Power and Communication Cables – CDS7 Cable



Pass-Thru Terminator

CBLSMCDS-xM (Moog Animatics CDS7 "Add-A-Motor™" Cable)

Power, RS-232 and CAN Bus Communications Daisy Chain Cable for Single-Cable Connections Between Multiple Moog Animatics SmartMotor[™] Servos

CBLSMCDS series is the "Add-A-Motor" -style power and communications cable for a CDS7-equipped SmartMotor. It consists of a pass-thru 7W2 main motor connector split out to a single second motor 7W2 connector. This single cable is capable of carrying power, RS-232 and CAN Bus communications from motor to motor using only the 7W2 connector.

The CBLSMCDS cable is designed to allow ease of connection to multiple motors in a single daisy-chain network. The main power ground wire is a larger gauge to decrease noise emissions at the ground-plane level. All communications lines are internally shielded from the power lines.

| Part Number | Length |
|--------------|------------|
| CBLSMCDS-0.3 | 0.3 meters |
| CBLSMCDS-0.9 | 0.9 meters |
| CBLSMCDS-3.0 | 3 meters |
| CBLSMCDS-7.5 | 7.5 meters |

NOTES: CBLSMCDS series cables with blue overmolded connectors are designed for the Class 5 D-Style SmartMotor with the CDS7 option only. DO NOT use these cables with standard Class 5 D-Style SmartMotors.

RS-232

CAN Bus HMI

with Terminator

Power

The two end nodes of the CAN Bus network must be terminated with a 120 ohm terminator (shunt) for proper biasing. If an end node is a SmartMotor, a pass-thru terminator is available (PN: CBLSM-TR120) that attaches directly to the motor's 15-pin D-sub connector to serve as the terminator.



Figure 2



Connector Pinouts

| CON 3 PIN | AWG - Color/Stripe | CON 1 PIN | AWG - Color/Stripe | CON 2 PIN | Description |
|--------------|-----------------------|--------------|-----------------------|--------------|------------------|
| 1 | 20 - Any | 1 | 20 - Blue/White | 1 | CAN Bus Low |
| 2 | 20 - Any | 2 | 20 - White | 2 | CAN Bus High |
| 3 | | NC | 26 - Blue | 3 | RS-232 TX |
| NC | | 3 | 26 - Yellow | 4 | RS-232 Crossover |
| 4 | 26 - Any | 4 | | NC | RS-232 RX |
| 5 | 26 - Any | 5 | 26 - Black | 5 | Signal Return |
| A1 | 12 - Any | A1 | *12 - Red | A1 | Power |
| A2 | 12 - Any | A2 | *12 - Black | A2 | Ground |

*CON 2 PIN A1 and A2 wires spliced to wires between CON 1 and 3.

Terminate 20/26 AWG shield drain wires to CON 1 and CON 2 as shown in Figure 2.

Specifications are subject to change without notice. Consult website and factory for latest data.

CAUTION: When using these cables with the larger 34 frame motors, please consult the factory for power limitations.



Power and Communication Cable (Flying Leads) for Main 7W2 Connector on the SmartMotor™ with CDS7 Option

CBLPWRCOM3 series provides power along with RS-232 and CAN Bus communications in one convenient cable to simplify installation. It consists of a 7W2 main motor connector with RS-232 and CAN communications separately shielded from power, and a full shield over the entire length terminating at a metal jacket inside the over-molded connector.

| Part Number | Length | NOTE: The CBLPWRCOM3 cable is designed for use on the SmartMotor with the Space of the Space o |
|----------------|-----------|--|
| CBLPWRCOM3-3M | 3 meters | CDS7 option. |
| CBLPWRCOM3-5M | 5 meters | |
| CBLPWRCOM3-10M | 10 meters | |



Convenient and Simple CAN Bus Pass-Thru Termination

The CBLSM-TR120 provides convenient, pass-thru termination for CAN Bus signals on the 15-pin D-Sub connector of the Class 5 SmartMotor. It is used on D-style Class 5 SmartMotors with either the -CDS or -CDS7 option.

The CBLSM-TR120 requires no special software or drivers — it simply attaches onto the 15-pin D-sub connector, allowing you to terminate the CAN Bus signal on the last SmartMotor node while still having access to the other D-sub connector pins.

NOTE:

- The last SmartMotor in the daisy chain must also be the last CAN Bus node. If there are other CANopen devices connected to the last SmartMotor, then a 120 ohm terminator (shunt) must be applied to the final CAN Bus device.
- For proper termination, there must be one terminator at each end of the CAN Bus.

CAUTION: Proper termination is critical for successful network communications. Using less than two terminators is not acceptable; using more than two terminators is not acceptable.



