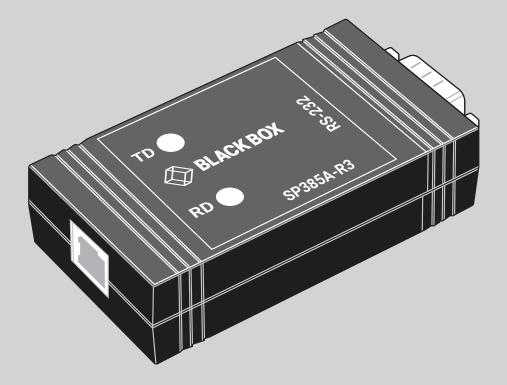
## DATA SHEET

SP385A-R3, SP390A-R3

# **USB TO RS-232 OR RS-422/485 CONVERTER**

24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT BLACKBOX.COM





## **OVERVIEW**

#### USB TO RS-232 OR RS-422/485 OPTO-ISOLATED CONVERTER DATA SHEET

#### **INTRODUCTION**

Use this compact, isolated USB to RS-232 or RS-422/485 converter to add an RS-232 or RS-422/485 port to your USB-only PC. Built to rugged specifications with 2 or 15 kilovolts of isolation, it protects your PC from hazardous ground loops. It's ideal for use in instrumentation and laboratory environments.

One USB port is required for each installed device. The port can be native to the PC or it can be a USB port from an installed USB hub to the PC. The USB port supports full speed (12 Mbps) USB 2.0.

NOTE: The devices work with USB 1.1 or 2.0 ports, but have a maximum USB data rate of 12 Mbps.

The RS-232 port is a DB9 male connector wired as a DTE with full hardware handshake support. It handles RS-232 data rates up to 460.8 kbps.

The RS-422/485 port is a 5-pin pluggable terminal block that also handles RS-422/485 data rates up to 460.8 kbps.

#### FEATURES

- SP385A-R3 PROVIDES 2-KV ISOLATION
- SP390A-R3 PROVIDES 15-KV SURGE PROTECTION
- PROTECTS AGAINST ESD (4 KV CONTACT, 8 KV AIR)
- FEATURES A COMPACT IN-LINE CASE
- COMPATIBLE WITH USB 2.0 FULL-SPEED (12 MBPS) DEVICES
- SUPPORTS RS-232 OR RS-422/485 DATA RATES UP TO 460.8 KBPS
- POWERED BY THE USB BUS, SO NO POWER SUPPLY IS NEEDED

SPECIFICATION COMPARISON CHART				
	SP385A-R3	SP390A-R3		
COMPATIBILITY	USB 1.0 and 2.0 (full-speed)	USB 1.0 and 2.0 (full-speed)		
ISOLATION	Serial port: 2 kV	Serial port: 15 kV		
MTBF	247,713 hours	2,267,777 hours		
OPERATING SYSTEM	Windows 2000, XP (32/64 bit), Vista (32/64 bit), 7 (32/64 bit), 8 (32/64 bit), 10 (32/64 bit), 2003 & 2008 Server (32/64 bit)	Windows 2000, XP (32/64 bit), Vista (32/64 bit), 7 (32/64 bit), 8 (32/64 bit), 10 (32/64 bit), 2003 & 2008 Server (32/64 bit)		
SPEED	Serial port data rate: 460.8 kbps; USB port speed: 12 Mbps (full)	Serial port data rate: 460.8 kbps; USB port speed: 12 Mbps (full)		
CONNECTORS	(1) DB9 male, (1) USB Type B	(1) 5-pin pluggable terminal block, (1) USB Type B		
TEMPERATURE	Operating: 32 to 158° F (0 to 70° C); Storage: -40 to +185° F (-40 to +85° C)	Operating: 32 to 158° F (0 to 70° C); Storage: -40 to +185° F (-40 to +85° C)		
HUMIDITY	Operating: 0 to 95%, non-condensing	Operating: 0 to 95%, non-condensing		
POWER	Source: USB bus powered; Consumption: Low-power device (less than 100 mA)	Source: USB bus powered; Consumption: Low-power device (less than 100 mA)		
DIMENSIONS	1.7"H x 3"W x 0.9"D (4.3 x 7.7 x 2.3 cm)	1.7"H x 3.5"W x 0.8"D (4.3 x 8.9 x 2.1 cm)		
WEIGHT	6.4 oz. (0.18 kg)	6.4 oz. (0.18 kg)		

### **COMPARISON CHART**



## SPECIFICATIONS

#### USB TO RS-232 OPTO-ISOLATED CONVERTER (SP385A-R3)



#### WHAT'S INCLUDED WITH THE SP385A-R3

USB TO RS-232 OPTO-ISOLATED CONVERTER

3.2-FT (1-M) USB CABLE

USB TO RS-232 OPTO-ISOLATED CONVERTER (SP385A-R3)		
COMPATIBILITY	USB 1.0 and 2.0 (full-speed)	
ISOLATION	Serial port: 2 kV	
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POWER	Source: USB bus powered; Consumption: Low-power device (less than 100 mA)	
DIMENSIONS	1.7"H x 3"W x 0.9"D (4.3 x 7.7 x 2.3 cm)	
WEIGHT	6.4 oz. (0.18 kg)	

## SPECIFICATIONS

#### USB TO RS-422/485 OPTO-ISOLATED CONVERTER (SP390A-R3)



#### WHAT'S INCLUDED WITH THE SP390A-R3

- USB TO RS-422/485 OPTO-ISOLATED CONVERTER
- 3.2-FT (1-M) USB CABLE

USB TO RS-422/485 OPTO-ISOLATED CONVERTER (SP390A-R3)		
COMPATIBILITY	USB 1.0 and 2.0 (full-speed)	
ISOLATION	Serial port: 15 kV	
MTBF	2,267,777 hours	
OPERATING SYSTEM	Windows 2000, XP (32/64 bit), Vista (32/64 bit), 7 (32/64 bit), 8 (32/64 bit), 10 (32/64 bit), 2003 & 2008 Server (32/64 bit)	
SPEED	Serial port data rate: 460.8 kbps; USB port speed: 12 Mbps (full)	
CONNECTORS	(1) 5-pin pluggable terminal block, (1) USB Type B	
TEMPERATURE	Operating: 32 to 158° F (0 to 70° C); Storage: -40 to +185° F (-40 to +85° C)	
HUMIDITY	Operating: 0 to 95%, non-condensing	
POWER	Source: USB bus powered; Consumption: Low-power device (less than 100 mA)	
DIMENSIONS	1.7"H x 3.5"W x 0.8"D (4.3 x 8.9 x 2.1 cm)	
WEIGHT	6.4 oz. (0.18 kg)	



## **ORDERING INFORMATION**

ITEM	CODE
USB to RS-232 Opto-Isolated Converter	SP385A-R3
USB to RS-422/485 Opto-Isolated Converter	SP390A-R3

#### DISCLAIMER

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#### **ABOUT BLACK BOX**

Black Box is a world leading technology solutions provider specializing in complete high-performance KVM, professional A/V signal distribution and extension and switching solutions for mission-critical applications. Black Box is dedicated to delivering superior project engineering, technical support, and 24/7 customer service you can rely on for your most critical operations.

Every day, our customers trust us to design, integrate, and maintain reliable control room solutions for broadcasting, post-production, stadiums & arenas, medical, air traffic control, oil & gas, government & military, and utility industries. Leave the tech to us and our comprehensive technology solutions will deliver secure connections, fast-response times, real-time collaboration and more.

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