

# N43 RAIL MOUNTED POWER NETWORK METER

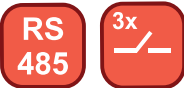
## Features



## Inputs



## Outputs



## Galvanic Isolation



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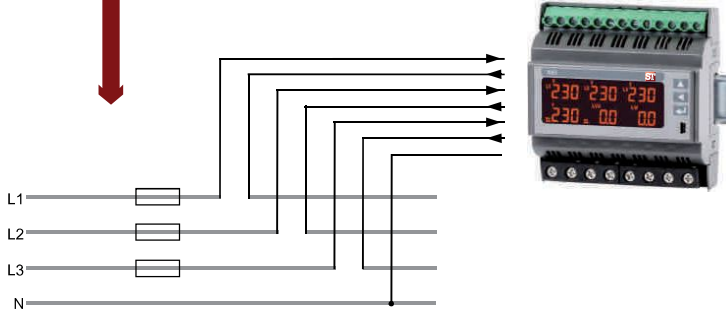


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- For direct (up to 63A) and indirect measurement, in 3 phase 4 wire/3 wire balanced and unbalanced systems
- The measurement of: rms values of voltage and current, active, reactive and apparent power, active, reactive, energy, power factors, frequency, 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



Measurements, monitoring,  
recording of network  
parameters and energy.

## Measured Quantities and Measured Ranges

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

## 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.<br>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:<br>- 1 sec. 50 A (for version In 1 A/ 5 A)<br>- 1 sec. 630 A (for version In 63 A) |
| Power consumption       | - in the supply circuit ≤ 4 VA,<br>- 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

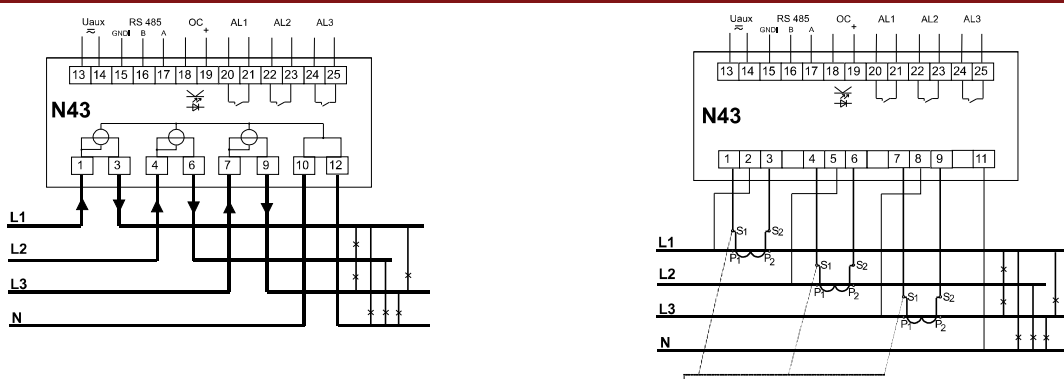


Fig. 1 Meter connection diagram

## 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 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                                      |   |   |   |    | U |   |
| 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 22100U0 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

U - all descriptions and user's manual in English

0 - without extra quality requirements.

## See Also



Free eCon program for programming SIFAM'S products.

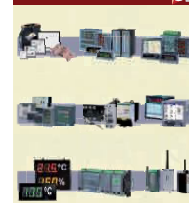


ND20 - power network meter.



P43 - three-phase transducer of power network parameters.

## OUR OFFER



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For more information about SIFAM's products please visit our website [www.sifamtinsley.com/uk](http://www.sifamtinsley.com/uk)

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