

N300 DIGITAL PANEL METER

FEATURES:

- 3-color display
- Program **LPConfig**
- MOD BUS**
- RS 485**
- 21 points
- RTC**
- IP65**
- Password protection

INPUTS:

- Hz
- Waveform icons: square wave, triangle wave, sine wave

OUTPUTS:

- 0..20 mA
- 0..10 V
- Waveform icons: square wave, triangle wave, sine wave
- 2x
- 2x

GALVANIC ISOLATION:

- Isolation icons: lightning bolt with slash, crossed lightning bolts
- RS 485**

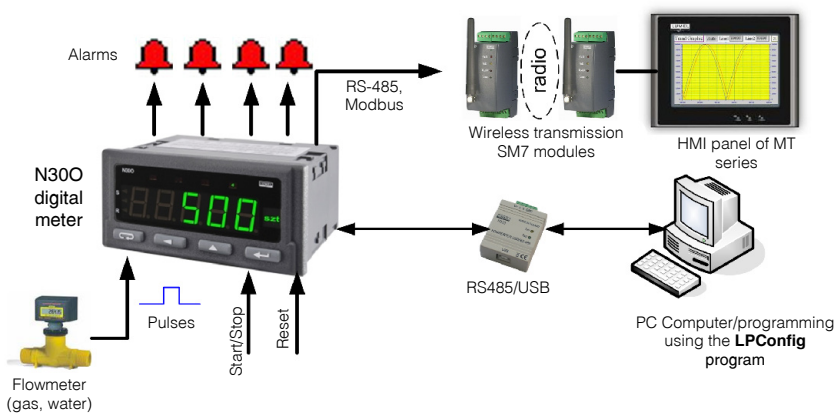
Export department:
 English: +48 68 32 95 302 / 321 / 276 / 386 / 233
 German: +48 68 32 95 305
 French: +48 68 32 95 304
 Russian: +48 68 32 95 321
 Fax: +48 68 32 54 091
 e-mail: export@lumel.com.pl

LUMEL S.A.
 ul. Sulechowska 1
 65-022 Zielona Góra
 POLAND
WWW.LUMEL.COM.PL



- Measurement: number of pulses, frequency, rotational speed, period, worktime counter.
- Two counter impuls, co-operation with encoders.
- Counter of actual and total values.
- 3-color 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

INPUTS

Input signal:	Input kind	Indication range	Maximal 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 Ω • voltage programmable 0...10 V load resistance ≥ 500 Ω 	Error of analogue 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 kbit/s

EXTERNAL FEATURES

Readout field	5 digit LED display - indication range -19999..99999 digit height: 14 mm	three-color display (color changes depending on displayed value): red, green, orange
Weight	< 0.2 kg	
Dimensions	96 × 48 × 93 mm	Panel cut-out: 92 ^{+0,6} × 45 ^{+0,6} mm
Protection level (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
Working position	any	
External magnetic field	0...400 A/m	

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emission	acc. to EN 61000-6-4
Insulation between circuits	basic	acc. to EN 61010-1
Pollution degree	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	

CONNECTION DIAGRAMS

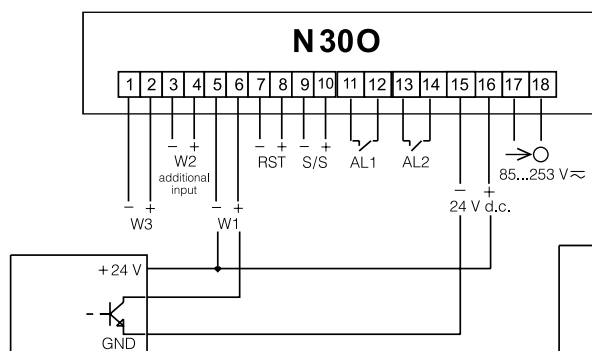


Fig. 1 Connection of the transducer with the OC output of NPN type.

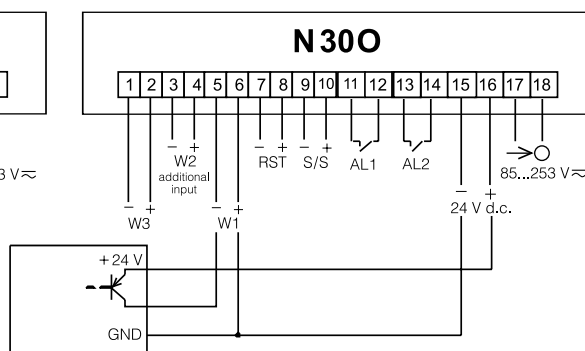


Fig. 2 Connection of the transducer with the OC output of PNP type.

ORDERING

TABLE 1. ORDERING CODES:

N300 - X X XX XX X					
Supply voltage:					
85...253 V a.c./d.c.	1				
20...40 V a.c./d.c.	2				
Additional outputs:					
lack		0			
pulse output, RS-485, analog outputs		1			
pulse output, RS-485, analog outputs		2			
switched-over relay outputs					
Unit:					
unit code acc. to the table 2			XX		
Kind of execution:					
standard					00
custom-made*					XX
Acceptance tests:					
without extra requirements					8
with an extra quality inspection certificate					7
acc. to customer's agreements*					X

Order example:

The code **N300 - 1 0 01 00 8** 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 execution
8 - 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	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	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	31	pH	51	pcs/h
12	Mvar	32	kg	52	m/h
13	VA	33	bar	53	km/h
14	kVA	34	m	54	m ³ /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	m ³		
19	Mvarh	39	turns		

* - the code will be established by the manufacturer

SEE ALSO:



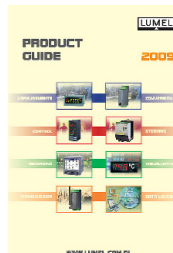
Free LPConfig software for easy programming of LUMEL's products. Available on our website



KD7 recorder with MODBUS master protocol for recording data measured by N300 meter. See our RECORDERS catalogue.



SM3 binary inputs module. For readout of binary states and pulses through RS-485 protocol. See our MODULES catalogue.



For more information about products look at Product Guide 2009 catalogue or visit our website.

Export department:

English: +48 68 32 95 302 / 321 / 276 / 386 / 233
German: +48 68 32 95 305
French: +48 68 32 95 304
Russian: +48 68 32 95 321
Fax: +48 68 32 54 091
e-mail: export@lumel.com.pl

LUMEL S.A.
 ul. Sulechowska 1
 65-022 Zielona Góra
 POLAND
WWW.LUMEL.COM.PL