

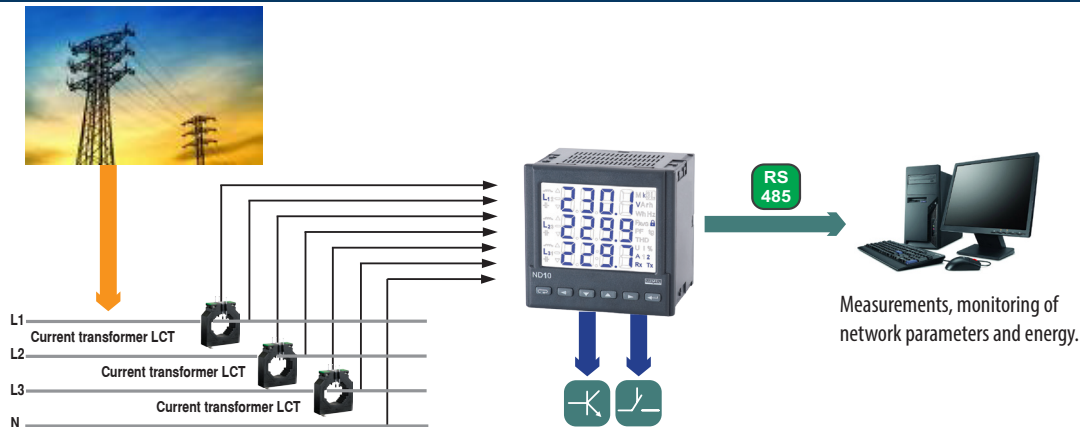


ND10 - METER OF NETWORK PARAMETERS

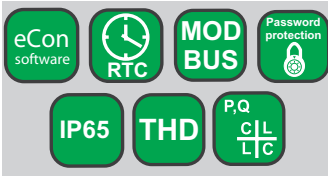
- Meter supply from measurement circuit
- Measurement of basic power quantities:
 $U_{L-L}, U_{L-N}, I_n, f, P, Q, S, PF, tg\phi, \cos\phi, \phi, Ep+, Ep-, EqL,$
 E_{qC}, THD
- 2 alarm outputs
- Pulse output for active energy
- Interface RS485 Modbus Slave (option)
- LCD display 3.5"
- Protection grade from the frontal side IP65



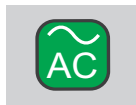
EXAMPLE OF APPLICATION



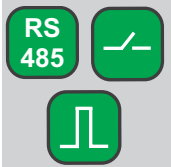
FEATURES



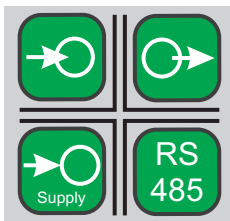
INPUT



OUTPUTS



GALVANIC ISOLATION



MEASURED QUANTITIES AND MEASURING RANGES

Measured value	Indication range*	Measuring range	L1	L2	L3	Σ	Basic error
Current In 1 A 5 A	0.00 ... 1.5kA 0.00 ... 60 kA	0.005 ... 1.200 A~ 0.025 ... 6.000 A~	•	•	•		$\pm 0.2\%$ r
Voltage L-N 57,7 V 230 V 290 V	0.0 ... 230.8 kW 0.0 ... 1.012 MV 0.0 ... 1.200 MV	50 ... 64 V~ 195 ... 253 V~ 246 ... 300 V~	•	•	•		$\pm 0.2\%$ mv
Voltage L-L 100 V 400 V 500 V	0.0 ... 440 kV 0.0 ... 1.752 MV 0.0 ... 2.000 MV	85 ... 110 V~ 340 ... 440 V~ 425 ... 520V~	•	•	•		$\pm 0.5\%$ mv
Frequency	47.0 ... 63.0 Hz	47.0 ... 63.0 Hz	•	•	•		$\pm 0.2\%$ mv
Active power	-9999 MW ... 0.00W ... 9999 MW	-1.52 kW ... 1.0 W ... 1.52 kW	•	•	•	•	$\pm 0.5\%$ r
Reactive power	-9999 Mvar ... 0.00 var ... 9999 Mvar	-1.52 kvar ... 1.0 var ... 1.52 kvar	•	•	•	•	$\pm 0.5\%$ r
Apparent power	0.00 VA ... 9999 MVA	1.0 VA ... 1.52 kVA	•	•	•	•	$\pm 0.5\%$ r
Power factor PF	-1 ... 0 ... 1	-1 ... 0 ... 1	•	•	•	•	$\pm 1\%$ r
Tangent ϕ	-1.2...0...1.2	-1.2 ... 0 ... 1.2	•	•	•	•	$\pm 1\%$ r
Cosinus ϕ	-1... 1	-1 ... 1	•	•	•	•	$\pm 1\%$ r
ϕ	-180 ... 180	-180 ... 180	•	•	•		$\pm 0.5\%$ r
Imported active energy	0 ... 99 999 999.9 kWh					•	$\pm 0.5\%$ r
Exported active energy	0 ... 99 999 999.9 kWh					•	$\pm 0.5\%$ r
Reactive inductive energy	0 ... 99 999 999.9 kvarh					•	$\pm 0.5\%$ r
Reactive capacitive energy	0 ... 99 999 999.9 kvarh					•	$\pm 0.5\%$ r
THD	0 ... 100%	0 ... 100%	•	•	•		$\pm 5\%$ r

r - of the range

mv - of the measured value

ND10 - METER OF NETWORK PARAMETERS



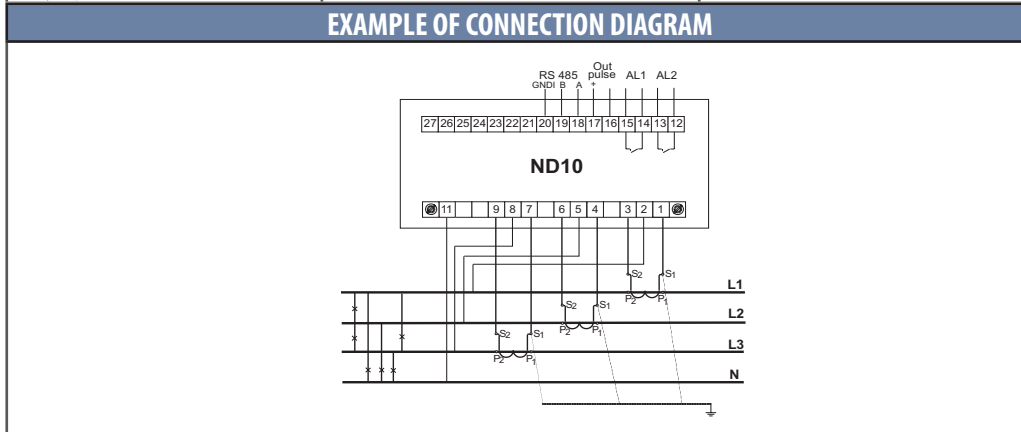
OUTPUTS	
Relay output	2 x relé, contacto libre normalmente abierto, 250 V~/0.5 A~
Pulse output of active/reactive energy	1 OC type (NPN), passive class A acc. to EN 62053-31, supply voltage 18 ... 27 V, current 10 ... 27 mA

DIGITAL INTERFACE			
Interface type	Transmission protocol	Mode	Baud rate
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8; 9.6; 19.2; 38.4 kbit/s

EXTERNAL FEATURES	
Readout field	LCD 3.5" screen, specialized, monochromatic with backlight
Weight	< 0.3 kg
Overall dimensions	96 x 96 x 77 mm
Protection grade (acc. to EN 60529)	from frontal side: IP65 from terminal side: IP20

RATED OPERATING CONDITIONS		
Supply voltage/ from measurement circuit of phase L3/	50 ... 64 V a.c., 195... 253 V a.c., 246 ... 300 V a.c., 47 ... 63 Hz	Power consumption: -en circuitos de tensión L1, L2 <0.05VA -en circuito de tensión L3 < 3 VA -en circuitos de corriente < 0.05 VA
Temperature	ambient: -25...23...55°C	storage: -30...70°C
Relative humidity	25...95%	inadmissible condensation
Operating position	any	
External magnetic field	0...40...400 A/m	
Short duration overload (1 s)	voltage input: 2Un (max. 1000 V)	current input: 10 In

SAFETY AND COMPATIBILITY REQUIREMENTS		
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Safety requirements		acc. to EN 61010-1



ORDERING					
ANALYSER OF NETWORK PARAMETER ND10 -	X	X	XX	X	X
Current input In:					
1 A (X/1)	1				
5 A (X/5)	2				
Voltage input (phase/ phase-to-phase) Un:					
3 x 57.7/100 V		1			
3 x 230/400 V		2			
3 x 290/500 V		3			
Digital output:					
without RS485 interface		0			
with RS485 interface		1			
Version:					
standard				00	
custom-made*				XX	
Language:					
Spanish				S	
English				E	
French				F	
Acceptance tests:					
without extra quality requirements					0
with an extra quality inspection certificate					1
acc. to customer's request*					X

EXAMPLE OF ORDER:

The code **ND10 - 2 2 1 00 E 0** means:
 ND10 - meter of network parameters of ND10 type
 2 - current input: 5A (X/5)
 2 - input voltage (phase/phase-to-phase)
 Un = 3 x 230 V / 400 V
 1 - with RS485 interface
 00 - standard version
 E - all descriptions and user's manual in English
 0 - without extra quality requirements.

* - after agreeing with the manufacturer

SEE ALSO



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Current transformers.



P43 - three-phase transducer of power network parameters.

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DISEÑOS Y TECNOLOGIA S.A.

Xarol, 6B P.I. Les Guixeres
 08915 Badalona - ESPAÑA
 tel.: +34 933 394 758,
 fax .: +34 934 903 145
www.ditel.es

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