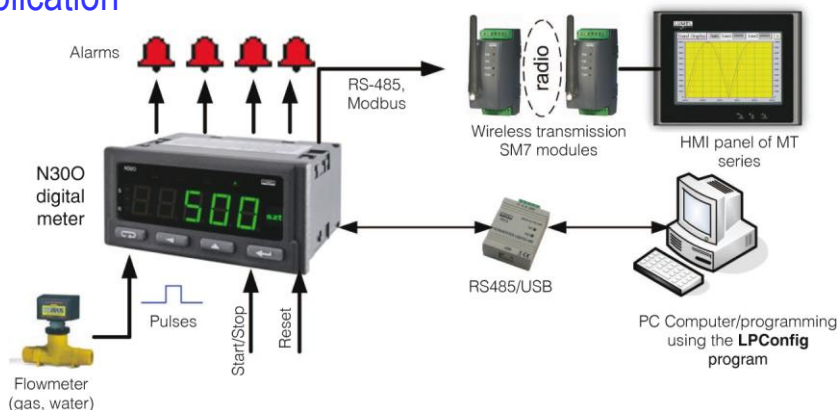


N300 Digital Panel Meter



- Measurement: number of pulses, frequency, rotational speed, period, worktime counter.
- Two impulse counters, co-operation with encoders.
- Counter of actual and total values.
- 3-colour display (14 mm high), programmable in 3 ranges of the measured value.
- Meter programming from keyboard or through the RS-485 interface by means of the free LPConfig program.
- 4 alarm outputs with signalling on LED diodes, working in 6 different modes.
- Conversion of any measured value into an analog signal 0/4...20 mA or 0...10 V.
- Storage of minimal and maximal values for all measured quantities.
- Supply of object transducers (option).
- 21-point individual characteristic for the measured value.

Example of application



Measurement and visualization of the water/gas flow. The measured value is transmitted to the operating panel via radio modules

Input signal:	Input kind	Indication range	Maximum frequency of input signal	Class	Remarks
Voltage 5...36 V d.c.	Number of pulses	-19 999..99 999	100 kHz	-	Duration of control signals must be higher than 10 ms.
	Frequency < 10 kHz	0.05..99 999 Hz		0.01	
	Frequency > 10 kHz	1...99 999 Hz (measuring range up to 1 MHz)	1 MHz	0.01	
	Rotational speed	0.05...99 999 [rpm]	100 kHz	0.01	
	Period t < 10s	0.0001...11 [s]		0.01	
	Period t < 10s	0.0001...3600 [s]		0.01	
-	Worktime counter	0...99 999 [h]		0.5 sek./24 h	
	Current time	00.00...23.59		0.5 sek./24 h	
	Encoder	-19 999...99 999			

Outputs		
Output kind	Properties	Remarks
Relay output	<ul style="list-style-type: none"> • 2 x relays, voltageless NOC contacts load-carrying capacity 250 V a.c./ 0.5 A a.c. • 2 x relays, voltageless switched contacts load-carrying capacity 250 V a.c./ 0.5 A a.c. 	
Analog output	<ul style="list-style-type: none"> • current programmable 0/4...20mA, load resistance ≤ 500 H • voltage programmable 0...10 V load resistance ≥ 500 H 	Error of analog output: 0.2% of the set range Additional error from temperature changes: 50% of the class/10K
OC output	• typu OC, passive npn, 30 V d.c./30 mA	
Auxiliary Supply	• 24 V d.c./ 30mA	

Digital Interface			
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

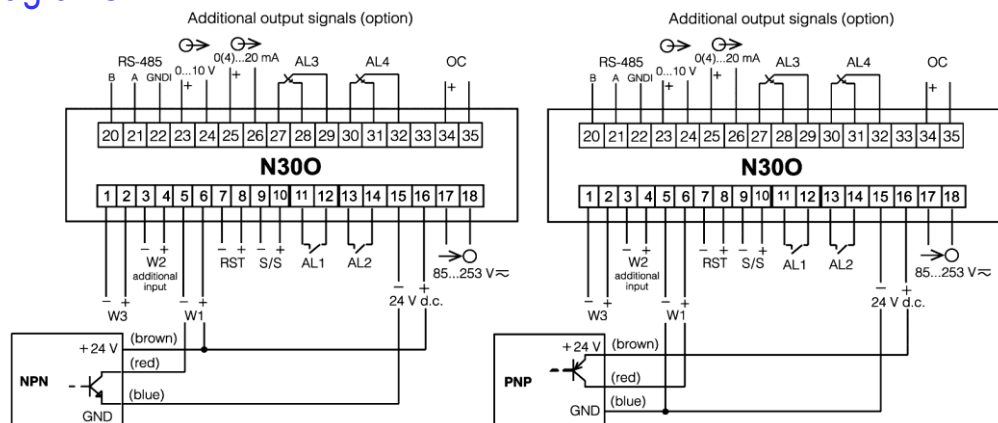


External Features		
Readout field	5-digit LED display - indication range -19999..99999 digit height: 14 mm	three-colour display (color changes depending on displayed value): red, green, orange
Weight	< 0.2 kg	
Overall dimensions	96 x 48 x 93 mm	Panel cut-out: 92 ^{+0.6} x 45 ^{+0.6} mm
Protection grade (acc. to EN 60529)	from frontal side: IP65	from rear side: IP 10

Rated Operating Conditions		
Supply voltage	85...253 V a.c. (40...400 Hz) or d.c., 20...40 V a.c. (40...400 Hz) or d.c.	Power input < 6 VA
Temperature	Ambient: -25...23...55°C	Storage: -30...70°C
Relative humidity	25...95%	Condensation inadmissible
Operating position	any	
External magnetic field	0...400 A/m	

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

Connection Diagrams



Ordering

Table 1. Ordering Codes:						
	N300-	X	X	XX	XX	X X
Supply:						
85...253 V a.c./d.c.		1				
20...40 V a.c./d.c.		2				
Additional outputs:						
Lack			0			
OC output, RS-485, analog outputs			1			
OC output, RS-485, analog outputs switched-over relay outputs			2			
Unit:				XX		
unit code number acc. to table 2						
Version:						
Standard					00	
custom-made*					XX	
Language:						
Polish						P
English						E
Other*						X
Acceptance tests:						
without extra requirements						0
with an extra quality inspection certificate						1
acc. to customer's request*						X

ORDER EXAMPLES :

The code N300 - 1 0 01 00 E 0 means:
N300 - programmable N300 digital panel meter
1 - supply: 85...253 V a.c./d.c.
0 - lack of additional outputs
01 - unit "V" acc. to tabel 2
00 - standard op! on
E - English language
0 - without extra requirements

Table 2. Codes of Highlighted Unit:					
Code	Unit	Code	Unit	Code	Unit
00	Lack of unit	20	kVah	40	Pcs
01	V	21	mmMVah	41	Imp
02	A	22	cmHz	42	Rps
03	mV	23	mkHz	43	m/s
04	kV	24	Ω	44	l/s
05	mA	25	kΩ	45	Turns/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	m ³ /min
11	Kvar	20	pH	51	Pcs/h
12	Mvar	31	Kg	52	m/h
13	VA	32	Bar	53	Km/h
14	kVA	33	M	54	M ³ /h
15	MVA	34	L	55	Kg/h
16	kWh	35	S	56	l/h
17	MWh	36	H	XX	on order*
18	Kvarh	37	m ³		
19	Mvarh	38	turns		

1) - after agreeing with the manufacturer