Electricity Meter

Landis+Gyr E550

ZMG300/400

The optimal metering solution for
harsh environments

The E550 is a four quadrant active/reactive industrial and commercial entry level meter family with two load profiles, a comprehensive feature set and all applicable connection types. It is especially designed for harsh environments. A combination of anti-tampering functionalities and the state-of-the-art communication interface will maximize your revenue and assure you peace of mind. The meter allows you to monitor the network and power quality metrics.

Application
Industrial and commercial 3 PH direct and transformer connected, current range 5(125)A, 5(10)A, 1(6)A, class 0.5s, 1 (IEC) or C, B (MID), advanced anti-tampering events

Rate control
Externally and internally switched (TOU, CI's, Comm's), MD, stored values, load profiles

Interfaces/modularity
Optical, 2 independant integrated interfaces, support of IEC62056-21 and DLMS (short and logical names), GSM/GPRS modem under terminal cover.

Extensive feature set and innovative Swiss design

The E550 robust design and a broad range of innovative anti-tampering features significantly minimize the risk of energy theft. With this non-technical loss solution, we offer you peace of mind.

Quality and Safety: The extensive basic functionality meets all major IEC and MID standards applicable to the respective requirements.

Electronics	Wide voltage power supply
	Large LCD display
	Backlit display
	Utility sealed reset button
	Optical interface (IEC62056)
	Optical button for the display
	Optical test output
Recording	Max. 48 energy registers
	24 demand registers
	Tariff control external or internal timeswitch
	Load profile
	Historical billing value registers
	7 operating time registers
	Event log
Functions	Installation support on display
	Set mode via buttons
	Real-time clock with power reserve
	Instantaneous voltage, current and power values
	Voltage monitoring
	Current and power indication
	Remote control of output contacts
Housing	Glass fiber reinforced, antistatic
	Crystal clear, unbreakable windows
	Wiring diagram on faceplate or under terminal cover
	Battery compartment under utility seal
Communication	IEC62056-21 and DLMS
	DLMS with short and logical names

Configuration E550

The Landis+Gyr E550 meter is the right answer to your specific needs, covering applications in commercial and industrial field. With the new E55C modems it gives you a state of the art and cost effective solution for AMR.

E550		ZMG405C	ZMG410C	ZMG310C	ZMG410A	ZMG310A
Application	High voltage	■	■	□	■	□
	Medium voltage	■	■	□	■	□
	Low voltage	■	■	■	■	■
Connection Type	Transf. connection	■	■	□	■	□
	Direct connection	□	□	■	□	■
Metering accuracy *active/reactive	Class C (0.5)/1.0	■	□	□	□	□
	Class B (1.0)/2.0	□	■	■	■	■
			Combi		Active	
Energy Type	Active energy	■	■	■	■	■
	Reactive energy	■	■	■	□	□
	Apparent energy	■	■	■	□	□

Communication Interfaces

The maximum communication speed of the RS232/RS485/RS422, powered RS232 and optical interfaces have been increased to 38,400 bps and 19,200 bps, respectively.
Additionally, extended modem support is available for RS232, including initialisation, periodic reset, etc.

		00	02	03	40	42	43	60	62	63	07	37
Interface 1	without	■	□	■	□	□	□	■	□	□	□	□
	RS232	□	■	□	□	■	□	□	■	□	□	□
	RS485	□	□	□	■	□	■	□	□	■	□	□
	Powered RS232	□	□	□	□	□	□	□	□	□	■	■
Interface 2	without	■	■	□	■	□	□	□	□	□	■	□
	CS	□	□	■	□	■	■	□	□	□	□	□
	RS485	□	□	□	□	□	□	□	□	□	□	■
	RS422	□	□	□	□	□	□	■	■	■	□	□

Additional Functionality

Tariff functions	Average demand
	Switching tables (active and passive TOU)
	Mixed control with programmable matrix
	Remote real time tariff control
Measured Values	Power factor
	Instantaneous values for current voltage, power, phase angle, frequency, power factor
Recording	2 power factor registers
	2nd load profile for diagnostic purposes
Special functions	Monitoring for power, current, power factor
	Losses calculation
	Distortion level calculation
Fraud detection	Hardware and software
	Per phase Ah measurement
Event detection and recording	Standard
	Fraud detection (DC magnet, terminal and front cover detection)
	Network quality
	Power quality
Access protection	On all security levels and interfaces

Software Tools

MAP 120	Parameterisation
	Matching to primary data
MAP 110	Installation support
	Meter data readout
	Load profile analysis
	Display of event log (fraud detection, nework quality, power, standard)
	Settings for communications
	Security system visualisation

Communication with E55C

The E550 meter supports now the E55C module portfolio. The first member provides an innovative and price effective solution for AMR applications using GSM/GPRS network.

The new Landis+Gyr E550 four quadrant load profiling meters offer you substantially increased protection against meter manipulation and data access by unauthorised persons. Improved installation support is integrated into the meters.

- This new meter range has high immunity against strong magnet fields and records manipulation attempts and opening of the meter housing or terminal cover.

- The meters recognise and record not only all these events, but differentiate between fraud detection, network quality, power quality and general events.

- The meter data can be read out from the display or the optical interface without power connection.

- To prevent unauthorised data access, the number of communication attempts using the wrong password is limited.

- The installation support has been improved. The terminals have visual separation of the individual phases.

- On the Landis+Gyr E550 (ZMG400), the voltage inputs are recognisable by the recessed upper section of the terminal entry. The display also shows whether voltage and phase current are present immediately after connection.

- Communication with new E55C module portfolio and with external modems (PSTN, GSM, GPRS,etc) is well supported thanks to the smart RS232 and DLMS-Cosem Protocol (short and logical names).

Manage energy better

Landis+Gyr is the leading global provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios, we deliver innovative and flexible solutions to help utilities solve their complex challenges in smart metering, grid edge intelligence and smart infrastructure. With sales of USD 1.8 billion, Landis+Gyr employs approximately 5,600 people in over 30 countries across five continents, with the sole mission of helping the world manage energy better. More information is available at www.landisgyr.eu.

Landis+Gyr in short

- Swiss HQ with 5'600 employees in 30+ countries worldwide
- Serving 3'500+ utilities worldwide
- Over USD 1b of self-funded R&D investment since 2011
- Over 90 million connected intelligent devices deployed
- More than 14 million meter points under managed services
- TWorld's largest smart grid IoT project with 300+ million devices globally
- Frost & Sullivan Global AMI Company of the Year 2017 - the 4th consecutive year

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