DITEL
Made by LUMEL

P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

- Measurement of 1-phase power network parameters.
- Conversion of measured value in an output signal on the base of the inddivudal 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

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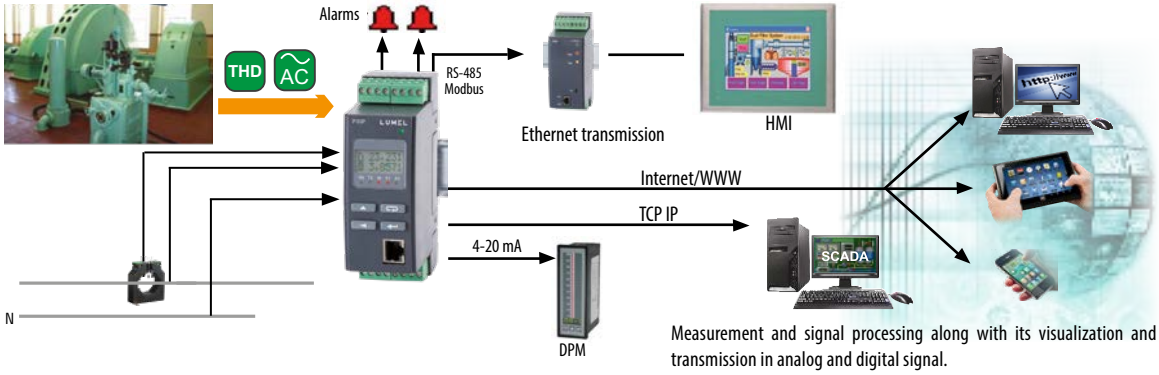
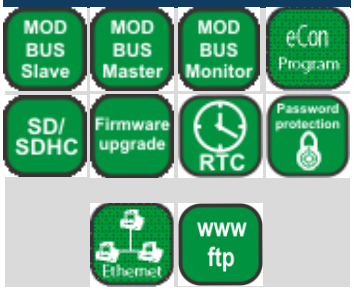
EXAMPLE OF APPLICATION



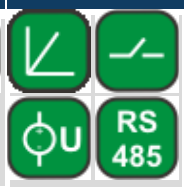
Measurement and signal processing along with its visualization and transmission in analog and digital signal.

FEATURES

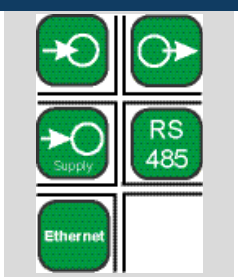


INPUTS

OUTPUTS



GALVANIC ISOLATION



INPUTS AND MEASURING RANGES

Measured value		Nominal range (for direct measurement, for ratios i=Ku=1)	Class (for averaging 1s)
RMS current I A, Mean RMS current I_śr A 1 A 5 A		 0.01 ...1...1.200 A~ 0.05 ...5... 6.000 A~	±0.2 %
RMS voltage U V 100 V (dependent on execution code) 230 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_śr W Reactive power Q var	1 A, 100 V 5 A, 100 V 1 A, 230 V 5 A, 230 V	-144..-100 ... 100..144 -720..-500 ... 500..720 -360..-230 ... 230..360 -1800..-1150 ... 1150..1800	±0.5 % [W] ±1.0 % [var]
Apparent power S VA Apparent mean power S_śr VA	1 A, 100 V 5 A, 100 V 1 A, 230 V 5 A, 230 V	0 ... 100..144 VA 0 ... 500..720 VA 0 ... 230..360 VA 0 ... 1150..1800 VA	±0.5 %
Active power factor (P/S) PF Factor cosφ		-1 .. 0 .. 1	±0.5 %
Tangent tgφ (Q/P) tgφ		-1.2 .. 0 .. 1.2	±1 %
Active input/ output energy E_p+ Wh E_p- Wh		0 .. 9 999 999.9 kWh	±0.5 %
Reactive inductive/ capacitive energy E_qL varh E_qC varh		0 .. 9 999 999.9 kvarh	±1 %
Apparent energy E_s Vah		0 .. 9 999 999.9 VAh	±0.5 %
THD THD U % THD I %		0...100%	±5 %
Phase angle U, I		-180°...180°	±1 % (for φ ≠ <-5°...5°. I > 10% I_N, U >10%U_N)

P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

OUTPUTS

Output type	Properties	Remarks
Analog OUT1, OUT2 (1 or 2 outputs - depends on transducer version)	OUT1 current: 0/4...20 mA, load resistance ≤ 500 Ω voltage: 0...10 V, load resistance ≥ 500 Ω	accuracy class 0.1
	OUT2 current: 0/4...20 mA, load resistance ≤ 250 Ω voltage: 0...10 V, load resistance ≥ 500 Ω	accuracy class 0.5
Relay OUT2,OUT3 (1 or 2 outputs - depends on transducer version)	1 or 2 relays; voltageless contacts – NO –maximun 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 x 120 x 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	

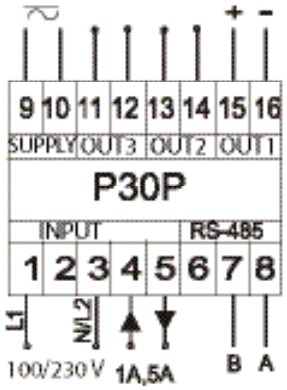
RATED OPERATION CONDITIONS

Supply voltage	• 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	basic / reinforced (see user's manual)	acc. to EN 61010-1
Pollution level	2	acc. to EN 61010-1
Installation category	III for input voltage up to 300 V d.c., III for input voltage 300...600 V d.c. with additional resistance D5, II for input voltage 600...1000 V d.c. with additional resistance D5	
Maximal phase-to-earth voltage	• for supply and input circuits 300 V • for other circuits 50 V	
Altitude above see 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

XXXX

OUT2 - alarm 1
OUT3 - alarm 2

P30P-XX21XXXXX

OUT2 - analog output 2
0/4...20 mA
OUT3 - Alarm 2

SEE ALSO

Screen recorder KD8 with touch panel - 3 or 6 channels - RS-485 interface.

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

Software LUMEL - PROCES.

For more information of our products please visit our website:

www.ditel.es

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CONNECTION DIAGRAM

P30P-XXX12XXXXX

OUT2 - alarm 1
OUT3- supplying output
24 V d.c., 30 mA

P30P-XXX22XXXXX

OUT2 - analog output 2
0/4...20 mA
OUT3- supplying output
24 V d.c., 30 mA

P30P-XXX31XXXXX

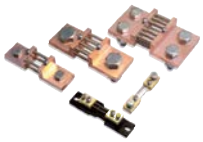
OUT2 - analog output 2
0...10 V
OUT3- alarm 2

P30P-XXX32XXXXX

OUT2 - analog output 2
0...10 V
OUT3- supplying output
24 V d.c., 30 mA

SEE ALSO

Temperature and d.c. standard signals universal digital meter with OLED - N21 type.



Shunts class 0.5

Analog meters

ORDERING

P30P -	X	X	X	X	X	X	XX	E	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:									
English								E	
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 ,
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
an extra quality inspection certificate.

For more information of our products please visit our website:

www.ditel.es

DITEL Made by LUMEL

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