

# Single Port USB Isolators

UH401 Series

B+B SMARTWORX

Powered by

ADVANTECH



## PRODUCT FEATURES

- 15 kV ESD Protection
- -40 to 80°C Operating Temperature
- High Retention USB Connectors
- Ultra-Compact
- 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

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## SPECIFICATIONS

TECHNOLOGY	
Standards	USB 1.1, 12 Mbps (UH401 & UH401-2KV) or 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) EN61000-6-2:2005 (Heavy Industry) EN61000-4-2:2008 (ESD +/-8kV Contact, +/-15kV Air) EN61000-4-3:2006 (RI) 10V/m, 80-1000MHz; 3V/m, 1.3 to 2.7 GHz EN61000-4-4:2004 (EFT Burst) +/-2kV DC ports; +/-1kV signal ports EN61000-4-5:2005 (Surge) +/-500V DC ports ; +/-1kV signal ports EN61000-4-6:2005 (CI) 10Vrms, 0.15 to 80 MHz EN61000-4-8:2001 (Magnetic) 10A/m, 50Hz & 60Hz
CE	

## MECHANICAL DIAGRAM

