

# Product data sheet

## Characteristics

# 19D-301M

## Three phase + neutral kWh meter

3x230V/400V 10(100)A  
3x230V/400V 1.5 (6) A

### General Technical Data

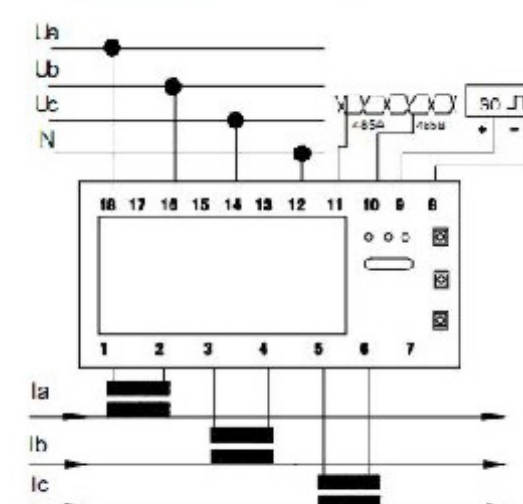
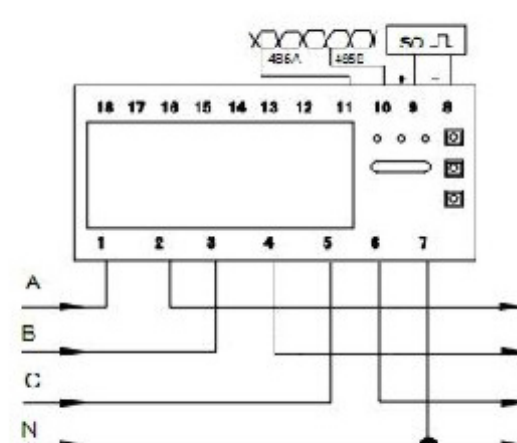
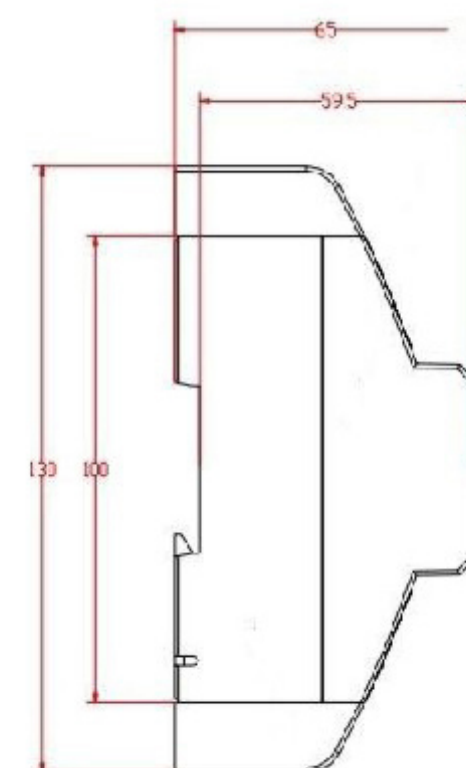
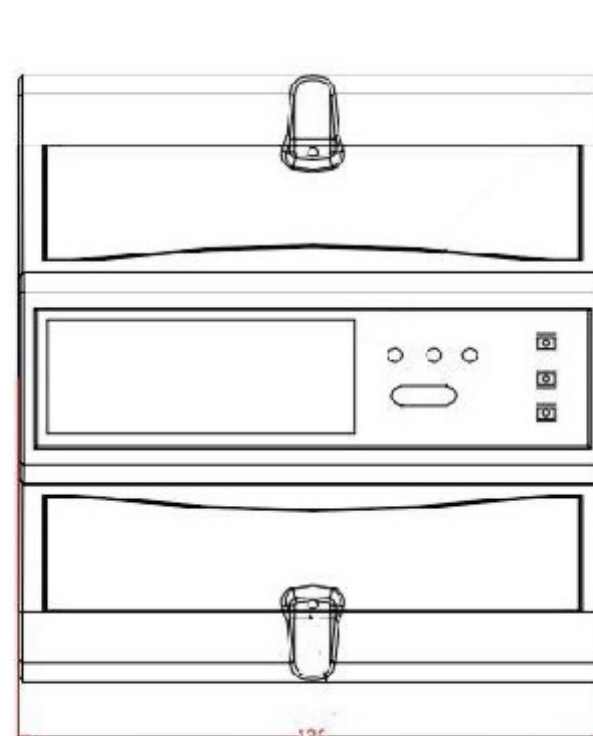
<b>Voltage (V)</b>	
Voltage AC (Un)	230 / 400 (3~)
Voltage range	161/279 to 300/520 (3~)
<b>Current (A)</b>	
- base (Ib)	1.5 (CT type) 10 (directly connect)
- max (Imax)	6 (CT type) 100 (directly connect)
Starting current (mA)	0.4% of Ib
Power consumption of current	≤2W / 10VA per phase
<b>General data</b>	
Frequency (Hz)	50(±10%)
Accuracy	1.0
<b>Standards</b>	IEC 62053-21
<b>Memory back-up</b>	EEPROM
<b>Enclosure material</b>	
Upper	Polycarbonate
Lower	Polycarbonate/glass fibre
<b>Temperature range (°C)</b>	
Operating	-10°C to +50°C
Storing	-30°C to +70°C
<b>Humidity</b>	
Operating	75%
Storing	95%
<b>Protection</b>	
Protection against penetration Of dust and water	IP51
Insulating encased meter of Protective class	II
<b>Voltage withstand</b>	
AC voltage withstand	2KV for 1 minute
Impulse voltage withstand	6KV -1.2μS waveform
<b>Current withstand</b>	30Imax for 0.01s
<b>Pulse output rate</b>	400 imp/kWh 3200imp/kWh(CT)
<b>Data stored</b>	More than 20 years when power off

### RS485 communication specifications

Bus type	RS485
Protocol	MODBUS RTU with 16 bit CRC
Baud rate (bps)	1200 (default), 2400,4800,9600
Address range	0-255 user settable
Bus Loading	256 meters per bus
Rage (m)	1200

### Infrared communication specifications

Infrared wavelengths (nm)	Between 900 and 1000
Communication distance (m)	5
Communication angle	-15° to +15°
Baud rate (bps)	1200(default), 9600(optional)
Portocol	MODBUS RTU with 16 bit CRC



### Tariff specifications

Tariff number	4
Time segments	10
Clock accuracy	≤ 0.5 s (every 24 hours)
Battery voltage	3.6V DC, ≥ 1.2Ah

#### Directly connect type

1/2	Ia	IN/OUT
3/4	Ib	IN/OUT
5/6	Ic	IN/OUT
7	Neutral wire	
8/9	Test pulse output contact	
10/11	RS485 communication contact	

#### CT connect type

1/2	Ia	IN/OUT
3/4	Ib	IN/OUT
5/6	Ic	IN/OUT
18/16/14/12	Phase A/B/C/N	
8/9	Test pulse output contact	
10/11	RS485 communication contact	

To comply with the protection requirements the meter must be mounted in a class IP 51 enclosure or better, according to IEC 60529

### Display

Display type	LCD
Digit length	5+2