

AC Parameter Digital Panel Meter, N20Z



- AC voltage, AC current or frequency input
- Wide voltage, AC/DC control
- 3 Colour, 5 digit display. Red, green and orange

Description

APPLICATION

The N20Z meter is a digital programmable panel instrument destined for measurements of a.c. voltages or a.c. currents, or frequency.

FEATURES

- three-colour display: red, orange, green, facilitating the observation of measured value changes,
- readout field: 5-digit LED, 14 mm digit height,
- 2 alarm outputs of OC type (4 types of alarms),
- signaling of alarm states through the highlight of the alarm index,
- housing protection level: IP 65,
- programming possibility of chosen meter parameters with the use of the PD14 programmer and free delivered LPConfig software:
- display colour, individually in three intervals,
- thresholds of displayed overflows
- display precision of the result (decimal point),
- highlight of the unit,
- kind of measured signal a.c. or a.c. + d.c. (True RMS),
- averaging time of the measurement,
- recalculation of indications (individual characteristic),
- two alarms of OC type operating in six working modes.

Technical data

Measuring ranges

INPUTS:

Measuring range of Un voltage:

1...100...120 V

2.5... 250...300 V

input resistance > 2 MΩ

4... 400...480 V

Measuring range of In current:

0.01... 1...1.2 A

input resistance 50 mΩ ± 10%

0.05... 5...6 A

input resistance 10 mΩ ± 10%

Frequency measurement:

(in voltage range 24... 480 V)

20... 500 Hz

input resistance > 2 MΩ

Preheating time	30 min.
Intrinsic error (at manufacturer settings):	
– voltage and current	± (0.5% of the range ±1 digit) in the frequency interval 20... 500 Hz
– frequency	± (0.02% of the range ±1 digit)
Additional errors in rated operating conditions:	
– from ambient temperature changes	(50% of the intrinsic error/10K)
Averaging time:	
– voltage, current (programmable)	min 0.5s (1s by default)
– frequency (not programmable)	1s
Alarm outputs	outputs of O/C type (30 V, 20 mA), Passive outputs acc. to EN 62053-31
Rated operating conditions:	
– supply voltage	85...253 V a.c. (45...65 Hz) or d.c. 20...40 V a.c. (45...65 Hz) or d.c.
– ambient temperature	- 10...23...55°C
– storage temperature	- 25... + 85°C
– relative air humidity	< 95% (condensation inadmissible)
– working position	any
Sustained overload capacity	120% Un, 120% In
Short duration overload capacity (3 s):	
– voltage input	2 Un (< 1000 V)
– current input	10 In
Readout field	5-digit three-colour LED display: - digit height: 14 mm, - colours: green, orange, red, - indication range: -19999...99999
Ensured protection level from frontal side	IP 65 acc. to EN 60529
Dimensions	96 x 48 x 64 mm (with terminals)
Panel cut-out dimensions	92+0.6 x 45+0.6 mm
Weight	< 0.25 kg
Power consumption	< 6 VA
Electromagnetic compatibility:	
– noise immunity	acc. to EN 61000-6-2
– noise emission	acc. to EN 61000-6-4
Safety requirements acc. to PN-EN 61010-1:	
– isolation between circuits	basic
– installation category	III (for 400 V execution - category II)
– pollution degree	2
– maximal phase-to-earth working voltage:	
- for supply circuit	300 V
- for measuring input	600 V - category II 600 V - category II
- for input destined for programming	50 V

Connection diagrams

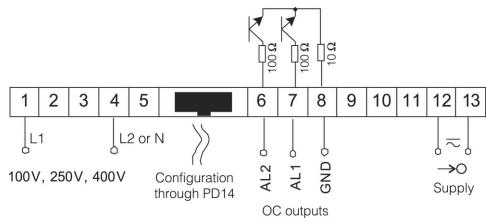


Fig. 1 Electrical Connections of the N20Z Meter for Voltage and Frequency Measurements

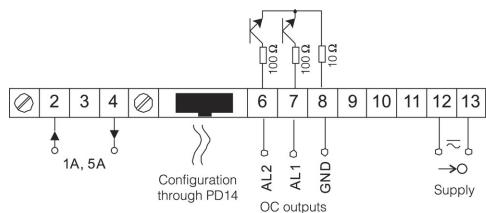


Fig. 2 Electrical Connections of the N20Z Meter for Current Measurements

Part number Key

Table 1. Ordering codes:

Part number key						
Digital panel meter	N20Z -	X	X	XX	XX	X
Input:						
100 V		1				
250 V		2				
400 V		3				
1 A		4				
5 A		5				
frequency 20... 500 Hz		6				
Supply Voltage:						
85... 253 V a.c. (45...65 Hz) or d.c.		1				
20... 40 V a.c. (45...65 Hz) or d.c..		2				
Unit:				XX		
code number of the unit acc. table 2						
Kind of execution:						
standard			00			
special execution			XX			
custom-made			99			
Acceptance tests:						
without extra additional requirements			8			
with an extra quality inspection certificate			7			
acc. to customer's agreement			X			

Table 2. Code of the highlighted unit

Code	Unit	Code	Unit
00	without unit	24	l/h
01	V	25	ms
02	A	26	s
03	mV	27	h
04	kV	28	N
05	MV	29	kN
06	mA	30	Pa
07	kA	31	hPa
08	MA	32	kPa
09	°C	33	MPa
10	°F	34	bar
11	K	35	rad
12	Hz	36	Ω
13	kHz	37	kΩ
14	Ah	38	%
15	kAh	39	°
16	m/s	40	rev
17	mm	41	rps
18	mm	42	rpm
19	cm	43	rph
20	m	44	m/h
21	km	45	km/h
22	l	46	imp
23	l/s	XX	on order



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