

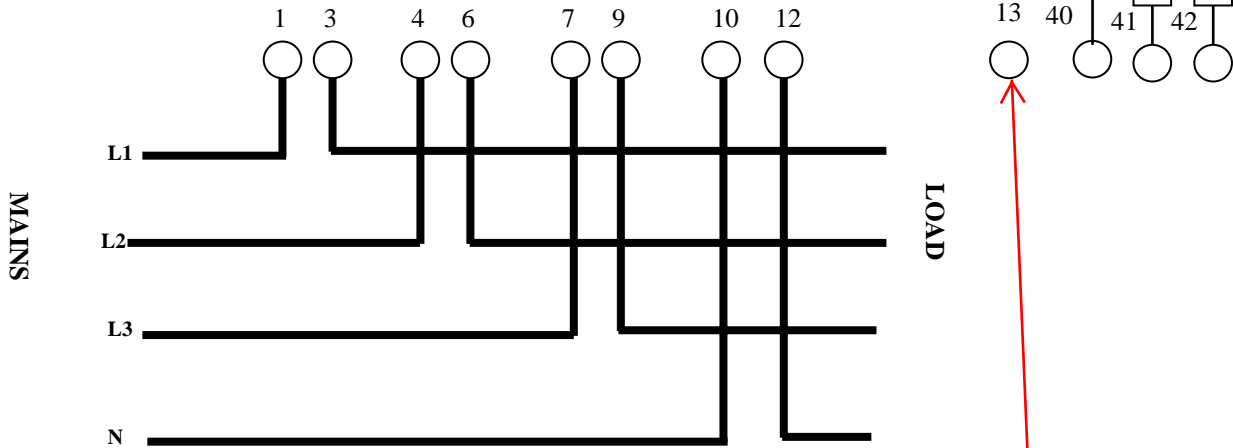


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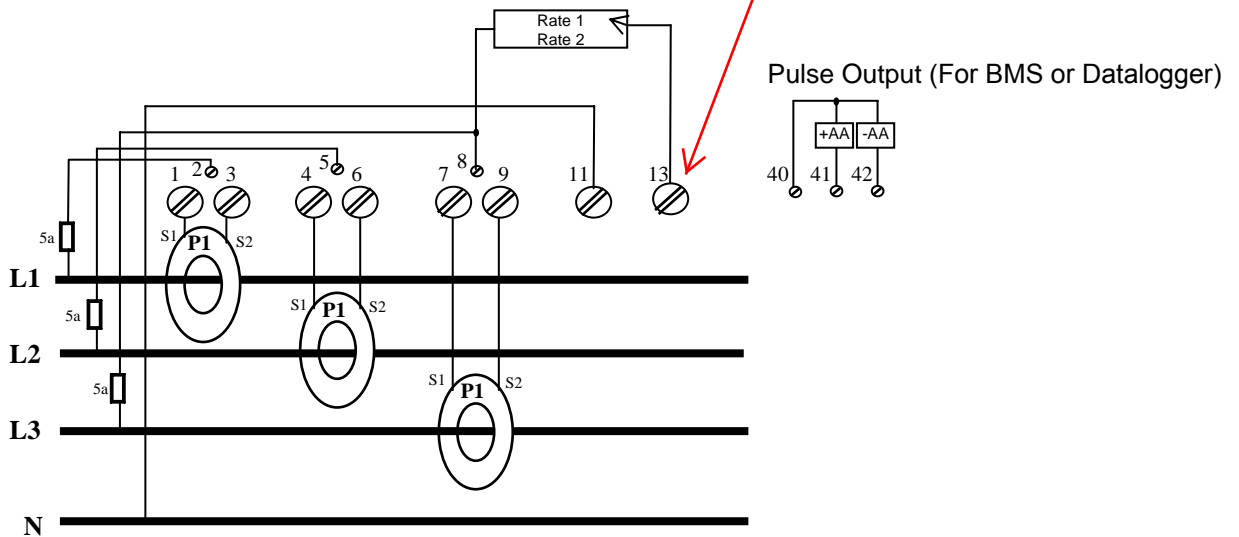
## TPN100 & TPNCT-MT171

### Connection for 1-20(120) AMP Version



Apply a switched neutral for day/night tariff if required - otherwise leave unconnected

### Connection for 0,1-5(6) AMP version



1. Please ensure all CTs are installed as per wiring diagram. NB., Correct polarity of CTs is ESSENTIAL ie., (P1-Mains) & (P2-Load)
2. Check all S1 & S2 Connections are correct as per wiring diagram otherwise problems will result with the register displays.
3. For health & safety reasons it should be noted that if a Current Transformer is operated with the secondary (S1 & S2) open circuited, DANGEROUS voltages may be generated at the secondary terminals or leads.

## Inputs

The meter is equipped with one (two-rate meters) or two (3- and 4-rate meters) tariff inputs that are used for external tariff changeover with a phase voltage.

## Outputs

The meter is equipped with one or two impulse outputs. Two impulse outputs are used in case of bi-directional energy flow (an output for each energy flow direction).

Outputs can be an S0 (DIN 43864) or opto-MOS relay type.

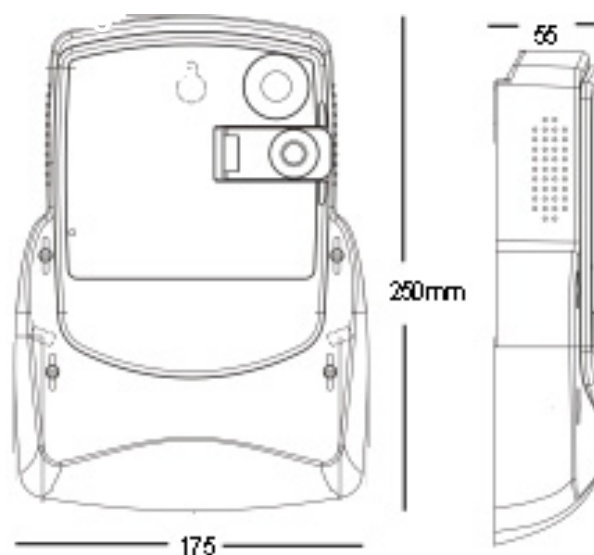


Fig. 7 – Meter constituent parts

1. An LCD
2. Meter technical data
3. A legend of data identification codes
4. A meter cover sealing screw
5. A terminal cover sealing screw
6. An IR optical port
7. A Scroll key
8. An impulse LED

## Meter connection procedure

1. Wire as above
2. Check connection indication:
  - LED is constant - just low current that's all
  - LED is blinks proportional to the current
3. Check connection – see LCD indications:
  - Presence of all three phases - ▼ is lit at 5th position
  - Failure of at least one phase - ▼ is not lit at 5th place
  - Reversed phase sequence - ▼ is blinking at the 5th place



## Installation Notes

### To ensure that the meter reads correctly...

#### Meters Operated by Current Transformers (CTs)

*(Note: Different types of CT Markings – P1=K, P2=L, S1=k, S2=l)*

1. Wire the meter according to the drawing inside the terminal cover. The voltage inputs to the meter must be externally fused.
2. The CT cables should be kept as short as possible, use 2.5mm cable to maintain accuracy.
3. CTs must be of the correct ratio for the meter fitted (e.g. 200:5A) – if the meter is on the Meteronline service you may request that it is reprogrammed to suit your CTs
4. CTs must be fitted onto the cables the correct way round so that the K (or P1) side is towards the mains.
5. The cables from the CTs must be connected the correct way round observing k (or S1) and l (or S2) markings on the meter and CT.
6. The CTs must be on the correct phase e.g. if phase 1 voltage goes to terminal 2 the phase 1 CT must go to terminals 1 and 3. The voltage terminals are between the two CT terminals for each phase on a CT operated meter.
7. Check the RST indicator, this should be on – if it's off one or more phase voltages are missing – if it flashes the phases are in the wrong order, two will have to be swapped over (the CT wires will also have to be moved to keep them with the right voltage).
8. Check the meter is operating in the correct direction – the arrow symbol should show left to right. Open all the voltage fuses then try one phase on at a time and check each phase makes the meter go in the correct direction.
9. Check that the blue light is slowly flashing – this shows that remote reading is working.
10. Check the red light, this should flash if power is being measured.

#### Meters Directly Connected To The Supply

1. Wire the meter according to the drawing inside the terminal cover.
2. Check the RST indicator, this should be on – if it's off one or more phase voltages are missing – if it flashes the phases are in the wrong order, two will have to be swapped over.
3. Check the meter is operating in the correct direction – the arrow symbol should show left to right. Check that the mains and load are connected to the correct terminals on each phase.
4. Check that the blue light is slowly flashing – this shows remote reading is working.
5. Check the red light, this should flash if power is being measured.

# MT171 Auxiliary Terminals

## Outputs – ...G22... Model

<i>Function</i>	<i>Denotation</i>	<i>Terminal</i>
Common	G	40
Pulse output for active energy +A (kWh)	+AA	41
Pulse output for active energy –A (kWh Reverse)	-AA	42

### Pulse Outputs

The two pulse outputs are solid state switches equivalent to two relay contacts connected to the common terminal number 40.

Maximum Switching Voltage = 27VDC

Maximum Current through switch = 27mA

### Pulse Rate – Default Values – Other Settings Available on Request

Direct Connected 100A Meter – 100 Pulses Per kWh

CT Operated Meter – (CT Ratio) Pulses per kWh

( e.g. A meter Programmed for 200/5A CTs would output 40 Pulses/kWh)

### Pulse Width – Default Value – Other Settings Available on Request

All meter versions – 100mS

### Inputs

<i>Function</i>	<i>Denotation</i>	<i>Terminal</i>	<i>Connection</i>
Common of tariff input (15) is connected internally to phase	G	15	Do Not Connect
Energy tariff T1 – T2	TE1/2	13	Connect to N to select T2
Energy tariff T3 – T4	TE3/4	33	Not Used