recdigit *NODUS*™

96 x 96 Power Monitor

Measurement, metering and supervision applications on L-V networks

Energy Quality

Energy Q Quality

Numerous advantges:

- Simplicity : intuitive operation and programming
- A universal product with no optimal extras
- High-readability LCD display
  - Automatic units management
  - Pictographs: phase sequence connection errors
- Qualimetry: THD V and I, $I_{neutral}$
- Single model for CT ... /1 A and ... /5 A
- Measurement and metering on four quadrants

CE

ENERDIS

The LCD display

- 4 lines of characters
- and a large number
- of pictographs accessible
- using the 4 keys,
- provide the operator with
- constant information.

I / Imax

Display 1
I1 (A)
I2 (A)
I3 (A)
U1-2 (V)

Display 2
I1max (A)
I2max (A)
I3max (A)
Max. total active power (kW)

U / V

Display 3
U1-2 (V)
U2-3 (V)
U3-1 (V)
Frequency (Hz)

Display 4
V1-N (V)
V2-N (V)
V3-N (V)
Frequency (Hz)

P/Q/S

Display 5
Total active power (kW)
Total reactive power (kvar)
Power factor
Total active energy (kWh)

Display 6
Total active power (kW)
Total reactive power (kvar)
Power factor
Total reactive energy (kvarh)

Display 7
Total apparent power (kVA)
Total reactive power (kvar)
Power factor
Total apparent energy (kVAh)

Q / ?

Display 8
Neutral current (A)
Voltage THD (%)
Current THD (%)
Hour meter (h, 1/10, 1/100)

Display 9
CT x VT ratio
Transmission speed (bps)
Modbus/JBus address
Instrument serial number

Main characteristics

Measurement accuracy	voltage/current: ± 0.5% R ± 0.05% U_N/I_N (10 to 130% of U_N/I_N) power P: ± 1% R ± 0.05 % S_N (10 to 130% of S_N for 0.8 CAP/IND ≤ cos φ ≤ 1) power Q: ± 1% R ± 0.05 % S_N (10 to 130% of S_N for 0.8 CAP/IND ≤ sin φ ≤ 1) power S: ± 1% R ± 0.05 % S_N (10 to 130% of S_N) power factor: ± 0.02 (measurement on 4 quadrants) frequency: ± 0.2 Hz from 45 to 65 Hz THD V/I: ± 2% R (10 to 130% of U_N/I_N) hour meter: 250 ppm
Metering accuracy	active energy: class 1 according to IEC 61036 reactive energy: class 2 according to IEC 61268 apparent energy: ±1% R (10 to 130% of S_N)
Measurement inputs	voltage (3 phases + neutral): V_N/U_N = 400/690 V, consumption < 1 VA VT ratio programmable from 1.00 to 20.00 intensity (3 phases isolated): I_N = 1 A and 5 A, consumption < 1 VA CT primary programmable from 1 to 5,000 A
Display	amber LCD on back-lit black background; “measurement” digits 10 mm
Pictographs	phase-to-phase voltage measurement, wrong phase sequence, bidirectional current measurement, flow on RS communication link
Digital output	RS485 (2 wires + sheathing), Modbus/JBus™ protocol - RTU mode, speeds from 1,200 to 19,200 bps, even or odd or no parity, 1 or 2 stop bits, 120 Ω switchable terminal resistor
Relay output	• energy pulse (Ep, Eq, Es): width 300 ms, parameterisable size 1, 10 or 100 kWh (or kvarh or kVAh) • or alarm: min. and max. value threshold exceeded (I, V, U, P, Q, S, PF, F, THD-V, THD-I) ; n.o. or n.c. status, delay time adjustable from 0.1...99.9 s and hysteresis 5%
Auxiliary power supply	110/127/230/400 VAC ± 15% 45/65 Hz or 24/48/110 VDC ± 20% or 125/220 VDC ± 20% (< 5 VA / 5 W)
Connection	current circuit: terminal strip with double-headed screws for 6 mm² wires voltage circuit, RS, relay and power supply: pull-out terminal strips for 2,5 mm² wires
Dimensions	front panel: DIN 96 x 96 mm; panel cut-out: 92 x 92 mm; depth: < 130 mm with terminal strips
Weight	approx. 800 g
Fastening	by metal strips for panels between 1 and 5 mm
EC directives	IEC 61010, EN 50081-2, EN 50082-2

To order:

recdigit *NODUS* **Q**, power supply 110/127/230/400 V_{AC} . ref. NODQ2001

recdigit *NODUS* **Q**, power supply 24/48/110 V_{DC} . . . . . ref. NODQ2002

recdigit *NODUS* **Q**, power supply 125/220 V_{DC} . . . . . ref. NODQ2003

Your distributor:

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