FLIR CM85–2: 1000 Amp Power Clamp Meter with VFD Mode and METERLiNK™

P/N: CM85-2

Document identity

Publ. No.: CM85-2
Commit: 93336
Language: en-US
Modified: 2023-09-19
Formatted: 2023-09-19

Website

http://www.flir.com

Customer support

http://support.flir.com

Part Number	CM85–2
Part Name	1000 Amp Power Clamp Meter with VFD Mode and METERLiNK™

The FLIR CM85-2 is an industrial-grade high-capacity power clamp meter with the advanced power analysis and VFD filtering functions desired by electrical troubleshooters. Its versatility is engineered to help you manage power analysis & VFD Troubleshooting for full scale equipment. The CM85-2 incorporates numerous features - VFD, Harmonics, Inrush Current and Phase Rotation – that are designed to enable users to accurately analyze voltage, current and frequency going into and out of complex machinery. The rugged CM85-2 also has an extremely bright dual LED worklight to illuminate work areas.

- 1,000 Amp clamp capacity for large electrical equipment
- VFD Mode provides superior accuracy for working on Variable Frequency Drive controlled equipment
- Advanced power efficiency and harmonics measurements for system level performance analysis
- Inrush mode captures fast AC Current spikes during appliance start-up
- Phase Rotation testing ensures the motor and power source are aligned
- True RMS DMM functionality features reliable performance and expansive ranges
- Powerful worklights are bright enough to serve as a primary worklight
- METERLiNK APP connects the FLIR CM85-2 to your compatible smartphone and tablet via Bluetooth, wirelessly obtaining and displaying electrical readings.
  See https://www.flir.com/instruments/new-flir-meterlink-app/

Measurement Ranges and Accuracy	
Voltage DC	99.99 V, ±(0.7% + 2 digits) 999.9 V, ±(0.7% + 2 digits)
Voltage AC	0.05–99.99 V, ±(1.0% + 5 digits) 999.9 V, 50–500 Hz
VFD, ACV	0.05–99.99 V, 50–60 Hz ± (1% + 5 digits) 999.9 V, 50–60 Hz ± (1% + 5 digits)
Current DC	99.99 A, ±(2% + 0.5 A) 999.9 A, ±(2% + 5 digits)*
Current AC	0.10–99.99 A, 50–60 Hz ± (2% + 5 digits)* 999.9 A, >60–400 Hz ± (2.5% + 5 digits)*

FLIR CM85–2: 1000 Amp Power Clamp Meter with VFD Mode and METERLiNK™

P/N: CM85-2

#CM85-2; r. 93336; en-US

Measurement Ranges and Accuracy	
VFD, ACA	0.10–99.99 A, 50–60 Hz ± (2% + 5 digits)* 999.9 A, 50–60 Hz ± (2% + 5 digits)*
Peak Hold ACV	140.0 V, ±(3.0% + 15 digits) 1400 V, ±(3.0% + 15 digits)
Peak Hold ACA	140.0 A, ±(3.5% + 15 digits) 1400 A, ±(3.5% + 15 digits)
Frequency	20.00–99.99 Hz, ±(0.5% + 3 digits) 20.0–999.9 Hz, ±(0.5% + 3 digits) 0.020–9.999 kHz, ±(0.5% + 3 digits)
Total harmonic distortion ACA/ACV	99.9%, ±(3.0% + 10 digits)
Harmonic distortion H01–H12	99.9%, ±(5% + 10 digits)
Harmonic distortion H13–H25	99.9%, ±(10% + 10 digits)
Inrush current ACA	99.99 A, ±(3% + 0.3 A) 999.9 A, ±(3% + 5 digits)*
Watts DC	9.999 kW (10 V, 5 A min), ±(3% + 0.05 kW) 99.99 kW (10 V, 5 A min), ±(3% + 0.5 kW) 999.9 kW (10 V, 5 A min), ±(3% + 10 digits)
Watts AC	9.999 kW (10 V, 5 A min), ±(3% + 10 digits) 99.99 kW (10 V, 5 A min), ±(3% + 10 digits) 999.9 kW (10 V, 5 A min), ±(3% + 10 digits)
Power factor	–1.00 to 0.00 to +1.00, ±3° ± 1 digit
Resistance	999.9 Ω, ±(1.0% + 5 digits) 9.999 kΩ, ±(1.0% + 3 digits) 99.99 kΩ, ±(1.0% + 3 digits)
Continuity	999.9 Ω, ±(1.0% + 5 digits)
Diode	0.40–0.80 V, ±0.1V
Capacitance	3.999 µF, ±(1.9% + 8 digits) 39.99 µF, ±(1.9% + 8 digits) 399.9 µF, ±(1.9% + 8 digits) 3.999 mF, ±(1.9% + 8 digits)
Measuring rate:	3 times per second

Meter Data	
Jaw Opening	45 mm (1.77 in.).
Bluetooth Range Max	10 m (32 ft.) maximum.
Category Rating	CAT IV-600 V, CAT III-1000 V
Data Recording	Available via the METERLiNK App
Warranty	Limited Lifetime Warranty https://www.flir.com/testwarranty
Calibration cycle:	Once per year

FLIR CM85–2: 1000 Amp Power Clamp Meter with VFD Mode and METERLiNK™

P/N: CM85-2

#CM85-2; r. 93336; en-US

Certifications	
Certifications	UL, CE, FCC, IC, UKCA
Complies with Safety Standards:	IEC 61010-1:2010, IEC 61010-2-032:2012, IEC 61010-2-033:2012
EMC	• FCC: ◦ 47 CFR Part 15 Subpart B • CE: ◦ EN IEC 61326-1:2021 ◦ EN IEC 61326-2-2:2021 ◦ EN 301 489-1 V2.2.3 (2019-11) ◦ EN 301 489-17 V3.2.4 (2020-09) • RF: ◦ ETSI EN 300 328 V2.2.2 ◦ EN 62479:2010 ◦ EN 50663:2017
Declaration of conformity	See: https://support.flir.com/resources/DoC

Power System	
Power requirements	6 × 1.5 V AAA alkaline batteries.
Battery life	50 hours with alkaline batteries (backlight, work light, and Bluetooth are off).
Auto power off	Approx. 30 minutes.
Battery documents	For documents like MSDS and UN38.3 test reports/summaries, see: https://support.flir.com/resources/msds

Environmental Data	
Operating ambient temperatures and relative humidity	0 to 10° C (32 to 50°F) (non-condensing) 10 to 30° C (50 to 86°F) (≤ 80% RH) 30 to 40° C (86 to 104°F) (≤ 75% RH) 40 to 50° C (104 to 122°F) (≤ 45%RH)
Storage temperature and relative humidity	–10 to 50° C (14 to 122°F). 0–80% RH (batteries not fitted)
Temperature coefficient	0.2 × (specified accuracy)/° C, <18° C, >28° C
Operating altitude	2000 m (6562 ft.)
Pollution degree	2
Shock vibration	Random vibration per MIL-PRF-28800f Class 2 (5–55 Hz, 3g maximum)

Meter Physical Data	
Weight	0.65 kg (1.43 lb.), including batteries
Dimensions (L × W × H)	275.5 mm × 100.63 mm × 50.09 mm (10.85 in. × 3.96 in. × 1.97 in.)
Material	Polycarbonate + acrylonitrile butadiene styrene (PC-ABS) Thermoplastic elastomer (TPE)
Color	Grey, Black

FLIR CM85–2: 1000 Amp Power Clamp Meter with VFD Mode and METERLiNK™

P/N: CM85-2

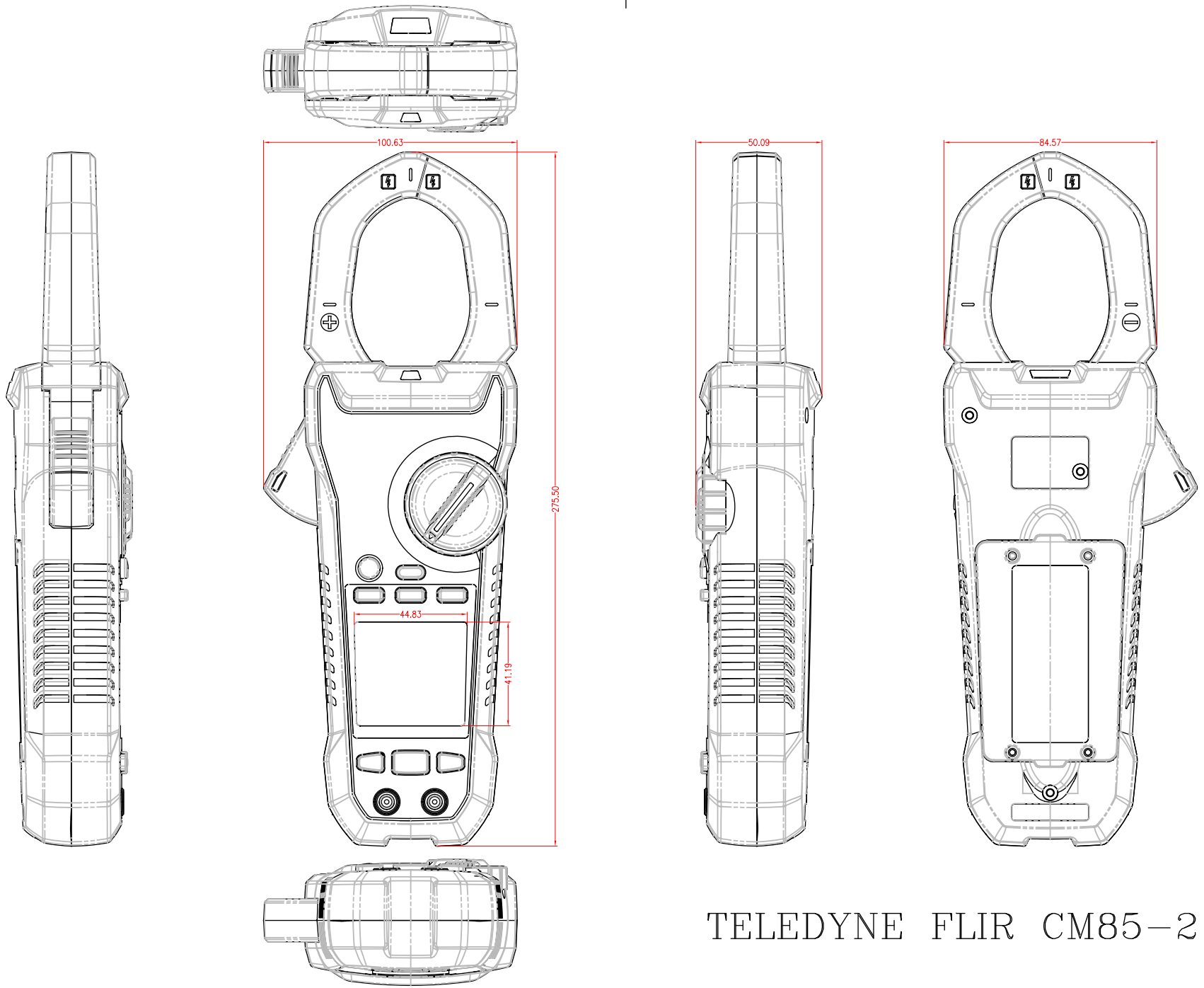
#CM85-2; r. 93336; en-US

Shipping Information	
Packaging, type	Gift box
Packaging, Contents:	• CM85–2 FLIR meter • Set of CAT IV silicon test leads • 6 × AAA Alkaline batteries • Quick Start Guide • Warranty card Multilingual Quick Start Guides and User Manual are available online.
Packaging weight	1.052 kg (2.32 lb.)
Packaging dimensions (L × W × H)	28.5 cm × 15 cm × 10.4 cm (9.4 in. × 4.95 in. × 3.4 in.)
EAN-13	0793950373859
UPC-12	793950373859
Country of Origin	Taiwan
Tariff Code / ECCN	9030310000 / 3A992.a

Technical support	
Website	http://support.flir.com

Supplies & accessories:

- TA11; Protective case for CM7x and CM8x Series
- TA15; Universal Soft Sided Case
- TA17; Pouch for FLIR Clamp Meters
- TA55; AC Current Line splitter
- TA70; CAT IV Insulated Alligator Probes
- TA80; CAT IV Silicone Test Leads



TELEDYNE FLIR CM85-2

A2

Scale 1:1

Page 1 OF 1