

# 106A SINGLE- AND THREE PHASE POWER ANALYZERS



FROM INFRATEK

## LOW COST, HIGH PERFORMANCE

- Suitable for frequency inverter drivers
- Large and bright display for up to 10 values
- Scope function, Trend Plots
- Harmonics 1-99, Bar Charts
- DC-300kHz, 15mA-40A, 0.3V-1000V
- 0.1 % accuracy

Infratek has developed two state of the art high performance power analyzers, single phase and three phase.

Unlike other instruments at this price level the 106A is designed to cope with the extreme signals generated on frequency inverter drivers. You don't have to worry about the signal wave forms. The analyzers will always provide precise and reliable measurements.

The large and very bright monitor lets you read the display values from a distance of up to 4m.

## SIMPLE TO USE

From checking power of your coffee machine to determining the pertinent power parameters of a frequency inverter driven system is a simple task. You have all values displayed. In large letters by the way, well readable, even in dark rooms.

The user menu makes operation easy. The measured values you can either print, send them to a PC via IEEE- or RS232 interface, or to a chart recorder via the analog outputs. You can have all available options installed in your instrument.

## EXTRAORDINARY FEATURES, ATTRACTIVE DISPLAY

Infratek has put much effort into the design of the 106A Power Analyzers to give you highest performance at low costs.

The analyzer inputs are all galvanically isolated, are broad band DC-300kHz, have a wide input range (0.3V-1000V, 15mA-40A), and have an exceptional common mode rejection for use in frequency inverter driven systems. The accuracy is 0.1 % (0.05 % versions are available). The bright LCD monitor displays up to 10 measured values in well legible 9mm high numbers. The Three Phase Power Analyzer puts up to 32 measured values on the screen.

You have the choice to visualize wave forms, bar graphs or trend plots. A unique feature of these instruments allows a combination of meter mode and graphic mode.


## DESIGNED TO LAST

Infratek is dedicated to power measurement and will continue to add features to the 106A. You can purchase these upgrades at modest costs through your local Infratek Distributor. The Power Analyzers are warranted one year and are supplied with a traceable calibration certificate.

For more information about the Infratek Power Analyzers, please contact your nearest Infratek distributor.



# SPECIFICATIONS

Voltage	Ranges, 8 ranges 1-3-10-sequence; 0.3V, 1V, 3V, 10V, 30V, 100V, 300V, 1000V.		
	Frequency range	DC, 0.1Hz-300kHz	
	Crest Factor	4:1 at 50 % full scale (fs)	
	Input Impedance	>1M $\Omega$	
	Common Mode	50Hz/100kHz	155dB/95dB
	Standard accuracy 23° $\pm$ 3°K; rms, mean, rectified mean; for 0.3, 1V range, input >50 % fs. 1Hz-1kHz $\pm$ (0.1 % rdg + 0.1 % range) DC, 1kHz-10kHz $\pm$ (0.2 % rdg + 0.2 % range) 10kHz-100kHz, $\pm$ (0.3 % range + 0.04 %/kHz rdg) * 100kHz-300kHz $\pm$ (0.3 % range + 0.04 %/kHz rdg), typical		improved accuracy $\pm$ (0.05 % rdg + 0.05 % range)  *0.3V range typical
Current	Ranges, 10 ranges 1-3-10-sequence; 15mA, 50mA, 150mA, 500mA, 1.5A, 5A; 1, 3, 10, 30, 100, 300A.		
	Frequency range	DC, 0.1Hz-300kHz	
	Crest Factor	4:1 at 50 % full scale (fs)	
	Common Mode	50Hz/100kHz	160dB/120dB
	Standard accuracy 23° $\pm$ 3°K 1Hz-1kHz $\pm$ (0.1 % rdg + 0.1 % range) DC, 1kHz-10kHz $\pm$ (0.2 % rdg + 0.2 % range) 10kHz-100kHz $\pm$ (0.3 % range + 0.04 %/kHz rdg) 100kHz-300kHz $\pm$ (0.3 % range + 0.04 %/kHz rdg), typical	5A-/Shunt input <sup>1</sup> $\pm$ (0.1 % rdg + 0.1 % range) 30A input <sup>1</sup> $\pm$ (0.1 % rdg + 0.1 % range) $\pm$ (0.2 % rdg + 0.2 % range) $\pm$ (0.3 % range + 0.04 %/kHz rdg) $\pm$ (0.3 % range + 0.5 %/kHz rdg)	improved accuracy 1Hz-400Hz $\pm$ (0.05 % rdg + 0.05 % range)  <sup>1</sup> For 2 lowest ranges, input >50 % fs
Power	80 ranges corresponding to the products V x A .		
	Frequency range	DC, 0.1Hz-300kHz	
	Accuracy 23° $\pm$ 3°K 1Hz-1kHz DC, 1kHz-10kHz 10kHz-100kHz	Add accuracy percentage figures of current and voltage input, and add 0.04 %/kHz of Vrms x Arms / PF	PF = 0 to $\pm$ 1 PF = 0 to $\pm$ 1 PF = 1
Frequency	0.1Hz-300kHz, A or V triggered; Accuracy $\pm$ 0.1 %.		
Computed Values	Accuracy; Reactive Power, Var = $\pm$ (VA <sup>2</sup> - W <sup>2</sup> ) <sup>1/2</sup> ; Apparent Power: VA = Arms Vrms; Power Factor: PF = W/VA; Crest Factor: CF = Ap/Arms, Vp/Vrms; Form Factor: FF = At/Arms, Vt/Vrms; Impedance: Z = Vrms/Arms; Total Harm Dist: THD = (Irms <sup>2</sup> - IFund <sup>2</sup> ) <sup>1/2</sup> /Irms	Add accuracy percentage figures of values involved in computation.	
Integrator	Energy, Charge; Accuracy Wh, VAh, Varh, Ah; Basic accuracy of integrated quantity.		
Harmonic Analysis	Frequency range of fundamental	2.5Hz-100kHz	
	Range of harmonic	1-99	
	Accuracy, Harmonic current and voltage 2Hz-1kHz $\pm$ (0.2 % rdg + 0.1 % range) 1kHz-10kHz $\pm$ (0.5 % rdg + 0.5 % range) 10kHz-100kHz $\pm$ (0.7 % range + 0.1 %/kHz rdg), typical		
Display	Blue liquid crystal graphic display with FL backlight 64 x 120mm; 128 x 240 pixels		
Power	AC, 50-400Hz; Fuse: Power	85V-240V; 2AF/30VA	
Dielectric Strength	Inputs to case or power supply Line input to case Input to Input	2.5kV/50Hz/1 minute 1.5kV/50Hz/1 minute 4kV/50Hz/1 minute	
Dimension	H x W x D; Weight	150 x 235 x 320mm; 4kg	
Options	IEEE-488-2, RS232, Centronics printer output 4 Analog outputs, Output impedance 100 $\Omega$ 4 Analog inputs, low range, input impedance 200k $\Omega$ 4 Analog inputs, high range, input impedance 200k $\Omega$ Rack mounting kit Humidity: KYG according to DIN 40040, max. 85 % RH non-condensing	0 - $\pm$ 5V 0 - $\pm$ 1V 0 - $\pm$ 10V	
Shunt Input	 open circuit Lo	Ranges in mV: 60, 60 $\sqrt$ 10, 600, 600 $\sqrt$ 10, 6000, 6000 $\sqrt$ 10 Accuracy: Same as 5A-input Input impedance: 200k; input of 60mV corresponds to 1.0000A display.	

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