

N24 DIGITALNI VGRADNI PRIKAZOVALNIK

LASNOSTI:

IP65 Program LPConfig
PD14 Linear char. Programmer

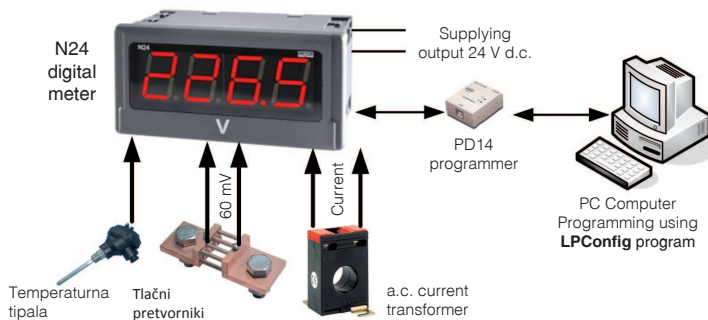


- Destined for measurement of d.c. voltage or d.c. current, temperature through Pt100 resistance thermometers, J, K thermocouples, a.c. voltage and a.c. current.
- 4 digitni LED prikazovalnik z 20mm visokimi števkami
- Parameters programmable by PD14 programmer:
 - precision of displayed results (decimal point),
 - measurement averaging time,
 - recounting of indications (individual characteristic),
 - automatic or manual compensation: cold junction temperature for measurement with thermocouples or wire resistance for measurement with Pt100 (N24T).

VHODI:

AC **DC**

PRIMER APLIKACIJE



Measurement and display:

- temperature
- analog signals
- d.c. current and voltage
- rms current and voltage.

VHODI

TIP	Merilno območje	Parameters	Overloads	Merilna napaka
N24S	-11 mV...-10 mV...60 mV...66 mV	Input resistance >1 MΩ	Short duration overload (1s): - voltage input: 10 Un - current input: 5 In Sustained overload: 110% Un, 110% In	Basic error: ± (0.2% of range + 1 digit) Additional error from ambient temperature changes: ± (50% of basic error/10K)
	-66 mV...-60 mV...60 mV...66 mV			
	-0.5 V...0 V...10 V...11 V			
	-11 V...-10 V...10 V...11 V			
	-1 mA...0 mA...20 mA...22 mA			
N24T	3.6 mA...4 mA...20 mA...22 mA	Input resistance 10 Ω ±1%	Short duration overload (1s) Input of sensors: 30 V	Basic error: ± (0.2% of range + 1 digit) Additional errors: • compensation of cold junction temperature changes: ± 0.2% of range, • from ambient temperature changes: ± (50% of basic error/10K).
	Pt100	Current flowing through the sensor: < 300 μA. Resistance of wires connecting RTD with the meter: - max 5 Ω (per wire) for automatic compensation - max 10 Ω (per wire) for manual compensation		
	Thermo-couple J	-50°C...1200°C		
	Thermo-couple K	-50°C...1370°C		
N24Z	1...100...120 V a.c.	Input resistance > 2 MΩ	Short term overload (1s): voltage input: 2 Un (< 1000V), current input: 10 In Sustained overload: 150% Un (for 400 V input), 120% (for remaining inputs), 120% In	Basic error: • voltage and current: ± (0.5% of range + 1 digit) in frequency range 20...500 Hz • frequency: ± (0.02% of range + 1 digit) Additional error from ambient temperature changes: ± (50% of basic error/10K)
	2.5...250...300 V a.c.			
	4...400...600 V a.c.			
	20...500 Hz (in voltage range: 24...480 V)			
	0.01...1...1.2 A a.c.			
N24H	0.05...5...6 A a.c.	Input resistance 2 mΩ ±10%	Short term overload (1s): voltage input: 2 Un (< 1000V), current input: 10 In Sustained overload: 150% Un (for ± 400 V input), 120% (for remaining inputs), 120% In	Basic error: ± (0.2% of range + 1 digit) Additional error from ambient temperature changes: ± (50% of basic error/10K)
	0...100...110 V d.c.	Input resistance > 2 MΩ		
	0...250...275 V d.c.			
	-120...-100...100...120 V d.c.			
	-300...-250...250...300 V d.c.			
	-600...-400...400...600 V d.c.			
-1.2...-1...1...1.2 A d.c.	Input resistance 10 mΩ ±10%			
-6...-5...5...6 A d.c.	Input resistance 2 mΩ ±10%			

IZHODI:



GALVANSKA IZOLACIJA



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IZHODI

For N24S and N24T	Output for supply external transducers	24 V ± 5%, 30 mA
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OSTALI PODATKI

Teža	< 0.25 kg	
Mere	96 x 48, globina 64 mm (vključno z priključki)	
Stopnja IP zaščite (ustreza EN 60529)	s čelne strani: IP65	z zadnje strani: IP 20
Display	4-digitni LED prikazovalnik rdeče barve, 20 mm višina	nastavljivo območje: -1999...9999

POGOJI DELOVANJA PRIKAZOVALNIKA

Napajalne napetosti	230 V ± 10% a.c. (45...65 Hz); 110 V ± 10% a.c. (45...65 Hz) 24 V ± 10% a.c. (45...65 Hz); 85...253 V a.c. (40...400 Hz) or d.c.; 20...40 V a.c. (40...400 Hz) or d.c.	input power consumption: 6 VA
Temperatura	ambient: -10...23...55°C	storage: -25...85 °C
Relativna vlažnost	≤ 95%	condensation inadmissible
Položaj vgradnje	poljuben	
Preheating time	30 min	
Averaging time	≥ 0.5 s	1 second default set

VARNOSTNE IN USTREZNOSTNE ZAHTEVE

Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	
Pollution grade	2	
Installation category	III (for the 400 V option - category II)	
Maximal phase-to-earth operating voltage	for supply circuits: 300 V, for measuring circuits: 600 V - cat. II	acc. to EN 61010-1
	for other circuits: 50 V	
Altitude above sea level	< 2000 m	

PRIKLJUČITVENE SCHEME

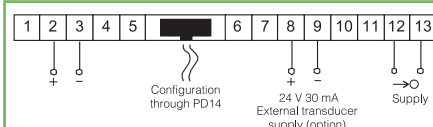


Fig. 1. Electrical connections of the N24S meter

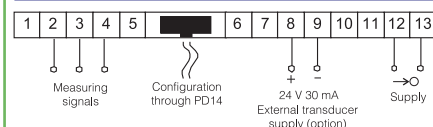


Fig. 2. Electrical connections of the N24T meter.

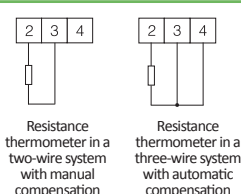


Fig. 3. Connections of N24T measuring inputs

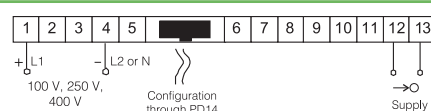


Fig. 4. Electrical connections of N24Z and N24H meters for the measurement of voltage (and frequency only in N24Z)

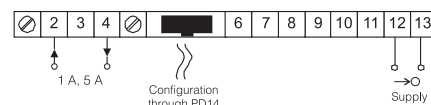


Fig. 5. Electrical connections of N24Z and N24H meters for the current measurement

ORDERING

TABELA 1. OBRAZEC ZA NAROČANJE:

N24 -	X	X	X	XX	XX	X	X
Vrsta vhoda:							
standard: voltage, current		S					
temperaturni: Pt100, termopa K, J		T					
a.c. signals		Z					
d.c. signals: high voltage and high current		H					
Input:							
see table 2		X					
Supply:							
230 V a.c.						1	
110 V a.c.						2	
24 V a.c.						3	
85...253 V a.c./d.c. with supply output 24 V/30 mA*						4	
20...40 V a.c./d.c. with supply output 24 V/30 mA*						5	
Unit:							
see table 3					XX		
Version:							
standard						00	
non-standard settings						NS	
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

* - The output is only in N24S and N24T meters
** - After agreeing with the manufacturer

TABELA 2. VHODNI SIGNAL

Nr	N24S	N24T	N24Z	N24H
1	0...20 mA	Pt100: -50...150°C	100 V a.c.	±100 V d.c.
2	4...20 mA	Pt100: -50...400°C	250 V a.c.	±250 V d.c.
3	0...60 mV	termopar J	400 V a.c.	±400 V d.c.
4	0...10 V	termopar K	1 A a.c.	±1 A d.c.
5	± 60 mV		5 A a.c.	±5 A d.c.
6	± 10 V		20...500 Hz	0...100 V d.c.
7				0...250 V d.c.

TABELA 3. KODE ZA NATISNjeno ENOTO

Code	Unit	Code	Unit	Code	Unit
00	without unit	06	mA	12	bar
01	°C	07	kA	13	kPa
02	%	08	kV	14	MPa
03	A	09	Hz		
04	V	10	turns	XX	on order
05	mV	11	rpm		

TABLE 4. EXAMPLE OF NON-STANDARD SETTINGS:

Parameter	Range/Value
Decimal point	000,0 for I, U
Averaging time	1 s
Upper measurement overflow	9999
Lower measurement overflow	-1999
Individual characteristic	enabled
Parameter a of the individual characteristic	5
Parameter b of the individual characteristic	0

Order example 1 :

The code **N24Z-2 1 04 00 E 0** means
N24Z - digital meter for a.c. signals
2 - input: 250 V a.c.
1 - supply: 230 V a.c.
04 - unit: V
00 - standard version
E - English language
0 - without extra requirements

Order example 2 :

The code **N24S-1 4 02 NS E 1** means:
N24S - digital meter for d.c. signals
1 - input: 0...20mA
4 - supply: 85...253 V a.c. with supply output: 24V/30mA
02 - unit: %
NS - non-standard settings, display range: 0...100.0
E - English language
1 - with an extra quality inspection certificate

SEE ALSO:



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



PD14 programmer - unit for programming LUMEL's products, with USB connection, LPCon compatible.



N30 digital panel meters with three-colour display.



For more information about LUMEL's products please visit our website: www.lumel.com.pl



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