

P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

NEW!



- 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.
 - Protocol: Modbus TCP/IP, HTTP, FTP.
 - Services: www server, ftp server, client DHCP.

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

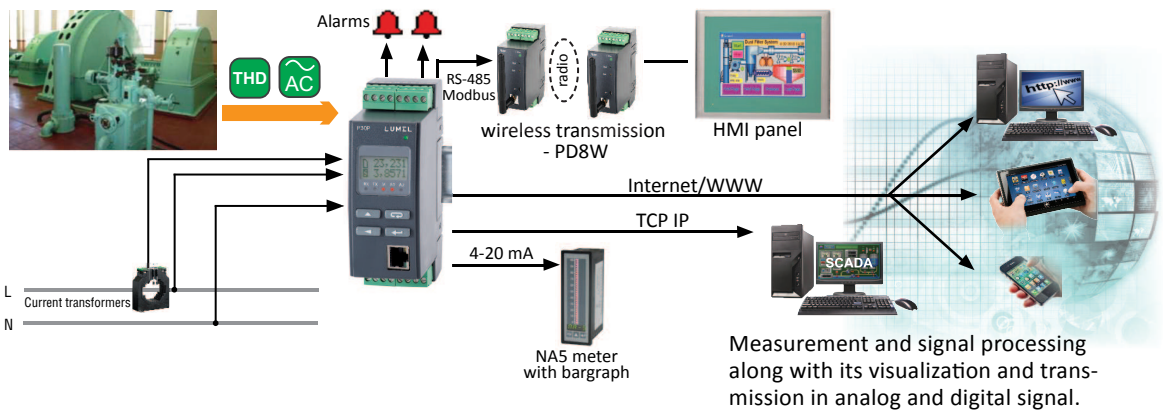
OUTPUT:

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

GALVANIC ISOLATION:

Supply, RS 485, Ethernet

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 _{DM} A	1 A 5 A	±0.2 %
RMS voltage U V (dependent on execution code) 230 V	100 V 5.5... 100...120 V 12.5..230.. 300 V	±0.2 %
Frequency f Hz	2...40.0 .. 60.0 .. 100 Hz	±0.1 %
Active power P W Mean active power P _{DM} W	1 A, 100 V 5 A, 100 V 1 A, 230 V	-144..-100... 100..144 -720..-500... 500..720
Reactive power Q var	5 A, 230 V	-360..-230 ... 230..360
Apparent power S VA Apparent mean power S _{DM} VA	1 A, 100 V 5 A, 100 V 1 A, 230 V 5 A, 230 V	-1800..-1150 ... 1150..1800
Active power factor (P/S) PF Factor cosφ		0 ... 100..144 VA 0 ... 500..720 VA 0 ... 230..360 VA 0 ... 1150..1800 VA
Tangent tgφ (Q/P) tgφ		-1.. 0 .. 1
Active input/ output energy E ₊ Wh E ₋ Wh		-1.2 .. 0 .. 1.2
Reactive inductive/ capacitive energy E _L varh E _C varh		0 .. 9 999 999.9 kWh
Apparent energy E _S VAh		0 .. 9 999 999.9 kvarh
THD %U % I		0 .. 9 999 999.9 VAh
Phase angle U, I		0...100%
		-180°...180°
		±1 % (for φ ≠ <-5°...5°. I > 10% I _N , U > 10%U _N)

Export department:
+48 68 45 75 139/ 233/
321/ 386
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

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	

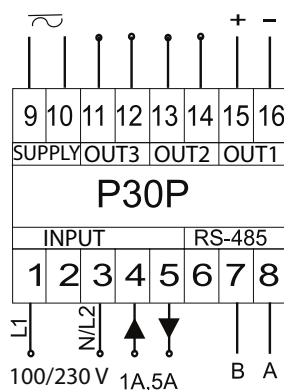
RATED OPERATION CONDITIONS

Supply voltage (depends on execution code)	<ul style="list-style-type: none"> 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

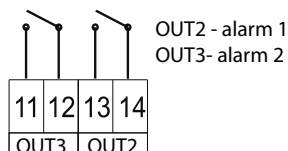
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	reinforced - for input circuits basic - for other circuits	acc. to EN 61010-1
Pollution level	2	
Installation category	III	
Maximal phase-to-earth voltage	• for supply and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

CONNECTION DIAGRAM

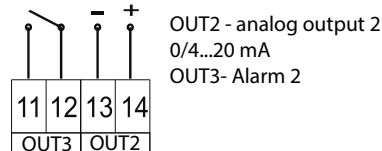


SUPPLY - supply
 OUT2 - output no.2 (alarm or analog output)
 OUT3 - output no.3 (alarm or supplying output 24V)
 OUT1 - main analog output no.1
 INPUT - measuring input
 RS-485 - interface RS-485

P30P-XXX11XXXXX



P30P-XXX21XXXXX



SEE ALSO:



Current transformers



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



LUMEL - PROCESS software.

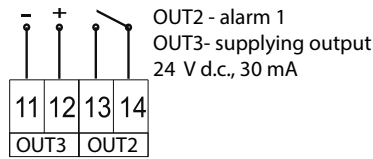
Export department:
 +48 68 45 75 139/ 233/
 321/ 386
Fax: +48 68 32 54 091
e-mail: export@lumel.com.pl

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

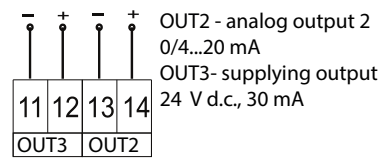
P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

CONNECTION DIAGRAM

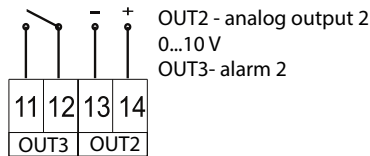
P30P-XXX12XXXXX



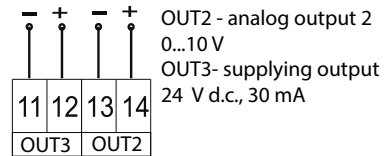
P30P-XXX22XXXXX



P30P-XXX31XXXXX



P30P-XXX32XXXXX



3-phase power network meter/analyzer -ND1.



3-phase power network meter - ND20.



Analog meters

For more information about LUMEL products please visit our website:
www.lumel.com.pl

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

Order example:

P30P-11112100E1 means the transducer P30P in standard version with: input range 100 V and 1/5 A with analog current output 0/4...20 mA, external SD/SDHC card, relay and power output 24 V/30 mA, supply 85...235 V a.c./d.c., user's manual in English and an extra quality inspection certificate.

Export department:
+48 68 45 75 139/ 233/
321/ 386
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