

Providing the Total Wire & Cable Solution for the

WOOD, PULP and PAPER INDUSTRY



0



DESIGNED FOR ABUSE

TPC Wire & Cable's products are designed and constructed to typically last 8-10 times longer than standard commercially available products in abusive industrial environments where cables are exposed to flexing, heat, chemicals, cutting and abrasion.

Super-Trex[®]

A very rugged line of cables which includes both single and multi-conductor configurations ranging from 600 volts to 2000 volts. These products are designed primarily for power and control applications where cables may be exposed to tension reeling, flexing, cutting, abrasion, impact and heat.

Trex-Onics[®]

Designed for constant flexing applications such as cable carriers and robotics, this product line is designed to provide a high level of resistance to abrasion and cutting. Trex-Onics products include power cables and shielded multi-conductor cables for instrumentation, control and communications.

Thermo-Trex®

High temperature cables and accessories designed for temperatures ranging from 400°F up to an extreme of 3000°F. This line includes power and control cables as well as a line of thermo-couple cables.

Chem-Gard

Designed for a broad range of applications where heat, cold or extreme chemical exposure can affect cable performance. Chem-Gard uses a fluoropolymer insulation and jacket that gives the cable a temperature performance range of -60°C to +200°C. The fluoropolymer jacket also allows the cable to survive in very acidic, alkali or solvent based environments. Chem-Gard's unique design makes it an excellent choice for flexing and high-cycling applications.

As you know . . . the real cost of cord and cable maintenance includes not only the cost of material, but also the labor and down-time that result from unnecessary repair and replacement of damaged or worn-out cord and cable. In addition to providing a unique product, TPC Wire & Cable provides . . .

- •High-performance problem solving products
- •Cost and time-saving products
- Personal sales support
- In-depth inventories

- •Hard to find cord and cable products
- •Knowledgeable customer service
- Proven product reliability
- Custom engineered products

WOOD, PULP & PAPER INDUSTRY APPLICATIONS

In the wood, pulp and paper industry, it is important to address the abusive environments in which the electrical cable is applied. In many cases, the cable will fail due to chemical spillage or leaks, UV rays, extensive abrasion, high or low temperatures and flexing in the wood, pulp and paper process. Therefore, choosing a high quality, high performance electrical cable and accessories are at the forefront to save labor, material and unexpected downtime costs. TPC Wire & Cable's product line includes cables designed for high flex, chemical, high heat, extreme cold, and abusive environments. If the cable does not exist, our team of engineers will design and produce the cable to match your requirements.



At TPC, research and development is a continuous process. Superior performance is a



function of construction, materials, and matching the right cable to the application. In the wood, pulp and paper market, TPC has developed many solutions to meet your cable needs for power and portable cord, P&R cord (Payout & Retractile), control cable, welding cable, and accessories to simplify your daily responsibilities.

TPC's heavy-duty cable is the choice preference for applications that are in the harshest environments in wood, pulp and paper applications. Our thorough knowledge of wood, pulp and paper applications allows our experienced engineers and sales staff to help you with custom cables to address your specific needs. With our dedicated mechanical assembly

shop, we can deliver the complete cable package with connectors – ready to go off the spool. No matter what the extreme application is, TPC has the right cable selection for

you to choose that will survive the wood, pulp and paper environment.

TPC provides custom engineered products designed with application and environment information from the customer. These products are built specifically for an individual customer and represent a real problem-solving service.

The cables, connectors and accessories presented in our catalog have been specifically designed for use in applications where performance and reliability are of the utmost importance.



CHEM-GARD[™] 150

ORDERING INFORMATION

UNS	JNSHIELDED Non-Shielded Configurations – 150°C (Additional configurations available)										
Part	Configuration	Stranding	Braid			Cable	Ampacity	Drain	Wt. (LBS.)		
No.	AWG/Cond.	(Strands/AWG)	Shield	Conductor	Insulation	OD	(1)	Wire	per 1,000'		
42126	16/4	65/34	None	Tinned	Fluoropolymer	.225	21.0	None	59		
42128	12/4	65/30	None	Tinned	Fluoropolymer	.335	48.0	None	128		
42130	16/12	65/34	None	Tinned	Fluoropolymer	.365	13.0	None	150		

SHI	SHIELDED Shielded Configurations – 150°C (Additional configurations available)									
Part	Configuration	Stranding	Braid			Cable	Ampacity	Drain	Wt. (LBS.)	
No.	AWG/Cond.	(Strands/AWG)	Shield	Conductor	Insulation	OD	(1)	Wire	per 1,000'	
42114	18/3	65/36	Tinned	Tinned	Fluoropolymer	.205	16.0	20AWG	35.5	
42116	16/4	65/34	Tinned	Tinned	Fluoropolymer	.245	21.0	20AWG	77	
42118	12/4	65/30	Tinned	Tinned	Fluoropolymer	.370	48.0	20AWG	154	
42120	16/12	65/34	Tinned	Tinned	Fluoropolymer	.385	13.0	20AWG	176	

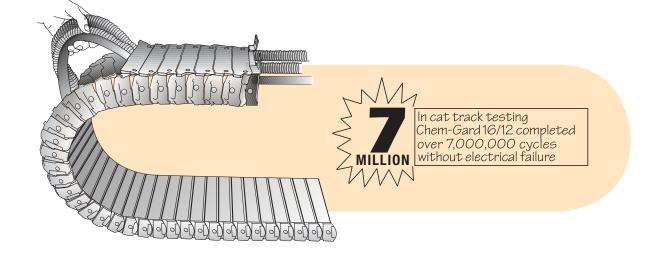
NOTE: (1)Ampacities are based on conductors in free air, 40°C (104°F) ambient, 150°C (302°) conductor temperature.

CONDUCTOR COLOR CODES

1	Black
2	White
3	Red
4	Green
5	Orange
6	Blue
7	White/Black
8	Red/Black
9	Green/Black
10	Orange/Black
11	Blue/Black
12	Black/White

CHEMICAL RESISTANCE

	Fluoropolymer	FEP
Oxidation Resistance	Excellent	Excellent
Oil	Excellent	Excellent
UV Rays	Excellent	Excellent
Water	Excellent	Excellent
Acid	Excellent	Excellent
Alkali	Excellent	Excellent
Gasoline/Kerosene	Excellent	Excellent
Benzol Toluene	Excellent	Excellent
Degreaser Solvent	Excellent	Excellent
Alcohol	Excellent	Excellent



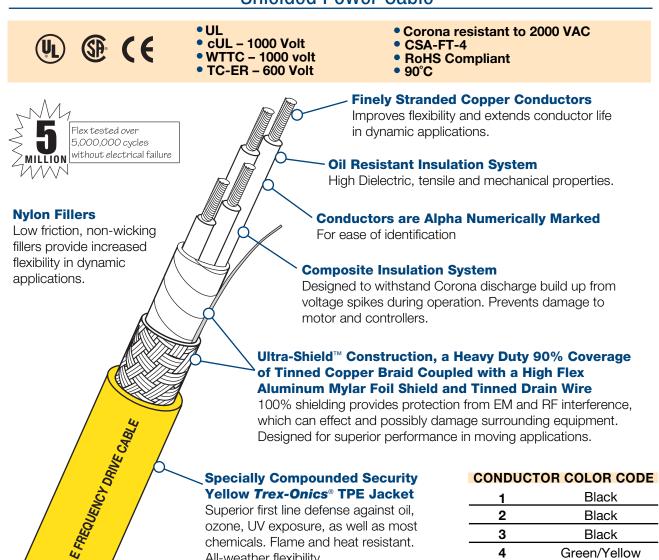
STANDARD FLEX VFD CABLE

• UL • cUL • FT-4	 Corona Resistant to 2000 Volt AC Direct Burial Rated 90°C Dry/75°C Wet 	 WTTC – 1000 Volt TC-ER – 600 Volt CIC-TC
Conductors are Coded wit Numeric Identification Provides fast identification of conductors. Easy to read for ease of installation.	Finely	Stranded Copper as flexibility and flex life.
Three Uninsulated Tinned Copper Grounding Conductors Provides circuit ground.	Provides protect	pounded TPE Insulation tion against corona up to 2KV. enhanced mechanical properties.
	Dual-Shield Construct Heavy duty 100% shieldi aluminum mylar tape.	rtion ng of tinned copper braid and
	Specially Compounded TPE J Protects against UV and sunlight.	Jacket Oil resistant and direct burial rated.

	PART NO.	CABLE SIZE AWG/COND.	CONDUCTOR Stranding	BARE GROUND AWG/ Stranding	INSULATION THICKNESS (OVERALL)	JACKET THICKNESS NOMINAL (IN.)	NOMINAL O.D. (IN.)	CABLE WEIGHT PER 1,000' (LBS.)
7	6801	4/3	413 x 30	10/105 x 30	.069"	.090"	1.13	878
7	6802	2/3	665 x 30	10/105 x 30	.079"	.090"	1.28	1236
7	6803	1/3	836 x 30	8/168 x 30	.085"	.090"	1.438	1534
7	6804	1/0 3 Cond.	1045 x 30	8/168 x 30	.085"	.090"	1.545	1850
7	6805	2/0 3 Cond.	1330 x 30	8/168 x 30	.085"	.120"	1.716	2246
7	6806	4/0 3 Cond.	551 x 24	8/168 x 30	.098"	.120"	2.029	3241

O R D E R I N G I N F O R M A T I O N

VARIABLE FREQUENCY DRIVE Shielded Power Cable



ORDERING INFORMATION

All-weather flexibility.

4

Green/Yellow

PART NO.	CABLE SIZE AWG/COND	STRANDING	AMPACITY	NOMINAL O.D. (IN.)	WT. (LBS.) PER 1000'
60040	16/4	65 x 30	17	.569	69
60041	14/4	105 x 30	25	.645	192
60042	12/4	168 x 30	30	.730	230
60043	10/4	229 x 30	40	.780	302
60044	8/4	413 x 30	55	.945	498
60045	6/4	665 x 30	75	1.08	714
60046	4/4	413 x 30	95	1.16	1035

APPLICATIONS

AC Variable Frequency Drives are the newest design in servo motor technology that in many cases are replacing the older DC servo drive motors. The new AC drive technology reduces the size and increases the efficiency of the motor while improving control over the motors speed and torque. These motors are controlled utilizing Pulse Width Modulation (PWM), a method by which the frequency of the AC voltage going to the motor is used to control the motor speed. One of the major issues with these types of systems is that the PWM control systems causes more EMI to be radiated by the inverter to motor power cable. With today's faster switching, the electrical energy flowing through the cable contains frequencies up to 3000Hz. The EMI emitted by the power cable can induce cross-talk on adjacent cables, which can lead to failure or malfunction of nearby electronic equipment, and the more automated the facility, the greater the risk of problems. For this reason, TPC has designed a high performance VFD cable suitable for industrial applications.

VARIABLE FREQUENCY DRIVE Shielded Power Cable with Brake & Signal Pairs





Nylon Fillers

Low friction, non-wicking fillers provide increased flexibility in dynamic applications.

AVENCY DRIVE CABLE



- WTTC 1000 volt • TC-ER – 600 Volt
- Corona resistant to 2000 VAC
- CSA-FT-4
- RoHS Compliant • 90°C

Finely Stranded Copper Conductors

Improves flexibility and extends conductor life in dynamic applications.

Composite Insulation System

Designed to withstand Corona discharge build up from voltage spikes during operation. Prevents damage to motor and controllers.

Oil Resistant Insulation System

High Dielectric, tensile and mechanical properties.

Conductors and Pairs are Alpha Numerically Marked For ease of identification

Ultra-Shield[™] Construction, a Heavy Duty 90% Coverage of Tinned Copper Braid Coupled with a High Flex **Aluminum Mylar Foil Shield and Tinned Drain Wire**

100% shielding provides protection from EM and RF interference, which can effect and possibly damage surrounding equipment. Designed for superior performance in moving applications.

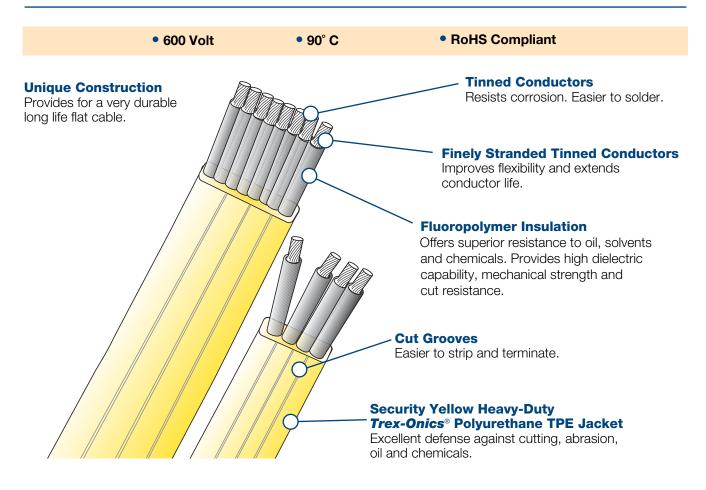
Specially Compounded Security Yellow Trex-Onics® TPE Jacket

Superior first line defense against oil, ozone, UV exposure, as well as most chemicals. Flame and heat resistant. All-weather flexibility.

	PART NO. YELLOW ORANGE			POWER COND.		16 AWG BRAKE &	SIGNAL PAIRS				WT.
			AWG/COND.	STRANDING	AMPACITY	NO. OF PAIRS	STRANDING	DRAIN Wires	JACKET THICKNESS	NOM. O.D.	(LBS.) PER 1,000 ft.
ш	60021*	I	14/4	41x30	25	1 pr	26x30	18	0.063	0.620	215
PAIR	60023	-	12/4	65x30	30	1 pr	26x30	18	0.063	0.660	310
Ë	60025	-	10/4	105x30	40	1 pr	26x30	18	0.073	0.760	420
SING	60026	-	8/4	168x30	55	1 pr	26x30	18	0.083	0.940	650
S	60027*	-	6/4	266x30	75	1 pr	26x30	18	0.083	1.050	950
_											
œ	60028*	-	14/4	41x30	25	2 pr	26x30	18	0.063	0.680	280
PAII		60029F	12/4	65x30	30	2 pr	26x30	18	0.073	0.760	395
TWO		-	10/4	105x30	40	2 pr	26x30	18	0.085	0.850	505
F	60031	60031F	8/4	168x30	55	2 pr	26x30	18	0.085	0.999	800
	60032*	-	6/4	266x30	75	2 pr	26x30	18	0.090	1.100	1175
			CONDUC	TOR COLOR		Pairs ide	entified				
			1	Bla	ck	alpha num					
			2	Bla	ck	BLACK with					
			3	Bla	ck	Pair #1					
* Cl	heck for ava	ailability	4	Green/	Yellow	Pair #2	= /+8				

ORDERING INFORMATION

FLAT FESTOON CABLE



ORDERING INFORMATION

14/7

PART NO.	CORD SIZE AWG/COND	CONDUCTOR STRANDING	INSULATION THICKNESS (IN.)	AMPACITY (1)	DIMENSIONAL DATA	COLOR CODE	WT. (LBS.) PER 1000'
61114	16/4	65/34	.015"	16	.19" x .485"	Black, Red, Blue, Orange	94
61118	16/8	65/34	.015"	15	.19" x .87"	Black, Red, Blue, Orange, Yellow, Brown, Red/Black, Blue/Black	130
61112	16/12	65/34	.015"	14	.19" x 1.255"	Black, Red, Blue, Orange, Yellow, Brown, Red/Black, Blue/Black, Orange/Black, Yellow/Black, Brown/Black, Black/Red	198
61148	14/8	105/34	.015"	20	.204" x .982"	Black, Red, Blue, Orange, Yellow, Brown, Red/Black, Blue/Black	206
61142	14/12	105/34	.015"	17	.204" x 1.423"	Black, Red, Blue, Orange, Yellow, Brown, Red/Black, Blue/Black, Orange/Black, Yellow/Black, Brown/Black, Black/Red	287
61124	12/4	65/30	.015"	30	.22" x .60"	Black, Red, Blue, Orange	112
61104	10/4c	105/30	.018"	41	.246" x .709"	Black, Red, Blue, Orange	210
61164	6/4	266/30	.022"	72	.350" x 1.13"	Black, Red, Blue, Orange	462

NOTE: (1)Ampacities calculated at 30° C ambient and 90° C conductor temperature

FLAT FESTOON CABLE

600 Volt
 Oil and Sunlight Resistant
 105°C Rated

TPC's Flat Festoon Cable has been specifically designed for use in festoon systems for power and control on cranes and hoists. Cables can also be used where space is at a premium or where extreme flexing is a requirement, recommended bend radius of three to five times cable thickness. TPC's Flat Festoon Cables are suitable for either indoor or outdoor applications operating at -40° C to 105° C.

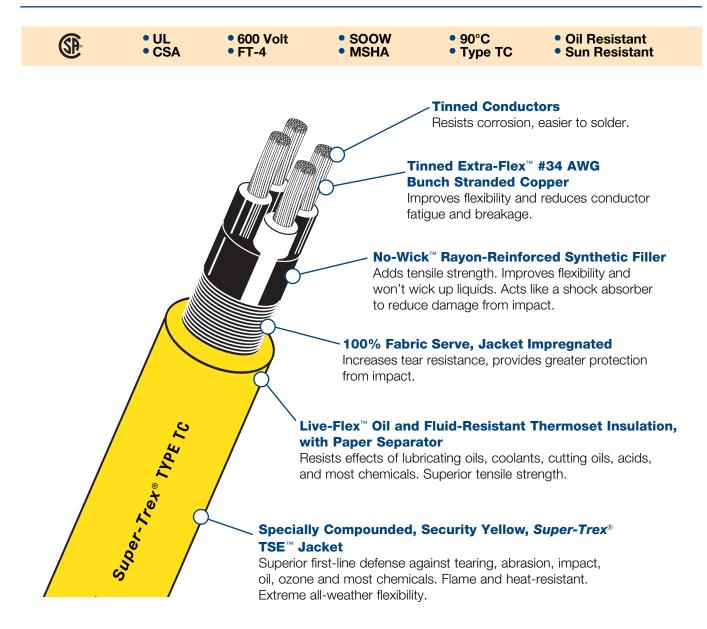
Yellow jacketed

- Indoor and outdoor rated
- Oil and chemical resistant
- Color coded per ICEA method 1
- Designed for continuous flexing applications

ORDERING INFORMATION

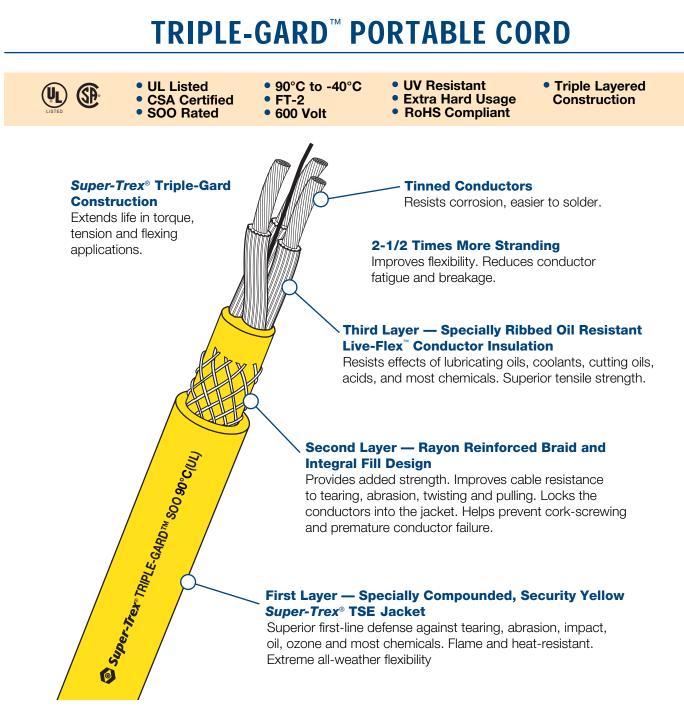
PART NO.	SIZE AWG/COND.	BUNCH Stranding	VOLTS	CABLE DIM. Thickness x Width(IN.)	WT. (LBS.) PER 1000'
61918	16/8c	65/34	600	.20 x 1.110	192
61912	16/12c	65/34	600	.20 x 1.605	286
61944	14/4c	41/30	600	.217 x .730	142
61948	14/8c	41/30	600	.217 x 1.22	252
61942	14/12c	41/30	600	.217 x 1.81	375
61924	12/4c	65/30	600	.236 x .71	174
61928	12/8c	65/30	600	.236 x 1.650	383
61904	10/4c	105/30	600	.276 x .820	254
61984	8/4c	168/30	600	.36 x 1.15	438
61964	6/4c	266/30	600	.43 x 1.45	679
61994	4/4c	420/30	600	.49 x 1.67	959

SUPER-TREX® TYPE TC PORTABLE CORD



PART NO.	CABLE Size Awg/cond.	STRANDING No. x Awg	AMPACITY	INSULATION THICKNESS (IN.)	MIN. AVG. JACKET THICKNESS (IN.)	NOMINAL O.D. (IN.)	WT. (LBS.) PER 1000'
87193TC	16/3	65 x 34	13	.030	.060	.408	105
87198TC	16/4	65 x 34	10	.030	.060	.435	130
87194TC	14/3	104 x 34	18	.045	.080	.548	185
87199TC	14/4	104 x 34	15	.045	.080	.590	245
87200TC	12/4	165 x 34	20	.045	.095	.675	320
87201TC	10/4	259 x 34	25	.045	.095	.745	400

O R D E R I N G I N F O R M A T I O N



PART NO.		CONDUCTOR STRANDING	AMPACITY (1)	INSULATION THICKNESS (IN.)	JACKET THICKNESS (IN.)	NOMINAL O.D. (IN.)	WT. (LBS.) PER 1000'
85194	14/3	104 x 34	18	.045	.080	.548	185
85199	14/4	104 x 34	15	.045	.080	.590	245
85195	12/3	165 x 34	25	.045	.095	.623	265
85200	12/4	165 x 34	20	.045	.095	.675	320
85196	10/3	259 x 34	30	.045	.095	.685	335
85201	10/4	259 x 34	25	.045	.095	.745	400

ORDERING INFORMATION

NOTES: (1) Maximum allowable current per conductor when one conductor is utilized as ground or neutral. Ampacities are based on an ambient temperature of 30° C with a conductor temperature of 90° C.

EXTREME TEMPERATURE CABLE (-70°C to + 150°C)

c**RU**us

1000V Rated

RoHS Compliant

FT1 Flame Rating

Super-Trex[®] Extreme Temperature Cable is designed to operate in temperature extremes ranging from -70°C to 150°C per ISO standards, (UL/cUL 105°C). The jacket is designed to withstand mechanical abuse and is resistant to UV light, water, oil and chemicals. Stranded Tinned Copper Conductors

Stranded tinned copper conductors resist corrosion, improves flexibility and helps reduce conductor fatigue and breakage in flexing applications.

XLPO Insulation on Individual Conductors

The temperature rating of the insulation is matched to the jacket to provide maximum protection in high and low temperatures applications. The heavy duty design provides extra cut through protection.

High Temperature XLPO Jacket

Cross-linked polyolefin jacket protects the cable from high temperature operation and remains flexible at extreme cold temperatures. The heavy duty jacket provides protection from cutting, abrasion, water, oils, chemicals and is UV resistant.

UL Recognized

Certified by UL to both Canadian and U.S. requirements.

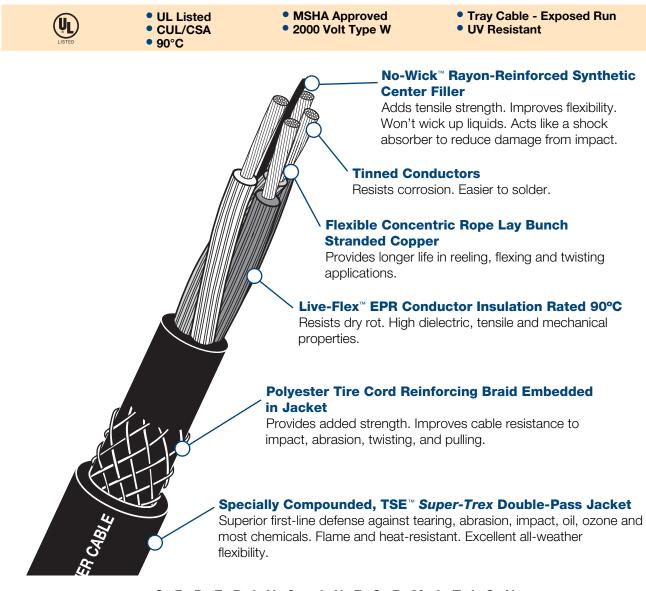
CONDUCTOR	COLOR
1	White
2	Black
3	Green
4	Red

ORDERING INFORMATION

Part No.	Cable Size AWG/Cond.	Conductor Stranding	Ampacity(1)	Nom. Dia. (in.)	Jacket Thickness (in.)	Wt. (lbs.) per 1000 ft.
87840	14/3	41/30	34	0.426	.065	106
87841	14/4	41/30	27	0.460	.065	130
87835	12/3	65/30	43	0.465	.065	141
87836	12/4	65/30	34	0.503	.065	172
87830	10/3	105/30	55	0.492	.065	192
87831	10/4	105/30	44	0.536	.065	238
87825 *	8/3	168/30	76	0.685	.060	306
87826*	8/4	168/30	61	0.790	.080	482
87820 *	6/3	259/30	96	0.814	.080	448
87821 *	6/4	259/30	77	0.889	.080	593
87815 *	4/3	413/30	120	0.933	.080	653
87816*	4/4	413/30	96	1.022	.080	871
87810 *	2/3	665/30	160	1.074	.080	991
87811 *	2/4	665/30	128	1.179	.080	1328

NOTES: (1)Ambient temperature rating of 40° C, 150° C conductor temperature. Based on at least 3 current carrying conductors. Reference Table 310.18 of the NEC. *Call for availability

SUPER-TREX® 4 AND **6 CONDUCTOR PORTABLE POWER & AUTOMATION CABLE**

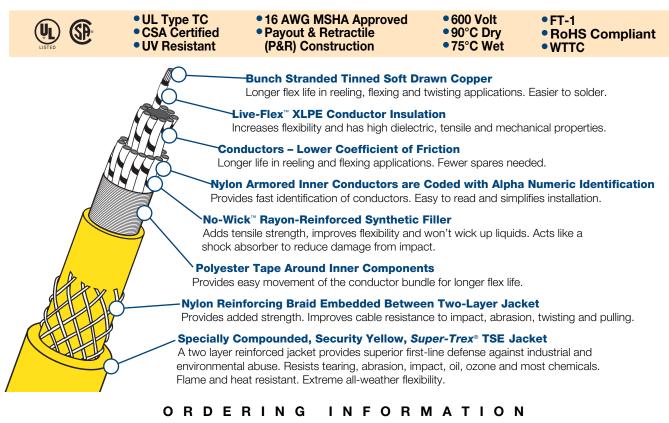


PART NO.	CABLE SIZE Awg/Cond	CONDUCTOR Stranding	AMPACITY (1)	JACKET Thickness (In.)	Nominal O.D. (IN.)	WT. (LBS.) PER 1000'	FLAME Rating		
BLACK									
85108	4/4	259 (7 x 37)	93	.125	1.27	1187	FT 5		
85110	2/4	259 (7 x 37)	122	.125	1.48	1663	FT5		
			YEL	LOW					
85204	8/4	133 (7 x 19)	54	.141	.995	658	FT 1		
85206	6/4	259 (7 x 37)	72	.141	1.100	945	FT 4		
85208	4/4	259 (7 x 37)	93	.125	1.270	1187	FT 4		
85210	2/4	259 (7 x 37)	122	.125	1.480	1663	FT 4		
85606	6/6	259 (7 x 37)	64	.140	1.480	1200	FT 4		
NOTE: (1) Ar	nnacities are hase	d on an amhient tem	perature of 40° C	with a conductor temp	erature of 90° C				

ORDERING INFORMATION

NOTE: (1) Ampacities are based on an ambient temperature of 40° C with a conductor temperature of 90° C.

MULTI-CONDUCTOR P&R CABLE



PART NO.	CABLE SIZE AWG/COND.	CONDUCTOR STRANDING	AMPACITY	JACKET THICKNESS (IN.)	NOM. O.D. (IN.)	WT. (LBS.) PER 1000'				
COLOR CODED CONDUCTORS 88820 16/6 65/34 14.4 .115 .555 168										
88822	16/8	65/34			.615	206				
			12.6	.115						
88823	16/10	65/34	9	.115	.690	255				
88824	16/12	65/34	9	.135	.705	290				
88825	16/16	65/34	9	.135	.750	353				
88826	16/20	65/34	9	.135	.820	412				
88827	16/24	65/34	8.1	.135	.885	484				
88828	16/33	65/34	7.2	.155	1.030	657				
88829	16/36	65/34	7.2	.155	1.050	693				
88830	16/41	65/34	6.3	.155	1.090	734				
88831	16/49	65/34	6.3	.155	1.170	849				
				CONDUCTORS						
88811	14/7	41/30	17.5	.115	.625	240				
88812	14/8	41/30	17.5	.115	.660	265				
88813	14/10	41/30	12.5	.115	.750	324				
88814	14/12	41/30	12.5	.135	.760	379				
88815	14/16	41/30	12.5	.135	.820	467				
88816	14/20	41/30	12.5	.135	.890	535				
88817	14/24	41/30	11.3	.135	.965	630				
88800	12/6	65/30	24	.115	.655	291				
88802	12/8	65/30	21	.115	.735	358				
88804	12/12	65/30	15	.135	.850	515				
88806	12/20	65/30	15	.135	1.000	763				
88808	12/30	65/30	13.5	.155	1.190	1119				
88832	10/6	105/30	32	.115	.760	382				
88834	10/8	105/30	28	.115	.860	484				
88836	10/12	105/30	20	.135	.990	697				

EXTRA HEAVY DUTY ALL WEATHER REELING CABLE

- Extra Heavy Duty
- Aramid Reinforced
- -40° to 90°C Dry
 600 Volt
- Extra Heavy Duty All Weather Construction

This product is suitable for harsh industrial applications, indoor or outdoor use. The high quality compounds provide superior protection from sunlight, UV, oils, solvents, water, impact, heat and offer excellent all weather flexibility. Designed for Harsh Industrial Applications
All Weather Usage

Central Strength Member

Rubber insulated aramid strength member provided additional overall strength to the cable, reduces stress on conductors.

Flexible Tinned Copper Conductors

Provide longer flex life in reeling applications, tinned copper conductors resist corrosion and are easy to solder.

Flexible Heat and Moisture Resistant Insulation

Provides protection to the individual conductors while allowing them to remain flexible, provides long flex life in heavy duty reeling applications.

Integral Fill Design

Inner jacket compound fills interstices of cable and locks conductors into place preventing corkscrewing and premature cable failure.

Reinforced with Aramid Braid

Specially Compounded Super-Trex[®] TSE[™] Jacket

Double pass aramid reinforced jacket provides superior tensile strength in the most demanding reeling applications. The combination of a center aramid strength member with the reinforced aramid jacket provides 6,000 pounds of break strength.

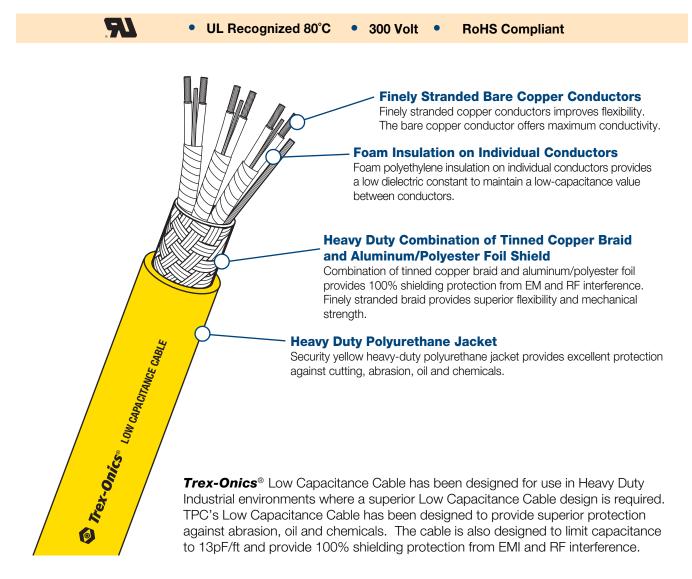
> Color Code BLACK conductor insulation with white alpha-numeric print and one GREEN ground

PART NO.	CABLE SIZE AWG/COND.	CONDUCTOR Stranding	AMPACITY (1)	JACKET THICKNESS (IN.)	INSULATION THICKNESS (IN.)	Nominal O.D. (IN.)	WT. (LBS.) PER 1000'
88847	14/24	19 x 27	11	.120	.030	1.135	836
88857	12/24	19 x 25	13	.120	.030	1.278	1296
88867	10/24	37 x 26	18	.120	.030	1.352	1503
88842	14/12	19 x 27	12	.120	.033	0.930	704
88852	12/12	19 x 25	15	.120	.033	0.982	939
88862	10/12	37 x 26	20	.120	.033	1.114	704
88879	12/30	19 x 25	13	.26	.03	1.75	2175
88859	2.5mm ² x 44	50 x 30	9	.12	.03	1.55	1849

ORDERING INFORMATION

NOTES: (1) Ampacity is based on NEC Table 310.16 and derated 50% for 12 conductors (further derating will be required for multiple layers on reel)

COMMUNICATION/INSTRUMENTATION LOW CAPACITANCE CABLE



PART NO.	CABLE AWG/NO. PAIRS	CONDUCTOR STRANDING	AMPACITY (1)	INSULATION THICKNESS (IN.)	IND. PAIRS DRAIN WIRE	OVERALL DRAIN WIRE	JACKET THICKNESS (IN.)	NOM. DIA. (IN.)	WT. (LBS.) PER 1000'
68902	24/2	19/36	1.6	0.028	26 AWG	26 AWG	0.035	0.364	64
68903	24/3	19/36	1.4	0.028	26 AWG	26 AWG	0.035	0.386	72
68904	24/4	19/36	1.4	0.028	26 AWG	26 AWG	0.035	0.428	91
68906	24/6	19/36	1.4	0.028	26 AWG	26 AWG	0.035	0.509	118
68909*	24/9	19/36	1.0	0.028	26 AWG	26 AWG	0.035	0.639	164
68912*	24/12	19/36	1.0	0.028	26 AWG	26 AWG	0.035	0.639	175

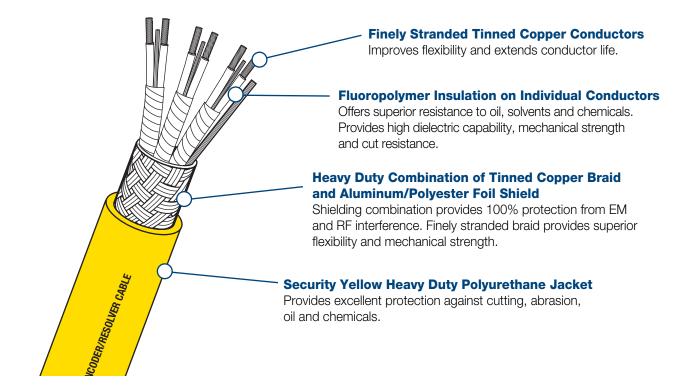
ORDERING INFORMATION

NOTE: (1)Based on 20°C ambient, 80°C Conductor Temperature, single cable in open air. *Call for availability

300 VOLT INDIVIDUALLY SHIELDED ENCODER/RESOLVER CABLE

FL (F

UL Recognized 90°C
 CSA Certified 80°C
 300 Volt
 RoHS Compliant



PART	COND SIZE (AWG)/	CONDUCTOR	AMPACITY	INSULATION THICKNESS	IND. PAIRS DRAIN	OVERALL DRAIN	JACKET THICKNESS		WT. (LBS.) PER
NO.	NO. OF PAIRS	STRANDING	(1)	(IN.)	WIRE	WIRE	(IN.)	(IN.)	1000'
68602	20/2	19/32	13.5	0.006	22 AWG	22 AWG	0.045	0.305	53
68603	20/3	19/32	10.8	0.006	22 AWG	22 AWG	0.045	0.315	66
68604	20/4	19/32	9.5	0.006	22 AWG	22 AWG	0.045	0.350	83
68606	20/6	19/32	6.7	0.006	22 AWG	22 AWG	0.045	0.410	117
68607	20/7	19/32	6.7	0.006	22 AWG	22 AWG	0.045	0.410	125
68609	20/9	19/32	6	0.006	22 AWG	22 AWG	0.045	0.500	189
68702	22/2	19/34	11	0.006	24 AWG	24 AWG	0.045	0.275	43
68703	22/3	19/34	9	0.006	24 AWG	24 AWG	0.045	0.300	52
68704	22/4	19/34	8	0.006	24 AWG	24 AWG	0.045	0.315	62
68706	22/6	19/34	8	0.006	24 AWG	24 AWG	0.045	0.370	86
68707	22/7	19/34	6	0.006	24 AWG	24 AWG	0.045	0.370	92
68709	22/9	19/34	6	0.006	24 AWG	24 AWG	0.045	0.450	138
68802	24/2	19/36	8	0.006	26 AWG	26 AWG	0.045	0.275	33
68803	24/3	19/36	7	0.006	26 AWG	26 AWG	0.045	0.265	42
68804	24/4	19/36	6	0.006	26 AWG	26 AWG	0.045	0.300	48
68806	24/6	19/36	6	0.006	26 AWG	26 AWG	0.045	0.330	64
68807	24/7	19/36	4	0.006	26 AWG	26 AWG	0.045	0.330	68
68809	24/9	19/36	4	0.006	26 AWG	26 AWG	0.045	0.400	97

ORDERING INFORMATION

NOTES: (1)Ampacities are based on 40°C ambient and 90°C conductor temperature. These values are to be used as a guideline and may vary according to the actual cable application.

TREX-ONICS[®] OVERALL SHIELDED CONTINUOUS FLEX MULTI-CONDUCTOR CABLE **Designed for Continuous Flex** • 600 Volt • UL Recognized 90°C Applications • 90°C CSA Certified 80°C **MSHA** Approved RoHS Compliant **Bunch Stranded Soft Drawn Copper** Longer flex life in flexing and twisting applications. In cat track testing TPC Continuous Flex products exceeded 25,000,000 cycles without electrical failure Finely Stranded Tinned Copper Conductors Improves flexibility and extends flex life. ION **Fluoropolymer Insulation** Offers superior resistance to oil, solvents and chemicals. Provides high dielectric capability, mechanical strength and cut resistance. **Flat Tinned Drain Wire** Fluoropolymer Over-Wrap Acts as a flex-facilitator, allowing the conductors to slide smoothly under the braid shield in dynamic applications. Protects the conductors from abrasion, improving flex life. Ultra-Shield[™] Construction, a Heavy-Duty Tinned Copper Braid Shielding provides a minimum of 85% protection from EM and RF interference in addition to superior mechanical strength in industrial applications. Continuous is a series of the Woven Nylon Tape Improves flexibility, allows the conductor bundle to move easily within the jacket for longer flex life. Security Yellow Heavy-Duty Polyurethane TPE Jacket Provides superior first-line defense against industrial and environmental abuse. Resists tearing, abrasion, oil, ozone and most chemicals. UV resistant.

ORDERING INFORMATION

PART	CABLE	STRANDING	AMPACITY	DRAIN	NOMINAL	INSULATION	WT. (LBS.)
NO.	AWG/COND.	NO./AWG	(1)	WIRE	0.D.	THICKNESS (IN.)	PER 1000'
61705	16/5	65/34	20.0	20AWG	.385	.010	110
61709	16/9	65/34	17.0	20AWG	.435	.010	158
61712	16/12	65/34	12.0	20AWG	.465	.010	185
61719	16/19	65/34	12.0	20AWG	.575	.010	286
61725	16/25	65/34	11.0	20AWG	.640	.010	360
61731	16/31	65/34	9.6	20AWG	.655	.010	412
61402	18/2	41/34	18.0	20AWG	.250	.010	50
61403	18/3	41/34	18.0	20AWG	.265	.010	54
61404	18/4	41/34	14.4	20AWG	.280	.010	58
61406	18/6	41/34	14.4	20AWG	.320	.010	88
61409	18/9	41/34	13.0	20AWG	.400	.010	110
61412	18/12	41/34	9.0	20AWG	.415	.010	145
61418	18/18	41/34	9.0	20AWG	.485	.010	210
61424	18/24	41/34	8.1	20AWG	.560	.010	265
61433	18/33	41/34	7.2	20AWG	.615	.010	322
61449	18/49	41/34	6.3	20AWG	.875	.010	496
61465	18/65	41/34	6.3	20AWG	.980	.010	628
61502	20/2	26/34	13.5	22AWG	.235	.010	40
61506	20/6	26/34	10.8	22AWG	.290	.010	68
61509	20/9	26/34	9.5	22AWG	.360	.010	89
61512	20/12	26/34	6.8	22AWG	.375	.010	110
61518	20/18	26/34	6.8	22AWG	.430	.010	148
61524	20/24	26/34	6.0	22AWG	.495	.010	192
61526	20/26	26/34	6.0	22AWG	.500	.010	196
61602	24/2	19/36	8.0	24AWG	.210	.010	28
61604	24/4	19/36	6.4	24AWG	.225	.010	32
61606	24/6	19/36	6.4	24AWG	.255	.010	41
61609	24/9	19/36	5.6	24AWG	.300	.010	51

NOTES: (1)Ampacities are based on 30° C ambient and 90° C conductor temperature. These values are to be used as a guideline and may vary according to the actual cable application.

TREX-ONICS[®] INDUSTRIAL ETHERNET CAT5E CABLE

- TIA/EIA 568-B.2
- 300 Volt

Shielded and Unshielded Cable Design

Shielded and unshielded cables in stock so you can select the cable that is right for your application.

Unique Conductor Lay Lengths

Conductor pairs are cabled with unique lay lengths to ensure signal integrity.

(Shielded cable shown)

.772

-1

Industrial Use Cable

- RoHS Compliant
- Available Shielded or Unshielded

Stranded Tinned Copper Conductors Provide longer flex life and improves cable flexibility. Resists corrosion. Easier to solder.

Center Spline (on shielded cable only)

Keeps conductors separated and in proper lay.

Insulation

High density polyethylene compounds are used for the conductor insulation to provide excellent dielectric properties that meet CAT5E requirements.

Double Jacket Design

• 80° C

Product is constructed with an inner and outer jacket. The inner jacket provides protection to the conductor bundle from impact and keeps the lay lengths of the cable in tact to ensure signal integrity. The outer Trex-Onics TPE jacket provides protection from environmental abuse and offers excellent defense against cutting, abrasion, oil and chemicals.

SPECIFICATIONS

Specially Compounded Jacket

ELECTRONIC

Trex-Onics TPE jacket provides excellent protection against cutting, abrasion, oil and chemicals. Unique teal color for easy identification.

FREQ. ATTENUATION **PSNEXT** ELFEXT **PSELFEXT** RL NEXT ACR PSACR (dB/100m) MAX. (dB/100m) MIN. (MHz) (dB) MIN. (dB) MIN. (dB/100m) MIN. (dB/100m) MIN. (dB/100m) MIN. (dB) MIN. 61.8 2.2 67.0 64.0 64.8 66.0 63.0 CE O 63.8 <u>0</u> 4 60.0 60.0 50.0 60.0 20.0

	Z.4	00.3	02.3	02.9	59.9	03.0	00.0	20.0
4	4.9	56.3	53.3	51.4	48.4	51.7	48.7	23.0
8	7.0	51.8	48.8	44.8	41.8	45.7	42.7	24.5
10	7.8	50.3	47.3	42.5	39.5	43.8	40.8	25.0
16	9.8	47.3	44.3	37.5	34.5	39.7	36.7	25.0
20	11.2	45.8	42.8	34.6	31.6	37.7	34.7	25.0
25	12.5	44.3	41.3	31.8	28.8	35.8	32.8	24.2
31.25	14.0	42.9	39.9	28.9	25.9	33.9	30.9	23.3
62.5	20.4	38.4	35.4	18.0	15.0	27.8	24.8	20.7
100	26.4	35.3	32.3	8.9	5.9	23.8	20.8	19.0

COLOR CODE

PAIR 1	Blue / White with Blue Stripe
PAIR 2	Orange / White with Orange Stripe
PAIR 3	Green / White with Green Stripe
PAIR 4	Brown / White with Brown Stripe

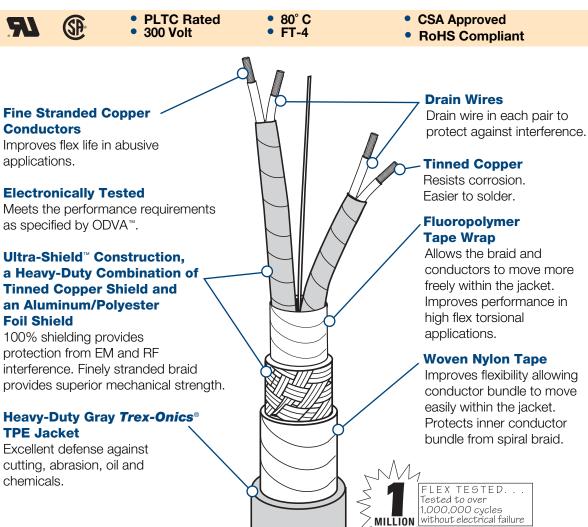
DC RESISTANCE 9.38 Ω/100m (28.6 Ω/kft) Max. DCR UNBALANCED 5% Max. **MUTUAL CAPACITANCE** 55.8 pF/m (17 pFm/ft) Max. **CAPACITANCE UNBALANCE** 330 pF/100m (1 pF/ft) Max.

CHARACTERISTIC IMPEDANCE 100 Ω +/- 15 Ω (1-100 MHz) INPUT IMPEDANCE 100 Ω +/- 15 Ω (1-100 MHz) PROP. DELAY (SKEW) 45 ns/100m Max. **VELOCITY OF PROPAGATION** 69% Nom.

INFORMATION ORDERING

PART NO.	CABLE AWG	STRAND AWG	NO. OF Pairs	CENTER Spline	INNER JACKET 0.D.	SHIELD	TAPE SEPARATOR	FINISHED 0.D.
60065S (Shielded)	24	(7/32)	4 (8 cond.)	Polyolefin	.235"	YES	Fluoropolymer	.330"
60065 (Unshielded)	24	(7/32)	4 (8 cond.)	None	.195"	NO	None	.260"

FLEX-NET[™] CABLE "THICK" HIGH PERFORMANCE DESIGN



ORDERING INFORMATION

PART NO.	NOMINAL O.D.	WT. (LBS.) PER 1000'	
60008	.475	100	

ODVA™ is a trademark of the Open DeviceNet Vendors Association, Inc. — 16 AWG Power Pair — 18 AWG Communication Pair

COLOR CODE POWER PAIR - Red & Black DATA PAIR - Blue & White

ELECTRONIC SPECIFICATIONS

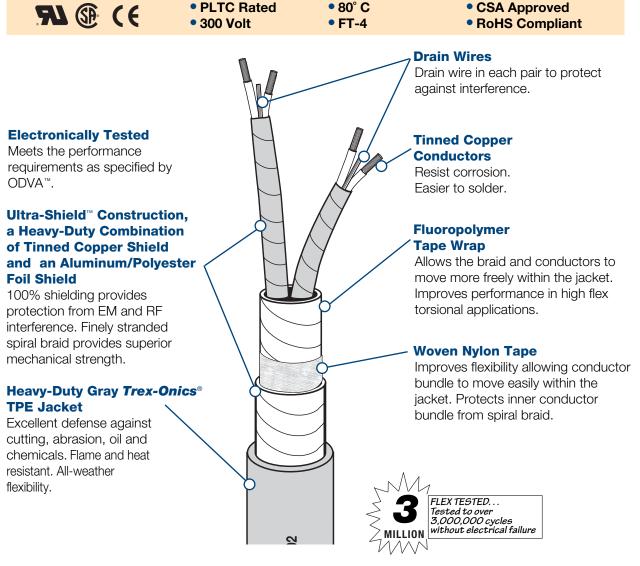
- The electrical requirement of the DeviceNet Cable shall be in accordance with those identified by the ODVA (Open DeviceNet Association) for the Thin Cable.
- Impedance 120 Ohms +/- 10% (at 1 MHz).
- Capacitance between Conductors 12 pF/ft. at 1 kHz (nominal).
- Capacitance between one conductor and other conductor connected to shield -24 pF/ft. at 1 kHz (nominal).
- Propagation Delay 1.36 nSec/ft. (maximum).

DeviceNet

conductors to move more freely within the jacket. Improves performance in

Improves flexibility allowing conductor bundle to move easily within the jacket. Protects inner conductor bundle from spiral braid.

FLEX-NET[™] CABLE "THIN" HIGH PERFORMANCE DESIGN



ORDERING INFORMATION

PART NO.	NOMINAL O.D.	WT. (LBS.) PER 1000'	
60007	.300"	55	

ODVA[™] is a trademark of the Open DeviceNet Vendors Association, Inc. — 22 AWG Power Pair — 24 AWG Communication Pair

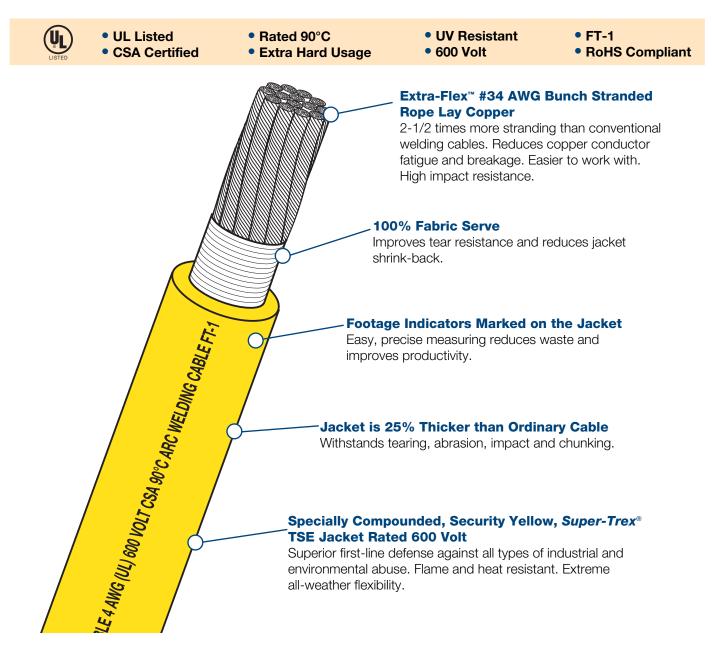
COLOR CODE POWER PAIR - Red & Black DATA PAIR - Blue & White

ELECTRONIC SP

- The electrical requirement of the DeviceNet Cable shall be in accordance with those identified by the ODVA (Open DeviceNet Association) for the Thin Cable.
- Impedance 120 Ohms +/- 12 Ohms.
- SPECIFICATIONS
 - Capacitance between Conductors 12 pF/ft. at 1 MHz (nominal).
 - Capacitance between one conductor and other conductor connected to shield – 24 pF/ft. at 1 MHz (nominal).
 - Propagation Delay 1.36 nSec/ft. (maximum).

eviceNe

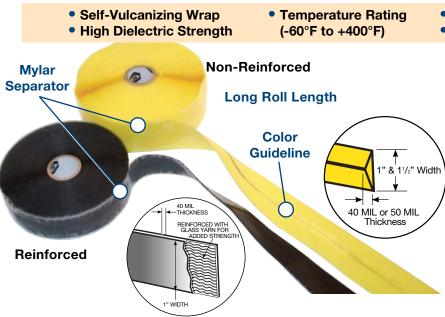
600 VOLT WELDING CABLE



O R D E R I N G I N F O R M A T I O N

PART No.	CABLE Size (AWG)	CONDUCTOR Stranding	JACKET Thickness (IN.)	NOMINAL O.D. (IN.)	WT. (LBS.) PER 1000'
86310	6	660 x 34	.080	.370	132
86311	4	1045 x 34	.093	.450	202
86312	2	1650 x 34	.103	.540	305
86313	1	2090 x 34	.103	.580	380
86314	1/0	2640 x 34	.115	.620	416
86315	2/0	3300 x 34	.115	.700	558
86316	3/0	4256 x 34	.140	.800	710
86317	4/0	5225 x 34	.158	.900	906

VULKO-WRAP[™] INSULATING MATERIAL



High Dielectric Strength

Can be used for all electrical connections.

Specially Compounded, Synthetic Silicone Elastomer

Resistant to oil, water, ozone, and many chemicals. Wide temperature range from -60° F to +400° F.

Vulcanizes Immediately

Requires no heat - becomes fully bonded in 24 hours at room temperature. Remains pliable over time.

No Adhesives - Adheres Only to Itself

Easy to remove – leaves no residue. Covered fittings are immediately reusable.

Triangular Shape with Color Guideline

Allows even thickness for uniform high dielectric strength.

Non-Reinforced Product Stretches to Approximately 2-1/2 Times its Length

Conforms to irregular shapes and uneven surfaces. Can be used on parts which move or vibrate.

Width 1" to 1-1/2"

Covers more surface than ordinary tape with a single wrap.

Available in 40 MIL or 50 MIL Thickness

Extra thick design allows wrapping over sharp and irregular surfaces without tearing or puncturing.

Reinforced with Glass Yarn Fiber

RoHS Compliant

OTHER APPLICATIONS Motor Leads

- Bus Bar Insulation
- Corrosive Areas
- Electroplating Danglers
- Food Related Equipment
- HVAC Equipment
- Lift Truck Battery Cable Terminals
- · Temporary Repair of Low Pressure Air and Hydraulic Lines
- Transformer Tap Lead Insulation
- Washdown Areas

For Non-Reinforced

SPECIFICATIONS Meets U.S. Military Spec. MIL-I-46852, superseded by CID A-A-59163.

DIELECTRIC STRENGTH (Per ASTM D-149): 300 volts per mil of finished wrap thickness for 40 mil and 275 volts per mil of finished wrap thickness for 50 mil.

TENSILE/BREAK STRENGTH (Per ASTM D-412): 700 PSI Min.; 17 lbs. for 40 mil; 42 lbs. for 50 mil.

ELONGATION (Per ASTMD-412): 300% minimum.

SHELF LIFE Product should be stored at 70°F or less for maximum shelf life. Store in original packaging in clean dry environment when not in use

PRODUCT LIMITATION Vulko-Wrap has a low abrasion and cut resistance. A protective overwrap is recommended for applications exposed to dragging or impact.

For Reinforced

SPECIFICATIONS Meets U.S. Military Spec. MIL-I-22444C. DIELECTRIC STRENGTH (Per ASTM D-149) 500 volts per mil of finished wrap thickness for 40 mil.

ELONGATION (Per ASTMD-412) 15% minimum.

SHELF LIFE Product should be stored at 70°F or less for maximum shelf life. Store in original packaging in clean dry environment when not in use.

REINFORCEMENT Reinforcing braid embedded in center of material provides enhanced mechanical strength while still allowing the product to cover irregular shapes.

PART NO.	THICKNESS WIDTH & LGTH.	COLOR	DIELECTRIC STRENGTH	MEETS MIL SPEC	NO. OF WRAPS	FINISHED THICKNESS	VOLTAGE PROTECTION
98412 Non-Reinforced	40 Mil 1 in. x 36 ft.	Yellow	300 Volts/Mil	MIL-I-46852	1 2 3	20 mil 40 mil 60 mil	5,500 11,000 16,500
98512 Non-Reinforced	50 Mil 1 in. x 36 ft.	Yellow	275 Volts/Mil	MIL-I-46852	1 2 3	25 mil 50 mil 75 mil	6,875 13,750 20,625
98412BK Non-Reinforced	40 Mil 1 in. x 36 ft.	Black	300 Volts/Mil	MIL-I-46852	1 2 3	20 mil 40 mil 60 mil	5,500 11,000 16,500
98512BK Non-Reinforced	50 Mil 1 ¹ / ₂ in. x 36 ft.	Black	275 Volts/Mil	MIL-I-46852	1 2 3	25 mil 50 mil 75 mil	6,875 13,750 20,625
18412 Reinforced	40 Mil 1 in. x 36 ft.	Black	500 Volts/Mil	MIL-I-22444C	1 2 3	36 mil 72 mil 108 mil	18,000 36,000 54,000

ORDERING INFORMATION

Assumes 50% overlap and stretching the wrap 2.5 times. Assumes 25% overlap and stretching the wrap 10%.

CUSTOM DESIGNED AND **ENGINEERED**

High performance cables designed for the most demanding industrial applications. Cable designs include . . .

- Custom Data Communications Cables
- Chemical Resistant Cables
- Composite Cables
- Custom Thermocouple Cables
- High Temperature Cables

- High Tension Reeling Cables
- Aramid Reinforced Cables
- Low Temperature Cables
- Water Resistant Cables

A major part of TPC's capabilities is working with customers to custom design and develop cables specifically for their application needs.

TPC's expertise in materials, design and manufacturing provides superior cable performance resulting in longer cable life and reduced equipment downtime.

TPC's cable design engineers can assemble the critical components of your cable into a final design that will give you a longer lasting cost effective alternative to constantly replacing cables.

> Custom lengths and strain reliefs available

CUSTOM CABLE

A major part of TPC's capabilities is working with customers to custom design and develop cables specifically for their application needs. TPC's expertise in materials, design and manufacturing provides superior cable performance resulting in longer cable life and reduced equipment downtime.

HDLC ASSEMBLIES

Heavy Duty Locking Connectors

Three quarter turn reverse bayonet coupling system is easy to connect and disconnect. Positive locking indent prevents accidental uncoupling. Inserts are environmentally sealed to protect the connection from oil, water and chemical contamination. 18 AWG to 1/0 - up to 65 pins/contacts.

MILITARY ASSEMBLIES

Designed for a Wide Range of Industrial Applications

Assembled with custom TPC backend hardware for environmental sealing and superior strain relief. Molded backends available.

RECTANGULAR ASSEMBLIES

Mechanically Attached and Molded Designs for Industrial Applications

With Super-Trex[®] or Trex-Onics[®] cable for proven performance where flexing, abrasion, impact and oil can cause premature cable failure. Custom lengths available.

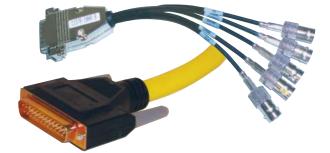
CUSTOM AND MOLDED D-SUB ASSEMBLIES

D-sub assemblies available in various configurations and pinouts for customer specific applications. Environmental protection and durability provided with molded versions.

CUSTOM DESIGNED LUGS

Image at right is made of titanium for corrosion prevention. Strain relief covering cable jacket to prevent copper stranding fatigue and breaking in flexing applications.











CORRE

PRODUCT APPLICATIONS

PRODUCT CATAGORIES/APPLICATIONS	PORTABLE CORD	PORTABLE POWER	MULTI-COND.	VFD CABLE	WELDING CABLE
General Plant Use	0				
Bleach Systems					
Cable Bus systems					
Chemical Recovery					
Chippers	0	0			
Conveyors	0	0	0		
Cranes	0	0	0		
Debarkers		0			
De-Inking					
Digesters					
Dryers/Dryer Alarms		0			
Elevator	0	0	0		
Encoder					
Festoon Systems	0		0		
Hoists		0			
Lathes	0	0			
Motors/Motor Leads	0	0			
Panograph	0	0	0		
Pendants	0		0		
Presses	0				
Printing Presses	0				
Pulper	0	0			
Pumps - Aeration	0	0			
Reels	0		0		
Refiner	0	0	0		
Saws		0			
Screen Press		0			
Sensors					
Shearers					
Slitter & Guide Rolls	0	0			
Splicers	0				
VFD				0	
Welders					0

This matrix displays TPC products and appropriate applications within the wood, pulp and paper industry.

TREX-ONICS®	CHEM-GARD [™]	HIGH TEMP	QCs	MECHANICAL ASSY.	ACCESSORIES	VULKO-WRAP [™]
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TOOLS

A variety of tools to cut, strip and prepare cable of all sizes.



Cable Cutter Part No. 91457 For cable O.D. up to 1.50"



USA 800-521-7935 FAX 866-528-2930 TOLL FREE MEXICO 001-800-290-5614 TOLL FREE PERU 0800-53931-800-290-5614 TOLL FREE CHILE 1230-020-5842 TOLL FREE COLUMBIA 009-0-1-800-915-6832 ONLINE www.tpcwire.com





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