



CI/OS 624 – Smart Metering

CI/OS 624 is an integrated communication terminal for Landis + Gyr electricity meters in a point-to-point solution. CI/OS 624 communicates directly with the data collection system over the cellular network GPRS (General Packet Radio Service). The terminal is prepared for a migration to 3G/UMTS.

The terminal is designed to meet the needs of the Dutch NTA requirements for Smart Metering. Wireless multi utility is integrated so other utility meters can now be read through the electricity meter.

The terminal is designed so that no further on-site maintenance is needed after installation. In case of power losses, the terminal stores meter values in a built-in, non-volatile memory. The terminal then sends an SMS for notification of the outage.

Easy and flexible

Easy to Install

The CI/OS 624 in the Landis+Gyr meter is very easy to install. The terminal is readily configured from the factory and the installation phase only involves connecting the power cords and turning on power. CI/OS 624 automatically connects to the cellular network and is ready to deliver data. To verify the whole communication flow, a check installation is done at sight with a PDA.

Multi utility

Other utility meters, such as gas, water and heat, can easily be connected to CI/OS 624 wirelessly. Meaning more meters can share one communication unit and reduce equipment and communication costs.

Easy to Upgrade

CI/OS 624 is easy to upgrade. The firmware and configuration can be made complete remotely and with a smart verification. The terminal will not install a faulty firmware due to interruption in the communication.

More communication modules

Thanks to the modular design, the terminal can be ordered with ZigBee, WiFi and M-bus communication. In this way communication costs can be reduced by letting several meters share the communication line to the data acquisition system. Another benefit is that end users can connect a wide range of sensors, and ZigBee equipped devices such as relays and controls to save energy.

Main features

Data collection intervals

The terminal can be programmed to collect meter values with a resolution of 1 minute to monthly values.

Multi rate

The terminal has a built-in rate system, which enables storage of power consumption data according to tariffs. The tariffs can be freely specified according to customer needs.

Support for micro production

The terminal has support own production of electricity and measures energy production as well as consumption.

Real-time clock

The terminal has a built-in real time clock that supplies accurate time. A special clock synchronization algorithm is used for ensuring correct time stamping of meter values at all times.

Tampering detection

The terminal supports all tampering detection equipment in the Landis+Gyr electricity meters, which function to improve revenue protection of the utility companies.

Load Control

The terminal has a built-in relay, that can be configured to control loads and steer third party equipment according to tariffs and customer specified needs.

Breaker

The terminal can be equipped with a breaker (option), that disconnects the power to the consumer after the meter. Status of the breaker position can be communicated.

Chip SIM

With chip SIM there is no physical SIM card. This gives the option for more than one telecom operator for the same meter.

Wireless M-bus

With built-in wireless m-bus, the terminal can connect to a wide range of utility meters wirelessly, thus it can share the communication.

Local data reading

Through a RJ-11 connector, third parties can read meter data from electricity and other connected meters.

Customized messages in display

The terminal can send messages to be displayed on the meter display, such as scheduled power outages.

Extensive data availability

Data such as voltage, current, power, frequency, power factor, active and reactive energy are just a few of the extensive data available for storage or control.

Power outage detection

Complete power outages, phase dropouts and voltage levels can be monitored in the terminal. Thresholds for outage lengths and voltage levels can be predefined according to customer needs.

Communication

The terminal always uses bi-directional communication between meter and data acquisition system. The communication protocol is IP over GPRS.

Remote configuration and update

CI/OS 624 can be remotely configured and updated over GRPS, which eliminates the need for anyone to visit the site after installation.

Storage of metering data

The CI/OS 624 stores internally up to 4.000 meter values. These values are all stored in a non-volatile memory which is independent of power losses.

Technical specifications

Voltage

- 3 x 230/400 V
- 3 x 230 V
- 1 x 230 V

Frequency

- 50 Hz

Temperature Ranges

- -25 ... 55 °C
- Humidity: < 95%, non condensing

Housing

- IP 52

Dimensions (terminal)

- 27.7 mm height
- 120.0 mm width
- 62.5 mm length

Communication

- Quad-Band (850/900/1800/1900 MHz)

Antenna

- Internal dipole antenna
- SMA Connector for external antenna

Digital IOs

- 1 x digital output
- 1 x Relay 230 VAC / 3 A

Communication ports

- RJ-11 connector (read only)

Real-time Clock

- Clock accuracy: ±1s / 24h (in 25 °C)
- Automatic NTP Time Synchronization
- Power back-up: 10 days

Compliance

- CE
- EN60950-1
- EN61010-1
- 73/23/EEC
- 89/336/EEC
- SPI618
- NTA 8130