

Description

- Three Phase Volt-Hertz Meter : KM-12-V is an instrument for measuring voltage, displaying values of all three phases R, S, T simultaneously.
- Voltage measuring range: 8-500 VAC.
- Can be connected with a Potential Transformer (PT) up to 40,000/100 or 110 V.
- Frequency measuring range: 45-65 Hz.
- True RMS measurement for high accuracy.
- Supports communication with a computer via RS-485 Modbus RTU Protocol.
- Equipped with LED indicators for operating status and electrical units
- Peak Hold function to view the maximum voltage in the system
- Display: 7-Segment, 4 digits, 0.56 inch, 3 rows

Specification

Power Supply		230VAC $\pm 15\%$ 50-60Hz
		115VAC $\pm 15\%$ 50-60Hz
Power Consumption		2.5VA
Display		7-Segment, Size 0.56 Inch, 4 Digit, 3 Rows
Input	Voltage	3 Phase
	Phase Voltage (V_{Full})	8-500VAC
	Potential Transformer Ratio	0.1-400.0
	Primary Voltage	40000V
	Secondary Voltage	8-500V
	Accuracy Volt	$\pm 1.0\%$ FS
	Accuracy Frequency	45-65 Hz $\pm 0.1\%$ FS
Communi- cation	Protocol	Modbus RTU
	Baud Rate	1200, 2400, 4800, 9600, 19200, 38400, 57600 bps
	Parity	None, Even, Odd
	Stop Bits	1, 2
	Data Bits	8 Bits
	Support Device Node	128
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	Front Protection Rating	IP52
	Case Protection Rating	IP30
Installation		Panel Mounting
Material		ABS-V0
Size (mm.)		96 x 96 x 76.6
Weight (kg.)		465

Operation

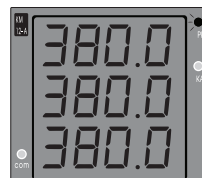
KM-12-V has 4 display pages: it displays Phase Voltage, Line Voltage, and Frequency (Hz) measured simultaneously for all three phases at the current moment, as well as Peak Volt Avg. The Peak Volt value is calculated as an average over a 15-minute period. Pressing the up arrow button displays the present voltage values, while pressing the down arrow button displays the Peak Volt Avg. On the Peak Volt display page, the Peak LED will blink during display. The meter can also transmit data via RS-485 Modbus RTU Protocol for logging and recording on a computer.

Volt Phase-Neutral (Key $\uparrow$)



Shows Volt Phase-Neutral 1,2,3

Volt Line to Line (Key $\uparrow$)



Shows Volt Line to Line
Phase1 to Phase2 , Phase2 to Phase3
Phase3 to Phase1

Hz (Key $\uparrow$)



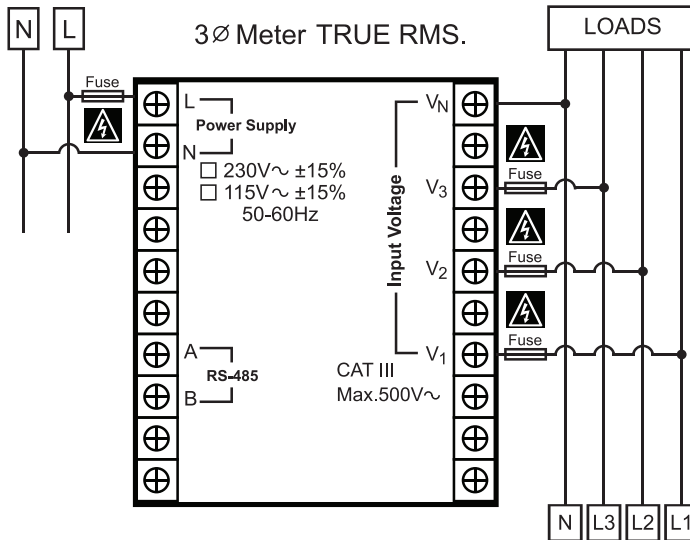
Shows Hz

Peak (Key $\uparrow$)



Shows Peak Volt

Wiring Diagram

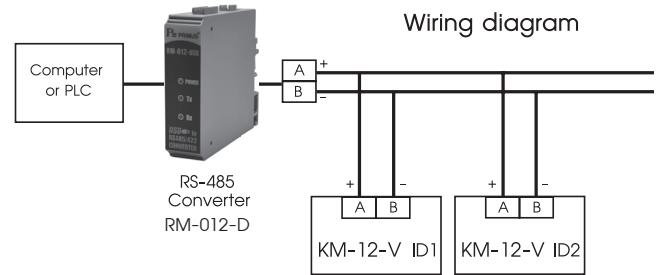


• Make sure the correct wiring connection before turning on electricity. Mis-wiring may cause malfunction of the unit and fire.
• Never modify the unit to prevent damage or incident such as malfunction and fire etc.

SERIAL COMMUNICATIONS

KM-12-V can read various measured parameter values in real time via the RS-485 BUS system, using the MODBUS RTU mode as the communication protocol.

The command set that can be used with the meter is as follows:



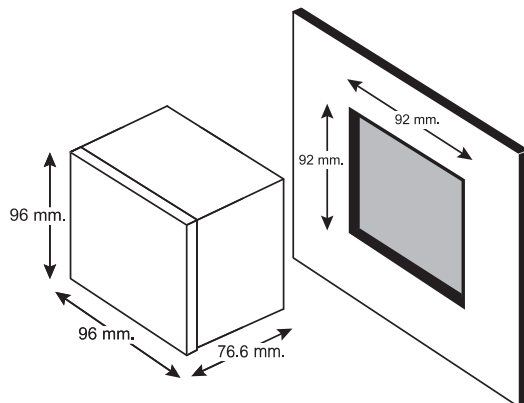
0x03 : Read Holding register

0x06 : Preset Single register

0x04 : Read Input register

0x10 : Preset multi register

Dimension



Ordering Code

Option		Power Supply	
KM-12-V-			
Option		Power Supply	
M	RS-485	NONE	230VAC
		115	115VAC

Example: KM-12-V-M means measures voltage (Volt), includes RS-485 communication and uses a 230 VAC power supply.