



The ISO-Uxx series offers a robust solution to USB connectivity challenges by severing the electrical connection between the host PC and the USB device. This isolation, known as *ground lift* in audio and *galvanic isolation* in other fields, eliminates noise and interferences, ensuring clean signal transfer and precise data transmission.

Note

The ISO-Uxx devices are not intended for use as protection against hazardous voltages.

Safety Specifications

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

Device	DC Isolation	AC Isolation ¹
ISO-U11	2000 V	500 V
ISO-U20	2000 V	500 V
ISO-U30	5000 V	3000 V

The ISO-Uxx devices effectively block overvoltages from crossing from one side to the other. However, the electronics of the ISO-Uxx devices themselves may be irreversibly damaged when exposed to voltages higher than 5.5 V.

¹Rated at 50 Hz

USB Data Transfer Rates

The ISO-Uxx devices cover a wide range of USB speeds up to USB 3.0 SuperSpeed with 5 Gbit/s:

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

When powered correctly, the LED indicator on the ISO-Uxx devices lights up. ISO-Uxx are powered solely via USB, no external power adapter is needed.

Below are the typical currents ISO-Uxx devices can supply to connected USB devices. For the ISO-U11 and ISO-U20, it is assumed 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

Operational Details

All ISO-Uxx devices come in a rugged aluminum enclosure. Rubber seals ensure a firm stand. ISO-U11 and ISO-U20 measure 57x45x28 mm, while the ISO-U30 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 special software is required.

ISO-Uxx devices are not certified for medical use.