

# Single Port USB Isolators

## UH401 Series

**B+B SMARTWORX**

Powered by

**ADVANTECH**

[www.advantech-bb.com](http://www.advantech-bb.com)



### PRODUCT FEATURES

- Full (12 Mbps) or Low (1.5 Mbps) USB Speed Options
- 2kV or 4kV Isolation Protection Options
- 15 kV ESD Protection
- -40 to 80 °C Wide Operating Temperature
- High Retention USB Connectors
- Ultra-Compact Size
- USB Bus Powered
- USB Cable Included

At just 2.0 x 1.7 x 0.8 inches, these little isolators pack a powerful punch against electrical noise, surges and spikes - up to 4kV isolation. Protect expensive PCs and equipment from damaging electrical storms, power surges and other high EMI/RFI disturbances. This isolation barrier eliminates ground loops which are disruptive in measurement applications.

UH401 and UH401SL provide 4 kV isolation.  
UH401-2KV and UH401SL-2KV provide 2kV isolation.

All models are USB bus powered and provide up to 100mA of current to attached downstream devices when they are attached to a full power (500 mA) USB host port.

These data rates are preconfigured at the factory. You should select a model that is appropriate for your USB peripheral (low speed or full speed). Note that high speed (480 Mbps) cannot be isolated with existing technology.

Four models are available. Select a low speed version, UH401SL or UH401SL-2KV, if you are using a low speed device. Low speed devices are typically human interface devices such as a mouse or keyboard. Use the full speed version, UH401 or UH401-2KV for full speed USB devices.

### ORDERING INFORMATION

MODEL NUMBER	USB SPEED	ISOLATION
UH401	Full (12 Mbps)	4 kV
UH401SL	Low (1.5 Mbps)	4 kV
UH401-2KV	Full (12 Mbps)	2 kV
UH401SL-2KV	Low (1.5 Mbps)	2 kV



### IN THE FIELD

#### Protecting Laptops on Field Service Calls

Industry: Industrial Automation  
Product: USB Isolators



### IN THE FIELD

#### USB Isolation in Medical Applications

Industry: Industrial Automation  
Product: USB Isolators

All product specifications are subject to change without notice.

UH401 Series\_2716ds

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### SPECIFICATIONS

TECHNOLOGY	
Standards	USB 1.1 12 Mbps (UH401 & UH401-2KV) 1.5 Mbps (UH401SL & UH401SL-2KV) Note: These devices are transparent to the operating system, require no software drivers and will not be enumerated in device manager.
INTERFACE	
USB Ports	High Retention USB Type B (Upstream) , Type A (Downstream), Minimum withdrawal force of 15 Newtons (~3.4 lbs-force)
LED Indicators	Power from USB bus
POWER	
Input Voltage	Standard USB bus power (5VDC)
Downstream Power Provided	Up to 100mA with full-power upstream connection
Isolation UH401-2KV	2KV
Isolation UH401SL-2KV	2KV
Isolation UH401	4KV
Isolation UH401SL	4KV

ENVIRONMENTAL	
Operating Temperature	-40 to 80 °C (-40 to 176 °F)
MTBF	1,049,851 hours
MTBF Calculation	MIL 217F Parts Count Reliability Prediction
MECHANICAL	
Enclosure	IP30 plastic case
Dimensions	4.32 x 5.08 x 2.03 cm (1.7 x 2.0 x 0.8 in)
APPROVALS/CERTIFICATIONS	
Emissions	FCC Class A, CISPR Class A (EN55022)
CE	EN61000-6-2 (Heavy Industry) EN61000-4-2 (ESD +/-8kV Contact, +/-15kV Air) EN61000-4-3 (RI) 10V/m, 80-1000MHz; 3V/m, 1.3 to 2.7 GHz EN61000-4-4 (EFT Burst) +/-2kV DC ports; +/-1kV signal ports EN61000-4-5 (Surge) +/-500V DC ports ; +/-1kV signal ports EN61000-4-6 (CI) 10Vrms, 0.15 to 80 MHz EN61000-4-8 (Magnetic) 10A/m, 50Hz & 60Hz

### MECHANICAL DIAGRAM

