



USB Isolator 3000 Vrms Rugged Metal Chassis

Model Number: *USBG-ISO-M*

Installation Guide

Coolgear, Inc.

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Revision History

Revision	Date	Comments
1.0	04/23/2024	First Release

1. Introduction

Thank you for purchasing Coolgear’s USB Isolator 3000 Vrms Rugged Metal Chassis. TITAN’s USB-ISO-M is a robust, industrial-grade full speed USB isolator that provides high-voltage 5kV isolation to protect the host computer and expensive USB equipment that are connected to it. This industrial USB isolator is designed to build protective isolation barriers to the power and USB signals between a host computer and any connected USB devices. Both the computer and the connected USB device are protected from harmful voltage, power surges, transient voltage spikes, ESD shock, EMI/RFI interferences and noise that may cause damage and inaccurate measurements. The isolator is very efficient and secured to eliminate ground loop currents and protect against overvoltage.

The data transfer rate of USB-ISO-M can be configured to either USB2.0 full speed 12Mbps or USB1.1 low speed 1.5Mbps. The isolator is bus-powered and provides up to 420mA current to downstream devices. There is no need for any driver or software installation. By plugging the cable from the USB isolator to the host USB port of the PC and connecting your USB device to the downstream port of the isolator, the host PC and USB device are immediately protected by isolation.

The USB isolator helps improve system stability and protect valuable industrial and medical equipment. When the USB host and USB devices are operating at different ground voltages, the USB-ISO-M is an ideal protector to prevent damage.

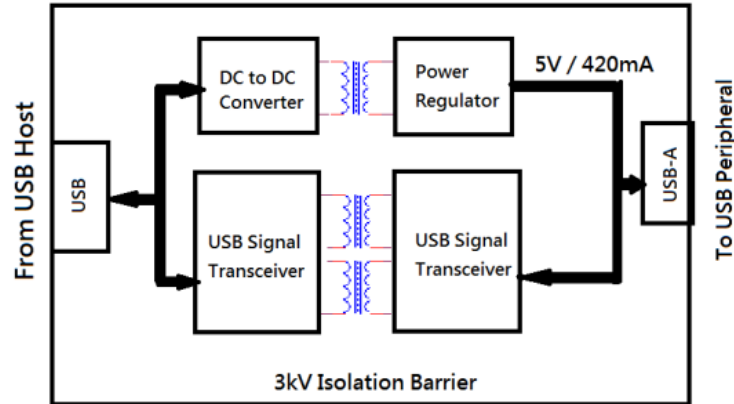
Features:

- ✓ Isolates and protects any USB devices from a USB host
- ✓ Electrical isolation up to 5000V both upstream and downstream
- ✓ Common mode filtering on all data lines
- ✓ Provides 5V 420mA isolated pass-thru power to downstream device
- ✓ Supports USB2.0 full speed 12Mbps or USB1.1 low speed 1.5Mbps data rate with jumper-selection
- ✓ No software or drivers required
- ✓ Short circuit protection
- ✓ LED for power indication
- ✓ Wide ambient temperature operation from -40 to 70°C (-40 to 158°F)
- ✓ USB bus-powered
- ✓ Robust metal case with DIN rail brackets
- ✓ USB cable securely locked to the case
- ✓ CE, FCC approval
- ✓ RoHS and RoHS2 compliant

2. Specifications

Ports	Downstream	One
	Upstream	One
LED	Power Indication	
Power Mode	Self-Power Mode	
Output Voltage (per port)	+5VDC	
Output Current (per port)	420mA maximum	
Operating Temperature	-40°C to 70°C	
Housing	Robust metal case	
Dimensions	73mm × 52mm × 25mm (L × W × H) 73mm × 75mm × 25mm (L × W × H) with DIN rail bracket	
Safety approvals	CE, FCC	

3. Diagram of OF USB-ISO-M



4. Hardware Settings

Setting USB Operation Speed

USB-ISO-M has two 1 × 3 jumper header blocks (JP2 & JP3), which are used to set the USB operation speed to USB2.0 full speed (12Mbps) or USB1.1 low speed (1.5Mbps). The data rate is set to full speed 12Mbps by default

Jumper	Function
JP2 1-2	USB2.0 full speed 12Mbps data rate operation (default)
JP3 1-2	
JP2 2-3	USB1.1 low speed 1.5Mbps data rate operation
JP3 2-3	

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Safety

- Read the entire Installation Guide before implementing this product for your application. This guide contains important information about electrical connections that must be followed for safe and proper operation.
- Inspect the product closely for visual defects before putting it to use.
- Keep away from areas where moisture builds, this product contains electrical components that can be damaged by moisture build up, this can adversely affect your equipment connected to it.
- Do not disassemble the product. Handling the product's internal components can expose it to ESD (Electro-Static Discharge) hazards that can affect the function of the device.
- If this product is not functioning properly, email our support team at support@coolgear.com.

USB CHARGING & CONNECTIVITY EXPERTS

Within Every Great Machine

For over 20 years our rugged, off-the-shelf USB hubs, chargers, and serial products are ready to go for your next project. Based in the US, Coolgear has successfully engineered and deployed millions of connectivity solutions into industrial, medical, automotive, commercial, and aerospace industries.

We understand the importance of reliability, build quality, & consider all our customers' applications as critical, wanting to ensure long-lasting event-free integrations.

Compliance Statement

View compliance within the product's respective Technical Data Sheet, found on the product's online listing.

Technical Support

When you reach out to Coolgear support, you'll find yourself in the hands of a solution-oriented and knowledgeable expert ready to answer whatever question you throw at them. If you ever need help with your product, visit coolgear.com/support for support tickets, downloads, and other support resources. For the latest drivers, please visit coolgear.com/download.



Product Standard Warranty

One (1) Year Warranty from Date of Purchase Invoice. Coolgear will repair or replace any Product determined to be defective and which has been returned, at your risk and expense, to Coolgear. Where Coolgear determines in its sole judgment that repair or replacement of such Product is not reasonable, Coolgear will keep the non-conforming Product and refund to you the amount you paid for such Product. Returned Products shall be subject to the balance of the Warranty Period otherwise applicable. Any reconditioned parts used by Coolgear shall be subject to all the same provisions as otherwise applicable to new parts. THE FOREGOING DESCRIBES COOLGEAR'S SOLE LIABILITY, AND YOUR SOLE REMEDY, FOR ANY BREACH OF WARRANTY. IF YOU DO NOT AGREE WITH THE TERMS OF THIS LIMITED WARRANTY, YOU MUST RETURN THE PRODUCTS UNUSED AND IN THEIR ORIGINAL CONTAINERS TO YOUR ORIGIN OF PURCHASE.

Limitation of Liability

This Limited Warranty does not cover: (i) defects or damages resulting from natural causes, casualty, accident, misuse or abuse, neglect, alterations, service or repair by other than Coolgear, including without limitation by you; (ii) improper installation or de-installation, operation or maintenance, improper connections with peripherals or other causes not arising out of defects in the materials or workmanship of Products; (iii) any Product for which the warranty sticker has been removed, modified or defaced; (iv) normal wear and tear; (v) damage to or loss of repaired or replaced Products during shipping by Coolgear except when such damage or loss is caused by poor or inadequate packaging by Coolgear; or (vi) Products purchased outside the United States. UNDER NO CIRCUMSTANCES WILL COOLGEAR BE LIABLE FOR ANY LOSS OF USE, INTERRUPTION OF BUSINESS OR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING LOST PROFITS) REGARDLESS OF THE FORM OF ACTION WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT PRODUCT LIABILITY OR OTHERWISE, EVEN IF COOLGEAR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE TOTAL LIABILITY OF COOLGEAR HEREUNDER EXCEED THE GREATER OF \$50.00 OR THE AMOUNT YOU ACTUALLY PAID FOR THE PRODUCT GIVING RISE TO SUCH LIABILITY, REGARDLESS OF THE CAUSE OF ACTION, IN CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE. NOT ALL JURISDICTIONS ALLOW SUCH LIMITATIONS OF DAMAGES SO THE FOREGOING LIMITATIONS MAY NOT APPLY TO YOU.

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