



Landis+Gyr L740
load switch device



Bringing dynamic load management to smart metering

Hybrid technology paves the way

The unique Landis+Gyr L740 load switch device offers the best of both worlds – the reliability of ripple control and 2-way future-oriented PLC communication. Today utilities are at a crossroads. The continued increase in energy demand, the liberalization of energy markets, and an increase in renewable energy, 'green' consumers and electric vehicles all create new challenges in providing a stable network. Smart metering systems are emerging in many markets to bring more intelligence, transparency and flexibility to power networks.

Load management is a key functionality to bring stability to distributed power networks. Load objects or power generators, such as solar panels, can be turned on or off in real time as needed. Peaks are thus avoided and the network is fully optimized. Dynamic load management allows utilities to react immediately to the current network situation.

The L740 enables the utility to migrate to smart metering at its own pace with minimum risk. It can be installed today as a standard ripple control receiver. As the network is updated to smart metering, the devices are switched over to PLC communication remotely via a simple profile change. This seamless migration path ensures the highest reliability and functionality while maximizing the investment protection. Load management functionality can also be easily added to an existing smart metering system, minimizing the needed investment and leveraging the infrastructure.

Landis+Gyr is the leading provider of integrated energy management solutions in the world. The L740 load switch is part of the proven, end to end Gridstream® smart metering system, which allows utilities to maximize the potential of their energy management assets.



Benefits

- **Hybrid Functionality** for seamless integration of load management applications covered by ripple control technology into a smart metering environment.
- **Remote Parameterization** offers highest flexibility within liberalized markets.
- **Remote Diagnostics** allows quick fault finding in case of any malfunction of the device.
- **Real Time Control** is a requirement to perform dynamic load management.

Typical application areas

- Smart grid migration
- Reliable switching of load objects
- Demand side management
- Load control for peak avoidance
- Balancing services
- Integration of renewables / renewable generation
- Tamper prevention

Dynamic load management enables network stability

With over 65 years of experience, Landis+Gyr is the trusted partner for load management solutions. In combination with the FPS controller, the Landis+Gyr L740 load switch device delivers real time load control and event triggered direct commands to avoid load peaks and enable a leaner grid infrastructure. Volatile renewable energy is safely integrated in the network.

The hybrid L740 load switch provides a low risk, cost efficient migration path to the smart grid. It enables the utility to leverage the ripple control system and investments for several years until it is ready to make the switch. Once the switch to PLC technology is made, the L740 enables the utility to meet individual customer requirements thanks to remote parameterization and the definition of customer profiles. Maintenance and service processes become more efficient through the ability to remotely diagnose the load switch for quick fault finding, as well as update the firmware remotely via PLC.

Whether you use the L740 load switch with ripple control, PLC or a combination thereof, it delivers the highest operational reliability. A large set of autonomous features and intelligence, such as time lines, supervision functions, learning functions, an astronomical calendar and back-up clock ensure that load objects and lighting are dependably switched.

Optimum flexibility

Basic performance

Operating modes

- Independent time switch with holiday calendar and summer/winter time change over
- Ripple control or PLC communication
 - Ripple control communication
 - Direct commands (Broadcast)
 - Ripple control frequency changeover
 - PLC communication
 - Direct commands (Broadcast)
 - Programming commands
 - Individual direct switching commands
 - Relay monitoring and status information
 - Tamper detection
 - Operational system information
 - PLC repeater function
 - Firmware download

Remote programmable functions (only via PLC PLAN/PLAN+)

- Add, change and remove time line entries
- Allocation of up to 65,536 individual profiles
- Relay monitoring

Local programming features

- Ripple control frequency switching
- Time lines and memo lines for independent switching
- Learn function: Remembers switching times for autonomous execution
- Communication outage detection (Fail safe)
- Interpreter programs allow any allocation of addresses and commands to the relays
- Programmable relay confirmation in intervals of 5 to 30 minutes
- Programmable mains monitoring, including power down, power up and under frequency detection

Internal clock, astronomical calendar

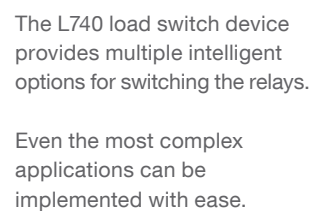
- Intelligent perennial time switch with synchronization via PLC and ripple control commands
- Astronomical calendar for lighting control
- Back-up clock: Supercap buffered real time clock with 7 days reserve



The L740 is compatible with both
Ripple Systems and Gridstream® AIM.

L740 functionality

Ripple Control System
Smart Metering System
Combination of Both



The L740 portfolio – available types

- | Number of relays | Hybrid Load Switch L740-H | PLC PLAN+ Load Switch L740-P |
|-------------------|---------------------------|------------------------------|
| 3 x 16 A | L740-H3 | L740-P3 |
| 5 x 16 A | L740-H5 | L740-P5 |
| 1 x 40 A | L740-H1 | L740-P1 |
| 1 x 40 + 3 x 16 A | L740-H4 | L740-P4 |

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