

Double Frequency PowerLine Modem

Article Reference:
OEM_PL50

Introduction

The OEM_PL50Driver module is a device for the transmission of data via the low voltage line and is designed to convert any product into a communications unit using the LonWorks[®] PowerLine technology.

Using the ANSI/EIA 709.1 (Protocol LonTalk[®]) communication protocol, any product can talk to other products using all the power that this technology provides to manufacturers, installers and users.

This module can replace the 3150 Neuron + PLT-22 + PLA-21 product. It complies with the CENELEC Band-C Standard (Residential, commercial applications). There is a product available on demand that complies with the CENELEC Band-A standard (Utility applications).

General characteristics

The OEM_PL50TxRx module is particularly indicated for long-distance applications and noisy environments where reliable, rugged and efficacious communication is required. The module has an amplified 2Ap-p output which enables it to send data signals to a distance of 5 km.

The equipment has a flash memory to store program applications to operate the equipment to be controlled, and a RJ-45 connector is available to configure the equipment's communication parameters. These parameters are also configurable via the PowerLine network.

It also has the following LEDs:

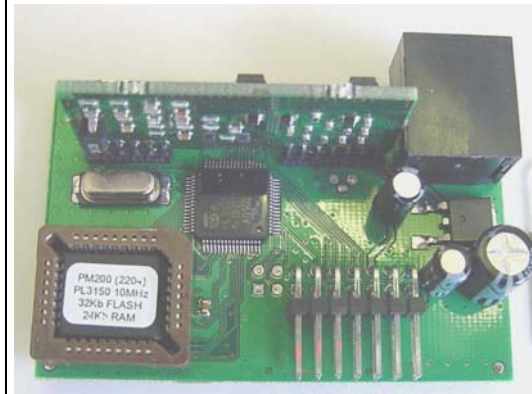
- Service Led (SL)
- PowerLine in use (BIU)
- Correct section detection (PKD)
- Port IO0 status (IO0)

All the Input/Output ports of the microcontroller are available to the application via a connector on the PCB.

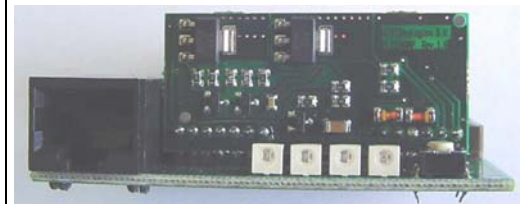
Technical Characteristics

Power supply	18-35Vdc
Ports available	11, I/O configurable
Scope	5Km
Communication speed	4Kbps
Type of communication	BPSK (by DSP)
Primary transmission frequency	132KHz
Secondary transmission frequency	115KHz
Emission conformity	CENELEC 50065-1
Operating temperature	-40°C to 85°C
Relative humidity	25-90% RH @ 50°C, without condensation

Front view



Top view



LEDs: PKD, BIU, IO0, SL

Electrical Connections

Interface with PCB	
Number pins	18
Pitch	1" (2,54mm)
Type of connector	90° elbow type (*)

(*) Non-elbow type available on demand

Outer Interface	
Data Bus	PowerLine
RJ-45 Connector	I ² C or SPI connection for local communication

Dimensions

The device is designed for housing in a DIN rail housing of 6 units along with the rest of the circuits that make up the product.

Height	43 mm
Width	63 mm
Depth	25 mm

Product parts

Microcontroller	PL3150 PowerLine Smart Transceiver
Memory	32 Kb Flash for Firmware and program application
	24Kb RAM
Operating frequency	10MHz

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