**PowerXplorer PX5-400**

**SPECIFICATIONS**

*Measured Parameters*

<table>
<thead>
<tr>
<th>(4) differential inputs, 1-600 Vrms, AC/DC, 0.1% rdg + 0.05% FS, 256 samples/cycle (1), 16 bit ADC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) inputs with 0.1% rdg + 0.05% FS, 256 samples/cycle (1), 16 bit ADC</td>
</tr>
<tr>
<td>1 MHz High Speed Sampling, 14 bit ADC</td>
</tr>
<tr>
<td>Frequency Range, 10 MHz resolution, 15-20 Hz, 45-65 Hz or 350-450 Hz</td>
</tr>
<tr>
<td>Phase Lock Loop - Generator tracking, Standard PQ mode</td>
</tr>
</tbody>
</table>

*Available Languages*

Chinese, English, Finnish, French, German, Italian, Spanish, Swedish

*General Specifications*

| Size (HxWxD): 12” x 2.5” x 8” (30cm x 6.4cm x 20.3cm) |
| Weight: 4.2 pounds (1.9 kg) |
| Operating Temperature: 0º to 50º C (32º to 122º F) |
| Storage Temperature: -20º to 55º C (4º to 131º F) |
| Humidity: 10 to 90% non-condensing |
| System Time Clock-Crystal controlled-1 second resolution |
| Charger/Battery Eliminator: 90-264 VAC 47-63 Hz |
| Display: LCD color touch screen |
| Memory options (must have one): 32M-128M removable compact flashcard |

*Optional Accessories*

- Current Probes: An extensive selection, including:
  - Model TR-2510A 0.1-10 A; up to 0.47” conductors
  - Model TR-2500A 10-500 A; up to 1/8” diameter or 2.5” x 0.2” conductors
  - Model TR-2520A 300-3000 A; up to 2.56” diameter 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: ranging in current from 30-6000 A, 24”, 36”, 48”
- Hall Effect Probes for AC/DC applications, 150 A or 1500 A
- CT Cable Adapter (CA4300LEM)
- Voltage Cable Accessory Pack (VCP4300)
- Soft Carrying Case (SCC-4300)
- External Battery Charger (XBC-PX5)
- Reusable Shipping Container (RSC-4300)
- Weather resistant Container (ENCL-HH)
- Lockable Portable Case (LPC-4300)
- Communications Interface:
  - RS232 FiberOptic Adapter (COMM-RS232)
  - USB FiberOptic Adapter (COMM-OUA)
  - LAN-FiberOptic Adapter (COMM-OEA)
- DRAN-VIEW software: Runs under Windows 98, ME, NT, XP
- NodeLink® with download, setups and meter

**Power Quality Triggers**

- Cycle-by-cycle analysis
- 256 samples/cycle; 1/2 cycle RMS steps (1)
- L-L, L-N, N-G RMS Variations: Sag/swell/intrusions
- RMS Recordings V & I (32 pre-fault, 10K post-fault cycles)
- Waveform Recordings (32 pre-fault, 10K post-fault cycles)
- Low and Medium Frequency Transients - V & I
- High Frequency Transients - V & I, 3% FS trigger
- Harmonics Summary Parameters
- Cross trigger V & I channels
- RMS Event Characterization (IEEE or IEC)
- Transient Event Characterization

**Distortion/Power/Energy**

- W, VA, VAR, TPF, Demand, Energy, etc.
- IEEE 1459 Parameters of distorted and unbalanced Harmonics/Interharmonics per IEC 61000-4-7
- THD/Interharmonic Spectrum (V,L,W) to 6thrd (2)
- THD/Interharmonic Spectrum (V,L,W) to 6thrd (2)
- Flicker per IEC 61000-4-15 (Pst,PII,Sliding PI)
- Crest Factor, K Factor, Transformer Derating Factor, Telephone Interference Factor
- Unbalance (max rms deviation) & sequencing components
- User Spec Harmonics or Signaling Frequency
- Vector/Arithmetic/Coincident Parameters

**Monitoring/Compliance**

- IEEE 1159
- IEC 61000-4-30 Class A
- MIL-STD-1399
- Current Inrush/Energization
- Voltage Fault Recording
- Long Term Monitoring w/min/max/avg
- Continuous Data Logging

**State-of-the-art monitoring of 50/60 and 400 Hertz systems in one instrument**

(1) PX5-400 samples at 32 samples/cycle, 1 cycle steps at 400 Hz. Certain parameters measured at 45-65 Hz range only.

(2) Maximum harmonics to 7th range at 400 Hz.
Troubleshooting
The PowerXplorer PX5-400’s unique annunciator “report card” provides instant power quality answers in the field. A wide range of power monitoring data is collected, analyzed and tabulated in color-coded categories to quickly identify areas of concern, which are identified in red. Drill down for more detailed information by simply touching the intuitive touch screen to locate the source and pinpoint the root cause of power quality disturbances.

Power Measurement
Equipment being used in these applications must be tested in all operating modes, including 400 Hz, to ensure that critical test and operational equipment fits with the power supply. The PowerXplorer PX5-400 collects a range of parameters — from load-related factors such as watts, VA, VAR, frequency stability, power factor and load excursions — to power quality information including sags, swells, transients and harmonics. Users can select the length and mode of data collection, including troubleshooting, data logging, power quality surveys, energy and load balancing.

Fast Transient Capture
The PowerXplorer PX5-400 uses digitized high-speed sampling to capture and analyze microsecond-wide transients (Dranetz 658-like and BMI 8800-like). Transients, generated by fast-switching electronics, computer systems, aircraft components, and load transfer are immediately characterized as impulsive or oscillatory and detailed for further analysis. The PowerXplorer PX5-400 delivers a full profile, with events time-stamped to the millisecond of the entire transient, to pinpoint the exact source and cause of the event.

Power Quality Diagnostics
The PowerXplorer PX5-400 has a built-in event characterizer that labels events to directly support troubleshooting and the gathering of survey data — for improving power quality and equipment reliability, as well as for matching the requirements and susceptibilities of fast equipment to the incoming supply. Plus, the PowerXplorer PX5-400 captures detailed harmonics, interharmonics and subharmonics to effectively troubleshoot the complex problems caused by these events.

Equipment Testing
Evaluating and testing the performance of military components and computerized systems under true operating conditions — 400 Hz or other — is key to ensuring a successful mission. The PowerXplorer PX5-400 incorporates advanced features such as RMS triggers, advanced transient capture, and cross triggering between channels to ensure that all equipment is working properly. Plus, real-time reading observing during testing, startup and maintenance enable users to see results and tweak equipment on-the-fly.

Data can be viewed in real time using scope mode, meter mode, event mode, harmonics spectrum or phasor diagrams. Data is captured on a memory card for analysis, trending, visualization and reporting using industry-leading DRAN-VIEW software. DRAN-VIEW makes it simple to trend events, correlate data, analyze worst-case scenarios, see frequency fluctuations, generate custom reports, and understand complex issues such as transients and harmonics.