


3 Connection and interface

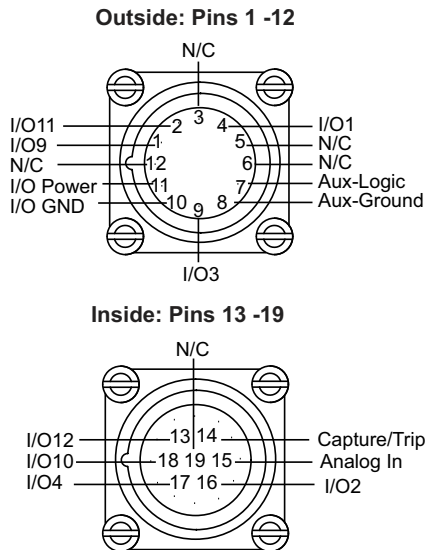
 DANGER
EXPOSED SIGNALS Hazardous voltage levels may be present if using an open frame power supply to power the product. Failure to follow these instructions will result in death or serious injury.

3.1 Interfacing I/O

See part 1 of this document, section 6, for I/O interface configurations and methods.

 CAUTION
ELECTRICAL OVERSTRESS The general purpose I/O is tolerant to +24 VDC. The following listed I/O point is TTL level and only tolerant to +5 VDC: 1) Capture/Trip Do not exceed +5 VDC on these points. Failure to follow these instructions can result in equipment damage.

3.1.1 P1 — 19-pin M23 circular connector (expanded I/O)



Pin Numbers	Signal	Prototype development cable wire colors (twisted pairs)
1	I/O 9	Violet
2	I/O 11	Red
3	Step/Clock I/O	Grey
4	I/O 1	Red/Blue
5	No Connect	Green
6	No Connect	Blue
7	Aux-Logic	Gray/Pink
8	Aux-Ground	White/Green
9	I/O 3	White/Yellow
10	I/O GND	White/Gray
11	I/O PWR	Black
12	No Connect	Green/Yellow*
13	I/O 12	Yellow/Brown
14	Capture/Trip I/O	Brown/Green
15	AIN	White
16	I/O 2	Yellow
17	I/O 4	Pink
18	I/O 10	Gray/Brown
19	No Connect	Brown

Table 3.1 I/O connections, 19-pin M23 circular

3.1.2 Connectivity option — 19 conductor cordset

19-pin M23 single-ended cordsets are offered to speed prototyping of the MDrive Accustep 34ac Motion Control. Measuring 13.0' (4.0m) long, they are available in either straight or right angle termination. PVC jacketed cables come with a foil shield and unconnected drain wire.

- Straight Termination..... MD-CS100-000
- Right Angle..... MD-CS101-000

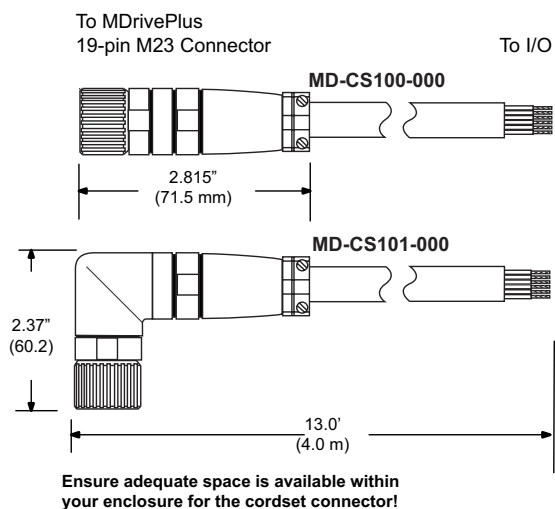
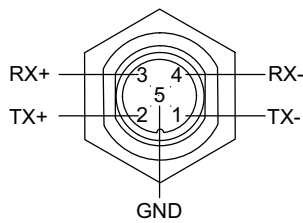


Figure 3.1 MD-CS10x-000 cordset

Revision R100110

3.2 Interfacing communications

3.2.1 P2 — 5-pin M12 circular connector (male)



Pin #	Function	Description
1	TX -	Transmit minus
2	TX +	Transmit plus
3	RX +	Receive plus
4	RX -	Receive minus
5	Comm GND	Communications ground only. Do not ground aux-logic to this pin.

Table 3.2 P2 communications, 5-pin M12F circular connector

3.2.2 Communications converter — MD-CC401-000

Electrically isolated in-line USB to RS-422/485 converter pre-wired with mating connector to conveniently program and set configuration parameters.

No mating connector kit is available for this connector style. Compatible mating connectors may be purchased from the following suppliers:

- Phoenix
- Turck
- RDE Connectors

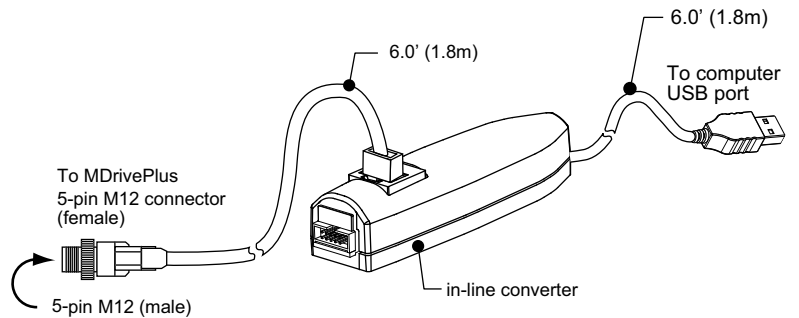
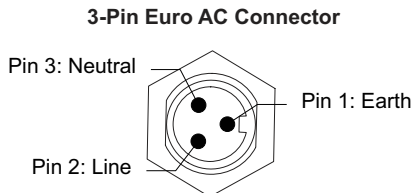


Figure 3.2 MD-CC401-001 communications converter

3.3 Interfacing AC power

3.3.1 P3 — 3-pin Euro AC



Pin number	Signal	European (IEC) color code
1	Earth	Yellow/Green
2	Line	Brown
3	Neutral	Blue

Table 3.3 AC standard wire colors

3.3.2 MD-CS20x-000 cordset

The single-end three conductor cordsets are used with the MDrive AC. Measuring 13.0' (4.0m) long, they are available in either straight or right angle termination. IEC color code, oil-resistant yellow PVC jacket, IP68 and NEMA 6P rated.

Straight Termination MD-CS200-000

Right Angle Termination MD-CS201-000

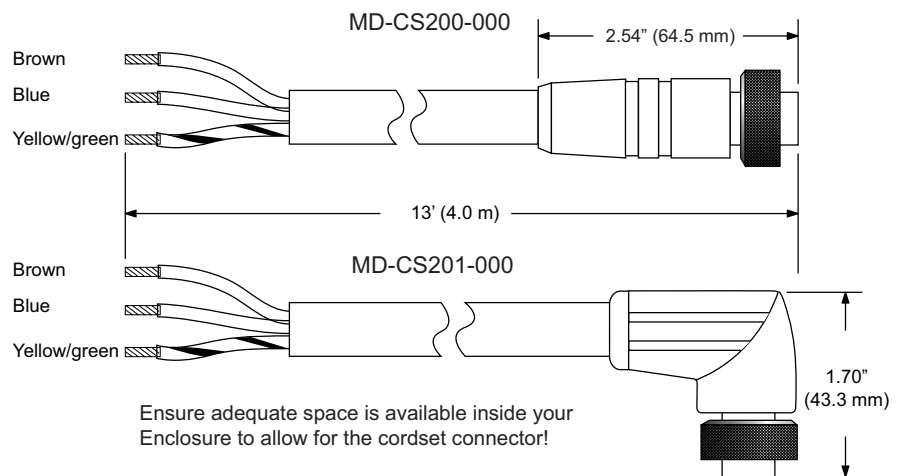


Figure 3.3 MD-CS20x-000