

USB-GT USB-GT-MED

USB Isolators

Description

The USB-GT and the USB-GT-MED Isolators provide up to 4 KV of galvanic isolation for USB devices. The USB Isolators plug in between the device to be isolated and the computer or hub and provide up to 100 mA of isolated power for the isolated device. Both Isolators comply with the EN 60601-1 and EN 60601-1-2 specifications for medical applications. Both Isolators are fully transparent and do not require any programming changes. The dash N versions can supply up to 1 Ampere of power to the isolated device from an external power supply. Applications include isolating medical devices connected to the patient from the computer and eliminating ground loops in measuring devices.

Medical Version

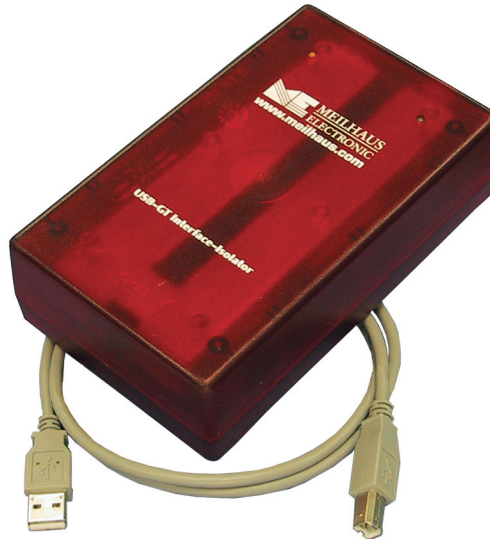
The USB-GT-MED version is built with EN 60601 certified components and comes with a EN 60601-1 and EN 60601-1-2 approval and certificate. The original USB-GT version is built to comply with EN 60601 but is not EN 60601 certified.

Typical Connections

The Isolators have two USB ports. One port is a standard USB-B connector that accepts the USB cable from the computer or a USB hub. The second port is the isolated port and it has a USB-A connector for driving the isolated USB device. Use a standard USB cable to connect the USB-GT or USB-GT-MED Isolator to the isolated device.



Top end showing USB Connectors



USB-GT or USB-GT-MED Isolator

Operation

Plug in the uplink USB cable to the host PC or to a powered hub and the Green LED lights indicating that the USB-GT is active. Plug in the supplied USB cable to the isolated device and the yellow LED lights indicating that the Isolator is supplying power to the isolated device. The yellow LED blinks when data is being transferred between the Isolator and the isolated device.

Isolated Port Current

The USB-GT and USB-GT-MED Isolators have an internal DC-DC converter that provides 100 mA to drive the isolated USB device. If the isolated USB device needs more current, an external power supply can be used to supply the extra current. The USB-GT-N and USB-GT-MED-N isolators have an auxiliary jack for an external power supply. A suggested power supply is shown on the next page.

Hub Version

The USB-GT is also available in a 4 port hub version. The USB-GT-H Isolator has four isolated full-speed USB ports with USB-A connectors. The 4 hub ports are isolated from the uplink USB port and have a common ground. An external power supply connection is used to supply power to the four isolated ports. An available power supply is shown on the next page.

- Provides 4KV of isolation. *Meets EN 60601-1 and -2.*
- MED versions built include EN-6060-1 certification. *Includes EN-60601 Certification.*
- Handles Full data speed. *Full 12 Mbs clock rate*
- USB 1.1 and 2.0 Compatible. *Works with all PCs*
- Fully transparent. *Requires no program changes*
- USB Bus powered, provides 100 mA of isolated power. *Does not need a separate power supply.*
- N version provides up to 1 A of power to the isolated device. *Uses an external isolated supply to power heavy USB loads.*

CE Approved

RoHS

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Specifications

USB Interfaces

Standard	USB 1.1 and USB 2.0
Data Rates	USB 1.1 full and low speed
Signal delay	< 50 ns
Distortion	< 5 ns
Jitter	1-3 ns
Power in	350 mA from Host
Power out	Requires a powered hub or host port 100 mA max to device Uses an internal DC-DC converter

Physical

Size	158 mm L x 95 mm W x 46 mm H (6.22 in L x 3.7 in W x 1.81 in H)
Connectors	USB B USB A (Isolated) DC Power (-N and -H versions) 3.6 mm ID, 1.3 mm center pin Center pin is positive Mate is Condor #103
Isolation	4,000 volts per EN 60601-1-2
Temperature	Operating 0 °C to +40 °C Storage -25 °C to +60 °C
Relative humidity	5 to 95% (not condensing)



US style, 2A, 5V Power Supply for -N models

Input range of 100-240 VAC.
EN60601-1 medical certification
EN55011 class B
4KV isolation voltage
Protection Class II
Order as ME-USB-GTMPow-US

Certifications and Tests

Meets:	EN 606010-1-2, EN 550011 EN 61000-6-3, EN 61000-6-2 EN 61000-4-2, EN 61000-4-3
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Included Items

USB Cable
EN 60601-1 and EN 60601-1-2 Certification (-MED units only)



ME-USB-GT-H Four port hub version

ORDERING INFORMATION

	Part Number
USB-GT Isolator, provides 100 mA to isolated device	ME-USB-GT
USB-GT-N Isolator with External Power Supply Connections	ME-USB-GT-N
USB-GT-MED-D Medical Certified Isolator, provides 100 mA to isolated device	ME-USB-GT-MED-D
USB-GT-MED-N Medical Certified Isolator with External Power Supply Connections	ME-USB-GT-MED-N
USB-GT-H Hub Isolator with External Power Supply Connections	ME-USB-GT-H
USB Power Supply, 100-240 VAC to 5 VDC at 2 amp	ME-USB-GTMPowUS