

# P20Z TRANSDUCER OF RMS CURRENT OR VOLTAGE

**INPUTS:**

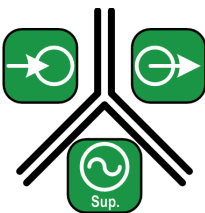


- Continuous conversion of RMS current or voltage without constant component
- Standard d.c. current or d.c. voltage output signal
- Small dimensions
- 0.2 accuracy class

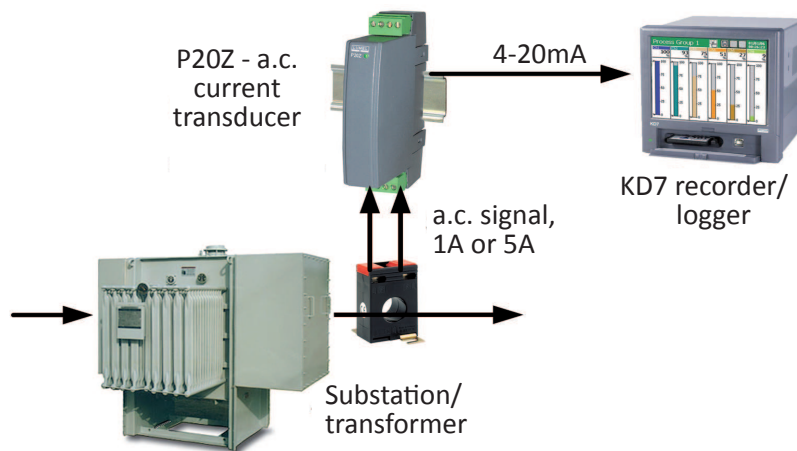
**OUTPUTS:**

- 0..20 mA
- 0..10 V

**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: <b>0.2</b>
Current	1A (X/1 A a.c.), 5A (X/5 A a.c.)	Additional errors: In multiplication of the class index (k): <ul style="list-style-type: none"> <li>•from ambient temperature change: &lt;0.5 k/10K</li> <li>•external magnetic field: &lt;1 k</li> <li>•frequency of the input signal: &lt;1 k/100 Hz</li> </ul>

**OUTPUTS**

Output kind	Properties	Remarks
0..5 mA	$R_{load} \leq 2000 \Omega$	Response time: 0.5 sec
0..20 mA	$R_{load} \leq 500 \Omega$	
4..20 mA	$R_{load} \leq 500 \Omega$	
0..10 V	$R_{load} \geq 500 \Omega$	

Export department:  
 English: +48 68 32 95 302 / 321 / 276 / 386 / 233  
 German: +48 68 32 95 305  
 French: +48 68 32 95 304  
 Russian: +48 68 32 95 321  
 Fax: +48 68 32 54 091  
 e-mail: export@lumel.com.pl

LUMEL S.A.  
 ul. Sulechowska 1  
 65-022 Zielona Góra  
 POLAND  
**WWW.LUMEL.COM.PL**

### 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./d.c or 20..40 V a.c./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	acc. to EN 61000-6-2
	Noise emissions	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

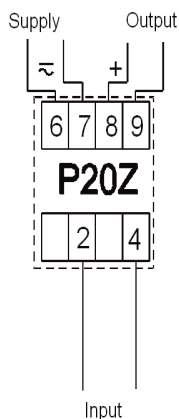


Fig.1 Direct measurement of voltage

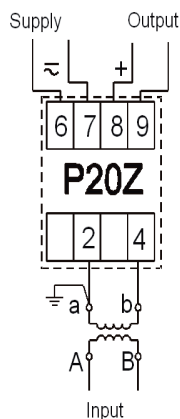


Fig.2 Indirect measurement of voltage by means of a voltage transformer

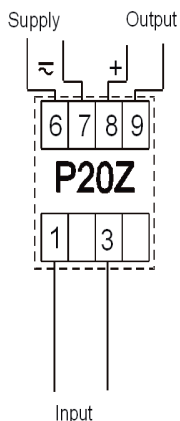


Fig.3 Direct measurement of current

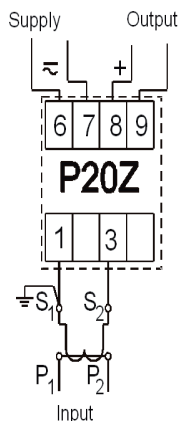


Fig.4 Indirect measurement of current by means of a current transformer

### ORDERING

TABLE 1. ORDERING CODES:

	P20Z -	XX	X	X	X	XX	X
<b>Input range:</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 range:</b>							
0..5 mA						1	
0..20mA						2	
4..20 mA						3	
0..10 V						4	
<b>Supply:</b>							
85...253 V a.c./d.c.						1	
20...40 V a.c./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 inspection 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./d.c.
- 1** - with inseparable screw terminals
- 00** - standard execution version
- 8** - without extra requirements

### 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.



Programmable digital meter of d.c. current and d.c. voltage N30H.



For more information about LUMEL's products please visit our website: [www.lumel.com.pl](http://www.lumel.com.pl)

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**French:** +48 68 32 95 304  
**Russian:** +48 68 32 95 321  
**Fax:** +48 68 32 54 091  
**e-mail:** [export@lumel.com.pl](mailto:export@lumel.com.pl)

LUMEL S.A.  
 ul. Sulechowska 1  
 65-022 Zielona Góra  
 POLAND  
**WWW.LUMEL.COM.PL**