PRIMUS

C E

| 1Ø | V | A | kW | kWh | Water Pulse | LoRa |

TECHNICAL SPECIFICATION

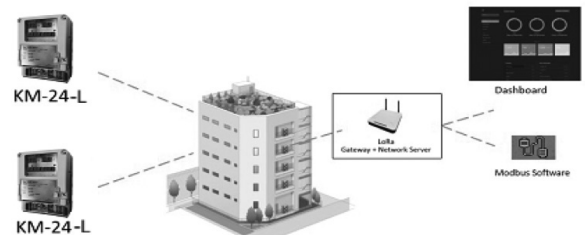| Power Supply		110-240VAC 50-60Hz
Power Consumption		2.5VA
Display		4 LED, 7-Segment size 0.39 inch
Input	Volt	1 Phase
	Volt Range	110-240 VAC
	Accuracy Volt	±0.5% FS.
	Current	0.02-45 A
	Accuracy Current	±0.5% FS.
	kW	±0.5% FS.
	kWh	Class 1
	Counter Input	PNP, NPN, Dry Contact Max 300 Hz
Output		3200 Impulse/kWh
LoRa Communication	Frequency	923-925 MHz
	Transmit Power	+20dBm (E.I.R.P.)
	Spreading factor	7 - 12
	Sensitivity	Up to -137dBm
	Antenna	Internal Antenna
Ambient Operation	Temperature	-10 ˚C to 60 ˚C
	Humidity	85 % RH Non-Condensing
Ambient Storage	Temperature	-20 ˚C to 80 ˚C
	Humidity	85 % RH Non-Condensing
Protection Degree		IP30
Installation		Wall Mount
Material		ABS
Size		160 x 111 x 72± 0.5 mm.
Weigth		400 g.

DESCRIPTION

- KM-24-L is the power meter 1 phase wireless LoRaWAN. It can transmit data to 500 m. for indoor area and 1000 m. for outdoor area.

- Able to install wireless meter over 1000 device per 1 Gateway system.

- Able to measure voltage (V), current (A), Power (kWh) and display water usage results in cubic meter (m^3) from Pulse of Water Meter.

- Input for receiving Pulse from Water Meter to send the water usage data in cubic meter (m^3).

- Measured electrical value with True RMS high precision.

- Voltage range 110-240 VAC.

- Current range 0.02 - 45 A.

- Display 7-Segment LED.

- Wireless communication by LoRaWAN.
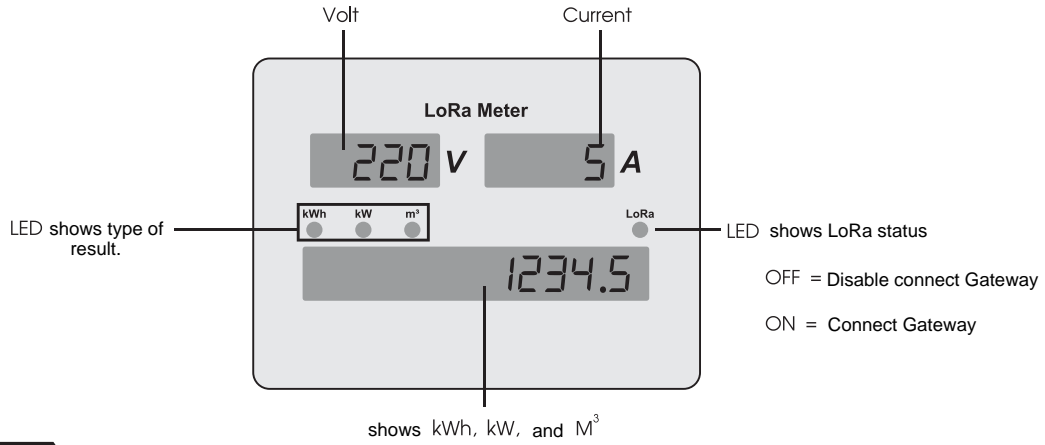
OPERATION

KM-24-L is Meter connect direct to electrical system 1 phase. It can use with current maximum 45 A. This device can measure and display value V, A, kWh and water usage volume in cubic meter (m^3) unit by receiving Pulse from Water Meter.

It can send power usage data in kWh unit and water usage volume in cubice meter(m^3) unit by wireless communication for distant 100-500 m. indoor and 1,000 m. to LoraWAN Gateway 4 times per hour every 15 minute to Computer display on Dashboard and has Prisoft support for saving data and analyze. It can connect to meter 1,000 devices per 1 Gateway system convince to connect online system all the time. Decrease labor, increase more accurate to note saving cost.
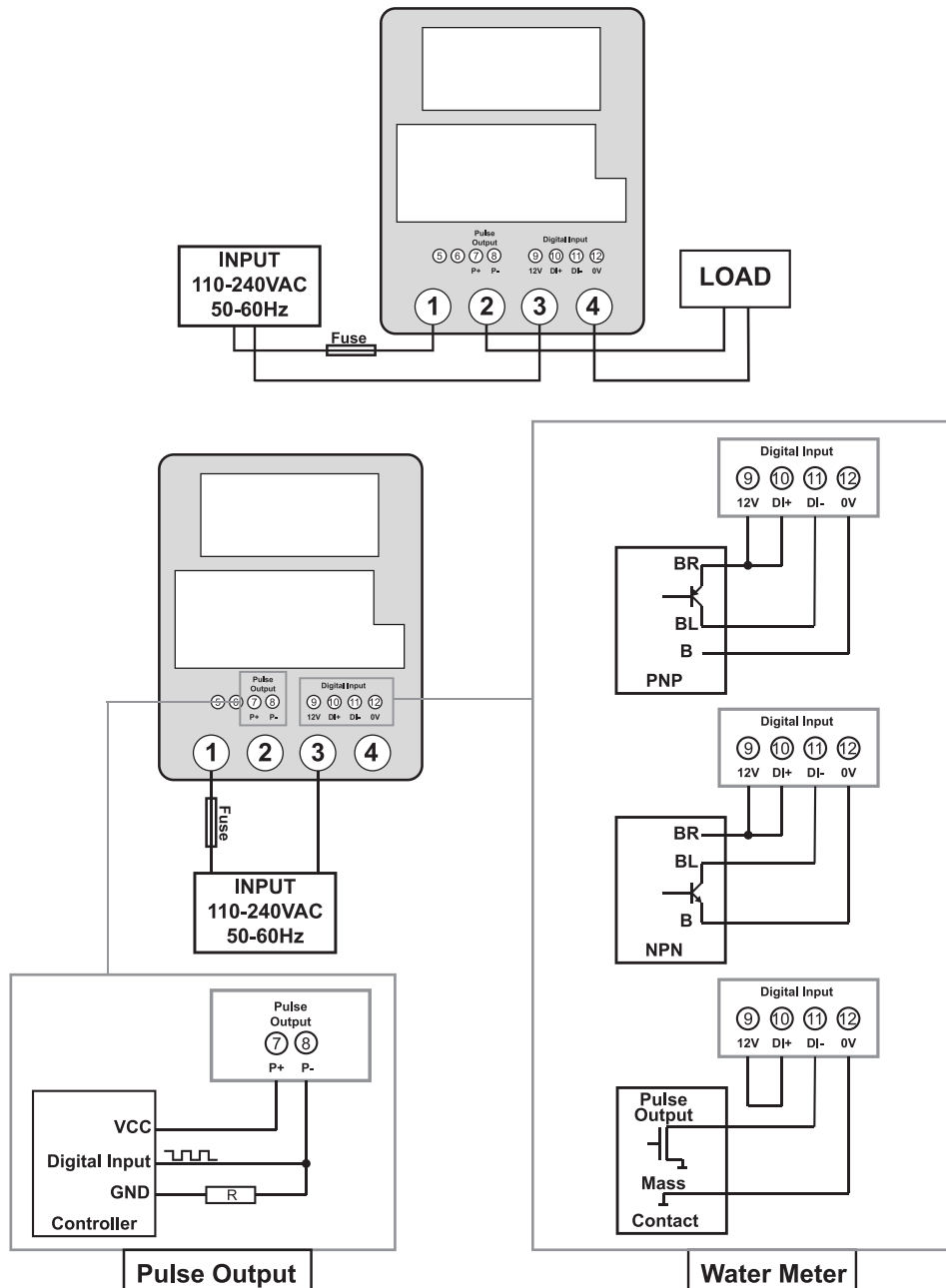

Application example. Install KM-24-L at Condominium measure electrical energy then send to gateway and display via Dashboard for convince to check power or water usage no need to look at meter.
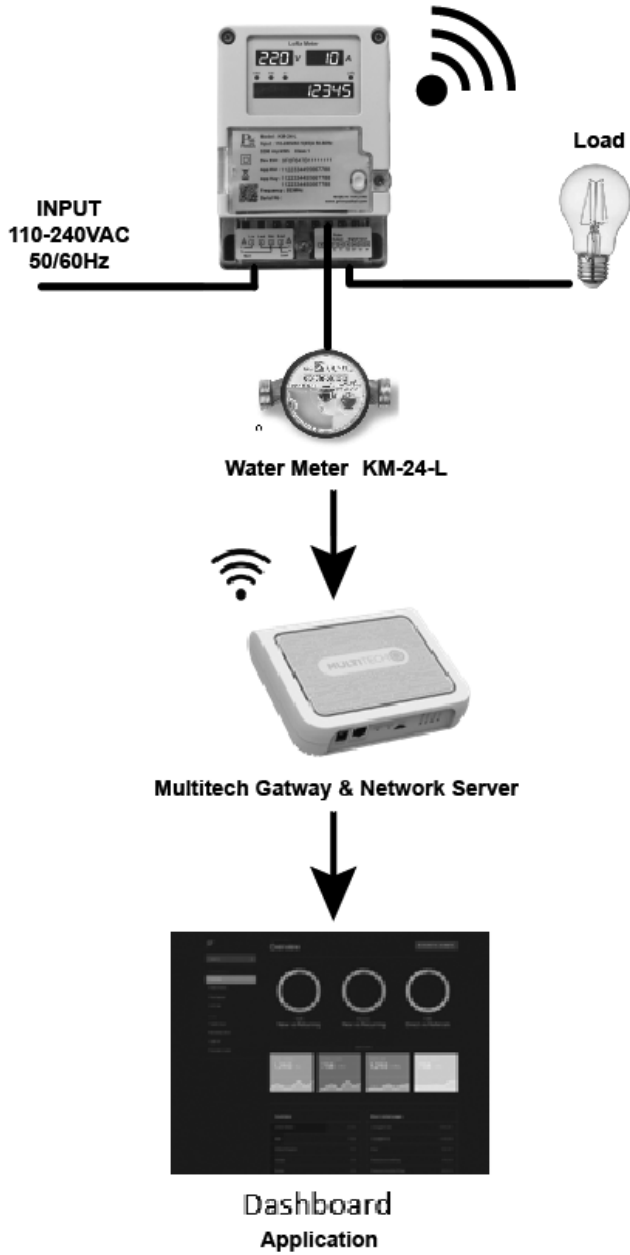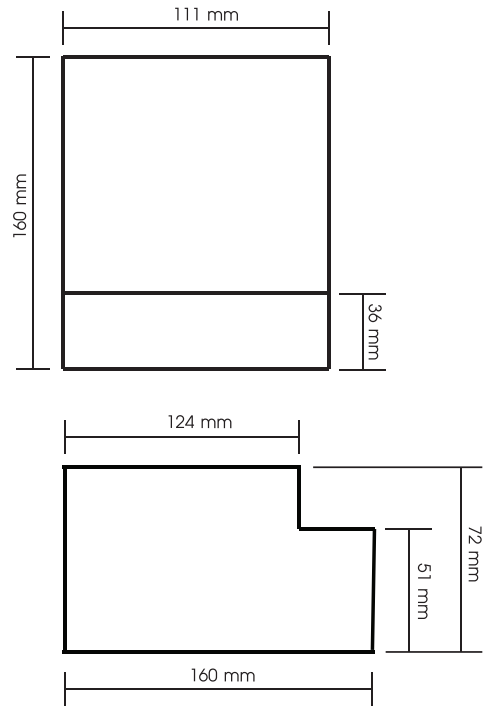
DISPLAY

Volt   Current

LoRa Meter

$220\,V$ $5\,A$

kWh   kW   m³   LoRa

LED shows type of result.

LED shows LoRa status

OFF = Disable connect Gateway

ON = Connect Gateway

1234.5

shows kWh, kW, and M³

WIRING DIAGRAM

Pulse Output   Digital Input
⑤ ⑥ ⑦ ⑧   ⑨ ⑩ ⑪ ⑫
P+ P-   12V DI+ DI- 0V

① ② ③ ④

**INPUT
110-240VAC
50-60Hz**

Fuse

LOAD

Digital Input
⑨ ⑩ ⑪ ⑫
12V DI+ DI- 0V

BR
BL
B
PNP

Digital Input
⑨ ⑩ ⑪ ⑫
12V DI+ DI- 0V

BR
BL
B
NPN

Pulse Output   Digital Input
⑤ ⑥ ⑦ ⑧   ⑨ ⑩ ⑪ ⑫
P+ P-   12V DI+ DI- 0V

① ② ③ ④

Fuse

**INPUT
110-240VAC
50-60Hz**

Pulse Output
⑦ ⑧
P+ P-

VCC
Digital Input
GND
Controller
R

Pulse Output

Digital Input
⑨ ⑩ ⑪ ⑫
12V DI+ DI- 0V

Pulse
Output

Mass

Contact

Water Meter

PRIMUS

DATA FLOW ARCHITECTURE

INPUT
110-240VAC
50/60Hz

Load

Water Meter   KM-24-L

Multitech Gatway & Network Server

Dashboard
Application

DIMENSION

111 mm

160 mm

36 mm

124 mm

72 mm

51 mm

160 mm

ORDERING CODE

KM-24 - [L]