



## Datasheet

- Multifunction kWh power meter complete with L+N fast clamp on terminals
- Bi-directional measurement IMP & EXP
- Two pulse outputs
- Modbus RS485 RTU serial connection via RJ12 port
- DIN rail mounted 1 module (18mm)
- Supplied with 100A Current Transformer with RJ12 connector
- Better than Class 1 accuracy

The energy-meters are used to measure single-phase applications like residential, utility and Industrial. The unit measures and displays various important electrical parameters. It equipped with a white back-lighted LCD screen for prefect reading. As well as a RS485 communication port for remote reading and monitoring. Bi-directional energy measurement makes it a good choice for solar PV energy metering. The compact design and din rail installation provides an easy and economical solution for your metering demand. Designed whereby there is no need for a screwdriver to connect any of the terminals. It has fast clamp on L+N connection, RJ12 port for current transformer connection and RJ12 for Modbus RTU serial output.



## Specification table

General Specifications	
Voltage AC (Un)	230V
Voltage Range	176–276V AC
Base Current (Ib)	0.1V AC
Power consumption	<2W/10VA
Frequency	50/ 60Hz(±10%)
AC voltage withstand	4KV for 1 minute
Impulse voltage withstand	6KV-1.2uS waveform
Overcurrent withstand	20Imax for 0.5s
Pulse output 1	1000imp/kWh (default)
Pulse output 2	0.001(default) /0.01/0.1/1 kWh/kVarh(configurable)
Display	LCD with white backlit
Max. Reading	999999kWh

Voltage	0.5% of range maximum
Current	0.5% of nominal
Frequency	0.2% of mid-frequency
Power factor	1% of Unity
Active power	1% of range maximum
Reactive power	1% of range maximum
Apparent power	1% of range maximum
Active energy	Class 1 IEC62053-21
	Class B EN50470-1/3
Reactive energy	Class 2 IEC62053-23

Environment	
Operating temperature	-25°C to + 55°C or -40°C to + 70°C
Storage and transportation temperature	-40°C to +70°C
Reference temperature	23°C ± 2°C
Relative humidity	0 to 95%, non-condensing up to 2000m
Altitude	
Warm up time	3s
Installation category	CAT II
Mechanical Environment	M1
Electromagnetic environment	E2
Degree of pollution	2

### Output

#### Pulse Output

The meter provides two pulse outputs. Both pulse outputs are passive type.

Pulse output 1 is configurable. The pulse output can be set to generate pulses to represent total /import/ export kWh or kVarh.

The pulse constant can be set to generate 1 pulse per: 0.001(default) /0.01/0.1/1 kWh/kVarh.

Pulse width: 200/100/60ms

Pulse output 2 is non-configurable. It is fixed to total kWh. The constant is 1000imp/kWh.

#### RS485 output for Modbus RTU

The meter provides a RS485 port for remote communication. Modbus RTU is the protocol applied. For Modbus RTU, the following RS485 communication parameters can be configured by the Modbus command.

**Baud rate:** 1200, 2400, 4800, 9600 bps.

Default: 9600 bps

**Parity:** NONE/EVEN/ODD

**Stop bits:** 1 or 2

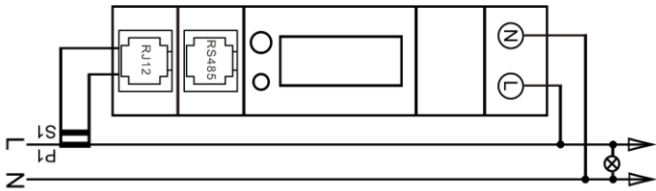
**Modbus Address:** 1 to 247

Mechanics	
Din rail dimensions	18x118x64 (WxHxD) DIN 43880
Mounting	DIN rail 35mm
Ingress protection	IP51 (indoor)
Material	self-extinguishing UL94V-0



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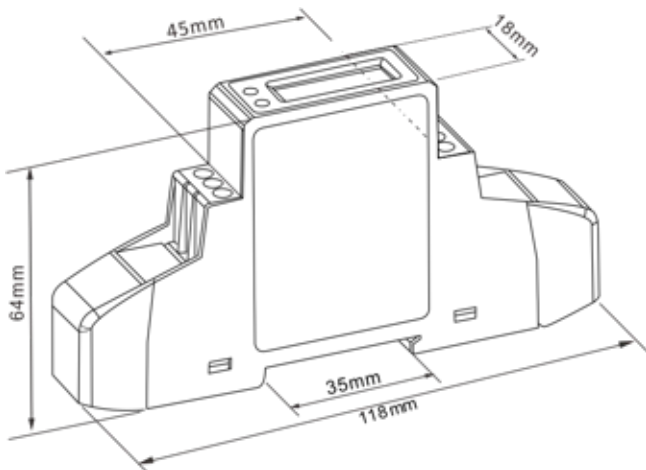
Wiring Configuration



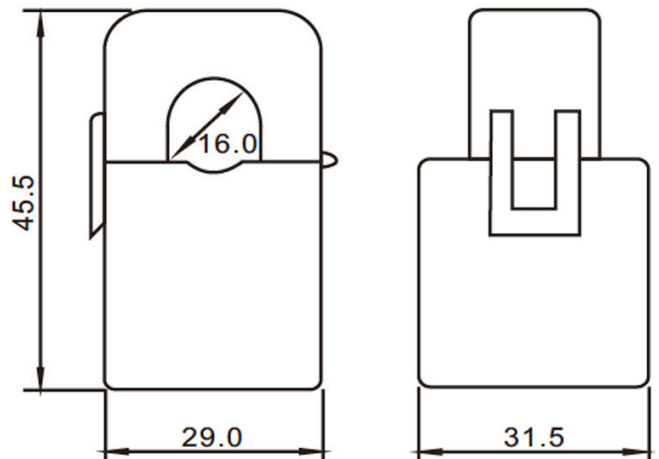
100A Current sensor ESCT-TA16 100A



Dimension Drawing



Complete with 3 meter fly lead and RJ12 connector



Conformity References

**Electromagnetic Compatibility:** EN61326-1:2013 & EN61326-2-3:2013

**Low Voltage Directive:** EN61010-1-2010 & EN61010-2-30-2010