



Multifunction Meters

Transducers & Isolators

Temperature Controllers

Converters & Recorders

Digital Panel Meters

Current Transformers

Analogue Panel Meters

Shunts

Digital Multimeters

Clamp Meters

Insulation Testers

ND20LITE METER OF NETWORK PARAMETERS

Features

- Measurement of power network parameters in 2,3 or 4- wire balanced and unbalanced systems.
- High accuracy class 0.2% on some measurements
- Indications considering values of programmed ratios
- Measurement of basic power quantities: UL-L, UL-N, In, f, P, Q, S, PF, tg, $\cos \varphi$, φ , Ep+, Ep-, EqL, EqC, THD
- Programmable VT and CT ratio for Medium and Low Voltage applications
- User Programmable system type
- Universal Auxiliary supply
- Profile of 15, 30, 60-minutes' power
- Backlit LCD 3.5" screen
- Protection grade from the front window: IP65
- RS-485 interface (MODBUS)
- Configurable alarm and pulse outputs (energy)
- Configuration of displayed pages
- Free Configuration and monitoring software available (1 meter license).

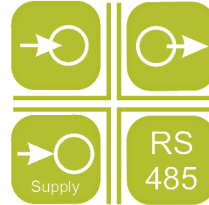
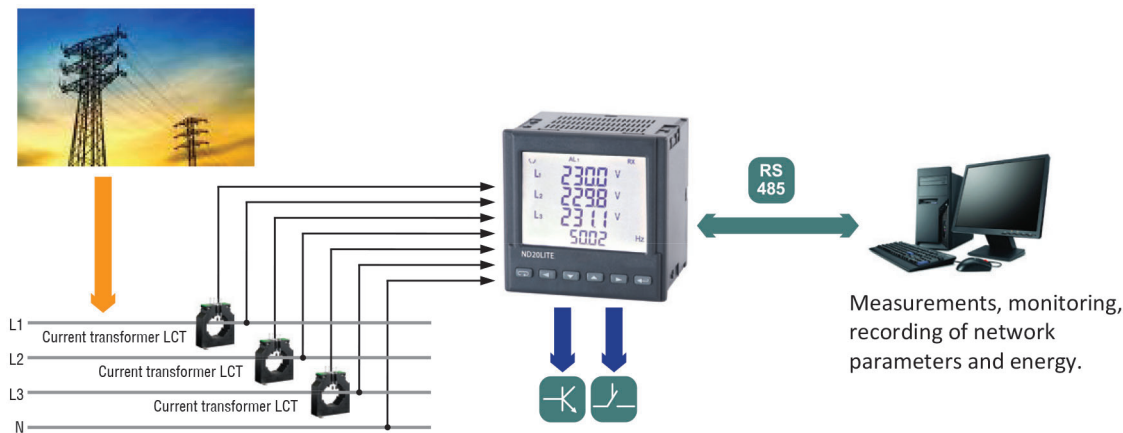
SUBJECT TO CHANGE WITHOUT NOTICE

This manual superseded all previous versions – please keep for future reference

Features

Input

Outputs

Galvanic Isolation

Example of Application

Measured Quantities and Measuring Ranges

| Measured value | Indication range* | Measuring range | L1 | L2 | L3 | Σ | Basic error |
|----------------------------|---------------------------------------|--------------------------------------|----|----|----|---|-------------|
| Current In | 1 A | 0.00 ... 12 kA | • | • | • | | ±0.2% r |
| | 5 A | 0.00 ... 60 kA | | | | | |
| Voltage L-N | 57.7 V | 0.0 ... 280 kV | • | • | • | | ±0.2% r |
| | 230 V | 0.0 ... 1.104 MV | | | | | |
| Voltage L-L | 100 V | 0.0 ... 480 kV | • | • | • | | ±0.5% r |
| | 400 V | 0.0 ... 1.92 MV | | | | | |
| Frequency | 47.0 ... 63.0 Hz | 47.0 ... 63.0 Hz | • | • | • | | ±0.2% mv |
| Active power | -9999 MW ... 0.00 W ... 9999 MW | -1.65 kW ... 1.4 W ... 1.65 kW | • | • | • | • | ±0.5% r |
| Reactive power | -9999 Mvar ... 0.00 var ... 9999 Mvar | -1.65 kvar ... 1.4 var ... 1.65 kvar | • | • | • | • | ±0.5% r |
| Apparent power | 0.00 VA ... 9999 MVA | 1.4 VA ... 1.65 kVA | • | • | • | • | ±0.5% r |
| Power factor PF | -1 ... 0 ... 1 | -1 ... 0 ... 1 | • | • | • | • | ±1% r |
| Tangent φ | -1.2 ... 0 ... 1.2 | -1.2 ... 0 ... 1.2 | • | • | • | • | ±1% r |
| Cosinus φ | -1 ... 1 | -1 ... 1 | • | • | • | • | ±1% r |
| φ | -180 ... 180 | -180 ... 180 | • | • | • | • | ±0.5% r |
| Imported active energy | 0 ... 99 999 999.9 kWh | | | | | • | ±0.5% r |
| Exported active energy | 0 ... 99 999 999.9 kWh | | | | | • | ±0.5% r |
| Reactive inductive energy | 0 ... 99 999 999.9 kvarh | | | | | • | ±0.5% |
| Reactive capacitive energy | 0 ... 99 999 999.9 kvarh | | | | | • | ±0.5% |
| THD | 0 ... 100% | 0 ... 100% | • | • | • | | ±5% |

* Depending on the set tr_U ratio (ratio of the voltage transformer: 0.1...4000.0) and tr_I ratio (ratio of the current transformer: 1...10000) r - of the range mv - of the measured value

Outputs

| Kind of output | Properties |
|---|--|
| Relay output | • programmable relay output, normally open voltageless contacts, load capacity 250 V~/0.5 A~ |
| Pulse output of active or reactive energy | • 1 OC type, passive |

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 backlit | |
| Weight | < 0.3 kg | |
| Overall dimensions | 96 x 96 x 77 mm | panel cut-out: 92.5+0.6 x 92.5+0.6 mm |
| Protection grade (acc. to EN 60529) | from frontal side: IP65 | from terminal side: IP20 |

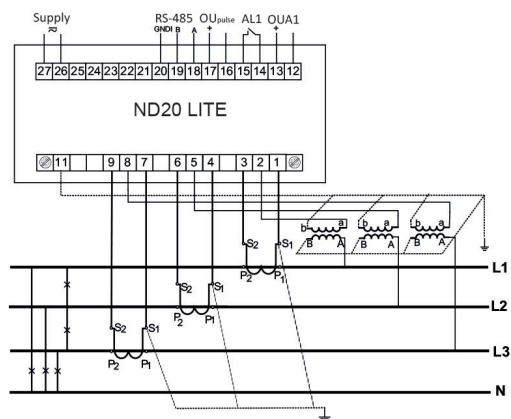
Rated Operating Conditions

| | | |
|-------------------------------|--|----------------------|
| Supply voltage | 85...253 V a.c., 90...300 V d.c., | |
| 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 |
| Power consumption | - in the supply circuit ≤ 6 VA, - in the voltage and current circuits ≤ 0.05 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



Connections:

- direct, semi-indirect and indirect one-phase measurement,
- direct measurement in a 3-wire network,
- semi-indirect measurement in a 3-wire network,
- indirect measurement with the use of 3 current transformers and 2 or 3 voltage transformers in a 3-wire network,
- direct measurement in a 4-wire network,
- semi-indirect measurement in a 4-wire network,
- indirect measurement with the use of 3 current transformers and 2 or 3 voltage transformers in a 4-wire network

| | | | | | | | |
|--|-------------------|----------|----------|----------|-----------|----------|----------|
| Ordering | ND20LITE - | X | X | X | XX | X | X |
| Current input In: | | | | | | | |
| 1 / 5 A | | 2 | | | | | |
| Voltage input (phase/ phase-to-phase) Un: | | | | | | | |
| 3 x 57.7/100 V, 3 x 69.3/120 V, 3 x 230/400 V | | 2 | | | | | |
| Supply voltage: | | | | | | | |
| 85...253 V a.c., 90...300 V d.c. | | | 1 | | | | |
| Version: | | | | | | | |
| standard | | | | | 00 | | |
| custom-made* | | | | | XX | | |
| Language: | | | | | | | |
| English | | | | | | U | |
| other* | | | | | | X | |
| Acceptance tests: | | | | | | | |
| with an extra quality inspection certificate | | | | | | | 1 |
| with calibration certificate | | | | | | | 2 |
| acc. to customer's request | | | | | | | X |

* - after agreeing with the manufacturer

EXAMPLE OF ORDER:

The code **ND20LITE - 2 2 1 00 U 0** means:

ND20LITE - meter of network parameters of ND20LITE type

2 - current input: 5A (X/5)

2 - input voltage (phase/phase-to-phase) Un = 3 x 230 V/ 400 V

1 - supply voltage: 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

Contact



Sifam Tinsley Instrumentation Ltd

1 Warner Drive
 Springwood Industrial Estate
 Braintree, Essex
 CM7 2YW

Tel: 01376 335271
 E-mail: sales@sifamtinsley.com

www.sifamtinsley.co.uk