

# Single Port USB Isolators

UH401 Series



## PRODUCT FEATURES

- UL 60601-1 Recognized (UH401 & UH401SL)
- 15 kV ESD Protection
- -40 to 80°C Operating Temperature
- High Retention USB Connectors
- Ultra-Compact
- USB Bus Powered
- USB Cable Included

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. Model UH401 and UH401SL provide 4 kV Isolation and are UL 60601-1 Recognized, which makes them appropriate for use with medical equipment. UH401-2KV and UH401SL-2KV provide 2 kV 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.

They comply with the USB 1.1 standard and transfer data at either 12 Mbps or 1.5 Mbps. 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).

Four models are available to choose from. 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 device.

## 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



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

UH401, UH401-2KV

Carrier data charges  
may apply.



## IN THE FIELD

### USB Isolation in Medical Applications

Industry: Industrial Automation  
Product: USB Isolators



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

UH401, UH401-2KV

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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

