

N43 RAIL MOUNTED POWER NETWORK METER

FEATURES:



INPUT:



OUTPUTS:

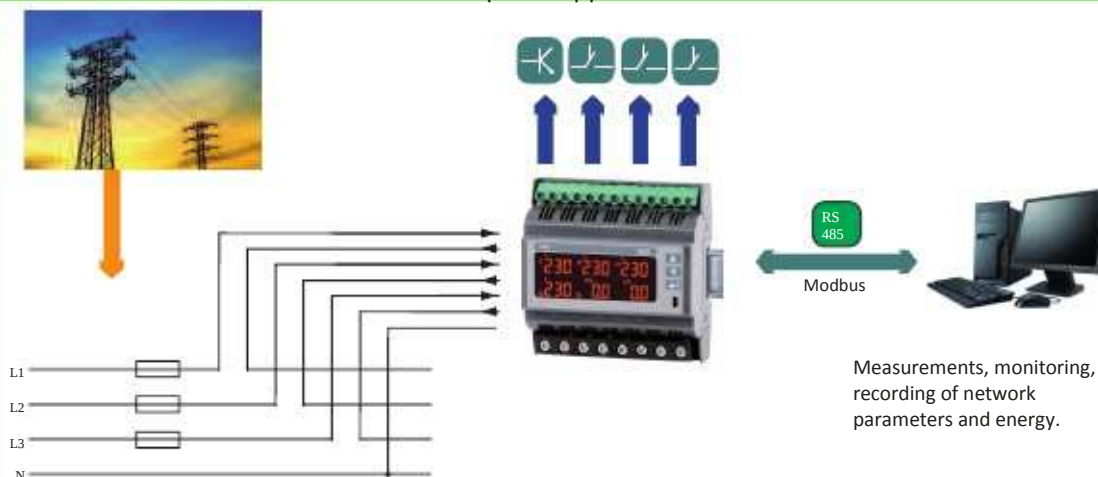


GALVANIC ISOLATION:



- For direct (up to 63A) and indirect measurement, in 3 phase 4 wire/3 wire balanced and unbalanced systems.
- The measurement of: rms values of voltage and current, ac*ve, reac*ve and apparent power, ac*ve, reac*ve energy, power factors, frequency, THD.
- Indica*ons considering values of programmed ra*os.
- Backlit LCD display.
- Programmable display pages.
- 3 programmable alarm outputs and 1 pulse output in standard version.
- Pulse output for monitoring of 3-phase ac*ve energy
- Digital transmission to the master system through the RS-485 interface (MODBUS).
- USB for configura*on by using free eCon software.
- Modern design allows for installa*on of the meter in modular switchgear in accordance with EN 62208 (meter has a width of 6 modules) on 35 mm rail.

Example of Application



Measurements, monitoring, recording of network parameters and energy.

Input

Measured value	Measuring range	L1	L2	L3	S	Basic error**
Current In 1 A/5 A 1A~ 5A~ 63 A~	0.002...1.20 A or kA * 0.010...6.00 A or kA * 0.10...76.0A~	1	1	1		±0.5%
Voltage L-N 57,7 V~ 230 V~ 290 V~ 100 V~	2.80 ...70.0 V or kV* 10.0 ... 276 V~ 14.0 ... 348 V~ 5.00 ... 120 V or kV*	1	1	1		±0.5%
Voltage L-L 400 V~ 500 V~	20.0 ... 480 V~ 25.0 ... 600 V~ 47.0 ... 63.0 Hz	1	1	1		±1%
Frequency					1	±0.5%
Ac*ve power /import or export/	0.00 ... 999 W, kW or MW	1	1	1	1	±1%
Reac*ve power /capaci*ve or induc*ve indica*on/	0.00 ... 999 VAR, kVAR or MVAR	1	1	1	1	±1%
Apparent power	0.00 ... 999 VA, kVA or MVA	1	1	1	1	±1%
Ac*ve energy /import or export/	0.0 ... 999999.9 kWh or MWh				1	±1%
Reac*ve energy /capaci*ve or induc*ve indica*on/	0.0 ... 999999.9 kVARh or MVARh				1	±1%
Power factor PF	-1 ... 0 ... 1 +1.2 ... 1 ... 1.2	1	1	1	1	±1%
Tangent j		1	1	1	1	±1%

* depending on set current ra*o:
- tr_U ra*o (ra*o of the voltage transformer: 0.1...4000.0)
- tr_I ra*o (ra*o of the current transformer: 1...10000)

** calculated for the nominal range In, Un

Outputs

Kind of output	Properties
Relay output	• 3x programmable relay output, normally open voltageless contacts, load capacity 250 V~/0.5 A~
Pulse output	• 1 x pulse output, OC type, passive (for monitoring of ac*ve energy)

Digital interface

Type of interface	Transmission protocol	Mode	Rate
RS-485 Modbus	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8; 9.6; 19.2; 38.4 kbit/s
USB 1.1/ 2.0	MODBUS RTU	8N2	9.6 kbit/s

External Feature

Readout field	LCD display, monochrome with backlit		
Weight	< 0.3 kg		
Overall dimensions	105 ´ 110 ´ 60 mm		
Protection grade (acc. to EN 60529)	from housing side: IP50	from terminal side: IP00	

Rated Operating Conditions

Supply voltage	85...253 V a.c., 90...300 V d.c. 20...40 V a.c., 20...60 V d.c.	
Temperature	ambient: -10...23...55°C	
Relative humidity	0...95%	inadmissible condensation
Operating position	any	
External magnetic field	0...40...400 A/m	
Short duration overload	voltage inputs (5 sec): 2 Un	current inputs: - 1 sec. 50 A (for version In 1 A/ 5 A) - 1 sec. 630 A (for version In 63 A)
Power consumption	- in the supply circuit £ 4 VA, - in the voltage and current circuits £ 2 VA	

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

ELECTRIC CONNECTIONS

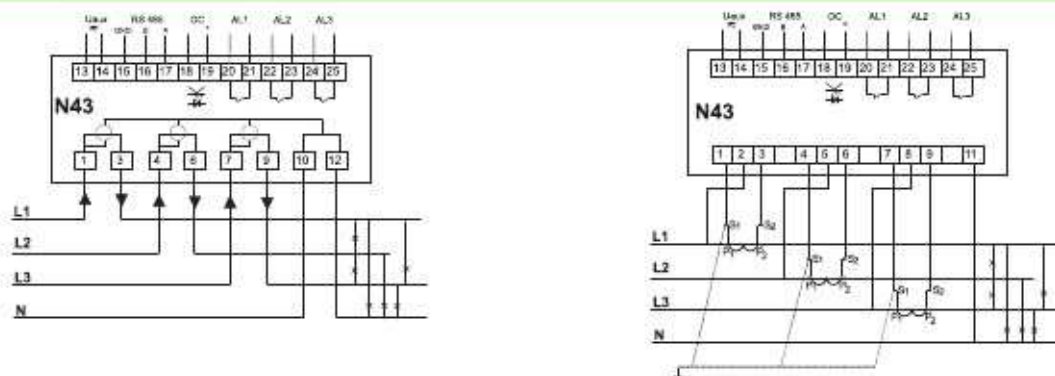


Fig 1. Meter connection diagrams.

Ordering

RAIL-MOUNTED NETWORK METER N43 -						
Current input In:	X	X	X	XX	X	X
1 A/5 A (X/1; X/5)			1			
63 A			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			
Auxiliary supply:						
85...253 V a.c., 90...300 V d.c.			1			
20...40 V a.c., 20...60 V d.c.			2			
Version:						
standard				00		
custom-made*				XX		
Language:						
Polish					P	
English					E	
other*					X	
Acceptance tests:						
without extra quality requirements						0
with an extra quality inspection certificate						1
acc. to customer's request*						X

* - after agreeing with the manufacturer

EXAMPLE OF ORDER:

The code **N43 - 2 2 1 00 E 0** means:
N43 - meter of network parameters of N43 type
2 - current input: 63 A
2 - input voltage (phase/phase-to-phase) Un = 3 x 230 V / 400 V
1 - auxiliary supply: 85...253 V a.c., 90...300 V d.c.
00 - standard version
E - all descriptions and user's manual in English
0 - without extra quality requirements.

SEE ALSO:



Free eCon program for programming LUMEL's products.



ND20 - power network meter.



P43 - three-phase transducer of power network parameters.

OUR OFFER



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