



Analyze Power-related Issues

# FLIR CM82/ CM83/CM85

## True RMS Power Clamps

FLIR's CM82, CM83 and CM85 industrial-grade power clamp meters are engineered with advanced power analysis and variable frequency drive (VFD) filtering functions required by electrical troubleshooters. The CM83 and CM85 meters offer additional features including Bluetooth technology to connect compatible mobile devices for remote viewing and sharing, and METERLiNK technology, to wirelessly embed electrical readings into radiometric infrared images on compatible FLIR thermal cameras.

### Superior accuracy.

*Advanced power analysis and variable frequency drive filtering functions*

- VFD Mode provides superior accuracy for working on VFD-controlled equipment
- Advanced power efficiency and harmonics measurements for system level performance analysis
- True RMS voltage and current plus non-contact voltage detector

### Reliable performance.

*Dependable functionality vital to professionals*

- 2 meter drop tested with lifetime warranty
- Inrush mode captures fast AC Current spikes during appliance start-up
- Phase Rotation testing ensures the motor and power source are aligned

### Key for troubleshooting.

*Designed for convenience and ease of use*

- Powerful LED lamps assist with clamping and are bright enough to serve as a primary work light
- Remote viewing on smartphones and tablets via Bluetooth plus METERLiNK to wirelessly embed readings into thermal images on compatible FLIR cameras (CM83 and CM85 only)
- Large, easy-to-read digits, backlit display and analog bargraph

## Specifications

| Technical Summary         | CM82                               | CM83                               | CM85                                | Basic Accuracy |
|---------------------------|------------------------------------|------------------------------------|-------------------------------------|----------------|
| AC/DC Current             | 600A                               | 600A                               | 1000A                               | ±2%            |
| AC/DC Voltage             | 1000V                              | 1000V                              | 1000V                               | ±1% / 0.7%     |
| AC VFD Voltage            | 1000V                              | 1000V                              | 1000V                               | ±1%            |
| Harmonics                 | 1st-25th Order                     | 1st-25th Order                     | 1st-25th Order                      | ±5%            |
| Total Harmonic Distortion | 0.0 to 99.9%                       | 0.0 to 99.9%                       | 0.0 to 99.9%                        | ±3%            |
| Inrush Current            | 600ACA<br>(Integration Time 100ms) | 600ACA<br>(Integration Time 100ms) | 1000ACA<br>(Integration Time 100ms) | ±3%            |
| Active Power              | 10kW to 600kW<br>(10V, 5A min)     | 10kW to 600kW<br>(10V, 5A min)     | 10kW to 1000kW<br>(10V, 5A min)     | ±3%            |
| Diode Test                | 0.4 to 0.8V                        | 0.4 to 0.8V                        | 0.4 to 0.8V                         | ±0.1V          |
| Capacitance               | 3.999mF                            | 3.999mF                            | 3.999mF                             | ±1.9%          |
| Resistance                | 99.99kΩ                            | 99.99kΩ                            | 99.99kΩ                             | ±1%            |
| Continuity Threshold      | 30Ω                                | 30Ω                                | 30Ω                                 | ±1%            |
| Frequency                 | 20.00Hz to 9.999kHz                | 20.00Hz to 9.999kHz                | 20.00Hz to 9.999kHz                 | ±0.5%          |
| Bluetooth Range Max       | —                                  | 32ft (10m)                         | 32ft (10m)                          | —              |
| Jaw Opening               | 1.45in (37mm, 1000MCM)             | 1.45in (37mm, 1000MCM)             | 1.77in (45mm, 1500MCM)              | —              |
| Category Rating           | CAT IV-600V, CAT III-1000V         |                                    |                                     |                |
| Battery Type              | 6 x AAA                            |                                    |                                     |                |
| Warranty                  | Limited Lifetime*                  |                                    |                                     |                |

\* When registered within 60 days of purchase.

## Ordering Information

CM82 ..... 600A True RMS AC/DC Power Clamp with VFD Mode  
 CM82-NIST ..... CM82 with Certificate of Traceability to NIST  
 CM83 ..... 600A True RMS AC/DC Power Clamp with VFD Mode and METERLiNK™  
 CM83-NIST ..... CM83 with Certificate of Traceability to NIST  
 CM85 ..... 1000A True RMS AC/DC Power Clamp with VFD Mode and METERLiNK™  
 CM85-NIST ..... CM85 with Certificate of Traceability to NIST

## Accessories

TA11.....Protective Case for CM8x and CM7x Series  
 TA55.....AC Current Line Splitter  
 TA70.....CAT IV Insulated Alligator Clips  
 TA80.....CAT IV Silicone Test Leads



Premium silicone test leads included



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