



**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

## P20Z TRANSDUCER OF RMS CURRENT OR VOLTAGE

### Product Characteristics

- Continuous conversion of RMS current or voltage without constant component
- Standard d.c. current or d.c. voltage output signal
- Small dimensions
- 0.2 accuracy class

**SUBJECT TO CHANGE WITHOUT NOTICE**

This manual superseded all previous versions – please keep for future reference

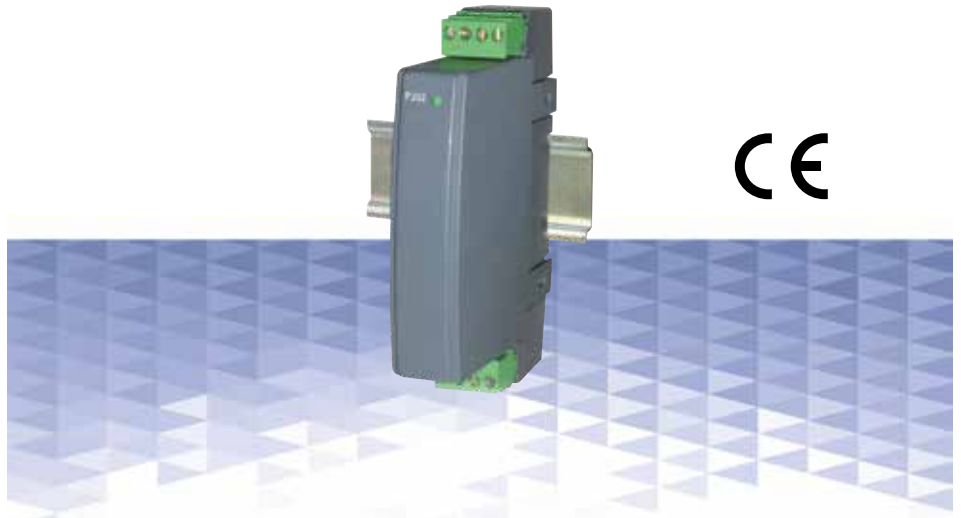
**Inputs**



**Outputs**



**Galvanic Isolation**



**Example of application**



Measurement and archiving of the a.c current.  
Measured data are retransmitted to the recorder/data logger.

Inputs				
Input:	Frequency of the input signal	Input signal min..max value	Short duration overload 5s)	Admissible peak factor
Voltage	45..65..500Hz	0..0.01..1.2 Un	2 Un (max. 1000V)	2
Current		0..0.01..1.2 In	10 In	

Measuring Ranges		
Input kind	Measuring range	Accuracy class
Voltage	60, 100, 150, 250, 400, 500, 600 V a.c.	Accuracy class: 0.2
Current	1A (X/1 A a.c.), 5A (X/5 A a.c.)	Additional errors: In multiplication of the class index (k): • from ambient temperature change: <0.5 k/10K • external magnetic field: <1 k • frequency of the input signal: <1 k/100 Hz

Outputs		
Output kind	Properties	Remarks
0..5 mA	Rload ≤ 2000 Ω	Response time: 0.3 sec
0..20 mA	Rload ≤ 500 Ω	
4..20 mA		
0..10 V	Rload ≤ 500 Ω	

External Features		
Weight	0.125 kg	
Dimensions	22.5 x 120 x 100 mm	
Protection grade (acc. to EN 60529)	ensured by the housing: IP50	from the terminal cover: IP20
Fixing	on a 35 mm rail	
Maximal wire section	2.5 mm <sup>2</sup> for execution with screw socket-plug terminals	1.5mm <sup>2</sup> for execution with inseparable socket terminals

Rated Operating Conditions		
Supply voltage	85...253 V a.c., 90...300 V d.c. or 20...40 V a.c., 20...60 V d.c.	power consumption: 4 VA
Temperature	ambient: -20...23...55°C	storage: -25...85°C
Relative humidity	≤ 95%	inadmissible condensation
Operating position	any	
External magnetic field	0..40..400 A/m	
Transducer preheating time	15 min	

Safety and Compatibility Requirements		
Electromagnetic compatibility	Noise immunity Noise emissions	acc. to EN 61000-6-2 acc. to EN 61000-6-4
Isolation ensured by the housing	double	acc. to EN 61010-1
Isolation between circuits	basic	
Pollution grade	2	
Installation category	for operating voltages in relation to the ground up to 300V: III for operating voltages in relation to the ground up to 600V: II	
Altitude above sea level	<2000 m	

Connection Diagrams

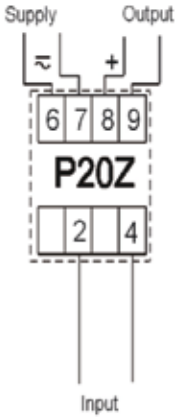


Fig.1 Direct measurement of voltage

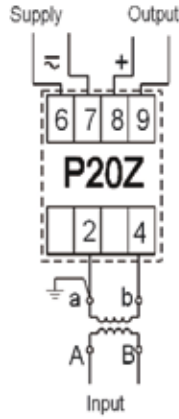


Fig.2 Indirect measurement of voltage by means of a voltage transformer

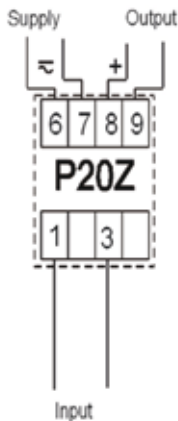


Fig.3 Direct measurement of current

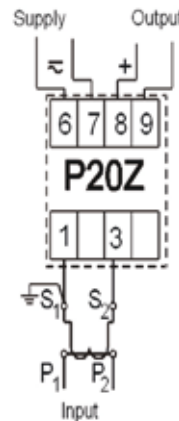


Fig.4 Indirect measurement of current by means of a current transformer

Ordering Codes

Ordering Codes						
P20Z -	XX	X	X	X	XX	X
<b>Input signal:</b>						
0..60 V	01					
0..100 V	02					
0..150 V	03					
0..250 V	04					
0..400 V	05					
0..500 V	06					
0..600 V	07					
0..1 A	08					
0..5 A	09					
<b>Output:</b>						
0..5 mA					1	
0..20mA					2	
4..20 mA					3	
0..10 V					4	
<b>Supply:</b>						
85...253 V a.c.,90...300 V d.c.					1	
20...40 V a.c.,20...60 V d.c.					2	
<b>Kind of terminals:</b>						
inseparable with screws						1
socket-plug with screws						2
<b>Version:</b>						
standard						00
custom-made*						XX
<b>Acceptance tests:</b>						
without extra requirements						8
with an extra quality inspecti on certificate						7
acc. to customer's request*						X

\* - after agreeing with the manufacturer

Order example:

The code P20Z - 09 3 1 1 00 8 means:

**P20Z** - transducer of RMS current or voltage.

**09** - input signal 5A (X/5A)

**3** - output signal 4..20mA

**1** - supply voltage: 85...253 V a.c.,90...300 V d.c.

**1** - with inseparable screw terminals

**00** - standard execution version

**8** - without extra requirements

Contact



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