Heavy-Duty USB to Serial Converters With Port to Port Isolation

Models USR602 & USR604

B+B SmartWorx
Powered by ADVANTECH
www.advantech-bb.com

PRODUCT FEATURES

- 2 kV Port-to-Port Isolation
- ESD Protection - 8 kV Contact, 15 kV Air
- Rugged Metal Case & High Retention USB Connector
- Wide Operating Temperature (-40 to 80°C)
- Redundant Power Inputs
- Modbus ASCII/RTU Compatible
- DIN Rail & Panel Mounting Options
- UL Class 1/Division 2

These industrial grade, isolated, USB to serial converters allow you to add two or four RS-232/422/485 ports to your PC. Built to rugged specifications, the USR602 and USR604 offer 2 kV port-to-port isolation. This means that your upstream PC is isolated from the downstream serial devices and the downstream serial devices are isolated from each other and the upstream PC.

Additional features, such as a heavy duty metal enclosure with panel and DIN rail mounting options, high ESD protection, shock and vibration testing and wide operating temperatures, make them ideal for use in harsh environments. Designed for industrial use, they are also suitable for instrumentation, utilities, and laboratory applications.

Full speed (480 Mbps) USB 2.0 support allows connectivity with modern computer technology. The serial ports are configurable for RS-232, RS-422 and RS-485 (2-wire & 4-wire). Modbus support enables them to be used with a wide variety of industrial devices. Each unit comes with DIN rail and panel mounting hardware, giving maximum flexibility for your installation.

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
USR602	USB to Isolated Converter, 2 port
USR604	USB to Isolated Converter, 4 port

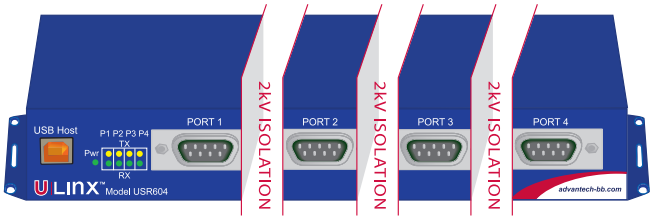
ACCESSORIES

PS12VLB-INT-MED - 12 VDC power supply, locking barrel plug, international blades
MDR-20-24 - 24 VDC, 24 W power supply, DIN rail

WHAT IS PORT TO PORT ISOLATION?

Most isolated USB to Serial Converters isolate the upstream device from the downstream device. This is fine when you are working with a single port unit. However, with multi-port devices, you need the additional protection offered by port-to-port isolation.

Simply put, port-to-port isolation isolates the upstream device from the downstream devices as well as the downstream devices from each other. This is the only way you can be sure that ground loop or surge can not be transferred through Port 1 to a device connected to Port 2.



All product specifications are subject to change without notice.
USR602 & USR604_2817ds

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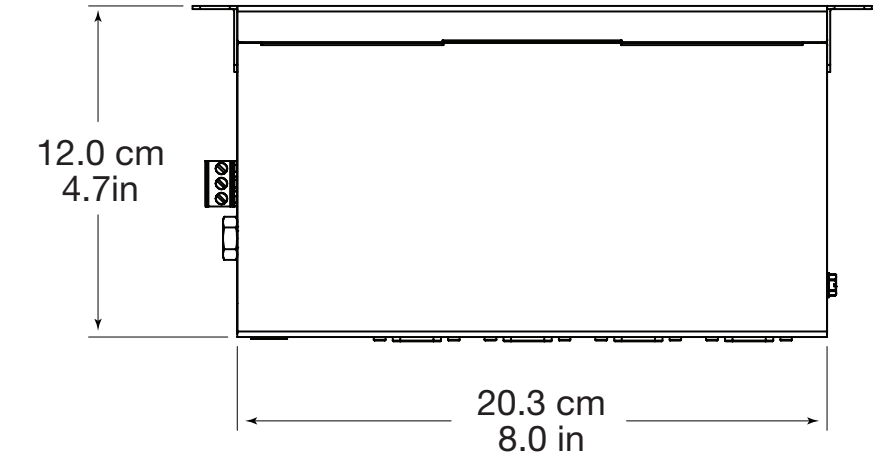
SPECIFICATIONS

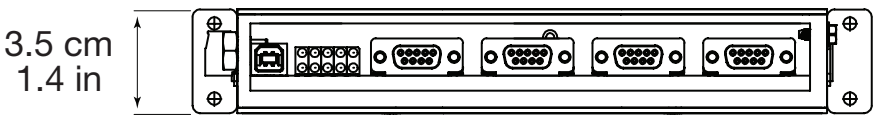
SERIAL TECHNOLOGY	
RS-232	TD, RD, RTS, CTS, DTR, DSR, DCD, GND
RS-422/485 4-Wire	TDA(-), RDA(-), TDB(+), RDB(+), GND
RS-485 2-Wire	DATA A(-), DATA B(+), GND
Connector	DB9 Male
Data Rate	921.6 Kbps
Isolation	2 kV – Port to Port
Surge Protection	+/- 0.5 kV DC Ports, +/- 1 kV Signal Ports
Industrial Bus	Modbus ASCII/RTU
Bias	1 KΩ on Receive Lines in RS-422/485 Mode
USB TECHNOLOGY	
USB Compatibility	1.1 and 2.0
Speed	1.5, 12, and 480 Mbps
Connector	Type B High Retention (15 N / 3.4 lbs-force withdrawal)
Operating System	Windows 2000, XP (32/64 bit), Vista (32/64 bit), 7 (32/64 bit), 8 (32/64 bit), 2003 & 2008 Server (32/64 bit)
POWER	
Source	External (Dual Input)
Power Connector	Terminal Block Locking Barrel Plug
Input Voltage	10 to 48 VDC
Power Consumption	USR602 – 3.5 Watts Maximum USR604 – 4.5 Watts Maximum
INDICATORS	
Power	Green LED
TD / RD (Each Port)	Green / Amber LED

SPECIFICATIONS - continued

MECHANICAL			
Dimensions USR602	13.8x3.5x8.8 cm (5.4x1.4x3.5 in)		
Dimensions USR604	20.3x3.5x12.0 cm (8.0x1.4x4.7in)		
Enclosure	IP30, Metal		
Weight	USR602 = 0.38 kg, USR604 = 0.68 kg		
MTBF USR602	90,013 hours		
MTBF USR604	51,098 hours		
MTBF Calc. Method	MIL 217F Parts Count Reliability		
ENVIRONMENTAL			
Operating Temperature	-40 to 80°C		
Storage Temperature	-40 to 85°C		
Operating Humidity	0 to 95% Non-condensing		
APPROVALS / CERTIFICATIONS			
Emissions	FCC Class B, CISPR Class B (EN55022)		
CE	EN61000-6-2	Industrial	
	EN61000-4-2	ESD	+/-8kV Contact, +/-15kV Air
	EN61000-4-3	RI	10V/m, 80-1000MHz; 3V/m, 1.3 to 6 GHz
	EN61000-4-4	EFT Burst	+/-2kV DC power port
	EN61000-4-6	CI	10 VRMS, 0.15 to 80 MHz
	EN61000-4-8	Magnetic	10A/m, 50Hz & 60Hz
Shock	IEC60068-2-27		
Vibration	IEC60068-2-6		
Freefall (Drop)	IEC60068-2-32		

MECHANICAL DIAGRAM - USR604





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