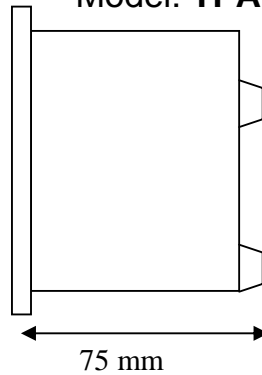


96 mm

Model: TPA-13L



75 mm

TPA-13L is a three phase panel meter specially designed to measure basic line parameters. Three line display of meter provides comfort to the user to see same parameter over all three phases simultaneously.

Features

- Parameters: Phase Voltage, Line Voltage, Current, Active Power Per Phase, Total Active Power, Power Factor (PF) Per Phase, Total Power Factor, Energy, Apparent Power, Reactive Power & Frequency,.
- True RMS measurement of all parameters.
- Sensing: 3 phase 4 wire system.
- 3 line, 4 digit per line seven Segment LED display.
- CT Ratio selectable (Up to 4000 / 5A).
- User can set the display in Auto scrolling or fixed screen Mode via front panel key.

TECHNICAL DETAILS

Enclosure

SIZE : 96mm X 96mm X 75mm
 PANEL CUT OUT : 92mm X 92mm

Front Panel

DISPLAY : 3 line, 4 digit/line seven segment LED display
 DIGIT COLOUR : Red
 DIGIT HEIGHT : 0.56 inch
 LED INDICATORS : For parameter under display

Parameters

Parameter Display	MEASUREMENT RANGE
Phase Neutral Voltage (VP)	20.0 – 300.0 V
Line Current (~A)	0 - 5A (direct without CT)
Line Voltage (Phase-to-Phase) (VL)	50 – 500 V
Active Power (kW) Per Phase & Total	0.000 – 9999 kW
Active Energy (kWh)	0.000 – 999999 kWh
Power Factor (PF) Per Phase & Average	0.20 – 1.00 PF
Apparent Power (kVA)	0.000 – 9999 kVA
Frequency (Freq)	40 - 80 Hz
Reactive Power(KVAr)	0.000-9999



Auxiliary Supply

Universal Supply 85 – 265 V AC, 47-63 Hz.


Environmental:

Temperature: 10.... 50°C operating,
Humidity: 0...95% RH condensing.

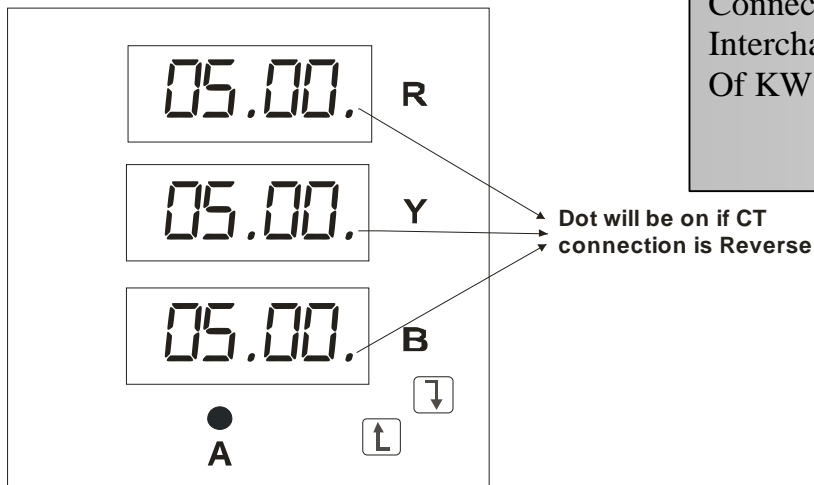
SCROLL / HOLD MODE:

- To enter into “Hold mode”, Press  key, when required parameter is displayed on Display.
- During “Hold mode”, LED will blink.
- Press  key again to enter into “Scroll Mode”.

CT Ratio Selection:


- Keep pressing front panel key for 4 Seconds. Display-1 will show $\frac{CT1}{CT2}$. Display-2 will show current CT ratio.
- Now release the key and press  key to change CT ratio.
- To store selected CT Ratio in non-volatile memory, release the key and wait for 5 Seconds. Instrument will automatically stores CT Ratio and starts operating normally.

Reverse Phase Indication:



NOTE: If the dot (as shown in above diagram) Of current display is ON, that means the C Connection (S1 & S2) is reverse therefore Interchange the CT wires to show proper value Of KW & KWh.

TO Reset KWh

Press and hold  key for 16 seconds and KWh value will be reset.

“KWh Reading”

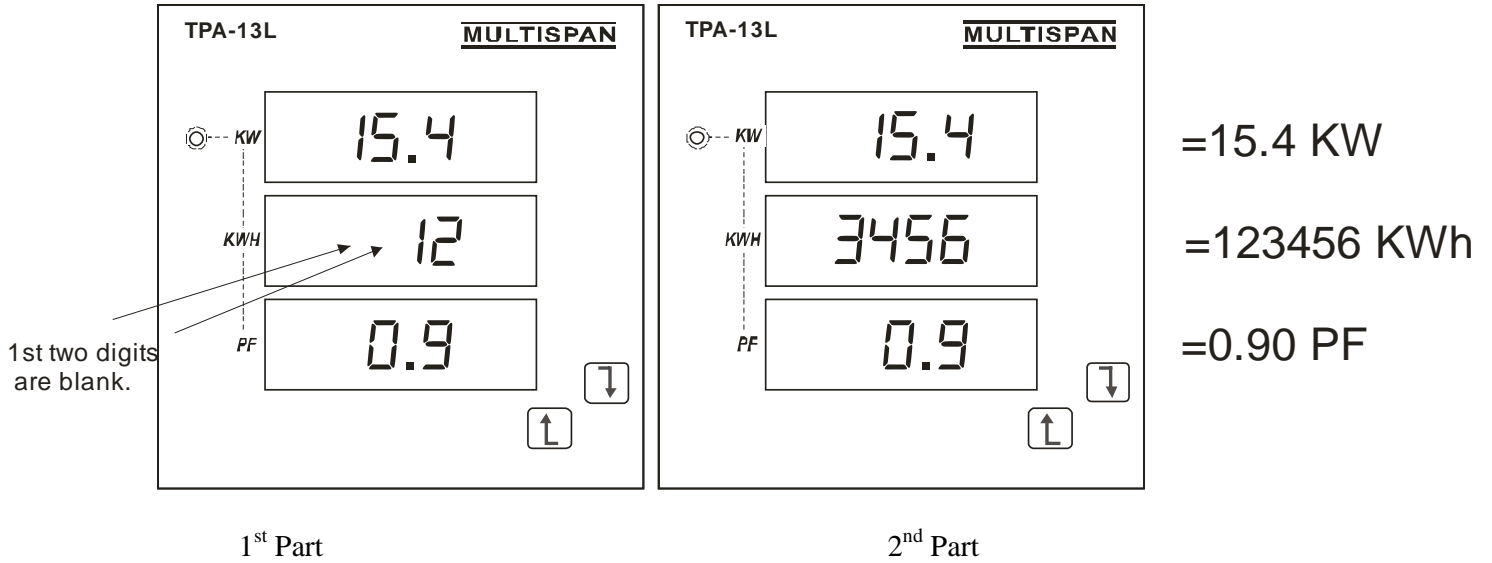
KWh is shown in middle display.
Maximum value of KWh is 999999 (Six digits)

As the number of digits is 4 higher value reading will be shown as follows.

- 1) Value up to 4 digits (i.e. up to 9999) is shown in normal way.

- 2) When this value is 5 or 6 digits, the display is split in two parts, 2D + 4D, which will be shown one after another in the middle display. (Both the parts will toggle at roughly 2 second interval.)

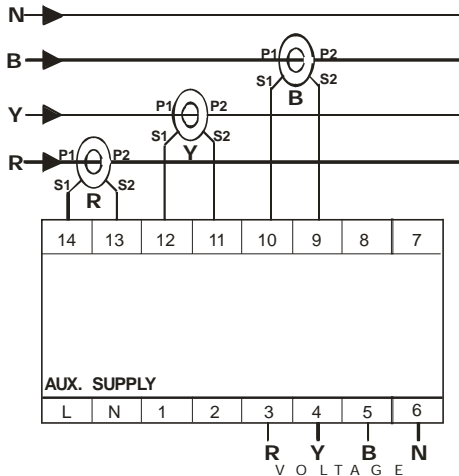
For example: if the value is 123456 KWh, then it will be shown as follows.



Means: KW = 15.4 KW
 KWh = 123456 KWh
 PF = 0.9 PF

Each part remains steady for 2 second approximately.

CONNECTION DIAGRAM:



For current higher than 5 Ampere
 (With External CT)

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