

USER'S MANUAL



PH485Y11

RS-485/RS-422 REPEATER & ISOLATOR & AMPLIFIER

IPEX

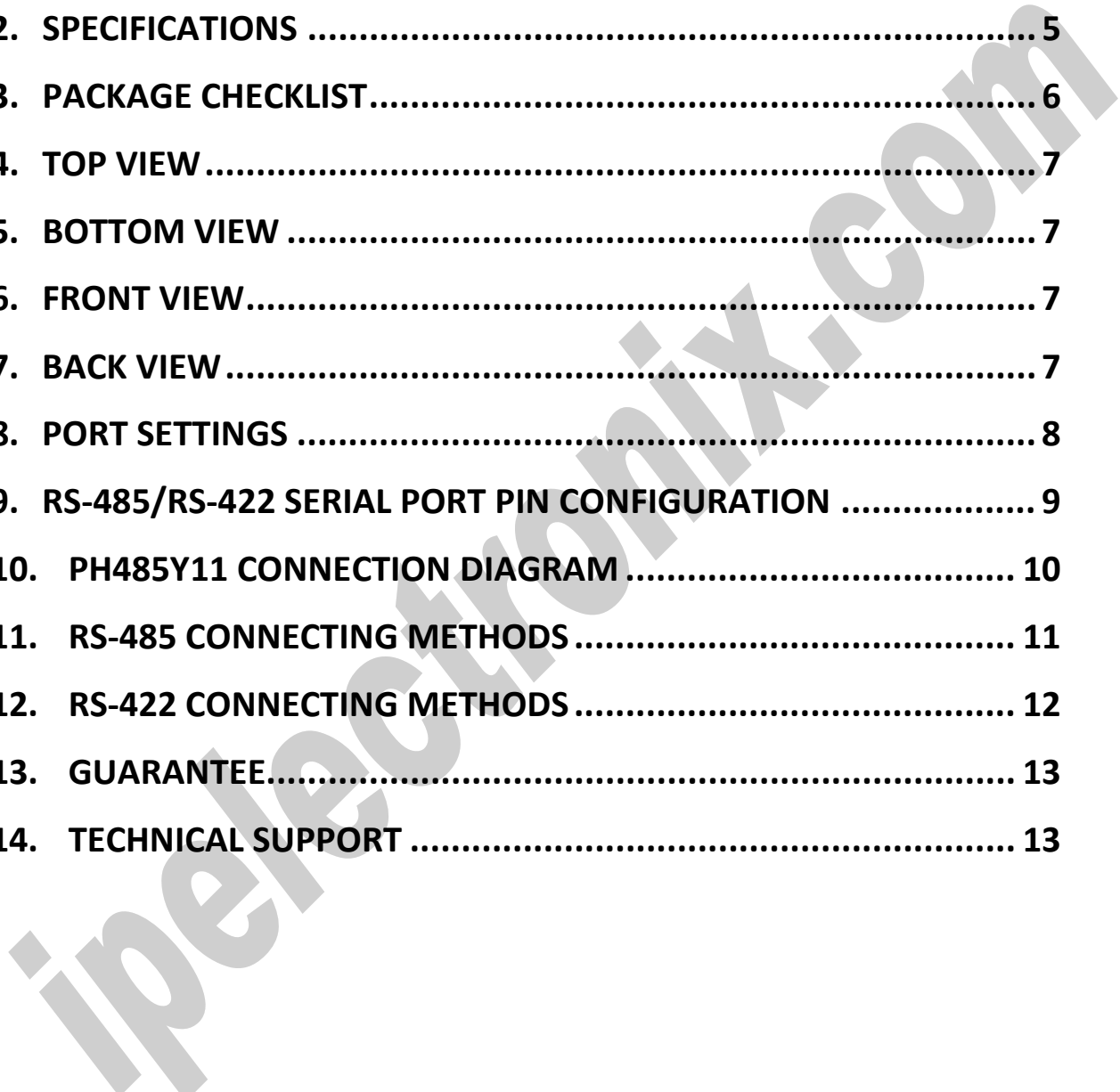
(IP Electronix)

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1. INTRODUCTION

IPEX PH485Y11 is a RS-485 and RS-422 Repeater and Isolator. If it is needed to have RS-485/RS-422 network with length more than 1200m or to have more than 32 nodes, using a **PH485Y11** helps you to increase the network length up to 2400m and also to have up to 64 devices connected to it.

PH485Y11 is compatible with RS-485 standard devices differential Data+ & Data- signals and is fully Plug & Play. It works with a wide range of +8V up to +48V DC power supply with low (about 1W) consumption.

Since RS-485 is a Half-Duplex standard, switching between transmit and receive is done automatically and no further signal (such as RTS) is required. **PH485Y11** supports Point-to-Point and Point-to-Multi Point Party Line network topologies.

Protection against Surge, ESD and EMI is considered in its design and also has 3kV insulation between RS-485/RS-422 sides, so **PH485Y11** is good for industrial usage and is useful for Industrial Automation, Telecommunications, SCADA Systems, and DCS Systems ...

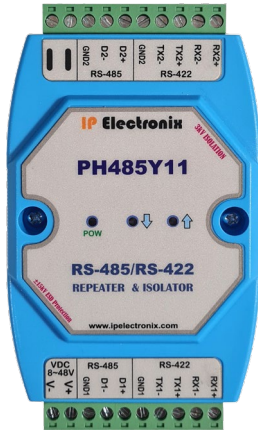
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2. SPECIFICATIONS

- **RS-485/422 Repeater, Isolator and Amplifier;**
- **Number of Ports:** #1 RS-485/422 to #1 RS-485/422 Bi-Directional Repeater;
- **Serial Standard:** Meets or Exceeds the Requirements of RS-485/422 Standards;
- **RS-485 Signal:** Data+, Data-, GND;
- **RS-422 Signal:** TX+, TX-, RX+, RX-, GND;
- **RS-485/422 Parity:** Even, Odd, None, Mark and Space;
- **Maximum Communication Distance:** 2400m (1200m each side);
- **Loading:** RS-485 and RS-422 Side up to 32 Nodes are supported;
- **Fully Plug & Play;**
- **Wide Range Power Supply:** +8V to +48V DC;
- **Serial Transmission Speed** up to 230.4 kbps;
- **Power (Green)** LED Indicator;
- **Transmit (Blue) and Receive (Yellow)** LED Indicator;
- **Isolation Protection:** 3kV Instantaneous, 500V DC Continuous;
- **Surge Protection:** Embedded 1500W Surge Protection;
- **Magnetic Isolation:** 1.5 kV Built-in;
- **ESD Protection:** Exceeds ± 15 kV Using Human-Body Model (HBM);
- **Dimensions:** 26mm x 71.6mm x 122 mm (1.03in x 2.8in x 4.82in);
- **Operating Temperature:** -10°C to +70°C (+14°F to +158°F);
- **1 Year Guarantee and 5 Years Support.**

3. PACKAGE CHECKLIST

Before installing the PH485Y11, verify that the package contains the following items:



1) #1 PH485Y11

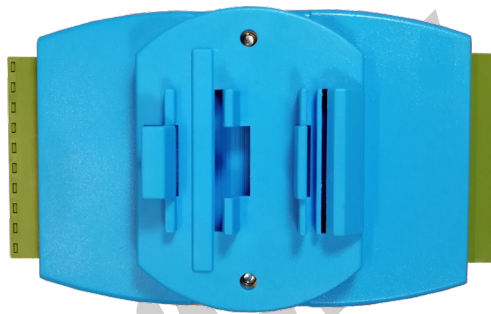
2) #1 Document and Driver CD-ROM

NOTE: Notify your sales representative if any of the above items is missing or damaged.

4. TOP VIEW



5. BOTTOM VIEW



6. FRONT VIEW



7. BACK VIEW

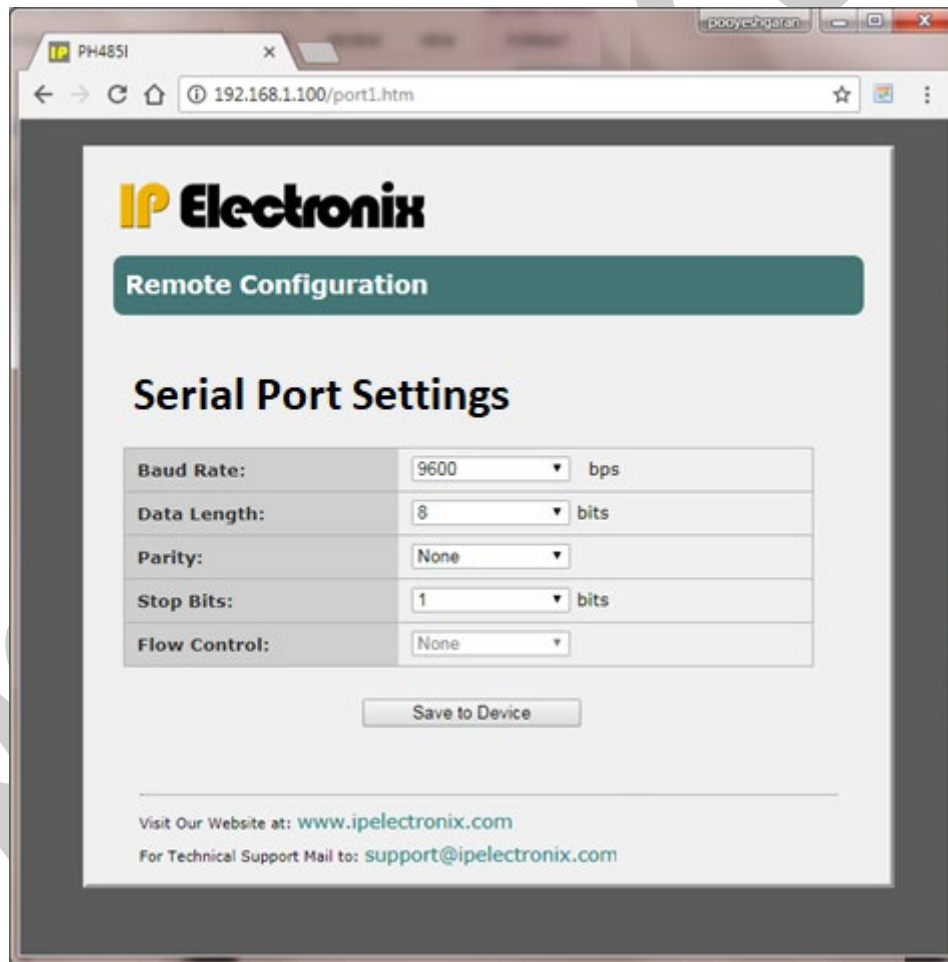


8. PORT SETTINGS

Connect PH485Y11 to your PC or Laptop by means of Ethernet RJ-45 port, the default IP of the device is 192.168.1.100 and the default subnet mask is 255.255.255.0.

Make sure the PC IP and is in the PH485Y11 IP Range and the PC subnet mask is same as PH485Y11.

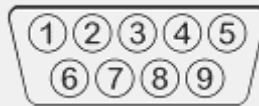
Now open a web browser like Google Chrome or Firefox on your PC and type the device IP on the address bar of the web browser, then you can see the device port settings page as shown below and you can change the settings to what you want and then press save button to save them and close the browser.



9. RS-485/RS-422 SERIAL PORT PIN CONFIGURATION

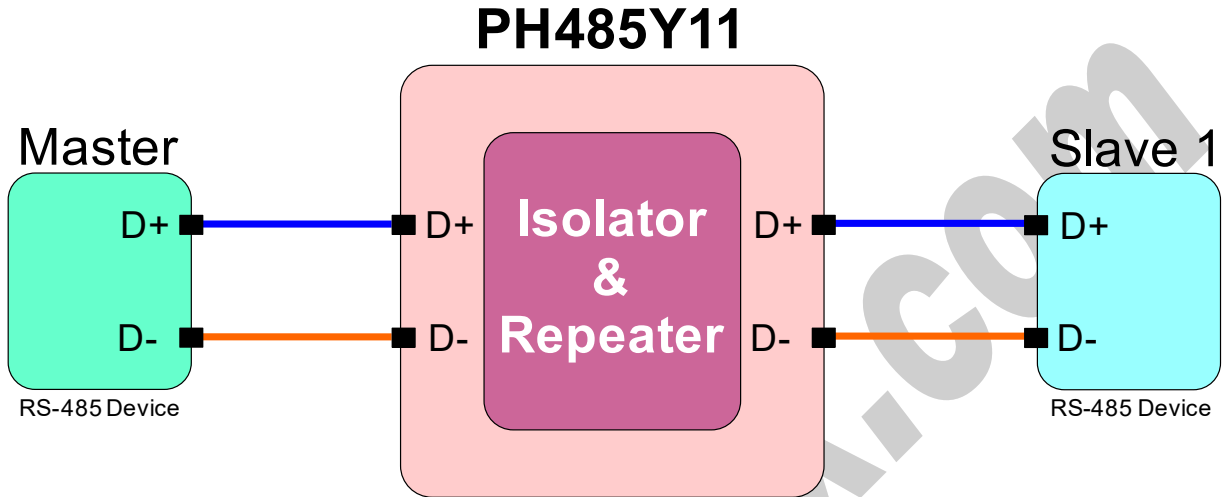
Port	Pin #	Name	Task	Type
RS-422	1	TX+	Transmit +	Output
	2	TX-	Transmit -	Output
	3	RX+	Receive +	Input
	4	RX-	Receive -	Input
	5	GND	Ground	GND
RS-485	6	NC	No Connection	-----
	7	DATA-	Data -	Bi-Directional
	8	DATA+	Data +	Bi-Directional
	9	GND	Ground	GND

Connector Type: DB9 Male

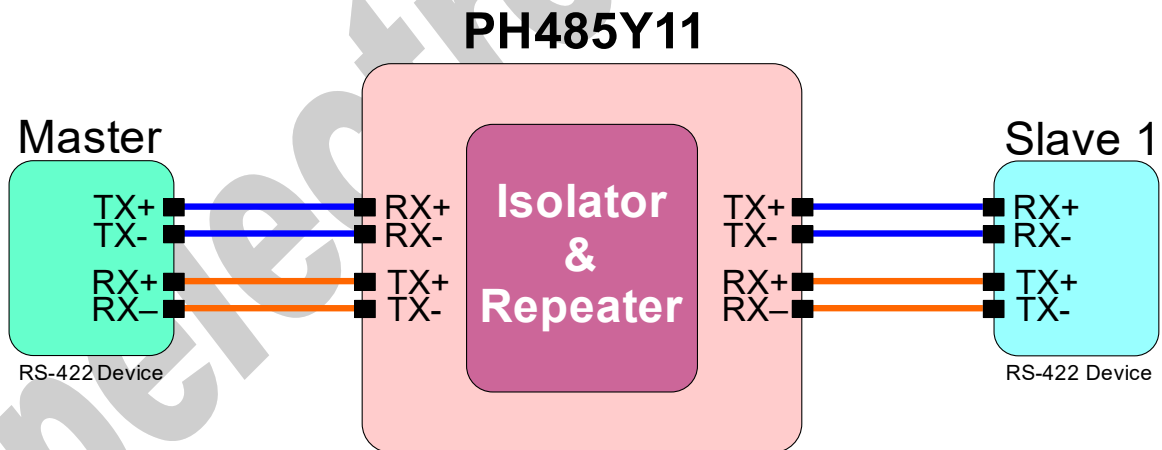


10. PH485Y11 CONNECTION DIAGRAM

- **PH485Y11 in RS-485 Mode**



- **PH485Y11 in RS-422 Mode**

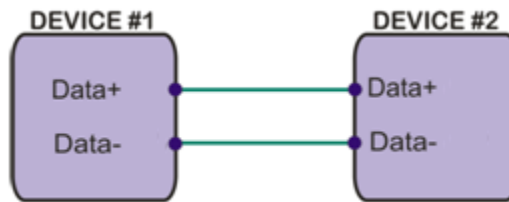


- **PH485Y11 in Mixed Mode**

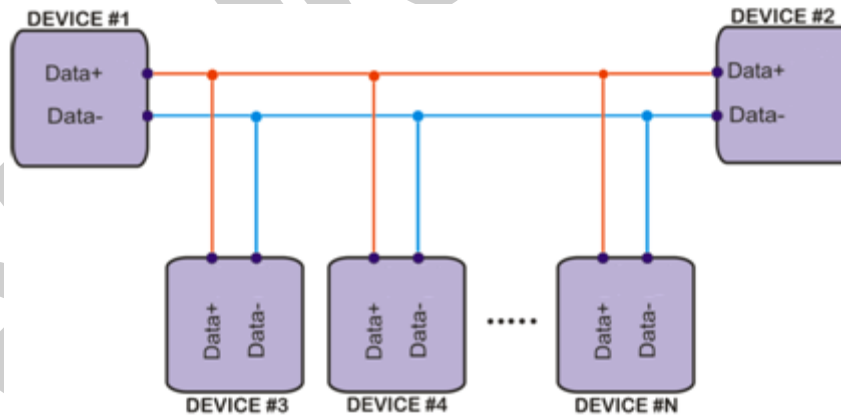
It is possible to use PH485Y11 in mixed mode, this means you can use one side in RS-485 mode and another side in RS-422 mode.

11. RS-485 CONNECTING METHODS

- RS-485: Point to Point Connection

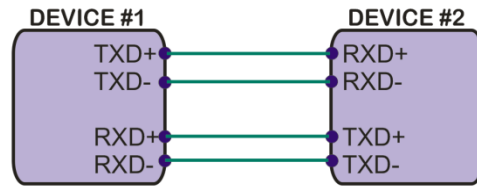


- RS-485: Multipoint Network

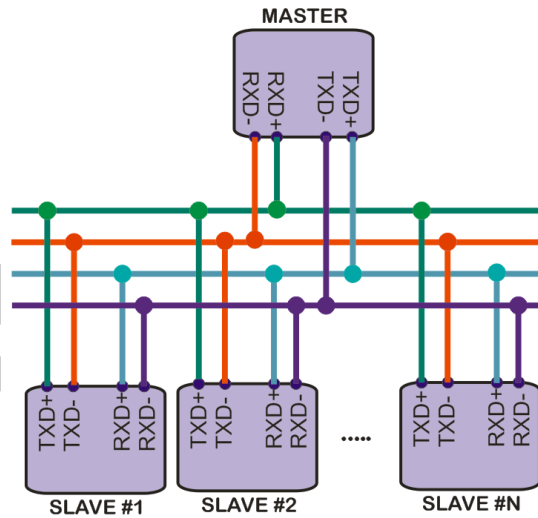


12. RS-422 CONNECTING METHODS

- RS-422: Point to Point



- RS-422: Multi-Drop Network



13. GUARANTEE

All products manufactured by **IPEX** are under warranty regarding defective materials for a period of one year from the date of delivery to the original purchaser.

14. TECHNICAL SUPPORT

If you have any technical question or need any technical support, please contact us using this Email address: support@ipelectronix.com.

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