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Electricity meter LoRaWAN three-phase direct
Product datasheet

Talkpool's E-meter LoRaWAN three-phase direct is an advanced energy monitoring solution with built-in LoRaWAN communications.

It is a three phase multi-function remote control energy meter. It measures all important electrical parameters, such as Active Energy (kWh), Current (A), Voltage (V), Frequency(Hz), Power Factor, Power Demand, import and export energy etc. With built-in relay inside, the meter can be remotely controlled to turn on or off the electricity supply via LoRaWAN. The user can also set alarm objects and alarm level, once the alarm is activated the relay will be turned off. The relay of each phase can be controlled together or separately. Built-in interfaces provides pulse and LoRaWAN outputs.

- Measures kWh Kvarh, KW, Kvar, KVA, P, F, PF, Hz, dmd, V, A, etc.
- Bi-directional measurement IMP & EXP
- Pulse output
- 2DI
- LoRaWAN
- Din rail mounting 35mm
- 100A direct connection
- Better than Class 0.5 / C accuracy

Product features

Max.100A Direct Connect

Multifunction Measurement, Displays Scrollable Settings

Support AMR, SCADA system

Remote Control with Built-in Relay

Energy Resettable

White Backlit LCD Display

Din Rail Mounting 35mm

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Technical Parameters

Input Voltage	Basic Value: 230V AC
Operating Voltage Range	±20%Basic Value
Measurement Form	Valid Values
Input Current	Basic Value: 5A
Max.Current	100A
Over Current Withstand	20 Imax for 0.5s
Input Frequency	Basic Value: 50/60Hz
Input Frequency Range	45-65 Hz
Insulation Capabilities	- AC voltage withstand 4KV/1min
Impulse Voltage Withstand	6kV – 1.2μS waveform
Power Consumption	≤ 2W
Pulse Port	Configurable
Pulse Output Rate	1000imp/kWh(Default)
Display	LCD with White Backlit
Max reading	999999.99 kWh

Energy Measurements

Imported active energy	0 to 999999.99 kWh
Exported active energy	0 to 999999.99 kWh
Imported reactive energy	0 to 999999.99 kVArh
Exported reactive energy	0 to 999999.99 kVArh
Total active energy	0 to 999999.99 kWh
Total reactive energy	0 to 999999.99 kVArh

Accuracy

Voltage	0Ø5% of range maximum
Current	0Ø5% of nominal
Frequency	0.1% of mid-frequency
Power factor	1% of unity (0.01)
Active power	(W) ±1% of range maximum
Reactive power	(VAr) ±1% of range maximum
Apparent power	(VA) ±1% of range maximum
Active energy	(Wh) Class 0.5 IEC 62053-22
Class	C EN50470-1/3
Reactive energy	(VArh) Class 2 IEC 62053-23
Response time to step input	1s, typical, to >99% of final reading, at 50 Hz

Interfaces for External Monitoring

LoRaWAN communication channels via protocol wireless

Pulse output indicating real-time measured energy

Pulse Output

Pulse output is non-configurable. It is fixed up with active kWh. The constant is 1000imp/kWh.

Reference Conditions of Influence Quantities

Influence Quantities are variables that affect measurement errors to a minor degree. Accuracy is verified under nominal value (within the specified tolerance) of these conditions.

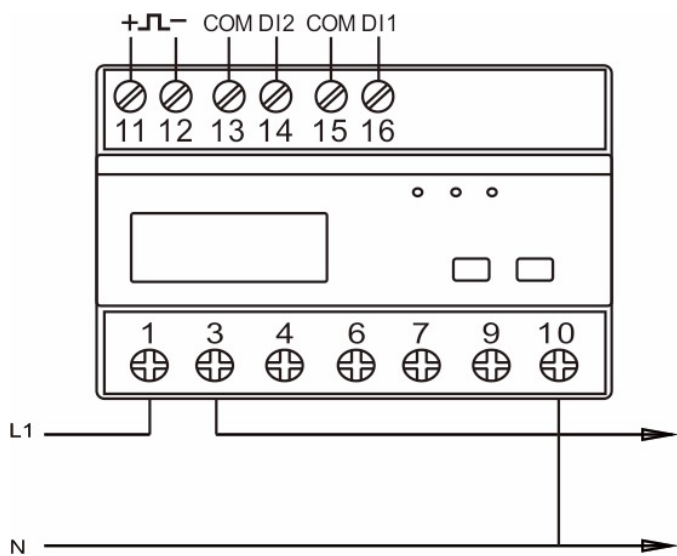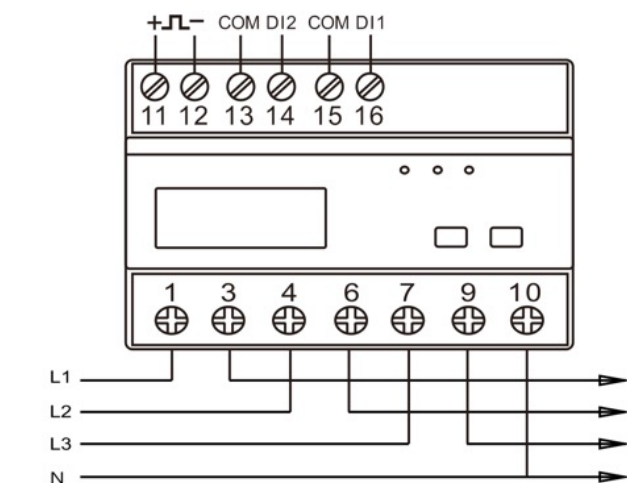|	
Ambient temperature	23°C ±1°C
Input frequency	50Hz(MID)
	50 or 60Hz ±2%(non-MID)
Input waveform	Sinusoidal (distortion factor < 0Ø005)
Magnetic field of external origin	Terrestrial flux

Environment

Operating temperature	3K7 (-40AC to +70ÆC*)
Storage temperature	-40ÆC to +70ÆC*
Relative humidity	0 to 100%, non-condensing
Altitude	Up to 2000m
Warm up time	5S
Vibration	10Hz to 50H , IEC 60068-2-6, 2g
Shock	30g in 3 planes

* Maximum operating and storage temperatures are in the context of typical daily and seasonal variation.

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Wiring configuration

Dimension drawing