DATA SHEET

PH485Ux2

#2 RS-485/422 Over USB ISOLATED MULTIPORT
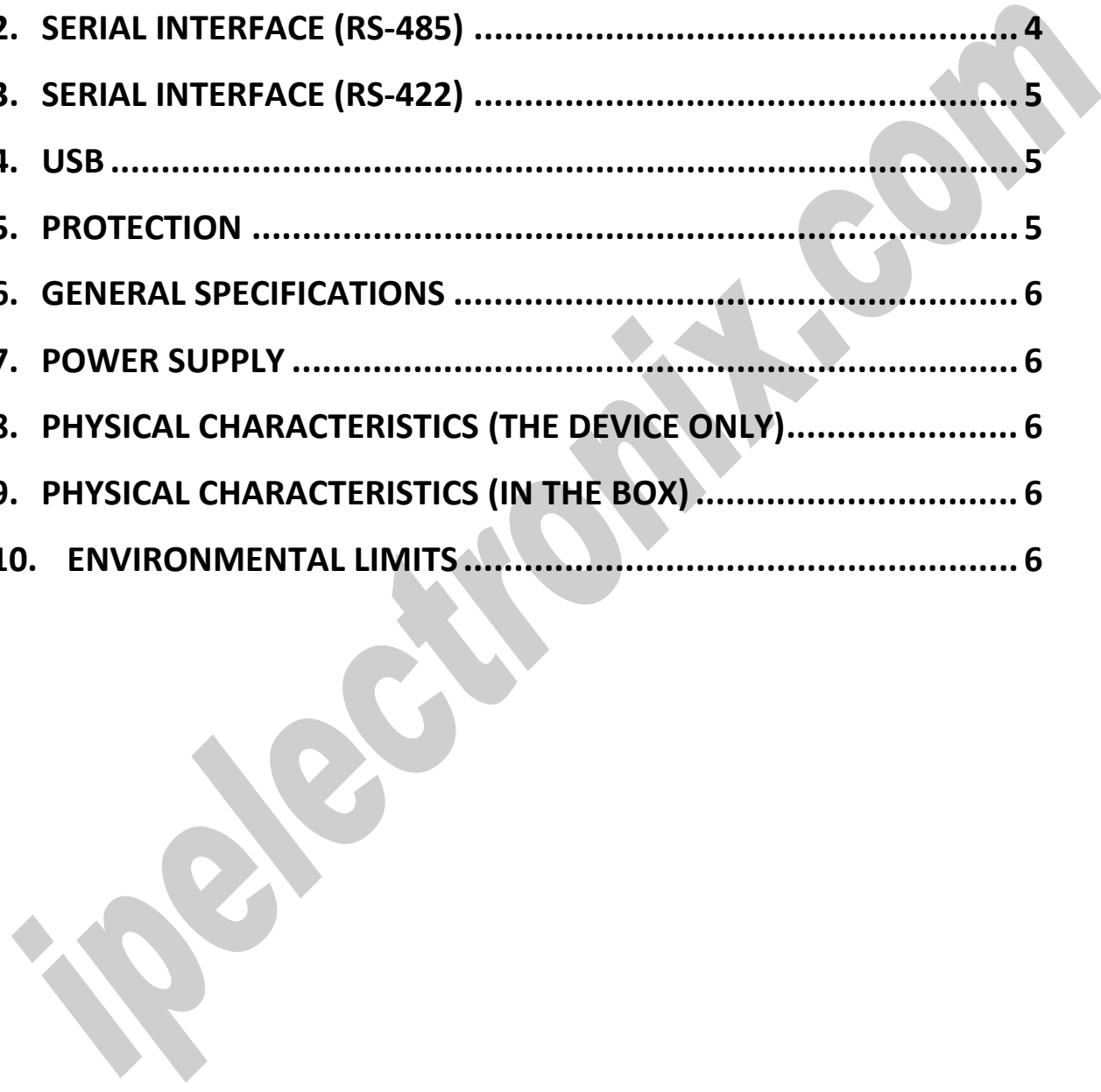
IPEX

(IP Electronix)

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Contents

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1. INTRODUCTION

IPEX PH485Ux2 is a USB Adapter Multiport that provides a Serial COM Ports via its USB connection and is compatible with RS-485 standard devices differential (Data+ & Data-); and RS-422 standard devices differential (TX+, TX- & RX+, RX-) signals. **PH485Ux2** is fully Plug & Play a and enables your laptop or workstation with the ability to communicate between a USB port and up to #2 RS-485/422 serial peripherals with baud-rate from 300bps to 230400bps simultaneously.

PH485Ux2 supports Point-to-Point and Point-to-Multi Point Party Line network topologies. Since RS-485 is a Half-Duplex standard, switching between Transmit and Receive is doing automatically and no further signal (such as RTS) is required.

PH485Ux2 supports a wide range power supply and is working with DC voltage between 8V to 48V. Protection against Surge, ESD and EMI is considered in its design and also has 3kV insulation between USB and RS-485/422 sides. Furthermore, all the ports are insulated from each other too.

PH485Ux2 is designed for industrial usage and is useful for Industrial Automation, Telecommunications, SCADA Systems and DCS Systems …

PH485Ux2 comes complete with drivers for Microsoft Windows. Drivers are also available for Linux, Mac OS and Android.

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. USB

- **Compatibility:** USB 1.0, 1.1 and 2.0 Standard Compatible;
- **Speed:** Hi-speed USB 2.0 Supported (up to 480 Mbps);
- **Additional I/O or IRQ:** Not Required;
- **Driver Supported:** Microsoft Windows, Linux, Mac OS and Android (32 & 64 Bits) Operating Systems;
- **Cable:** USB Type A Connector (Type A to Type B cable provided);
- **USB Cable Length:** 1.5m;
- **Connector:** USB type B.

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

7. POWER SUPPLY

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

8. PHYSICAL CHARACTERISTICS (THE DEVICE ONLY)

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

9. PHYSICAL CHARACTERISTICS (IN THE BOX)

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

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).

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