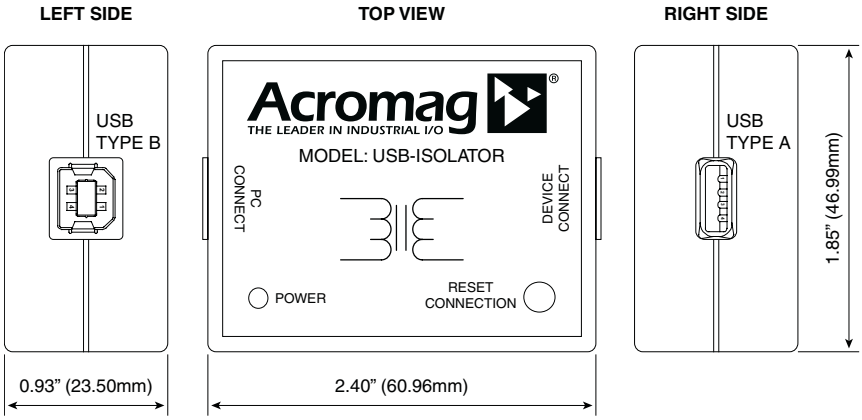
Accessories

USB-ISOLATOR USB-to-USB Isolator



USB-powered, USB 2.0 and 1.1 compatible ◆ 1500V AC / 2100V DC isolation ◆ No drivers required

Description

This compact, industrial-grade isolator provides a high-voltage isolation barrier between a computer and a connected USB device. The isolation protects equipment from electrical surges and transient voltage spikes. It also eliminates ground loop currents flowing between the PC and peripherals which can cause damage and inaccurate measurements. Additionally, isolation minimizes conducted noise from static discharge, magnetic fields, and radio frequency interference.

Acromag's USB isolator is very easy to use. The isolator inserts in-line with the USB connection and operates transparently. No special software drivers are required. The unit receives power from the PC's USB port and isolates that power to the connected device. High noise immunity and low radiated emissions ensure reliable data transfer in sensitive applications.

A number of high-performance features help provide convenient and dependable operation. The green LED indicates that power is being received and blinks if the connected device draws too much current. An internal jumper lets you switch from Full Speed (12 Mbps) to Low Speed (1.5 Mbps) communication. The reset button offers a simple way to reinitialize a connected device without breaking the cable connection. High-retention USB sockets keep cables securely attached under shock and vibration.

Key Features & Benefits

- Isolates and protects a USB peripheral from a USB host
- Electrical isolation up to 1500V AC / 2100V DC
- Common mode filtering on all data lines
- Built-in surge/transient suppression up to 8kV on all ports
- Self-powered through the USB port
- Supports USB 2.0 full speed (12 Mbps) and USB 1.1 low speed (1.5 Mbps) data rates with jumper-selection
- LED for power indication and diagnostics
- Reset button to reinitialize and re-enumerate peripheral devices
- Output short circuit protection with auto-retry
- No software or configuration required (transparent operation)
- Uses standard high-retention USB Type A/B cable connections (includes 1m cable)
- Compact size and rugged design for harsh environments
- Wide ambient temperature operation -40 to 70°C (-40 to 158°F)
- CE, FCC, UL/cUL approvals

Ordering Information

Models

USB-ISOLATOR
USB isolator, includes USB cable (Part # 4001-112) for isolator-to-PC connection

TTC-SIP
CD-ROM (Part #5040-944), USB isolator and two USB cables (Part # 4001-112, 4001-113) for configuration of Acromag TT2XX Series transmitters

Accessories

4001-112
USB cable, 1 meter, with Type A to Type B plugs

4001-113
USB cable, 1 meter, with Type A to Mini-B plugs

Distribué par GMI-Databox
Tel: 01 69 90 03 03
Fax : 09 70 61 64 19
ventes@gmidatabox.fr

Accessories

USB-ISOLATOR USB-to-USB Isolator

Performance Specifications

USB Port Interface

Standards
USB 1.1 and 2.0 compatible, full speed (12Mbps, default) and low speed (1.5Mbps) data rates supported. For low speed data rates, an internal jumper is provided for user setting. Connection is transparent, no software or configuration is required. Isolator will not be enumerated in the device manager.

Physical

Dimensions
2.40" Length x 1.85" Wide x 0.925" High (60.96mm x 46.99mm x 23.495mm).

Connectors
Standard high retention USB A/B connectors with minimum withdrawal force of 15 Newtons. 1 meter A/B cable included.

PC Connector
USB Type B receptacle

Device Connector
USB Type A receptacle

LED Indicator
Green LED indicates isolator receiving 5V power from the USB computer bus. Flashing indicates short circuit/ retries on peripheral side.

Reset Button
Resets the connection to the USB peripheral device for reinitialization and re-enumeration.

Enclosure Material
ABS Resin, UL94 rated, IP30 plastic case.

Environmental

Operating temperature
-40 to 70°C (-40° to 158°F).

Storage temperature
-40 to 85°C (-40 to 185°F).

Relative humidity
5 to 95% non-condensing.

Power
PC Connect Side: Standard USB bus power (5V DC).

Device Connect Side: 5V DC / 120mA with full power connection from PC. Includes over-current protection with auto-retry.

Isolation
1500V AC / 2100V DC peak isolation.
250V AC continuous safety isolation.

Agency Approvals:
CE and FCC compliant. UL/cUL Class 1 Div. 2 Zone 2.

Radiated Field Immunity (RFI)
Designed to comply with IEC1000-4-3 Level 3 and EN50082-1.

Electromagnetic Compatibility (EMC)
Minimum immunity per EN61000-6-2:2001

Electrostatic Discharge (ESD) Immunity
Per IEC61000-4-2.

Radiated Field Immunity (RFI)
Per IEC61000-4-3.

Electrical Fast Transient Immunity (EFT)
Per IEC61000-4-4. Complies with IEC1000-4-4 Level 3 and EN50082-1.

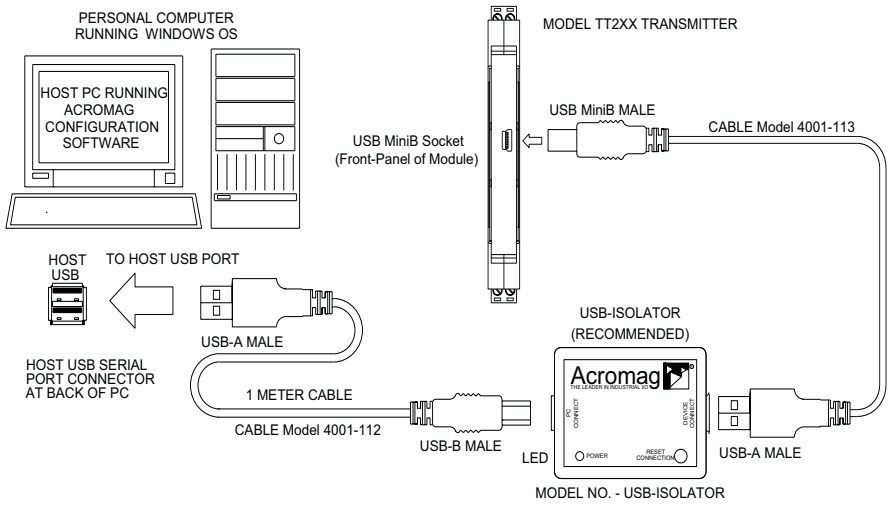
Surge Immunity
Complies with IEC1000-4-5 Level 3 and EN50082-1. Per IEC61000-4-5.

Conducted RF Immunity (CRFI)
Per IEC61000-4-6.

Emissions
Per EN61000-6-4:2001.

Radiated Frequency Emissions
Per CISPR11 Class A. Meets or exceeds EN50081-1 for Class B equipment.

TT SERIES USB TRANSMITTER CONNECTIONS



ISO9001
AS9100

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