

NDM50 Rail Type Three Phase Electricity Meter



NDM-50

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It is ideal for users who have space issues in electrical panels. Thanks to Modbus communication, it can also be used in system solutions. Rail-type energy analyzers, which can measure reactive energy in parallel with active energy, enable monitoring of potential compensation needs. With the capability of measuring both import and export energy, it allows monitoring of produced energy in addition to consumed energy. Besides energy parameters, it can also measure current, voltage, power, and frequency.

With the NDM50 series model, it can operate on a pay-as-you-go basis in a prepaid system, and it allows cutting off the energy of a subscriber who has not paid the bill without needing to visit them. The prepaid system is generally used in structures such as shopping malls, residences, and timeshares. This design frees the user from the hassle of bill due dates and encourages more planned usage. Prepaid amounts also enable the distribution company to purchase electricity at more favorable rates in a planned manner.

Application Areas

- Shopping Malls
- Industrial Zones
- Electric Distribution Companies
- Marinas
- Residences
- Airports
- Factories
- Holiday Villages

Standarts

- IEC 61557-12
- IEC 62053-22
- IEC62053-21
- IEC62053-23



Advantages

- Suitability for rail-type application solutions,
- Convertible to panel type with additional equipment,
- Class 0.5 and class 1 application,
- Competitive prices,
- Compatibility with all software through Modbus RTU protocol communication,
- Wide range of solutions with direct and current transformer models,
- Measurement capability up to 100 Amperes with direct type meters,
- Bidirectional measurement capability,
- Takes up less space compared to competitors,
- Proven reliability with unique design,
- Billing option for high-cost liquid fuels with generator tariff types,
- Easy payment collection from subscribers and the advantage of pre-collected amounts with prepaid types,
- Higher measurement accuracy classes compared to analyzers,
- Wide measurement range

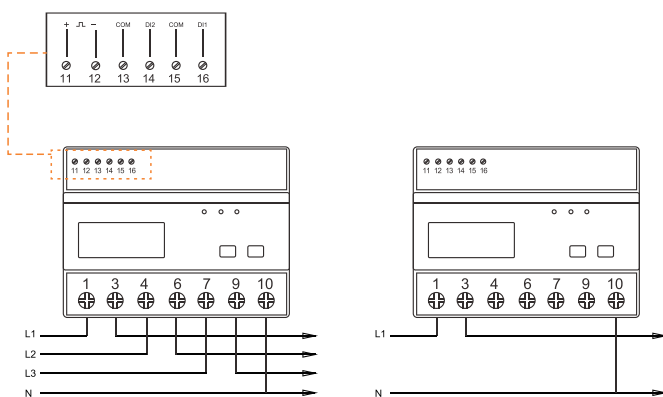
Features

- Nominal voltage (Un): 3x230/400 V AC
- Operational voltage: 80%-120% of Un
- AC voltage withstand: 4KV for 1 minute
- Impulse voltage withstand: 6KV-1.2μS
- Base current (Ib): 10A
- Operational current range: 0.4% Ib - I_{max}
- Overcurrent withstand: 30 I_{max} for 0.01s
- Operational frequency range: 50 or 60Hz
- Internal power consumption: ≤ 2W/10VA
- Display: LCD
- Maximum reading: 999999.99kWh

Performance Criteria

- Operating humidity: ≤ 90%, non-condensing
- Storage humidity: ≤ 95%, non-condensing
- Operating temperature: -25°C to 55°C
- Storage temperature: -40°C to 70°C
- Reference temperature: 23°C ± 2°C
- International standard: IEC 62053-22
- Accuracy class: Class 0.5S
- Installation category: CAT III
- Mechanical environment: M1
- Electromagnetic environment: E2
- Pollution degree: 2
- Dust and water ingress protection: IP51 (indoor)

Wiring Diagram



- Protective insulated meter: Class II
- Electrostatic discharges: 8kV contact / 15kV air gap
- Electromagnetic HF fields: IEC 61000-4-3
- Electrical fast transients: 4kV

Accuracy

- Voltage, Current: 0.2%
- Frequency: 0.2% of mid-frequency
- Power factor: 1% of unity (0.01)
- Active power, Apparent power: ±5% of range maximum
- Reactive power: ±1% of range maximum
- Reactive energy (VArh): Class 2
- Active energy (Wh): Class 0.5s / Class 1.0

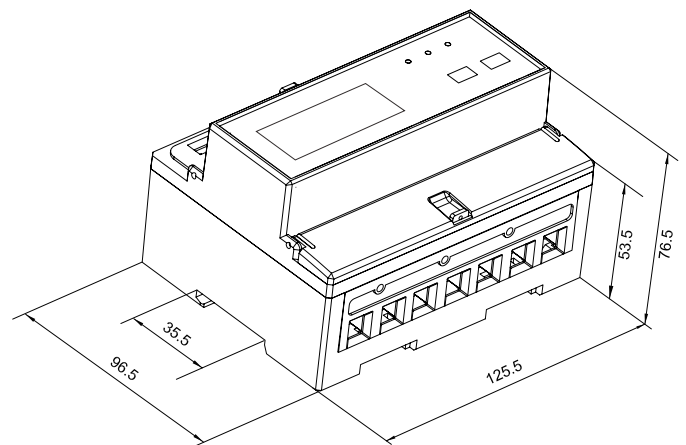
Communication

- Terminal wire area: 0.5-1mm²
- Recommended tightening torque: 0.25Nm

Pulse Output

- Pulse output: 1
- Pulse output type: Passive
- Pulse output 1: Configurable
- Pulse width: 200 / 100 (default) / 60ms

Dimensions





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