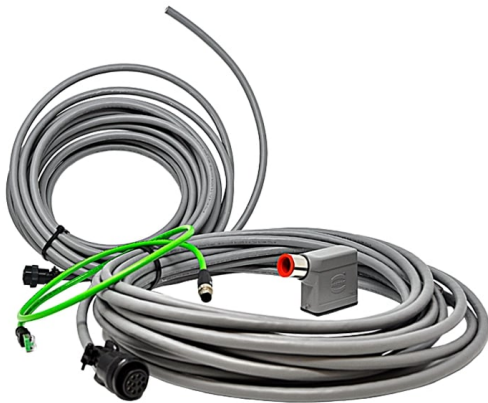# Cables and Connectors

Continuous lengths up to 2000 feet
Incremental and Absolute Assemblies
& Stand-Alone Bulk Cable

Encoder Cable Assemblies

Incremental and absolute cable assemblies

Assemblies available with many connectors including: MIL MS 6, 7, & 10 pin, Mini TW 10 pin, Industrial EPIC, M12 and M23, and flying leads.

Custom lengths available in increments of 5 ft

Shielded and twisted pairs for improved signal quality

Ultra-low capacitance option available

Up to 2000 ft of continuous cable possible

Rated up to 105° C optional

1 Year No-Hassle Warranty

CE and UL Listed*

Cables and Connectors

Using a low quality cable in your encoder application can mean the difference between clear, reliable signal quality and weak, distorted signal. To ensure your encoder can produce the best signal possible in any application, Avtron offers high quality cables and connectors in a number of different variations and options!

For incremental encoders, all Avtron cables are shielded and have twisted pairs for the best signal possible. For cable runs longer than 100 feet, our special ultra-low capacitance cable is used so that your signal stays strong. Bulk cables can be ordered in lengths up to 2000 ft. and are offered with a variety of different connector options, including: 6 pin, 7 pin, & 10 pin MS, 10 pin TW, 8 pin M12, industrial EPIC, and more.

Avtron also offers an expansive catalogue of absolute cables in an assortment of communication protocols such as: Analog, Devicenet, CANopen, Profibus, Profinet, Ethernet IP, SSI, and plenty more! We also offer cables that support all your functions, from power to daisy chain to encoder communication.

Next time you buy an Avtron Encoder, pair your purchase with one of our high quality cable assemblies!

OUTLINE DRAWING

MORE Cables and Connectors ADVANTAGES

- Don't see what you need? Contact our factory for more options

MORE Cables and Connectors SPECIFICATIONS

Incremental Cables

High Temp. Cable

Conductor: 22 AWG, 5 pairs, 7X30 stranding, Tinned Copper

Insulation: PVC

Outer Jacket: 0.035" pressure extruded PVC jacket

Overall Cable Diameter: 0.325"

Operating Temperature: -40° C to +105° C

Nominal Capacitance Conductor to Conductor: 35 pF/ft

UL NEC: CM   **UL CEC:** CMG

Ultra-Low Capacitance Cable

Conductor: 18 AWG, 1 pair, 19X30 TC SR PVC; 22 AWG, 4 pairs, 7X30 stranding TC

Insulation: FPE

Outer Jacket: 0.035-0.055" pressure extruded PVC jacket

Overall Cable Diameter: 0.430"

Operating Temperature: -30° C to +80° C

Nominal Capacitance Conductor to Conductor: 12 pF/ft\

UL AWM Style 2517   UL NEC/CEC: CM

Outer Shield: Overall aluminum mylar shield & tinned copper braid

Outer Shield Drain: 24 AWG, 7X32 stranding, TC

Maximum Operating Voltage: 300 V

Absolute Cables

Contact Factory

*Select options and bulk cable only. Contact factory for more information

Check out our website for more detailed specifications, drawings, and installation instructions. www.avtronencoders.com

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SELECTION GUIDE

☐	☐	☐	☐	☐	☐	☐	☐
MODEL	**COMMUNICATION BUS**	**FIRST CONNECTOR TYPE**	**PURPOSE OF CABLE**	**TEMPERATURE RATING**	**CABLE TYPE**	**SECOND CONNECTOR TYPE**	**LENGTH (METERS)**
CBL1	A - Analog Encoder Interface B - Incremental Encoder Interface C - CANopen CANSafe Encoder Interface D - DeviceNet Encoder Interface E - Ethernet Encoder Interface Modbus TCP EtherNet IP ProfiNet L - Parallel Encoder Interface P - Profibus DP Encoder Interface S - SSI Encoder Interface	AC - M12 4/5 Pin Connector AE - M12 8 Pin Connector (for absolute encoders) AF - M23 12 Pin Connector AG - M27 26 Pin Connector AR - M23 16 Pin Connector BA - MS10 Pin Connector (small encoder pinout) BP - Mini-EPIC 10 Pin Connector CP - EPIC 10 Pin (large) Connector BW - No Connector, Bulk Incremental Encoder Cable (<30m length) CW - No Connector, Bulk Incremental Encoder Cable (>30m length) B4 - MS10 Pin Connector (large encoder pinout) BR - TW10 Pin Connector, Mini-Twist Lock Plug (Baldor) BJ - MS 7 Pin Connector (Small encoder pinout w/ complements, w/o marker) BT - M12 8 Pin Connector (for incremental encoders) BL - MS10 Pin Connector 90º Elbow Plug (large encoder pinout) BE - MS 6 Pin Connector (Small encoder pinout w/ complements, w/o marker) CE - MS 6 Pin Connector (Small encoder pinout w/o complements, w/ marker) B2 - M23 12 Pin CW Connector (for incremental encoders) C2 - M23 12 Pin CCW Connector (for incremental encoders)	1 - Bus In/Connection to Encoder 2 - Bus Out to Another Device 3 - Power Only to Encoder	X - Standard Temperature Range 1 - -20°C to 80°C (Cable Type 1 Only) 8 - 80°C Max, Ultra-low Capacitance, Low Voltage Loss Cable	P - PVC T - TPE 1 - Belden 8777 Type Cable	W - No Second Connector, Strip and Tin Leads Only D - Daisy-Chain Bus to Next Encoder R - RJ45 for Ethernet Switch 1 - Mini EPIC connector, 180 degrees exit	000.5 - 1.5 feet [0.5m] Length 001.0 - 3 feet [1.0m] Length 002.0 - 6 feet [2.0m] Length 003.0 - 10 feet [3.0m] Length 004.3 - 14 feet [4.3m] Length 005.0 - 16 feet [5.0m] Length 007.0 - 22 feet [7.0m] Length 010.0 - 33 feet [10.0m] Length 015.0 - 49 feet [15.0m] Length 020.0 - 64 feet [20.0m] Length 025.0 - 82 feet [25.0m] Length 030.0 - 98 feet [30.0m] Length 040.0 - 130 feet [40.0m] Length 050.0 - 164 feet [50.0m] Length 060.0 - 196 feet [60.0m] Length 070.0 - 230 feet [70.0m] Length 080.0 - 260 feet [80.0m] Length 090.0 - 295 feet [90.0m] Length 100.0 - 324 feet [100.0m] Length 110.0 - 360 feet [110.0m] Length 125.0 - 410 feet [125.0m] Length 130.0 - 426 feet [130.0m] Length 150.0 - 492 feet [150.0m] Length 152.4 - 500 feet [152.4m] Length (1 Spool) 182.0 - 600 feet [182.4m] Length (1 Spool) 200.0 - 656 feet [200.0m] Length 304.8 - 1000 feet [304.8m] Length (1 Spool) 500.0 - 1640 feet [500.0m] Length (1 Spool) 609.6 - 2000 feet [609.6m] Length (1 Spool) 762.0 - 2500 feet [762m] Length (1 Spool)

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