

# METERS AND ANALYZERS OF POWER NETWORK PARAMETERS



	N43	N14	ND10	ND20LITE	ND20CT	ND20	ND30	ND30PNET	ND30BAC
Measured parameters (detailed information in user's manuals)	$U_{LN} / U_{LL}$				✓/✓				
	average $U_{LN} / U_{LL}$		✓/✓			@/@		✓/✓	
	$I_L$ / average $I_L / I_N$	✓/✓/@	✓/✓/-				✓/✓/✓		
	P / Q / S				✓/✓/✓				
	$E_p / E_q / E_s$	✓/✓/✓			✓/✓/-			✓/✓/✓	
	4-quadrant measurement	@				✓			
	PF / tgφ / cosφ / φ		✓/✓/-/-	✓/✓/@/@		✓/✓/✓/@		✓/✓/-/-	
	f / THD U / THD I	✓/✓/✓	✓/-/-				✓/✓/✓		
	Harmonics	-					✓ 21	✓ 51	
	P (15/30/60 min.)	✓/✓/✓	✓/-/-				✓/✓/✓		
	S (15/30/60 min.)	✓/✓/✓						✓/✓/✓	
	I (15/30/60 min.)	✓/✓/✓						✓/✓/✓	
Time / Date / Temp.	✓/@/-		✓/✓/-		✓/-/-	✓/✓/-		✓/✓/✓	
Memory of min. and max. values					✓				
Inputs	1 A / 5 A or 63 A 57.7/100 V or 230/400 V or 290/500 V	1 A or 5 A 57.7/100 V or 230/400 V or 400/690 V	1 A or 5 A 57.7/100 V or 230/400 V or 290/500 V	1 A or 5 A 57.7/100 V or 230/400 V	<b>0.1 A and 0.25 A</b> 57.7/100 V or 230/400 V	1 A or 5 A 57.7/100 V or 230/400 V or 290/500 V or 63.5/110 V or 69.3/120 V	1 A / 5 A 57.7/100 V 230/400 V or 110/190 V or 400/690 V		
Outputs	3 x relay 1 x pulse	1 x relay 1 x pulse	2 x relays 1 x pulse	1 x relay 1 x pulse	1 x 0/4...20 mA (option) 1 x relay 1 x pulse		2 x Pt100 - option	-	-
Interface	RS-485 Modbus Slave		RS-485 Modbus Slave - option	RS-485 Modbus Slave			RS-485 Modbus Slave		
							Ethernet 10/100 Base-T Modbus TCP, www, FTP - option	Ethernet ICMP (Ping) / Profinet ver. 2.2	BACnet IP
Display	LCD 4x3 digits + 1 x 7 digits	LED 3 x 3 digits (14 mm)	3.5" LCD 3 x 4 digits (16 mm)	3.5" LCD 3 x 4 (11 mm) + 1 x 5 digits (9 mm)			3.5" colour TFT LCD 320x240 pixel		
Supply voltage	85...253 V a.c./ 90...300 V d.c. or 20...40 V a.c./ 20...60 V d.c.	85...253 V a.c./d.c.	50...64 V a.c. or 195...253 V a.c. or 246...300 V a.c.	85...253 V a.c./ 90...300 V d.c. or 20...40 V a.c./ 20...60 V d.c.					
Protection IP	IP50	IP40	IP65						
Ext.dimensions	105 x 110 x 60 mm	96 x 96 x 70.5 mm	96 x 96 x 77 mm						
Programming	free eCon software (using miniUSB) or using buttons	free eCon software (using RS-485) or using buttons				free eCon software (using RS-485 or Ethernet) or using buttons			
Additional functions	• connection with S4A0 module (module of 4 analog outputs)				• easy installation of meter and current transformer • <b>only to co- operation with dedicated current trans- formers L3XX and LJXX</b>	• memory 9000 samples samples for mean power	• selection of displayed quantities on each of the 12 programmable pages • galvanic isolation between input/output, supply and interface		
		• galvanic isolation of current inputs				• data archiving in the internal memory 8 GB	• temperature measurement - 2 x input Pt100,		

@ - parameter available only through digital interface RS-485 and/or Ethernet



## Current transformers dedicated to ND20CT

	LJ12	LJ25, LJ35, LJ45	L306, L307, L308
<b>Version</b>	1-phase	3-phase	
<b>Range</b>	50-250 A*	60-600 A*	63-250 A*
<b>Class</b>	1 or 0.5*		
<b>Connection way to ND20CT</b>	RJ12 connector		screw terminals

\* - more detailed informations in data sheet

	N100	ND40
<b>Measured parameters</b> (detailed information in user's manuals)	$U_{LN} / U_{LL}$	✓/✓
	average $U_{LN} / U_{LL}$	@✓
	$I_L$ / average $I_L / I_N$	✓/✓/✓
	P / Q / S	✓/✓/✓
	$E_p / E_q / E_s$	✓/✓/✓
	4-quadrant measurement	✓
	PF / $\tan\phi$ / $\cos\phi$ / $\varphi$	✓/✓/-/-
	f / THD U / THD I	✓/✓/✓
	Harmonics	✓ 51
	P(15/30/60 min.)	✓/✓/✓
	Q(15/30/60 min.)	-
	S(15/30/60 min.)	✓/✓/✓
	I(15/30/60 min.)	✓/✓/✓
	Time/Date/Temp.	✓/✓/-
	Dips / Swells / Overvoltages	-
Tariffs / Voltage asymmetry	-	
Memory of min. and max. values	✓	
<b>Inputs</b>	1 A / 5 A 57.7/100 V or 230/400 V or 400/690 V	1 A / 5 A 230/400 V or 57.7/100 V
	pulse 0/12...36 V	2 x Pt100/Pt1000/5k $\Omega$ 6 x logic - option
<b>Outputs</b>	1 x pulse, 1 x 0/4...20 mA + 3 x relay or 3 x -20...0...20 mA + 1 x relay	3 x 0/4...20 mA; or 8 x relay
	RS-485 Modbus Slave	RS-485 Modbus Slave, USB Device & Host
<b>Interface</b>	Ethernet 10/100 Base-T Modbus TCP, www, FTP - option	Ethernet 10/100 Base-T Modbus TCP, www, FTP, NTP
	LED 4 x 4 1/2 digit, backlight unit, 2-colour display (red, green) (14 mm)	5.6" LCD TFT colour touch screen 640 x 480 pixel
<b>Supply voltage</b>	85...253 V a.c. / 90...300 V d.c.	85 V..240 V a.c. / 90 V..320 V d.c.
<b>Protection IP</b>	IP40	IP65
<b>Ext. dimensions</b>	144 x 144 x 77 mm	144 x 144 x 104 mm
<b>Programming</b>	free eCon software (using RS-485 or Ethernet) or using buttons	dedicated software or using touch screen
<b>Additional functions</b>	<ul style="list-style-type: none"> <li>selection of displayed quantities on each of the 20 programmable pages</li> <li>galvanic isolation of current and voltage inputs</li> <li>data archiving in the internal memory 8 GB</li> <li>available special version with input frequency up to 500 Hz (see ordering code, page 8)</li> </ul>	<ul style="list-style-type: none"> <li>measurement class A/S</li> <li>measurement and logging of energy quality acc. to EN 50160, EN 61000-4-30, EN 6100-4-7                             <ul style="list-style-type: none"> <li>oscilloscope</li> </ul> </li> <li>galvanic isolation of measuring current and voltage inputs</li> <li>data archiving on SD card</li> </ul>

## ND20CT APPLICATION EXAMPLE



Measurements, monitoring, recording of network parameters and energy using three single-phase transformers with RJ12 slot.

