

P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

FEATURES:

- MOD BUS Slave
- MOD BUS Master
- MOD BUS Monitor
- eCon
- 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
- U

GALVANIC ISOLATION:

- Supply
- RS 485
- Ethernet

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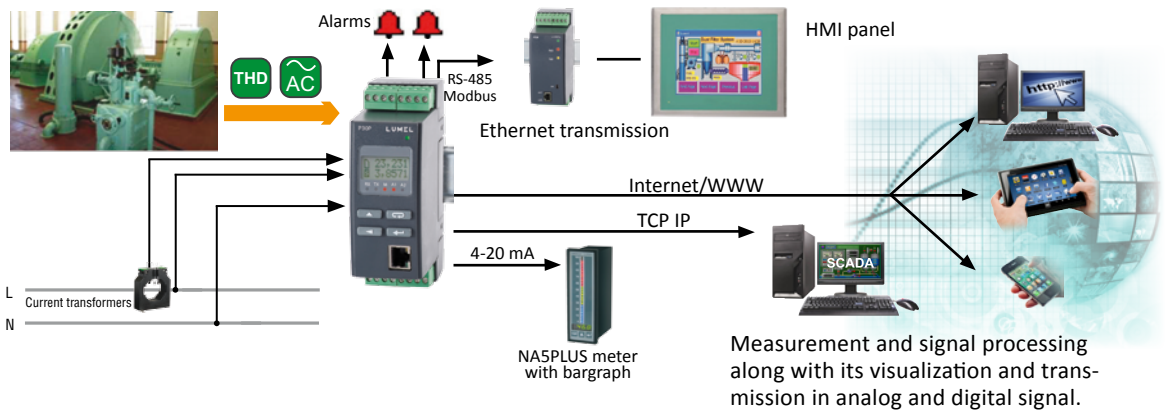
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- Measurement of 1-phase power network parameters.
- Conversion of measured value in an output signal on the base of the individual characteristic.
- 1 or 2 alarm relays with NO contact operating in 6 modes.
- Additional supplying output 24 V d.c 30 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 _{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 5 A, 230 V	±0.5 % [W]
Reactive power Q var	5 A, 230 V	±1.0 % [var]
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	±0.5 %
Active power factor (P/S) PF Factor cosφ		±0.5 %
Tangent tgφ (Q/P) tgφ		±1 %
Active input/ output energy E ₊ Wh E ₋ Wh		±0.5 %
Reactive inductive/ capacitive energy E _L varh E _C varh		±1 %
Apparent energy E _S VAh		±0.5 %
THD % THDU % THDI %	0...100%	±5 %
Phase angle U, I	-180°...180°	±1 % (for φ ≠ < -5°...5°. 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	

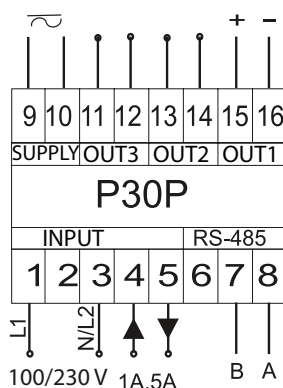
RATED OPERATION CONDITIONS

Supply voltage (depends on execution code)	<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

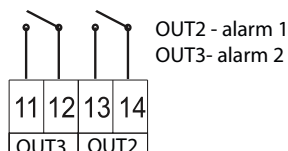
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	reinforced - for input circuits basic - for other circuits	acc. to EN 61010-1
Pollution level	2	acc. to EN 61010-1
Installation category	III	
Maximal phase-to-earth voltage	<ul style="list-style-type: none"> • for supply and input circuits 300 V • for other circuits 50 V 	
Altitude above sea level	< 2000 m	

CONNECTION DIAGRAM

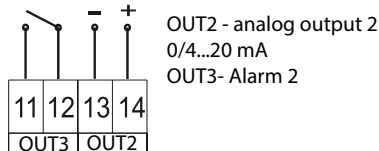


SUPPLY - supply
 OUT2 - output no.2 (alarm or analog output)
 OUT3 - output no.3 (alarm or supplying output 24V)
 OUT1 - main analog output no.1
 INPUT - measuring input
 RS-485 - interface RS-485

P30P-XXX11XXXXX



P30P-XXX21XXXXX

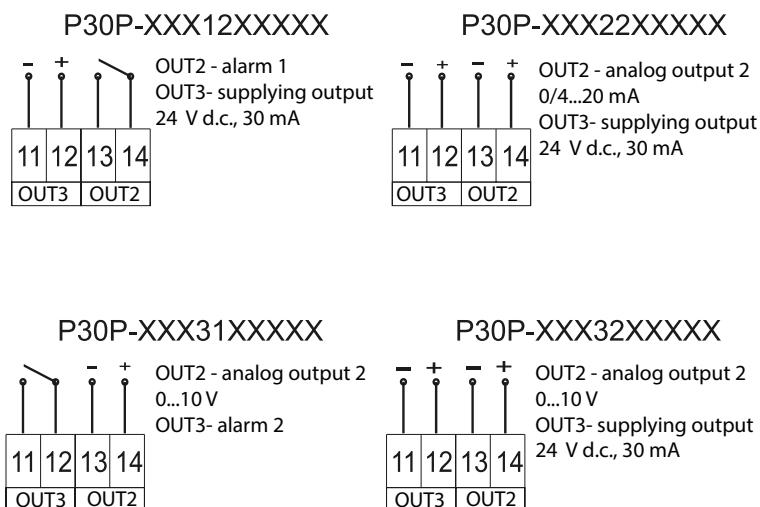


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P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

CONNECTION DIAGRAM



ORDERING

Code	Description
P30P 21011100M0	TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETER P30P Voltage input 230V; 2 x relay; 1 x analog output 0/4...20mA; supply 85-253Vac / 85-300Vdc; documentation and descriptions in Polish and English version, test certificate
P30P 11011100M0	TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETER P30P Voltage input 100V; 2 x relay; 1 x analog output 0/4...20mA; supply 85-253Vac / 85-300Vdc; documentation and descriptions in Polish and English version, test certificate
P30P 21211100M0	TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETER P30P Voltage input 230V; 2 x relay; 1 x analog output 0/4...20mA; Ethernet interface with internal memory file system, supply 85-253Vac / 85-300Vdc; documentation and descriptions in Polish and English version, test certificate
P30P 11211100M0	TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETER P30P Voltage input 100V; 2 x relay; 1 x analog output 0/4...20mA; Ethernet interface with internal memory file system, supply 85-253Vac / 85-300Vdc; documentation and descriptions in Polish and English version, test certificate

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