

DATA SHEET



PH485Y12

#1 to #2 RS-485/422 ISOLATED HUB (REPEATER, ISOLATOR & AMPLIFIER)

IPEX

(IP Electronix)

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1. INTRODUCTION

IPEX PH485Y12 is a 1 to 2 RS-485/RS-422 HUB that provides #2 RS-485 (Half-Duplex) or RS-422 (Full-Duplex) ports from one single RS-485/RS-422 port. It works with Baud-Rate from 300bps to 230400bps. Using this device, you can connect a RS-485/RS-422 line, to 2 different devices.

PH485Y12 can also be used as a RS-485/RS-422 Repeater and Amplifier. In addition, due to the fact that 3kV Optical and Electrical insulations have been used in the design of this device, this means all the ports are insulated from each other, so using this device in the RS-485/RS-422 line, can be very effective in eliminating electrically and electromagnetically noises. Also, the length of the RS-485/RS-422 line increases from 1200m to 2400m (1200m on each side).

Protection against Surge, ESD and EMI is considered in its design, so, **PH485Y12** is good for industrial usage and are useful for Industrial Automation, Telecommunications, SCADA systems, DCS systems...

2. SERIAL INTERFACE (RS-485)

- **Serial Standard:** EIA RS-485 Standard;
- **RS-485:** Asynchronous Half-Duplex 2-wire;
- **RS-485 Signal:** Data+, Data-, GND;
- **RS-485 Data Direction Control:** ADDC (Automatic Data Direction Control);
- Supports **Point-to-Point** and **Multidrop** Configuration;
- **Transmission Medium:** Twisted Pair Cable or Shielded Wire;
- **Protocol:** Differential 2-wire Half-Duplex RS-485;
- **Maximum Communication Distance:** 1200m (4000 feet);
- **Loading:** RS-485 Side Support up to 32 Nodes;
- **Plug & Play:** Online Module Insertion and Removal;
- **Transient Suppression** on RS-485 Communication Lines;
- **Connector:** DB9 Male.

3. SERIAL INTERFACE (RS-422)

- **Serial Standard:** EIA RS-422 Standard;
- **RS-422:** Asynchronous Full-Duplex 4-Wire;
- **RS-422 Signal:** Tx+, Tx-, Rx+, Rx-, GND;
- Supports **Point-to-Point** and **Multidrop** Configuration;
- **Transmission Medium:** Twisted Pair Cable or Shielded Wire;
- **Protocol:** Differential 4-wire Full-Duplex RS-422;
- **Maximum Communication Distance:** 1200m (4000 feet);
- **Loading:** RS-422 Side Support up to 32 Nodes;
- **Plug & Play:** Online Module Insertion and Removal;
- **Transient Suppression** on RS-422 Communication Lines;
- **Connector:** DB9 Male.

4. PROTECTION

- **Isolation Protection:** 3kV Instantaneous, 500V DC Continuous;
- **Surge Protection:** Embedded 1500W Surge Protection;
- **Magnetic Isolation:** 1.5 kV Built-in;
- **ESD Protection:** 15 kV Built-in.

5. GENERAL SPECIFICATIONS

- Power (**Green**) LED Indicator;
- Transmit (**Blue**) LED Indicator;
- Receive (**Yellow**) LED Indicator;
- **Guarantee Period:** 1 Year;
- **Warranty Period:** 5 years.

6. POWER SUPPLY

- **Power Supply Input Voltage:** 8V ~ 48V DC;
- **Power Consumption:** ~ 2W (Max.).

7. PHYSICAL CHARACTERISTICS (THE DEVICE ONLY)

- **Housing:** Metal;
- **Weight:** 350g;
- **Dimensions:** 145mm x 118mm x 27mm (5.70in x 4.65in x 1.06in).

8. PHYSICAL CHARACTERISTICS (IN THE BOX)

- **Housing:** Carton;
- **Weight:** 630g;
- **Dimensions:** 200mm x 135mm x 65mm (7.87in x 5.31in x 2.56in).

9. ENVIRONMENTAL LIMITS

- **Operating Temperature:** -10°C to +70°C (+14°F to +158°F);
- **Operating Humidity:** 5% to 95% RH;
- **Storage Temperature:** -40°C to +85°C (-40°F to +185°F).