

AC Current Probe Model JM861



The Model JM861 is a high performance AC current probe for higher currents. Excellent transformation and low phase shift, plus a broad frequency response, permit accurate measurements of current and power. The high quality magnetic core and uniform windings provide for accurate measurements up to 3000A_{AC}. The “squared” jaw permits multiple conductor or bus bar positioning. The Model JM861 provides excellent True RMS capabilities and reliable signal reproduction.

The Model JM861 is designed for oscilloscopes, waveform displaying instruments and other instruments able to benefit from its frequency response. The Model JM861 encompasses a special circuit and three ranges to maximize frequency response performance.

Features

- Oscilloscope current probe for applications in industrial and power environments
- Analyze, measure and accurately display distorted current waveforms and harmonics
- Nominal range: 30A, 300A, 3000A
- Output: 10mV/A_{AC}, 1mV/A_{AC}, 0.1mV/A_{AC}
- Large jaw window for use on cables and bus bars
- Direct BNC connection to scope

Applications

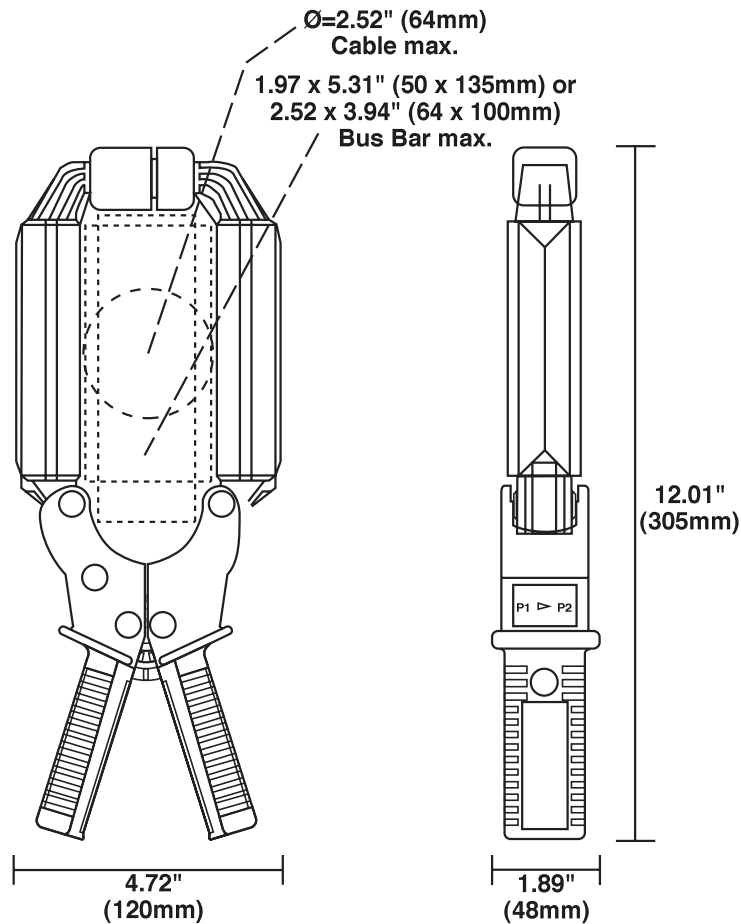
- Field testing
- Electrical utility
- HVAC
- Industrial maintenance
- Laboratory
- Plant maintenance
- Power quality

Specifications

MODELS	JM861
ELECTRICAL	
Nominal Range	30A, 300A, 3000A
Measurement Range	90A, 900A, 9000A Peak
Transformation Ratio	Voltage output
Output Signal	10mVAC/AAC (0.3V @ 30A) 1mVAC/AAC (0.3V @ 300A) 0.1mVAC/AAC (0.3V @ 3000A)
Accuracy (30A Range)	
1.5A	2% of Reading $\pm$ 1mV
6A	2% of Reading $\pm$ 1mV
30A	2% of Reading $\pm$ 1mV
Phase Shift (30A Range)	
1.5A	20°
6A	10°
30A	5°
Accuracy (300A Range)	
15A	2% of Reading $\pm$ 0.5mV
60A	2% of Reading $\pm$ 0.5mV
300A	2% of Reading $\pm$ 0.5mV
Phase Shift (300 A Range)	
15A	3°
60A	1.5°
300A	1°
Accuracy (3000A Range)	
150A	2% of Reading $\pm$ 0.2mV
600A	2% of Reading $\pm$ 0.2mV
3000A	2% of Reading $\pm$ 0.2mV
Phase Shift (3000A Range)	
150A	3°
600A	1.5°
3000A	1°
Overload	—
Frequency Range	10 to 50kHz; current derating above 5kHz for continuous use
Load Impedance	1M Ω , 47pF
Working/Common Mode Voltage	600VAC
Output Termination	6.5 ft coaxial cable
MECHANICAL	
Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	-13° to 176°F (-25° to 80°C)
Jaw Opening	3.54" (90mm)
Maximum Conductor Size	Cable: 2.52" $\varnothing$ max (64mm); Bus bar: 1.97 x 5.31" (50 x 135mm); 2.52 x 3.94" (64 x 100mm)
Dimensions	4.72 x 12.40 x 1.89" (120 x 315 x 48mm)
Weight	2.65 lbs (1200g)
Polycarbonate Material	Handles: 10% fiberglass charged polycarbonate UL94 VO; Jaws: ABS UL V2
SAFETY	
Electrical	EN61010-2-32
Electromagnetic Compatibility	EN 50081-1 Class B; EN 50082-2 Electrostatic discharge IEC 1000-4-2; Radiated field IEC 1000-4-3; Fast transients IEC 1000-4-4; Magnetic field at 50/60Hz IEC 1000-4-4
Double Insulation ☐	Yes
CE Mark	Yes

Note: Reference conditions:

23°C $\pm$ 3°K, 20 to 85% RH, 48 to 65Hz, external magnetic field <40A/m, no DC component, no external current carrying conductor, test sample centered, load impedance $\geq$ 1n Ω , 47pF.



Lead with BNC:
Insulated 6.5 ft
(2m) coaxial cable
with insulated BNC
connector rated
600Vrms

ORDERING INFORMATION

CATALOG NO.

AC Current Probe Model JM861 (BNC – 10mV/A 90A Peak; 1mV/A – 900A Peak; 0.1mV/A – 9000A Peak) . . **Cat. #2110.90**

Includes a user manual

Accessories (Optional)

Banana/BNC Connector XF-SS (4mm banana plug) **Cat. #2111.32**



AC Current Probes Model JM861 (pdf) Rev. 03 10/05

