

Motion Control

Thermo-Trex® High Temp VFD Cable

Thermo-Trex® High Temp VFD Cable is designed specifically for the harsh electrical environment of typical variable frequency drive systems that require higher heat exposure and can withstand a maximum conductor temperature of 200°C / 392°F. This power cable features three conductors with three symmetrical grounds, a braided shield, a temperature-resistant jacket that provides excellent protection against heat and mechanical abuse. The cable is constructed to withstand corona voltages up to 2,000 volts.



Ratings				600V	Max Conductor Temperature 200°C	AWM 758 Style 5587	CSA Std C22.2 No. 210 AWM Class I Group A/B 200°C
FT2 Flame Rating							

Performance Characteristics ✓ Corona Resistant to 2000V ✓ Bend Radius (Dynamic): 6x Cable O.D. ✓ Bend Radius (Dynamic): 8x Cable O.D.

Engineered to Resist High Temperature

Features & Benefits**Finely Stranded Nickel-Plated Copper Conductors**

Fine stranding improves flex-life and reduces conductor fatigue and breakage. Nickel-plated conductors allow for high heat resistance.

Silicone Rubber & Fiberglass Yarn Insulation

Silicone rubber insulation covered by color-coded braided fiberglass yarn impregnated with a saturant to minimize fraying.

Symmetrical Grounding System

Three ground conductors placed symmetrically in the interstices of the power conductors with a spiral-wrapped skived PTFE tape to create a smooth round bundle and balance the cable electrically.

Heavy-Duty 90% Coverage Nickel-Plated Copper Braid Shield

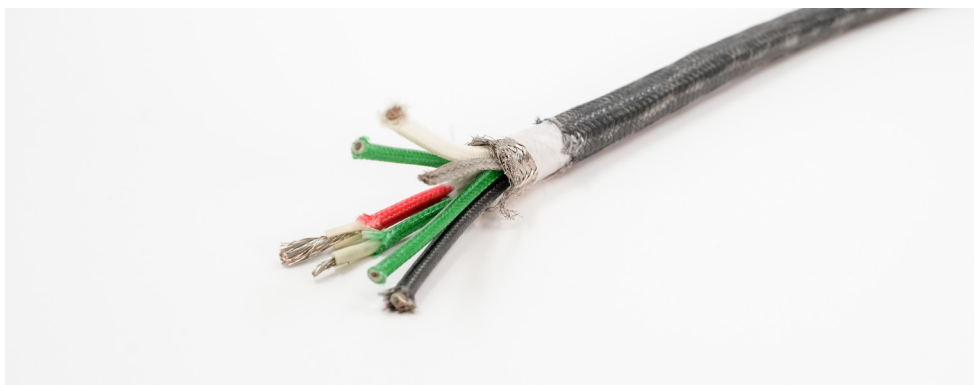
Nickel-plated copper braid shield with flat drain wire and spiral-wrapped skived PTFE tape. Provides protection against EM and RF interference and a low impedance path to ground. Protects equipment and motor damage from electrical noise and "stray voltage".

Specially Designed Fiberglass Braid Jacket

Braided fiberglass jacket impregnated with high-temp finishing compounds to prevent fraying. Provides first line defense against abrasion and high heat.

Ordering Information For complete product ordering information, please scan the QR Code or contact your ATPC sales representative

Part No.	Configuration AWG/Cond	Ground Conductor Size (AWG)	Ampacity*	Nominal O.D. (in)	W.T. (lbs) Per 1,000 ft.	Standard Cable Gland**
41279	16/3	3x20 AWG	29	0.344	124	55003
41280	14/3	3x18 AWG	40	0.495	178	55004
41281	12/3	3x16 AWG	55	0.540	225	55005
41282	10/3	3x14 AWG	74	0.630	316	55006
41283	8/3	3x12 AWG	102	0.805	506	55008

**Notes**

*Based on 40°C ambient 200°C conductor temperature per the IEEE Std. 835 Standard Power Cable Ampacity Table.

**Grip-Seals® Aluminum straight cable gland part number listed. Sizing based on nominal cable O.D. Due to process tolerances, a smaller/larger gland size may be required. Confirm NPT Fitting Size matches application.

Motion Control

Trex-Onics® Hybrid Motor Cable

Trex-Onics® Hybrid Motor Cable is built to withstand the harsh industrial environments in which many motors operate. This single-cable solution combines traditional power and signal pair conductors with the data element of dedicated encoder cables. The convergence of multiple roles into a single-cable solution greatly simplifies inventory management, installation, and maintenance. This composite cable features finely stranded tinned copper conductors that extend conductor life in dynamic applications. The oil-resistant insulation system offers high dielectric, tensile, and mechanical properties.



Ratings

- RoHS compliant
- 600V
- Max Conductor Temperature 70°C
- Cold Temperature Rating -40°C
- ANSI TIA/EIA 568-B
- IEC 60332-1
- ISO/IEC 11801
- IEC 61156-6

Performance Characteristics

- ✓ Bend Radius (Static): 6x Cable O.D.
- ✓ Bend Radius (Dynamic): 8x Cable O.D.
- ✓ Frequency Range up to 1000 MHz

Engineered to Resist

- Flexing
- Abrasion
- Chemicals

Features & Benefits

<p>Finely Stranded Tinned Copper Conductors</p> <p>Fine stranding improves flex-life and reduces conductor fatigue and breakage. Tinned conductors resist corrosion and are easier to solder.</p>	<p>Oil Resistant Composite Insulation System</p> <p>High dielectric, tensile and mechanical properties. Designed with a semi-conductive layer to protect against Corona discharge build up from voltage spikes during operation. Prevents damage to motor and controllers.</p>	<p>Low-Friction, Non-Wicking Fillers</p> <p>Increase flexibility and flex-life in dynamic applications.</p>	<p>Brake Pair Shielding</p> <p>Braid shield for maximum flex-life and signal integrity. greater protection from impact.</p>
<p>Heavy-Duty 85% Coverage Tinned Copper Braid Shield</p> <p>Provides protection against EM and RF interference and a low impedance path to ground. Protects equipment and motor damage from electrical noise and "stray voltage". Designed for superior performance in dynamic applications.</p>	<p>Specially Compounded TPE Jacket</p> <p>Offers superior first-line defense against tearing, abrasion, impact, oil, ozone and most chemicals.</p>	<p>Ethernet Backward Compatibility</p> <p>Fully interchangeable with CAT6A and CAT5e shielded cables.</p>	<p>Hybrid M23 Connector Compatibility</p> <p>Over molded capability in custom lengths – a single-connector and single-cable solution.</p>

Ordering Information For complete product ordering information, please scan the QR Code or contact your ATPC sales representative

Part No.	Configuration AWG/Cond	Ampacity*	Nominal O.D. (in)	W.T. (lbs) Per 1,000 ft.	Standard Cable Gland**
62268	16/4 + 18 AWG/pr + CAT7A	9	0.614	231	55006
62262	12/4 + 18 AWG/pr + CAT7A	15	0.684	360	55007



Notes

*Based on NEC Article 725.51(B)(1)
 **Crip-Seals® Aluminum straight cable gland part number listed. Sizing based on nominal cable O.D. Due to process tolerances, a smaller/larger gland size may be required. Confirm NPT Fitting Size matches application.

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Trex-Onics® HighFlex Encoder Cable

Trex-Onics® High-Flex Encoder Cable is built to withstand the harsh industrial environments in which many motors operate. This single-cable solution combines power conductors with signal pairs as well as the data element of dedicated encoder cables. The combination of multiple roles into a single-cable solution greatly simplifies inventory management, installation, and maintenance. This composite cable features finely stranded tinned copper conductors that extend conductor life in dynamic applications. The oil-resistant insulation system offers high dielectric, tensile, and mechanical properties.



Ratings



300V

Max Conductor Temperature 90°C

Cold Temperature Rating -40°C

AWM Style 21743

VW-1 Flame Rating

Performance Characteristics

✓ Bend Radius (Static): 6x Cable O.D. ✓ Bend Radius (Dynamic): 8x Cable O.D. ✓ MIL-STD-810G Antimicrobial

Engineered to Resist



Flexing



Abrasion



Chemicals

Features & Benefits

Finely Stranded Tinned Copper Conductors

Fine stranding improves flex-life and reduces conductor fatigue and breakage. Tinned conductors resist corrosion and are easier to solder.

Specially Compounded TPE Insulation

Resists effects of lubricating oils, coolants, cutting oils, acids, and most chemicals.

Low-Friction, Non-Wicking Fillers

Increase flexibility and flex-life in dynamic applications.

Signal Pair Shielding

Aluminum/polyester shield for maximum flex-life and signal integrity.

Data Pair Shielding

Low capacitance and aluminum/polyester shield for maximum flex-life and signal integrity.

Heavy-Duty 85% Coverage Tinned Copper Braid Shield

Provides protection against EM and RF interference and a low impedance path to ground. Protects equipment and motor damage from electrical noise and "stray voltage". Designed for superior performance in dynamic applications.

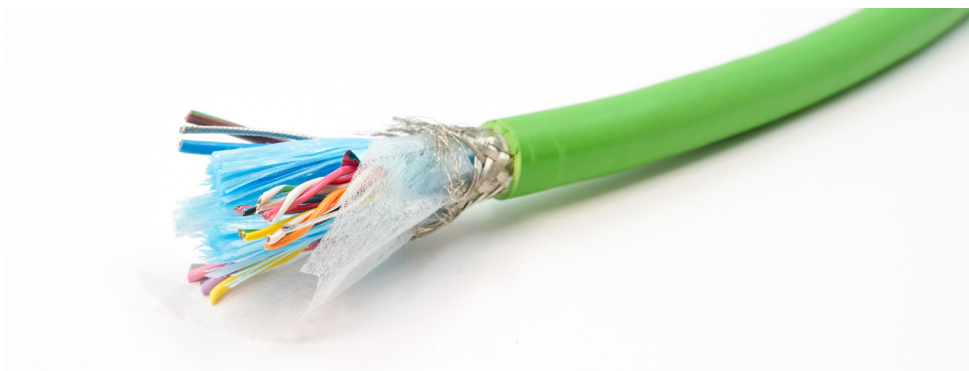
Specially Compounded TPU Jacket

Offers superior first-line defense against tearing, abrasion, impact, oil, ozone, UV exposure, and most chemicals. Flame and heat resistant. Extreme all-weather flexibility.

Ordering Information

For complete product ordering information, please scan the QR Code or contact your ATPC sales representative

Part No.	Configuration AWG/Cond	Nominal O.D. (in)	W.T. (lbs) Per 1,000 ft.	Standard Cable Gland*
68916	16/1PR OSP + 24/2PR OSP + 22/5PR OSP	0.535	145	55005



Notes

*Grip-Seals® Aluminum straight cable gland part number listed. Sizing based on nominal cable O.D. Due to process tolerances, a smaller/larger gland size may be required. Confirm NPT Fitting Size matches application.

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Trex-Onics® Servo-Motor Cable

Trex-Onics® Servo Motor Cable is a high-quality motion control cable designed for superior performance in continuous flex and static applications and is your high-performance OEM replacement for Rockwell/Allen-Bradley, Bosch Rexroth, Indramat, Kollmorgen, Siemens, Lenze, and Mitsubishi Drive Systems. This power cable features finely stranded tinned copper conductors that extend conductor life in dynamic applications and are alpha-numerically marked for ease of identification. The oil-resistant insulation system offers high dielectric, tensile, and mechanical properties. A heavy-duty tinned copper braid protects equipment and motors from damage caused by electrical noise and 'stray voltage'. It also provides a shield against electromagnetic and radio frequency interference and a low impedance path to ground.



Ratings



600V

Max Conductor Temperature 80°C

Cold Temperature Rating -40°C

AWM Style 20626

FT1 Flame Rating

Performance Characteristics

✓ Bend Radius (Static): 6x Cable O.D. ✓ Bend Radius (Dynamic): 8x Cable O.D.

Engineered to Resist



Flexing



Abrasion



Chemicals

Features & Benefits

Finely Stranded Tinned Copper Conductors

Fine stranding improves flex-life and reduces conductor fatigue and breakage. Tinned conductors resist corrosion and are easier to solder.

Specially Compounded TPE Insulation

Resists effects of lubricating oils, coolants, cutting oils, acids, and most chemicals.

Brake and Signal Pair Shielding

Aluminum/Mylar foil shield for maximum flex-life and signal integrity.

Heavy-Duty 85% Coverage Tinned Copper Braid Shield

Provides protection against EM and RF interference and a low impedance path to ground. Protects equipment and motor damage from electrical noise and "stray voltage". Designed for superior performance in dynamic applications.

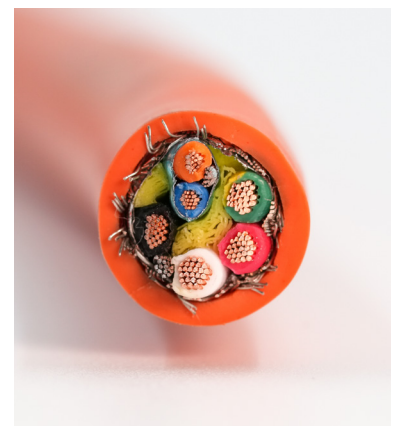
Specially Compounded Orange TPE Jacket

Offers superior first-line defense against tearing, abrasion, impact, oil, ozone and most chemicals.

Ordering Information

For complete product ordering information, please scan the QR Code or contact your ATPC sales representative

Part No.	Configuration AWG/Cond	Brake/Signal Pairs (AWG/No. Pairs)	Ampacity*	Nominal O.D. (in)	W.T. (lbs) Per 1,000 ft.	Standard Cable Gland**
6002181	18/4	20/1	11	0.365	92	55003
6002182	18/4	20/2	11	0.415	112	55004
6002161	16/4	20/1	13	0.390	105	55003
6002162	16/4	20/2	13	0.440	127	55004



Notes

*Based on three current-carrying conductors in conduit, 80°C conductor temperature, 40°C ambient temperature per IEEE Std 835.

**Grip-Seals® Aluminum straight cable gland part number listed. Sizing based on nominal cable O.D. Due to process tolerances, a smaller/larger gland size may be required. Confirm NPT Fitting Size matches application.

Motion Control

Trex-Onics® Low Capacitance Shielded Power Cable with Brake & Signal Pairs

Trex-Onics® Low Capacitance Shielded Power Cable with Brake and Signal Pairs is designed for superior performance. A heavy-duty tinned copper braid protects equipment and motors from damage caused by electrical noise and 'stray voltage'. It also provides a shield against electromagnetic and radio frequency interference and a low impedance path to ground. This power cable features finely stranded tinned copper conductors that extend conductor life in dynamic applications and are alpha-numerically marked for ease of identification. The oil-resistant insulation system offers high dielectric, tensile, and mechanical properties.



Ratings



Type TC-ER - 600V

1000V (CSA)

Max Conductor Temperature 90°C

Cold Temperature Rating -20°C

Type TC-ER

FT4 Flame Rating

Suitable for Class I, II, Division 2***

Performance Characteristics

- ✓ Sunlight Resistant
- ✓ Oil Resistant
- ✓ Corona Resistant to 2000V
- ✓ Bend Radius (Static): 6x Cable O.D.
- ✓ Bend Radius (Dynamic): 8x Cable O.D.

Engineered to Resist



Flexing



Abrasion



Chemicals

Features & Benefits

Finely Stranded Tinned Copper Conductors

Fine stranding improves flex-life and reduces conductor fatigue and breakage. Tinned conductors resist corrosion and are easier to solder.

XLPE Insulation System

High dielectric, tensile, and mechanical properties. Designed to support unique electrical requirements of VFD systems.

Low-Friction, Non-Wicking Fillers

Increase flexibility and flex-life in dynamic applications.

Heavy-Duty 95% Coverage Tinned Copper Braid Shield

Provides protection against EM and RF interference and a low impedance path to ground. Protects equipment and motor damage from electrical noise and "stray voltage". Designed for superior performance in dynamic applications.

Specially Compounded Security Yellow TPE Jacket

Offers superior first-line defense against tearing, abrasion, impact, oil, ozone and most chemicals.

Shielded Brake and Signal Pair

Aluminum/Mylar shielding for maximum flex-life and signal integrity.

Ordering Information

For complete product ordering information, please scan the QR Code or contact your ATPC sales representative

Part No.	Configuration AWG/Cond	Brake & Signal Pairs	Ampacity*	Nominal O.D. (in)	W.T. (lbs) Per 1,000 ft.	Standard Cable Gland**
Single Pair Part Numbers						
60021LC	14/4	16/1	25	0.660	272	55006
60023LC	12/4	16/1	30	0.708	336	55008
60025LC	10/4	16/1	40	0.770	423	55008
60026LC	8/4	16/1	55	0.960	625	55012
60027LC	6/4	16/1	75	1.055	790	55012
Two Pair Part Numbers						
60028LC	14/4	16/2	25	0.723	332	55008
60029LC	12/4	16/2	30	0.764	392	55008
60030LC	10/4	16/2	40	0.825	470	55009
60031LC	8/4	16/2	55	1.020	679	55012
60032LC	6/4	16/2	75	1.105	842	55012

Notes

*Ambient temperature of 30°C, conductor temperature of 90°C, not more than three current-carrying conductors. Based on NEC, Table 310.15(B)(16).

**Grip-Seals® Aluminum straight cable gland part number listed. Sizing based on nominal cable O.D. Due to process tolerances, a smaller/larger gland size may be required. Confirm NPT Fitting Size matches application.

***When installed in accordance with NEC guidelines sections, 501.140, 502.140, 503.140.

Motion Control

Trex-Onics® Low Capacitance VFD Shielded Power Cable

Trex-Onics® Low Capacitance VFD Shielded Power Cable is designed for superior performance. A heavy-duty tinned copper braid protects equipment and motors from damage caused by electrical noise and 'stray voltage'. It also provides a shield against electromagnetic and radio frequency interference and a low impedance path to ground. This power cable features finely stranded tinned copper conductors that extend conductor life in dynamic applications and are alpha-numerically marked for ease of identification. The oil-resistant insulation system offers high dielectric, tensile, and mechanical properties.



Ratings



Type TC-ER - 600V

1000V (CSA)

Max Conductor Temperature 90°C

Cold Temperature Rating -20°C

Type TC-ER

FT4 Flame Rating

Suitable for Class I, II, Division 2***

Performance Characteristics

- ✓ Sunlight Resistant
- ✓ Oil Resistant
- ✓ Corona Resistant to 2000V
- ✓ Bend Radius (Static): 6x Cable O.D.
- ✓ Bend Radius (Dynamic): 8x Cable O.D.

Engineered to Resist



Flexing



Abrasion



Chemicals

Features & Benefits

Finely Stranded Tinned Copper Conductors

Fine stranding improves flex-life and reduces conductor fatigue and breakage. Tinned conductors resist corrosion and are easier to solder.

XLPE Insulation System

High dielectric, tensile, and mechanical properties. Designed to support unique electrical requirements of VFD systems.

Low-Friction, Non-Wicking Fillers

Increase flexibility and flex-life in dynamic applications.

Heavy-Duty 95% Coverage Tinned Copper Braid Shield

Provides protection against EM and RF interference and a low impedance path to ground. Protects equipment and motor damage from electrical noise and "stray voltage". Designed for superior performance in dynamic applications.

Specially Compounded Security Yellow TPE Jacket

Offers superior first-line defense against tearing, abrasion, impact, oil, ozone and most chemicals.

Ordering Information

For complete product ordering information, please scan the QR Code or contact your ATPC sales representative

Part No.	Configuration AWG/Cond	Ampacity*	Nominal O.D. (in)	W.T. (lbs) Per 1,000 ft.	Standard Cable Gland**
60040LC	16/4	18	0.563	181	55006
60041LC	14/4	25	0.588	210	55006
60042LC	12/4	30	0.656	276	55007
60043LC	10/4	40	0.710	350	55008
60044LC	8/4	55	0.926	580	55012
60045LC	6/4	75	0.986	735	55012
60046LC	4/4	95	1.107	1010	55012



Notes

*Ambient temperature of 30°C, conductor temperature of 90°C, not more than three current-carrying conductors. Based on NEC, Table 310.15(B)(16).

**Grip-Seals® Aluminum straight cable gland part number listed. Sizing based on nominal cable O.D. Due to process tolerances, a smaller/larger gland size may be required. Confirm NPT Fitting Size matches application.

***When installed in accordance with NEC guidelines sections, 501.140, 502.140, 503.140.

Motion Control

Super-Trex® VFD Shielded Cable

Super-Trex® VFD Shielded Cable is ideal for harsh environment VFD applications where a longer lasting cable is desired or where cable flexibility during use or installation is critical. Designed specifically for variable frequency drives and to withstand the harsh electrical environment of typical VFD systems. This motion control cable is constructed with both a foil and braid shield and will withstand corona voltages up to 2,000 volts. Symmetrical grounds are used to reduce the effect of common-mode-voltage noise. It features a heavy-duty thermoset jacket that provides excellent protection against abrasion, impact, oil, chemicals, heat, and flame.



Ratings



600V (Type TC-ER)

1000V (Type R90)

Max Conductor Temperature 90°C

Type TC-ER

FT4 Flame Rating

Performance Characteristics

✓ Corona Resistant to 2000V ✓ Bend Radius (Static): 6x Cable O.D. ✓ Bend Radius (Dynamic): 8x Cable O.D.

Engineered to Resist



Flexing



Abrasion



Impact



Chemicals

Features & Benefits

Finely Stranded Tinned Copper Conductors

Fine stranding improves flex-life and reduces conductor fatigue and breakage. Tinned conductors resist corrosion and are easier to solder.

Symmetrical Grounding System

Three ground conductors placed symmetrically in the interstices of the power conductors with a spiral-wrapped skived PTFE tape to create a smooth round bundle and balance the cable electrically.

Ultra-Shield Aluminum/Polyester Foil Shield and Tinned Drain Wire Construction

Provides 100% protection against EM and RF interference and a low impedance path to ground. Protects equipment and motor damage from electrical noise and "stray voltage".

Cross Linked TSE Insulation System

Corona-resistant cross linked insulation designed to maintain the demanding electrical requirements of VFD systems.

Specially Compounded Black TSE Jacket

Offers superior first-line defense against tearing, abrasion, impact, oil, ozone, and most chemicals. Flame and heat resistant. Extreme all-weather flexibility.

Ordering Information For complete product ordering information, please scan the QR Code or contact your ATPC sales representative

Part No.	Power Configuration (AWG/Cond)	Ground Size (Cond/AWG)*	Ampacity**			Nominal O.D. (in)	W.T. (lbs) Per 1,000 ft.	Standard Cable Gland***
			In Free Air	In Cable Tray	In Conduit			
89103	#4 - 3 Cond	3 x 12 AWG	114	95	89	1.19	1101	55011
89104	#2 - 3 Cond	3 x 10 AWG	152	130	119	1.34	1512	55014
89106	1/0 - 3 Cond	3 x 10 AWG	205	170	163	1.61	2174	55015
89107	2/0 - 3 Cond	3 x 10 AWG	237	195	186	1.70	2510	55015
89109	4/0 - 3 Cond	3 x 8 AWG	316	260	253	1.99	3727	55016
89110	262 kcmil - 3 Cond	3 x 6 AWG	362	297	285	2.21	4581	55017
89111	373 kcmil - 3 Cond	3 x 6 AWG	449	363	357	2.45	5968	55020
89112	444 kcmil - 3 Cond	3 x 6 AWG	497	402	395	2.60	6922	55020
89113	535 kcmil - 3 Cond	3 x 6 AWG	555	445	441	2.85	8246	N/A

Notes

*Ground sized in accordance with NEC Table 250.122 + UL1277 whichever is larger.

**Ampacity in Free Air based on 90°C conductor temperature, 30°C ambient temperature, per NEC Table B310.15(B)(2)(3)

**Ampacity in Cable Tray based on 90°C conductor temperature, 30°C ambient temperature, per NEC Table 310.15(B)(16)

**Ampacity in Conduit based on 90°C conductor temperature, 30°C ambient temperature, per NEC Table B310.15(B)(2)(1)

***Grip-Seals® Aluminum straight cable gland part number listed. Sizing based on nominal cable O.D. Due to process tolerances, a smaller/larger gland size may be required. Confirm NPT Fitting Size matches application.