

# DATA SHEET



## PH485Ex1

#1 RS-485/RS-422 Serial Port to Ethernet, Terminal Server/Client

**IPEX**

**(IP Electronix)**

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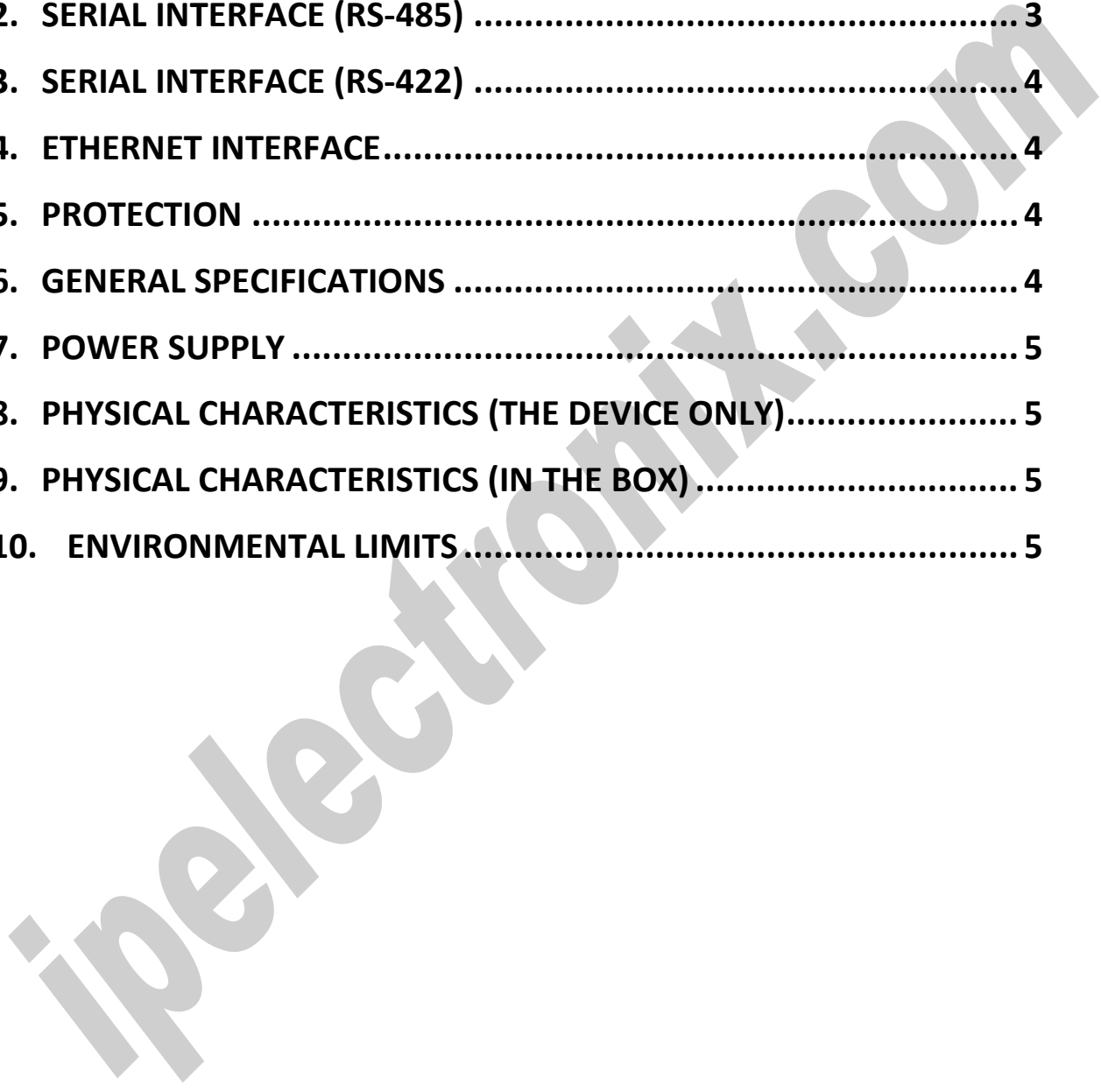
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## 1. INTRODUCTION

**IPEX PH485Ex1** bidirectional communication terminal server/client is a simple solution for connecting serial devices to a network which results in having 1 RS-485 or RS-422 serial port over Ethernet network. This converter uses transparent communicate protocol, so it is not required to understand complex Ethernet TCP/IP protocol, and no modification in serial programs is needed. It operates as a Real COM, TCP Server, TCP Client, UDP Server and UDP Client Full-Duplex converter and supports bidirectional connection.

**PH232Ex1** is designed for industrial usage and is useful for connecting any device with a serial interface to a computer via Ethernet supported network like LAN, WAN ... and can be used in Industrial Automation, Telecommunications, SCADA Systems, DCS Systems ....

Protection against Surge, ESD and EMI is implemented in its design and there is 3kV insulation between Ethernet and RS-232 sides.

## 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)
- **Network Topology:** Supports Point-to-Point and Multi-Drop 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 Supports up to 32 Nodes
- **Plug & Play:** Online Module Insertion and Removal
- **Transient Suppression** on RS-485 Communication Lines
- **Connector:** Phoenix Standard Green Terminal Block on RS-485 side.

### 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
- **Network Topology:** Supports Point-to-Point and Multi-Drop 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 Supports up to 32 Nodes
- **Plug & Play:** Online Module Insertion and Removal
- **Transient Suppression** on RS-422 Communication Lines
- **Connector:** Phoenix Standard Green Terminal Block on RS-422 side.

### 4. Ethernet Interface

- **Number of Ports:** 1
- **Speed:** 10/100 Mbps, auto MDI/MDIX
- **Connector:** 8-pin RJ45 Magnetic, POE is supported.
- **Magnetic Isolation Protection:** 1.5 KV built-in
- **Network Protocols:** ICMP, IP, TCP, UDP, DHCP, Telnet, DNS, ARP, HTTP.
- **Power Over Ethernet (PoE):** Supported.
- **Remote Configure:** Web Configuration is supported.

### 5. PROTECTION

- **Isolation Protection:** 3kV Instantaneous, 500V DC Continuous
- **Surge Protection:** Embedded 1500W Surge Protection
- **Magnetic Isolation:** 1.5 kV Built-in
- **ESD Protection:** RS-232 Bus-Pin ESD Protection Exceeds  $\pm 15$  kV Using Human-Body Model (HBM)

### 6. GENERAL SPECIFICATIONS

- Power (**Green**) LED Indicator
- PoE (**Green**) LED Indicator
- TCP Server, TCP Client, UDP (**Green**) LED Indicator
- Parity Error (PE) (**Red**) 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 to +48V DC
- **Power Consumption:** ~ 2W (Max.)

## 8. PHYSICAL CHARACTERISTICS (THE DEVICE ONLY)

- **Housing:** Plastic
- **Weight:** 185g
- **Dimensions:** 26mm x 71.6mm x 122 mm (1.03in x 2.8in x 4.82in)

## 9. PHYSICAL CHARACTERISTICS (IN THE BOX)

- **Housing:** Carton
- **Weight:** 430g
- **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)