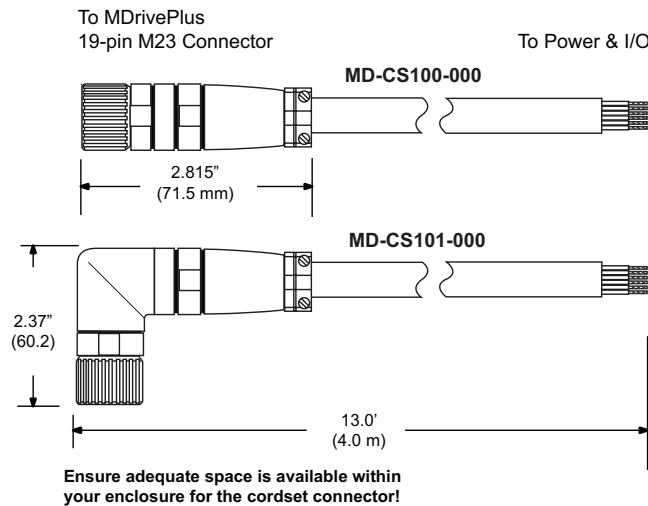


4.8.1 P2 — 19-pin M23 industrial connector MD-CS10x-000

The MD-CS10x-000 prototype development cordset is used to rapidly interface the MDrive to the users power, communications and logic interface. This 13' (4.0 m) cable consists of a 119-pin M23 industrial connector to plug directly into the MDrive P1 connector with flying leads on the opposite end to interface to power, communications and logic.

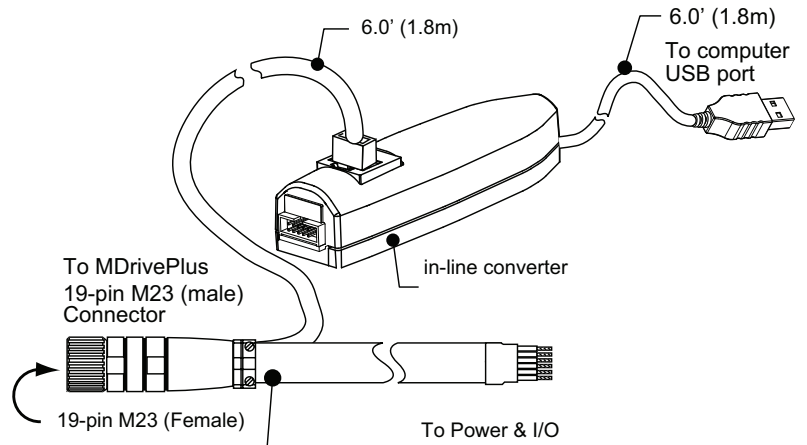


Pin #	Wire Colors	Signal
1	Violet	Opto Ref.
2	Red	Enable
6	Blue	+V*
8	White/Green	MOSI
9	White/Yellow	CS
10	White/Gray	+5 VDC
11	Black	Comm GND
12	Green/Yellow	Shell
13	Yellow/Brown	Direction
16	Yellow	SPI Clock
17	Pink	MISO
18	Gray/Brown	Step Clock
19	Brown	Power GND*
<i>The following signals represent a legacy version of the product. It is no longer available with an internal encoder. Pin numbers are for reference only and are not connected on current versions of the product.</i>		
3	Gray	Index +
4	Red/blue	Channel B +
5	Green	Channel B -
7	Gray/pink	Channel A -
14	Brown/green	Index -
15	White	Channel A +

Figure 4.7 MD-CS10x-000 prototype development cordset

4.7.3 USB to 19-pin M23 industrial — MD-CC301-001

Electrically isolated in-line USB to SPI converter pre-wired with mating connector to conveniently program and set configuration parameters. Power and logic signals are bundled into this connector via a second cable with signal accessibility via flying leads.



Pin #	Wire Colors	Signal
1	Violet	Opto Ref.
2	Red	Enable
6	Blue	+V*
11	Black	Comm GND
12	Green/Yellow	Shell
13	Yellow/Brown	Direction
18	Gray/Brown	Step Clock
19	Brown	Power GND*

*The following signals represent a legacy version of the product. It is no longer available with an internal encoder. Pin numbers are for reference only and are not connected on current versions of the product.*

3	Gray	Index +
4	Red/blue	Channel B +
5	Green	Channel B -
7	Gray/pink	Channel A -
14	Brown/green	Index -
15	White	Channel A +

Figure 4.5 MD-CC301-001 communications converter