

# Energy Analyzers and Meters



NDM50 - NDM50 Lora DIN Rail Type Three-Phase Electricity Meter

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# Energy Analyzers and Meters

## DIN Rail and Panel Type Energy Meters

Energy meters are devices that provide perfect readability with a white backlit LCD display, and are used for single-phase and three-phase energy measurements in residential and utility applications.

These devices measure and display various important electrical parameters, and also offer a communication port for remote reading and monitoring.

The bidirectional energy measurement feature makes them an ideal option for solar energy measurements as well.

Additionally, models with LoRa communication capability are available, as well as prepaid or generator tariff options.

### Application Areas

- Shopping Malls
- Marinas
- Residences
- Airports
- Factories
- Holiday Resorts
- Prisons
- EV Charging Stations

### Advantages

- Class 0.5 and Class 1 applications

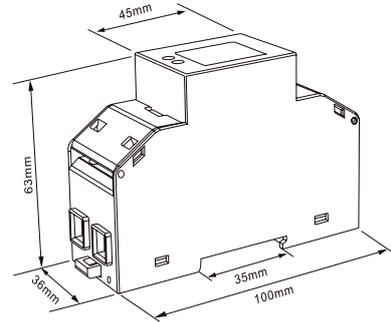
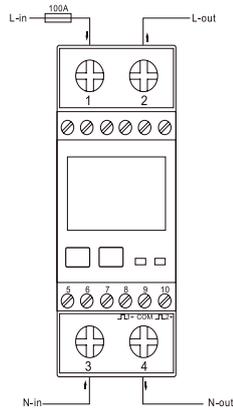
- Competitive pricing
- Compatibility with all software via Modbus RTU protocol
- Measurement capacity up to 100 Amps
- Bidirectional measurement capability
- Smaller footprint compared to competitors
- High measurement accuracy classes
- Wide measurement range
- Billing of high-cost liquid fuels with generator tariff option
- Advantage of collecting payments from prepaid subscribers
- DIN rail mounting (35mm)
- Wide range of solutions: direct connection and current transformer models
- RS485 (Modbus) or wireless data transmission (LoRaWAN communication)
- Savings on cabling and labor costs
- Fewer failure points due to wireless feature
- Convertible to modular or panel type solutions (only with additional equipment for NDM70 series)
- Advantage of collecting payments from subscribers and prepaid collection
- Compatibility with direct connection and CT models with a wide range of solutions
- White backlit LCD display
- Scroll settings display feature
- Support for AMR (Automatic Meter Reading) and SCADA systems
- Multifunctional measurement
- Easy payment collection (prepaid type)



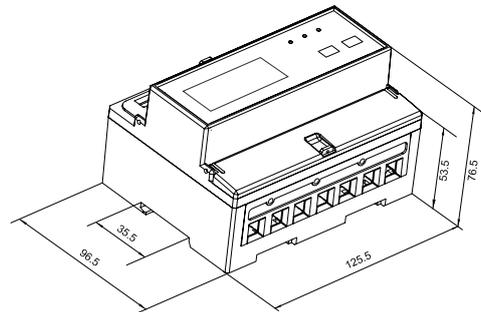
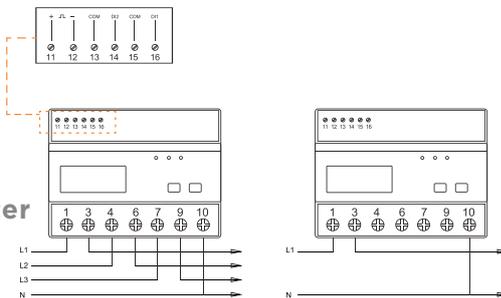
# Energy Analyzers and Meters

## Wiring Diagram - Dimensions for DIN Rail and Panel Type Energy Meters

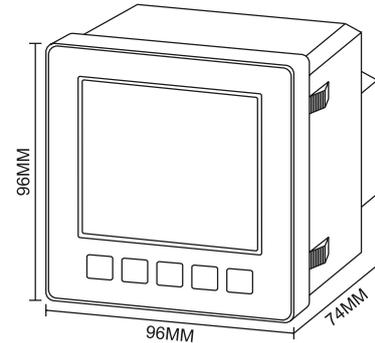
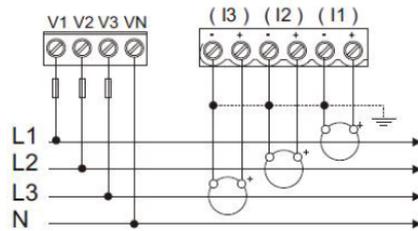
**NDM30 - NDM30 Lora**  
DIN Rail Type Single-Phase Electricity Meter



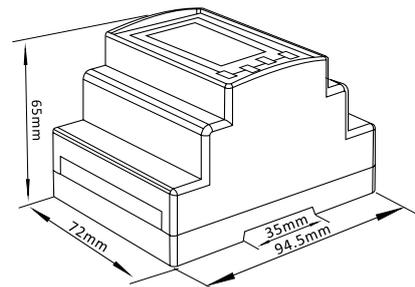
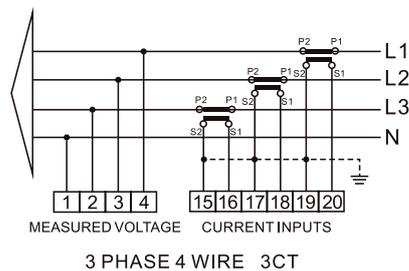
**NDM50**  
**NDM50 Lora**  
DIN Rail Type Three-Phase Electricity Meter



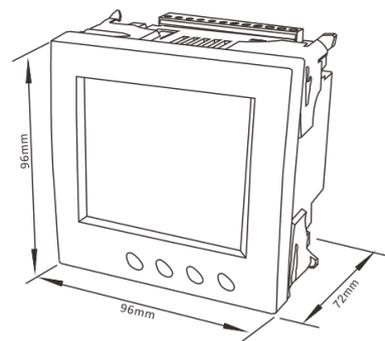
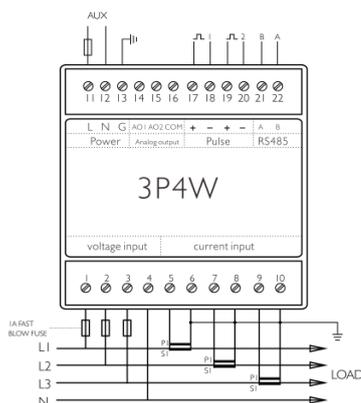
**NPM270BX**  
**NPM270BX-ETH**  
Series Panel Type Energy Analyzers



**NDM70**  
**NDM70 Lora**  
DIN Rail Type Three-Phase Electricity Meter



**NPM290-5G**  
**NPM290-5J Series**  
Panel Type Energy Analyzers



# Energy Analyzers and Meters

## NDM50 - NDM50 Lora DIN Rail Type Three-Phase Electricity Meter

	MODEL	
	NDM50	NDM50 Lora
Standards		
IEC62053-21	✓	✓
IEC62053-22	✓	✓
IEC62053-23	✓	✓
EN61326-1:2013	-	✓
EN61326-2-3:2013	-	✓
EN 61010_1:2010+A1:2019	-	✓
EN 61010-2-30:2010	-	✓
Specifications		
Nominal Voltage	3x230/400 VAC	3x230/400 VAC
Operating Voltage	80%-120%	80%-120%
AC Voltage Limit	4KV for 1 minute	4KV for 1 minute
Pulse Interval Change	6KV-1.2μS	6KV-1.2μS
Base Current	10A	30 I <sub>max</sub> for 0.01 seconds
Operational Current Range	0.4% I <sub>b</sub> -I <sub>max</sub>	0.4% I <sub>b</sub> -I <sub>max</sub>
Overcurrent Leakage	30 I <sub>max</sub> for 0.01s	30 I <sub>max</sub> for 0.01s
Operational Frequency Range	50 or 60Hz	50 or 60Hz
Internal Power Dissipation	< 2W/10VA	< 2W/10VA
Display	LCD	LCD
Maximum Reading	999999.99kWh	999999.99kWh
Accuracy		
Voltage	0,2%	0,2%
Current	0,2%	0,2%
Frequency	0,2%	0,2%
Power Factor	1,0%	1,0%
Active Power	0,5%	0,5%
Reactive Power	1,0%	1,0%
Apparent Power	0,5%	0,5%
Active Energy	0,5%	0,5%
Reactive Energy	2,0%	2,0%
Performance Criteria		
Operating Humidity	90% non-condensing	90% non-condensing
Storage Humidity	95% non-condensing	95% non-condensing
Operating Temperature	-25°C to +55°C	-25°C to +55°C
Storage Temperature	-40°C to +70°C	-40°C to +70°C
Reference Temperature	23°C ± 2°C	23°C ± 2°C
Installation Category	CAT III	CAT III
Mechanical Environment	M1	M1
Electromagnetic Environment	E2	E2
Protection Against Dust and Water Ingress	IP51	IP51
Protective Cost Meter	Class II	Class II
Electrostatic Transports	8kV contact / 15kV air gap	8kV contact / 15kV air gap
Electrical Fast Transients	4kV	4kV
Communication		
Interface Standard and Protocol	RS485 Modbus RTU	LoRaWAN Specification 1.0.2
Frequency	-	EU868/AS923/AU915/US902/CN470/ CN433
LoRaWAN Classes	-	Class C
Automatic Loading	-	Max. 19 parameters
Automatic Loading Interval	-	Configurable
Interaction Path	-	OTAA or ABP
Output Power	-	13dBm in transmit
Coding Format	-	ASCII
Communication Distance	Max 1200 m	1500m in open area
Pulse Output		
Pulse Output	1	1
Pulse Output Type	Passive	Passive
Pulse Output 1	Configurable	Configurable
Pulse Width	200 / 100 (default) / 60ms	200 / 100 (default) / 60ms



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