

ELECTRICAL SPECIFICATIONS

All Electrical Specifications are valid at the following reference conditions:

- Ambient temperature 23±3°C (73±3°F)
- Relative Humidity 20 to 75%
- Frequency 48 to 65 Hz
- Continuous external field < 40 A/m
- Load impedance
i200: 0.2Ω ... 15Ω
i200s: >1 MΩ // 100 pF
- The current may not contain any DC component
- No influence from adjacent currents
- The conductor must be centered within the jaw aperture

20A Range (i200s only)

Measuring range	0.1 to 24A
Maximum current	24A
Crest factor *	< 3
Maximum non-destructive current	200A (Frequency ≤ 1 kHz and crest factor < 3)
Output signal	100 mV/A
Output impedance	≤ 20 Ω @ 1 kHz
Basic accuracy	
48 Hz to 65 Hz	≤ 2% + 0.5A
Additional error:	
40 Hz to 48 Hz and 65 Hz to 1 kHz	+ < 10%
1 kHz to 10 kHz	+ < 15%
Phase shift	Unspecified

200A Range

	i200	i200s
Measuring range	0.5 to 240A	0.5 to 240A
Maximum current	240A	240A
Crest factor *	< 3	< 3
Maximum non-destructive current	@ Frequency ≤ 1 kHz and crest factor < 3	
Continuous	200A	
10 min ON / 30 min OFF	240A	
Output signal	1 mA/A	10 mV/A
Output impedance	-	≤ 10 Ω @ 1 kHz
Basic accuracy		
48 Hz to 65 Hz		
0.5A to 10A	≤ 3% + 0.5A	≤ 3.5% + 0.5A
10A to 40A	≤ 2.5% + 0.5A	≤ 3% + 0.5A
40A to 100A	≤ 2% + 0.5A	≤ 2.5% + 0.5A
100A to 240A	≤ 1% + 0.5A	≤ 1.5% + 0.5A
Additional error:		
40 Hz to 48 Hz and 65 Hz to 1 kHz	+ < 3%	+ < 3%
1 kHz to 10 kHz	+ < 12%	+ < 12%
Phase shift		
0.5A to 10A	Unspecified	Unspecified
10A to 40A	≤ 5 °	≤ 6 °
40A to 100A	≤ 3 °	≤ 4 °
100A to 240A	≤ 2.5 °	≤ 3 °

All ranges	i200	i200s
Load on output	0.2...15 Ω	>1 MΩ // < 100 pF
Load Influence	Current: < 1% Phase: < 1°	-
Bandwidth	-1.5 dB -3dB	40 Hz to 10 kHz 40 kHz
Additional errors		
With temperature		≤ 0.15 % / 10 K
With position of conductor in the clamp aperture		≤ 0.5 % @ 50 Hz
With adjacent conductors		≤ 15 mA / A @ 50 Hz

* This is the maximum permissible ratio between the peak value of a superimposed transient and the ac rms value.

GENERAL

Clamp Dimensions	135 x 50 x 30 mm (5.3 x 2 x 1.2 in)
Protection index	IP40
Jaw Opening	21 mm (0.82 in)
Height of open Jaws	69 mm (2.7 in)
Maximum conductor size	∅ 20 mm (0.8 in) or busbar 20 x 5 mm (0.8 x 0.2 in)
Weight	180 g (6.4 oz)
Cable length	i200 1.5 m (59 in) i200s 2m (79 in)
Temperature	
Operating	-10 to +55°C (+14 to +131°F)
Non-operating	-40 to + 70°C (-40 to +158°F)
Relative Humidity	
Operating	85%, up to +30°C (+86°F) 75%, up to +55°C (+131°F)
Altitude	
Operating	to 2000 m (6500 ft)
Non-operating	to 12000 m (40000 ft)
EMC	EN/IEC 50081-1 EN/IEC 50082-2 (3V/m, 2.74V/yd)

Instrument Compatibility

The i200s is compatible with any Fluke ScopeMeter test tool, Power Harmonics Analyzer, Oscilloscope, Multimeter, or other voltage measurement device that has the following features:

- BNC input connector. The Dual Banana to BNC Adapter included in the package, can be used to connect to standard inputs on multimeters. For the 120 series ScopeMeters, use the BB120 Shielded Banana to BNC Adapter.
- Input accuracy of 2% or better to take full advantage of the accuracy of the Current Clamp.
- Input impedance of greater than or equal to 1 MΩ, and for full bandwidth and accuracy, a maximum input capacity of 100 pF.
- A pass-band of more than four times the frequency of the waveform to be measured.

The i200 is compatible with any Fluke Multimeter or any other current measurement device that has the following features:

- Banana inputs.
- Input accuracy of 2% or better to take full advantage of the accuracy of the Current Clamp.
- Input impedance of 0.2Ω ... 15Ω
- A pass-band of more than four times the frequency of the waveform to be measured.