

# Professional High Performance TRMS Clamp-On Meter Models F1N & F3N

Direct Replacement  
for Fluke  
Models 31 & 33



CE

Models F1N and F3N clamps are AC current clamp-on meters designed to take measurements on low and medium power electrical installations in conductors carrying a peak current of no more than 1000A. The RMS current measurement range extends from 300mA to 400A. The clamp measures frequency from 0.5Hz to 10kHz.

The meters measure true RMS current, frequency (Hz) and HOLD the last measurement on the digital

display, the bargraph continues to display the instantaneous. Therefore frequency and current measurements can be made simultaneously.

These meters have automatic or manual selection of the display range (RANGE), an analog bargraph comprising 40-segments, battery test on the bargraph during operation of the instrument, battery level indicator and auto power off on the instrument after 10 minutes of non-use.

The Model F3N is different from Model F1N in that it has two additional functions: SMOOTH mode to display a smoothed True RMS current or frequency reading taken over three seconds; and PEAK mode which measures half-cycle current peaks.

Model F3N also has a RECORD function in addition to record the RMS value of a current, its frequency and SMOOTH value, as well as its MAX, MIN and AVG. The PEAK value and its MAX may also be recorded.

## Features

- True RMS AC Current measurements to 700A
- Frequency measurements to 10kHz
- Stores Min/Max and Avg for Current or Frequency for up to 24 hours (Model F3N)
- Fast Peak measurement (including a Max Peak) for Crest Factor in Harmonics (Model F3N)
- Smooth Function for three second running averages in Current and Frequency (Model F3N)
- Digital display with fast analog bargraph to show surge currents
- Display Current and Frequency simultaneously
- Auto and manual ranging modes
- Tapered jaws handle two 500MCM cables or one 1.5" (38mm) cable
- Audible beep confirms key functions and new Min/Max values
- Battery life indication displayed at power-up
- Sleep mode to conserve battery life
- EN 61010, 600V, Cat. III and agency approvals
- Supplied with soft protective carrying holster

## Applications

- Electrical testing of distorted currents found on uninterruptible power supplies (UPS), speed controls, static power blocks, chopped power supplies, controllers and motors

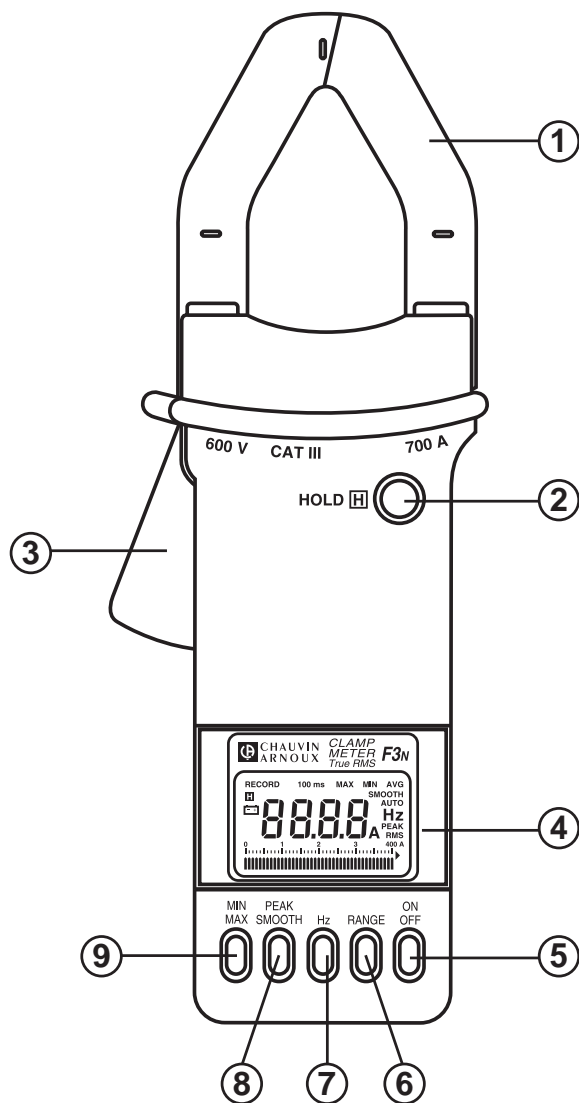


Model F3N measuring phase current on a 3 phase motor.

# Specifications

MODELS	F1N	F3N
<b>ELECTRICAL</b>		
<b>AC CURRENT (TRMS)</b>		
Measurement Range	0.3 to 400Arms (700A for sine wave)	0.3 to 400Arms (700A for sine wave)
Resolution 40A 400A	0.01A 0.1A	0.01A 0.1A
Accuracy	±2% of Reading ± 20cts; ±2% of Reading ± 2cts	±2% of Reading ± 20cts; ±2% of Reading ± 2cts
Smooth Function	–	3 sec running average
Min/Max & Avg	–	Records and displays min, max & average values
<b>PEAK MEASUREMENTS</b>		
Response	–	2ms
Range	–	99.9A, 1000A
Crest Factor	–	5 @ mid range
Resolution 40A 400A >400A	– – –	0.2A 2A 4A
Accuracy	–	±3% of Reading ± 3cts
<b>FREQUENCY</b>		
Range	0.5 to 10kHz	
Resolution	0.1Hz	
Accuracy	±0.2% of Reading ± 3cts	
<b>GENERAL</b>		
Digital Display	3½ digits LCD display, 4000-count for A, 10,000-count for Hz, (max. reading 9999)	
Analog Display	Fast 40-segment bargraph	
Power Source	9V Alkaline battery	
Jaw Opening	1.575" (40mm)	
Maximum Conductor Size	ø Cable: One 1.5" (38mm); Two 0.95" (24mm) or 2 x 500MCM Bus Bar: 1.96 x 0.19" (50 x 5mm)	
Dimensions	9.11 x 3.82 x 1.73" (232 x 97 x 44mm)	
Weight	1.1 lbs (550g)	
Operating Temperature	14° to 131°F (-10° to +55°C)	
Storage Temperature	40° to 158°F (-40° to 70°C)	
Humidity	40 to 75% RH	
Material	Case: Gray polycarbonate 920A, UL 94 V2; Jaws: Red polycarbonate 500R, 10% fiberglass, UL 94 V0 Lens: Crystal polycarbonate 920A, UL 94 VI	
<b>SAFETY</b>		
Agency Approvals	UL, CSA and GS	
Ratings	EN 61010, 600V, Cat. III	
CE Mark	Yes	

# Construction



- 1. Jaw assembly
- 2. Data Hold button
- 3. Lever for jaw opening/closing

- 4. LCD display with bargraph
- 5. On/Off button
- 6. Range button
- 7. Frequency (Hz)

- 8. Peak/Smooth button (Model F3N)
- 9. Min/Max button (Model F3N)



*Models F1N and F3N in soft protective carrying holster*

**ORDERING INFORMATION**

**CATALOG NO.**

**AC Clamp-On Meter Model F1N** (TRMS, 400A, Hz) . . . . . **Cat. #1207.01**

**AC Clamp-On Meter Model F3N** (TRMS, 400A, Hz, Peak, Smooth, Min/Max) . . . . . **Cat. #1207.03**

Includes soft protective carrying holster, 9V Alkaline battery and user manual

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