

EHID PLC

Power Line Communication



Concept:

PLC utilizes the existing power line for communication.

The PLC interface is a P2MP solution based on well-known commercial technology for communication.

EHID PLC is an innovative and effective way to remotely monitor and control electronic ballasts.

EHID PLC is a Plug & Play solution which is suitable for new installations as well as for retrofit lighting projects.

Technology:

EHID PLC utilizes the existing power lines to communicate between the ballasts and the PLC HUB.

The information is sent over the power lines by superimposing a high frequency carrier signal on top of the fundamental power frequency.

The EHID PLC system complies with the IEC 61000-3-8 standard for signaling on low-voltage electrical installations.

EHID PLC can easily be adapted to work with various customer-defined protocols.

System topology:

- EHID PLC controllable ballast
- PLC HUB - used to mediate between ballasts and Lighting Management System

Controlling and Monitoring:

- EHID PLC system is addressable and allows up to 128 controllable ballasts per phase
- Each ballast can be addressed individually, by groups or broadcast

Transmission on power line:

- Carrier frequency – C-Band (125-140kHz)
- Baud rate- 2.4 Kbps
- Modulation - FSK Modem
- Other consumers on the power line which might interfere with the PLC signals should be taken into consideration

Benefits:

- Low installation costs – no need for extra communication lines
- Retrofit – the most appropriate solution for existing installations
- Digital signaling – less sensitive to interference / higher signal integrity
- Long distance – up to 3km
- Bi-directional communication – allows for feedback from each ballast
- Master/Slave operation – lower communication conflict for higher communication reliability
- Addressability – endless control and configuration flexibility
- Low baud rate – allows for high communication reliability, utilizing standard cables for long distances
- Isolated communication media – secured data transmission
- Low maintenance costs
- Plug & Play solution
- Landscape is not a consideration
- No electromagnetic pollution