



# MULTI FUNCTION METER PREMIUM POWER & ENERGY AVH 16-M1

## APPLICATIONS

Energy Management System

DG Set Panels

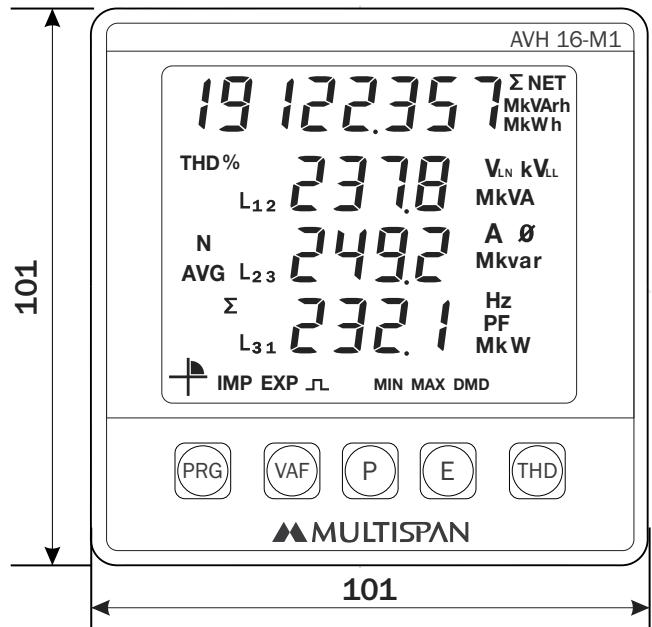
LT / HT Panel

Power Control Center Panels

Motor Control Center Panels

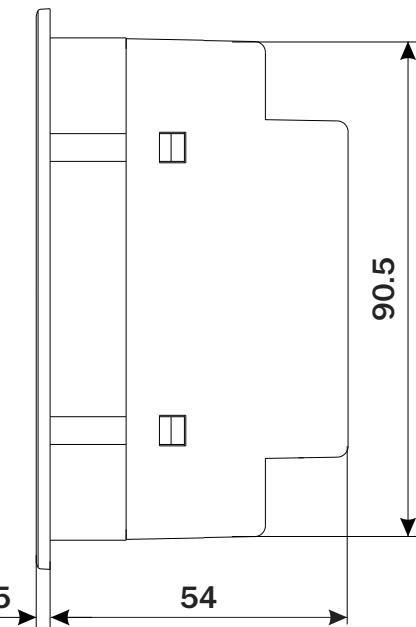
# Mechanical Dimensions

## Body Dimensions



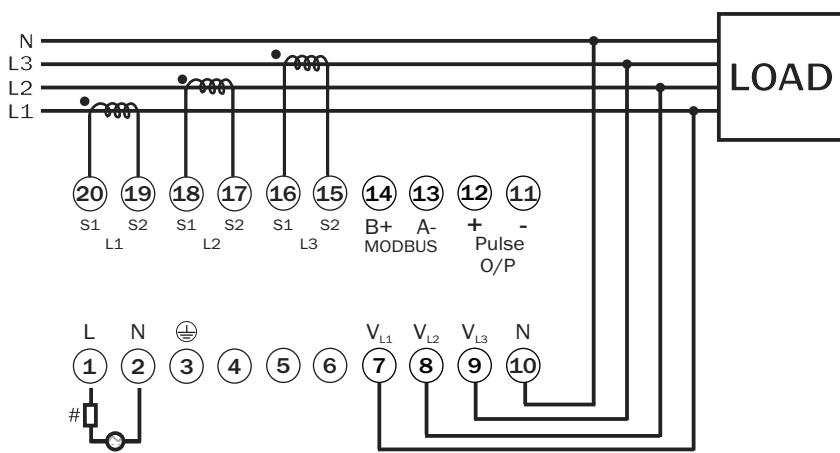
**FRONT VIEW**

All dimensions are in mm

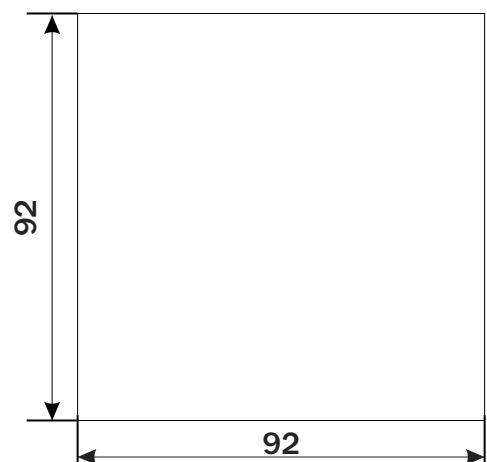


**RIGHT SIDE VIEW**

## Terminal Connection



## Panel Cutout



Proper conclusion about energy consumption and power quality can only be made through measurements that extend beyond the feed point. To locate disturbances or energy wasters, data must be recorded at multiple points in the network, the granularity (resolution) of the measurement is key. The new AVH series is an ideal solution for this task. It is suitable for measuring and controlling electrical variables, energy consumption as well as monitoring the power quality parameters, such as harmonics. It is used in energy distribution systems, for example, to record cost centres and monitor thresholds.

### **Harmonics Measurement**

- THD measurement For Voltage And Current, Up to 32 Harmonic.
- Individual Harmonics up to 32 order For Voltage.
- Individual Harmonics up to 32 order For Current.

### **Complete Energy Measurement**

- Import Active Energy.
- Export Active Energy.
- NET Active Energy.
- Total Active Energy.
- Total Apparent Energy.
- Import Reactive Energy.
- Export Reactive Energy.
- Lag & Lead Reactive Energy.
- Total Reactive Energy.

### **Demand Measurement**

- For Active Power.
- For Apparent Power.
- Display Of Minimum and Maximum Values.

Input		Output	
Direct Voltage	Voltage 20 To 300V AC ( L-N ) 35 TO 520V AC ( L-L )	Pulse Output	Voltage :- External 24V DC Current Capacity :- 25mA Pulse width - 50 to 500ms
Secondary Current AC	10mA to 5Amp AC	<b>Measurement Accuracy</b>	
Primary PT	100V to 520KV	Accuracy	Class 0.5
Secondary PT	100V to 520V	<b>Communication</b>	
Primary CT	Up to 9999A	Interface	RS-485
Secondary CT	By 5A/1A	Baud Rate	2400, 4800, 9600, 19200, 38400
Voltage THD%	Up to 32 Level	Parity	None, Odd, Even
Current THD%	Up to 32 Level	Protocol	Modbus - RTU
Sampling Rate	164 Sample / Cycle	Transmission Distance	500 Meter Maximum
<b>Meter type</b>		Communication address	1 to 125
1Φ2W / 3Φ 4W / 3Φ 3W ( Selectable )			

Display, Keys & LED			Environmental Characteristics	
Display	Upper	8 Digit 1 Line 7 seg 0.4"	Working Temperature	0 to 55 °C
	Lower	4 Digit 3 Line 7 seg 0.4"	Storage Temperature	0 to 55 °C
Key	PORG, VAF, P, E, & THD		Relative Humidity	95% RH Non-condensing
			Warm up time	5 minutes

Auxiliary power supply		Mechanical Characteristics	
Power Supply	100 to 270V AC/DC	Mounting Type	Panel Mount
Compliance for Isolation	Between Power Supply and all Inputs is tested at 2KV for 1 minute	Dimension (HxWxD) mm	101 x 101 x 54
		Panel Cutout (HxW) mm	92 x 92
		Material	Front Polycarbonate (PC) Enclosure ABS
		Terminal Screw Size	M3.5
		Screw Torque (N.m)	0.5
		Wire Guage (AWG)	26-14
		Weight (Approx) gms	Unpacked : 282 Packed : 337
		Accessories	1 Pair of Mounting Clamps

# Compliance

Applicable EMI / EMC Standards		
Standard : IEC 61326 - 1		
Category		Standards Compliance
Surge Immunity	IEC 61000 - 4 - 5	+ / - 2kV Common Mode, (Line to Ground) + / - 1kV Differential Mode, (Line to Line)
Power Frequency Magnetic Field Test	IEC 61000 - 4 - 8	Range:1 to 100 A/m
Conducted Susceptibility	IEC 61000 - 4 - 6	Level II (3V / m)
Voltage Dips and Interruptions	IEC 61000 - 4 - 11	<b>Dips</b> : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C) 70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C) <b>Interruptions</b> : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C)
Radiated Emission	CISPR - 11	
Electrical Fast Transient	IEC 61000 - 4 - 4	Level III (2kV)
Conducted Emission	CISPR - 11	

## Product Variant

Model	Voltage	Current	Supply
AVH-16-E3-NO	Network Selection : 3Ø3W/4W, 1Ø2W	CT Primary : Upto 9999A CT Secondary : 5A & 1A AC	
AVH-16-E3-N2	PT Primary : 100V to 520kV (Programmable)	CT Input : 60A with DIN 60AX CT	100 to 270V AC/DC
AVH-16-E3-N3	PT Secondary : 100V to 520 (L-L) (Programmable)	CT Input : 30A with DIN 30AX CT	
AVH-16-E3-N4		CT Input : 100A with DIN 100AX CT	
Note :	Modbus Available on request		