

N43 RAIL MOUNTED POWER NETWORK METER

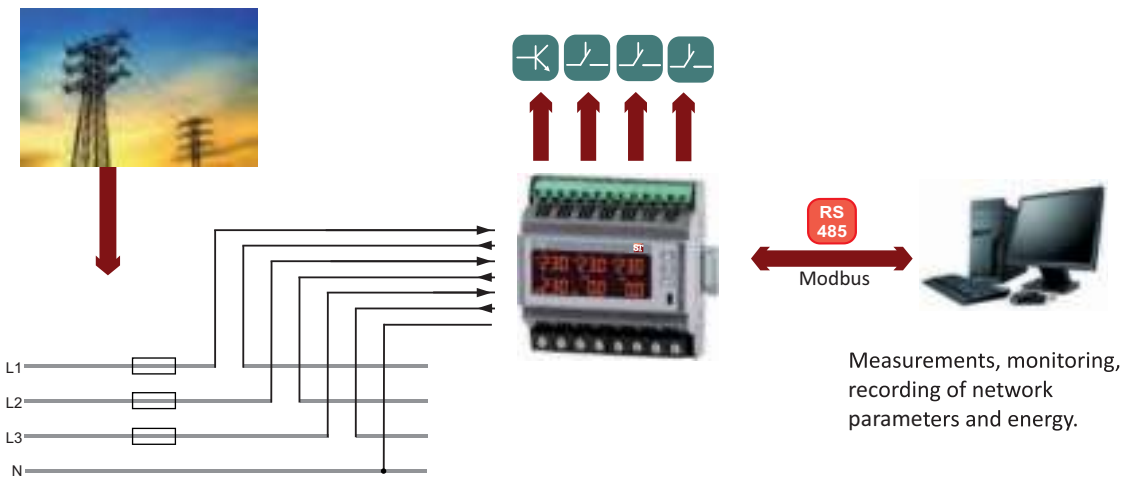
Features

- RTC MOD BUS
- Password protection P,Q C/L L/C
- PAord % 0-100
- eCon THD



- 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, active, reactive and apparent power, active, reactive, energy, power factors, frequency, THD
- Indications considering values of programmed ratios
- Backlit LCD display.
- Programmable display pages.
- 3 programmable alarm outputs and 1 pulse output in standard version.
- Pulse output for monitoring of 3-phase active energy
- Digital transmission to the master system through the RS-485 interface (MODBUS).
- USB for configuration by using free eCon software
- Modern design allows for Installation 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



Inputs

- AC up to 63 A

Outputs

- RS 485 3x
- USB
- Galvanic Isolation
- Supply RS 485

Measured Quantities and Measured Ranges

Measured value	Measuring Range	L1	L2	L3	S	Basic Error**
Current In 1 A/5 A 1 A ~ 5 A ~ 63 A ~	0.002...1.20 A or kA * 0.010...6.00 A or kA * 0.10...76.0A~	•	•	•		±0.5%
Voltage L-N 57,7 V ~ 230 V ~ 290 V ~	2.80 ...70.0 V or kV* 10.0 ... 276 V~ 14.0 ... 348 V~	•	•	•		±0.5%
Voltage L-L 100 V ~ 400 V ~ 500 V ~	5.00 ... 120 V or kV* 20.0 ... 480 V~ 25.0 ... 600 V~	•	•	•		±1%
Frequency	47.0 ... 63.0 Hz				•	±0.5%
Active power /import or export/	0.00 ... 999 W,kW or MW	•	•	•	•	±1%
Reactive power /capacitive or inductive indication	0.00 ... 999 VAR, kVAr or MVAR	•	•	•	•	±1%
Apparent power	0.00 ... 999 VA, kVA or MVA	•	•	•	•	±1%
Active energy /import or export/	0.0 ... 999999.9 kWh or MWh				•	±1%
Reactive energy /capacitive or inductive indication	0.0 ... 999999.9 kVArh or MVArh				•	±1%
Power factor PF	-1 ... 0 ... 1	•	•	•	•	±1%
Tangent φ	+1.2 ... 1 ...1.2	•	•	•	•	±1%

* depending on set current ratio:
 - tr_U ratio (ratio of the voltage transformer: 0.1...4000.0)
 - tr_I ratio (ratio of the current transformer: 1...10000)
 ** calculated for the nominal range In, Un

Outputs

Kind of Outputs	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 active energy)



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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 Features

Readout field	LCD display, monochromatic with backlight		
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 Operatin 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 System	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	

Electrical Connections

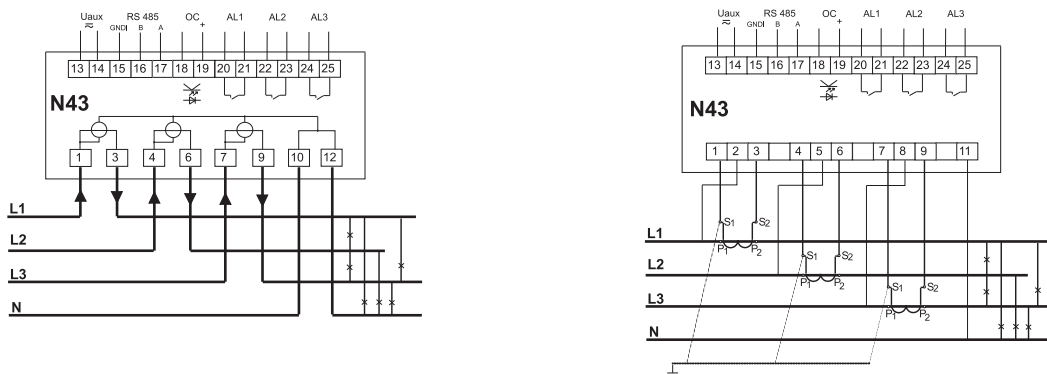


Fig. 1 Meter connection diagram

Ordering

Rail Mounted Network Meter N43	X	X	X	XX	X	X
Current input in						
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 AC, 90...300 V DC			1			
20...40 V AC., 20...60 V DC			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 22 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 users's manual in English
0- without extra quality requirements.

See Also



Free eCon program for programming SIFAM'S products.



ND20 - power network meter.



P43 - three-phase transducer of power network parameters.