

P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

NEW!



FEATURES:

- MOD BUS Slave
- MOD BUS Master
- MOD BUS Monitor
- eCon Program
- SD/SDHC
- Firmware upgrade
- RTC
- Password protection
- Ethernet
- www ftp

INPUT:

- AC
- RS 485
- MOD BUS

OUTPUT:

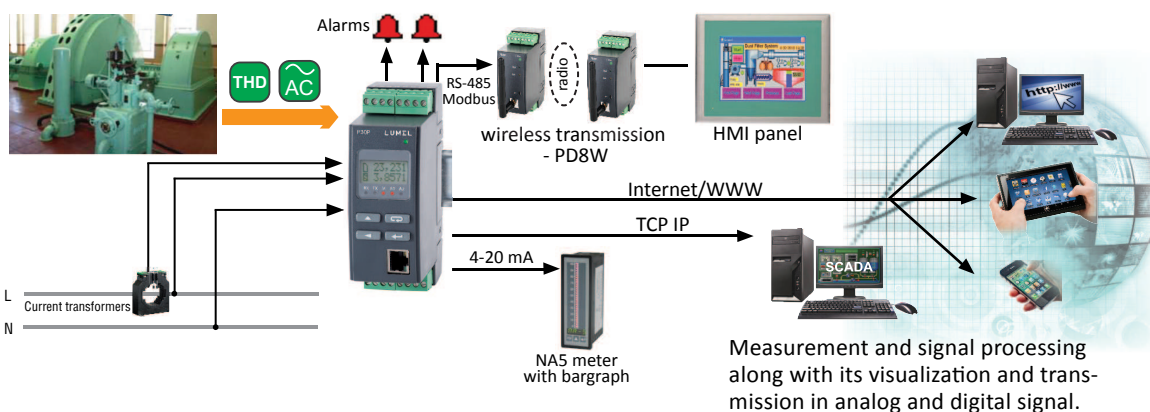
- 0/4...20 mA
- RS 485
- MOD BUS
- Ethernet

GALVANIC ISOLATION:

- Supply
- RS 485
- Ethernet

- Measurement of 1-phase power network parameters.
- Conversion of measured value in an output signal on the base of the individual characteristic.
- 1 or 2 alarm relays with NO contact operating in 6 modes.
- Additional supplying output 24 V d.c 30 mA switched-on/switched-off (option).
- Recording of input signals in internal memory, on SD/SDHC card (option) or internal file system memory (option).
- Interface RS-485 Modbus RTU.
- SD/SDHC support (option).
- RS-485 Master mode – possibility to poll 1 device.
- Interface Ethernet 10/100 BASE-T (option).
 - Protocol: Modbus TCP/IP, HTTP, FTP.
 - Services: www server, ftp server, client DHCP.

EXAMPLE OF APPLICATION



INPUTS AND MEASURING RANGES

Measured value		Nominal range (for direct measurement, for ratios Ki=Ku=1)	Class (for averaging 1s)
RMS current I A, Mean RMS current I_{eff} A	1 A 5 A	<u>0.01 ... 1</u> ...1.200 A~ <u>0.05 ... 5</u> ... 6.000 A~	±0.2 %
RMS voltage U V (dependent on execution code) 230 V	100 V	<u>5.5 ... 100</u> ...120 V <u>12.5 ... 230</u> ... 300 V	±0.2 %
Frequency f Hz		2... <u>40.0</u> .. <u>60.0</u> .. 100 Hz	±0.1 %
Active power P W Mean active power P_{eff} W	1 A, 100 V 5 A, 100 V 1 A, 230 V 5 A, 230 V	-144.. <u>100</u> ... <u>100</u> ..144 -720.. <u>500</u> ... <u>500</u> ..720 -360.. <u>230</u> ... <u>230</u> ..360 -1800.. <u>1150</u> ... <u>1150</u> ..1800	±0.5 % [W] ±1.0 % [var]
Reactive power Q var			
Apparent power S VA Apparent mean power S_{eff} VA	1 A, 100 V 5 A, 100 V 1 A, 230 V 5 A, 230 V	<u>0 ... 100</u> ..144 VA <u>0 ... 500</u> ..720 VA <u>0 ... 230</u> ..360 VA <u>0 ... 1150</u> ..1800 VA	±0.5 %
Active power factor (P/S) PF Factor $\cos \varphi$		-1 .. 0 .. 1	±0.5 %
Tangent $\tan \varphi$ (Q/P) $\tan \varphi$		-1.2 .. 0 .. 1.2	±1 %
Active input/ output energy E_{a} Wh E_{r} Wh		0 .. 9 999 999.9 kWh	±0.5 %
Reactive inductive/ capacitive energy E_{L} varh E_{C} varh		0 .. 9 999 999.9 kvarh	±1 %
Apparent energy E_{S} Vah		0 .. 9 999 999.9 Vah	±0.5 %
THD $\%U$ % $\%I$ %		0...100%	±5 %
Phase angle U, I		-180°...180°	±1 % (for $\varphi \neq -5^\circ \dots 5^\circ$, $I > 10\% I_N$, $U > 10\% U_N$)

OUTPUTS

Output type	Properties	Remarks
Analog OUT1, OUT2 (1 or 2 outputs - depends on transducer version)	OUT1 current: 0/4...20 mA, load resistance $\leq 500 \Omega$ voltage: 0...10 V, load resistance $\geq 500 \Omega$	accuracy class 0,1
	OUT2 current: 0/4...20 mA, load resistance $\leq 250 \Omega$ voltage: 0...10 V, load resistance $\geq 500 \Omega$	accuracy class 0,5
Relay OUT2,OUT3 (1 or 2 outputs - depends on transducer version)	1 or 2 relays; voltageless contacts – NO – maximum load 5A 30V d.c., 250V a.c.	
Additional supplying output OUT3	24 V d.c. / 30 mA (option)	

DIGITAL INTERFACE

Interface type	Properties	Remarks
Ethernet 10/100 Baste-T (option)	Modbus TCP/ IP HTTP, FTP	www, ftp server, client DHCP
RS-485	Modbus RTU: 8N2, 8E1, 8O1, 8N1 Address 1...247	baud rate: 4,8, 9,6, 19,2, 38,4, 57,6, 115,2, 230,4, 256 kbit/s

EXTERNAL FEATURES

Overall dimensions	45 × 120 × 100 mm	
Weight	< 0.25 kg	
Protection grade	for housing: IP40/ IP30	for terminals: IP20
Readout field	LCD 2 x 8 characters with LED backlight	

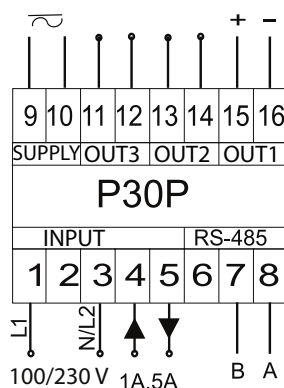
RATED OPERATION CONDITIONS

Supply voltage (depends on execution code)	85...253 V a.c., 85...300 V d.c. 20...40 V a.c., 20...60 V d.c.	power consumption < 5 VA
Temperature	ambient: -25...+23...+55°C	storage: -30...+70°C
Humidity	25...95 %	inadmissible condensation
Working position	any	

SAFETY AND COMPATIBILITY REQUIREMENTS

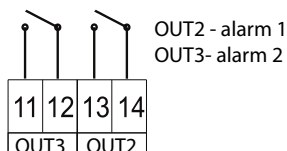
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	reinforced - for input circuits basic - for other circuits	acc. to EN 61010-1
Pollution level	2	acc. to EN 61010-1
Installation category	III	
Maximal phase-to-earth voltage	- for supply and input circuits 300 V - for other circuits 50 V	
Altitude above sea level	< 2000 m	

CONNECTION DIAGRAM

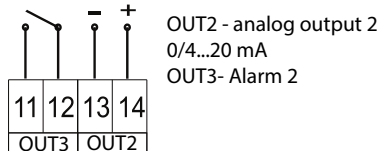


SUPPLY - supply
OUT2 - output no.2 (alarm or analog output)
OUT3 - output no.3 (alarm or supplying output 24V)
OUT1 - main analog output no.1
INPUT - measuring input
RS-485 - interface RS-485

P30P-XXX11XXXXX



P30P-XXX21XXXXX



SEE ALSO:



Current transformers



Programmable digital meter of temperature, resistance and standard signals N30U.

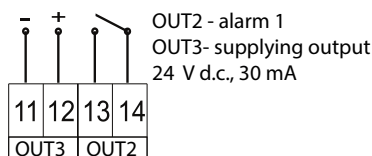


LUMEL - PROCESS software.

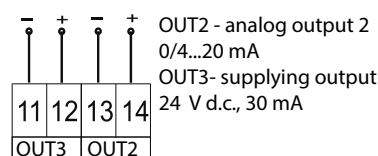
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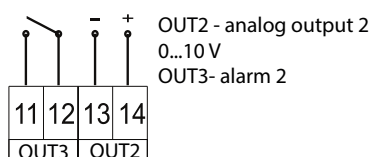
P30P-XXX12XXXXX



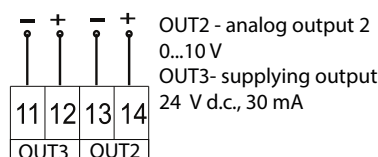
P30P-XXX22XXXXX



P30P-XXX31XXXXX



P30P-XXX32XXXXX



ORDERING

P30P -	X	X	X	X	X	X	XX	X	X
Inputs:									
voltage 100 V, current 1/5 A	1								
voltage 230 V, current 1/5 A	2								
Analog output OUT1:									
current (0/4...20 mA)	1								
voltage (0...10 V)	2								
Additional equipment:									
without	0								
with external SD/SDHC card	1								
with Ethernet interface and archive file system memory	2								
Output OUT2:									
relay A1, 5A 30V d.c., 250V a.c.	1								
analog current output (0/4...20 mA)	2								
analog voltage output (0...10 V)	3								
Output OUT3:									
relay A2, 5A 30V d.c., 250V a.c.	1								
power output 24 V d.c. / 30 mA	2								
Supply:									
85...253 V a.c., 85...300 V d.c.	1								
20...40 V a.c., 20...60 V d.c.	2								
Version:									
standard	00								
custom-made*	XX								
Language:									
Polish	P								
English	E								
other*	X								
Acceptance tests:									
without extra requirements	0								
with an extra quality inspection certificate	1								
acc. to customer's request*	X								

* after agreeing with the manufacturer



3-phase power network meter/analyzer -ND1.



3-phase power network meter - ND20.



Analog meters



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