Voltage input specifications

Parameter	S or A channel	W channel
Specified input range - DC	0 to ±1000V	0 to ±700V
Specified input range - AC	0.1 to 1000Vrms	0.1 to 700Vrms
Specified input range - Peak	<1800V	<1800V
Safe input range - <1ms	2500Vrms (<3000Vpk)	2000Vrms (<3000Vpk)
Safe input range - <100ms	2000Vrms (<3000Vpk)	1500Vrms (<3000Vpk)
Safe input range - <5s	1500Vrms (<2500Vpk)	1000Vrms (<2500Vpk)
Safe input range - Continuous	1000Vrms (<1800Vpk)	700Vrms (<1800Vpk)
Impedance	1.2MΩ ±1%	400KΩ ±1%

Voltage accuracy specifications

Parameter	S channel	A channel	W channel
Resolution	0.001V	0.1mV	0.001V
Base accuracy	0.1%rdg	0.03%rdg	0.1%rdg
Frequency adder	0.01-1Hz: 0.05%rdg <10KHz: (0.005*F)%rdg 10-40KHz: (0.05+(0.012*(F-10)))%rdg 40-100KHz: (0.41+(0.025*(F-40)))%rdg	0.01-1Hz: 0.05%rdg <10KHz: (0.005*F)%rdg 10-40KHz: (0.05+(0.012*(F-10)))%rdg 40-100KHz: (0.41+(0.025*(F-40)))%rdg	0.01-1Hz: 0.1%rdg <40KHz: (0.002*F)%rdg 40-100KHz: (0.08+(0.004*(F-40)))%rdg 100-1000KHz: (0.32+(0.013*(F-100)))%rdg
Bandwidth (-3dB)	>700KHz	>700KHz	>2.5MHz
Floor adder	DC: 0.002V AC<100Hz: 0.003V AC>100Hz: 0.005V	DC: 0.001V AC<100Hz: 0.002V AC>100Hz: 0.005V	DC: 0.003V AC<100Hz: 0.004V AC>100Hz: 0.007V
Self-heating adder	0.0005ppm rdg per Vrms²	0.0005ppm rdg per Vrms²	0.0015ppm rdg per Vrms²
Single harmonic adder	<10KHz: 0.01%fund + 0.001V <85KHz: 0.05%fund + 0.005V	<10KHz: 0.005%fund + 0.0005V <85KHz: 0.05%fund + 0.005V	<10KHz: 0.015%fund + 0.0015V <100KHz: 0.03%fund + 0.005V <310KHz: 0.08%fund + 0.01V
Σ harmonic adder	<10KHz: 0.02%fund + 0.002V <85KHz: 0.1%fund + 0.01V	<10KHz: 0.015%fund + 0.001V <85KHz: 0.15%fund + 0.01V	<10KHz: 0.03%fund + 0.003V <100KHz: 0.06%fund + 0.007V <310KHz: 0.15%fund + 0.015V
CMRR	1uV per V.Hz	1uV per V.Hz	0.7uV per V.Hz
Inter-channel phase	(0.02° + 0.15°*F)	(0.02° + 0.15°*F)	(0.02° + 0.07°*F)

The voltage input has a single dynamic range covering the entire specified input range.

Current input specifications

Parameter	H option	D auto	D HI	D LO	X HI	X LO
Specified input range - DC	0 to ±30A	0 to ±20A	0 to ±20A	0 to ±1A	0 to ±15V	0 to ±0.5V
Specified input range - <100Hz	3mA to 30Arms	10uA to 20Arms	2mA to 20Arms	10uA to 1Arms	800uV to 15Vrms	20uV to 0.5Vrms
Specified input range - >100Hz	20mA to 30Arms	150uA to 20Arms	15mA to 20Arms	150uA to 1Arms	2mV to 15Vrms	80uV to 0.5Vrms
Specified input range - Peak	<200A	<50A	<150A	<1A	<18V	<0.5V
Safe input range - <1ms	200Arms (<300Apk)	30Arms (<50Apk)	150Arms (<250Apk)	30Arms (<50Apk)	200Vrms (300Vpk)	20Vrms (300Vpk)
Safe input range - <20ms	75Arms (<300Apk)	20Arms (<50Apk)	50Arms (<200Apk)	20Arms (<50Apk)	50Vrms (300Vpk)	10Vrms (200Vpk)
Safe input range - <1s	50Arms (<200Apk)	20Arms (<50Apk)	30Arms (<150Apk)	5Arms (<25Apk)	30Vrms (300Vpk)	5Vrms (100Vpk)
Safe input range - Continuous	30Arms	20Arms (<50Apk)	20Arms (<150Apk)	2Arms (<5Apk)	20Vrms (300Vpk)	2Vrms (50Vpk)
Safe input range - Power off	As above	As LO range	As LO range	As LO range	As above	As HI range
Impedance	<10mΩ	As HI/LO range	<20mΩ	0.57Ω ±10%	20.5KΩ ±1%	10.25KΩ ±1%

H option current measurement accuracy specifications

Parameter	S channel	A channel	W channel
Resolution	100uA	10uA	100uA
Base accuracy	0.1%rdg	0.03%rdg	0.1%rdg
Frequency adder	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.1%rdg <40KHz: (0.0015*F)%rdg 40-100KHz: (0.06+(0.003*(F-40)))%rdg 100-1000KHz: (0.24+(0.012*(F-100)))%rdg
Bandwidth (-3dB)	>1.25MHz	>1.25MHz	>5MHz
Floor adder	DC: 200uA AC<100Hz: 800uA AC>100Hz: 3mA	DC: 100uA AC<100Hz: 500uA AC>100Hz: 2mA	DC: 300uA AC<100Hz: 1mA AC>100Hz: 4mA
Self-heating adder	1.5ppm reading per Arms²	1.5ppm reading per Arms²	1.5ppm reading per Arms²
Single harmonic adder	<10KHz: 0.01%fund + 100uA <85KHz: 0.05%fund + 5mA	<10KHz: 0.005%fund + 80uA <85KHz: 0.03%fund + 5mA	<10KHz: 0.015%fund + 150uA <100KHz: 0.03%fund + 5mA <310KHz: 0.08%fund + 5mA
Σ harmonic adder	<10KHz: 0.02%fund + 200uA <85KHz: 0.1%fund + 7mA	<10KHz: 0.015%fund + 150uA <85KHz: 0.15%fund + 7mA	<10KHz: 0.03%fund + 300uA <100KHz: 0.06%fund + 7mA <310KHz: 0.15%fund + 10mA
CMRR	500pA per V.Hz	500pA per V.Hz	500pA per V.Hz
V:A phase	(0.01° + 0.015°*F)	(0.01° + 0.015°*F)	(0.01° + 0.007°*F)
Inter-channel phase	(0.02° + 0.15°*F)	(0.02° + 0.15°*F)	(0.02° + 0.07°*F)

The H option current input has a single range covering the entire specified input range.

D option HI range current measurement accuracy specifications

Parameter	S channel	A channel	W channel
Resolution	100uA	10uA	100uA
Base accuracy	0.1%rdg	0.03%rdg	0.1%rdg
Frequency adder	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.1%rdg <40KHz: (0.0015*F)%rdg 40-100KHz: (0.06+(0.003*(F-40)))%rdg 100-1000KHz: (0.24+(0.012*(F-100)))%rdg
Bandwidth (-3dB)	>1.25MHz	>1.25MHz	>5MHz
Floor adder	DC: 200uA AC<100Hz: 500uA AC>100Hz: 2mA	DC: 100uA AC<100Hz: 300uA AC>100Hz: 1.5mA	DC: 300uA AC<100Hz: 700uA AC>100Hz: 3mA
Self-heating adder	2ppm reading per $Arms^2$	2ppm reading per $Arms^2$	2ppm reading per $Arms^2$
Single harmonic adder	<10KHz: 0.01%fund + 70uA <85KHz: 0.05%fund + 3.5mA	<10KHz: 0.005%fund + 50uA <85KHz: 0.03%fund + 3.5mA	<10KHz: 0.015%fund + 100uA <100KHz: 0.03%fund + 3.5mA <310KHz: 0.08%fund + 4mA
Σ harmonic adder	<10KHz: 0.02%fund + 150uA <85KHz: 0.1%fund + 5mA	<10KHz: 0.015%fund + 120uA <85KHz: 0.15%fund + 5mA	<10KHz: 0.03%fund + 200uA <100KHz: 0.06%fund + 5mA <310KHz: 0.15%fund + 7mA
CMRR	400pA per V.Hz	400pA per V.Hz	400pA per V.Hz
V:A phase	(0.01° + 0.015°*F)	(0.01° + 0.015°*F)	(0.01° + 0.007°*F)
Inter-channel phase	(0.02° + 0.15°*F)	(0.02° + 0.15°*F)	(0.02° + 0.07°*F)

D option LO range current measurement accuracy specifications

Parameter	S channel	A channel	W channel
Resolution	1uA	0.1uA	1uA
Base accuracy	0.1%rdg	0.03%rdg	0.1%rdg
Frequency adder	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.1%rdg <40KHz: (0.0015*F)%rdg 40-100KHz: (0.06+(0.003*(F-40)))%rdg 100-1000KHz: (0.24+(0.012*(F-100)))%rdg
Bandwidth (-3dB)	>1.25MHz	>1.25MHz	>6MHz
Floor adder	DC: 2uA AC<100Hz: 3uA AC>100Hz: 10uA	DC: 1uA AC<100Hz: 1.5uA AC>100Hz: 8uA	DC: 3uA AC<100Hz: 4uA AC>100Hz: 15uA
Single harmonic adder	<10KHz: 0.01%fund + 0.4uA <85KHz: 0.05%fund + 20uA	<10KHz: 0.005%fund + 0.3uA <85KHz: 0.03%fund + 20uA	<10KHz: 0.015%fund + 0.5uA <100KHz: 0.03%fund + 20uA <310KHz: 0.08%fund + 30uA
Σ harmonic adder	<10KHz: 0.02%fund + 1uA <85KHz: 0.1%fund + 30uA	<10KHz: 0.015%fund + 0.7uA <85KHz: 0.15%fund + 30uA	<10KHz: 0.03%fund + 1uA <100KHz: 0.06%fund + 30uA <310KHz: 0.15%fund + 40uA
CMRR	20pA per V.Hz	20pA per V.Hz	20pA per V.Hz
V:A phase	(0.01° + 0.015°*F)	(0.01° + 0.015°*F)	(0.01° + 0.007°*F)
Inter-channel phase	(0.02° + 0.15°*F)	(0.02° + 0.15°*F)	(0.02° + 0.07°*F)

The D option current input has two ranges. The tables above cover the entire specified HI and LO input ranges.

X option HI range current measurement accuracy specifications

Parameter	S channel	A channel	W channel
Resolution	10uV	1uV	10uV
Base accuracy	0.1%rdg	0.03%rdg	0.1%rdg
Frequency adder	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.1%rdg <40KHz: (0.0015*F)%rdg 40-100KHz: (0.068+(0.004*(F-40)))%rdg 100-1000KHz: (0.308+(0.015*(F-100)))%rdg
Bandwidth (-3dB)	>1.25MHz	>1.25MHz	>3MHz
Floor adder	DC: 20uV AC<100Hz: 50uV AC>100Hz: 200uV	DC: 10uV AC<100Hz: 30uV AC>100Hz: 150uV	DC: 30uV AC<100Hz: 70uV AC>100Hz: 300uV
Single harmonic adder	<10KHz: 0.01%fund + 7uV <85KHz: 0.05%fund + 350uV	<10KHz: 0.005%fund + 5uV <85KHz: 0.03%fund + 350uV	<10KHz: 0.015%fund + 10uV <100KHz: 0.03%fund + 350uV <310KHz: 0.08%fund + 400uV
Σ harmonic adder	<10KHz: 0.02%fund + 15uV <85KHz: 0.1%fund + 500uV	<10KHz: 0.015%fund + 12uV <85KHz: 0.15%fund + 500uV	<10KHz: 0.03%fund + 20uV <100KHz: 0.06%fund + 500uV <310KHz: 0.15%fund + 700uV
CMRR	15nV per V.Hz	15nV per V.Hz	15nV per V.Hz
V:A phase	(0.01° + 0.015°*F)	(0.01° + 0.015°*F)	(0.01° + 0.007°*F)
Inter-channel phase	(0.02° + 0.15°*F)	(0.02° + 0.15°*F)	(0.02° + 0.07°*F)

X option LO range current measurement accuracy specifications

Parameter	S channel	A channel	W channel
Resolution	1uV	0.1uV	1uV
Base accuracy	0.1%rdg	0.03%rdg	0.1%rdg
Frequency adder	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.05%rdg <10KHz: (0.003*F)%rdg 10-40KHz: (0.03+(0.007*(F-10)))%rdg 40-100KHz: (0.24+(0.02*(F-40)))%rdg	0.01-1Hz: 0.1%rdg <40KHz: (0.0015*F)%rdg 40-100KHz: (0.068+(0.004*(F-40)))%rdg 100-1000KHz: (0.308+(0.015*(F-100)))%rdg
Bandwidth (-3dB)	>1.25MHz	>1.25MHz	>3MHz
Floor adder	DC: 2uV AC<100Hz: 2uV AC>100Hz: 8uV	DC: 1uV AC<100Hz: 1.5uV AC>100Hz: 5uV	DC: 2uV AC<100Hz: 3uV AC>100Hz: 10uV
Single harmonic adder	<10KHz: 0.01%fund + 0.3uV <85KHz: 0.05%fund + 10uV	<10KHz: 0.005%fund + 0.1uV <85KHz: 0.03%fund + 10uV	<10KHz: 0.015%fund + 0.3uV <100KHz: 0.03%fund + 10uV <310KHz: 0.08%fund + 15uV
Σ harmonic adder	<10KHz: 0.02%fund + 0.5uV <85KHz: 0.1%fund + 15uV	<10KHz: 0.015%fund + 0.3uV <85KHz: 0.15%fund + 15uV	<10KHz: 0.03%fund + 0.5uV <100KHz: 0.06%fund + 15uV <310KHz: 0.15%fund + 20uV
CMRR	1nV per V.Hz	1nV per V.Hz	1nV per V.Hz
V:A phase	(0.01° + 0.015°*F)	(0.01° + 0.015°*F)	(0.01° + 0.007°*F)
Inter-channel phase	(0.02° + 0.15°*F)	(0.02° + 0.15°*F)	(0.02° + 0.07°*F)

The X option current input has two ranges, each with its own accuracy table. The HI-range and LO-range values are specified separately above.

Common input specifications

Parameter	Specification
Scope	Specifications apply to the inputs of all channel types and current options.
Isolation	From any V or A terminal to PXe-PA900 chassis ground.
Input impedance	>1GΩ || <30pF
Maximum without damage	4500Vpk
Maximum for <1s without damage	2500Vrms
Continuous rated working voltage - CAT I/II	1000Vrms
Continuous rated working voltage - CAT III	600Vrms
Continuous rated working voltage - CAT IV	300Vrms
Crest factor	Specifications valid for crest factors <30:1 unless otherwise limited by the specified input range.

Watts, VAR and VA measurement accuracy specifications

Parameter	S channels	A channels	W channels
Base accuracy	0.17%rdg	0.05%rdg	0.17%rdg
Frequency adder	Add frequency adders for voltage and current	Add frequency adders for voltage and current	Add frequency adders for voltage and current
Floor adder	DC: Vdc*(DC Current Floor Adder) + Adc*(DC Voltage Floor Adder) + (DC Voltage Floor Adder)*(DC Current Floor Adder) AC: Vac*K*(AC Current Floor Adder) + Aac*K*(AC Voltage Floor Adder)	Same	Same
Fundamental phase adder	Watts: VAfund*(PFfund - cos(cos^-1(PFfund) + V:A phase for current input)) VAR: VAfund*((1-PFfund) - cos(cos^-1(1-PFfund) + V:A phase for current input))	Same	Same
Self-heating adder	Add self-heating adders for voltage and current	Same	Same
Single harmonic adder	Add single harmonic adders for voltage and current	Same	Same
Σ harmonic adder	Add Σ harmonic adders for voltage and current	Same	Same

Power factor measurement accuracy

Parameter	Specification
Maximum error	For a non-unity power factor due to non-linearity in the load: PF - ((W + the AC Floor Adder portion with K = 0.3) / (VA + the AC Floor Adder portion with K = 1.0))
K value	K is 0.3 for Watts, harmonic VAR and harmonic VA; otherwise K is 1.0.

Voltage and current signal sampling

Parameter	Specification
Rate	245KSPS nominal; 900KSPS nominal for W channels.
Resolution	22 bits for S and W channels; 24 bits for A channels.
Measurement gaps	No inter-measurement gaps (100% signal coverage) for all non-harmonic measurements.
Synchronisation accuracy	Measurement period and rate are adjusted for synchronisation within <±5ppm of an integer number of fundamental cycles.
Asynchronisation	Measurement period and rate are adjusted so there is no synchronisation to >500Hz periodic signal content other than the fundamental frequency.
Sampling jitter	Sampling is deliberately jittered so the relative time of any sample varies by up to ±1/2 sample period. The net effect is zero over the measurement period. The jitter is quasi-random with no sub-measurement-period periodic elements within the actual sampling rate.
Inter-input difference	The V and A inputs of each channel are sampled nominally within <±5ns of each other, equivalent to ±0.0018° per KHz phase.
Inter-channel difference	All channels within each Virtual Power Analyser are sampled nominally within <±20ns of each other, equivalent to ±0.0072° per KHz phase.
Effective sampling rate	Including jittered sampling effects, the overall effective sampling rate for analysis of periodic signals within a measurement period is 384MSPS.
Phase and frequency compensation	No phase or frequency compensation is applied after sampling. Each signal is independently sampled to provide synchronous sampling at the PXe-PA900 terminals.

Virtual Power Analysers

Parameter	Specification
Quantity	Three Virtual Power Analysers (VPAs) in one mainframe with one user interface.
Channel assignment	Each installed channel may be assigned to any one, or none, of the three VPAs.
Per-VPA settings	Multi-channel wiring, signal filtering, default measurement coupling, display smoothing, significant digits, VA/VAR combine method and efficiency grouping.
Synchronisation mode 1	Totally asynchronous to the other VPAs in all aspects.
Synchronisation mode 2	Fully synchronous to another VPA with identical sampling, measurement period and fundamental frequency.
Synchronisation mode 3	Asynchronous to the other VPAs while using the fundamental frequency established in another VPA.
Wiring configurations	General (1 to 4 channels); 2ø3w (2 channels); 3ø3w (2 channels); 3ø3w (3 channels); 3ø4w (3 channels).
Group results	Total W, VA, VAR and PF; mean voltage and current; inter-phase voltages A-B, A-C and B-C; efficiency groups IN, MIDDLE and OUT.

Non-harmonic measurement results

Result group	Measurements / specification
DC	Volts, Amps, Watts
AC (RMS)	Volts, Amps, Watts, VA, VAR, Power Factor, Effective Phase
AC+DC (RMS)	Volts, Amps, Watts, VA, VAR, Power Factor, Effective Phase
AC+DC (Rectified)	Volts, Amps
AC+DC (Peak)	Volts (peak, hipk and lopk); Amps (peak, hipk and lopk)
AC+DC Crest Factor	Volts, Amps
AC+DC Form Factor	Volts, Amps
Inter-phase	Volts
Neutral	Amps
Load	Impedance (DC, AC and AC+DC); AC series resistance and inductance; AC parallel resistance and capacitance
Calculation precision	At least 32 bits for non-accumulated data; at least 64 bits for accumulated data; at least 96 bits for accumulated squared or cross-multiplied data. Post-measurement calculations use 32-bit precision, except integrated data which uses 64-bit precision.

Inrush and harmonic analysis

Parameter	Specification
Inrush analysis	Applicable non-harmonic results for every channel and VPA have a maximum-hold function for inrush and similar transient events.
Configured inputs	Harmonic analysis may be enabled on each input of each channel with no restriction on the number of channels.
Harmonic count	Up to 100 harmonics per channel input as standard; up to 500 with the H500 option.
Analysis method	DFT analysis with 48-bit precision and 64-bit accumulation. Modified sine/cosine tables account for jittered samples. Samples are sub-sampled and anti-alias filtered as required.
Multi-channel analysis	All harmonics of all inputs of all channels within a VPA are analysed simultaneously to produce consistent multi-channel results.
Harmonic bandwidth - LF/VLF	The smaller of F/2 or 1Hz.
Harmonic bandwidth - other periods	The smaller of F/2 or 100Hz.
Maximum harmonic	The smaller of the 500th harmonic; 80KHz for S and A channels or 305KHz for W channels; or a user-configured lower limit. Harmonics above the 100th require H500.
Harmonic results	Amplitude and phase for each harmonic for every configured signal. Combined results include Volts, Amps, Watts, VAR, PF, Load (fundamental), inter-phase phase and volts (fundamental), neutral amps (fundamental), THD relative to fundamental and THD relative to AC RMS.

Integration, history, logging and waveform views

Function	Specification
Integrated results	Integration may be manually or automatically timed from the front panel or interface, with programmable delay.
Historical data collection	The PXe-PA900 continuously records all non-harmonic results and selected harmonic results in volatile memory. The record automatically extends up to 397 days.
Data logging	Up to 16 selected measurement results may be logged at configured intervals to a drive attached to the front-panel USB port.
Cycle View	Single-cycle voltage and current periodic waveforms are provided for frequencies up to the maximum harmonic fundamental frequency.
Scope View	Voltage and current waveforms may be captured similarly to a digital sampling oscilloscope. Timebase, trigger, trigger position, scale and offset are selectable.
Power Data screen	V, A, W, VA, VAR and PF for a selected channel or VPA totals.
Custom Data screen	User-defined display of available results from any channel or analyser.
Harmonics screen	Bar chart of available harmonics for any selected V or A signal, plus numerical amplitude and phase for any eight harmonics. Imported limits show failures above the limit.
Vectors screen	Polar chart of fundamental voltage and current vectors for a selected channel or analyser.
Front-panel USB drive interface	Import/export configuration, custom data screens and harmonic limits; data logging; screenshot export.

General instrument specifications

Parameter	Specification
Interfaces	LAN (Ethernet), Serial (RS232), USB client and front-panel USB host for mass data storage.
Display	7-inch, 800 x 480 pixel, 18bpp colour LCD with high-resolution pressure-sensing touchscreen.
Channels	Up to four channels in any combination of S, A or W channel types and D, H or X current input options.
Line power	Installation Category II; 85 to 264Vrms; 45 to 65Hz; 40VA maximum.
Safety	EN61010-1 measurement categories: CAT I 1000V; CAT II 1000V; CAT III 600V; CAT IV 300V.
Storage environment	-20 to 75°C, non-condensing.
Operating environment	0 to 40°C; <85% RH, non-condensing; Pollution Degree 2.
Operating altitude	0 to 2000m (6560ft) above sea level.
Physical	133mm H x 240mm W x 280mm D; approximately 3.2kg net; approximately 5kg shipping.

Accuracy specification conditions

Condition	Specification
Warm-up	Accuracy specifications apply after a 10-minute warm-up following power-on.
Temperature range	Specifications are valid for ambient temperature within ±5°C of calibration temperature.
Temperature adder	Add 0.005% reading per °C outside ±5°C of calibration temperature.
Validity period	Specifications are valid for two years after calibration in normal use.
Accuracy calculation	Base Accuracy + relevant Frequency Adder + relevant Floor Adder + Self-Heating Adder + relevant Harmonic Adder.
AC+DC measurements	Use both DC and relevant AC floor adders.
Peak measurements	Use the same accuracy calculation with 10 x the relevant Floor Adder.
Frequency variable	In all specifications, F is frequency in KHz.

Accessories, calibration and warranty

Parameter	Specification
Standard supply	Operator manual, power cord and calibration certificate without data covering all installed channels.
ISO 17025 calibration	Accredited calibration certificate with data and uncertainties available.
Channel accessories	Each channel card includes four colour-coded, heavy-duty 1.5m alligator-to-sheathed-banana test leads.
Warranty	Two years, parts and labour.

Advanced computational options

Code / option	Description
H500	Extends harmonic capability to 500 harmonics.
EN	Adds EN61000 compliance computations.
MT channel	Motor torque and speed input card; slot 4 only.

Configuration coding

Parameter	Specification
Channel card code	Use the two-character channel card code for each installed channel in slot order, separated by commas, for up to four channels.
Mixed-card example	PXe-PA900AD,AD,WX,WX: AD cards in slots 1 and 2; WX cards in slots 3 and 4.
Option suffixes	Add H500 and/or EN option codes after the final channel card code.
Identical cards	A separate configuration code is not required where all installed cards are identical.