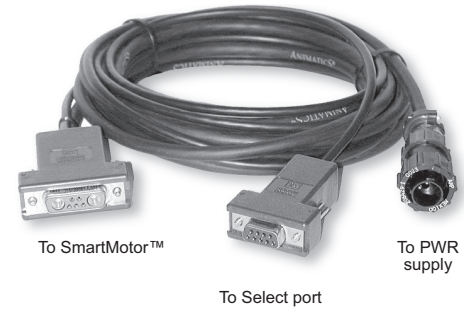


CBLSM1-3M

Power and Communications Cable for Main 7W2 Connector on Animatics SmartMotor™

CBLSM1 series is the main power and communications cable consisting of a 7W2 main motor connector split out to a pre-wired RS-232 DB-9 connector to plug directly into any standard PC serial port.

The power is split off and has a connector that plugs into our enclosed frame power supplies.



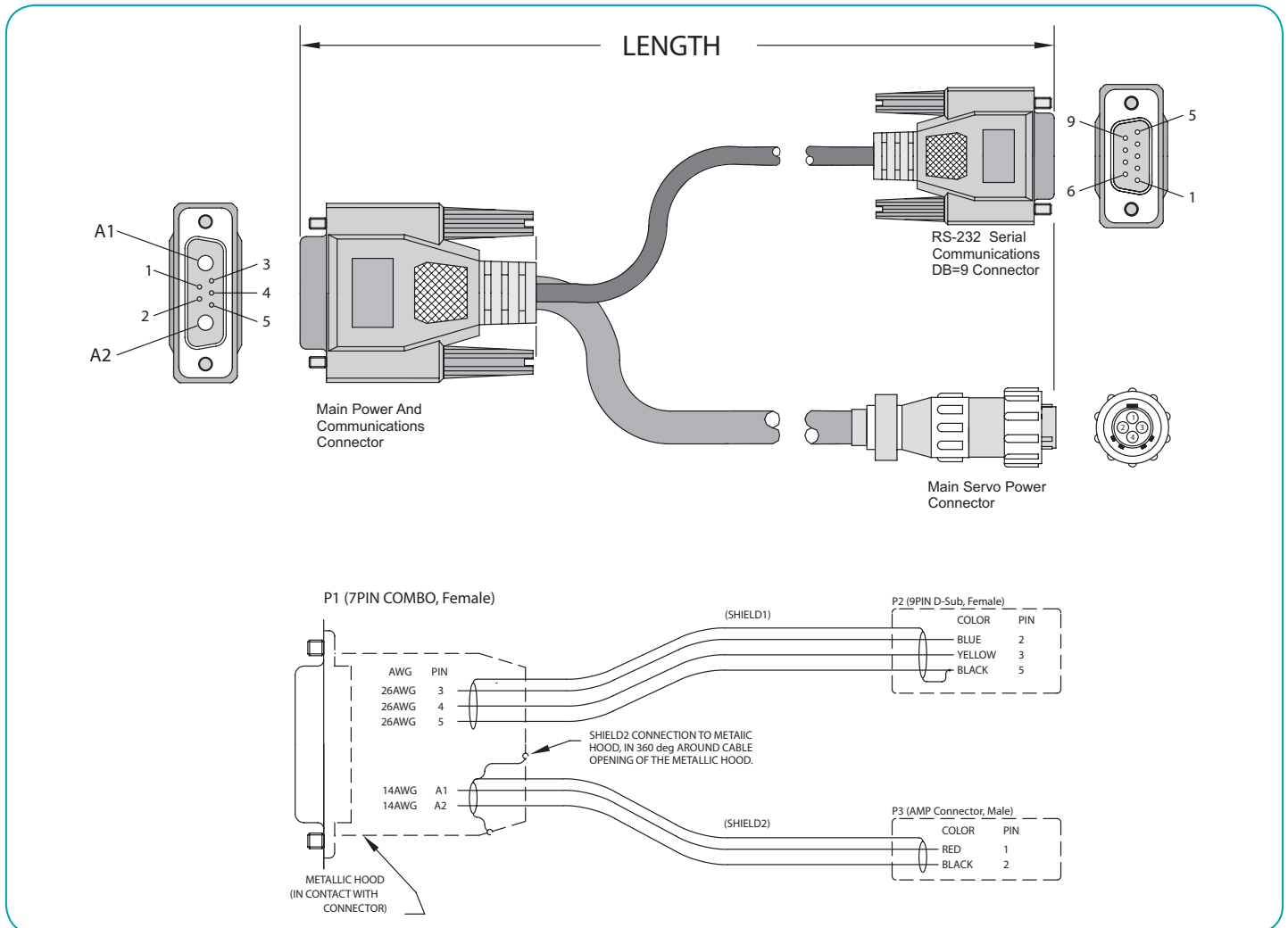
Standard Length

Part Number	Length
CBLSM1-3M	3 meters
CBLSM1-10M	10 meters

Custom Length

Part Number	Length
CBLSM1-x	x (in feet)

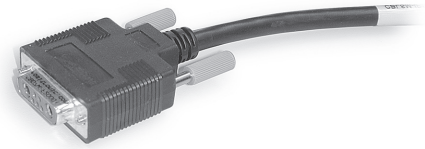
Note: Communications Shield is connected at the DB-9 end, but NOT the motor end. The power cable is connected at the motor connector shell but electrically isolated from the any internal electronic components.



CBLPWRCOM2-xM

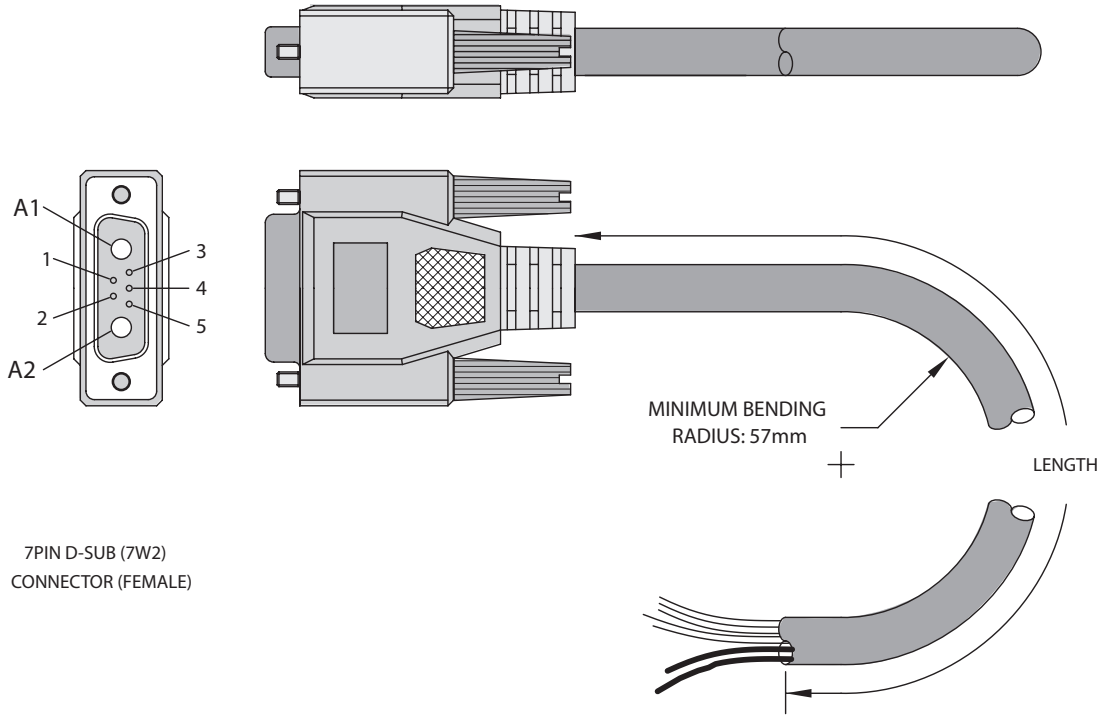
Power and Communications Cable (Flying Leads) for Main 7W2 Connector on Animatics SmartMotor™.

CBLPWRCOM2 series a Power and communications cable consisting of a 7W2 main motor connector with communications internally shielded from power and a full shield over entire length terminating at a metal jacket inside the over-molded connector.

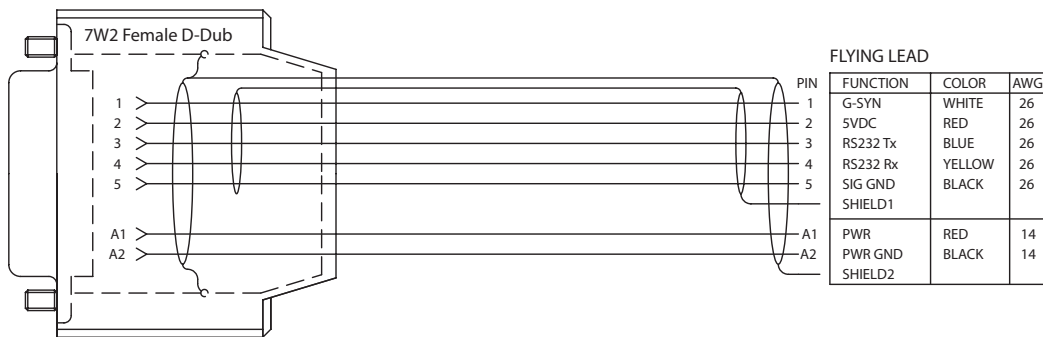


Part Number	Length
CBLPWRCOM2-3M	3 meters
CBLPWRCOM2-5M	5 meters
CBLPWRCOM2-10M	10 meters

Note: Communications Shield is connected at the DB-9 end, but NOT the motor end. The power cable is connected at the motor connector shell but electrically isolated from the any internal electronic components.



7PIN D-SUB (7W2)
CONNECTOR (FEMALE)



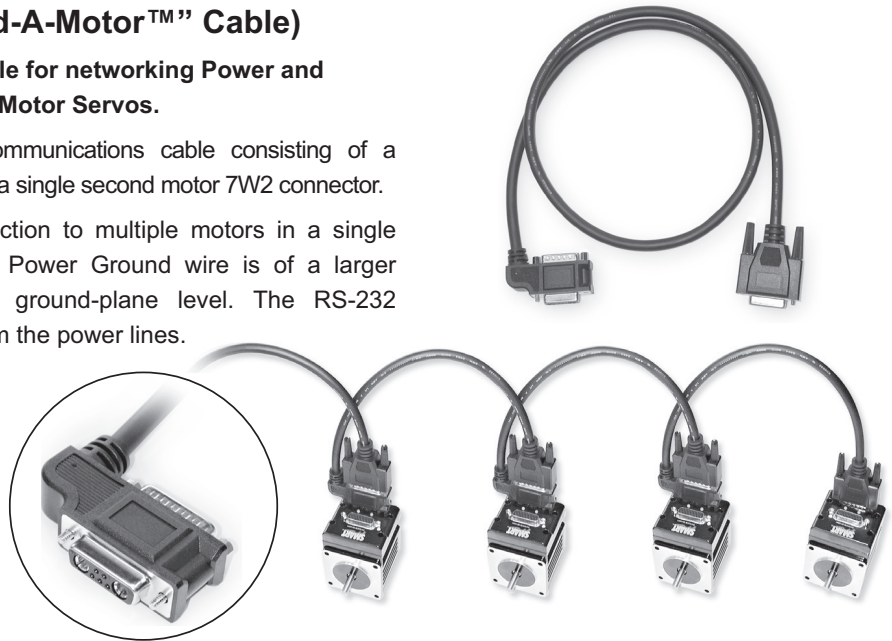
CBLSMADD-xM (Animatics™ “Add-A-Motor™” Cable)

Power and Communications Daisy Chain Cable for networking Power and Communications to multiple Animatics SmartMotor Servos.

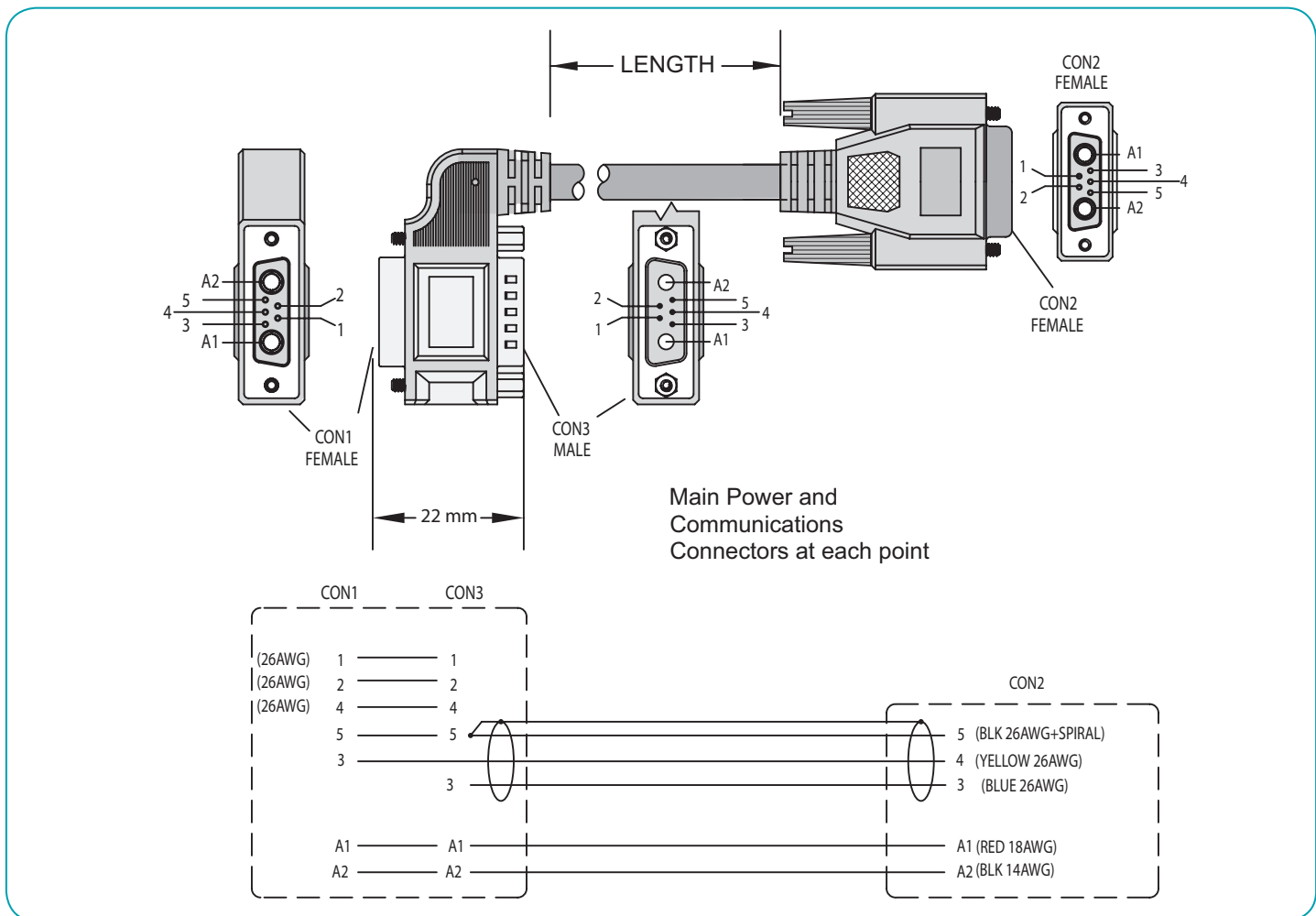
CBLSMADD series is the main power and communications cable consisting of a feed-through 7W2 main motor connector split out to a single second motor 7W2 connector.

The cable is designed to allow ease of connection to multiple motors in a single RS-232 serial daisy chain network. The Main Power Ground wire is of a larger gauge to decrease noise emissions at the ground-plane level. The RS-232 Communications lines are internally shielded from the power lines.

Part Number	Length
CBLSMADD-0.3	0.3 meters
CBLSMADD-1.0	1 meters
CBLSMADD-3.0	3 meters
CBLSMADD-7.5	7.5 meters



Note: Due to gauge of the main power lines, it is not recommended to use the “Add-A-Motor” cables with the larger 34 frame SmartMotor. If there is just one 34 frame SmartMotor in a system design, then it should be the first motor in the chain so as to minimize voltage drop effects over the entire network.

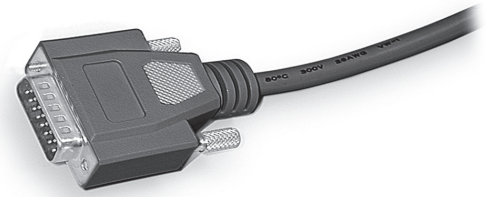


CBLIO5V 5V TTL I/O Interface Cable

Main I/O connector Cable (Flying Leads) for DB-15 Connector on Animatics SmartMotor™.

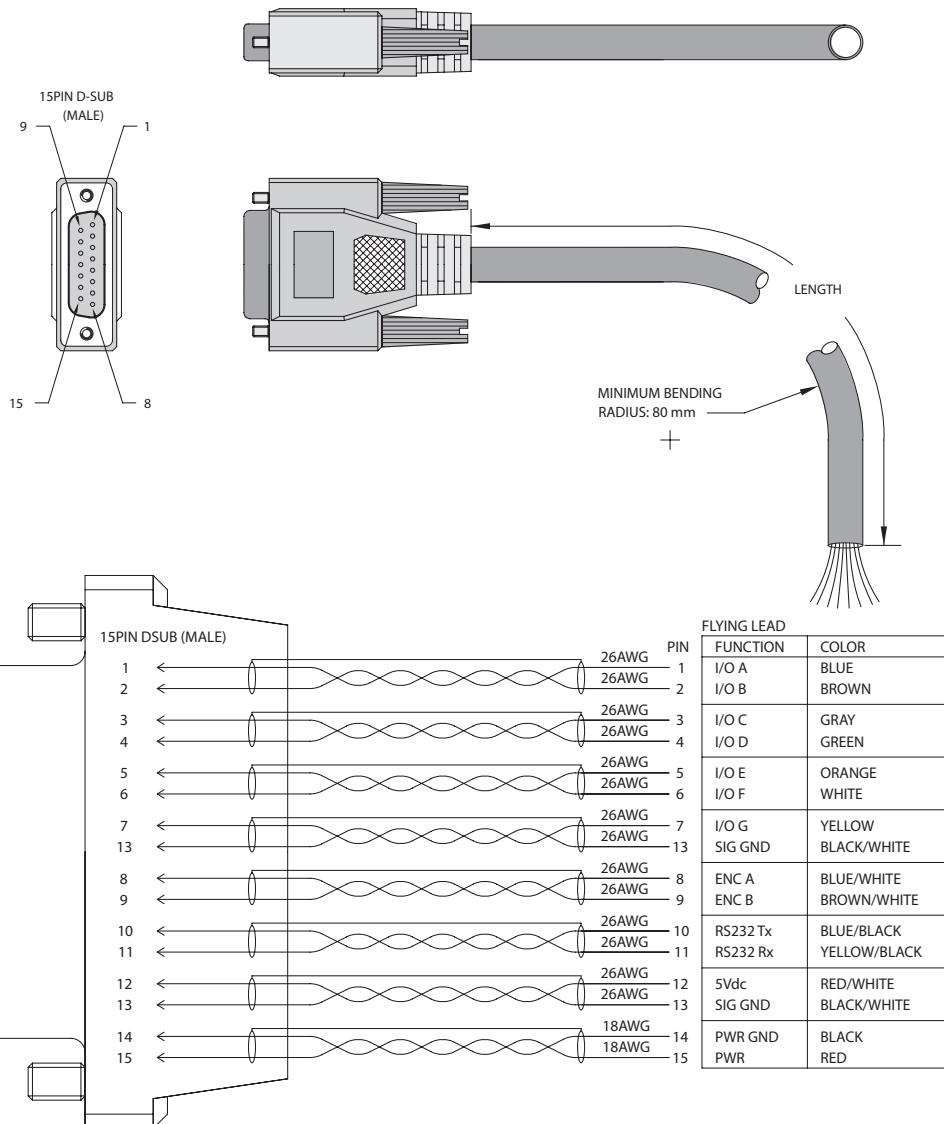
CBLIO5V series is for all 5VTTL I/O, communications, encoder output, and control power input (when needed for -DE option Motors).

The cable is organized in separately shielded twisted pairs to provide better noise immunity and lower emissions.



Part Number	Length
CBLIO5V-3M	3 meters
CBLIO5V-5M	5 meters
CBLIO5V-10M	10 meters

Note: The shields DO NOT have electrical contact with each other or the connector shell. This allows for proper grounding in the control cabinet or at termination point determined by user thereby eliminating ground loops.



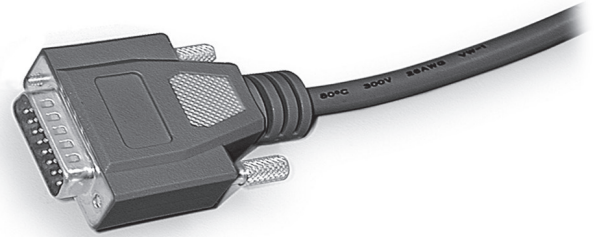
CBLIO-ISO1 24VDC TTL I/O Converter Cable

The CBLIO-ISO1 cable provide optically isolated 24VDC I/O interface to the controller.

The cable is user configurable as 4 inputs and 3 outputs OR 5 inputs and 2 outputs.

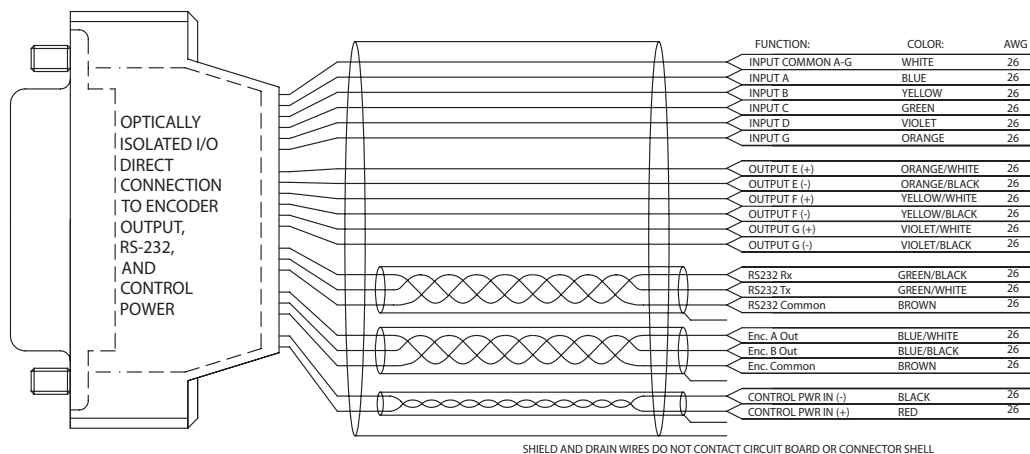
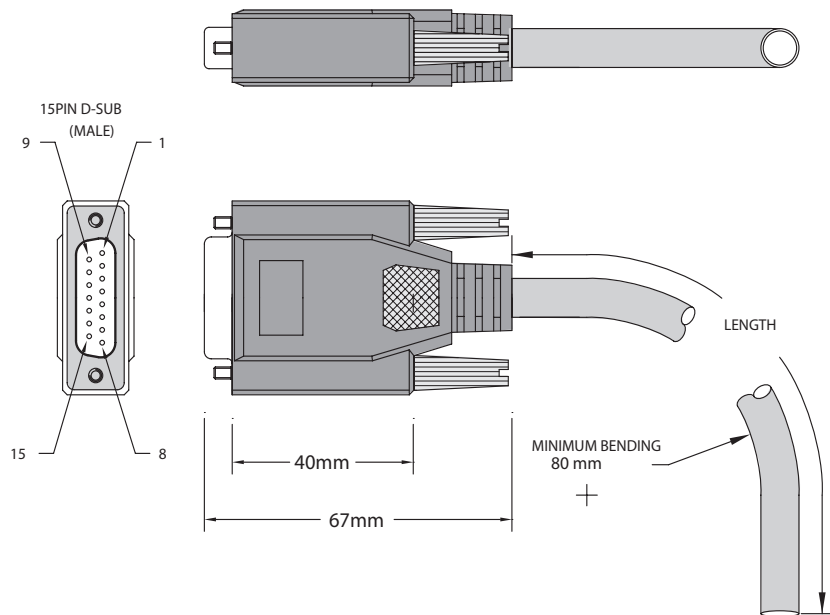
Additionally, this cable provides direct connection to:

- RS-232 Primary Communications Port (Ch. 0)
- Encoder Output
- Control Power Input



Part Number	Length
CBLIO-ISO1-3M	3 meter
CBLIO-ISO1-5M	5 meter
CBLIO-ISO1-10M	10 meter

It can be used with standard or DE option Animatics SmartMotor™

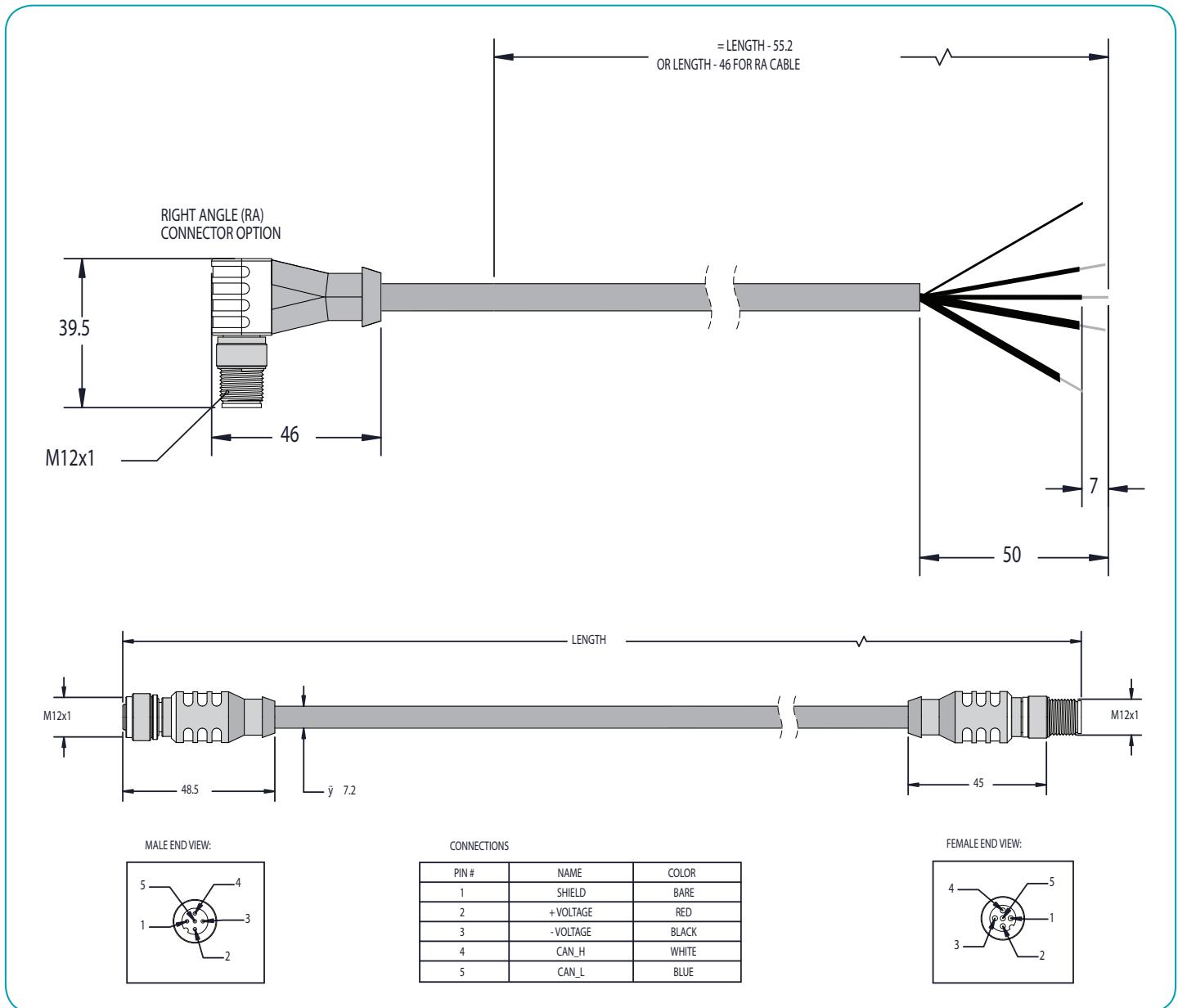


CAN Bus Flying Lead Cables, Right Angle Connector

The CAN FL1 cables are standard CAN bus communications cables rated to >1MB data transmission rate.

CBLIP series cables are sealed M12 threaded connector brass pins w/gold plating, maximum 4.0A 250V foil shield with black PVC jacket ~7.4mm dia.

Part Number	Description	Length
CBLIP-CAN-1MRA	Flying Lead Right Angle Connector	1 meter
CBLIP-CAN-3MRA	Flying Lead Right Angle Connector	3 meters
CBLIP-CAN-EXT-1M	CAN Bus Extension Cable	1 meter
CBLIP-CAN-EXT-2M	CAN Bus Extension Cable	2 meters
CBLIP-CAN-EXT-3M	CAN Bus Extension Cable	3 meters

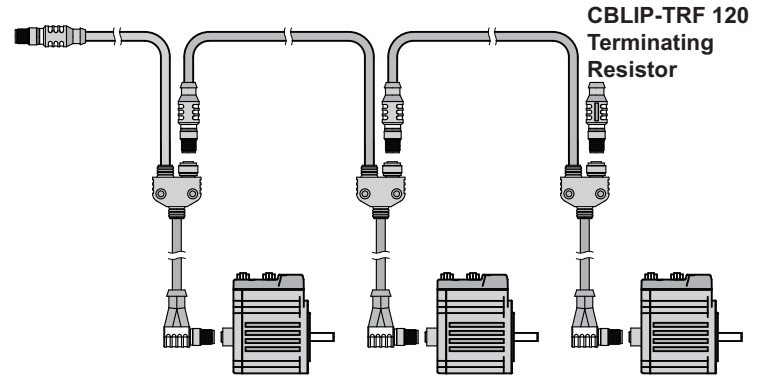


CAN Bus Y Cables, Right Angle Connector

The CAN Y1 series is meant for CAN bus communications connectivity between two motors with addition of a T-connector in line. Rated to >1MB data transmission rate.

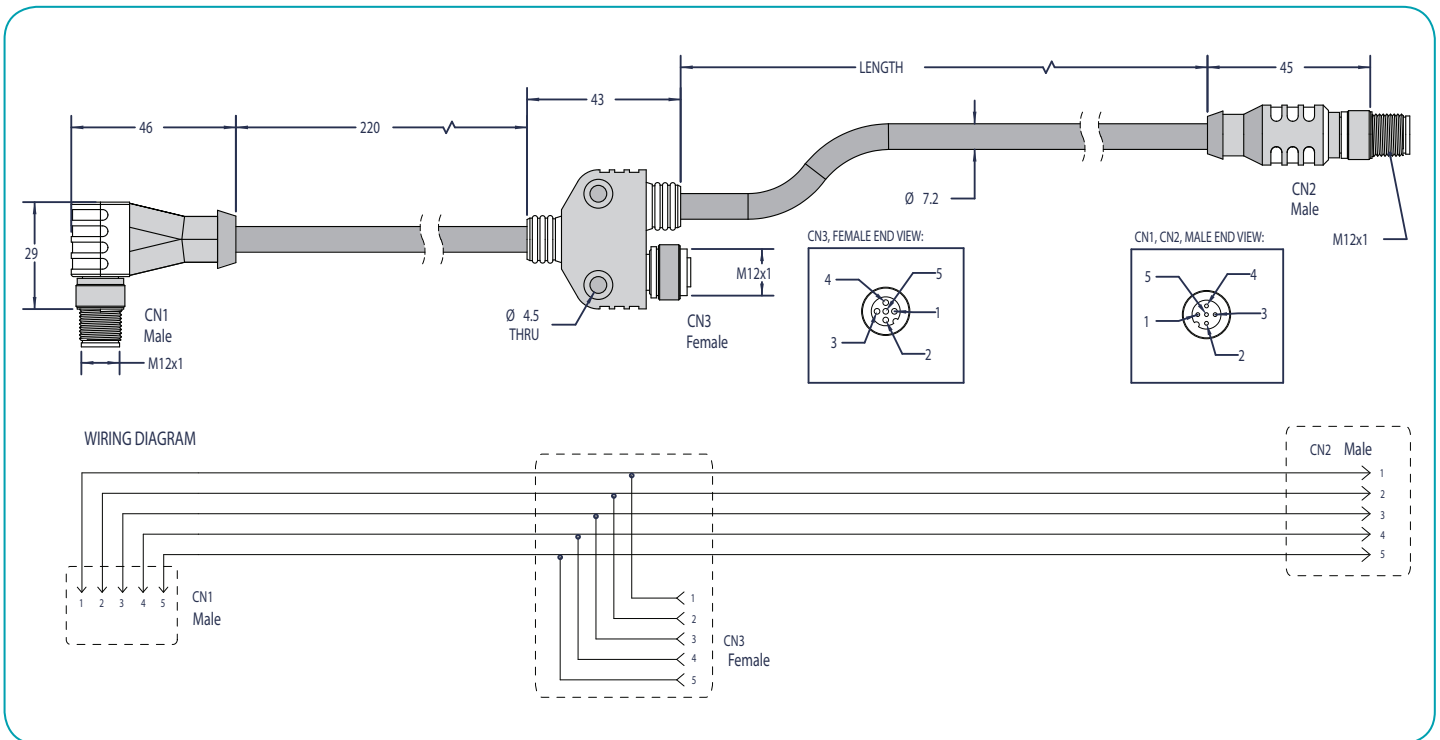
This allows for cascading of multiple SmartMotor servos and the addition of a shunt resistor when required.

CBLIP series cables are sealed M12 threaded connector brass pins w/gold plating, maximum 4.0A 250V foil shield with black PVC jacket ~7.4mm dia.



Right Angle Connector

Part Number	Length
CBLIP-CAN-Y1-0.5MRA	0.5 meters
CBLIP-CAN-Y1-1MRA	1 meters
CBLIP-CAN-Y1-3MRA	3 meters



Note: At least one shunt resistor is required on ALL CAN bus networks. Please consult the factory for additional information.

CAN Bus T Connector and Shunts

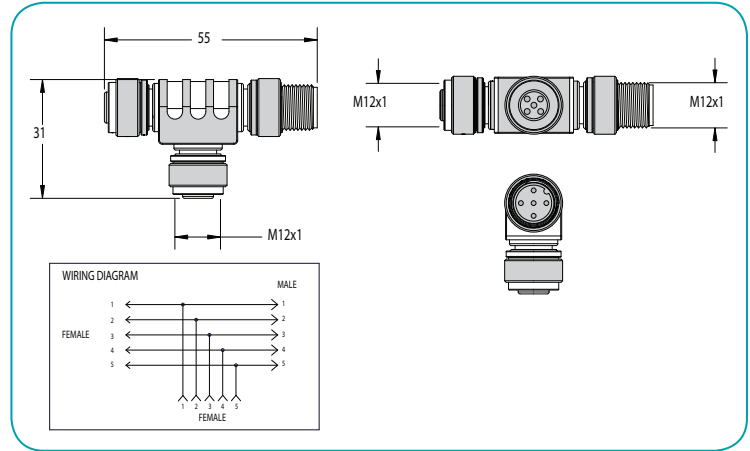
OVERVIEW
MOTOR SPECIFICATIONS
LINEAR SYSTEMS
CONNECTIVITY
PERIPHERALS
IP 65 MODELS & CONNECTIVITY
POWER SUPPLIES & SHUNTS
GEAR HEADS
SOFTWARE
APPENDIX

"T" CONNECTOR FEMALE-FEMALE-MALE CBLIP-T-FFM

T connectors may be used in place of Y cables and in conjunction with CAN bus extension cables.

Shunt resistors **MUST BE** used to allow proper biasing of CAN Bus cables.

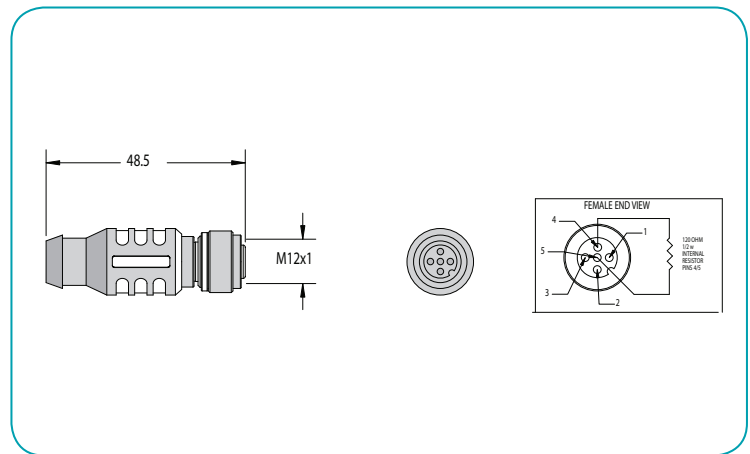
It is suggested to have at least one at furthest end of bus. Two may be required at opposing ends.



Female Terminating Resistor, 120 Ohms CBLIP-TRF120

Shunt resistors **MUST BE** used to allow proper biasing of CAN Bus cables.

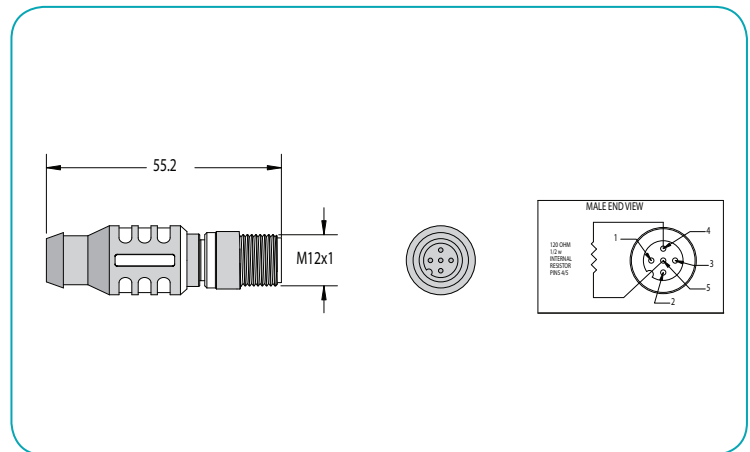
It is suggested to have at least one at furthest end of bus. Two may be required at opposing ends.



Male Terminating Resistor, 120 Ohms CBLIP-TRM120

Shunt resistors **MUST BE** used to allow proper biasing of CAN Bus cables.

It is suggested to have at least one at furthest end of bus. Two may be required at opposing ends.



Note: At least one shunt resistor is required on ALL CAN bus networks. Please consult the factory for additional information.

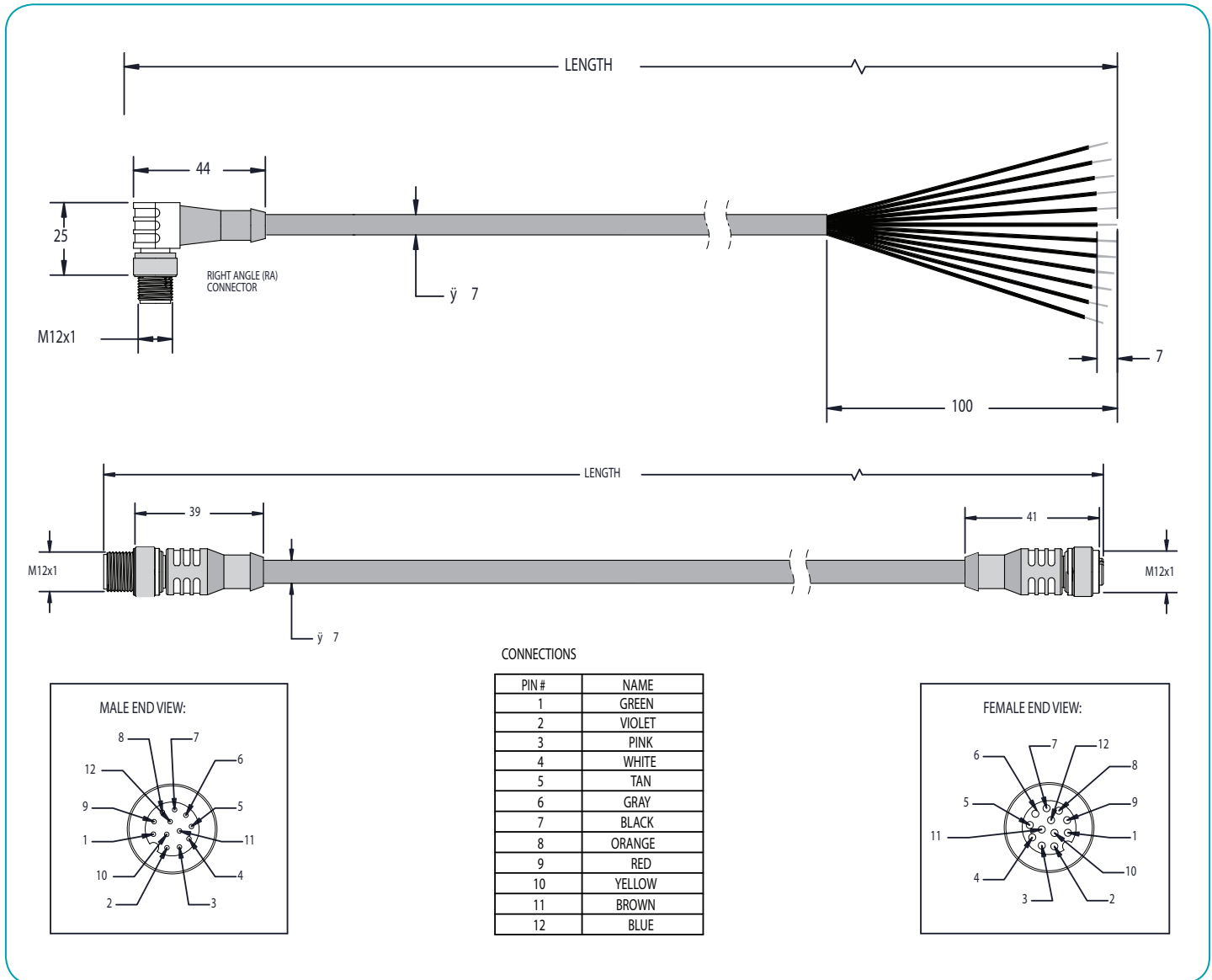
Expanded I/O Cables for Non Sealed Motors W/-ADI Option

CBLIO-IO 24VDC TTL I/O Cable

The Expanded I/O cables are for use with the -AD1 expanded I/O option on all Class 5 non sealed SmartMotor™ servos. Each cable is a 12 conductor shielded cable. 2 conductors are for +24VDC I/O power. The other 10 are for 10 channels of I/O.

CBLIP series cables are sealed M12 threaded connector brass pins w/gold plating, maximum 4.0A 250V foil shield with black PVC jacket ~7.4mm dia.

Part Number	Description	Length
CBLIP-IO-FL-1MRA	Flying Lead Right Angle Connector	1 meter
CBLIP-IO-FL-3MRA	Flying Lead Right Angle Connector	3 meters
CBLIP-IO-EXT-1M	I/O Extension Cable	1 meters
CBLIP-IO-EXT-2M	I/O Extension Cable	2 meters
CBLIP-IO-EXT-3M	I/O Extension Cable	3 meters



CBLSM1-X-Y-Z (Animatics Custom Build-to-Order)

Custom Multi-Motor Power and Communications Daisy Chain Cable for Networking Power and Communications to Multiple Animatics SmartMotor Servos

These cables are made to order where:

X = Cable length in Feet from the first motor to the Power and Serial connectors

Y = Number of Motors

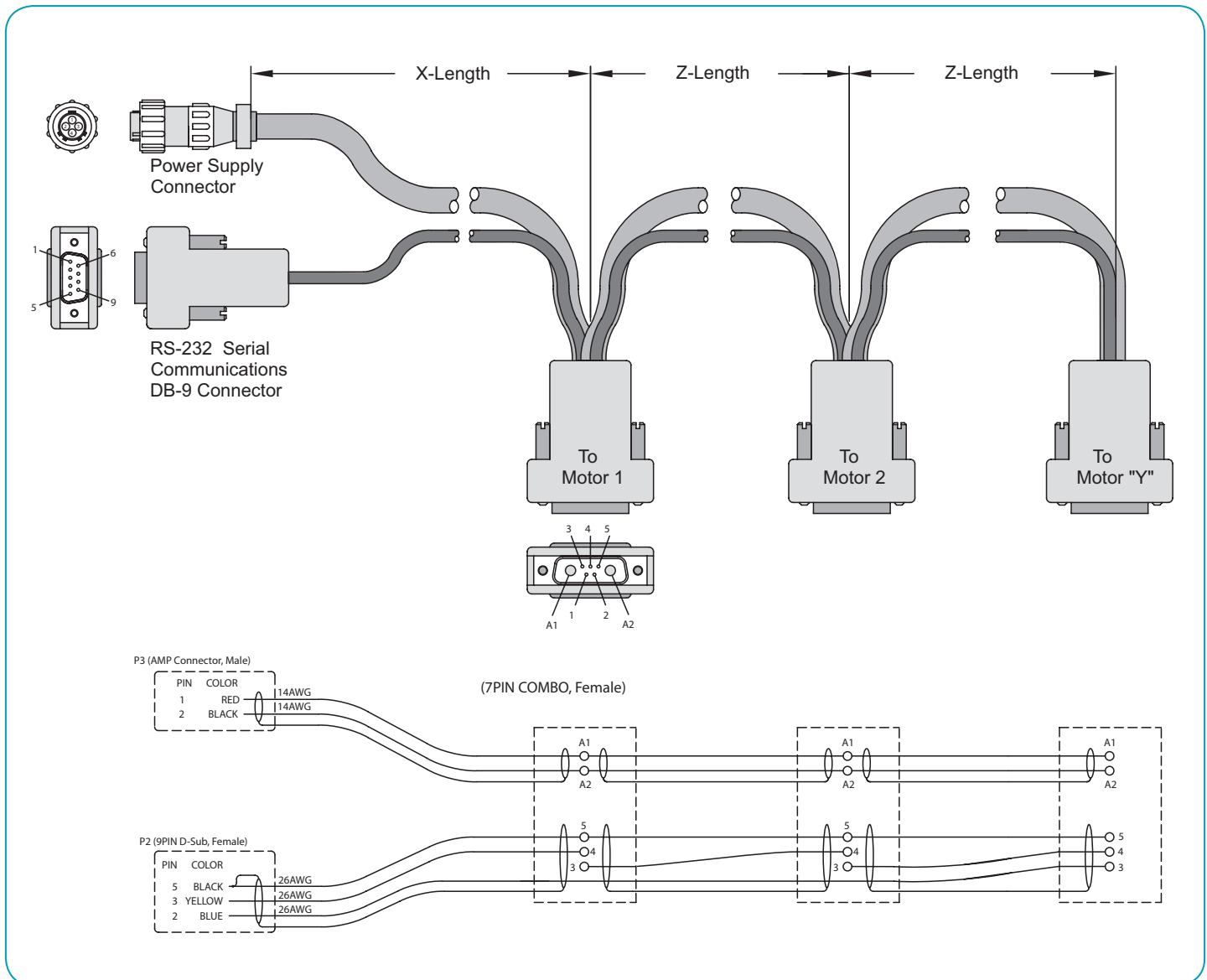
Z = Distance in feet from one motor to the next

Note: This part numbering system does not allow for different length between each motor daisy chain network. The RS-232 Communications lines are in a separate shielded cable from the main power cable for optimum noise immunity.

Example:

CBLSM1- 10- 3- 5 would give you a 3-motor cable with 10 feet to the first motor and 5 feet between each motor.

Example of 3-Motor CBLSM1-X-Y-Z shown



CBLSM2-X-Y-Z (Custom Build-to-Order)

Isolated RS-485 Multi-Drop Custom Cable

This cable makes use of the RS232485T converter at the host and a single RS485-ISO adapter at each motor.

The adapters have power hard wired and RS-485 wired together via jumper cables with a 4 pin G-grid Molex connect at each end.

As a result, it is easy to add or remove a given motor on the bus for setup and troubleshooting.

Since the RS485-ISO adapters are used, the entire Bus is isolated and shielded for maximum noise immunity in electrically harsh environments.

These cables are made to order where:

X = Cable length in Feet from the first motor to the Power and Serial connectors

Y = Number of Motors

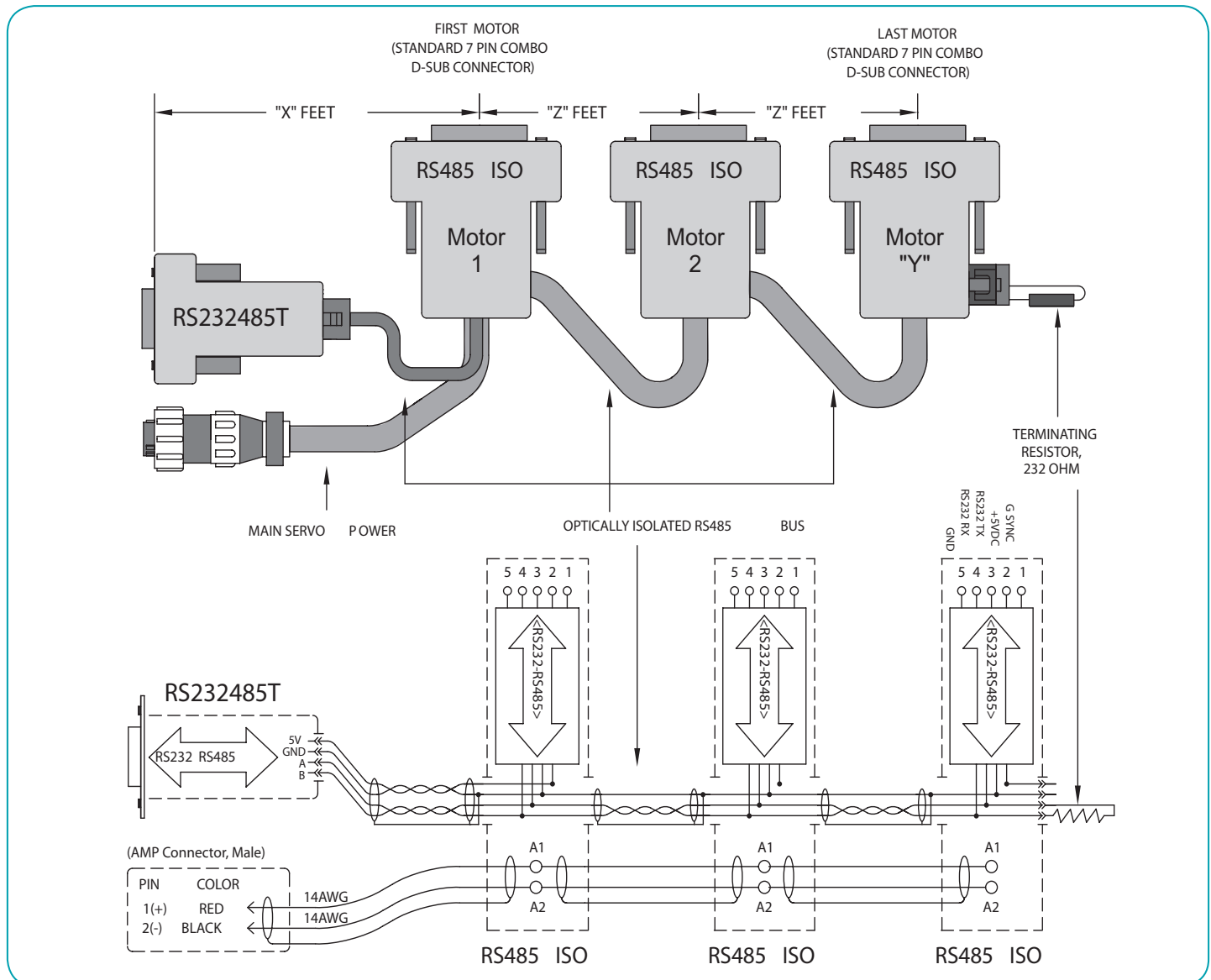
Z = Distance in feet from one motor to the next

Note: This part numbering system does not allow for different length between each motor daisy chain network.

Example:

CBLSM2-10-3-5 would give you a 3-motor cable with 10 feet to the first motor and 5 feet between each motor

Note: At least one shunt resistor is required on ALL CAN bus networks. Please consult the factory for additional information.



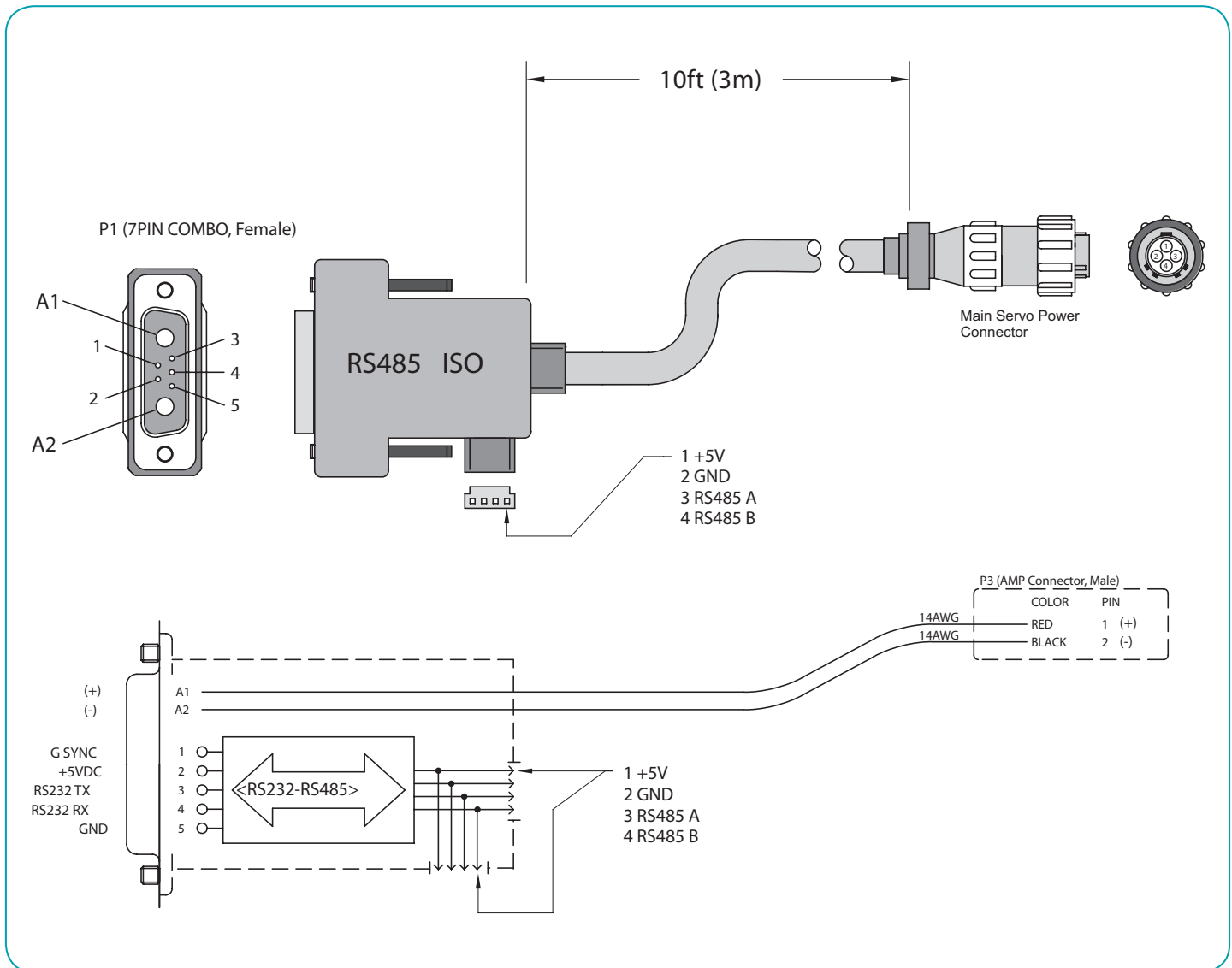
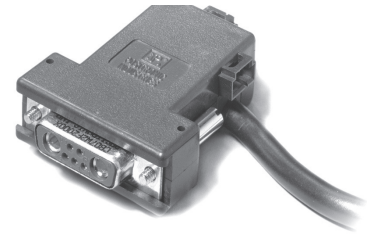
RS485-ISO

The RS485-ISO adapter provides electrically isolated conversion from RS-232 to the main 7W2 connector to RS-485. The adapter comes standard with a 10 Foot power cable and two parallel 4 pin Molex RS-485 connectors.

RS-485 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 SmartMotor servos in parallel, rather than daisy-chaining the communications from one motor to the next.

The adapter draws power and ground from the SmartMotor main connector (pins 2 and 5). It does require the use of the main connector G-Synch line (pin 1) for Read-Write control of the 485 transceiver.

The RS485-ISO communications adapter can be ordered with or without the power cable (no cable P/N: RS485ISO-NOCBL).

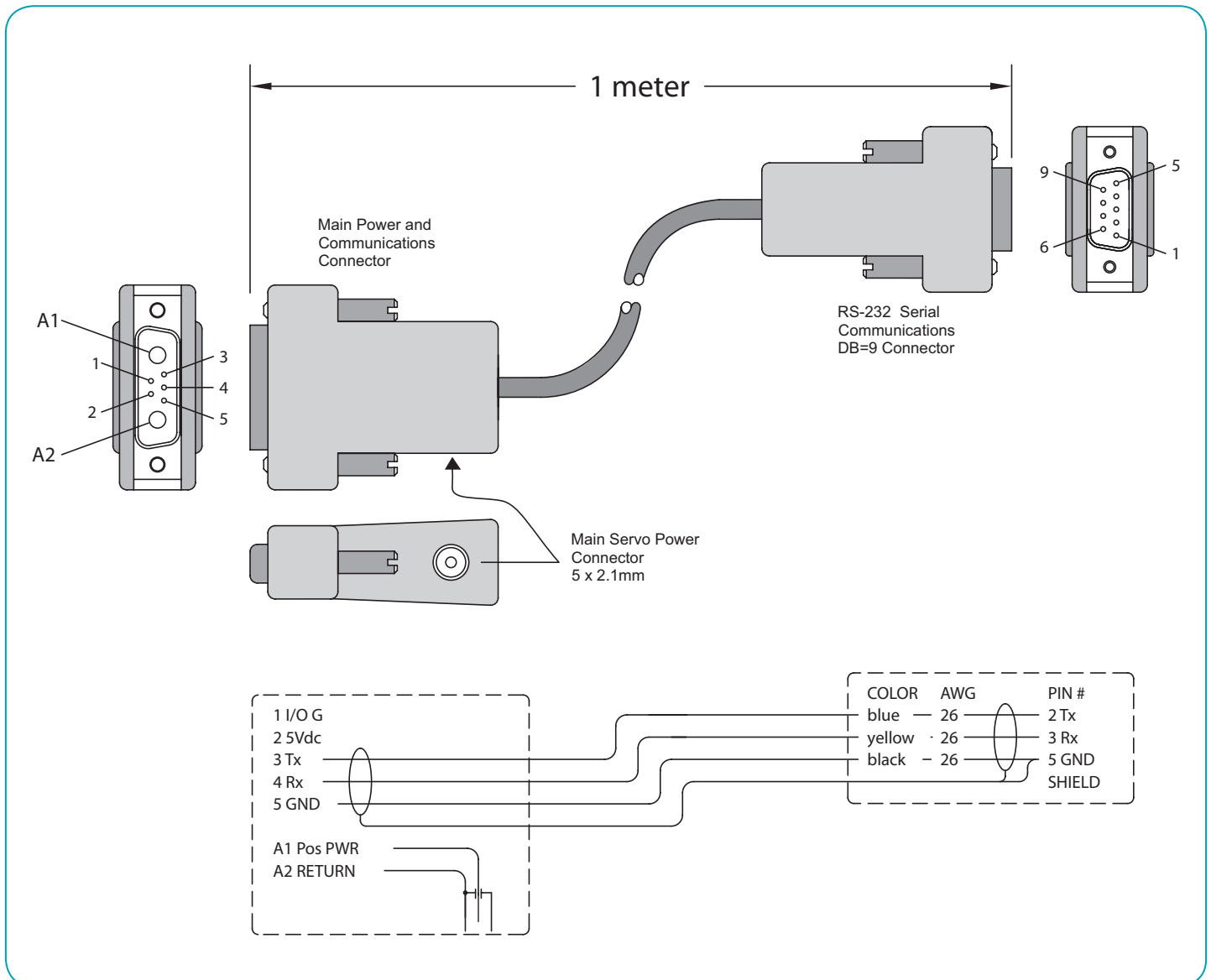


CBLSM1-DEMO

Training/Testing Power and Communications Cable for Main 7W2 Connector on Animatics SmartMotor™.

CBLSM1-Demo cable is only available in a fixed length of ~1 Meter. Similar to the CBLSM1-xM series, it consists of a 7W2 main motor connector split out to a pre-wired RS-232 DB-9 connector to plug directly into any standard PC serial port. The power to the motor is provided via a single 5mm diameter 2.1 mm center pin DC connector.

This connector accepts our PWR116V 24VDC power supply.



OVERVIEW

MOTOR SPECIFICATIONS

LINEAR SYSTEMS

CONNECTIVITY

PERIPHERALS

IP 65 MODELS & CONNECTIVITY

POWER SUPPLIES & SHUNTS

GEAR HEADS

SOFTWARE

APPENDIX

RS232485T

RS232485T is a non-isolated RS-232 to RS-485 communications adapter. It requires no drivers because it is hardware based only. The DB-9 connector can be plugged directly into a standard PC Serial port allowing the user to easily connect to and communicate with RS-485 devices.

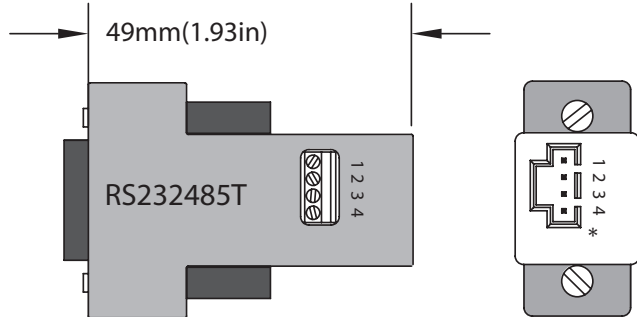
Note: The 4-pin molex connector is designed to match the RS485ISO adapters below.

The connector can be removed to allow direct screw terminal connection as well.

Includes two KITDC3

(Proper RS-485 biasing must be used)

PIN#	FUNCTION:
1	5VDC
2	GND
3	RS485 A
4	RS485 B



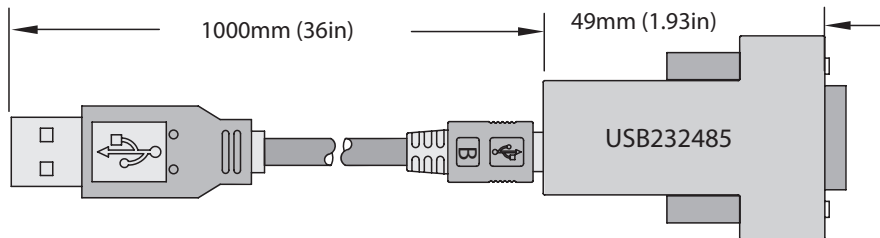
KITUSB232485

USB232485 is a non-isolated USB to RS-232 and RS-485 adapter. Available with Windows 98/2K/XP/Vista drivers.

This adapter plugs into standard USB port and provides either RS-232 or RS-485 communications. It is provided with ~1Meter standard USB cable.

Note: This is a single port device, it does not facilitate the use of both RS-232 AND RS-485 at the same time.

(Proper RS-485 biasing must be used in accordance with manual.)



PIN#	FUNCTION:
1	RS485 A
2	RS232 Rx
3	RS232 Tx
4	+5Vdc
5	GND
9	RS485 B

New User Development Kits & Connectors

SMDEVPACK-D

SMDEVPACK-D is the introductory development package for the Animatics SmartMotor™. It is highly recommended for first time users and developers alike.

SMDEVPACK-D includes:

- UG-SM: Animatics SmartMotor User's Guide
- CD-SMI: SMI (SmartMotor Interface) software CD
- CBLSM1-3M: Power-Communications Cable
- KITSMDC3: D-Sub Connector kit
- KITDC1: DC power supply connector kit

NOTE: Connector kits above include all parts below on this page with exception of KITDC3



KITSMDC3		
Part	Description	Qty.
CN132	Connector, Male, 15 Pin D-sub NOTE: for I/O Connector	1
P104	Pin Contact Contact Size 20 Crimp Type, 24-20 AWG	20
CN141	Connector, 7W2 Combination 7 Pin DB-15 Shell Size 2	1
CN142	Socket Contact Solder Cup 14 AWG for 7W2 Combo Connector	2
CN149	Connector Hood For DB-15 Shell Size, EMI/Magnetic Shielded	1
P121	Pin Contact, Female Contact Size 20 Crimp Type, 24-20 AWG	20
CN121V	Connector, Female 9 Pin D-Sub	1
CN161	Connector Hood For DB-9 Shell Size EMI/Magnetic Shielded	2

KITDC1		
Part	Description	Qty.
CN114	Connector Shroud/Hood	1
CN119	4-Pin Connector NOTE: For enclosed Power Supplies & Shunts	1
P102	Pin, Crimp Type, Male 16-18AWG	4

KITDC3		
Part	Description	Qty.
KITDC3	4-Pin Molex Communication Connector Kit NOTE: Includes 4 female crimp pins	1