



DATASHEET

Issue 1



- Multifunction Meters
- Transducers & Isolators
- Temperature Controllers
- Converters & Recorders
- Digital Panel Meters
- Current Transformers
- Analogue Panel Meters
- Shunts
- Digital Multimeters
- Clamp Meters
- Insulation Testers

P21Z AND FREQUENCY PROGRAMMABLE TRANSDUCER OF AC CURRENT, AC VOLTAGE

Product Characteristics

- Continuous conversion of AC current, AC voltage without DC component and frequency
- Standard DC current or DC voltage output signal or RS-485 interface with Modbus protocol
 - Compact dimensions.
 - 0.2 accuracy class.
 - Fully programmable parameters by PD14 programmer and free e-Con program:
 - measurement averaging time,
 - conversion characteristic,
 - preservation of the output signal at overflows,
 - RS-485 transmission parameters

SUBJECT TO CHANGE WITHOUT NOTICE
This manual superseded all previous versions – please keep for future reference

Features

PD14 Programmer
eCon

MOD BUS
Linear charts

Inputs



Outputs

0..10 V
0..20 mA

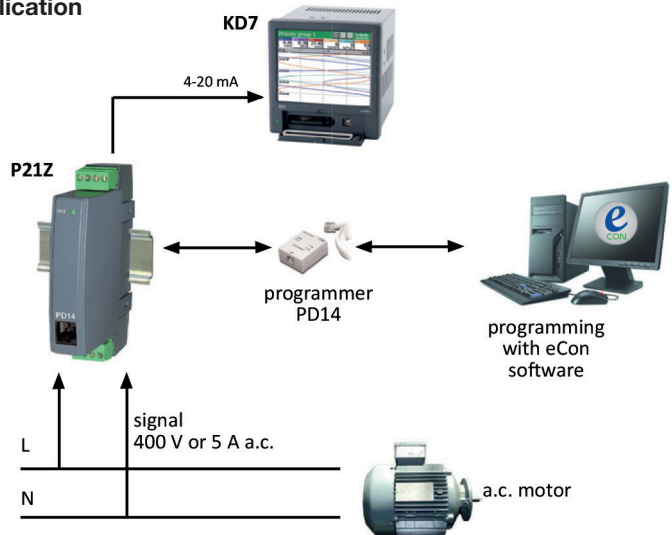
4...20 mA
RS 485

Galvanic Isolation

Supply
Interface PD14



Example of application



Measurement and archiving of a.c. motor current/voltage work parameters. Measured data are transmitted to the recorder/data logger.

Outputs			
Measuring ranges	Parameters	Overloads	Error
0...1...100...130 V a.c.	input resistance > 2 MΩ	Short duration overload (1s): 2 Un (< 1000V), 10 In	Basic error (at manufacturer's settings): ± (0.2% of range) Additional error from ambient temperature changes: ± (50% of the basic error/10K) ± 0.2% of range
0...2,5...250...325 V a.c.			
0...4...400...600 V a.c.	input resistance 10 mΩ ±10%	Sustained overload: 150% Un (only for Un = 400 V and ±400 V), 120% Un (for other Un), 120% In	
0...0,01...1,0...1,3 A a.c.	input resistance 2 mΩ ±10%		
0...0,05...5,0...6,3 A a.c.	input resistance > 2 MΩ		
20...500 Hz (in voltage range 24...480)			

Outputs		
Output kind	Properties	Remarks
0...20...22 mA	Rload ≤ 250 Ω	Resolution: 0.01% of the range
4...20...22 mA		
0...10...11 V	Rload ≥ 500 Ω	

Digital Interface			
Interface type	Transmission protocol	Modes	Baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8, 9.6, 19.2 kbit/s

External Features		
Weight	< 0.125 kg	
Dimensions	22.5 x 120 x 100 mm	
Protection grade (acc. to EN 60529)	ensured by the housing: IP 40	from the terminal side: IP 20
Fixing	on a 35 mm rail	acc. to EN 60715

Rated operating conditions		
Supply	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.	power consumption: < 3 VA
Temperature	ambient: -20...23...60°C	storage: -25...85°C
Relative humidity condensation	< 95%	inadmissible vapour
Operating position	any	
Preheating time	15 min	
Averaging time of the measurement ≥ 0.5 s	1 second set by default	

Safety and Compatibility Requirements		
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 the supply circuit: 300 V	acc. to EN 61010-1
	for the measuring input: 600 V cat. II (300 V - cat. III)	
	for the programming input: 50 V	
	for the output: 50 V	
Altitude above sea level	< 2000 m	

Connection Diagrams

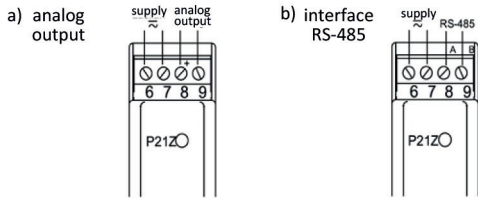


Fig. 1. Electrical connections of P21Z transducer: analogue output and supply.

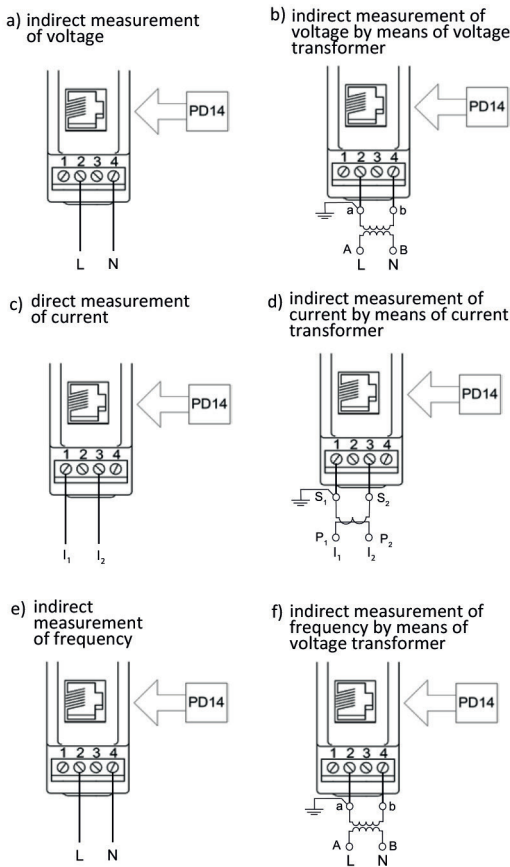


Fig. 2. Electrical connections of P21Z transducer inputs.

Ordering Codes

Ordering Codes							
	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:							
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:							
English							U
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 a.c. current or a.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

U - English language

0 - without extra quality inspection requirements

Contact



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