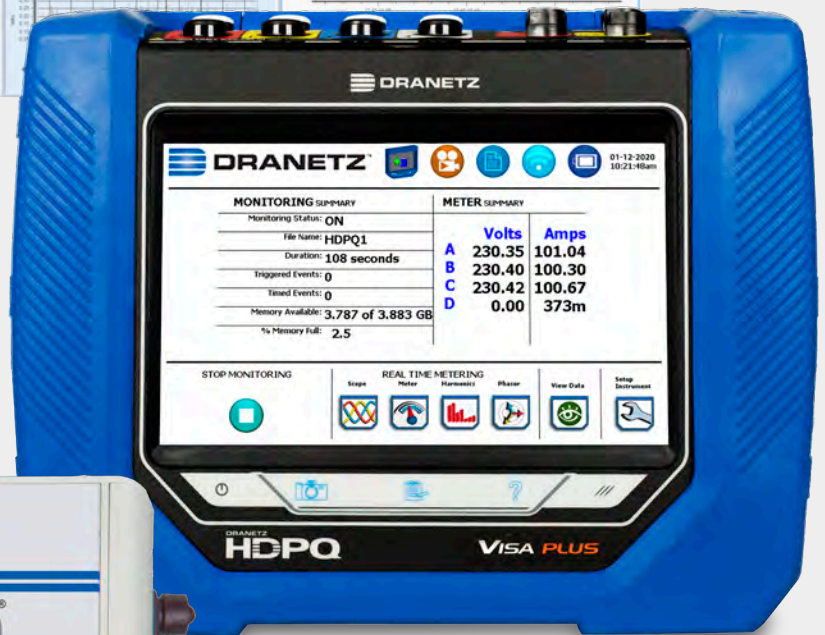
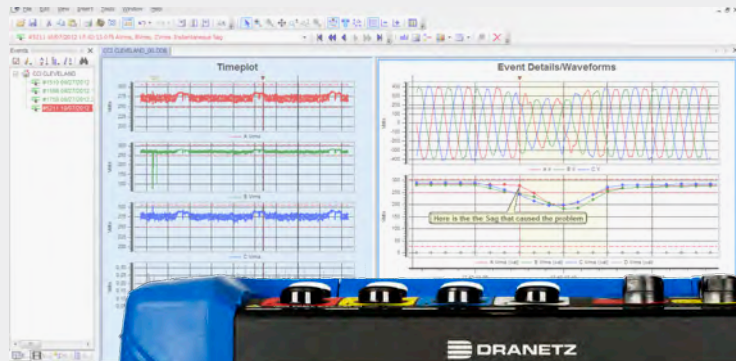


# POWER QUALITY MONITORING

TRUSTWORTHY  
POWER MONITORING



DRANETZ HDPQ® PLUS SERIES



DRANETZ HDPQ® SP SERIES

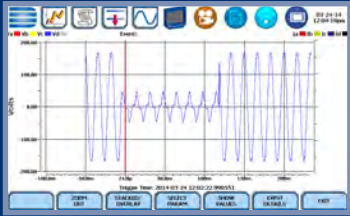
## HDPQ PLUS SERIES

VISA PLUS • GUIDE PLUS • XPLORER PLUS • XPLORER 400 PLUS

## HDPQ SP SERIES

VISA SP • GUIDE SP • XPLORER SP • XPLORER 400 SP

# 50 YEARS OF TRUSTWORTHY MEASUREMENT



PQ Surveys  
IEC 61000-4-30 Class A Ed 3



Transient Recording  
Peak, Waveshape Changes



Harmonics Recording  
IEEE 519-2014, IEC 61000-4-7



Compliance Reporting  
IEEE 519-2014, EN 50160

## DRANETZ HDPQ® FAMILY

- 4 MODELS TO MEET EVERY BUDGET AND APPLICATION
- EACH MODEL IS AVAILABLE IN 2 ENCLOSURES

### DRANETZ HDPQ® PLUS SERIES PORTABLE, 7" DISPLAY



### XPLORER 400 PLUS

### XPLORER PLUS

### VISA PLUS

### GUIDE PLUS

### DRANETZ HDPQ® SP SERIES SP-IP65, PHASE POWERED



### XPLORER 400 SP

### XPLORER SP

### VISA SP

### GUIDE SP

## APPLICATIONS (model dependant)

- PQ Surveys
- Energy/Load Surveys & Studies
- Data Logging
- Substation Monitoring
- DER/Alternative Energy
- Capacitor Testing
- Motor Testing
- Advanced Load Distortion and Imbalance
- Fault Recording/In-Rush
- UPS, Generator Testing/Commissioning
- Transformer/Inrush Testing
- TVSS, Protection Device Testing
- Aircraft/Aviation, Naval



**V & I CONNECTIONS**

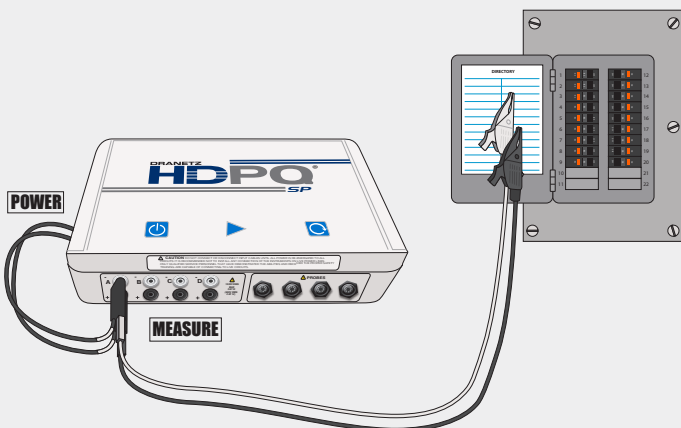
- 1000V CAT III (600V CAT IV)
- AC/DC Differential Voltage & Current Inputs
- DRANFLEX CT's powered by the instrument
- IEC 61000-4-30 Class A Ed. 3 Compliant



**DRANETZ HDPQ VISA SP**  
IP65 Enclosure - No Display, Phase Powered



**DRANETZ HDPQ® PLUS SERIES**  
Portable with 7" Display + Colored Cables



**PHASE POWER ON SP MODELS ONLY**



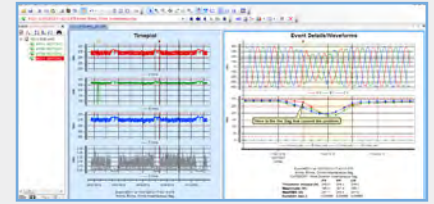
**SAFE REMOTE ACCESSIBILITY VIA DRAN-VIEW® 7, APPS AND VNC**

- Set it and forget it! Hands off for safety.
- Full remote access using ethernet, Wi-Fi (model dependent) and Bluetooth
- Remote control, data analysis & reporting using Dran-View® 7
- Remote control using Android and Apple VNC Apps.



## DRAN-VIEW 7 REMOTE CONTROL, ANALYSIS & REPORTING

- Windows based power quality, demand & energy analysis
- Powerful, yet easy to use
- 64 bit software for speed
- Fully compatible with the Dranetz HDPQ series and most legacy products
- Two versions are available
  - **PRO** for the everyday user (included with most HDPQ Visa packages)
  - **ENTERPRISE** for the advanced user (included with most other HDPQ packages)
- Automatic (or manual) internet updates



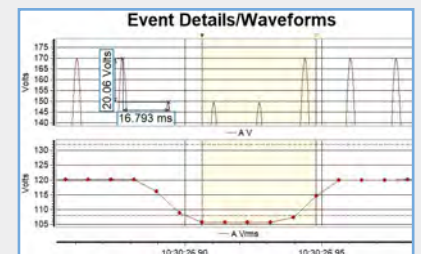
## REAL TIME REMOTE CONTROL OF ALL HDPQ SERIES INSTRUMENTS

- Remotely control the user interface – as if you were in front of the meter (SP included)
- Remote real time metering
- Remote control of all settings
- Remotely download recorded data



## POWERFUL ANALYTICAL TOOLS

- View all recorded instrument data
- Trends, events, waveforms
- Zooming, panning, scrolling and other tools
- Event filtering & sorting
- Rescue kit – correct timestamps, scaling, connections



## REPORTING

- Automatic or manual report generation
- Customizable report contents with YOUR logo
- Compliance reporting – IEEE 519-2014, EN 50160 and more
- Integrated RTF editor

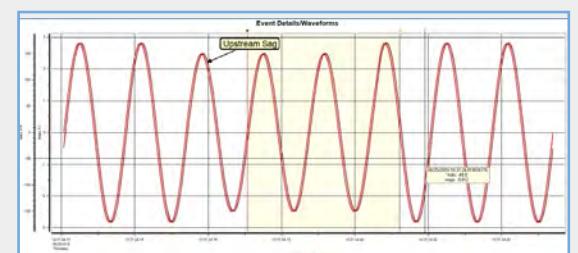
**Event Details/Waveforms**

| Date:            | Interval:        | Statistic:          | Compliance:               |
|------------------|------------------|---------------------|---------------------------|
| 3/14/2020        | Daily            | Very Short (99th)   | Fail                      |
| Nominal voltage: | Nominal current: | Max Demand Current: | Max ShortCircuit Current: |
| 230.00           | 10.33            | 10.33               | 100.00                    |

| Harm: | AV     | AI    | BV     | BI    | CV     | CI    | DV | DI |
|-------|--------|-------|--------|-------|--------|-------|----|----|
| THD   | 39.403 | 0.023 | 39.399 | 0.033 | 39.404 | 0.030 |    |    |
| 2     | 0.008  | 0.007 | 0.010  | 0.008 | 0.011  | 0.007 |    |    |
| 3     | 18.750 | 0.007 | 18.750 | 0.008 | 18.754 | 0.008 |    |    |
| 4     | 0.008  | 0.008 | 0.008  | 0.008 | 0.008  | 0.008 |    |    |
| 5     | 18.750 | 0.008 | 18.750 | 0.008 | 18.750 | 0.008 |    |    |
| 6     | 0.008  | 0.008 | 0.007  | 0.008 | 0.008  | 0.008 |    |    |
| 7     | 18.750 | 0.008 | 18.750 | 0.008 | 18.750 | 0.008 |    |    |
| 8     | 0.008  | 0.008 | 0.007  | 0.008 | 0.008  | 0.008 |    |    |
| 9     | 18.750 | 0.008 | 18.750 | 0.008 | 18.750 | 0.008 |    |    |
| 10    | 0.008  | 0.008 | 0.010  | 0.008 | 0.010  | 0.008 |    |    |
| 11    | 0.007  | 0.008 | 0.008  | 0.008 | 0.008  | 0.008 |    |    |
| 12    | 0.007  | 0.008 | 0.008  | 0.008 | 0.008  | 0.008 |    |    |
| 13    | 0.007  | 0.008 | 0.008  | 0.008 | 0.010  | 0.008 |    |    |
| 14    | 0.007  | 0.008 | 0.008  | 0.008 | 0.008  | 0.008 |    |    |
| 15    | 0.007  | 0.008 | 0.007  | 0.008 | 0.010  | 0.008 |    |    |

## DRAN-VIEW<sup>®</sup> 7 ENTERPRISE ALSO INCLUDES

- Snapshot/Bookmark tool
- Drag & drop charts – customizable appearance
- Insert pictures & photos into charts
- Annotations – add comments to points in charts
- Multisite capabilities – overlay data from different sites
- Math tool – create formulas for custom parameters
- Harmonic generation tool – compute harmonics from any recorded waveforms





# DRANETZ HDPQ FAMILY MODEL SELECTOR

## Visa Plus Visa SP

## Guide Plus Guide SP

## Xplorer Plus Xplorer SP

## Xplorer 400 Plus Xplorer 400 SP

### ENCLOSURE

|                               |                    |                    |                    |                    |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|
| Portable with 7" Touch Screen | HDPQ Plus Portable | HDPQ Plus Portable | HDPQ Plus Portable | HDPQ Plus Portable |
| SP IP65 without display       | HDPQ SP            | HDPQ SP            | HDPQ SP            | HDPQ SP            |

### POWER SUPPLY

|                                  |                    |                    |                    |                    |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|
| AC Mains Power - 90-264, 50/60Hz | HDPQ Plus Portable | HDPQ Plus Portable | HDPQ Plus Portable | HDPQ Plus Portable |
| Phase Powered - 600VAC, 500VDC   | HDPQ SP            | HDPQ SP            | HDPQ SP            | HDPQ SP            |

### MEASUREMENTS & MONITORING

|   |     |        |        |        |
|---|-----|--------|--------|--------|
| Power Quality - Sag, Swell, Interruption  | ○   | ○      | ○      | ○      |
| IEC61000-4-30 Class A Ed. 3 Compliant     | ○   | ○      | ○      | ○      |
| W, VA, VAR, PF, Demand Energy             | ○   | ○      | ○      | ○      |
| Peak & Waveshape Transient Capture        | ○   | ○      | ○      | ○      |
| Harmonics - IEC61000-4-7, IEEE519-2014    | ○   | ○      | ○      | ○      |
| Flicker - IEC61000-4-15, IEEE1453         | ○   | ○      | ○      | ○      |
| Pre/Fault/Post Cycles                     | 100 | 10,000 | 10,000 | 10,000 |
| Pre-Programmed Monitoring Modes           | 7   | 9      | 9      | 9      |
| AnswerModules - Motor Health, Sag, PF Cap |     | ○      | ○      | ○      |
| High Speed Transient Capture              |     |        | ○      | ○      |
| 400 HZ Measurements                       |     |        |        | ○      |

### COMMUNICATIONS

|  |   |   |   |   |
|--|---|---|---|---|
| Ethernet   | ○ | ○ | ○ | ○ |
| Wi-Fi  |   | ○ | ○ | ○ |
| USB  | ○ | ○ | ○ | ○ |
| Dran-View 7 Full Remote Control & Data Downloading | ○ | ○ | ○ | ○ |
| Apple & Android VNC Apps - Full Remote Control     | ○ | ○ | ○ | ○ |
| GPS Time Synch (optional)                          | ○ | ○ | ○ | ○ |

### APPLICATIONS

|  |   |   |   |   |
|--|---|---|---|---|
| PQ Surveys                             | ○ | ○ | ○ | ○ |
| Energy/Load Surveys & Studies          | ○ | ○ | ○ | ○ |
| Data Logging                           | ○ | ○ | ○ | ○ |
| Substation Monitoring                  | ○ | ○ | ○ | ○ |
| DER/Alternative Energy                 | ○ | ○ | ○ | ○ |
| Capacitor Testing                      | ○ | ○ | ○ | ○ |
| Motor Testing                          |   | ○ | ○ | ○ |
| Advanced Load Distortion and Imbalance |   | ○ | ○ | ○ |
| Fault Recording / In-Rush              |   | ○ | ○ | ○ |
| UPS, Generator Testing/Commissioning   |   | ○ | ○ | ○ |
| Transformer/Inrush testing             |   | ○ | ○ | ○ |
| TVSS, Protection Device Testing        |   |   | ○ | ○ |
| Aircraft/Aviation, Naval               |   |   |   | ○ |

# TECHNICAL DATA

## MEASURED PARAMETERS

- (4) Differential Voltage: 512 s/c, 16 bit resolution  
0-1000Vrms, AC/DC,  $\pm 0.1\%$  reading,  $<40V \pm 0.5\%$  FS  
IEC 61000-4-30 Class A: 60-1000Vrms,  $\pm 0.1\%$  of  $U_{din}$ , range of 10%-150% of  $U_{din}$   
Transients: 0-1414Vpk,  $\pm 0.2\%$  of  $U_{din}$   
Transients - High Speed: 1MHz (Xplorer/400), 10-2000 Vpk,  $\pm 10\%$  of reading,  $\pm 0.5\%$  FS
- (4) Current: 512 s/c, 16 bit resolution  
Range probe dep., AC/DC,  $\pm 0.1\%$  reading  $\pm 0.05\%$  FS

## FREQUENCY:

16-25Hz, 42.5-69Hz,  $\pm 0.01$ Hz

## CALCULATED PARAMETERS

### POWER/ENERGY - 1 SECOND SAMPLING

Real Power (W) - P: meets 0.2S requirements, range probe dep.  
Apparent Power (VA) - S: meets 0.2S requirements, range probe dep.  
Reactive Power (var) - Q: meets 0.2S requirements, range probe dep.  
Power Factor (W/VA) - "true" -1 to 0 to +1  
Displacement PF -1 to 0 to +1  
Demand (in W): meets 0.2S requirements, range probe dep.  
Energy (in Wh): meets 0.2S requirements, range probe dep.

### DISTORTION - 200MS, 3 SEC, 10 MIN WINDOWS

Vthd: 0-100%,  $\pm 5\%$  for  $V \geq 10\%$   $V_{nom}$ ,  
V Ind Harm: DC, 2-127,  $\pm 5\%$  for  $V \geq 10\%$   $V_{nom}$   
Ithd: 0-100%,  $\pm 5\%$  for  $I \geq 10\%$   $I_{nom}$ ,  
I Ind Harm: DC, 2-63,  $\pm 5\%$  for  $I \geq 10\%$   $I_{nom}$

## MISC.

Pst - 10 minutes: 0.2-10,  $\pm 0.05$  @ Pst=1  
Plt - 2 hours: 0.2-10,  $\pm 0.05$  @ Pst=1

## EASE OF USE FEATURES

Automatic Setups  
Pre-programmed monitoring modes  
Dashboards - PQ, Demand & Energy  
Simultaneous PQ, Demand & Energy Monitoring  
Mini Report

## STANDARDS COMPLIANCE

### POWER QUALITY

IEC 61000-4-30 Class A Edition 3 Compliant  
IEEE 1159: 2009

### POWER

IEEE 1459: 2000

## STANDARDS COMPLIANCE (CONTINUED)

### HARMONICS

IEC 61000-4-7 Class 1: Edition 2 (2008)  
IEEE 519: 2014

### VOLTAGE FLICKER

IEC 61000-4-15: Edition 2 (2010)  
IEEE 1453: 2011

### COMPLIANCE/TESTING

EN 50160: 2010

## GENERAL SPECIFICATIONS

### DRANETZ HDPQ PLUS SERIES

Size: (10" w x 8" h x 2.75" d), (25.4cm x 20.3cm x 7.00cm)

Weight: 4.2lbs, 2kg

Operating temperature: 0 to 50 deg C (32 to 122 deg F)

Storage temperature: -20 to 55 deg C (-4 to 131 deg F)

Humidity: 10-90% non condensing

Run time on full charge: 3 hrs Visa/Guide, 2.5hrs Xplorer/400, 3 hours charge time

AC Power: 90-264(max) 50/60Hz

Display: 7" WVGA color graphic, Icon based touch LCD, LED Backlit

### DRANETZ HDPQ SP SERIES- IP65 ENCLOSURE

Size: (11" w x 6.5" h x 2.5" d), (27.9cm x 16.5cm x 6.4cm)

Weight: 3.2lbs, 1.45kg

Operating temperature: -10 to 50 deg C (14 to 122 deg F)

Storage temperature: -40 to 85 deg C (-40 to 185 deg F)

Humidity: 10-90% non condensing

30 minutes run time on full charge, 3 hours charge time

AC /DC Power: 90-600V AC / 500 DC Max CAT IV, 50/60Hz 30W Max

Clock accuracy and resolution

Internal:  $\pm 1$  sec/day at 25deg C

NTP:  $\pm 10$  msec

GPS:  $\pm 1$  msec

Memory size: 4GB

Languages: English, German, Spanish, French, Italian, Swedish, Finnish, Polish, Chinese (traditional and simplified), Thai, Korean

## COMMUNICATIONS

Ethernet, 802.11 b/g/n Wi-Fi (not available in Visa Plus/SP)

USB

Bluetooth via USB adapter (optional)

VNC remote control

Android® & Apple® VNC App

## COMMON ACCESSORIES



FLEX CT'S



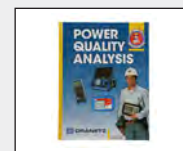
CLAMP CT'S



ENCLOSURES



MAGNETIC MOUNT



BOOKS



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