

# Permanent Power Quality Product Catalog



Published by Dranetz  
1000 New Durham Road  
Edison, NJ 08817 USA  
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Web site: [www.dranetz.com](http://www.dranetz.com)  
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Printed in the United States of America.



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## HDPQ-DN-MVS (Screw Terminal Measurement Connectors)

### HDPQ-DN-MVS Specifications

#### Voltage

Channels: (4) differential inputs, AC/DC  
 Sampling: 512 samples/cycle, 16bit A/D, synchronous sampling  
 Range: 1-600 Vac/Vdc  
 Full Scale Accuracy: 0-600V +/- 0.1% reading, <40V +/- 0.5% full scale  
 Frequency: 50Hz, 60Hz  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 127th  
 Input impedance: 10MΩ to ground  
 Screw terminals for voltage

#### Current

Channels: (4) differential inputs, AC/DC  
 Sampling 512 samples/cycle, 16 bit A/D  
 Range: CT dependent. 1.5Vrms FS, 5A or 1A  
 Accuracy: 0.1% reading. Does not include CT.  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 63rd  
 Screw terminals for current

#### Digital Input (optional)

Range: 0 – 200VDC  
 1KHz sampling, Edge or level triggered  
 Logic programmed by user (active high or active low)  
 Timed stamped to the millisecond  
 Screw terminals

#### Memory

4GB internal flash

#### Monitoring Compliance

IEC61000-4-30 Class A Edition 3 – Certified by an independent laboratory  
 IEC61000-4-7, IEC61000-4-15  
 EN50160, NVE, IEEE 1159, IEEE 1453, IEEE 519:2014

#### Communications

Standard: RJ45 TCP/IP Ethernet, USB  
 Optional: 3G/4G cellular  
 Protocols: XML, Modbus TCP, DNP3  
 Time synchronization: NTP, optional internal GPS or IRIG-B

#### Instrument Power

90 to 250V AC 50-60Hz  
 100 to 300V DC  
 15 minute internal UPS (user replaceable battery)

#### Environmental

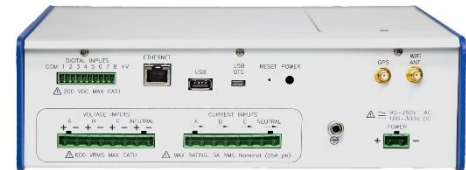
Operating temperature: 0 to 55°C  
 Humidity: 5 to 95%, non-condensing, indoor use only

#### Safety and Compliance

UL, CE, ISO9001



Front view



Back view





## HDPQ-DN-MZP (Pod connections for use with Dranetz voltage and current pods)

### HDPQ-DN-MZP Specifications

#### Voltage

Channels: (4) differential inputs, AC/DC  
 Sampling: 512 samples/cycle, 16bit A/D, synchronous sampling  
 Range: 1-600 Vac/Vdc  
 Full Scale Accuracy: 0-600V +/- 0.1% reading, <40V +/- 0.5% full scale  
 Frequency: 50Hz, 60Hz  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 127th  
 Input impedance: 10MΩ to ground  
 Pod connections for use with Dranetz voltage pods (sold separately)

#### Current

Channels: (4) differential inputs, AC/DC  
 Sampling 512 samples/cycle, 16 bit A/D  
 Range: Pod & CT dependent. 1.5Vrms FS, 5A or 1A  
 Accuracy: 0.1% reading. Does not include CT.  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 63rd  
 Pod connections for use with Dranetz current pods (sold separately)

#### Digital Input (optional)

Range: 0 – 200VDC  
 1KHz sampling, Edge or level triggered  
 Logic programmed by user (active high or active low)  
 Timed stamped to the millisecond  
 Screw terminals

#### Memory

4GB internal flash

#### Monitoring Compliance

IEC61000-4-30 Class A Edition 3 – Certified by an independent laboratory  
 IEC61000-4-7, IEC61000-4-15  
 EN50160, NVE, IEEE 1159, IEEE 1453, IEEE 519:2014

#### Communications

Standard: RJ45 TCP/IP Ethernet, USB  
 Optional: 3G/4G cellular  
 Protocols: XML, Modbus TCP, DNP3  
 Time synchronization: NTP, optional internal GPS or IRIG-B

#### Instrument Power

90 to 250V AC 50-60Hz  
 100 to 300V DC  
 15 minute internal UPS (user replaceable battery)

#### Environmental

Operating temperature: 0 to 55°C  
 Humidity: 5 to 95%, non-condensing, indoor use only

#### Safety and Compliance

UL, CE, ISO9001



Front view



Back view



## HDPQ-DN-MVB (Safety connectors for voltage, Dranetz TR connectors for Flex and clamp-on CT's)

### HDPQ-DN-MVB Specifications

#### Voltage

Channels: (4) differential inputs, AC/DC  
 Sampling: 512 samples/cycle, 16bit A/D, synchronous sampling  
 Range: 1-600 Vac/Vdc  
 Full Scale Accuracy: 0-600V +/- 0.1% reading, <40V +/- 0.5% full scale  
 Frequency: 50Hz, 60Hz  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 127th  
 Input impedance: 10MΩ to ground  
 Safety connectors for voltage (Includes Voltage Cable Set)

#### Current

Channels: (4) differential inputs, AC/DC  
 Sampling 512 samples/cycle, 16 bit A/D  
 Range: CT dependent. 1.5Vrms FS, 5A or 1A  
 Accuracy: 0.1% reading. Does not include CT.  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 63rd  
 Dranetz TR connectors for Flex and clamp-on CT's (sold separately)

#### Digital Input (optional)

Range: 0 – 200VDC  
 1KHz sampling, Edge or level triggered  
 Logic programmed by user (active high or active low)  
 Timed stamped to the millisecond  
 Screw terminals

#### Memory

4GB internal flash

#### Monitoring Compliance

IEC61000-4-30 Class A Edition 3 – Certified by an independent laboratory  
 IEC61000-4-7, IEC61000-4-15  
 EN50160, NVE, IEEE 1159, IEEE 1453, IEEE 519:2014

#### Communications

Standard: RJ45 TCP/IP Ethernet, USB  
 Optional: 3G/4G cellular  
 Protocols: XML, Modbus TCP, DNP3  
 Time synchronization: NTP, optional internal GPS or IRIG-B

#### Instrument Power

90 to 250V AC 50-60Hz  
 100 to 300V DC  
 15 minute internal UPS (user replaceable battery)

#### Environmental

Operating temperature: 0 to 55°C  
 Humidity: 5 to 95%, non-condensing, indoor use only

#### Safety and Compliance

UL, CE, ISO9001



Front view



Back view



## HDPQ-DN-MVSTR (Screw terminals for voltage, Dranetz TR connectors for Flex and clamp-on CT's)

### HDPQ-DN-MVSTR Specifications

#### Voltage

Channels: (4) differential inputs, AC/DC  
 Sampling: 512 samples/cycle, 16bit A/D, synchronous sampling  
 Range: 1-600 Vac/Vdc  
 Full Scale Accuracy: 0-600V +/- 0.1% reading, <40V +/- 0.5% full scale  
 Frequency: 50Hz, 60Hz  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 127th  
 Input impedance: 10MΩ to ground  
 Screw terminals for voltage

#### Current

Channels: (4) differential inputs, AC/DC  
 Sampling 512 samples/cycle, 16 bit A/D  
 Range: CT dependent. 1.5Vrms FS, 5A or 1A  
 Accuracy: 0.1% reading. Does not include CT.  
 Harmonics: Per IEC 61000-4-7, individual harmonics to the 63rd  
 Dranetz TR connectors for Flex and clamp-on CT's (sold separately)

#### Digital Input (optional)

Range: 0 – 200VDC  
 1KHz sampling, Edge or level triggered  
 Logic programmed by user (active high or active low)  
 Timed stamped to the millisecond  
 Screw terminals

#### Memory

4GB internal flash

#### Monitoring Compliance

IEC61000-4-30 Class A Edition 3 – Certified by an independent laboratory  
 IEC61000-4-7, IEC61000-4-15  
 EN50160, NVE, IEEE 1159, IEEE 1453, IEEE 519:2014

#### Communications

Standard: RJ45 TCP/IP Ethernet, USB  
 Optional: 3G/4G cellular  
 Protocols: XML, Modbus TCP, DNP3  
 Time synchronization: NTP, optional internal GPS or IRIG-B

#### Instrument Power

90 to 250V AC 50-60Hz  
 100 to 300V DC  
 15 minute internal UPS (user replaceable battery)

#### Environmental

Operating temperature: 0 to 55°C  
 Humidity: 5 to 95%, non-condensing, indoor use only

#### Safety and Compliance

UL, CE, ISO9001



Front view

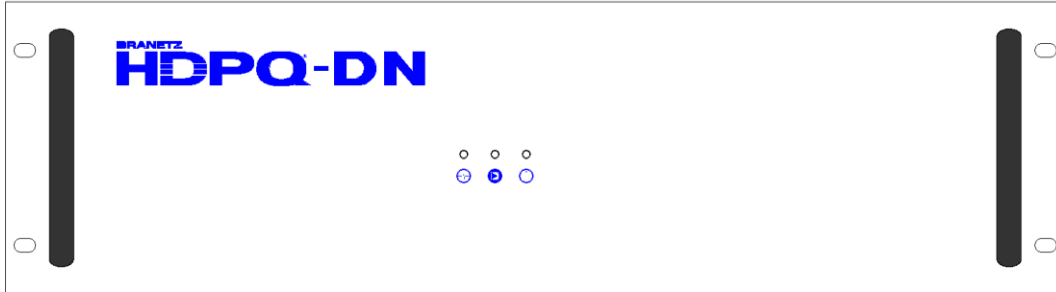


Back view



# HDPQ-DN Mounting Options

## HDPQ-DN-RMTS



HDPQ-DN 19" Rack mount

## 61BRKTS



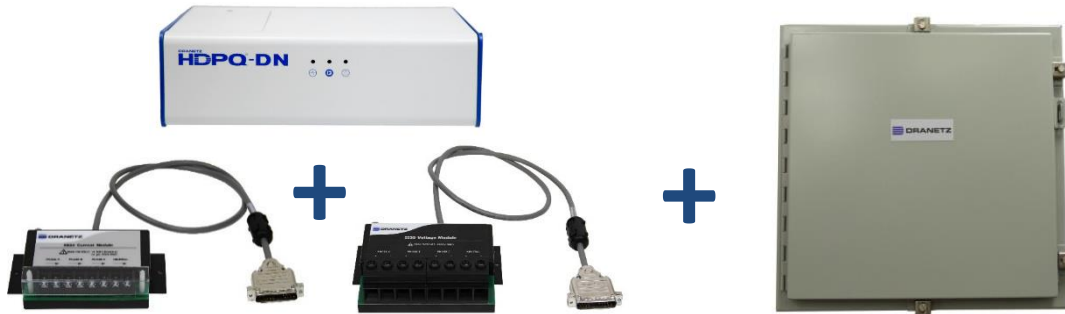
61STD Wall mounting Brackets (pair)





# HDPQ-DN Enclosure Options

## HDPQ-DN-QENCL (Enclosure Only)



Metal weather resistant enclosure.  
 Fits one HDPQ-DN mainframe and up to 2 Voltage or Current Pods.

**Dimensions:**  
 20" L x 20" W x 8" D  
 (50.8cm x 50.8cm x 20cm)

## HDPQ-DN-WENCL (Enclosure Only)



Weather resistant enclosure.

**Dimensions:**  
 16.75" L x 12" W x 8" D  
 (42.5cm x 30.5cm x 20cm)

## AMPOLEMNT14 (Pole Mount Only)



61WENCL Pole mount kit.



## HDPQ-DN Voltage Pods

### 5536 Voltage Pod



#### 5536VPOD

- 4 differential Inputs
- Accepts four 5 - 600 Vrms (AC/DC), 1000 Vpk
- Phase A, B, C voltage, plus neutral to ground
- Neutral to ground voltage range: 0.5 - 20 Vrms (AC/DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

### 5539 Voltage Pod



#### 5539VPOD

- 4 differential Inputs
- Accepts four 5 - 1000 Vrms (AC/DC), 1414 Vpk
- Phase A, B, C voltage, plus neutral to ground
- Neutral to ground voltage range: 0.5 - 20 Vrms (AC/DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

## HDPQ-DN Current Pods

### 5533 Current Pod



#### 5533APOD

- 4 differential Inputs
- Accepts four 0.01-5 Arms, 100 Apk
- Allows pass thru wire up to #10 AWG
- The current tube diameter is 0.215" (5.461mm)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale
- 20X over current, High fault current application

### 5534 Current Pod



#### 5534APOD

- 4 differential Inputs
- Accepts four 0.01-1 Arms, 5A pk
- Allows connection up to #12 AWG wire
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

### 5537 Current Pod



#### 5537APOD

- 4 differential Inputs
- Accepts four 0.01-5 Arms, 25A pk
- Allows connection up to #12 AWG wire
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

### 5538 Current Pod



#### 5538APOD

- Same as 5537APOD with one 'TR' connector for Ch. D
- 4 differential Inputs
- Accepts four 0.01-5 Arms, 25A pk
- Allows connection up to #12 AWG wire
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale
- Typically for DC Current measurement on a UPS



## HDPQ-DN Pod Accessory Cables

### TRTO55



TR Type Current cable adapter for  
Dranetz clamp & flex CT's

### BNCTO55



Current cable adapter with BNC connector

### PODEXTKIT



#### Voltage & Current POD Extension Cable

Requires connector kit + wire (charged per foot) 50 ft  
max

**116836-G1** Connector kit. One per cable

**901084** Wire. Enter # of feet. (50 ft max)



# HDPQ-DN Communication and Time Synchronization Options

## GPS Antenna Cable Assembly



- 61GPSANT10** - GPS antenna 10' cable, only for use on mainframes with GPS receiver.
- 61GPSANT25** - GPS antenna 25' cable, only for use on mainframes with GPS receiver.
- 61GPSANT50** - GPS antenna 50' cable, only for use on mainframes with GPS receiver.
- 61GPSANT100** - GPS antenna 100' cable, only for use on mainframes with GPS receiver.

**10BTSTD**



10 Base T standard 6' cable

**10BTNUL**



10 Base T Null 6' cable

### HDPQ-DN-WIFI

**WiFi Antenna (Optional)** – Use for wireless connectivity via a factory-installed WiFi card (**Not user installable**)

### HDPQ-DN GPS

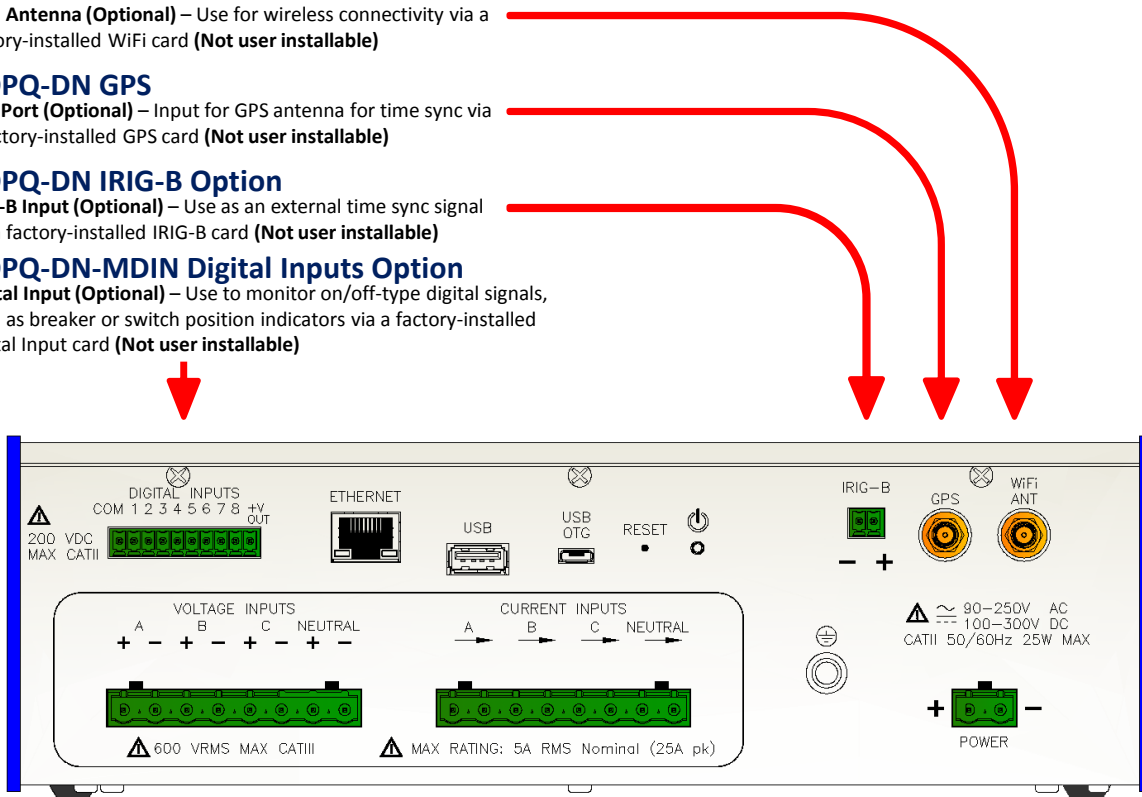
**GPS Port (Optional)** – Input for GPS antenna for time sync via a factory-installed GPS card (**Not user installable**)

### HDPQ-DN IRIG-B Option

**IRIG-B Input (Optional)** – Use as an external time sync signal via a factory-installed IRIG-B card (**Not user installable**)

### HDPQ-DN-MDIN Digital Inputs Option

**Digital Input (Optional)** – Use to monitor on/off-type digital signals, such as breaker or switch position indicators via a factory-installed Digital Input card (**Not user installable**)



# HDPQ-DN Battery and Optional Power Cords

## BP-HDPQ-DN (Standard Accessory)



Battery for HDPQ-DN.

## HDPQ-DN-PWR-US



HDPQ-DN US Power Cord. (Optional Accessory)

## HDPQ-DN-PWR-EU



HDPQ-DN Euro Power Cord. (Optional Accessory)

## HDPQ-DN-PWR-UK



HDPQ-DN UK Power Cord. (Optional Accessory)

## HDPQ-DN-PWR-AU



HDPQ-DN AU Power Cord. (Optional Accessory)





# PQ3K



The PQ3K is a cost effective monitoring solution that combines general purpose PQ detection (with waveform recording) and 4 quadrant energy monitoring in one instrument. Wide-ranging applications include utility, facility, manufacturing, petro chemical, mission critical and more. The PQ3K is housed in a 144mm x 144mm panel mounted enclosure with a high resolution, color TFT display.

The PQ3K is configured by selecting options to create a part number to order. The format is: PQ3K-1|2|3|4|5|6|7|8. Each number to the right of the '-' is an option position which is listed below. To create a PQ3K part number, you must select the option for all 8 positions. If the option is not required, select the 'without' code for that position.

Part Number	Description
PQ3K-	Base PQ3K. 144mm x 144mm panel mounted

01. Basic device	
1	Base with TFT

02. Input/frequency range	
1	4 current inputs, 42..50/60..69,5Hz

03. Power supply - Choose one	
1	110...230 V AC, 130...230 V DC
2	24...48 V DC
3	110...200 V AC, 110...200 VDC

04. Bus connection - Choose one	
1	Ethernet (Modbus/TCP protocol)
2	Ethernet (Modbus/TCP) + RS-485

05. Extension 1 - Choose one	
0	Without
1	2 relays (change-over contact)
2	2 analog outputs +/-20mA
3	4 analog outputs +/-20mA
4	4 digital inputs passive
5	4 digital inputs active
6	Fault current detection, 2 channels
7	GPS connection module
C	Temperature monitoring, 2 channels

06. Extension 2 - Choose one	
0	Without
1	2 relays (change-over contact)
2	2 analog outputs +/-20mA
3	4 analog outputs +/-20mA
4	4 digital inputs passive
5	4 digital inputs active
6	Fault current detection, 2 channels
7	GPS connection module
A	Profinet interface
B	IEC61850 interface
C	Temperature monitoring, 2 channels

07. Extension 3 - Choose one	
0	Without
1	2 relays (change-over contact)
2	2 analog outputs +/-20mA
3	4 analog outputs +/-20mA
4	4 digital inputs passive
5	4 digital inputs active
6	Fault current detection, 2 channels
8	Uninterruptible power supply
C	Temperature monitoring, 2 channels

08. Test certificate - Choose one	
0	Without
1	Test certificate in English

Accessories	
181131	GPS receiver 16x-LVS, programmed



# PQ5K



The PQ5K is a cost effective monitoring solution that combines general purpose PQ detection (with waveform recording) and 4 quadrant energy monitoring in one instrument. Wide-ranging applications include utility, facility, manufacturing, petro chemical, mission critical and more. The PQ5K is housed in a DIN mounted enclosure with an option for a high resolution, color TFT display.

The PQ5K is configured by selecting options to create a part number to order. The format is: PQ5K-1|2|3|4|5|6|7|8. Each number to the right of the '-' is an option position which is listed below. To create a PQ5K part number, you must select the option for all 8 positions. If the option is not required, select the 'without' code for that position.

Part Number	Description
PQ5K-	Base PQ5K. DIN Mounted
<b>01. Basic device - Choose one</b>	
0	Base PQ5K without TFT display.
1	Base PQ5K with TFT display.
<b>02. Input/frequency range</b>	
1	4 current inputs, 42..50/60..69,5Hz
<b>03. Power supply - Choose one</b>	
1	Nominal voltage 100...230 V AC/DC
2	Nominal voltage 24...48 V DC
<b>04. Bus connection - Choose one</b>	
1	RS485 + Ethernet (Web, Modbus)
<b>05. Uninterruptable power supply - Choose one</b>	
0	Without
1	With uninterruptible power supply
<b>06. Extension 1 - Choose one</b>	
0	Without
1	2 relays (change-over contact)
2	2 analog outputs +/-20mA
3	4 analog outputs +/-20mA
4	4 digital inputs passive
5	4 digital inputs active
6	Fault current detection, 2 channels
7	GPS connection module
A	Profinet interface
B	IEC61850 interface
C	Temperature monitoring, 2 channels
<b>07. Extension 2 - Choose one</b>	
0	Without
1	2 relays (change-over contact)
2	2 analog outputs +/-20mA
3	4 analog outputs +/-20mA
4	4 digital inputs passive
5	4 digital inputs active
6	Fault current detection, 2 channels
8	Uninterruptible power supply
C	Temperature monitoring, 2 channels
<b>08. Test certificate - Choose one</b>	
0	Without
1	Test certificate in English
<b>Accessories</b>	
181131	GPS receiver 16x-LVS, programmed



# Energy DataNodes



The Encore Series (ES210, ES220, ES230 and ES230S) family of energy monitors are compact, cost effective and easy to use. They record all of the parameters to fit any electrical energy application, and have several options for communications including Ethernet and Serial. Combined with the Encore Series software, this enables users to monitor, record, and report on all energy management initiatives.

## ES210 Energy DataNodes

### *Without Communications*

- ES2105A** EMS DataNode, 5A, 85-253Vac/DC, 96mm x 96mm. No communications.
- ES2101A** EMS DataNode, 1A, 85-253Vac/DC, 96mm x 96mm. No communications.

### *With 10/100baseT Ethernet Communications, MODBUS TCP*

- ES2105AE** EMS DataNode, 5A, 85-253Vac/DC, 96mm x 96mm. Ethernet communications.
- ES2101AE** EMS DataNode, 1A, 85-253Vac/DC, 96mm x 96mm. Ethernet communications.

### *With RS232/RS485 Serial Communications, MODBUS RTU*

- ES2105AS** EMS DataNode, 5A, 85-253Vac/DC, 96mm x 96mm. Serial communications.
- ES2101AS** EMS DataNode, 1A, 85-253Vac/DC, 96mm x 96mm. Serial communications.

## ES220 Energy DataNodes

### *Without Communications*

- ES2205A** EMS DataNode, 5A, 85-253Vac/DC, 144mm x 144mm. No communications.
- ES2201A** EMS DataNode, 1A, 85-253Vac/DC, 144mm x 144mm. No communications.

### *With 10/100baseT Ethernet Communications, MODBUS TCP*

- ES2205AE** EMS DataNode, 5A, 85-253Vac/DC, 144mm x 144mm. Ethernet communications.
- ES2201AE** EMS DataNode, 1A, 85-253Vac/DC, 144mm x 144mm. Ethernet communications.

### *With RS232/RS485 Serial Communications, MODBUS RTU*

- ES2205AS** EMS DataNode, 5A, 85-253Vac/DC, 144mm x 144mm. Serial communications.
- ES2201AS** EMS DataNode, 1A, 85-253Vac/DC, 144mm x 144mm. Serial communications.

## ES230 Energy DataNodes

### *Without Communications*

- ES2305A** EMS DataNode, harmonics, 5A, 85-253Vac/DC, 144mm x 144mm. No communications.
- ES2301A** EMS DataNode, harmonics, 1A, 85-253Vac/DC, 144mm x 144mm. No communications.
- ES23055A** EMS DataNode, harmonics, 5A, 85-253Vac/DC, 96mm x 96mm. No communications.
- ES230S1A** EMS DataNode, harmonics, 1A, 85-253Vac/DC, 96mm x 96mm. No communications.

### *With 10/100baseT Ethernet Communications, MODBUS TCP*

- ES2305AE** EMS DataNode, harmonics, 5A, 85-253Vac/DC, 144mm x 144mm. Ethernet communications.
- ES2301AE** EMS DataNode, harmonics, 1A, 85-253Vac/DC, 144mm x 144mm. Ethernet communications.
- ES23055AE** EMS DataNode, harmonics, 5A, 85-253Vac/DC, 96mm x 96mm. Ethernet communications.
- ES230S1AE** EMS DataNode, harmonics, 1A, 85-253Vac/DC, 96mm x 96mm. Ethernet communications.

### *With RS232/RS485 Serial Communications, MODBUS RTU*

- ES2305AS** EMS DataNode, harmonics, 5A, 85-253Vac/DC, 144mm x 144mm. Serial communications.
- ES2301AS** EMS DataNode, harmonics, 1A, 85-253Vac/DC, 144mm x 144mm. Serial communications.
- ES23055AS** EMS DataNode, harmonics, 5A, 85-253Vac/DC, 96mm x 96mm. Serial communications.
- ES230S1AS** EMS DataNode, harmonics, 1A, 85-253Vac/DC, 96mm x 96mm. Serial communications.
- ES230RS232** RS232 Interface Cable

## ES Series Misc. options

- EMMOD201** RS232/RS485 Communications module, MODBUS RTU.
- EMMOD203** Ethernet Communications module, MODBUS TCP.
- ESDIN** DIN Rail Mount. **FOR ES210 & ES230s ONLY**
- 117872-G1** Enclosure for ES220 and ES230 (not for ES210 or ES230s)



# ADAM 6000 Data Acquisition DataNode's

The Encore Series™ readily interfaces with and acquires data from the popular Advantech® ADAM-6000 series data acquisition and control modules. This added feature enables the Encore Series™ to record process control environment parameters such as temperature, pressure, rotation, torque, tension, speed, vibration, and pulse counts at approximately a one second sample rate.

## ADAM-6000 Modules



### ADAM-6015 7 Channel RTD (temperature) input Module

The ADAM-6015 7-channel RTD input module accepts a wide range of RTD sensor types, including Pt100, Pt1000, Ni50, Ni508, and Balco 500 series. Multi input ranges are allowed in one module, creating a cost-effective solution. Most important of all, the ADAM-6015 supports open wiring diagnostic function which warns operators when the sensor wire has been broken. It specifically aims at building and factory temperature monitoring applications.



### ADAM-6017 8 Channel Analog Input Module

The ADAM-6017 is designed with 8 analog inputs and 2 digital outputs to satisfy all plant needs. Each analog channel is allowed to configure an individual range for variety of applications. ( $\pm 150\text{ mV}$   $\pm 500\text{ mV}$   $\pm 1\text{ V}$   $\pm 5\text{ V}$   $\pm 10\text{ V}$ ,  $0\sim 150\text{ mV}$ ,  $0\sim 500\text{ mV}$ ,  $0\sim 1\text{V}$ ,  $0\sim 5\text{V}$ ,  $0\sim 10\text{V}$ ). Sampling rate of 10 or 100 sample/second.



### ADAM-6018 8-ch Isolated Thermocouple Input Modbus TCP Module with 8-ch DO

The ADAM-6018 8-channel thermocouple input module is the most prevailing temperature sensor in today's industrial automation market. In addition to 8 T/C input channels, the ADAM-6018 is also equipped with 8 digital output channels such as auxiliary alarm outputs or pure outputs. Last but not least, the ADAM-6018 comes with an external DIN-rail terminal board for wiring between the ADAM-6018 module and the field sensor. This special wiring mechanism greatly enhances the accuracy and reliability for thermocouple measurement in environmental and facility monitoring applications.



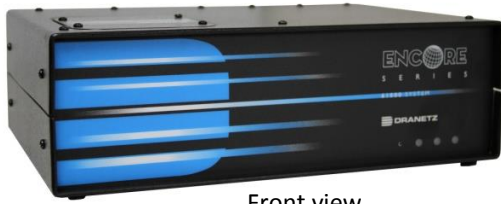
### ADAM-6022 Ethernet-based Dual-loop PID Controller

The ADAM-6022 is an Ethernet-enabled dual-loop PID controller for general purposed PID control applications. A user-friendly utility software is included for users to set PID parameters (Pv, Mv, & Sv). Through the integrated web page, users can monitor and change the control set point through the Internet via web browser. The ADAM-6022 also supports MODBUS/TCP protocol. HMI software can easily access this module to monitor the I/O data and change the control parameters.

\* Requires the purchase of the optional SW MODBUS Answer Module for use with ESS.



## 61STD-PQ



Front view



Back view

### 61STD-PQ DataNode® Specifications

#### Voltage

Channels: (4) differential inputs, AC/DC  
 Sampling: 512 samples/cycle, 16bit A/D, synchronous sampling  
 Range: 1-600 Vrms, +/- 1000VPK, Frequency: 16/20Hz, 50Hz, 60Hz  
 Full Scale Accuracy: 0-600V 0.1% reading +/- 0.05% full scale, 7KHz bandwidth for low/medium  
 Input impedance: 10MΩ to ground  
 Screw terminals 61MVS

#### Current

Channels: (4) differential inputs, AC/DC  
 Sampling 512 samples/cycle, 16 bit A/D.  
 Range: Full scale current = 1.5Vrms, crest factor of 3  
 Accuracy: 0.1% reading +/- 0.05% full scale, 3KHz bandwidth for low/ medium freq. transients. Does not include CT.  
 Screw terminals 61MAS5

#### Memory

1GB internal flash

#### Monitoring Compliance

IEC61000-4-30:2008 Class A, IEC61000-4-7, IEC61000-4-15  
 EN50160, NVE, IEEE1159, IEEE1453, IEEE519, IEEE1459

#### Communications

Standard: RJ45 TCP/IP Ethernet, RS232/RS485  
 Protocols: XML, Modbus TCP/RTU, HTTP, (IEC 61850 optional)  
 Time synchronization: NTP, optional GPS


#### Instrument Power

Standard: 90 to 264VAC 47-63Hz  
 15 minute internal UPS (specified with display & 4 modules)  
 Battery is replaceable in the field  
 Din Rail power supply (61DINPWR12VDC) optional

#### Environmental

Operating temperature: -10 to 60°C  
 Humidity: 10 to 95%, non-condensing, indoor use only

#### Safety and Compliance

ISO9001, CE, 

#### Power Supply Options Please choose ONE

- 61PSAC-US** 100-250VAC Power supply, US AC Power Cord   
  **61PSAC-EURO** 100-250VAC Power supply, EURO AC Power Cord  
 **61PSAC-UK** 100-250VAC Power supply, UK AC Power Cord   
  **61PSAC-AUST** 100-250VAC Power supply, AUST AC Power Cord  
 **61DINPWR12VDC** 85-264VAC or 90-375VDC input Din Rail power supply, 12 VDC output (see page 23)





## 61SG-PQ



Front view



Back view

### 61SG-PQ DataNode® Specifications

#### Voltage

Channels: (4) differential inputs, AC/DC

Sampling: 512 samples/cycle, 16bit A/D, synchronous sampling

Range: 1-600 Vrms, +/- 1000VPK, Frequency: 16/20Hz, 50Hz, 60Hz

Full Scale Accuracy: 0-600V 0.1% reading +/- 0.05% full scale, 7KHz bandwidth for low/medium

Input impedance: 10MΩ to ground

Screw terminals 61MVS

#### Current

Channels: (4) differential inputs, AC/DC

Sampling 512 samples/cycle, 16 bit A/D.

Range: Full scale current = 1.5Vrms, crest factor of 3

Accuracy: 0.1% reading +/- 0.05% full scale, 3KHz bandwidth for low/ medium freq. transients. Does not include CT.

Screw terminals 61MAS5

#### Memory

1GB internal flash

#### Monitoring Compliance

IEC61000-4-30:2008 Class A, IEC61000-4-7, IEC61000-4-15

EN50160, NVE, IEEE1159, IEEE1453, IEEE519, IEEE1459

#### Communications

Standard: RJ45 TCP/IP Ethernet, RS232/RS485

Protocols: XML, Modbus TCP/RTU, HTTP, (IEC 61850 optional)

Time synchronization: NTP, optional GPS

#### Instrument Power

Standard: 90 to 250VAC 50/60Hz, 105 to 125VDC

Screw terminals

15 minute internal UPS (specified with display & 4 modules)


Battery is replaceable in the field

#### Environmental

Operating temperature: -10 to 60°C

Humidity: 10 to 95%, non-condensing, indoor use only

#### Safety and Compliance

ISO9001, CE, 



## 61SGD-PQ



Front view



Back view

### 61SG-PQ DataNode® Specifications

#### Voltage

Channels: (4) differential inputs, AC/DC

Sampling: 512 samples/cycle, 16bit A/D, synchronous sampling

Range: 1-600 Vrms, +/- 1000VPK, Frequency: 16/20Hz, 50Hz, 60Hz

Full Scale Accuracy: 0-600V 0.1% reading +/- 0.05% full scale, 7KHz bandwidth for low/medium

Input impedance: 10MΩ to ground

Screw terminals 61MVS

#### Current

Channels: (4) differential inputs, AC/DC

Sampling 512 samples/cycle, 16 bit A/D.

Range: Full scale current = 1.5Vrms, crest factor of 3

Accuracy: 0.1% reading +/- 0.05% full scale, 3KHz bandwidth for low/ medium freq. transients. Does not include CT.

Screw terminals 61MAS5

#### Memory

1GB internal flash

#### Monitoring Compliance

IEC61000-4-30:2008 Class A, IEC61000-4-7, IEC61000-4-15

EN50160, NVE, IEEE1159, IEEE1453, IEEE519, IEEE1459

#### Communications

Standard: RJ45 TCP/IP Ethernet, RS232/RS485

Protocols: XML, Modbus TCP/RTU, HTTP, (IEC 61850 optional)

Time synchronization: NTP, optional GPS

#### Instrument Power

Standard: 90 to 250VAC 50/60Hz, 105 to 125VDC

Screw terminals

15 minute internal UPS (specified with display & 4 modules)


Battery is replaceable in the field

#### Environmental

Operating temperature: -10 to 60°C

Humidity: 10 to 95%, non-condensing, indoor use only

#### Safety and Compliance

ISO9001, CE, 



## ① 61000 Mainframe Options – Choose you Mainframe type. 61STD Mainframe



### 61STD

Standard instrument: 4" x 11" x 8" (10.2cm x 28cm x 20.3cm)

#### Communications

##### Standard:

Ethernet, RS232/RS485, (MODBUS TCP, RTU), HTTP

##### Optional:

GPRS, GSM, Modem

3G/4G wireless

IEC61850 optional

#### Memory:

1GB internal Flash memory (Not removable)

#### Display:

¼ VGA touch display (optional)

#### Power Supply

On/Off Switch

Standard enclosure, 12VDC input

External AC adapter

61DINPWR12VDC Din Rail power supply (optional)(see page 23)

Built in UPS with user accessible battery

Internal GPS receiver (optional), rear panel connector

Time synchronization via NTP or optional internal GPS

#### Power Supply Options Please choose ONE

\_\_\_ **61PSAC-US** 100-250VAC Power supply, US AC Power Cord

\_\_\_ **61PSAC-EURO** 100-250VAC Power supply, EURO AC Power Cord

\_\_\_ **61PSAC-UK** 100-250VAC Power supply, UK AC Power Cord

\_\_\_ **61PSAC-AUST** 100-250VAC Power supply, AUST AC Power Cord

## 61SG Mainframe



### 61SG

Switchgear mount without display: 6.5" x 7" x 8" (16.5cm x 17cm x 20.3 cm)

#### Communications

##### Standard:

Ethernet, RS232/RS485, (MODBUS TCP, RTU), HTTP

##### Optional:

GPRS, GSM, Modem

3G/4G wireless

IEC61850 optional

#### Memory:

1GB internal Flash memory (Not removable)

#### Power Supply

On/Off Switch

Switchgear mount

Standard: 90 to 250VAC 50/60Hz, 105 to 125VDC, Optional: 90 to 250V AC/DC, 50/60Hz

Built in UPS with user accessible battery

Internal GPS receiver (optional), rear panel connector

Time synchronization via NTP or optional internal GPS

## 61SGD Mainframe



### 61SGD

Switchgear mount with display: 6.5" x 7" x 8" (16.5cm x 17cm x 20.3 cm)

#### Communications

##### Standard:

Ethernet, RS232/RS485, (MODBUS TCP, RTU), HTTP

##### Optional:

GPRS, GSM, Modem

3G/4G wireless

IEC61850 optional

#### Memory:

1GB internal Flash memory (Not removable)

#### Display:

¼ VGA touch display

#### Power Supply

On/Off Switch

Switchgear mount

Standard: 90 to 250VAC 50/60Hz, 105 to 125VDC, Optional: 90 to 250V AC/DC, 50/60Hz

Built in UPS with user accessible battery

Internal GPS receiver (optional), rear panel connector

Time synchronization via NTP or optional internal GPS



**② 61000 Host Comm. Module Options** – Choose one Host Comm. Module.

**61HC Host Module\***

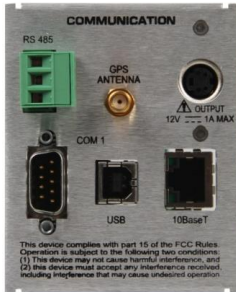


**61HC Host Communication Module**

- RS232 / RS485 port
- RJ45 TCP/IP Ethernet

\*One required per mainframe

**61HCG Host Module\***



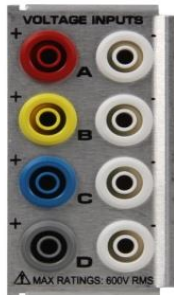
**61HCG Host Communication Module with GPS time Synchronization**

- RS232 / RS485 port
- RJ45 TCP/IP Ethernet
- GPS Antenna input

\*One required per mainframe

**③ 61000 Voltage Input Modules** – Choose up to 4 Modules, one Voltage Module is required.

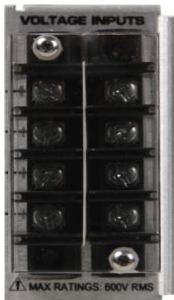
**61MVB Voltage Input Module\***



**Voltage Module - Safety Connectors**

- 4 differential inputs
- Accepts four 5-600 Vrms (AC or DC),  $\pm 1000$  Vpk
- Channels A, B, C voltage, plus neutral to ground
- Neutral to ground voltage range: 0.5 - 20 Vrms (AC or DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

**61MVS Voltage Input Module\***



**Voltage Module - Terminal Block**

- 4 differential inputs
- Accepts four 5-600 Vrms (AC or DC),  $\pm 1000$  Vpk
- Channels A, B, C voltage, plus neutral to ground
- Neutral to ground voltage range: 0.5 - 20 Vrms (AC or DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

\*Note: Anti Aliasing filters are available at an additional charge. Contact factory for details. At least 1 Voltage module must be chosen.



## 61000 Voltage Input Modules

### 61MVLS Low Voltage Input Module\*



#### Voltage Module - Terminal Block

- 4 differential inputs
- Accepts four 0-150 Vrms (AC or DC)
- Channels A, B, C voltage, plus neutral to ground
- Neutral to ground voltage range: 0.5 - 20 Vrms (AC or DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

\*Note: Anti Aliasing filters are available at an additional charge. Contact factory for details. At least 1 Voltage module must be chosen.

## ④ 61000 Current Input Modules – Choose your Current Module.

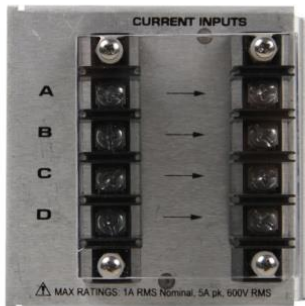
### 61MAC Current Input Module\*



#### Current Probe Module - TR Series Probes

- 4 differential inputs
- Allows connection of TR Series and Flex probes
- Hypertronics connector inputs, same as used in PX5 portable family
- 1.5 VRMS Full Scale Input (AC or DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale + CTs

### 61MAS1 Current Input Module\*



#### Current Module - Internal CT's

- 4 differential inputs
- Accepts four 0.01-1 Arms, 5 Apk
- Allows connection to #12 AWG wires
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

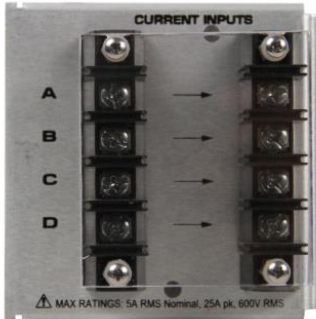
\*Note: Anti Aliasing filters are available at an additional charge. Contact factory for details.





## 61000 Current Input Modules

### 61MAS5 Current Input Module\*



#### Current Module - Internal CT's

- 4 differential inputs
- Accepts four 0.01-5 Arms, 25 Apk
- Allows connection to #12 AWG wires
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

\*Note: Anti Aliasing filters are available at an additional charge. Contact factory for details.

## ⑤ 61000 Input Module Options – Choose other optional Modules, Only 4 in total per Unit.

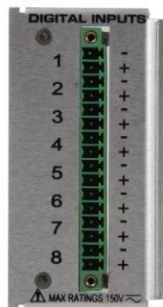
### 61MZP Voltage / Current Input Module



#### Voltage / Current Module

- Allows connection of Voltage / Current pods (pg. 26)
- Allows connection of TR Probes with TRTO55 adapter cable (pg. 27)
- Allows connection of Flex Probes with BNC connectors with BNCTO55 adapter cable (pg.27)

### 61MDIN Digital Input Module



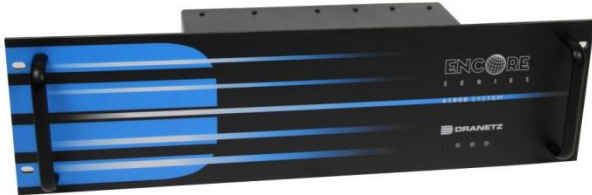
#### Digital Input Module

- 8 channels differential inputs
- Rating: 150V AC or DC
- Change of state logic level detection from "high to low" or "low to high"



**⑥ 61000 Mounting Options** – Choose your mounting option.

**61RMTS**



61STD 19" Rack mount without display

**61RMTD**



61STD 19" Rack mount with 4" VGA touch display

**61SGRMT**



Front view



Back view

61SG/61SGD 19" Rack mount

**61BRKTS**



61STD Wall mounting Brackets (pair)



## ⑦ 61000 Enclosures Options – Choose your Enclosure option.

### 61QENCL (Enclosure Only)



Metal weather resistant enclosure.  
Fits one 61STD mainframe and up to 4 Voltage or Current Pods.  
**Dimensions:**  
20”L x 20”W x 8”D  
(50.8cm x 50.8cm x 20cm)

### 61WENCL (Enclosure Only)



Weather resistant enclosure.  
**Dimensions:**  
16.75”L x 12”W x 8”D  
(42.5cm x 30.5cm x 20cm)

### AMPOLEMNT14 (Pole Mount Only)



61WENCL Pole mount kit.



## HDPQ-DN and 61000 Voltage Pods – For use with 61MZP Modules.

### 5536 Voltage Pod



#### 5536VPOD

- 4 differential Inputs
- Accepts four 5 - 600 Vrms (AC/DC), 1000 Vpk
- Phase A, B, C voltage, plus neutral to ground
- Neutral to ground voltage range: 0.5 - 20 Vrms (AC/DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

### 5539 Voltage Pod



#### 5539VPOD

- 4 differential Inputs
- Accepts four 5 - 1000 Vrms (AC/DC), 1414 Vpk
- Phase A, B, C voltage, plus neutral to ground
- Neutral to ground voltage range: 0.5 - 20 Vrms (AC/DC)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

## HDPQ-DN and 61000 Current Pods

### 5533 Current Pod



#### 5533APOD

- 4 differential Inputs
- Accepts four 0.01-5 Arms, 100 Apk
- Allows pass thru wire up to #10 AWG
- The current tube diameter is 0.215" (5.461mm)
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale
- 20X over current, High fault current application

### 5534 Current Pod



#### 5534APOD

- 4 differential Inputs
- Accepts four 0.01-1 Arms, 5A pk
- Allows connection up to #12 AWG wire
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

### 5537 Current Pod



#### 5537APOD

- 4 differential Inputs
- Accepts four 0.01-5 Arms, 25A pk
- Allows connection up to #12 AWG wire
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale

### 5538 Current Pod



#### 5538APOD

- Same as 5537APOD with one 'TR' connector for Ch. D
- 4 differential Inputs
- Accepts four 0.01-5 Arms, 25A pk
- Allows connection up to #12 AWG wire
- Accuracy  $\pm 0.1\%$  of reading  $\pm 0.05\%$  full scale
- Typically for DC Current measurement on a UPS



## 61000 Accessories



61STD mainframe shown using a DC3VFLEX cable to power 4 flex CT's



61SG or 61SGD mainframe shown using a DC3VFLEX cable to power 4 flex CT's

### DC3VFLEX



Power supply cable to power up to 4 flex CT's from the 61000

### FLEXPWRHUB



Hub to allow the 61000 to power up to 12 flex CT's. Must use with DC3VFLEX (117067-G1) cable

### TRTO55



TR Type Current cable adapter for Dranetz clamp & flex CT's

### BNCTO55



Current cable adapter with BNC connector

### PODEXTKIT



**Voltage & Current POD Extension Cable**  
Requires connector kit + wire (charged per foot) 50 ft max  
**116836-G1** Connector kit. One per cable  
**901084** Wire. Enter # of feet. (50 ft max)

### 116439-G1



Cable to use 8010 Current Modules with Encore Series





# 61000 Communication and Time Synchronization Options

## GPS Antenna Cable Assembly



- 61GPSANT10** - GPS antenna 10' cable, only for use on mainframes with GPS receiver.
- 61GPSANT25** - GPS antenna 25' cable, only for use on mainframes with GPS receiver.
- 61GPSANT50** - GPS antenna 50' cable, only for use on mainframes with GPS receiver.
- 61GPSANT100** - GPS antenna 100' cable, only for use on mainframes with GPS receiver.

### 10BTSTD



10 Base T standard 6' cable

### 10BTNUL



10 Base T Null 6' cable

### 61MDM



External 56K modem



# 61000 Measurement Accessories

## Single Phase Measurement Cables

**114015-G1**  
US



**114015-G2**  
EURO



**114015-G3**  
UK



**114015-G4**  
AUSTRALIA



Voltage cable with 4mm connectors to measure one Single phase circuit.  
*Compatible with portable and permanent systems with 4mm Voltage connectors.*

**Cable Pouch**  
**116042-G1**



Voltage cable set with 4mm connectors. *Compatible with portable and permanent systems with 4mm voltage connectors.*

*\*FOR USE WITH 61MVB*

Includes:

- 8 - Six ft. (183cm) measurement cables:  
1 Red, 1 Yellow, 1 Blue, 1 Gray, 4 White
- 4 - Red alligator clips
- 4 - Black alligator clips

**114013-G1**



- 1 - Black 25 cm stackable jumpers



**Red Alligator Clip**  
**900371**  
**600V CATIII**



**Black Alligator Clip**  
**900372**  
**600V CATIII**

### FVA-1K1 Single Fuse Voltage Adapter



Inline fuse adapter for one voltage channel, 4mm connector, 1000V MAX.  
*Compatible with portable and permanent systems with 4mm voltage connectors.*

### FVA-1K4



Set of 4 Inline fuse adapters, 4mm connector, 1000V MAX.  
*Compatible with portable and permanent systems with 4mm voltage connectors.*



# 61000 Batteries & Power Adapters

**BP-61000**



Battery for Encore 61000 Encore products.

**61P5DC-SB**



Encore 61STD Mainframe Power supply for substations.  
120-300VDC Max, 60W.

**61000 AC Adapter 117029-G3**



Instrument Power Supply for Encore 61STD and 61STD-PQ.

**61DINPWR12VDC Din Rail power supply**



This power supply is supplied with a low voltage cable that plugs into the back of the 61STD instrument. This power supply provides a 12 VDC output that powers the instrument and is capable of being secured to a DIN rail TS35/7.5 or TS35/15.  
85-264VAC or 90-375VDC input, 12 VDC output

## Power Supply Options for 61STD only

- 61PSAC-US** 100-250VAC Power supply, US AC Power Cord
- 61PSAC-EURO** 100-250VAC Power supply, EURO AC Power Cord
- 61PSAC-UK** 100-250VAC Power supply, UK AC Power Cord
- 61PSAC-AUST** 100-250VAC Power supply, AUST AC Power Cord

**PPA-PP1R/115 Phase Power Adapter**



Power the instrument from the phase being measured. For circuits from 90V to 500Vrms.

Dimensions:  
4.3"L x 7.1"W x 3.6"D  
(10.9cm x 18cm x 9.1cm)

Compatible with portable and permanent systems.

**PPA-PP1R/230 Phase Power Adapter**



Power the instrument from the phase being measured. For circuits from 90V to 500Vrms.

Dimensions:  
4.3"L x 7.1"W x 3.6"D  
(10.9cm x 18cm x 9.1cm)

Compatible with portable and permanent systems.



# Current Probes

Clamp-on - AC only



TR-2500B 10A-500ARMS CT



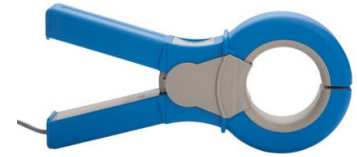
TR-2501B 100 mA to 1.2ARMS-CT



TR-2510B 1A-10ARMS CT



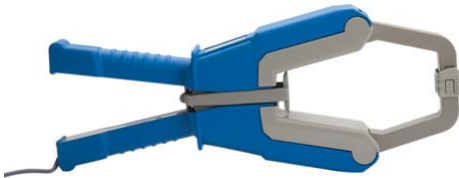
TR-2550B 1A-100ARMS CT



TR-2530B 20A-300ARMS CT



TR-2540B 10A-1000ARMS CT



TR-2520B 100A-3000ARMS CT

Model	Range	Amplitude Accuracy ±	Phase Accuracy ±	Frequency Range	Maximum Conductor Size	Rated Voltage	Connector/ Output
<b>Clamp CT's</b>							
TR-2500B	10A to 500Arms	100A to 500A	1%	1.5°	40Hz to 5KHz	50mm dia.	600V Max. Dranetz 1.5V
		10A to 100A	2%	3°			
TR-2501B	100mA to 1.2Arms	1.2A	1.5%	2°	40Hz to 5KHz	15mm dia.	600V Max. Dranetz 1.5V
		100mA	2%	3°			
TR-2510B	1A to 10Arms	5A to 10A	1.2%	1.5°	40Hz to 5KHz	15mm dia.	600V Max. Dranetz 1.5V
		1A to 5A	1.2%	1°			
TR-2520B	100A to 3000Arms	1000A to 3000A	0.5%	0.5°	40Hz to 5KHz	72mm dia.*	600V Max. Dranetz 1.5V
		300A to 1000A	0.75%	0.75°			
		100A to 300A	1.5%	1.5°			
TR-2530B	20A to 300Arms	50A to 300A	1%	0.5°	30Hz to 5KHz	54mm dia.	600V Max. Dranetz 1.5V
		20A to 50A	1.5%	0.6°			
TR-2540B	10A to 1000A	100A to 1000A	1%	0.4°	30Hz to 5KHz	54mm dia.	600V Max. Dranetz 1.5V
		10A to 100A	1.5%	0.5°			
TR-2550B	1A to 100Arms	10A to 100A	1%	2.5°	40Hz to 10KHz	15mm dia.	600V Max. Dranetz 1.5V
		1A to 10A	2%	5°			

**Note:** These are guidelines only. Many other factors will influence the stated accuracy, including but not limited to, temperature, humidity, frequency, and conductor position. Model numbers and specifications subject to change without notice.

TR probes with an "A" suffix have the same specifications as above.

The current probes shown above have a 1.5V output, Dranetz Hypertronics connector, 3 meter cable and are directly compatible with the following Dranetz products:

**Portable instruments**

Dranetz HDPQ family, PowerXplorer, PowerGuide, PowerVisa, PowerGuia, Energy Platform, PP4300, 658 with CA4300 adapter.

**Permanent instruments**

61000 with 61MAC module, Signature System 55XX. Adapters are available for use with other instrument configurations; Please contact Customer Service for details.



## AC/DC Current Probes

**PR150-SP1B 150A CT**  
**PR1500-SP7B 1500A CT**  
*(Requires one PR9VUS AC adapter for each probe. UK, Euro plugs available.)*



**PR150-SP2B 150A CT**  
**PR1500-SP8B 1500A CT**  
*(9v battery powered only)*



Model	Range		Amplitude Accuracy ±	Phase Accuracy +/-	Frequency Range	Maximum Conductor Size	Rated Voltage	Connector/ Output
PR150B	15A to 150A	15A to 150A	1%	3°	DC to 5KHz	52mm dia.	600V Max.	Dranetz 1.5V
PR1500B	150 to 1500A	150A to 1500A	1%	1°	DC to 5KHz	52mm dia.	600V Max.	Dranetz 1.5V

Note: These are guidelines only. Many other factors will influence the stated accuracy, including but not limited to, temperature, humidity, frequency, and conductor position. Model numbers and specifications subject to change without notice.

The current probes shown above have a 1.5V output, Dranetz Hypertronics connector, 2 meter cable and are directly compatible with the following Dranetz products:

### Portable instruments

Dranetz HDPQ family, PowerXplorer, PowerGuide, PowerVisa, PowerGuia, Energy Platform, PP4300, 658 with CA4300 adapter.

### Permanent instruments

61000 with 61MAC module, Signature System 55XX. Adapters are available for use with other instrument configurations; Please contact Customer Service for details.

### PR9VUA AC Adapter (for PR Probes Only)



AC power adapter for the PR150 and PR1500 AC/DC probes

## Current Probe Accessories

### TR PROBE EXTENSION CABLE



<b>TREXT5B</b>	5' Long	<b>TREXT20B</b>	20' Long
<b>TREXT10B</b>	10' Long	<b>TREXT25B</b>	25' Long
<b>TREXT15B</b>	15' Long	<b>TREXT30B</b>	30' Long

### ISO-65X-5



0-5A ISO CT Term Box (needs CA4300)

### CA4300BNCB



### TRTOREDEL



### CA4300





## Flexible Probes

AC only

### Single Phase



**DRANFLEX3000XLB 30A/300A/3000A Probe**  
**DRANFLEX6000XLB 60A/600A/6000A Probe**  
 Available in 24", 36" and 48"

### Three Phase



**DRANFLEX3003XLB 30A/300A/3000A Probe**  
**DRANFLEX6003XLB 60A/600A/6000A Probe**  
 Available in 24", 36" and 48"

Model	Range	Amplitude Accuracy ±	Phase Accuracy +/-	Frequency Range	Maximum Conductor Size	Rated Voltage	Connector/ Output
DRANFLEX3000XLB DRANFLEX3003XLB 24/36/48	3A to 3000A (3 Ranges)	3A to 30A	1%rdg, ±0.1A	1°	10Hz to 10KHz	8/11/17in dia.	1000V Max Dranetz 1.5V
		30A to 300A	1%rdg, ±0.1A	1°			
		300A to 3000A	1%rdg, ±1A	1°			
DRANFLEX 6000XLB DRANFLEX 6003XLB 24/36/48	6A to 6000A 3 ranges	6A to 60 A	1%rdg, ±0.1A	1°	10Hz to 10KHz	8/11/17in dia.	1000V Max Dranetz 1.5V
		60A to 600A	1%rdg, ±0.1A	1°			
		600A to 6000A	1%rdg, ±1A	1°			

**NOTE:** These are guidelines only. Many other factors will influence the stated accuracy, including but not limited to; temperature, humidity, frequency, and conductor position. Model numbers and specifications subject to change without notice.

## MicroFlex Probes

AC only-Single phase



**DRANFLEX300MHB 3A/30A/300A Probe**  
 Available in 6", 8" and 12"

Model	Range	Amplitude Accuracy ±	Phase Accuracy +/-	Frequency Range	Maximum Conductor Size	Rated Voltage	Connector/ Output
DRANFLEX300MHB6 DRANFLEX300MHB8 DRANFLEX300MHB12 6/8/12	0.3A to 300A 3 ranges	0.3A to 3A	1%rdg, ± 0.1A	1°	25Hz to 70kHz	2/2.75/4in dia.	1000V MAX Dranetz 1.5V
		3A to 30A	1%rdg, ± 0.1A	1°			
		30A to 300A	1%rdg, ± 0.5A	1°			

Note: These are guidelines only. Many other factors will influence the stated accuracy, including but not limited to; temperature, humidity, frequency, and conductor position. Model numbers and specifications subject to change without notice.

The current probes shown above have a 1.5V output, Dranetz Hypertronics connector, 3 meter cable ( 2 meters from probe head to Integrator box, 1 meter to instrument) and are directly compatible with the following Dranetz products:

#### Portable instruments

Dranetz HDPQ family, PowerXplorer, PowerGuide, PowerVisa, PowerGuia, Energy Platform, PP4300, 658 with CA4300 adapter.

#### Permanent instruments

61000 with 61MAC module, Signature System 55XX. Adapters are available for use with other instrument configurations;

Please contact Customer Service for details.





# DranFlex Power Supplies

( Not required for use with the Dranetz HDPQ family, when Dranflex XLB (blue) probes are used. )

## ISOFLEX-MHXL\*



Isolated 3 volt power adapter for use with an Instrument's power supply. Does **NOT** include the RR/PS/4A cable for up to 4 probes.

## ISOFLEX-MHXLU



Isolated 3 volt probe power supply. Does **NOT** include the RR/PS/4A cable for up to 4 probes.

## ISOFLEX-MHXL4P\*



Isolated 3 volt power adapter for use with an Instrument's power supply. Powers up to four probes

**ISOFLEX-MHXLU-US** - ISOFLEX-MHXLU with a US 125V cord  
**ISOFLEX-MHXLU-EU** - ISOFLEX-MHXLU with an European 250V cord  
**ISOFLEX-MHXLU-UK** - ISOFLEX-MHXLU with a UK 250V cord  
**ISOFLEX-MHXLU-AU** - ISOFLEX-MHXLU with an Australian 250V cord

## ISOFLEX-MHXLU4P



Isolated 3 volt power supply with a RR/PS/4A cable for up to four probes.  
*Not suitable for use with LPC-4300.*

## RR/PS/4A



Flex power cable for up to 4 probes.

**ISOFLEX-MHXLU4P-US** - ISOFLEX-MHXLU with a US 125V cord  
**ISOFLEX-MHXLU4P-EU** - ISOFLEX-MHXLU with an European 250V cord  
**ISOFLEX-MHXLU4P-UK** - ISOFLEX-MHXLU with a UK 250V cord  
**ISOFLEX-MHXLU4P-AU** - ISOFLEX-MHXLU with an Australian 250V cord

\*ISOFLEX-MHXL and ISOFLEX-MHXL4P Isolated power adapters are intended for use with an instruments power supply. Compatible with PX5, PX5-400, PowerGuide, PowerVisa, Energy Platform EP1, and 61STD instruments.



## Miscellaneous Accessories



### Portable Station

Portable computer for Encore Series Software InfoNode. Contact Factory for more information.



### Master Station

Computer for Encore Series Software InfoNode. Contact Factory for more information.



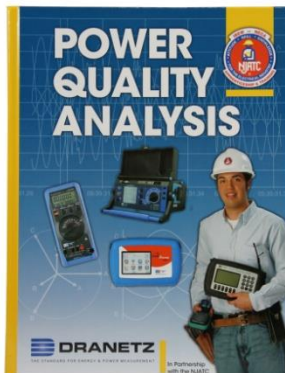
### FS108

8 Port Hub



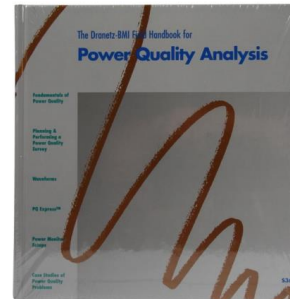
## Dranetz Library

### Power Quality Analysis



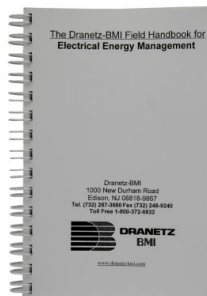
**HB114416** Written in partnership with the NJATC, 228 pages.

### The Dranetz Field Handbook for Power Quality Analysis



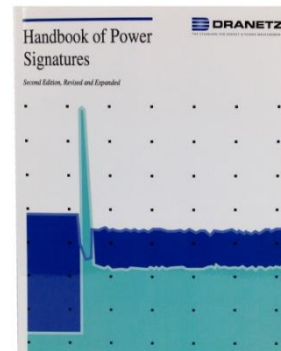
**HB114414-S** Learn the methodology for a successful power survey and how to establish and maintain a power quality program, 283 pages.

### The Dranetz BMI Field Handbook for Electrical Energy Management



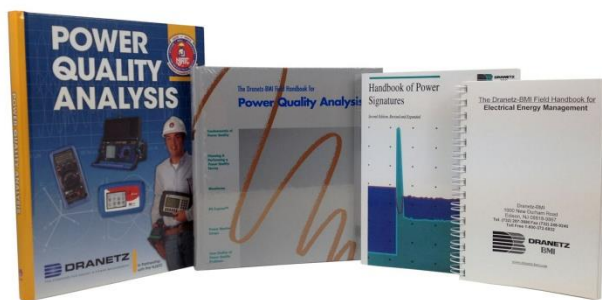
**HB114415** This handbook explores proven energy management techniques useful in a variety of applications, 248 pages.

### Handbook of Power Signatures



**A-010S** Learn to interpret and solve AC power problems, 290 pages.

### Handbook Set

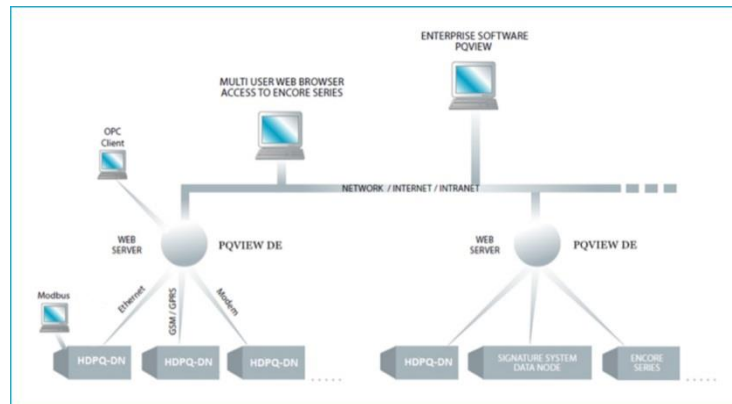


All 4 of the above handbooks.



# Permanent Equipment Software

## PQView DE® Software



### PQView DE®

PQView DE® is a web-based, advanced, intelligent software that is both a system controller and a user interface for your entire monitoring system. PQView DE® can be used in any application, from small systems with a few instruments to very large multi-point, facility-wide or utility monitoring. PQView DE® automatically communicates with each instrument in your system via all supported communications methods to download and store data. PQView DE® is also a password-protected web server that acts as the gateway to your Dranetz monitoring system. All user interactions with the system such as trending, reports, real-time and setups are done using a web browser with connectivity to the system. PQView DE® has a modern responsive web interface which is fully compatible with most computers, laptops, tablets and smartphones. The multi-user interface allows co-workers, engineers or consultants simultaneous access to analyze and share data and reports within a familiar web environment.

#### Web Enabled Interface

PQView DE® has an easy to use, password-protected web browser interface. *All interactions with the system can be completed using any web browser, such as Microsoft Edge or Mozilla Firefox.* Not only is it easy to use, the web browser environment allows for multi-user access to your monitoring system from any computing device for any authorized user with access to the communications network. Trends, data lists, real-time views and reports are just a few mouse clicks away. Information can be easily shared and exported to Word, Excel, PQView and other software packages.

#### Performance Evaluations

By combining multiple modules or instruments, Dranetz intelligently monitors and evaluates diverse equipment and power system performance parameters to evaluate the performance and health of your power system for applications such as: UPS — Encore monitors both input and output to continually evaluate the health of a UPS to ensure it operates correctly and to manufacturer specifications.

System Reliability — Gain a clear indication of power system reliability by simultaneously evaluating power quality of multiple circuits on an ongoing basis.

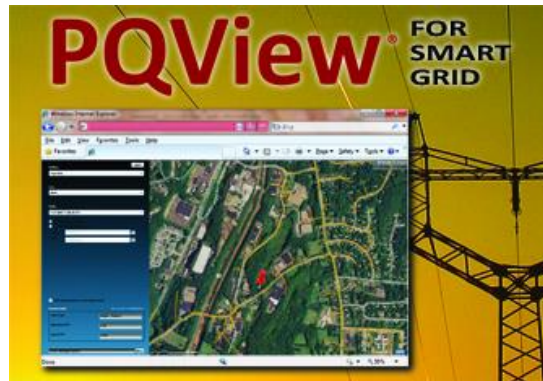
Predictive Maintenance — Continuous, proactive monitoring allows for benchmarking, which provides a statistical evaluation, enabling you to reduce operating and maintenance costs, including determining when maintenance is really needed, rather than just on a routine schedule basis.

#### Intelligence

The combined knowledge of Dranetz and its sister company, Electrotek Concepts, gives our monitoring systems the intelligence to perform advanced characterization of events. You receive a clear and simple explanation of an event with in-depth analysis. Unique AnswerModules® perform advanced analysis and provide answers to more difficult power quality events through an intuitive user interface. Answer Modules interpret data, making every user an expert. Answer Modules are available for every industry and include: Sag Directivity, PF Correction Capacitor detection/directivity.

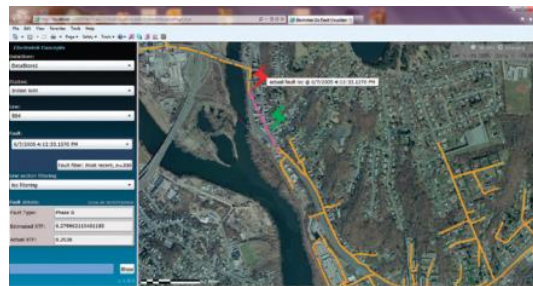


## PQView® Software



### PQView®

PQView® is enterprise software available to expand the analytical capabilities of Dranetz Encore Series and/or manage multiple monitoring systems. Developed by Electrotek Concepts and EPRI®, PQView is a database software application designed to store and analyze large quantities of power quality-related disturbance and steady-state measurement data from hundreds of monitoring points. Featuring data management tools that can quickly characterize this data, PQView includes statistical analysis and plotting tools that can provide single- or multiple-site analysis for power systems. Encore Series, Signature System, PQNode family, Dranetz portable instruments, IEEE PQDIF, IEEE COMTRADE and many non Dranetz meters are PQView compatible.



PQView® is a multi-component software system developed by Electrotek Concepts® and EPRI®. This industry leading software is used for building and analyzing databases of power, power quality, and energy measurements, and is available for use with Dranetz Encore instrument configurations. PQView also integrates data from microprocessor relays, digital fault recorders, power quality monitors, smart meters, and SCADA historians into an open relational database.







## Dranetz - The Standard for Energy & Power Management

For more than 50 years, Dranetz has been the leading provider of intelligent monitoring solutions for electrical demand, energy and power quality. With over 100,000 clients worldwide, Dranetz's scalable solutions range from portable power quality analysis equipment, to permanent energy management devices with data storage and web-based solutions. Dranetz provides a full suite of services, including personalized pre- and post-sales support, educational power quality seminars, consulting, customization and on-site assistance.

Dranetz corporate headquarters, located in Edison, New Jersey USA, includes sales, product support and manufacturing, with distributors and sales representatives located globally. Dranetz proudly manufactures their products in the USA, and is also the supplier of [Gossen Metrawatt's](#) (GMC-I) test and measurement products in the Americas.

View our power quality analyzers, energy monitoring systems, electrical safety testers, electrical digital multifunction meters and more at [www.Dranetz.com](http://www.Dranetz.com) (categorized by function to easily determine the Dranetz product that is the right tool for your needs).

