POWER PLATFORM 4300

Power quality, harmonics
and energy instrument

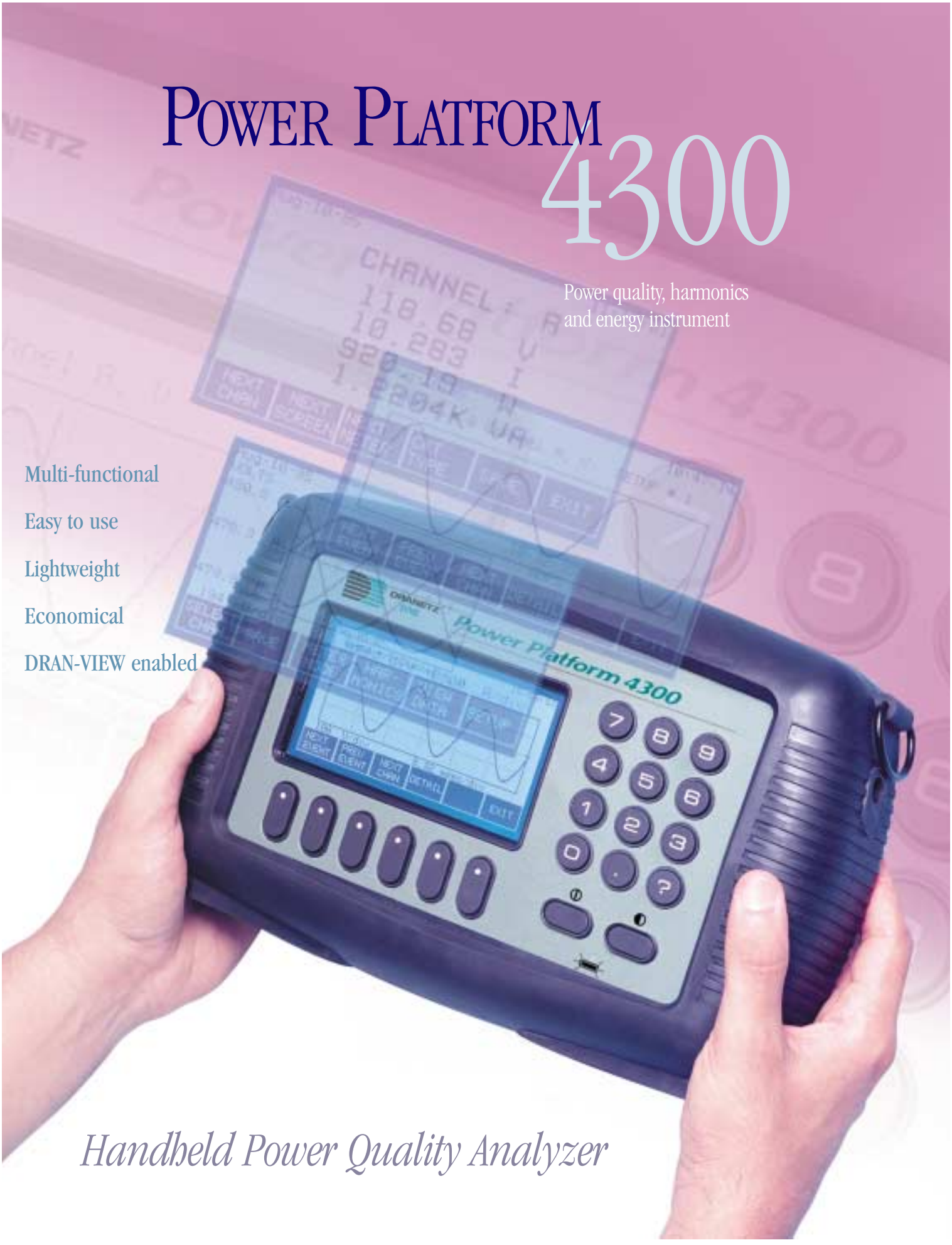
Multi-functional

Easy to use

Lightweight

Economical

DRAN-VIEW enabled



Handheld Power Quality Analyzer

The award-winning Power Platform® 4300 sets the industry standard for power analyzers. With four differential voltage channels and four independent current channels, the 4300 measures, analyzes and records power quality, harmonics and energy data simultaneously and continuously on single- or three-phase systems, responding to a range of power system management needs:

Power Platform 4300

- **PREVENTIVE MAINTENANCE**
  The only handheld instrument that independently triggers on voltage transients and RMS variations and current transients and RMS variations, the PP4300's built-in ability to simultaneously capture harmonic disturbances and power flow enables monitoring for up to 16 parameters including V, I, W, VA, VAR, power factor, demand and energy.

- **TROUBLESHOOTING**
  With its easy setup and operation, the PP4300 is a versatile tool for identifying and locating disturbances, determining their causes, and providing the critical data needed to respond quickly and efficiently.

- **PROACTIVE PLANNING**
  The PP4300 enables users to anticipate and address power quality impacts from process changes, fluctuating demand, or the installation of new equipment and facilities. Users can add or balance loads, verify equipment performance, or determine the need and effectiveness of mitigation systems.

- **FINANCIAL MANAGEMENT**
  The 4300 provides the data to manage power systems, from accurate cost allocation to energy contract compliance, evaluation of alternative rate structures, and determination of demand during different process cycles.

Parameters Measured:

Volts, Amps, Watts, VA, VAR, Power factor, Frequency, Voltage unbalance Current crest factor, Demand, Energy, Harmonic directivity, V&I total harmonic distortion, K Factor, Nth harmonics

The optional, lockable, NEMA 4x case allows the use of the PP4300 in harsh environments.

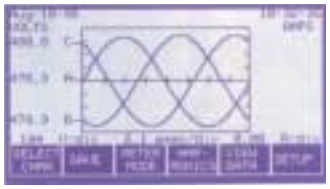
TaskCard

From the economical single-phase TaskCard – the perfect entry system for electrical contractors – to the full 8-channel instrument for advanced power quality management, the TaskCard system allows you to easily and cost-effectively upgrade your instrument.

Memory Card

The PP4300 can be equipped with up to 4MB of additional memory for collecting data. Depending on the size of the card and the nature of the event, these removable cards enable users to capture a week's worth of data and transfer it to a PC for further analysis.

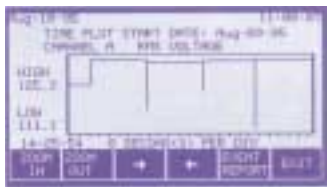
With integrated PCMCIA technology, a 2-hour UPS capacity and individual TASKCards® for upgradable operations, the PP4300 provides four unique modes of operation:



- **SCOPE MODE®:** In the Scope Mode, the PP4300 allows real-time viewing of voltage and current waveforms and voltage and current phasor diagrams.

- **METER MODE®:** A 3-phase meter updates values every second for volts, amps, watts, VA, VAR, power factor, frequency, voltage unbalance, V&I total harmonic distortion, current crest factor, K factor, demand, energy and nth harmonics. Values are displayed by parameter or by channel.

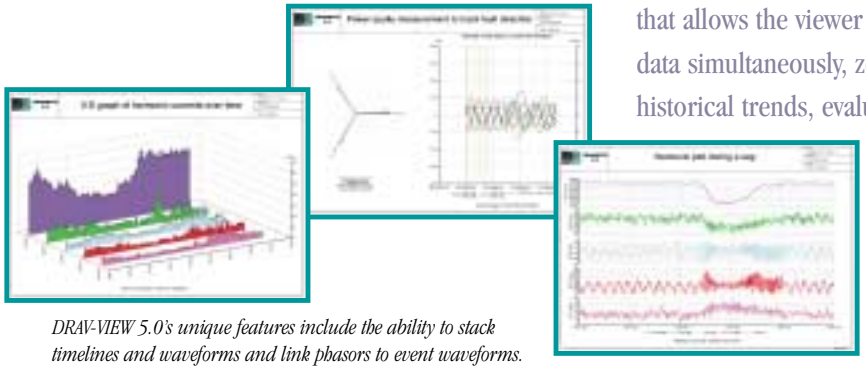
- **EVENT RECORDER:** The PP4300 captures critical data in unique configurations, including event data by event; worst case or activity report; actual captured voltage and current waveforms; and power quality events classified to the IEEE 1159 standard for voltage disturbance. Limits and thresholds can be easily set to match equipment susceptibilities.



- **TIME PLOT:** Time plots can be displayed for as many as 16 different parameters and 8 individual channels to identify abnormalities before they become problems. It is linked to event reports for textual and waveform details. Zoom-in capabilities allow the display of detail to 0.1 sec/div.

DRAN-VIEW®

Underlying the PP4300 is DRAN-VIEW®, the industry-leading software that allows the viewer to scroll through event, timeline and waveform data simultaneously, zero in on captured disturbance waveforms, scan historical trends, evaluate statistics and perform harmonic and interharmonic analysis —all with the click of a mouse. With its intuitive two-pane browser, complete report writing capabilities, Windows® interface and simple-to-use visualization and analytical capabilities, DRAN-VIEW turns every user into a power quality expert.



DRAV-VIEW 5.0's unique features include the ability to stack timelines and waveforms and link phasors to event waveforms.

Specifications

Measured Parameters

	PQ-Lite*	808
Voltage	■	■
4 fully differential channels		
Channels A, B, C range: 10-600 Vrms max.		
Channel D low range: 0.5-20 Vrms max.		
Channel D high range: 10-600 Vrms max.		
Accuracy: ±1% of reading ±0.05% full scale		
Voltage Transients	■	
Channels A, B, C range: 50-1000 Vpk		
Channel D low range: 1-30 Vpk		
Channel D high range: 50-1000 Vpk		
Accuracy: ±10% of reading ±1% full scale		
Transient duration: 1 µs min.		
Current	■	■
4 independent input channels	■	■
Channels A, B, C, D range: 10-200% of full scale current probe rating		
Accuracy: ±1% of reading ±0.05% full scale at fundamental frequency plus current probe accuracy		
Current Transients	■	
Channels A, B, C, D range: 10-300% CT full scale		
Accuracy: ±10% of reading ±1% full scale		
Transient duration: 1 µs min.		
Phase	■	■
Each voltage/current pair are sampled simultaneously to preserve phase relationship		
Frequency	■	■
Fundamental range: 30-450 Hz		
Accuracy: ±0.2% of reading		

Computed Parameters

Update Rate	■	■
Power quality–cycle-by-cycle for V&I, & energy parameters: once per second		
Harmonic-based parameters: every 5 seconds		
ABC Volts	■	■
Calculated as the geometric mean of the three phases		
ABC Amps	■	■
Calculated as the sum of the three phases		
Real Power	■	■
Single Phase: Average of instantaneous power samples taken as the product of voltage and current samples. Includes sign to indicate direction of power flow		
Three Phase: Calculated as the sum of the three phases. Includes sign to indicate direction of power flow		
Accuracy: ±2% of Reading ±0.2% of full scale at fundamental frequency		
Apparent Power	■	■
Single Phase: Calculated as Vrms times Arms		
Three Phase: Calculated as the vector sum of VAR_{ABC} and W_{ABC}		
Accuracy: ±2% of reading ±0.2% of full scale at fundamental frequency		
Power Factor	■	■
Calculated as real power divided by apparent power. Includes sign to indicate leading or lagging load current		
Accuracy: ±0.05 typical		
Reactive Power	■	■
Single Phase: Calculated as the vector difference between VA and W. Includes sign to indicate capacitive or inductive		
Three Phase: Calculated as the sum of the three phases. Includes sign to indicate capacitive or inductive		
Accuracy: ±2% of reading ±0.2% of full scale		
Demand	■	■
Average power during a demand interval in W, VA, VAR Accuracy: ±0.2% of reading ±0.02% of full scale at fundamental freq.		
Energy	■	■
Summation of Watt-Hours for accumulated energy use Accuracy: ±0.2% of reading ±0.02% of full scale at fundamental freq.		
Total Harmonic Distortion	■	■
Calculated using the individual harmonic components derived from the FFT		

*Single-phase PQ-Lite TASKCard–only channels A+D are enabled

General Specifications

Dimensions
Size (HxWxD): 12" x 2.5" x 8" (30cm x 6.4cm x 20.3cm)
Weight: 3.8 pounds (1.8 kg)

Environmental
Operating: 5 to 45°C (41 to 113°F)
Storage: -20 to 55°C (4 to 131°F)
Humidity: 10 to 90% non-condensing

System Time Clock
Crystal controlled. 1 second resolution
Time displayed in 24-hour format HH:MM:SS

Internal Memory
280 kb of standard non-volatile data RAM (event storage) expandable with optional memory card

Expansion Memory Card
2 MB to 4 MB depending on the optional card memory capacity for removable and/or extended memory

Power Requirements
Charger/battery eliminator: 95-264 VAC 47-63 Hz

Display
Type: negative transreflective liquid crystal display (LCD) with electroluminescent (EL) backlighting

Alarm
Audible alarm of an error condition or event trigger

Optional Accessories

Current Probes
An extensive selection of current probes is available for the Power Platform 4300, including:

Model TR-2510	10-10 A; up to 0.47" conductors
Model TR-2500	10-500 A; up to 1.8" dia. or 2.5"x 0.2" conductors (not rated for transient capture)
Model TR-2520	300-3000 A; up to 2.56" dia. or 1.97"x 5.3" (bus bar)
Model TR-2019B	1-300 A; up to 2.0" conductors (requires 116002-G1 adapter)
Flexible Probes	Consult with factory

CT Cable Adapter (CA4300)
Provides interface of Dranetz TR2021, 2019B, 2022 and 2023 (658 probes) to be used with PP4300. Also adapts Isolated CT termination box ISO-65X-5. One required for each probe

Voltage Cable Accessory Pack (VCP4300)
Voltage measurement cable for direct connection to standard 120VAC single phase outlet. Includes four (4) jumper cables for various three phase connections

Soft Carrying Case (SCC4300)
Rugged Condura nylon carry case, holds PP4300, voltage probes, CTs and manual

Field Replaceable Battery Pack (BP4300)
Provides full operation for up to two hours. One included, standard, with unit

External Battery Charger (XBC4300)
Provides charging of extra batteries when PP4300 is in use

Reusable Shipping Container (RSC4300)
Protects the analyzer from damage during shipment. Complies with NSTA project 1A vibration and drop specifications. Includes space for accessories

Lockable Portable Case (LPC4300)
Rugged, weatherproof case (NEMA 4X) for using PP4300 in harsh environments. Includes multi-conductor voltage measurement cable and AC power cable. Optional current probe interface available

Isolated Communications Module (PP4300RS232)
Provides RS-232 serial interface between PP4300 and PC or printer. Terminates to 9 pin connector for PC connection. Includes DRAN-LINK™ 4300 communications utility software

Portable Field Printer (PFP4300)
AC or battery powered for field printouts. Requires Isolated Communications Module PP4300RS232

Memory Cards (Card 2M, Card 4M)
Removable 2MB and 4MB PCMCIA type I (PC card) SRAM card for data storage

Windows PC Software (DRAN-VIEW®)
View and analyze PP4300 recorded data on a PC. Runs under Windows 3X, 95, 98 and NT

Video Training Program (VT4300)
VHS videotape (95 minutes); workbook and floppy disk with sample setup and event data

DRANETZ BMI
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