

DATA SHEET



PH232T485Y14

RS-232 to #4 RS-485/RS-422 ISOLATED HUB

IPEX

(IP Electronix)

16 January 2022

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1. INTRODUCTION

IPEX PH232T485Y14 is a Bi-Directional RS-232 to 4 RS-485/RS-422 HUB that provides #4 RS-485/RS-422 ports from one single RS-232 port that converts RxD & TxD signals of RS-232 standard to differential (Data+ & Data-) signals of RS-485 standard and (RX+, RX- & TX+, TX-) signals of RS-422 standard at a same time. It works with Baud-Rate from 300bps to 230400bps. Using this device, you can connect a RS-232 line, to 4 different devices which have RS-485 or RS-422 ports.

Since RS-485 is a Half-Duplex standard, switching between Transmit and Receive is done automatically and further signals (such as RTS) are not required. **PH232T485Y14** supports Point-to-Point and Point-to-Multi Point Party Line network topologies.

There are 3kV Optical and Electrical insulations have between RS-232/TTL UART and RS-485/422 sides, thus using this device in the RS-485/RS-422 line, can be very effective in eliminating electrically and electromagnetically noises.

Protection against Surge, ESD and EMI is considered in its design, so, **PH232T485Y14** is good for industrial usage and is useful for Industrial Automation, Telecommunications, SCADA Systems, DCS Systems and ...

2. SERIAL INTERFACE (RS-232)

- **Number of Ports:** 4;
- **Serial Standard:** Meets or Exceeds the Requirements of TIA/EIA-232-F and ITU v.28 Standards;
- **RS-232 Signal (Full Handshake Support):** TxD, RxD, DTR, RTS, DSR, CTS, GND;
- **Baud Rate Type:** Configurable;
- **Baud Rates:** 50, 75, 110, 150, 300, 450, 600, 900, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 56000, 57600, 76800, 115200 bps and Custom Baud Rate is Selectable;
- **Data Bits:** 5, 6, 7, 8; Selectable;
- **Stop Bits:** 1, 1.5, 2; Selectable;
- **Parity:** Even, Odd, None, Mark and Space; Selectable;
- **Flow Control:** Hardware (RTS/CTS, DTR/DSR), Software (Xon/Xoff) and None;
- **Data Buffer:** 4000 Bytes (2k Bytes Transmit, 2k Bytes Receive);
- **Connector:** DB9 Female (DTE);
- **Maximum Communication Distance:** 15m.

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. 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.

5. 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.

6. GENERAL SPECIFICATIONS

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

7. POWER SUPPLY

- **Power Supply Input Voltage:** 8V ~ 48V DC;
- **Power Consumption:** ~ 4.5W (Max.).

8. PHYSICAL CHARACTERISTICS (THE DEVICE ONLY)

- **Housing:** Metal;
- **Weight:** 507g;
- **Dimensions:** 218mm x 122mm x 30mm (8.58in x 4.80in x 1.18 in).

9. PHYSICAL CHARACTERISTICS (IN THE BOX)

- **Housing:** Carton;
- **Weight:** 840g;
- **Dimensions:** 220mm x 160mm x 80mm (8.66in x 6.30in x 6.08in).

10. 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).