

## isolating protecting ground-breaking

- High reinforced isolation of 4kVrms
- Certified to EN60601-1, 3rd Edition
- For all medical and industrial applications
- Isolated energy transfer to secondary side
- For USB full speed devices, no software needed
- Simple replacement for standard USB cables
- Detailed status indication
- Made in Germany, 3 years warranty



## ISOUSB-Cable-M

### 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 full certification according to EN60601-1 gives protection in all sensitive medical and industrial applications.

### Its special features

Extra save and easy usage by simple exchanging the standard USB cable with Mini connector for the isolator cable, no further connections necessary.

Transfers up to 500mA from the primary USB connector to the secondary side for USB supplied devices.

Isolates the 'normal' PC systems from the critical application.

Energy transformer with reinforced isolation.

### 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 Mini-B.
Isolation strength	5000Vdc 1 second, 4000Vrms 1 minute, permanent working range 250Vrms.
Transient protection	Integrated protection diodes with approval $\pm 12\text{kV}$ acc. to IEC 61000-4-2.
Energy transfer	Primary to secondary max. 2.5W, 500mA, about 75% efficiency, short-circuit proof.
Coupling capacity	About 1.5nF.
Data transmission	Full speed communication completely transparent and invisible.
Working environment	0-40 °C (32-100 °F), 20 to 90% humidity, non-condensing.
Storage environment	-40 to +70 °C, 10 to 100% humidity.
Certification	According to EN60601-1:2007, 3rd Edition, CE and FCC requirements fulfilled.
Scope of delivery	USB isolation cable 3m, Plugs Type A and Type Mini-B.
Dimension	Cable 3m with centered housing 78mm x 37mm x 20mm (length, wide, height), weight about 100g.

### Scope of delivery, availability and price

**ISOUSB-Cable-M Set:** USB isolator cable 3m with USB plug A to PC and USB plug Mini-B to device. No further accessories needed.

**Set price: 129 €** plus tax if applicable.

Also available:

**ISOUSB-Cable-A** with USB jack A type

**ISOUSB-Cable-B** with USB plug B type.

Products worldwide available from IFTOOLS and their distributors.

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

High contact protection through the completely encapsulated housing allows using the device in harsh environments.

Display of the connection status with two LEDs:  
Orange: Cable connected to PC and ready  
Orange-Green: Establishing connection or standby  
Green: USB communication established and active

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Please pay attention to the following hints!  
Especially in critical and sensitive application fields 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!



### 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.

The device must not be used for live-supporting functions.

The device generates high frequency. Any 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 other electronic devices.

The certification is valid for the standard length of the cable. It does not include the usage as an USB extension.

### OEM applications

For OEM applications the isolator cable can be delivered with modified connectors.  
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.

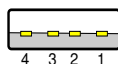
The side of the cable, marked with 'Prim' on the housing, can directly be plugged into the respective USB jack of the PC or hub.

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

After a correct connection the green LED has to light after a few seconds while the orange 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!

### Type A Connector PC primary side



### Connector Type Mini-B device secondary side

