

## 61SG, 61SGD Switchgear Mount DataNode®

### Power Quality, Demand & Energy Monitoring



*Available with or without a color display, the 61SG/61SGD panel mount design is ideal for switchgear applications*

#### THE INTELLIGENT INSTRUMENT

The Encore Series System, our state of the art power monitoring system, combines more than 50 years of power monitoring experience with the power of the Internet. By using any web browser, Encore Series provides an advanced, yet easy to use monitoring system that meets the needs of virtually any application, large or small. The Encore® Series 61SG and 61SGD DataNode's are Power Quality, Demand and Energy monitoring instruments with a configurable design that allows users to specify the right instrument configuration for their specific application. The 61SGD has all of the capabilities of the 61SG, but has a built in ¼ VGA color touch LCD display. Both are perfect for switchgear and other applications that require mounting in a standard 186mm cutout. Combined with the multi-user, web interface of Encore Series Software, the 61SG/61SGD is the right product for any application.

#### 61SG AND 61SGD DATANODE'S

The Encore Series 61SG/61SGD DataNode is a modular and configurable instrument that greatly improves upon the traditional 8-channel (4 voltage/4 current) instrument format. You can have your choice of (4 channel) voltage, (4 channel) current and (8 channel) digital input modules. Each voltage and current module is available with either screw terminals for permanent connections, or safety connectors for temporary connections with voltage clip leads and clamp-on or FLEX CT's. You can save money, prevent integration aggravation and save physical space by combining up to four modules in one instrument for applications that previously required two or more instruments. Popular combinations are:

- 8 channel traditional power and PQ monitoring: 1 Voltage & 1 Current module
- 16 channel equipment performance (I/O) monitoring: 2 Voltage & 2 Current modules
- 16 channel substation feeder monitoring: 1 Voltage & 3 current modules

The 61SG/61SGD DataNode enables you to combine modules in software to build your own instrument with up to four virtual analyzers. Virtual analyzers are either individual modules working as independent analyzers or combinations of modules, such as when combining voltage & current modules to create a power quality, demand & energy analyzer.

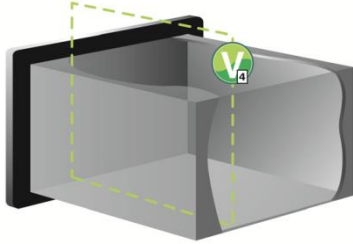
#### COMPLIANCE

Encore Series is perfect for ongoing monitoring to determine compliance with world-wide standards, such as EN50160, NVE and your own specialized compliance requirements. Encore Series voltage modules are certified by an independent laboratory for Class A compliance with IEC61000-4-30:2008. You can be confident that Encore Series measurements are both accurate and repeatable, and that they meet the most stringent requirements of any country.

#### 61000 FAMILY OF DATANODE'S

Available in standard and switchgear mounting enclosures, the 61000 family of DataNode's can be used in a wide variety of applications. Choose the appropriate mainframe and then add the modules that meet your application. The standard enclosure (61STD) is a stand-alone instrument with an available rack mount (with or without ¼ VGA touch display), wall mounting brackets and weather resistant enclosure to withstand the most severe operating environments. The switchgear version is available with a ¼ VGA color display (61SGD) or without a ¼ VGA color touch display (61SG). It's perfect for mounting in switchgear doors or other enclosures.

## Voltage Compliance



4 Ch. Voltage Module

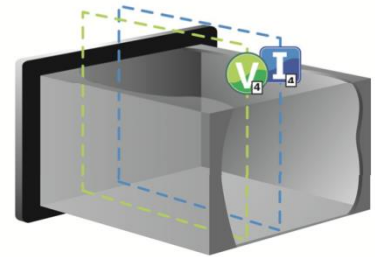


4 Ch. Current Module

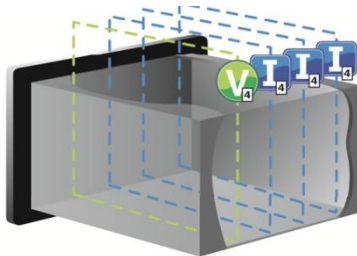


8 Ch. Digital Input Module

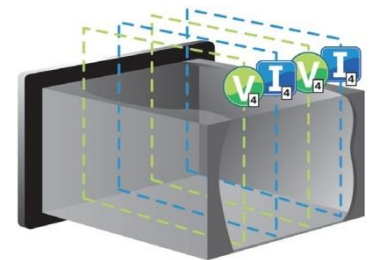
## Standard Power Quality



## Substation Feeder



## UPS Performance



The modular design of the 61SG & 61SGD DataNode's enables you to build the right instrument for your application

## 61SG/61SGD DATANODE<sup>®</sup> SPECIFICATIONS

### MODULES – CHOOSE UP TO FOUR

#### VOLTAGE

- Channels: (4), differential inputs, AC/DC
- Sampling: 512 samples/cycle, 16 bit A/D, synchronous sampling
- Range: 1-600 Vrms, +/- 1000VPK
- Full Scale Accuracy: 0-600V, 0.1% reading +/- 0.05% full scale, 7KHz bandwidth for low/medium frequency transients. 100-300V AC, 0.1% reading for IEC61000-4-30:2008 Class A
- Frequency: 16/20Hz, 50Hz, 60Hz
- Input impedance: 10MΩ to ground
- Choice of connections: Screw terminals (61MVS), safety connectors (61MVB), D connector (61MZP) for use with (optional) remote voltage pod with screw terminals.

#### CURRENT

- Channels: (4), differential inputs, AC/DC
- Sampling 512 samples/cycle, 16 bit A/D
- Range: Module dependent. 1.5Vrms FS, 5A or 1A.
- Accuracy: 0.1% reading +/- 0.05% full scale, 3KHz bandwidth for low/medium frequency transients. Does not include CT
- Choice of connections: Screw terminals (61MAS5, 1), TR connectors (61MAC) for clamp-on/FLEX CT's, D connector (61MZP) for use with (optional) remote 5A or 1A current pod

#### DIGITAL INPUT

- 61MDIN: Range: 0 – 135VAC/DC,
- 1KHZ sampling, Edge or level triggered,
- Logic programmed by user (active high or active low)
- Time stamped to the millisecond
- Screw terminals

#### 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
- Optional: 3G/4G, GSM/GPRS modem, analog modem
- Protocols: XML, Modbus TCP/RTU
- Time synchronization: NTP, optional internal GPS
- IEC 61850

#### INSTRUMENT POWER

- Standard: 12VDC input with 90 to 250V AC 50/60Hz adapter
- Optional: 90 to 250V AC/DC, 50/60Hz
- 15 minute internal UPS (specified with display & 4 modules)

#### AVAILABLE ENCLOSURES & MOUNTING

- Panel Mount, 186mm x 186mm cutout
- 61SGD: with ¼ VGA color touch display, 12 languages
- 61SG: without display
- 61RMTSG: rack mount

#### ENVIRONMENTAL

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

#### SAFETY AND COMPLIANCE

- UL, CE, ISO 9001:2008