Frequency

Rectangular Style

- **Phenolic Case**
- **Glass Window**
- **Distinctive Case Style**
- **Six Different Models**
- **Three Popular Sizes: 2-1/2", 3-1/2", 4-1/2"**

Simpson's Rectangular frequency meters are ideal for monitoring line frequency. They are used wherever fast, precise monitoring of complex circuits is essential. Segmental scale frequency meters present a selected frequency range across the entire dial face in linear fashion. Where the significant frequency range on a conventional meter is squeezed into a quarter of an inch of space, Simpson Segmental meters distribute that range across the entire scale.

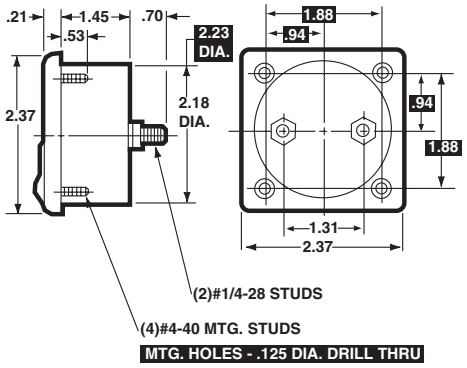
Simpson's Rectangular style offers a popular look with sharp, beveled edges and glass windows for easy viewing.

Model Number	Size	Meter Movement
187	2-1/2"	Self-Shielding
87	3-1/2"	Self-Shielding
89	4-1/2"	Self-Shielding

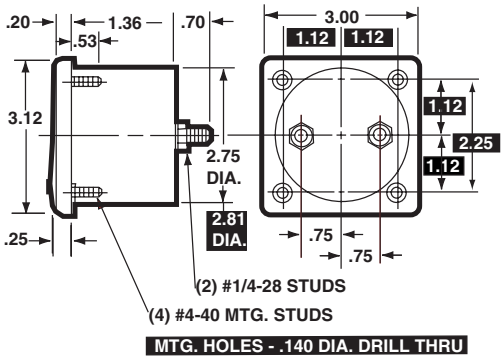
Dimensions and Compatibility

2-1/2"-Model 187

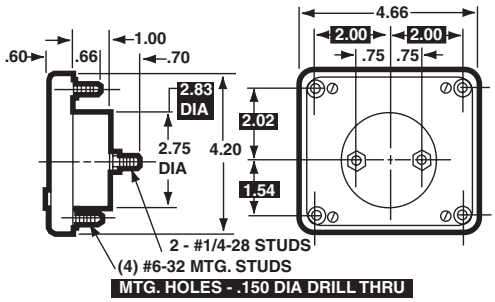
1 = Panel Meter Cut-out Dimensions



3-1/2"-Model 87



4-1/2"-Model 89



Specifications

Accuracy: 45-55Hz ±0.3Hz (120V-240V)
55-65Hz ±0.3Hz (120V-240V)

Movement: Small core magnet, self-shielding

Suspension: Pivot and Jewel

Shielding: Calibration is unaffected by magnetic panel mounting

Center Scale Value: 50/60/400Hz

Power Consumption: 1.6VA

Warm-up Time: 5 minutes

Max. Input Voltage (10 sec): 150, 120V normal
280, 240V normal

Dial: Sharp clear scale. Each dial arc is calibrated to track the specific type of movement used.

Case: High density black phenolic

Operating Temperature: -4ºF to +149ºF (-20ºC to +65ºC)

Pointer: Spade pointer, with black matte finish

Scale Length: Model 87: 3.9" (99.mm)
Model 89: 3.5" (89.0mm);
Model 187: 1.8" (45.7mm)

Net Weight: Model 87: 8oz (0.23kg)
Model 89: 11oz (0.31kg)
Model 87: 5oz (0.14kg)

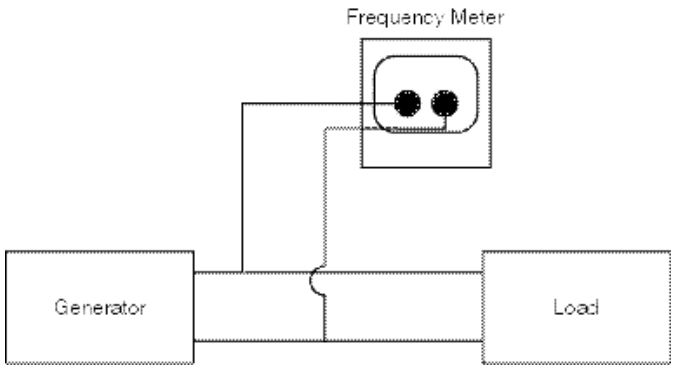
Ordering Information

Range	Operating Voltage	Center Frequency	Accuracy	Size/Model and Catalog number 2-1/2"	3-1/2"	4-1/2"
45-55	120V	50	3%	35136	35142	35148
55-65	120V	60	3%	35138	35144	35150
380-420	120V	400	3%	35140	35146	35152
45-55	240V	50	3%	35137	35143	35149
55-65	240v	60	3%	35139	35145	35151
380-420	240V	400	3%	35141	35147	35153

Wiring Diagram

There is a need to measure the frequency of the line voltage supplying power to a particular load. The normal operational frequency range of the load is 55-65 Hz. If the frequency level of a generator rises above 65Hz, the equipment will not function properly and could damage the equipment.

A Simpson frequency meter is used to monitor the frequency of the generator. The meter is installed in parallel between the source (line voltage) and the load (control panel) like a volt meter. In the event that the generator is functioning poorly, a backup generator is on standby.



Function Reference Table

For your convenience, the table below lists Rectangular style models for other electrical monitoring functions and page reference.

Function	Section	Page
AC Current	E	19
AC Voltage	E	39
DC Current	E	59
DC Voltage	E	79
Watts	E	111

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