ZEMFYRE

Single Pair Ethernet System Alliance

ZPC400
PoDL/SPoE Power Controller
Single Pair Ethernet

Overview

ZPC400 by Zemfyre Inc. is a 4-channel PoDL/SPoE Power Controller to compliment ZEM6xx series Single Pair Ethernet switches' capabilities.

It takes DC supply voltage in 15-58V range and converts it to either PoDL Class 10-12 output (24VDC nominal) or Class 13-15 (48VDC nominal). It enables SPE power delivery on the same pair of wires used for data communication that can extend existing Ethernet link for up to 1,700m.

Besides supplying power, monitoring and protecting four individual SPE channels ZPC400 communicates to end nodes with Serial Communication Classification Protocol (SCCP) for PoDL to establish compatibility and power requirements for each peripheral device and support low power mode during periods of inactivity.

The Power Controller runs completely autonomously of ZEM6xx device reducing time and efforts to poll PoDL channel status periodically, only sending a message to the host when proper event (device connect/disconnect, fault, sleep mode) is detected.

ZPC400 to ZEM6xx communication based on CAN Bus allow easy system extensions by daisy-chaining the devices best suited for any particular customer use case.

ZPC400 in conjunction with a secure unmanaged switch ZEM6xx enables IIoT devices secure Cloud connectivity that facilitates Industry 4.0 adoption.

Features

- 15-58VDC Input Power range over a 0.2" pitch 3-pin industry standard terminal block, polarity-agnostic.
- Four output power PoDL channels per IEEE 802.3cg with SCCP communication.
- PoDL power Class 10 to Class 15 are supported.
- Voltage, current, and temperature telemetry.
- Auxiliary 12VDC output power for ZEM6xx supply.
- Galvanically Isolated host CAN Bus Interface.
- Support software field updates over CAN Bus.
- Multicolor LED PoDL channels' and overall Status indication.
- Earth grounding on input power terminal block is available.
- Fanless construction in rugged ABS plastic.
- Dimensions: 3.5x4.5x1.25" (W×H×D), weight 0.2kg, DIN-rail or panel mounting options.
- -40…+70C temperature range, 5% to 95% relative humidity (non-condensing).
- Patent pending.

• Industry 4.0 • Process Automation • Factory Automation • IIoT • Transportation •
• Building Security/Automation • Smart City • Robotics • Audio/Video Streaming •
Efficient Power Delivery + Security + Range + Seamless Data Aggregation