

RS232485

The RS232485 is designed to take RS232 from a standard PC COM port and convert it to RS485. It incorporates the adapter into a 9 pin, D-sub backshell.

RS-485 provides improved noise immunity over long cable lengths and allows a network of up to 100 OEM and Legend Series SmartMotors to be operated in a parallel fashion, instead of daisy-chaining the communications from one motor to the next. This feature reduces coordination problems for many multi-axis applications.

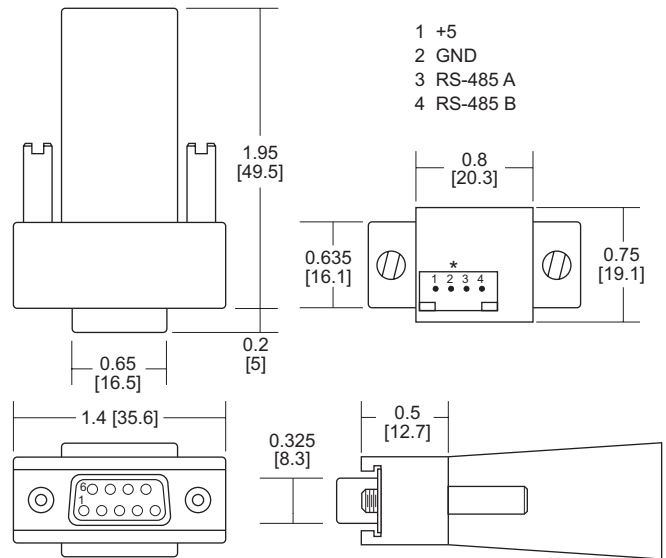
The converter circuit is housed entirely within the connector backshell. It requires 5VDC, typically supplied by the first SmartMotor in the chain.

The RS485 A and B output signals are single ended and biased for bus mastering.

With RS485, all SmartMotors receive input at the same time. There is no echoing of data from one motor to the next. While that saves time, it also makes it necessary for each motor to have a unique address originating from its own program. The SmartMotor program ECHO command must be disabled and must remain in non-ECHO default state to protect the data bus. Use the SADDR command to set the unique address, and the OCHN command to open the communications port as RS485.

*To mate with these 4 pin connectors, you need:

- MOLEX® connector 50-57-9404 (Digikey # WM2902-ND)
- Crimp Terminal 16-02-0103 (Digikey # WM2512-ND)



* All sizes are given in inches, sizes in brackets are in mm

RS232485T

The RS232485T is similar to the RS232485 with a screw terminal instead of MOLEX® connectors.

Features	Benefits
Noise immunity.	Ideal for noisy industrial environments involving such things as TIG welding or plasma heads.
Extended range.	Cable runs of 1,000 feet possible for remote applications (305m).
Convenient size and mounting.	Mounts neatly inside the cable connector backshell.
Firmware supported.	Firmware includes built in OCHN mode.

Electrical

Bus DC line Voltage:	5VDC
Driver Output Voltage Unloaded	2VDC min, -2VDC min
Driver Output Voltage Loaded	2VDC, -2VDC
Receiver Voltage Range	+12VDC to -7VDC

Mechanical

Dimensions:	see figure
Weight:	0.5 oz (14.2g)

Environmental

Operating Temperature:	0 to 50° C
Storage Temperature:	-20 to 70° C
Humidity:	0 to 90% non condensing

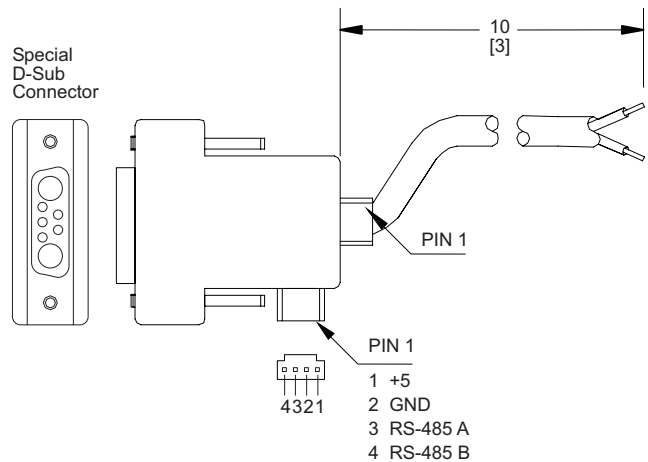
The RS485-ISO is designed to take RS232 from the communications port of the OEM and Legend Series SmartMotor and convert it to RS485. It incorporates the adapter into a 7 pin, 7W2, D-sub backshell.

RS485 provides improved noise immunity over cable lengths of up to 1,000 ft (305m). It also allows you to operate a network of up to 100 SmartMotors in parallel, rather than daisy-chaining the communications from one motor to the next. This feature reduces coordination problems for many multi-axis applications.

The converter circuit is entirely housed and protected by the supplied cable backshell. It draws power and ground from the SmartMotor main connector (pins 2 and 5). It also requires the use of the main connector G-Synch line (pin 1). The G-Synch line is used to bias the state of the balanced line, allowing motor-to-host communications.

Firmware support for the RS485-ISO adapter is provided by the OCHN command. The OCHN command must reside in the stored user program for a motor to communicate correctly upon power-up.

The RS485-ISO communications adapter can be ordered as part of a completed cable, or as a kit to be used in the creation of a cable.



* All sizes are given in inches, sizes in brackets are in mm

Features	Benefits
Noise immunity.	Ideal for noisy industrial environments involving such things as TIG welding or plasma heads.
Extended range.	Cable runs of 1,000 feet possible for remote applications (305m).
Convenient size and mounting.	Mounts neatly inside the cable connector backshell.
Product compatible.	The RS485-ISO converter is compatible with all SmartMotor, firmware J3 or later.
Firmware supported.	Firmware includes built in OCHN mode.

Electrical

Bus DC line Voltage:	5VDC
Driver Output Voltage Unloaded	2VDC min, -2VDC min
Driver Output Voltage Loaded	2VDC, -2VDC
Receiver Voltage Range	+12VDC to -7VDC

Mechanical

Dimensions:	see figure
Weight:	0.5 oz (14.2g)

Environmental

Operating Temperature:	0 to 50° C
Storage Temperature:	-20 to 70° C
Humidity:	0 to 90% non condensing