



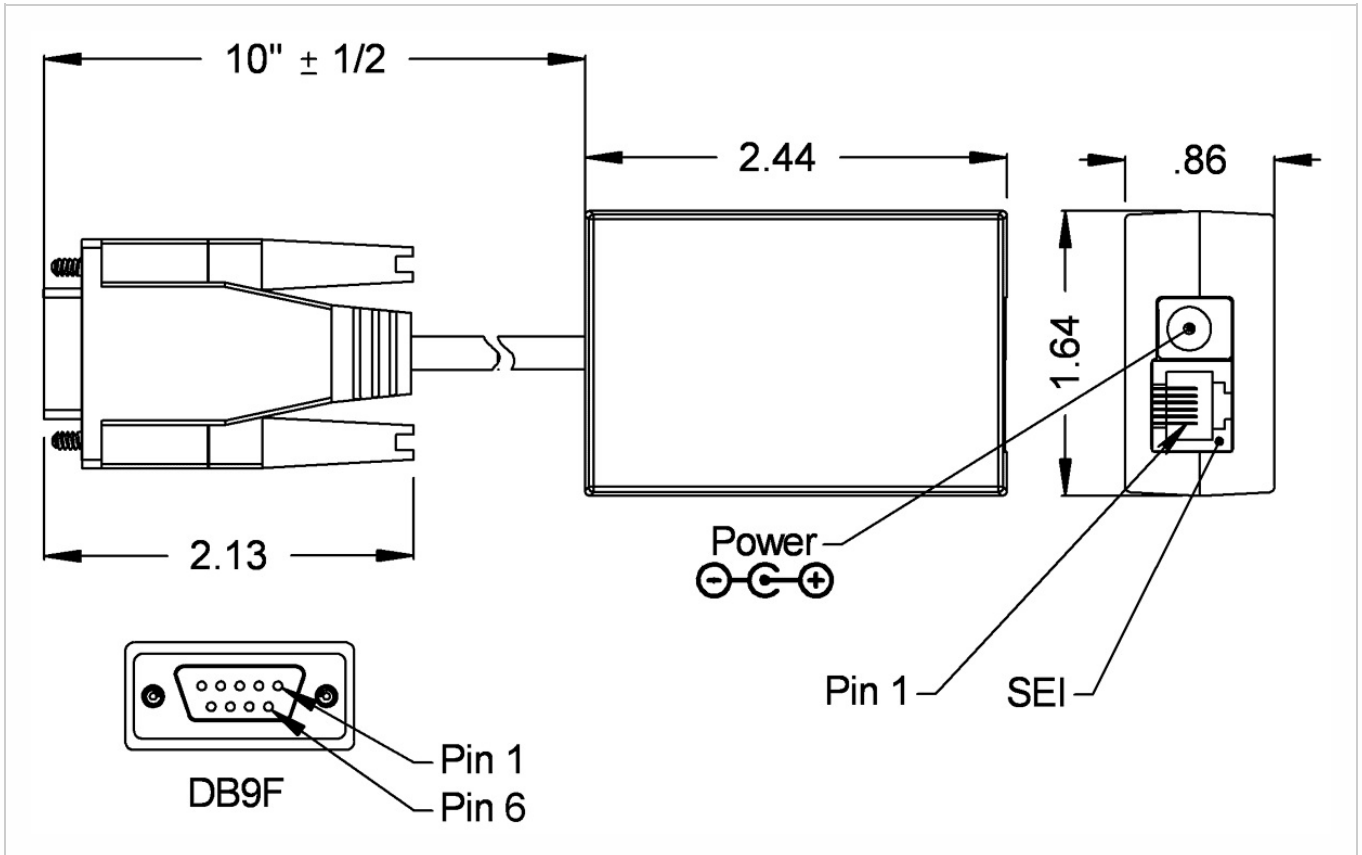
**The AD2B is no longer available for purchase.**

## AD2B Product Description

The AD2B adapter allows the RS-485-like signal of SEI devices to interface to a standard RS-232 port (9-pin DB), such as those in IBM-compatible PCs. The SEI (Serial Encoder Interface) bus is a simple, quick, and convenient network of SEI devices interfacing to an RS-232 serial port. The SEI bus supports from 1 to 15 devices on a single 6-wire telephone-type cable, up to 1000 feet long. For more information on the SEI bus, please see the SEI (<https://www.usdigital.com/products/sei>) page.

The AD2B has 2 differential signals to interface to SEI devices: the bidirectional data pair for communication and the busy input pair for data flow control. The PS-12 (<https://www.usdigital.com/products/products/power-supplies/standard/ps-12>) power supply connects to the AD2B and furnishes power for all SEI devices on the bus.

## Mechanical Drawings



## Specifications



# AD2B SEI TO RS-232 ADAPTER (9-PIN)

## ELECTRICAL

Specifications apply over entire operating temperature range.

PARAMETER	MIN.	TYP.	MAX.	UNITS	NOTES
Supply Voltage	8.0	-	16	Volts	-
Supply Current (without encoders)	-	-	15	mA	-
Differential SEI Output voltage  DataL - DataH ,  Busy+ - Busy-	2.0	2.75	5.0	Volts	Load = 100Ω
Differential SEI Input Voltage  DataL - DataH ,  Busy+ - Busy-	0.2	-	5.0	Volts	-
Common Mode SEI Output Voltage (DataH + DataL)/2, (Busy- + Busy+)/2	2.0	2.5	3.0	Volts	Load = 100Ω
Common Mode SEI Input Voltage (DataH + DataL)/2, (Busy- + Busy+)/2	-4.5	-	3.0	Volts	-
Input current DataH, DataL, Busy-, Busy+	-15	-	15	mA	In = 0 to 5V
RS-232 Output	±5.0	±8.0	-	Volts	-
RS-232 Input	±3.5	-	±15	Volts	-
RS-232 Input Resistance	3	5	7	kΩ	-

## ABSOLUTE MAXIMUM RATINGS

PARAMETER	MIN.	MAX.	UNITS
Storage Temperature	-40	100	C
Operating Temperature	0	70	C
Humidity (non-condensing)	0	95	%



## FUNCTIONAL PIN DESCRIPTIONS

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### MOD6:

PIN	NAME	DESCRIPTION
1	GND	Ground, common for power, data and busy pairs.
2	Busy+	Differential input line, active high, has 330 $\Omega$ pull down.
3	Busy-	Differential input line, active low, has 330 $\Omega$ pull up.
4	PWR	Power supply output to encoder bus.
5	DataL	Bidirectional differential data line, has 330 $\Omega$ pull up.
6	DataH	Bidirectional differential data line, has 330 $\Omega$ pull down.

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### DB9F:

PIN	NAME	DESCRIPTION
3	RXD	Data input from host, normally low.
2	TXD	Data output to host, normally low.
7	RTS	Not connected.
8	CTS	Busy line to host, active low.
5	GND	Ground, common for RS232 signals.



## CABLES & CONNECTORS

6-pin Modular	
Cables	Description
CA-MD6-SH-MD6-x ( <a href="https://www.usdigital.com/products/cables-connectors/cables/ca-md6-sh-md6">https://www.usdigital.com/products/cables-connectors/cables/ca-md6-sh-md6</a> )	Modular connectors on both ends of a shielded cable
CA-MD6-SS-MD6-x ( <a href="https://www.usdigital.com/products/cables-connectors/cables/ca-md6-ss-md6">https://www.usdigital.com/products/cables-connectors/cables/ca-md6-ss-md6</a> )	Modular connectors on both ends of a silver satin cable
Connectors	Description
CON-MD6-2J ( <a href="https://www.usdigital.com/products/cables-connectors/connectors/con-md6-2j">https://www.usdigital.com/products/cables-connectors/connectors/con-md6-2j</a> )	Two-way 6 conductor modular connectors
CON-MD6-3J ( <a href="https://www.usdigital.com/products/cables-connectors/connectors/con-md6-3j">https://www.usdigital.com/products/cables-connectors/connectors/con-md6-3j</a> )	Three-way 6 conductor modular connectors

Attention:

- The cables supplied for the SEI bus by US Digital are wired straight through with no crossed wires. Cables and splitters intended for telephone system usage are wired differently and may damage your SEI device.
- Specify cable length when ordering.

## INCLUDED ACCESSORIES

PS-12 Power supply (<https://www.usdigital.com/products/power-supplies/standard/ps-12/>)

Software

## PRODUCT CHANGE NOTIFICATIONS

Title	Date	Description	Download
PCN 1011	9/21/2011	The AD2B, AD4B, AD7, EADAPT, EDAC2, EDIVIDE, EPOT, EQUAD, ESUM, ESWITCH, ETACH2, SEI-USB, USB-232 currently utilizes a printed thermal transfer label. This label will no longer be used and will be replaced by laser marking directly onto the housing of the product. The purpose for this change is to create a more durable solution and eliminate the possibility of the label being inadvertently removed from the housing.	Download ( <a href="https://www.usdigital.com/support/resources/product-change-notifications/pcn-1011-interface-product-laser-marking/">https://www.usdigital.com/support/resources/product-change-notifications/pcn-1011-interface-product-laser-marking/</a> )
PCN 4242	3/4/2014	This PCN is a formal notification that US Digital is discontinuing the AD2B SEI to RS-232 Adapter.	