ISO-Uxx

Isolation & protection for reliable USB communication

www.cesys.com



The ISO-Uxx devices offer isolation called *ground lift* in audio applications, and *galvanic isolation* in electrical engineering. This isolation eliminates noise and interferences, ensuring clean signal transfer and precise data transmission between USB host and device. The ISO-Uxx devices have superior quality and are easy to use.

Application examples

- Enabling USB communication between devices at different ground potentials
- Eliminating ground loops in audio and measurement systems
- Protecting connected devices from overvoltage and transient spikes

USB Data Transfer Rates

USB specification	ISO-U11	ISO-U20	ISO-U30
USB 1.1 Full Speed (12 Mbit/s)	✓	✓	✓
USB 2.0 Hi-Speed (480 Mbit/s)		✓	✓
USB 3.0 SuperSpeed (5 Gbit/s)			✓

Power & Current Limits

The green LED on the ISO-Uxx devices lights up when powered correctly. ISO-Uxx are powered via USB, no external power supply is needed.

The table below lists typical currents the ISO-Uxx devices can supply on their output. For the ISO-U11 and ISO-U20, it is assumend that the host can provide a minimum of 500 mA on the input, respectively 900 mA for the ISO-U30.

Device	$I_{out,typ}$	USB device speed
ISO-U11	390 mA	Full Speed
ISO-U20	340 mA	Hi-Speed
ISO-U30	710 mA	Hi-Speed
	660 mA	SuperSpeed

In practice, ISO-Uxx devices may deliver less current dependent on the host's capability to supply current, the quality of cables in use and the overall length of all cables combined.

Safety Specifications

The ISO-Uxx devices are tested according to EN 62368-1 and withstand the following voltages between their inputs and outputs for 60 seconds:

Device	DC	AC (50 Hz)
ISO-U11	2000 V	500 V
ISO-U20	2000 V	500 V
ISO-U30	5000 V	3000 V

Technical Details

All ISO-Uxx devices feature a robust aluminium enclosure. Rubber seals ensure a firm stand.

ISO-U11 and ISO-U20 measure 57x45x28 mm, while the ISO-U30 is slightly larger at 67x45x28 mm.

The ISO-Uxx devices contain no servicable parts. They can be operated in environments with temperatures between -40 °C and +40 °C.

No driver or software is required. ISO-Uxx devices will not appear in the Windows Device Manager.

Use good quality USB cables with a maximum length of 1.5 m on both the input and output.

ISO-Uxx devices are not certified for medical use.

Compliance statements

European Union

The ISO-Uxx devices comply with the relevant Union harmonisation legislation. You can download the declaration of conformity at www.cesys.com.

United States of America

The ISO-Uxx devices comply with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. These devices may not cause harmful interference, and
2. these devices must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You can download the supplier's declaration of conformity at www.cesys.com.

Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

You can download the declaration of compliance at www.cesys.com.