

## isolating protecting ground-breaking

- High 4kV isolation
- Certified according to EN60601-1-2:2007, EN55011
- Energy transfer to secondary side
- For USB full speed devices
- Transparent transmission without software driver
- Simple replacement for standard USB cables
- Made in Germany, 3 years warranty



## ISOUSB-Cable

### Protection and security for human, device and PC

The USB isolator cable effects a potential decoupling of all USB connections. It is the professional tool to avoid and fight ground loops and equalizing currents and to protect against overvoltage.

Its high isolating voltage and the certification according to EN60601-1-2 and EN55011 gives protection in all sensitive applications, especially for medical usages.

### Its special features

Extra save and easy usage by simple exchanging the standard USB cable for the isolator cable, no further connections necessary. Also usable as USB extension with the included jack adaptor.

Transfers up to 400mA from the primary USB connector to the secondary side for USB supplied devices.

Certified according to EN60601-1-2:2007 and EN55011 for use in sensitive applications like the medical technology. Isolates the 'normal' PC systems from the critical application.

### Technical data

|                      |  |
|----------------------|--|
| Construction         | Isolating cable for direct replacement of non-isolating USB cables, complete isolation of all lines including ground |
| Connectors           | Cable with plugs Type A and Type B, additional adaptor Jack A to B.  |
| Isolation strength   | 4000Vrms 1 second, 6000Vpk 1 minute.   |
| Transient protection | Integrated protection diodes with approval $\pm 8kV$ acc. to IEC 61000-4-2.  |
| Energy transfer      | Primary to secondary max. 2.5W, about 75% efficiency, short-circuit proof.   |
| Output current       | Maximal 400mA sourced from the 500mA primary input.  |
| Data transmission    | Full speed communication competely transparent and invisible.  |
| Working enviroment   | 0-40°C (32-100°F), 20 to 90% humidity, non-condensing.   |
| Storage enviroment   | -40 to +70°C, 10 to 100% humidity.   |
| Certification        | According to EN60601-1-2:2007, EN55011, CE and FCC requirements fulfilled.   |
| Scope of delivery    | USB isolation cable 2m, Plugs Type A and B, Adapter Jack A to B.   |
| Dimension            | Cable 2m with centered housing 78mm x 27mm x 20mm (length, wide, height), weight about 100g.                         |

### Scope of delivery, availability and price

**ISOUSB-Cable Set:** USB isolator cable 2m with USB plug A to PC and USB plug B to device. For usage of the isolator cable as USB extension an adaptor USB jack A to jack B is provided. No further accessories needed.

This product is exclusively worldwide available from [www.iftools.com](http://www.iftools.com).

**Set price: 99 €** plus tax if applicable.

High 4kV isolation for data and energy plus additional transient absorber ensures high application security.

High contact protection by the completely encapsulated housing allows using the device in harsh enviroments.

Display of the connection status by two LEDs:  
 Red: Cable connected to PC and ready  
 Red-Green: Establishing connection  
 Green: USB communication established and active

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Please pay attention to the following hints!  
Especially in critical and sensitive application fields like the medical technology some applications requirements have to be followed!



High voltage may be attached!  
It is the responsibility of the user to take care for a sufficient insulation and protection against contact of the floating system components!

## ISOUSB-Cable



### Warning hints

According to its task the isolator splits by its complete isolation one electric circuit with a common ground line into two circuits with a floating voltage relationship.

If no method is implemented to prevent drifting voltage ranges from each other, i.e. by a common earthing, large floating voltage differences between primary and secondary side can occur. These can lead to serious danger when not isolated parts of the circuits are touched.

If no voltage equalization can be done by earthing or must not be done in the special application, care must be taken that the permanent potential difference between both sides does not exceed the working range of the isolator, specified in the technical data.

### Basic rules for this device

The requirements of professional devices are so that a usage in the living range or a connection to public supply is allowed. In medical field the device may be used in practice and hospital even outside of shielded locations.

The device does not have a live-supporting function.

The device generates high frequency. Medical electronic devices are subject to special precautionary measuring in particular regarding the EMC with the installation and operation. Portable and mobile HF-communications devices such as phones can effect medical electrical devices.

The certification is valid for the standard length of the cable. If does not include the usage as an USB extension by use of the included adaptor.

### OEM applications

For OEM applications the isolator cable can be delivered with modified connectors. Also the integrated isolation electronic is available as Plug & Play board. Please contact us.

### Inserting into the USB connection

The isolator cable replaces an existing connection fully transparent by a direct exchange for the available non-isolating USB cable.

The side of the cable, marked with 'Prim' on the housing, can directly be plugged into the respective USB jack of the PC or hub. The side of the cable, marked with 'Sec' on the housing, can directly be plugged into the appropriate USB jack of the device which shall be isolated.

In case of a non-fitting jack (e.g. mini USB) the isolator cable can be turned into an isolating extension cable by the supplied jack adaptor. So the original USB cable can be used to connect the USB device.

After a correct connection the green LED has to light after a few seconds while the red LED goes off.

If both LED's go permanently off or start to blink the end device consumes too much current. In this case the isolator cable can not be used and has to be replaced by an isolator with an additional auxiliary supply.

The appropriate type is: ISOUSB-hvc from IFTOOLS.