

# 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.
  - Interface Ethernet 10/100 BASE-T (option).
    - 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

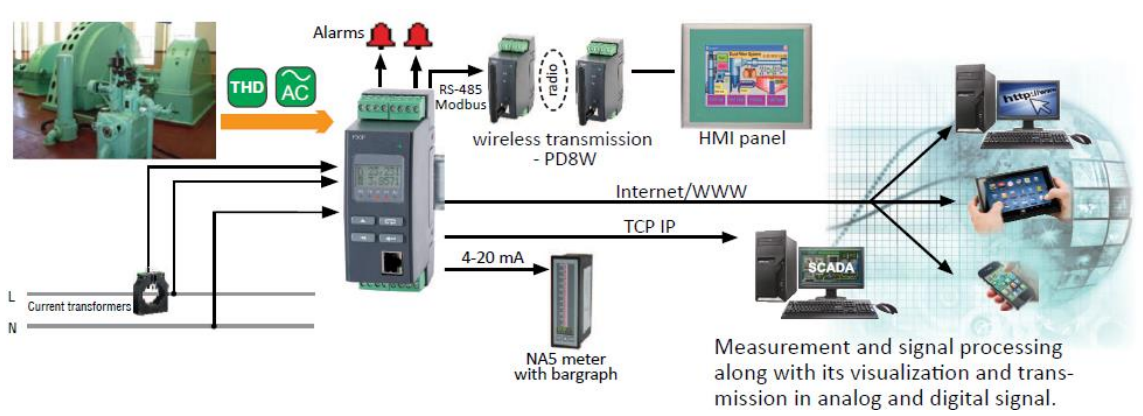
### OUTPUT:

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

### GALVANIC ISOLATION:

- Supply
- RS 485
- Ethernet

### EXAMPLE OF APPLICATION



### INPUTS AND MEASURING RANGES

		(for direct measurement, for ratios Ki=Ku=1)	(for averaging 1s)
RMS current I A, Mean RMS current $I_{\Sigma}$ A	1 A 5 A	0.01...1...1.200 A~ 0.05...5... 6.000 A~	±0.2 %
RMS voltage U V (dependent on execution code) 230V	100 V 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 $P_{\Sigma}$ W	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 $S_{\Sigma}$ 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 $\cos\varphi$		-1 .. 0 .. 1	±0.5 %
Tangent tgφ (Q/P) tgφ		-1.2 .. 0 .. 1.2	±1 %
Active input/ output energy $E_{+}$ Wh $E_{-}$ Wh Reactive inductive/ capacitive energy $E_L$ varh $E_C$ varh		0 .. 9 999 999.9 kWh 0 .. 9 999 999.9 kvarh	±0.5 % ±1 %
Apparent energy $E_{\Sigma}$ VAh		0 .. 9 999 999.9 VAh	±0.5 %
THD $\%U$ $\%I$		0...100%	±5 %
Phase angle U, I		-180°...180°	±1 % (for φ < -5°...5° I > 10%I, U > 10%U)

# 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 $\leq 500 \Omega$ 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 (optional)	

## DIGITAL INTERFACE

Interface type	Properties	Remarks
Ethernet 10/100 Base-T (optional)	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	

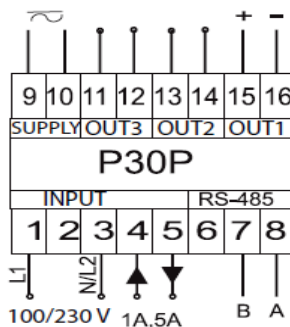
## RATED OPERATION CONDITIONS

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

## SAFETY AND COMPATIBILITY REQUIREMENTS

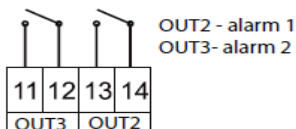
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic / reinforced (see user's manual)	acc. to EN 61010-1
Pollution level	2	
Installation category	III for input voltage up to 300 V d.c., III for input voltage 300...600 V d.c. with additional resistance D5,	
	II for input voltage 600...1000 V d.c. with additional resistance D5	acc. to EN 61010-1
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

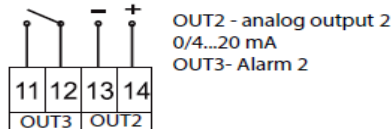


SUPPLY - supply  
OUT2 - output no.2 (alarm or analog output)  
OUT3 - output no.3 (alarm or supplying output 24V)  
OUT1 - main analog output no.1  
INPUT - measuring input  
RS-485 - interface RS-485

P30P-XXX11XXXXX



P30P-XXX21XXXXX



**SEE ALSO:**



transformers



# P30P TRANSDUCER OF 1-PHASE POWER NETWORK PARAMETERS

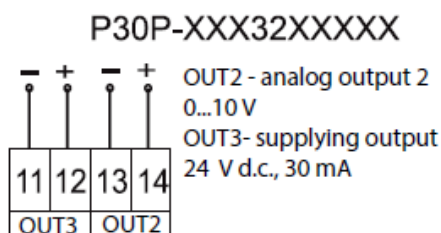
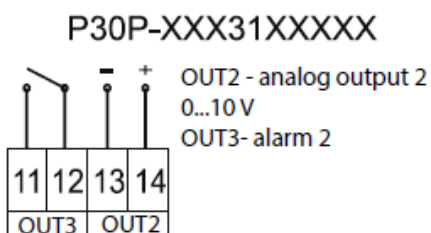
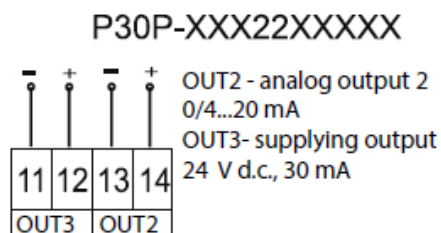
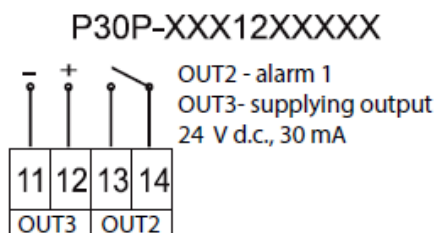
## CONNECTION DIAGRAM



3-phase power network meter/analyzer -ND1.



3-phase power network meter - ND20.



## ORDERING

P30P -	X	X	X	X	X	X	XX	X	X
voltage 100 V, current 1/5 A	1								
voltage 230 V, current 1/5 A	2								
current (0/4...20 mA)		1							
voltage (0...10 V)		2							
without			0						
with external SD/SDHC card			1						
with Ethernet interface and archive file system memory			2						
relav A1, 5A, 30V d.c., 250V a.c.				1					
analog current output (0/4...20 mA)				2					
analog voltage output (0...10 V)				3					
relav A2, 5A, 30V d.c., 250V a.c.					1				
power output 24 V d.c. / 30 mA					2				
85...253 V a.c., 85...300 V d.c.						1			
20...40 V a.c., 20...60 V d.c.						2			
standard								00	
custom-made*								XX	
Polish									P
English									E
other*									X
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 P 30 P 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.