

# UHR401 & UHR402

## One and Two Port Ruggedized USB Isolators

- ✓ 4 kV Isolation
- ✓ High Retention USB Connectors
- ✓ ESD Protection – 15 kV Air
- ✓ Heavy Duty Case – Panel Mount with DIN Rail Adapters
- ✓ USB 2.0 – Full Speed
- ✓ One and Two Port Version



The UHR401 and UHR402 are **One and Two Port Ruggedized Isolators**. They are designed and tested to meet heavy industrial EMC standards. High retention USB connectors hold standard USB cables tight and are perfect for high vibration applications – requiring up to 3.2 lbs-force to disconnect them. They have 4 kV Isolation between the upstream and downstream USB ports to protect expensive equipment from dangerous ground loops and to help ensure data integrity. They are also suitable for integration into medical applications requiring 60601-1 certification.

The Heavy Industrial EMC specifications allow these isolators to operate in unfriendly electrical environments – such as near variable frequency drives, motor control centers, welding, and other large electrical loads.

They are powered from an external 10 to 30 VDC power supply unit. The product comes with an international power supply that has US, EU, and UK blades.

The downstream port(s) provides up to 500 mA of power to connected USB devices.

Remember B&B Electronics when it comes to USB applications in harsh electrical environments.

### Specifications

USB Interface	
Standards	USB 1.1 & 2.0 (12 Mbps)
Upstream Port	(1) Type B Female – High Retention
Downstream Port	(1 or 2) Type A Female – High Retention
Speed	12 Mbps
Isolation	Multi-transaction Translator, 1 per port
ESD	4 kV – Upstream to Downstream
High Retention	15 kV Air, 8 kV Contact
	USB Ports require 15 N (3.2 lbs-force) withdrawal force using standard USB Cable
Power	
Source	External
Power Connector	Threaded barrel jack
Input Voltage	10 to 30 VDC
PSU	Input : 110 – 240 VAC, 50 / 60 Hz US, EU, UK Blades Included Output: 12 VDC
Barrel Jack Power	Barrel Jack, Center Positive UHR401 – 4 Watts (External Source) UHR402 – 7 Watts (External Source) Locking / Threaded, Center Positive
Downstream Power	500 mA per port
Indicators	
Power	Green LED
Port Ready	Green LED
Mechanical	
Dimensions	3.1 x 2.1 x 1.1 in (7.9 x 5.4 x 2.7) cm
Enclosure	IP 30, Plastic
Weight	0.15 lbs (80 g)
MTBF UHR401	375842 Hours
MTBF UHR402	353807 Hours
MTBF Calc. Method	MIL 217F Parts Count Reliability
Environmental	
Operating Temperature	0 to 50°
Storage Temperature	-40 to 85°C
Operating Humidity	0 to 95% Non-condensing
Ordering Information	
UHR401	1 Port Rugged USB Isolator
UHR402	2 Port Rugged USB Isolator
PSPT-LB	Stripped and Tinned Power connector for use with industrial power supply. Locking Barrel Connector. Sold Separately.
DRAD35	DIN Rail Adapter - Sold Separately



Approvals / Certifications			
Emissions	FCC Class B, CISPR Class B (EN55022)		
CE	EN61000-6-2:2005	(Heavy Industrial)	
	EN61000-4-2:2008	(ESD)	+/- 8kV contact, +/- 15 kV air
	EN61000-4-3:2006	(RI)	10 V/m, 80-1000 Mhz; 3 V/m 1.3 to 2.7 GHz
	EN61000-4-4:2004	(EFT Burst)	+/- 2kV DC ports; +/- 1 kV signal ports
	EN61000-4-5:2005	(Surge)	+/- 2 kV com; +/- 1 kV differential
	EN61000-4-6:2008	(CI)	10 Vrms, 0.15 to 80 MHz
	EN61000-4-8:2001	(Magnetic)	10 A/m, 50 Hz & 60 Hz
Other	IEC60068-2-27	(Shock)	50G Peak, 11 ms, 3 axes
	IEC60068-2-6	(Vibration)	140-500 Hz, 4G, 3 axes
	IEC60068-2-32	(Drop)	10 total drops from sides, corner, edges

