USB isolator - galvanic isolation between PC and USB devices

USB-GT

USB
UNIVERSAL SERIAL BUS

This module gives you more reliability for your **USB transmission. It isolates your USB lines up to 4000 V. It is the ideal solution for professional USB applications in labs and industry. And the best: The USB-GT is fully transparent - no changes in software and no drivers are required!**

- **Galvanic isolation** of the USB connection between PC and USB devices with opto-couplers.
- Isolation voltage up to **4000 V**.
- IP 40 protection, classe 2, models with **EN 60601-1-2**[1].
- **Fully transparent**, can be inserted into USB without changes in software and without additional drivers.
- Data transmission with low and full-speed protocol (USB 1.1).
- Size (mm, L x W x D) 158 x 95 x 46.
- **Model with x4 hub available**.
- **Power supply from PC via USB** or models with **external power supply**.

- - - Software: - - -

The USB-GT is **fully transparent** and **doesn't require any special driver or application software.**

- - - Specifications - - -

Isolator and USB	
Isolation voltage	Opto-coupler up to 4 kV$_{eff}$
Data transmission	Bi-directional, half-duplex, master-slave. Low-speed 1.5 Mbit/s, full-speed: 12 Mbit/s
Signal	Through-put time ~50 ns, distortion ~5 ns, skew ~1...3 ns
Hub	Model "H": x4 USB hub
General	
Power supply	**Model "USB-GT N" and "H":** External power supply. Max. current load 1 A. **Model "USB-GT":** From PC via USB (+5 V, max. 100 mA). Secondary via internal DC/DC converter.
Indicators	LED green - operation/host connected. LED yellow - DC/DC converter active; flashing: communication between host and device
Connectors	Host: USB B. Device/secondary: USB A
Size (mm)	158 (L) x 95 (W) x 46 (H)
Protection	IP40, class 2, optional EMV 60601-1-2

- - - Ordering code and features   USB-GT - - -

Model	Description
USB-GT	USB isolator for USB 1.1
USB-GT N	USB isolator for USB 1.1. External power supply
USB-GT H	USB isolator for USB 1.1. x4 USB hub. External power supply

Scope of delivery: Module, instructions for use, USB cable. For the models "N" and "H": External power supply.
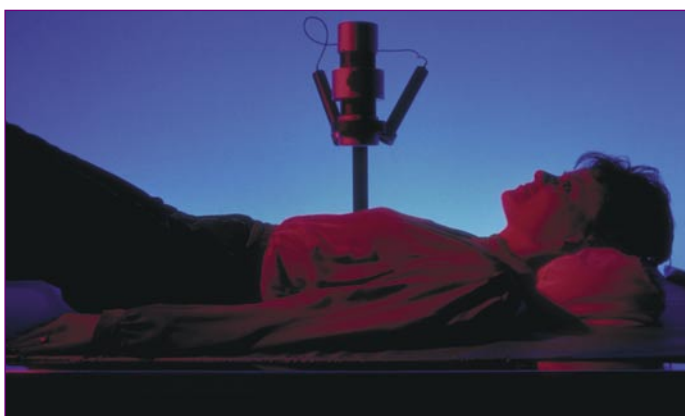
1) Models with EN 60601-1-2 on request.

Applications:

Using USB under highest safety requirements...

In various security relevant data communication applications, like for example in medical environments, a galvanic isolation is required. The USB-GT implements such a full galvanic isolation for the Universal Serial Bus. This allows you to connect PCs and peripheral devices to medical equipment. For example, a standard office PC or a workstation with peripheral devices like printers can be connected to medical devices like X-ray, ultrasonic, endoscope or laser systems using the USB-GT. The USB-GT creates a compete and safe galvanic isolation between both "worlds".
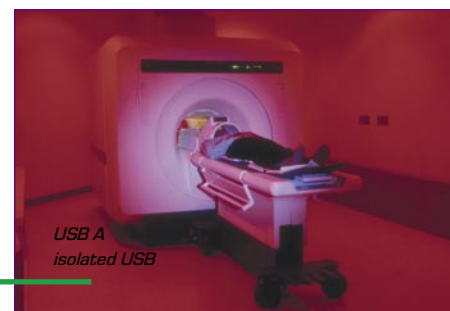

Peripheral device, eg. office PC/workstation with printers

USB B to host/PC

Interface isolator USB-GT: Full galvanic isolation up to 4 kV

USB A isolated USB

Medical devices like X-ray, ultrasonic, endoscope, laser systems