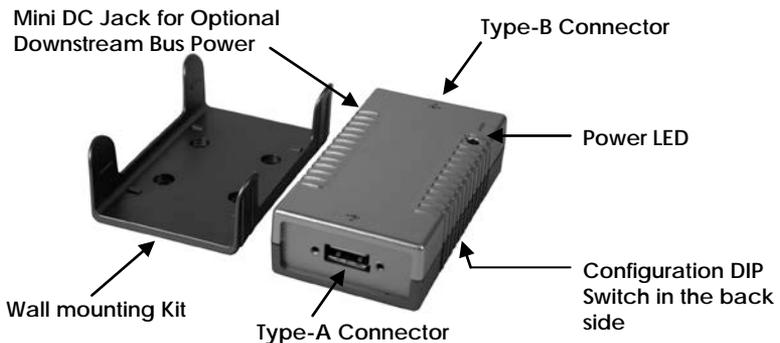# USB Isolation Adapter
Installation Guide

1. Introduction

Thank you for purchasing this USB Isolation Adapter. This unit complies with Universal Serial Bus (USB) Specifications Revision 1.1 and supports both USB1.1 and 2.0 devices. It provides 1 isolated downstream facing port with standard type-A connector and an upstream port with type-B connector.
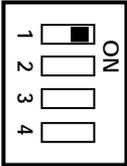
Features:

✓ Supports USB 1.1 and USB 2.0 Devices
✓ Provides 2,500Vrma Isolation Between USB Host and USB Peripheral
✓ Supports Data Rates up to 12Mbps
✓ Fully Transparent, No Software or Device Drivers Required
✓ Includes Wall and DIN-Rail Mounting Kit
✓ Supports Screw-Lock USB Mechanism
✓ Supports Wall and DIN RAIL Mounting Kits
✓ Supports Self-powered and Bus-powered Mode
✓ Built-in Power LED Indicator
✓ Supports DC Jack for Downstream USB Bus Power
✓ Applications: Test Equipment, Industrial Computer and Control Systems, Data Acquisition, Embedded Systems Development

2. Connector Layout:

Mini DC Jack for Optional Downstream Bus Power

Type-B Connector

Power LED

Wall mounting Kit

Type-A Connector

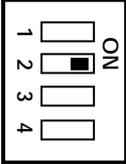Configuration DIP Switch in the back side

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3. LED and DIP Switch Settings

● **USB Speed Settings:** Pin#1 of the DIP switch is used to select the USB bus speed, when set to OFF, the speed is Full-speed (12Mbps), when set to ON, the speed is limited to Low-speed (1Mbps). It depends on what USB device you are connecting. Usually, the keyboard and mouse need to be set at Low-speed, other devices have to be set at Full-speed.
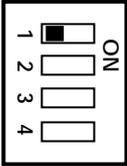
Switch Settings	Function
FULL_SPD ENABLE N/A N/A (Pin 1 ON)	**USB operates in Full-speed, up to 12Mbps transfer rate (default)**
FULL_SPD ENABLE N/A N/A (Pin 1 OFF)	USB operates in Low-speed, 1Mbps transfer rate

● **Enable/Disable USB Adapter:** Pin#2 of the DIP switch is used to Enable or Disable (like plugging and unplugging the USB cable). When set to OFF (Enable), the Adapter works normally, when set to ON (Disable), the Adapter is Disabled and is treated as if it was disconnected from the USB host port. In some cases, you may need to unplug the USB device from the Adapter, however, if you are using screw-lock type USB cables, you are NOT allowed to remove the cable unless you remove the cable screws first. Using the DIP switch will do the same thing without removing the USB cable, simply set the switch to ON (Disable) then set it back to OFF (Enable).
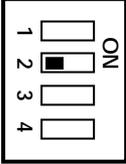
Switch Settings	Function
FULL_SPD ENABLE N/A N/A	**USB Isolation Adapter is Enabled.** **(default)**
FULL_SPD ENABLE N/A N/A	USB Isolation Adapter is Disabled.

4. Block Diagram
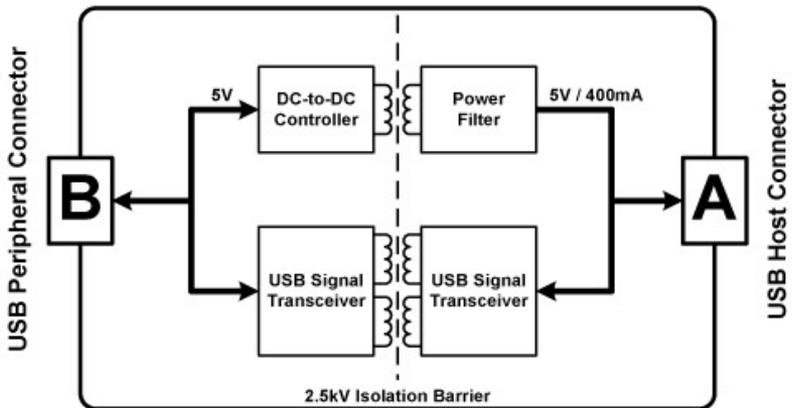
5. Installing the Adapter

Since this Adapter supports USB bus-powered feature, you don't need to connect any AC adapter to the unit. However, in some cases you may need an AC adapter to provide more bus power for your USB

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device. Please note that the power input DC jack is located at the secondary side (type-A connector):

WARNING! Don't supply the power from your PC USB host with an USB-to-DC-Jack conversion cable to the DC jack of the Isolation Adapter, it will short the primary and secondary side isolations. If you are using an AC Adapter to provide power, please make sure that your AC adapter provides enough isolation capability, at least it should be more than 2,500Vrms.

1. **Use static electricity discharge precautions.**
   Remove possible static discharge potential from any objects that the converter may come in contact with before installation. This can be accomplished by touching a bare metal chassis rail after you have turned off the power.

2. **Locate an unused USB host port on your PC, connect USB cable from the USB host port to the Isolation Adapter's upstream port.**

3. **Install USB cable from the Isolation Adapter to the USB device**

4. **Install the Wall / Optional DIN Rail Mounting Kit**

6. Specifications

Type	Specifications
Connectors	Upstream: Type-A USB1.1
	Downstream: Type-B USB1.1
Speed	Full-speed: 12Mbps
	Low-speed: 1Mbps
USB Signals	D+, D-
Isolation	2,500Vrms
Power Consumption	5V/120mA max.
Operating Temperature	0 to 608C (32 to 1408F)
Operating Humidity	5 to 95% RH
Storage Temperature	-20 to 85°C (-4 to 185°F)