

Polyphase metering products for advanced energy measurement applications

Commercial & Industrial Metering



Leading-Edge Design



Landis+Gyr's commercial and industrial meter family offers a solution for all applications. Developed in response to industry requirements for value and function, the E650 S4e and E330 FOCUS® AX Polyphase meters are designed to meet specific performance criteria with more features, a wide voltage range and self-diagnostics. These products combine elements of simplicity and upgradability for a highly functional meter that reduces overall ownership costs. Equipped with all the quality and user-friendly functions customers have come to expect, our commercial and industrial meters feature enhancements, such as:

- Flash memory for firmware upgrades
- ANSI C12.19 standard protocol
- Transformer loss compensation option
- On-board load profile option

Inventory Reduction

Designed for total software and firmware upgradability, the commercial and industrial meter family offers precision metering for all applications without the need to add hardware. Firmware upgrades enable utilities to easily maintain inventory for their predominant requirements. Then, as needed, Landis+Gyr can provide software upgrades and activate service enhancements virtually overnight. This flexibility is a necessity in today's rapidly changing utility environment.

Simplicity

The E650 S4e and E330 FOCUS AX Polyphase meters eliminate the need to preprogram the service type. Just install the meter, and it automatically detects the service type and voltage, displaying the information on the LCD and configuring the GyrBox for a complete diagnostic check of the installation. By continually performing diagnostics on the metering installation equipment, service wiring and load characteristics, GyrBox is able to identify equipment failures, improper installation wiring, poor load conditions, poor power quality conditions and tampering.

Compatibility

Even with advanced functionality, the E650 S4e remains compatible with earlier models, minimizing adjustments to existing reading and programming systems. Both the E650 S4e and the E330 FOCUS AX support the ANSI C12.19 standard protocol.





E330 FOCUS AX Polyphase Features and Options

Proven Platform for Light Commercial & Industrial Applications

As an addition to the FOCUS family of meters, the AX Polyphase brings the same proven, solid-state performance utilities have come to expect from the FOCUS product line in an AMI-ready platform for light commercial and industrial applications.

The meter supports modular AMI communications or an optional KYZ option board and is available in both self-contained or transformer rated S-base meter forms. It provides an ANSI Type 2 optical port for meter programming and firmware upgrades. The meter utilizes advanced second generation “over-the-air,” flashable firmware so that when supported by the AMI network, it can be upgraded remotely without losing the meter configuration or billing data.

Wide Range Power Supply

The E330 FOCUS AX Polyphase meter comes standard with a wide range power supply for meter service voltages of 120V to 277V. With the meter wired line-to-neutral, it is suitable for 277/480V 4W wye services or 240/480V 4W delta services.

Load Profile

The E330 FOCUS AX Polyphase meter is available as an AX Demand (TOU Capable) meter or as a FOCUS AXR/TOU recording meter. It comes standard with 77K of load profile memory — no software keys are required. It can be configured with up to eight channels of load profile memory. Load profile interval lengths include 1, 5, 15, 30 and 60 minutes. The meter can record up to 156 days of load profile data on eight channels at 60 minute intervals.

Available Metrics:

- +kWh
- -kWh
- Voltage sag per phase/any phase
- Voltage swell per phase/any phase
- Amp-hours per phase
- Volt-hours per phase
- Temperature
- Line frequency

AMI Integration

The meter features the same 10-pin header as the rest of the FOCUS meter family making AMI integration easier. All meter data has the capability of being transmitted over various communication channels via optical port or AMI device.

Commercial and Industrial Meter Options

The FOCUS AX Polyphase enters into Landis+Gyr's portfolio, next to the reliable commercial and industrial S4e meter. The FOCUS AX Polyphase provides a cost effective alternative for light commercial metering applications that does not require the same level of functionality as the S4e.





E650 S4e Features and Options

Configuration Options

The E650 S4e is available with one of three register configurations, AXLS4e, AXS4e or RXS4e, providing the right functionality for all metering applications.

AXLS4e

This kilowatt-hour-only version was designed to replace electromechanical meters for energy-only billing applications. The AXLS4e is upgradable to an AXS4e using a software upgrade key.

AXS4e

This meter provides combined demand and time-of-use (TOU), active energy configuration. Demand programming requires no batteries. With reprogramming and a battery, the meter becomes a full-function TOU meter with a supercapacitor for short-term carryover. The AXS4e is upgradable to an RXS4e using a software upgrade key.

RXS4e

This version is a full-function active, reactive and apparent energy demand-only or demand and TOU multifunction meter. Available metrics include: kW/kWh, kVAR/kVARh and kVA/kVAh, as well as power factor. kVA can be calculated from apparent power (RMS) or from arithmetic kW and kVAR.



Load Profile

The E650 S4e is available with an optional 32K or 128K load profile memory. Any combination of up to 15 metrics can be recorded from a list of 24 possible choices.

Available Metrics Include:

- +kWh (delivered)
- -kWh (received)
- Voltage sag per phase/any phase
- Voltage swell per phase/any phase
- Volt-hours per phase
- Amp-hours per phase
- Amp-hours neutral current
- Two external inputs

Demand Time of Use

- Demand intervals from 1–60 minutes with up to 15 subintervals
- Up to four seasons
- Supports seven different day schedules
- Allows two different holiday schedules
- Up to five different rates
- Load profile options of 32K and 128K memory
- Real-time rate entry and exit

Communication & Input/Output Capabilities

Communications

The modular E650 S4e is designed with maximum flexibility to add functionality in the future. It has the largest space in the industry for a variety of communication possibilities, such as the advanced high-speed modem, RS-232 and RS-485 boards and a variety of AMI devices that include RF, PLC and digital cellular modules.

Inputs/Outputs

An optional input/output board provides up to four Form C, solid-state relay outputs and up to two external inputs for recording pulses from remote sources. These relays can be programmed for end-of-interval, power factor alert, diagnostic alert, voltage alert, demand threshold alert, KYZ or load control.

Software Solutions



1132Prog

Use this software to create programs for the E650 S4e and E330 FOCUS AX.

- Allows the operator to have as many databases as desired or create multiple programs in a single Microsoft Access database.
- Handles demand, TOU and load-profile programs for the AX and RX series.
- Defines the capabilities available through its companion program, 1132Com.
- Supports DGC0M and ANSI protocols.

1132Com

Use this companion to 1132Prog to program and read meters.

- Supports modem, RS-232/RS-485 or optical-port communication (On the optical port, all popular cables are supported).
- Reads meter files that are saved in formats for easy export to other reporting packages, such as the Itron MV-90 or Landis+Gyr 1132Gyr.
- Provides protocol-neutral capabilities for end users seamless interaction with legacy DGC0M or ANSI meters.
- Allows for partial modifications of an existing meter's program—total reprogramming is not necessary.



1132Gyr

- Acts as a Load Profile Translation software package with an interface to the 1132Com software.
- Designs and generates single, multiple or totalized reports from a single Windows interface. For totalized reports, you can use data from different meter types, such as the E330 FOCUS AX or E650 S4e.
- Supports automated reading and reporting with the use of built-in scheduler option.



ProPak

Upgrade E330 S4e meters from AXL to AX or from AX to RX.

- Does not lose the meter program when registers are set to zero (master-reset).
- Can enable load profile or a switch between 32KB and 128KB of load-profile storage.
- Allows for firmware upgrades or changing of the protocol between ANSI and DGC0M on the S4e meter.

Note: Performing some of ProPak's functions does require the use of hardware keys and software authorizations, which are available through your Landis+Gyr sales channel.



Landis+Gyr – Your Smart Grid Partner

Landis+Gyr offers a combined portfolio of advanced metering and smart grid automation solutions to utilities in more than 30 countries. The company's global experience includes deployment of over 1,000 advanced metering systems, supporting an installed base of over 300 million meters, and managing over 15 million meters under contracts.

With smart grid solutions from Landis+Gyr, utilities streamline processes, improve energy efficiency and reduce peak load.

Consumers benefit from personal energy management technology, which empowers them to monitor and manage their energy usage.

And communities benefit through the smarter use of energy resources. This is what it means to manage energy better.



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