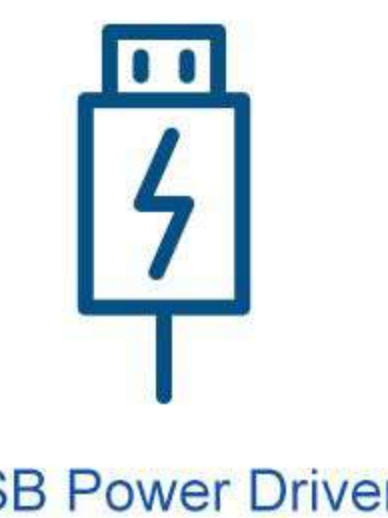
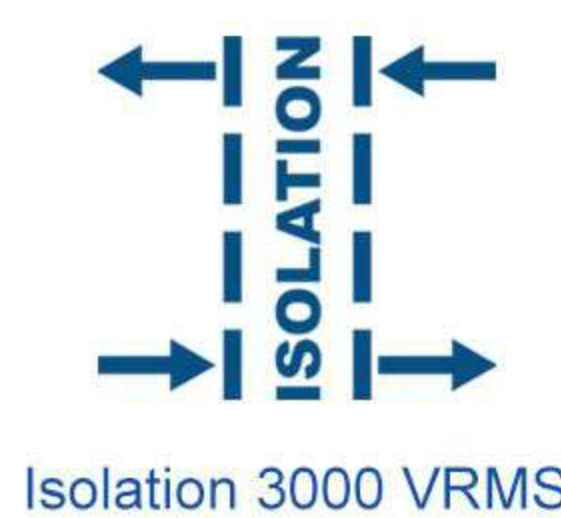
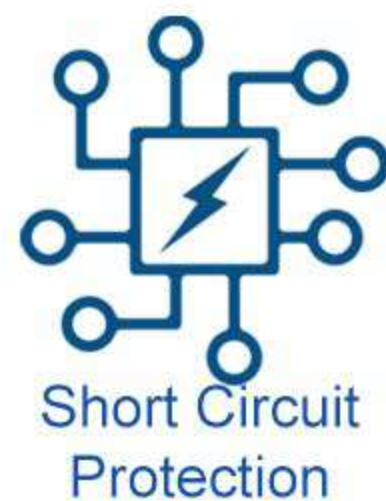




# Isolated USB to RS485 Adapter





Industrial grade Isolated Serial USB to RS485 adapter build the communication link between DAQ / DAS, PLC's and any serial port enabled devices to USB enabled devices

### FEATURES

- Both Ports Completely Isolated.
- ESD Protected.
- EMC / EMI compliance enabled Design.
- USB Power driven - no additional power supply required.
- Rugged and compact Adapter - specifically designed for industrial use.
- FT232 chip Inside - Support High speed data transfer\*.
- High common-mode transient immunity: 100 kV/ $\mu$ s typical.
- High robustness to radiated and conducted noise.
- UL recognition: 3000 Vrms for 1 minute per UL 1577
- RoHS-compliant, SOIC package.
- Fully integrated USB termination resistors.
- Supports 32 slaves on RS485 Bus.
- Output shorting is prevented by a thermal shutdown circuit.
- Interface support for 7 or 8 data bits, 1 or 2 stop bits and odd / even / mark / space / no parity.
- Device can be supplied with pre-programmed unique USB serial number.
- Integrated power-on-reset circuit.
- USB 2.0 Full Speed compatible.
- FTDI's royalty-free VCP allow for communication as a standard emulated. COM port & D2XX 'direct' drivers provide DLL application programming interface.

\*Transfer of data depends on serial device and data cable quality

- Visual indication of TX & Rx traffic via LEDs in the transparent USB connector.
- -40°C to 85°C extended operating temperature range.
- Supports devices with RS485 interface: PLC, HMI & fingerprint attendance machine.

### ESD PROTECTION RS485 SIDE

#### IEC 61000-4-5 (lightning) see IPPM below

- ESD immunity acc. IEC 61000-4-2.
- $\pm 8$  kV contact discharge.
- $\pm 15$  kV air discharge.
- ESD capability according to AEC-Q101.

### ESD PROTECTION USB SIDE

- IEC 61000-4-2 Level 4
- $\pm 25$  kV (Contact discharge)
- $\pm 30$  kV (Air-gap discharge)
- IEC 61000-4-5 Surge protection
- 5.5-A Peak pulse current (8/20  $\mu$ s Pulse)
- IO Capacitance 1.5 pF (Typ)
- DC Breakdown voltage 6.5 V (Min)
- Ultra-Low leakage current 10 nA (Max)

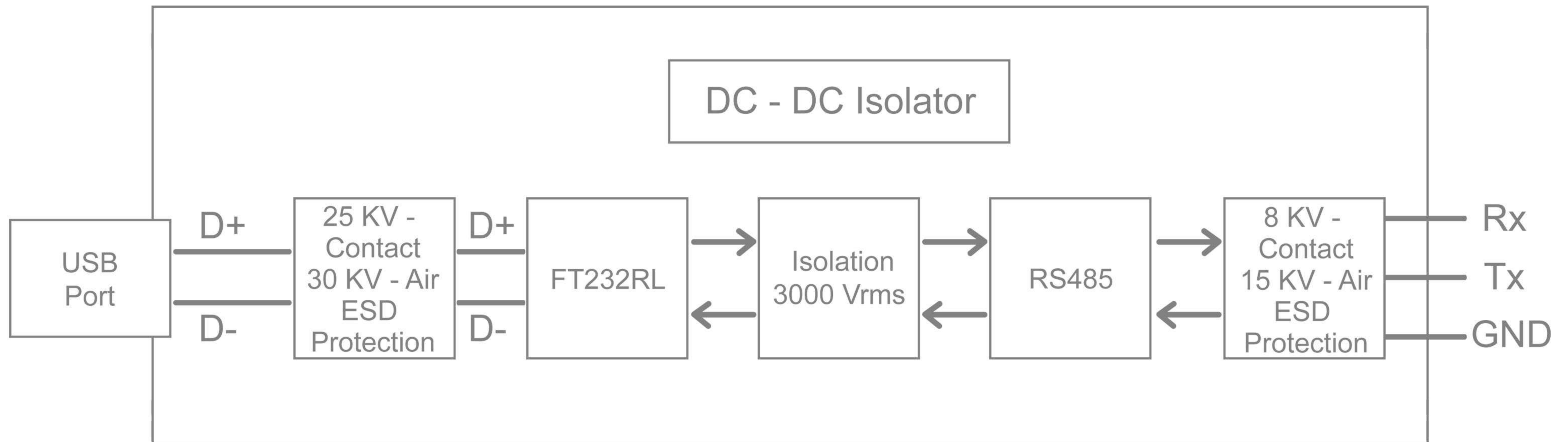


### APPLICATIONS

- DAQ / DAS serial to USB communication.
- USB Software and Hardware Encryption Dongles.
- USB to serial RS485 level converter.
- USB to RS485 industrial legacy device PLC / HMI / SCADA communication.
- USB Instrumentation PC interface
- Upgrading legacy peripherals to USB
- USB password protected file transfers.
- USB to RS485 Data Logging application.
- USB to RS485 industrial / instrumentation device Diagnostic application.

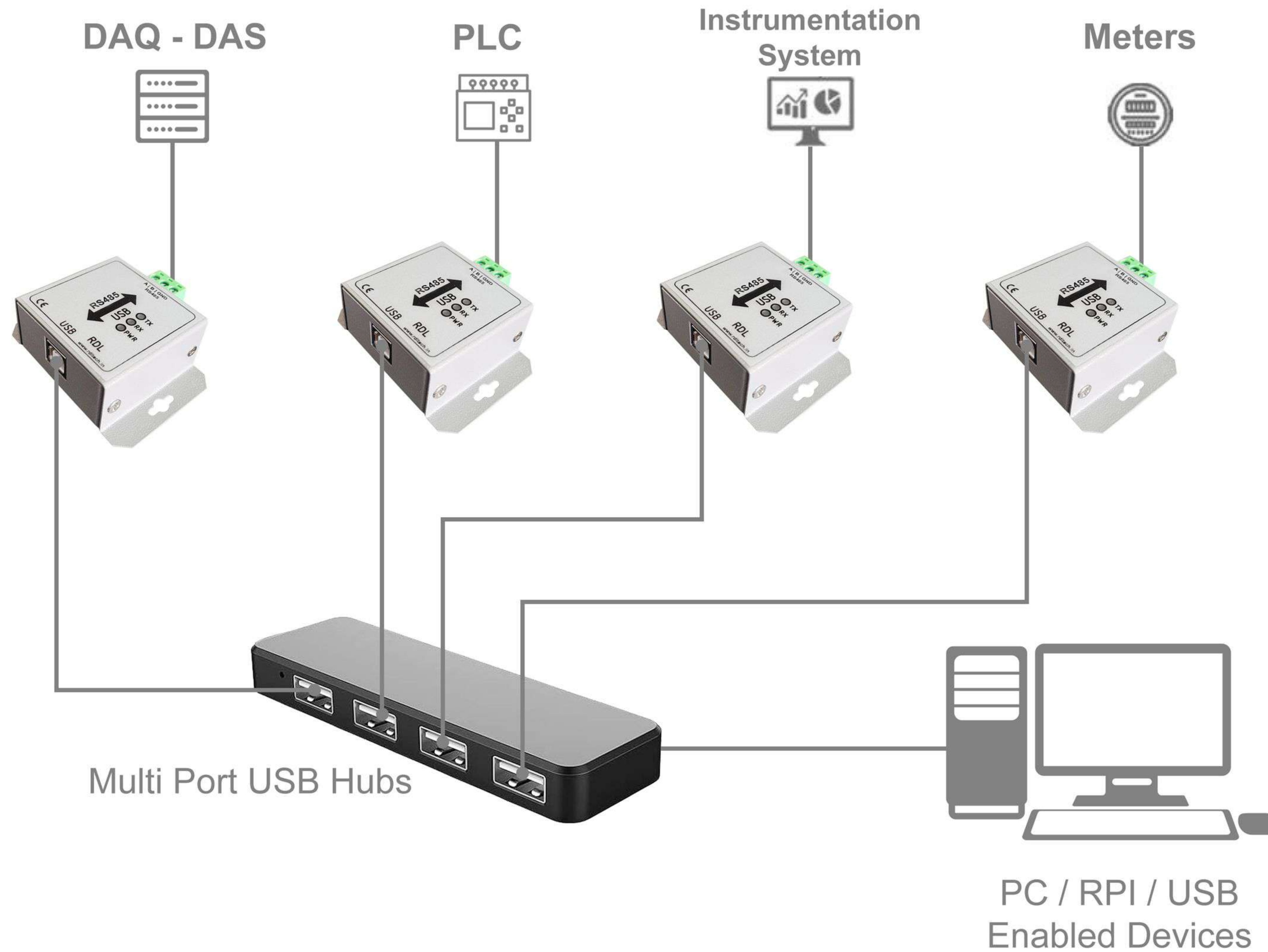
- Transceivers for EMI-Sensitive Applications.
- Industrial-Control Local Area Networks.
- DTE/DCE interface Application.
- DMX512 Lighting Control Application.

### APPLICATIONS DIAGRAM





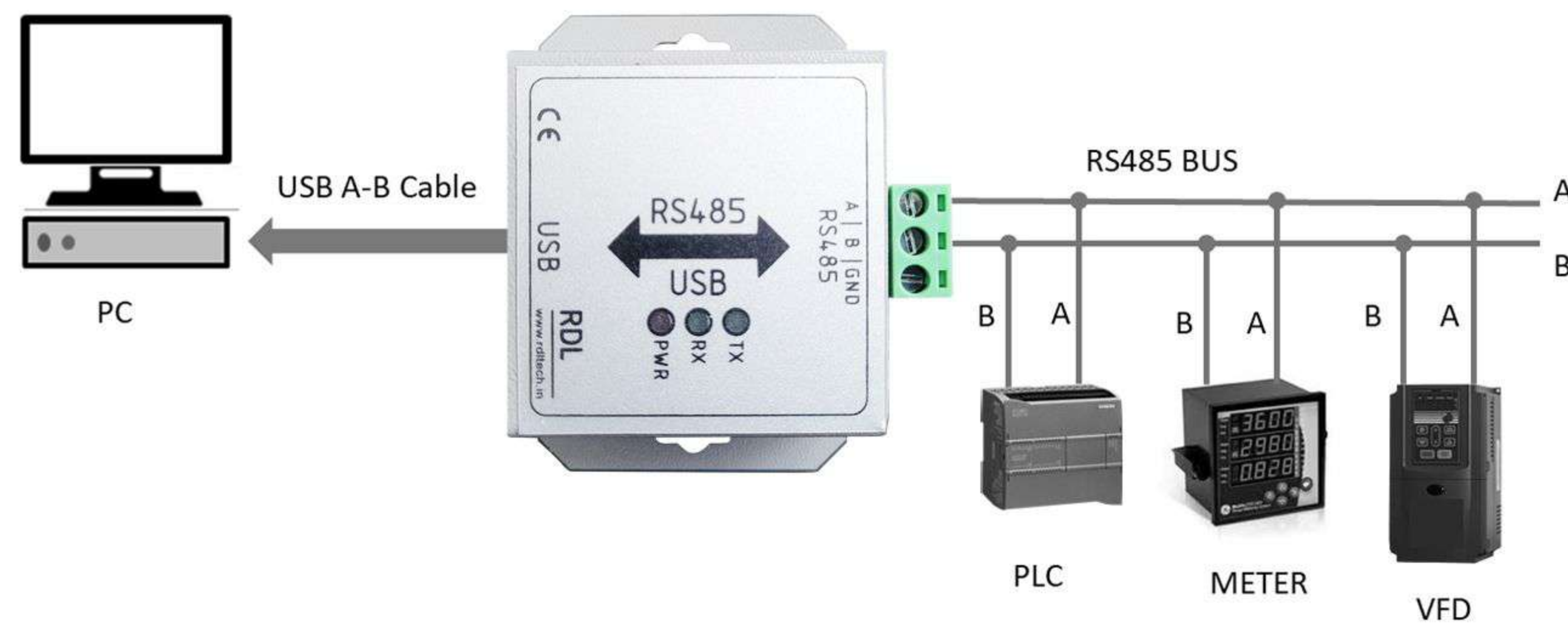
### USB TO RS485 ADAPTER WITH MULTI PORT USB HUBS



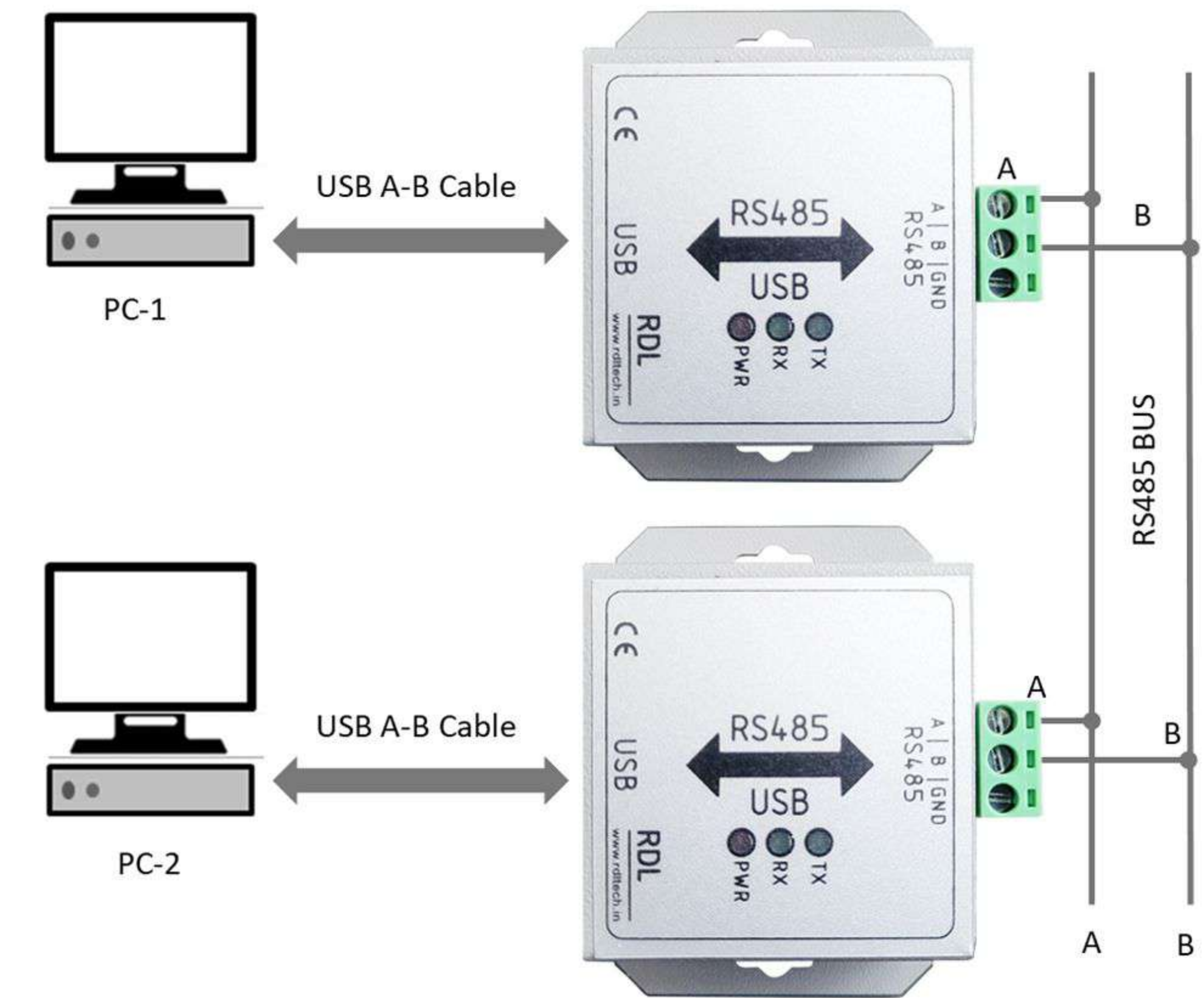


## USB TO RS485 ADAPTER WITH MULTI PORT USB HUBS

### RS485 RTU APPLICATION CONNECTION DIAGRAM



### APPLICATION WIRING DIAGRAM FOR TESTING METHOD



### APPLICATION WIRING DIAGRAM FOR DMX512 MASTER CONTROL





### RELATED PRODUCTS

#### Board Level USB to Serial RS232 Adapter

Model No. : RDL898B



- Single board USB to asynchronous serial data transfer interface.
- UART interface support for 7 or 8 data bits, 1 or 2 stop bits and odd / even / mark / space / no parity.
- Power LED.
- Low USB bandwidth consumption.
- Supports automatic handshake mode

#### 4 Port USB to Serial RS232 Adapter

Model No. : RDL898C



- Both ports Completely Isolated.
- ESD Protected.
- EMC / EMI compliance enabled Design.
- USB Power driven - no additional power supply required.
- Rugged and compact Adapter - specifically designed for industrial use.
- FT232 chip Inside - Support High speed data transfer\*.
- 4 Channel RS232 Communication Port
- 1x USB Port

#### 4 Port USB to Serial RS485 Adapter

Model No. : RDL899A



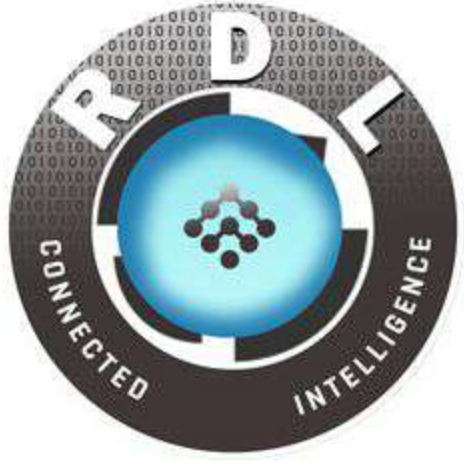
- Both ports Completely Isolated.
- ESD Protected.
- EMC / EMI compliance enabled Design.
- USB Power driven - no additional power supply required.
- Rugged and compact Adapter - specifically designed for industrial use.
- FT232 chip Inside - Support High speed data transfer\*.
- 4 Channel RS485 Communication Port
- 1x USB Port

#### 4-20 mA Transmitter

Model No. : RDL900



- ESD Protected.
- EMC / EMI compliance enabled Design.
- Loop Power driven - no additional power supply required.
- Rugged and compact Adapter specifically designed for industrial use.
- 2-WIRE, 4-20mA Current Loop Transmitter.
- Analog Input - Noise Filter and over voltage protection.
- Support Analog 0-5v / 0-10v and PWM Input.



**We Ship Worldwide**

**Our Shipping Partner**



**We Accept**



Note:

1. Unless otherwise specified, all parameters in this datasheet were measured at 25°C and 75% humidity.
2. All index testing procedures in this datasheet are based on our company's corporate standards.
3. We offer product customization, OEM and ODM Services; please contact the sales team @ sales@rdltech.in.
4. We Ship Worldwide.
5. Specifications are subject to change without prior notice.
6. For additional information on Product and to buy online @ www.researchdesignlab.com

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