



**ELECTRICAL SAFETY  
POWER QUALITY  
ENERGY MANAGEMENT**

Eetarp GPM96 Power Meter Training Slide



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# 01 - PRODUCT INFORMATION

## GPM96-PK3





# 01 - PRODUCT INFORMATION

## GPM96-MID



- IEC62053-22 CI 0.5S meter
- Instantaneous values, L-N voltage, L-L voltage, frequency, power, power factor, THDV, THDI harmonics, Harmonics up to 63<sup>rd</sup> order
- Memory Recording for energy, demand, max demand
- 6.4kHz sampling (128 Samples/cycle)
- Suitable for 3 phase & Single phase application
- 3 x Voltage Input – 3 phase 4 wires (400V), support continuous overload of 1.2x
- 3 x CT secondary Input 1 / 5A selectable, support continuous overload of 1.2x
- 1 x RS485 Modbus RTU output



## 01 - PRODUCT INFORMATION

- During normal operation, voltages hazardous to life may be present at some of the terminals of this unit. Installation and servicing should be performed only by qualified, properly trained personnel abiding by local regulations. Ensure all supplies are de-energized before attempting connection or other procedures.
- Terminals should not be user accessible after installation and external installation provisions must be sufficient to prevent hazards under fault conditions.
- This unit is not intended to function as part of a system providing the sole means of fault protection - good engineering practice dictates that any critical function be protected by at least two independent and diverse means.
- The unit does not have internal fuses therefore external fuses must be used for protection and safety under fault conditions.
- **Never open-circuit the secondary winding** of an energized current transformer.
- This product should only be operated with CT secondary connections Earthed.
- If this equipment is used in a manner not specified by the manufacturer, protection provided by the equipment may be impaired.

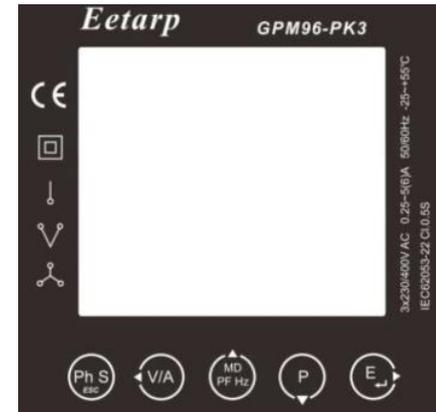




# 02 – DEVICE CONNECTION

## 02 – DEVICE CONNECTION

### GPM96-MID





# 02 – DEVICE CONNECTION

Rear view

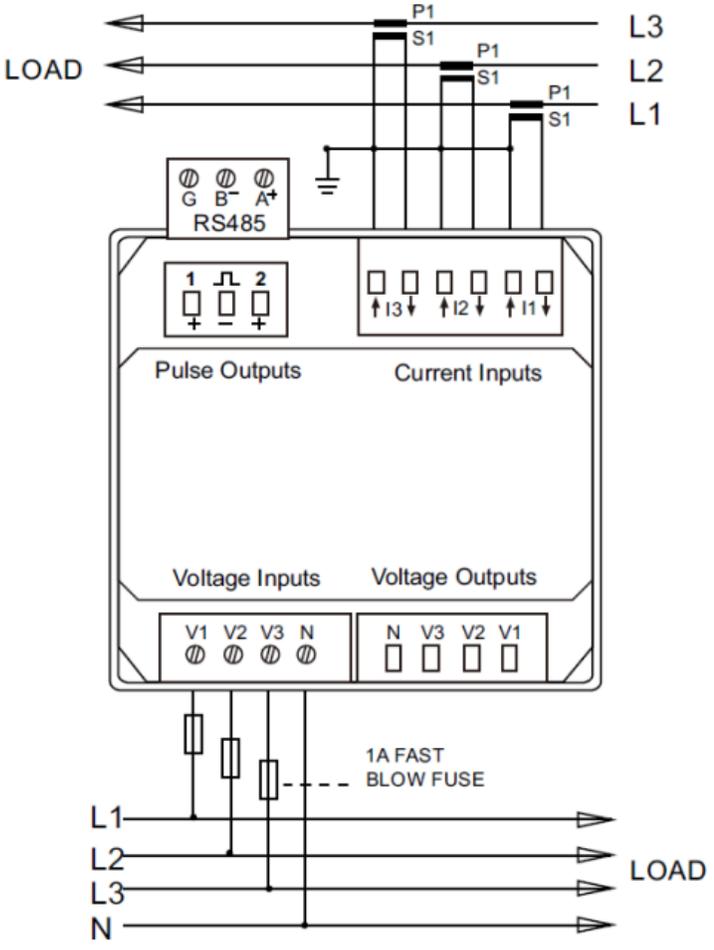


Rear view





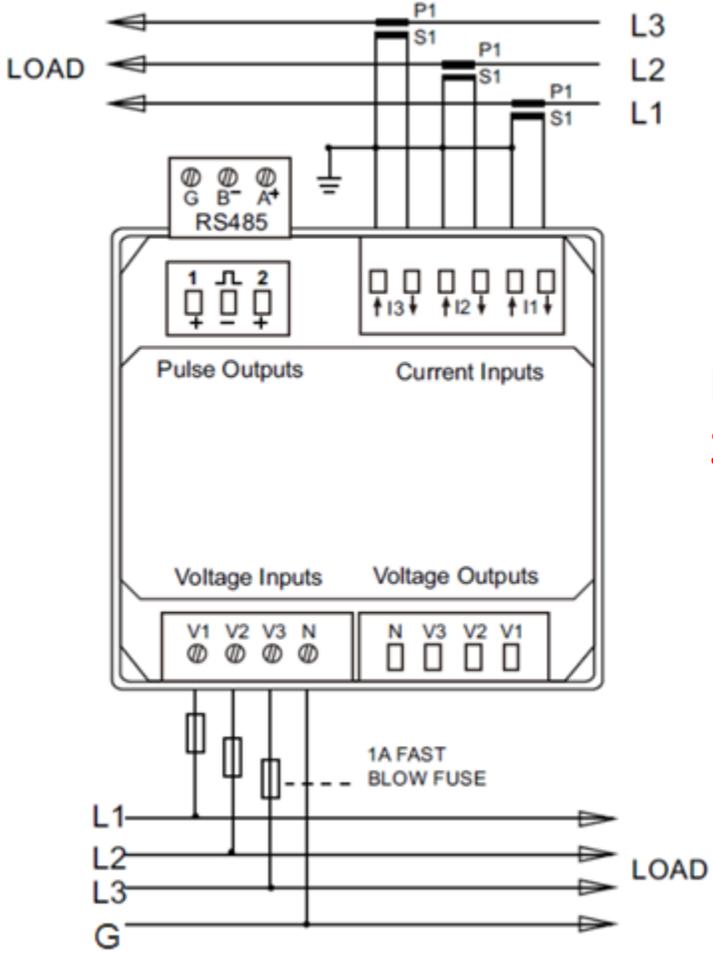
# 02 – DEVICE CONNECTION (3P4W3CT)



(3 phase 4 wires)



# 02 – DEVICE CONNECTION (3P3W3CT)



**Device setting remain at 3-4-3 connection**



# 03 – DEVICE SETUP

## 03 - BASIC DEVICES SETUP

### GPM96-MID





## 03 – DEVICE SETUP (Buttons)

Buttons	Click	Press 2S
	<ul style="list-style-type: none"> <li>➤ Displays power, voltage, current and energy information of each phase</li> <li>➤ Exit from the menu</li> </ul>	<ul style="list-style-type: none"> <li>➤ Automatic Scroll display ON / OFF</li> </ul>
	<ul style="list-style-type: none"> <li>➤ Display Voltage and current information of the selected system type. (3p4w, 3p3w and 1p2w)</li> <li>➤ Phase sequence</li> <li>➤ Left side move</li> </ul>	<ul style="list-style-type: none"> <li>➤ Individual Harmonic Distortion of Voltage up to 63rd</li> </ul>
	<ul style="list-style-type: none"> <li>➤ Display power factor, frequency, Max. Demand.</li> <li>➤ Max. and Min. of current and voltage</li> <li>➤ Up page or add value</li> </ul>	<ul style="list-style-type: none"> <li>➤ Individual Harmonic Distortion of Current up to 63rd</li> </ul>
	<ul style="list-style-type: none"> <li>➤ Display active power, reactive power and apparent power information of the selected system type.</li> <li>➤ Down page or reduce value</li> </ul>	<ul style="list-style-type: none"> <li>➤ Running hour</li> <li>➤ Full Screen checking</li> <li>➤ Modbus / Ethernet setting information</li> <li>➤ Tariff Information</li> </ul>
	<ul style="list-style-type: none"> <li>➤ Display total / import / export active or reactive energy information of the selected system type.</li> <li>➤ Right side move</li> </ul>	<ul style="list-style-type: none"> <li>➤ Set-up mode entry</li> <li>➤ Confirmation</li> <li>➤ Default Password 1000</li> </ul>



## 03 – DEVICE SETUP (Access to setup page)

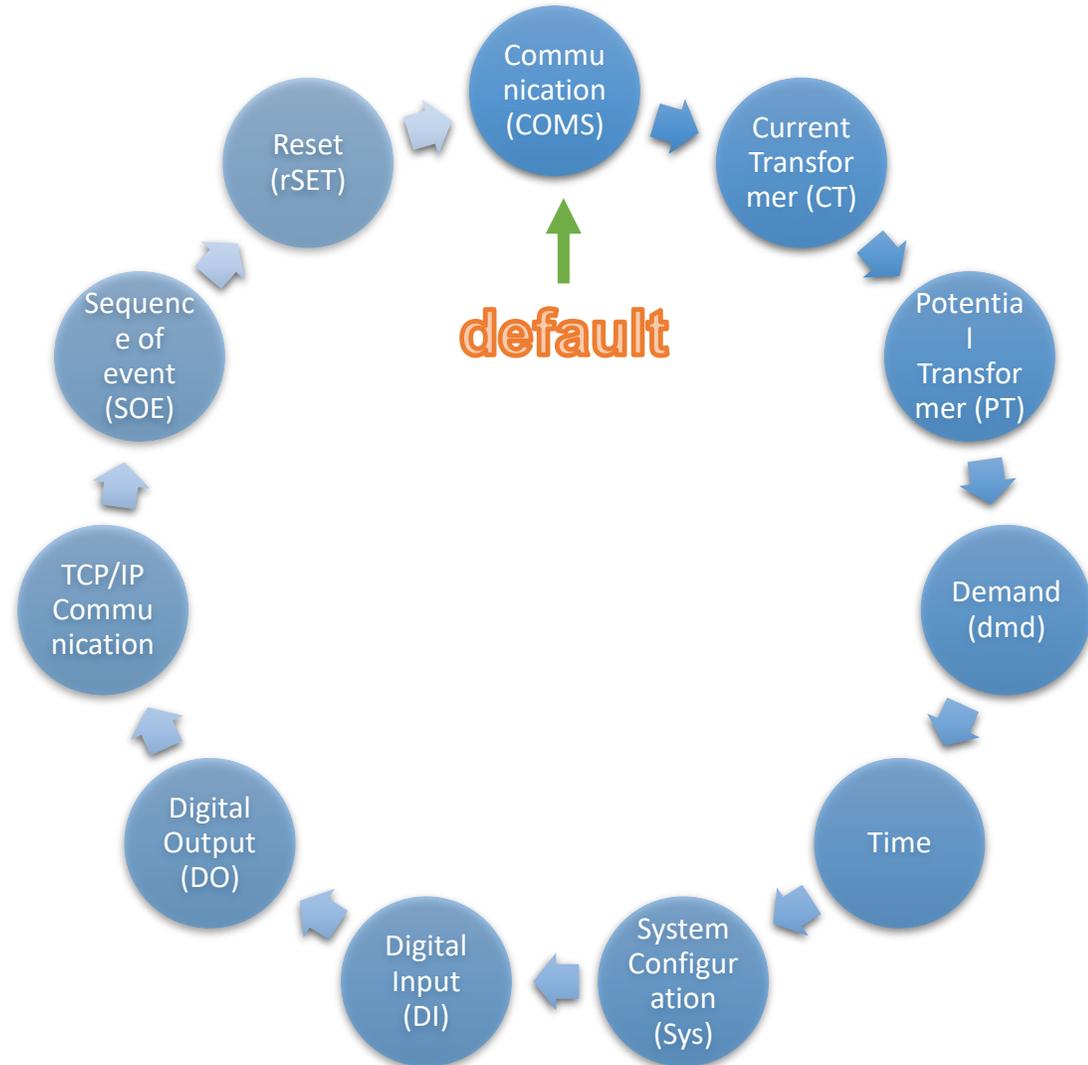
- Press  for 2 seconds
- Enter Password (Default: 1000)  
( - Right,  - +,  - -)
- Press  for 2 seconds to confirm entry





## 03 – DEVICE SETUP (General Menu)

- Graphic depicts the categories available for configuration, in sequence.
- Press  for 5 seconds to change address
- Press  for 5 seconds to confirm changes
- Press  to return

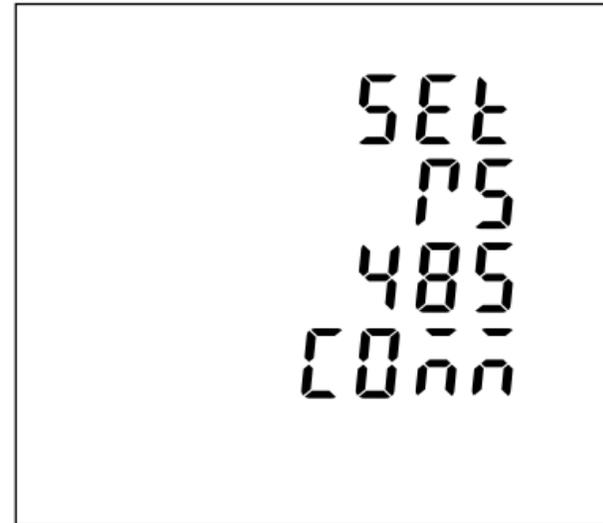




## 03 – DEVICE SETUP (Com setup)

### Access to Communication Setup

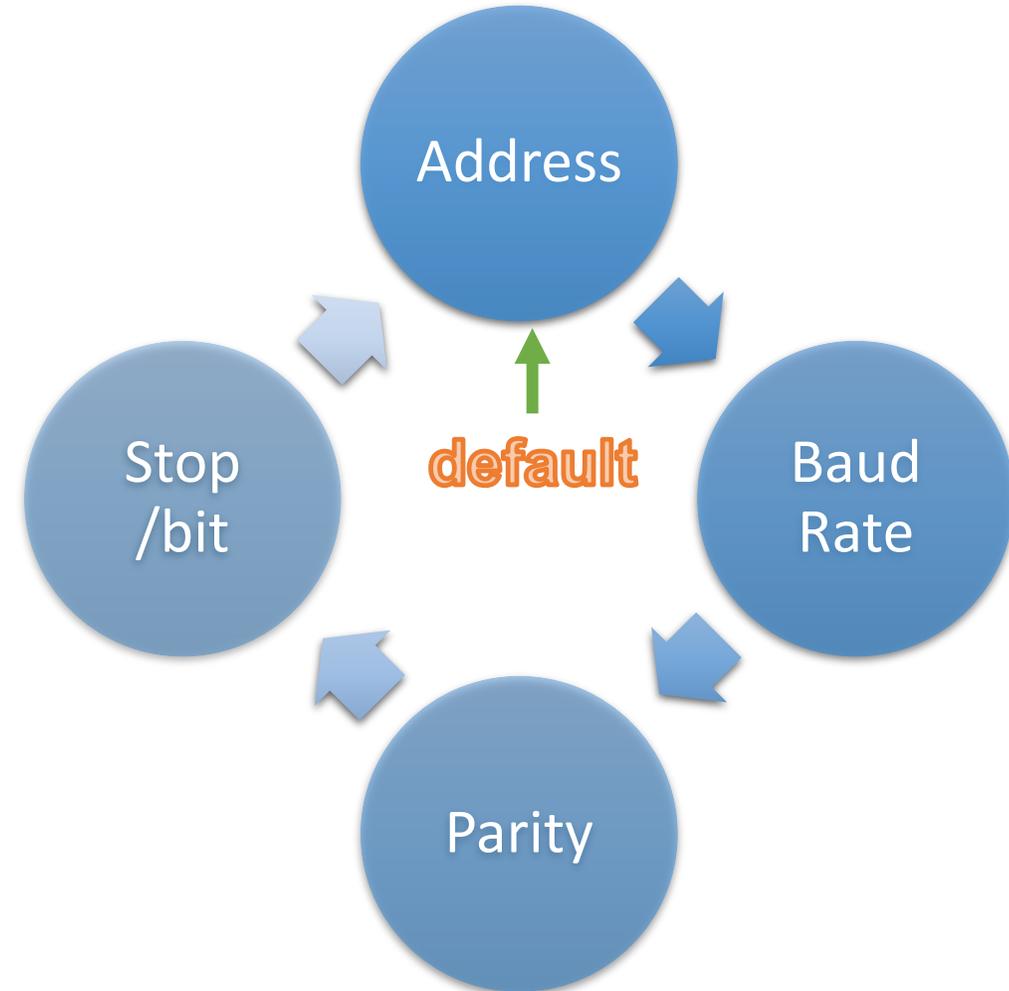
- Once Password is entered, **communication** will be the default page
- Press  for 5 seconds to enter the particular settings page for further configuration
- Press  to scroll down to other settings





## 03 – DEVICE SETUP (Com setup)

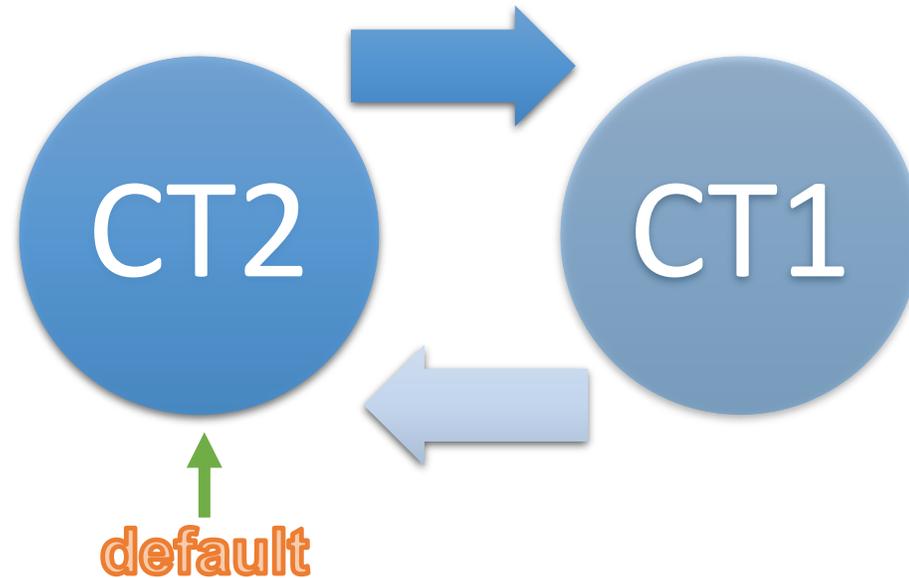
- Graphic depicts the categories available inside communication setting, in sequence.
- Press  for 5 seconds to change setting
- Press  for 5 seconds to confirm changes
- Press  to return





## 03 – DEVICE SETUP (CT ratio setup)

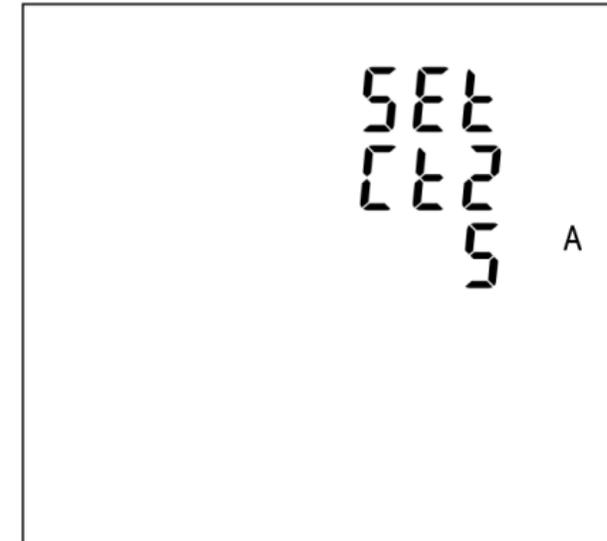
- Current Transformer (CT)
  - Graphic depicts the categories available inside communication setting, in sequence.
  - Press  for 5 seconds to change setting
  - Press  for 5 seconds to confirm changes
  - Press  to return





## 03 – DEVICE SETUP (CT ratio setup)

- CT2 secondary current input
- Options: 5A or 1A
- Default CT2: 5A



Press  5 sec to enter setting. Press  for 2 sec to modify

Use   to change settings. Press  for 5 sec to confirm.



# 03 – DEVICE SETUP (CT setup)

- CT1 primary current input
- Options: 1~9999
- Default CT1: 5A

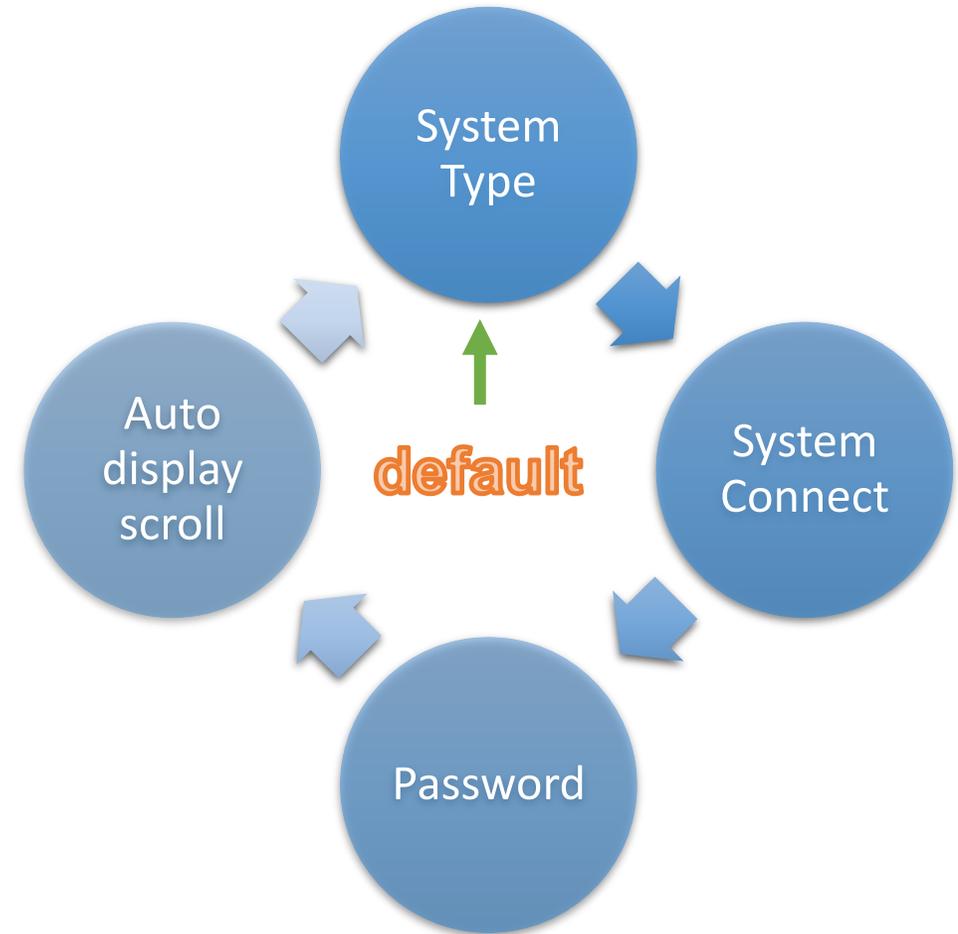


Press  for 5 sec to enter setting. Press  for 2 sec to modify  
Use   change settings. Press  for 5 sec to confirm.



## 03 – DEVICE SETUP (SYSTEM setup)

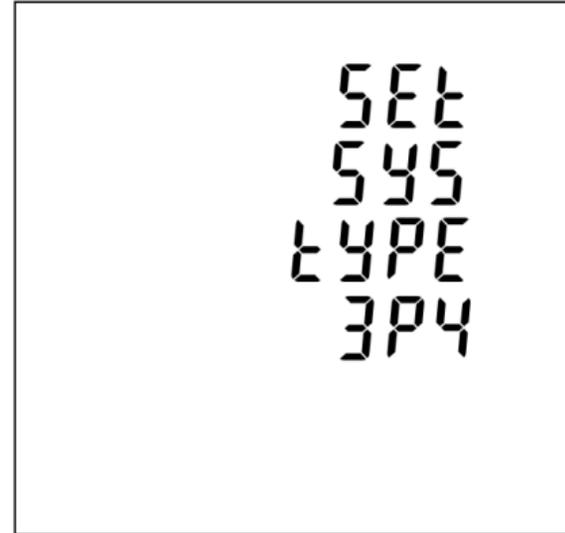
- Graphic depicts the categories available inside system configuration setting, in sequence.
- Press  for 5 seconds to change setting
- Press  for 5 seconds to confirm changes
- Press  to return





## 03 – DEVICE SETUP (SYSTEM setup)

- Options:
  - 3P4W (3P4)
  - 3P3W (3P3)
  - 1P2W (1P2)
- Default: 3P4W



Press  for 5 sec to enter setting. Press  for 2 sec to modify  
Use   change settings. Press  for 5 sec to confirm.



# 05 – FREQUENCY ASK QUESTIONS

## 05 – FREQUENCY ASK QUESTIONS

### GPM96-MID





## 05 – FREQUENCY ASK QUESTIONS

**1) Does GPM96-PK3 required external power supply?**

Yes, it can be power up with aux voltage AC 85 ~ 275Vac /DC 120 ~ 380Vdc.

**2) How many CTs required for GPM96-PK3 for 3 phase 4 wires or 3 phase 3 wires application?**

3 CTs required and the neutral current will be automatically calculated by the power meter

**3) What is the accuracy of GPM96-MID meter**

It comply with IEC62053-22 Cl 0.5S

**4) Is GPM96-PK3 meter come with memory for data logging?**

No, the power meter only come with memory for recording accumulated energy and maximum demand.

Data logging function is not available on GPM96-PK3

**5) What is the sampling rate of GPM96-MID ?**

The sampling rate of power meter is 128 sample/cycle which equivalent to 6.4kHz

**6) How many GPM96-MID can be daisy chain in 1 looping?**

Theoretically is 32nos but recommend to be <20nos.



## 05 – FREQUENCY ASK QUESTIONS

**7) What is the maximum length RS485 communication cables for GPM96-PK3?**

Theoretically is 1200 meters.

**8) Why BMS / PMS cannot read power meter reading?**

Recommend to use Modscan software to connect to the power meter and read the data directly to confirm the connection and meter functionality

<https://www.youtube.com/watch?v=STBX1Nc2I0s>

**9) Can I replace the power meter without shutdown the load?**

It is possible but please do take note that voltage signal's fuses need to be pull out and CT secondary signals need to be short link. Whenever possible, we still recommend to replace the meter with system shutdown.

# THANK YOU

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