

## Clamp-On Harmonic Meter Model 721



The Model 721 combines the simplicity and familiarity of digital clamp-ons with today's critical information on power quality and harmonics.

Operation is simple and direct, with no menus, calculations or complex analyzer procedures. Simply select A or V on the rotary dial, connect and measure. The push of a button gives additional information. You can troubleshoot and measure power quality with the ease of using a digital clamp-on.

True RMS electronics and measurement techniques ensure correct, accurate readings on distorted waveforms. Use the Model 721 as a

comprehensive tool for troubleshooting as well as for daily measurements on distribution circuits supplying traditional and non-linear loads.

The Model 721 measures current and voltage in True RMS, and provides immediate readings of Total Harmonic Distortion (%THD), Distortion Factor (%DF), Crest Factor (CF) and Peak of distorted currents and complex voltages. It also gives Min, Max, Max Peak and Average measurement values for recording over 24 hours to monitor daily fluctuations. Frequency (Hz) may be measured through the current or voltage at any time. An analog output function enables the user to display current waveforms on

any oscilloscope or hand-held scope while measuring, or even use the output for loggers and recorders.

The Model 721 is built of GE Lexan®. In addition to its ruggedness and high design standards, it meets or exceeds UL®1244 safety standards, as well as EN 61010-1, Category III for 800V ratings. The Model 721 is compact, comfortable to hold and easy to maneuver in crowded breaker panels, yet the hooked jaw design facilitates clamping and accommodates two 500 MCM conductors. The Model 721 includes leads, test probes, grip probes, insulated banana to BNC connector and hard carrying case.



## Features

- Designed for traditional and nonlinear loads
- Simple clamp-on operation with power quality features
- No menus, no calculations and no analyzing
- Accurate True RMS readings of amperes and volts
- Direct reading of %THD, %DF, CF, and Peak
- Recording mode for Min, Max, Avg, Max Peak
- Works with oscilloscopes as a harmonic and current transducer
- Rugged Lexan construction for professional daily use
- Built to UL, CSA, VDE, GS and EN 61010 safety standards

## Applications

- True RMS voltage and current values on any circuit
- Identify harmonic distortion patterns and sources of voltage harmonics
- Identify dominant load types in circuits
- Identify linear and nonlinear loads
- Locate sources of harmonic current
- Derating transformers
- Track down overloaded or unbalanced circuits
- Reduce system overloads
- Measure output frequency of adjustable speed drive controllers

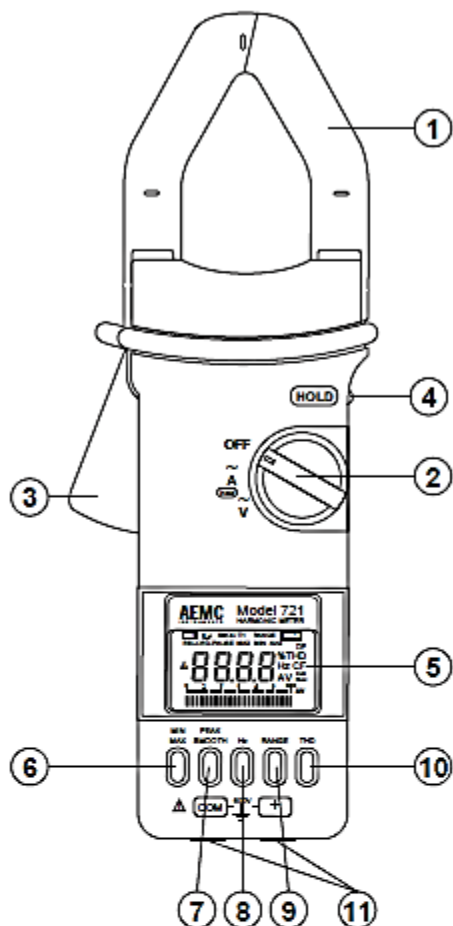


Model 721 Hard Carrying Case

## Specifications

ELECTRICAL	
<b>AC CURRENT (TRMS)</b>	
Input Range	0.05 to 700.0Arms 0.05 to ±999.9A peak
Accuracy (45 to 65Hz, sine wave)	0.3 to 99.99A: 2% of Reading ± 20cts 100.0 to 400.0A: 2% of Reading 400.0 to 700.0A: 5% of Reading
Crest Factor	>3.0 below 300A
Frequency Range	15Hz to 10kHz
<b>AC VOLTAGE (TRUE RMS)</b>	
Input Range	0.05 to 600Vrms 0.05 to ±1200V peak
Accuracy (45 to 65Hz, sine wave)	0.5 to 400.0V: 1.5% of Reading ± 4cts 400.0 to 999.9V: 1.5% of Reading
Crest Factor	>4.0 below 300V
Input Impedance	1MΩ, 47pF
Frequency Range	15Hz to 10kHz
<b>TOTAL HARMONIC DISTORTION (%THD)</b>	
Range	0.5% to 600.0%, 25th order
Resolution	0.1%
Minimum Input	300mA, 300mV
Accuracy	0 to 100%: 10% of Reading ± 5cts; 100 to 200%: 15% of Reading
Frequency Range	Fundamental 45 to 65Hz, 25th harmonic
Display	Digital: %THD; Bargraph: True RMS (A or V)
<b>DISTORTION FACTOR (%DF)</b>	
Range	0.5% to 100%
Resolution	0.1%
Minimum Input	300mA, 300mV
Accuracy	0 to 100%: 10% of Reading ± 5cts
Frequency Range	Fundamental 45 to 65Hz, 25th harmonic
Display	Digital: %DF; Bargraph: True RMS (A or V)
<b>CREST FACTOR (CF)</b>	
Range	1.00 to 10.00
Resolution	0.01
Minimum Input	300mA, 300mV
Accuracy	±10% of Reading ± 3cts (40 to 450Hz)
Frequency	15Hz to 10kHz
Display	Digital: CF; Bargraph: True RMS (A or V)
<b>FREQUENCY (HZ)</b>	
Range	0.5 to 9999Hz
Minimum Input	1A or 1V
Accuracy	0.5Hz to 999.9Hz: 0.1% of Reading ± 1ct; 1000Hz to 9999Hz: 0.2% of Reading ± 1ct
Display	Digital: Hz measurement; Bargraph: True RMS (A or V)
<b>ANALOG OUTPUT</b>	
Range	1mV/A (0.05 to 700 Arms), or 10mV/A (0.05 to 60 Arms)
Basic Accuracy	3%
Input	0.05A to 999.9A peak
Output Impedance	4Ω, 47pF
Display	Digital: all A and THD functions; Bargraph: Arms

## Construction



- |                            |  |
|----------------------------|--|
| 1. Jaw assembly            | 7. Peak/Smooth                                       |
| 2. Rotary selection switch | 8. Hz  |
| 3. Lever/Trigger           | 9. Range   |
| 4. Hold/Data Hold          | 10. THD  |
| 5. Display                 | 11. Voltage Jacks and Analog Output V <sub>out</sub> |
| 6. Min/Max                 |  |

### ORDERING INFORMATION

### CATALOG NO.

Clamp-On Harmonic Meter Model 721 (9999-count, TRMS, V, A, F, Hz, THD, CF) ..... Cat. #1208.52

Model 721 is supplied with a set of test leads, 9V battery, two test probes, two grip probes, insulated banana jack to BNC connector, hard carrying case and user manual

