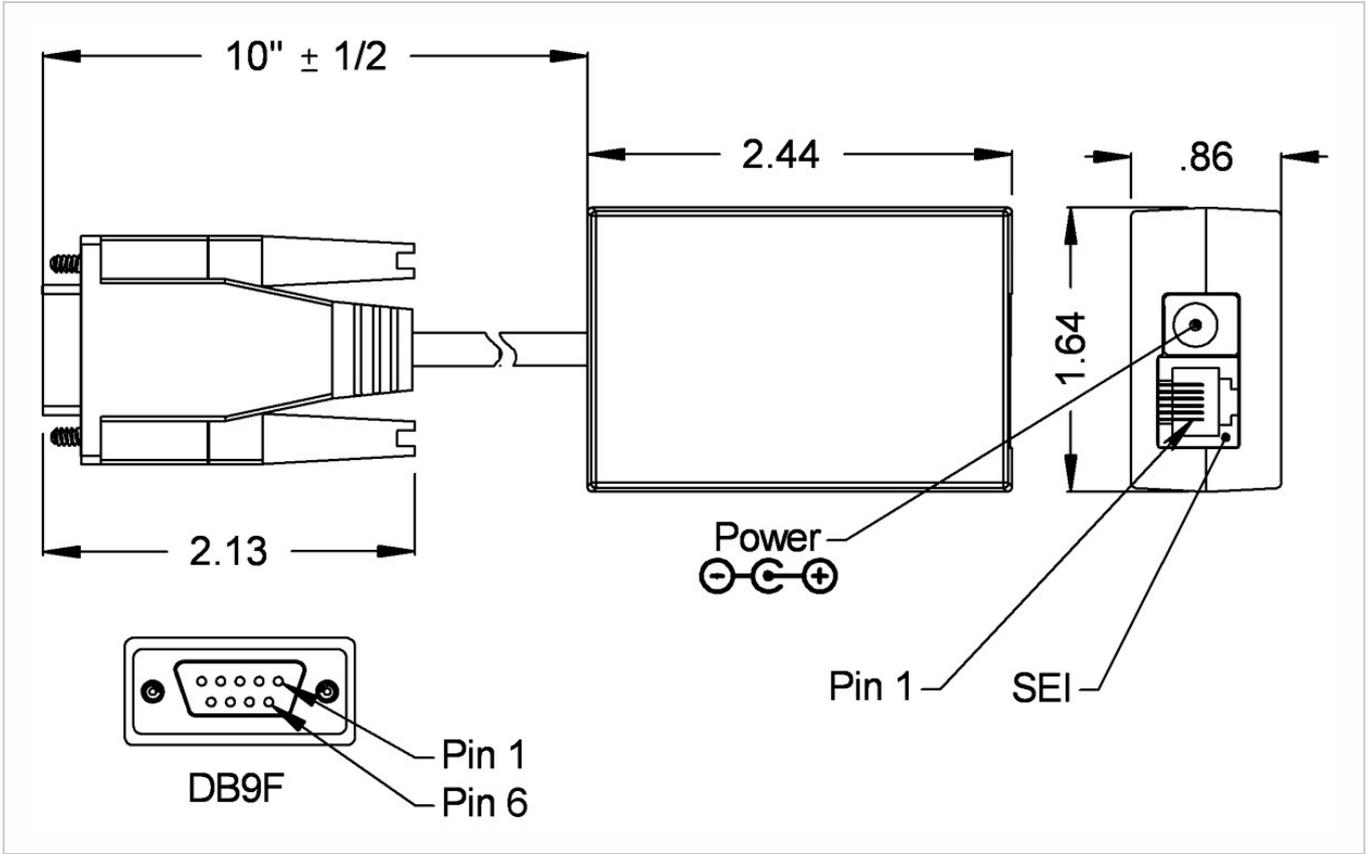**The AD2B is no longer available for purchase.**

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.

US DIGITAL
Motion Control Products

**1400 NE 136th Ave.
Vancouver, WA 98684
USA**

info@usdigital.com
sales@usdigital.com
support@usdigital.com

Toll Free: **800.736.0194**
Worldwide: **360.260.2468**
Support: **360.397.9999**

Page: 1 of 5
11/13/2024 58686
AD2B

Mechanical Drawings

Specifications

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	%

US DIGITAL
Motion Control Products

1400 NE 136th Ave.
Vancouver, WA 98684
USA

info@usdigital.com
sales@usdigital.com
support@usdigital.com

Toll Free: **800.736.0194**
Worldwide: **360.260.2468**
Support: **360.397.9999**

Page: 3 of 5
11/13/2024 58686
AD2B

FUNCTIONAL PIN DESCRIPTIONS

MOD6:

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

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.

US DIGITAL
Motion Control Products

1400 NE 136th Ave.
Vancouver, WA 98684
USA

info@usdigital.com
sales@usdigital.com
support@usdigital.com

Toll Free: **800.736.0194**
Worldwide: **360.260.2468**
Support: **360.397.9999**

Page: 4 of 5
11/13/2024 58686
AD2B

CABLES & CONNECTORS

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

Configuration Options

AD2B

PLEASE NOTE: This chart is for informational use only. Certain product configuration combinations are not available. Visit the AD2B product page *(https://www.usdigital.com/products/AD2B)* for pricing and additional information.

US DIGITAL Motion Control Products

1400 NE 136th Ave.
Vancouver, WA 98684
USA

info@usdigital.com
sales@usdigital.com
support@usdigital.com

Toll Free: **800.736.0194**
Worldwide: **360.260.2468**
Support: **360.397.9999**

Page: 5 of 5
11/13/2024 58686
AD2B