SPECIFICATION

Frequency Range			
			DC,10mHz ~ 2MHz (10Arms), (30Arms) DC,10mHz ~ 1MHz - (50Arms)
Voltage Input			
Internal	Range		300mVpk ~ 3000Vpk(1000Vrms) in 9 ranges (240Vrms within 300Vpk range, using 20% overange)
	Accuracy		0.01% Rdg+0.038% Rng+(0.004%×kHz)+5mV
External	Range		300µVpk ~ 3Vpk in 9 ranges【BNC connector 3Vpk max input】
	Accuracy		0.01%Rdg+0.038%Rng+(0.004%×kHz)+3µV
Current Input			
Internal		Ranges	3mApk ~ 30Apk(10Arms) in 9 ranges
		Accuracy	0.01% Rdg+0.038% Rng+(0.004%×kHz)+ 30µA
		Ranges	30mApk ~ 300Apk(30Arms) in 9 ranges
		Accuracy	0.01% Rdg+0.038% Rng+(0.004%×kHz)+ 300µA
		Ranges	100mApk ~ 1000Apk(50Arms) in 9 ranges
		Accuracy	0.01% Rdg+0.038% Rng+(0.004%×kHz)+ 900µA
External input (External shunt Current sensor)		Ranges	300µVpk ~ 3Vpk in 9 ranges
		Accuracy	0.01% Rdg+0.038% Rng+(0.004%×kHz)+ 3µV
Phase Accuracy			
			0.005deg+(0.01deg×kHz) 【LC(10Arms), (30Arms)】 0.01deg+(0.02deg×kHz) 【HC(50Arms)】
Power Accuracy			
			[0.03%+0.03%/pf+(0.01%×kHz)/pf] Rdg+0.03%VA Rng
40-400Hz			[0.02%+0.03%/pf+(0.01%×kHz)/pf] Rdg+0.02%VA Rng
General			
Crest Factor			20(Voltage and Current)
Sample Rate			2.2Ms/s on all channels, No-Gap
IEC Modes			IEC61000 Harmonics and Flicker, IEC62301 Standby Power
Application Modes			PWM Motor Drive, Ballast, Inrush, Power Transformer, Standby Power, Fluctuating Harmonics, Flicker Meter, TVF105 Interharmonics
CMRR - Common Mode Rejection Ratio			
			250V @ 50Hz - ≥ 1mA (150dB)
			100V @ 100kHz - ≥ 3mA (130dB)
Measurement Parameters			
			W ,VA ,Var ,pf ,V & A - rms ,rectified mean ,AC ,DC ,Peak ,Surge ,Crest Factor ,Form Factor ,Star to Delta Voltage, +ve Pk, -ve Pk
			Frequency (Hz), Phase (deg), Fundamentals, Impedance
			Harmonics, THD, TIF, THF, TRD, TDD
			Integrated Values, Datalog, Sum and Neutral values
Datalog - Up to 4 user selectable measurement functions (30 with optional PC software)			
Datalog Window			No-Gap analysis, Minimum window 2ms
Memory			10M records into flash RAM (Non-Volatile)
Communication Ports			
RS232			Baud rate up to 38.4kbps,RTS/CTS flow control
LAN			(Fitted as standard) 10/100 Base-T Ethernet auto sensing
GPIB			(Fitted as standard) IEEE488.2 Compatible
USB			USB 2.0 and 1.1 compatible
Analogue Output			Bipolar ±10V(BNC)
Speed Input			BNC Bipolar±10V 0.05% Rdg + 0.05% Rng or Pulse count 1Hz to 1MHz 0.01% Rdg
Torque			BNC Bipolar±10V or Pulse count 1Hz to 1MHz 0.01% Rdg
Sync			4 ~ 6 Phase measurement (Master/Slave)
Extension			4 ~ 6 Phase (Master/Slave) + Auxilary
Standard Accessories			
Leads			Power, RS232, USB, GPIB
Connection Cables			36A 1.5m long 4mm stackable terminals 1x red, 1x yellow and 2x black per phase (1x red, 1x black with HC version)
Connection Clips			4mm terminated aligator clips - 1x red, 1x yellow and 2x black per phase (1x red and 1x black per phase with HC version)
CD-ROM			CommView2 (RS232/USB/LAN), Command line, Script based communication software
Documents			User manual, Communications manual, Calibration certificate, Quick start guide
Mechanical/Environmental			
Display			320×240 dot full colour TFT, White LED Backlit
Dimensions			130H×400W×315D mm excluding feet
Weight			5.4kg(1 Phase), 6kg(3 Phase)
Safety Isolation			1000Vrms or DC(CATII), 600Vrms or DC(CATIII)
Power supply			90 ~ 265Vrms, 50 ~ 60Hz, 40VAmax
Operating Conditions			23˚C ± 5˚C Ambient Temperature (or air intake temperature when rack mounted), 20-90% Non-Condensing Relative Humidity. Temperature coeficient ±0.01% per ˚C of reading at 5-18˚C and 28-40˚C

SPECIFICATION

Harmonic Specification	
Bandwidth	DC,10mHz ~ 2MHz DC,10mHz ~1MHz
No. of Harmonics	417
Sampling Frequency	2Ms/s
Signal Processing	DFT (Discreet Fourier Transform)
Crest Factor	20
Power Factor	0 to 1
Harmonic Accuracy	
Voltage and Current	0.01% Rdg+0.038% Rng+(0.004%×kHz)+5mV
Harmonic Accuracy (above) still applies with any Frequency Filter set	
IEC61000 Harmonic Accuracy	
Voltage and Current	0.2% Rdg+0.038% Rng+(0.004%×kHz)+5mV
Cycle by Cycle Analysis direct to PC - 2Ms/s sample rate (Window setting)	
Data Rate	5ms
Cycle by Cycle Analysis direct to Internal RAM - 2Ms/s sample rate	
Data Rate	2ms
Voltage Attenuator Overload Capability	
20ms	4.2kVpk (3kVrms)
5s	3.1kVpk (2.2kVrms)
Continuous	3kVpk (1kVrms)
Minimum Current Measurement at Full Accuracy	
	700uArms

ACCESSORIES

Leads and Interfacing	
Type	**Specification**
36A Connection lead set	1.5 Meter - 36A lead set with 4mm stackable safety terminals 1x Red, 1x Yellow and 2x Black per phase plus alligator clips
36A 4mm to spade (Option)	1.5 Meter - 36A lead set with 4mm to spade for HC terminals
RS232 cable	RS232 9pin serial Cable
USB cable	USB 2 Meter A male to B male
USB to 9-pin RS232 (Option)	USB ~ 9-pin RS232 Serial Converter
GPIB Cable	GPIB Interface Cable