

E660

## A FRESH PERSPECTIVE ON HIGH-END INDUSTRIAL METERING AND ANALYSIS



The E660 is a completely newly developed device for high-end metering and analysis. It has been developed based on proven experience in multiple markets and is designed for forward-looking DSO's. The E660 is providing unprecedented state-of-the art metrology in terms of accuracy, precision and reliability. With extensive power quality measurement and a completely new set of advanced grid edge capabilities, this meter supports multiple utility processes from one single device. For efficiency, the key characteristics of the E660 contribute to a very competitive total cost of ownership.

### Highlights at a glance

- High precision metering for energy and demand for multiple tariffs
- Simultaneous communication on several channels
- Exchangeable communication and local control functionality
- Security according to the highest industry standards
- Excellent firmware isolation of legally relevant metrology – allowing application changes without re-certification
- 15 years of life: high grade component selection
- Fulfils IEC62052-31 safety standard
- Continuous power quality measurement integrated (EN50160, IEC61000-4-30 Cl. S)

### State of the art metering: High performance metrology, secure, and flexible

The measurement capabilities of the new E660 enable a wide range of applications, including the measurement of energy, demand, instantaneous network values, power quality and a comprehensive set of tariffs, log books and profiles for historical values.

Its hardened security architecture sets a new standard for safety and security in industrial metering: High Level DLMS security with encryption and authentication, role based access (RBAC), TLS and security updates have been developed for the system integrated devices of the IoT world.

The E660 supports new safety standards in full (IEC62052-31).

The **expansion module E66E** with digital inputs and outputs and electro-mechanical relay makes it possible to add new functionalities and extend the range of use cases flexibly, on demand and over the entire lifetime of the device.

A new licensing approach makes it possible to extend meter functionality on demand in the field.

### Two in one: The E660 as a Power Quality Instrument

The growing integration of renewables is only one factor that causes more and more disturbances in the grid. At the same time, technical equipment becomes increasingly sensitive and their industrial production needs to rely on undisturbed and high quality energy supply. The E660 can therefore also be used as a certified Power Quality instrument for better and faster power quality data that solve this conflict while making sure that utilities can adhere to regulatory requirements. Last, but not least, the E660 makes continuous measurement a cost-efficient option.

## Automated data distribution: Communication and grid edge functionalities

The **communication module E66C** supports state of the art IP-communication LTE CAT-M1 and NB-IoT. As a hub for securely routing differentiated data connections to multiple discrete clients and systems simultaneously (e.g. MDM, SCADA), it also provides access to local functionalities at the grid edge. Intelligent data delivery (SmartPush), RTU functionalities and modular software open the door for further customer specific use cases and local autonomy.

## Competitive Total Cost of Ownership: Multiple drivers

The design and the range of functionalities are geared towards a very efficient Total Cost of Ownership. Not only its modularity and the flexibility to acquire additional features when needed are crucial, also the optimized design to ease installation, integration and operation is a strong driver for low TCO.

| Ease of integration   | Ease of operations  | Ease of installations and usability  |
|---|---|--|
| <ul style="list-style-type: none"> <li>State of the art IP-communication</li> <li>DLMS with logical names</li> <li>Simultaneous communication</li> <li>Pre-integrated in Landis+Gyr systems                             <ul style="list-style-type: none"> <li>Gridstream® Connect</li> <li>Gridstream® Converge</li> <li>Gridstream® AIM/HES</li> </ul> </li> <li>Ready for integration in 3<sup>rd</sup> party systems with fully standardised interfaces [DMLS/IDIS aligned]</li> <li>SCADA integration</li> </ul> | <ul style="list-style-type: none"> <li>Powerful measurement capabilities for near real-time data available</li> <li>Ongoing monitoring of meter operation</li> <li>Network and renewables generation controls</li> <li>Power quality monitoring</li> <li>Gateway for local sensors</li> <li>Connectivity for permanent network monitoring</li> <li>Robust device, reliable, maintenance free</li> <li>One single data source for multiple purposes</li> </ul> | <ul style="list-style-type: none"> <li>Screwless terminals to reduce installation time and increase safety</li> <li>Monitoring of connection status</li> <li>Separate installation and test lists</li> <li>Installation support though grid values (e.g. current and voltage) on a dedicated screen</li> <li>Standalone and multi-meter room installations possible                             <ul style="list-style-type: none"> <li>Including mixed installations with e.g. E650</li> </ul> </li> <li>Hot swap of E66C and E66E modules</li> <li>Configurable HW at point of sale and post-sale [E66E]</li> </ul> |

## Available variants

| Release 2020                     | Basic                                     | Options  |
|----------------------------------|---|--|
| Accuracy active energy           | Cl. C (MID) / Cl. 0,5 (IEC)               | Cl. B (MID) / Cl. 1 (IEC) / Cl. 0,2S (IEC)                     |
| Accuracy reactive energy         | Cl. 0,5 (IEC)                             | Cl. 1 (IEC)  |
| Network Connection               | Transformer connection (CT; CT/VT)        | -  |
| Wide voltage range               | -   | X  |
| Energy                           | Reactive and apparent energy (4-quadrant) | Active energy (bi-directional)                                 |
| Power Quality                    | PQ acc. IDIS                              | PQ acc. IEC61000-4-30<br>U, f, THD, Voltage unbalance, profile |
| Diagnostic and fraud events      | Standard Security                         | DLMS High Level Security (HLS)                                 |
| Communication                    | ETH, RS485                                | ETH, RS485, LTE CAT M1, NB-IoT                                 |
| Monitoring and control interface | 2 digital outputs, 3 digital inputs       | E66E: digital outputs and relay                                |

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