

6. TECHNICAL DATA

Measuring ranges

INPUTS:

Measuring range for AC voltage (Un):

0.. <u>1..100</u> ...130 V a.c.	}	input resistance > 2 MΩ
0.. <u>2.5..250</u> ...325 V a.c.		
0.. <u>4..400</u> ...600 V a.c.		

Measuring range for AC current (In):

0.. <u>0.01..1.0</u> ...1.3 A a.c.	input resistance 10 mΩ ± 10 %
0.. <u>0.05..5.0</u> ...6.3 A a.c.	input resistance 2 mΩ ± 10 %

Frequency measurement 20...500 Hz:

(in range of 24...480 V)) input resistance > 2 MΩ

Analog output

current 0(4)..20...24 mA

load resistance ≤ 250 Ω

voltage 0...10...11 V

load resistance ≥ 500 Ω

resolution 0.01 % of range

output response time: 200 ms

Serial interface

RS485: address 1..247

mode: 8N2, 8E1, 8O1, 8N1

baud rate: 4.8, 9.6, 19.2 kbit/s

transmission protocol: Modbus RTU

response time: 200 ms

Basic conversion error (by default settings):

voltage and current: 0.2% of range in the
frequency range 45...65 Hz
frequency: 0.02 % of range

Additional errors in rated operating conditions:

from ambient temperature changes (100 % of basic error/10 K)

Sustained overload: 150 % U_n (in. 400V a.c.),
120 % U_n (other inputs),
120 % I_n

Short duration overload (1 s): voltage input 2 U_n
(<1000 V)
current input: 10 I_n

Admissible peak factor: current: 2
voltage: 2

Rated operating conditions:

supply voltage 85..253 V a.c. 40..400 Hz; 90..300 V d.c.
20..40 V a.c. 40..400 Hz; 20..60 V d.c.
ambient temperature - 20...23...60 °C
storage temperature -25...+85 °C
humidity < 95 % (inadmissible condensation)
work position any

Averaging time – measurement (programmable): ≥ 0.5 s

Pre-heating time: 15 minutes

Galvanic isolation between:

- supply – meas.input: 3.2 kV d.c.
- supply – output: 2 kV d.c.
- measuring input – output: 3.2 kV d.c.

Ensured protection grade acc. to EN 60529:

- for the housing IP40
- from the terminal side IP20

Dimensions: 22.5 x 100 x 120 mm

Weight: 0.125 kg

Fixing: 35 mm rail acc. to EN 60715

Input power: < 3 VA

Electromagnetic Compatibility:

- noise immunity acc. to EN 61000-6-2
- noise emissions acc. to EN 61000-6-4

Safety requirements acc. to EN 61010 -1 standard:

- isolation between circuits: basic
- installation category III (for version 400 V – cat. II)
- pollution level 2
- maximal phase-to-earth working voltage:
 - for power supply circuit 300 V
 - for measuring input 600 V – cat. II (300 V – cat. III)
 - for programming input 50 V
 - for output 50 V
- altitude above sea level < 2000 m.



7.ORDERING CODE

Table 5

PROGRAMMABLE TRANSDUCER OF AC CURRENT AND AC VOLTAGE P21Z -		X	X	X	XX	X	X
Input signal:							
100 V a.c.	1						
250 V a.c.	2						
400 V a.c.	3						
1 A a.c.	4						
5 A a.c.	5						
frequency 20...500 Hz	6						
Output:							
0...20 mA	1						
4...20 mA	2						
0...10 V	3						
RS-485	4						
Supply voltage:							
85..253 V a.c. 40..400 Hz; 90..300 V d.c.	1						
20..40 V a.c. 40..400 Hz; 20..60 V d.c.	2						
Version:							
standard					00		
non-standard settings					NS		
custom-made*					XX		
Language:							
Polish						P	
English						E	
other*						X	
Acceptance tests:							
without extra quality inspection requirements							0
with an extra quality inspection certificate							1
acc. to customer's request*							X

* - after agreeing with the manufacturer

Order example:

The code **P21Z - 1 1 1 00 E 0** means:

P21Z - transducer of d.c. current or d.c. voltage signals

1 - input signal: 1...100 V a.c.

1 - output signal: 0...20 mA

1 - supply voltage: 85..253 V a.c. 40..400 Hz; 90..300 V d.c.

00 - standard version

E - English language

0 - without extra quality inspection requirements