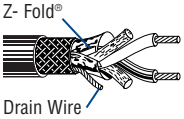
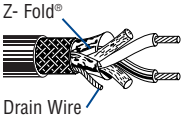
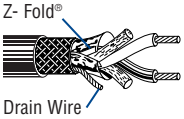
Industrial Data Solutions® — Industrial Twinax

DataTray® 600V Twinaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m
18 AWG Stranded (7x26) Tinned Copper Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (55% Coverage) • TC Drain Wire																			
Flame-retardant Polyolefin Insulation • Blue Sunlight-resistant PVC Jacket (Color Code: Natural, Blue)																			
UL Type TC 600V 75°C Z- Fold®  Drain Wire P-MSHA-C-7K-1827*	**3072F**	NEC: CMG, ITC TC, PLTC CEC: CMG FT4	250 500 1000 2500 5000† 10000†	76.2 152.4 304.8 762.0 1524.0 3048.0	17.5 35.0 69.0 170.0 345.0 710.0	8.0 15.9 31.3 77.2 156.6 322.3	18 AWG (7x26) .046″ Tinned Copper 6.9Ω/M′ 22.7Ω/km	.192	4.88	Beldfoil +55% TC Braid (100% Shield) 3.2Ω/M′ 10.4Ω/km	.324	8.23	78	65%	19.5	64	1 10 50 100 200 400	.5 2.0 3.8 5.4 7.6 10.7	1.7 6.5 12.4 17.6 24.8 35.1
												For CPE jacketed version order Part No. YM45044.							
UL Type TC 600V 75°C Z- Fold®  Drain Wire	**3073F**	NEC: CMG, ITC TC, PLTC CEC: CMG FT4	250 1000 5000†	76.2 304.8 1524.0	21.0 85.0 420.0	9.5 38.6 190.7	18 AWG (7x26) .046″ Tinned Copper 6.9Ω/M′ 22.7Ω/km	.246	6.25	Beldfoil +55% TC Braid (100% Shield) 2.9Ω/M′ 9.6Ω/km	.388	9.86	100	65%	15.3	50.2	1 10 50 100 200 400	.4 1.3 3.0 4.2 6.0 7.5	1.3 4.4 9.7 13.8 19.5 24.7
												CPE jacket optional.							
UL Type TC 600V 75°C Z- Fold®  Drain Wire	**3074F**	NEC: CMG, ITC TC, PLTC CEC: CMG FT4	500 1000 2500	152.4 304.8 762.0	62.5 121.0 300.0	28.4 54.9 136.2	18 AWG (7x26) .046″ Tinned Copper 6.9Ω/M′ 22.7Ω/km	.328	8.33	Beldfoil +55% TC Braid (100% Shield) 2.8Ω/M′ 9.1Ω/km	.460	11.68	124	65%	12.3	40.3	1 10 50 100 200 400	.3 1.1 2.4 3.4 4.8 6.8	1.1 3.5 7.8 11.1 15.7 22.2
												CPE jacket optional.							

DCR = DC Resistance • TC = Tinned Copper if conductor, or Tray Cable if NEC rating.

*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration certification.

†Final put-up length may vary -0 to +10% from length shown.

UL Instrumentation Cable

600V Tray Cables – Overview

Tray Cable Construction Options

UL Listed for MC and TC				
Insulation/Jacket	Max. Temp Rating		Flame Tests	Ratings*
	Wet	Dry		
PVC-Nylon/PVC (THHN or THWN) 14 AWG & larger	75°C	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-61-402
PVC-Nylon/PVC (TFN or TFFN) 16 & 18 AWG	N/A	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-61-402
XLPE/PVC or CPE (XHHW–2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-66-524
XLPE/PVC or CPE (RFH–2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-66-524 ICEA S-82-552
FRPO/PVC 18 AWG & larger	—	75°C	UL 1685	
TPE/TPE	75°C	90°C	UL 1685	
FRPO/PVC	75°C	90°C	UL 1685	
XLPE/Haloarrest® (XHHW-2) 14 AWG & larger	90°C	90°C	UL 1685 ICEA T-29-520 FT4/IEEE 1202/383	TC-LS
XLPE/Haloarrest (RFH-2) 16 & 18 AWG	75°C	75°C	UL 1685 ICEA T-29-520 FT4/IEEE 1202/383	TC-LS
FEP/PVC	90°C	90°C	UL 1685	

CPE = Chlorinated Polyethylene • FEP = Fluorinated Ethylene-propylene • FRPO = Flame-retardant Polyolefin • PVC = Polyvinyl Chloride • TPE = Thermoplastic Elastomer • XLPE = Cross-linked Polyethylene

*Applicable to TC-rated cables only.

Construction

Soft annealed bare or tinned copper conductors. PVC insulated with a nylon overcoat, 90°C PVC Jacket, TFN, TFFN or THHN style singles. Nylon rip cord included in all PVC-Nylon/PVC instrumentation cables.

Application

These cables are suitable for installation in wet or dry locations. Cable jackets are resistant to sunlight, moisture and vapor penetration. The cables can be used in raceways, and (supported by messenger wire), outdoor applications and direct burial applications.

Unshielded

Twisted non-shielded instrument pairs provide a minimal OD allowing greater tray and conduit fill. Non-shielded instrument pairs may be utilized when recommended by the instrument manufacturer and used in a metallic conduit.

Overall Shield

Recommended for use in instrumentation applications where signals are transmitted in excess of 100 millivolts except in areas where high voltage and current sources creates excessive noise interference.

The Beldfoil® shield with drain wire provides 100% coverage for maximum shield effectiveness. Copper tape shield available upon request.

Individually Shielded and Overall Shielded

Individually shielded pairs or triads with an overall shield are recommended for use in instrumentation applications where optimum noise rejection is required. Individual pair/triad shields are fully isolated from each other and contain a separate drain wire for grounding, to provide maximum protection from crosstalk and common mode interference. Cables with an overall shield provide additional electrostatic noise protection.

Conductor, Insulation and Jacket Options*

To Specify: 1234 A (Start with Part No. / Add or replace letter code)	Bare	Tinned	Insulation/Jacket
	A	B	PVC-Nylon/PVC
	C	D	XLPE/PVC
	E	F	FRPO/PVC
	G	H	XLPE/TPE
	K	L	TPE/TPE
	M	N	PVC-Nylon/Oil Res II
	Q	R	XLPE/CPE
	S	T	XLPE/Haloarrest

*For 1000 and 3000 Series cables only.

Specifications

- UL Subject 1277 TC
- UL 1685 (UL1581) Vertical Tray Flame Test comparable to IEEE 383-1974 (70,000 BTU/hr.) Flame Test
- NEC Type TC Listed, which is approved for cable tray use in Class 1, Division 2 areas, per NEC Articles 340, 318 and 501 and for Class 1 circuits as permitted in Article 725
- PVC-nylon/PVC constructions are NEC Type NPLF Listed, which is approved for use in Non Power-Limited Fire Protective Signaling circuits, per NEC Article 760
- PVC-Nylon/PVC, XLPE/PVC and XLPE/CPE constructed cables meet IEEE 1202/IEEE 383-2003/FT4 (70,000 BTU) Flame Test
- XLPE/Haloarrest cables are UL 1277 TC-LS rated

TC-ER Rated Cables

As an option, Belden offers all PVC-nylon/PVC, XLPE/PVC and XLPE/CPE jacketed tray cables with a TC-ER (Exposed Run) rating, formerly referred to as Open Wiring.

Per NEC Article 336, a TC-ER rated cable may be installed in an industrial establishment between a cable tray and the utilization equipment or device. A TC-ER rated cable must meet the crush and impact requirements of UL Type MC cable. By eliminating the need for metal conduit and/or armor, using a TC-ER rated cable results in savings in both installation and maintenance.

MC Cable Ratings Optional

Customize any 600V TC instrumentation cable, with armor and a full-sized ground. See chart below to specify.

To Specify MC Rated Cable

1	2	3456	A
Overall Jacket Type	Armor Type	Core 4-digit Part No. 600V TC Instrumentation	Conductor, Insulation, Inner Jacket Type

Overall Jacket

Code	Material
1	PVC
3	CPE
4	TPE
5	HDPE
6	Oil Res II
7	Haloarrest

Armor

Code	Material
2	Aluminum Interlock
3	Steel Interlock

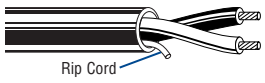
Standard lengths may be subject to tolerance. Custom lengths may be available upon request. Contact the Belden Electronics Division Customer Service Department for additional information. 1-800-BELDEN-1.

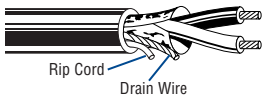
UL Instrumentation Cable

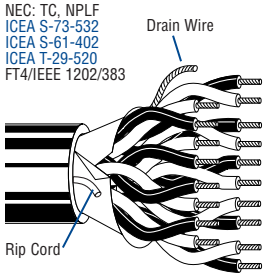
600V Tray Cables

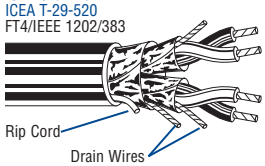
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
18 AWG Pairs Stranded (19x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9486**	1	E2	1000	304.8	43.0	19.5	.048	1.22	.275	6.99	50	222	2.75	69.85
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9341**	1	E2	500 1000	152.4 304.8	22.0 43.0	10.0 19.5	.048	1.22	.276	7.01	63	280	2.75	69.85
18 AWG Pairs Stranded (7x26) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1120A**	1	E2	10000 †	3048.0	450.0	204.3	.048	1.22	.278	7.06	59	262	2.80	71.12
	3088A	1	E1	10000 †	3048.0	510.0	231.3	.048	1.22	.278	7.06	67	298	2.80	71.12
	1063A	2	E1	10000 †	3048.0	790.0	358.3	.053	1.35	.407	10.34	112	498	4.10	104.14
	1064A	4	E1	7500 †	2286.0	892.5	404.8	.053	1.35	.470	11.94	202	899	4.70	119.38
	1065A	8	E1	7500 †	2286.0	1650.0	748.4	.064	1.63	.599	15.21	381	1695	6.00	152.40
	1066A	12	E1	5000 †	1524.0	1520.0	689.5	.064	1.63	.717	18.21	560	2491	7.20	182.88
	1067A	16	E1	5000 †	1524.0	1905.0	864.1	.064	1.63	.793	20.14	739	3287	8.00	203.20
	1068A	24	E1	2500 †	762.0	1487.5	674.7	.084	2.13	1.017	25.83	1098	4884	10.30	261.62
	1087A	36	E1	1250 †	381.0	1005.0	455.9	.084	2.13	1.178	29.97	1635	7273	11.70	297.18
	1088A	50	E1	Bulk ††	Bulk	—	—	.084	2.13	1.446	36.73	2262	10062	14.50	368.30
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1048A**	2	E1	7500 †	2286.0	622.5	282.4	.048	1.22	.381	9.68	140	623	3.80	96.52
	1049A	4	E1	7500 †	2286.0	1057.5	479.7	.053	1.35	.489	12.42	258	1148	4.90	124.46
	1050A	8	E1	7500 †	2286.0	1965.0	891.3	.064	1.63	.654	16.61	350	1557	6.60	167.64
	1051A	12	E1	5000 †	1524.0	1915.0	868.6	.064	1.63	.785	19.94	728	3238	7.90	200.66
	1052A	16	E1	2500 †	762.0	1267.5	574.9	.084	2.13	.898	22.81	963	4284	9.00	228.60
	1053A	24	E1	2500 †	762.0	1907.5	865.2	.084	2.13	1.115	28.32	1434	6379	11.10	281.94
	1054A	36	E1	1250 †	381.0	1270.0	576.1	.084	2.13	1.299	32.99	2139	9515	13.00	330.20
	1038A	50	E1	Bulk ††	Bulk	—	—	.084	2.13	1.527	38.79	2962	13176	15.30	388.62









E1, E2 = Refer to Technical Information section for color code. Alternate color coding available upon request.
Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234 Start with Part No. **A** Add or replace letter code for desired conductor, insulation & jacket **E** Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

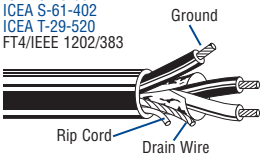
**For 1000 and 3000 Series cables only.

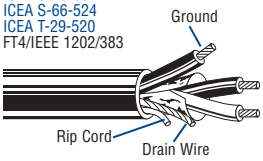
UL Instrumentation Cable

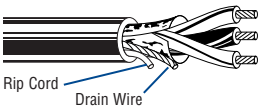
600V Tray Cables

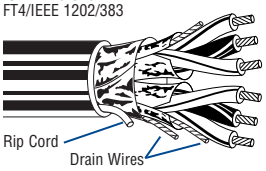
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
18 AWG Pairs Stranded (7x26) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3088AE**	1	E1	1000 5000 †	3048.0 1524.0	63.0 320.0	28.6 145.3	.048	1.22	.340	8.64	80	356	3.40	86.36
Overall Beldfoil Shield (100% Coverage) • XLPE Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-66-524 ICEA T-29-520 FT4/IEEE 1202/383	**3088CE**	1	E1	1000 5000 †	3048.0 1524.0	66.0 375.0	30.0 170.3	.048	1.22	.340	8.64	80	356	3.40	86.36
18 AWG Triads Stranded (7x26) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1121A**	1	E2	500 † 1000 † 10000 †	152.4 304.8 3048.0	27.5 53.0 560.0	12.5 24.0 254.0	.048	1.22	.282	7.16	90	400	2.75	69.85
	3089A	1	E1	10000 †	3048.0	590.0	267.6	.048	1.22	.284	7.21	90	400	2.75	69.85
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3064A**	2	E1	Bulk ††	Bulk	—	—	.048	1.22	.493	12.52	185	823	4.75	120.65
	1093A	4	E1	7500 †	2286.0	1545.0	700.8	.063	1.60	.577	14.66	347	1544	6.00	152.40
	1094A	8	E1	5000 †	1524.0	1755.0	796.1	.063	1.60	.745	18.92	672	2989	7.50	190.50
	1095A	12	E1	2500 † 5000 †	762.0 1524.0	1320.0 2875.0	598.8 1304.1	.084	2.13	.944	23.98	997	4435	9.75	247.65
	3066A	16	E1	Bulk ††	Bulk	—	—	.084	2.13	1.046	26.57	1322	5881	10.50	266.70
	1096A	24	E1	Bulk ††	Bulk	—	—	.084	2.13	1.284	32.61	1971	8767	13.00	330.20









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†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234 Start with Part No. **A** Add or replace letter code for desired conductor, insulation & jacket **E** Add for Exposed Run rating if desired

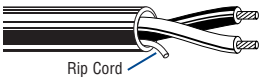
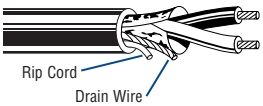
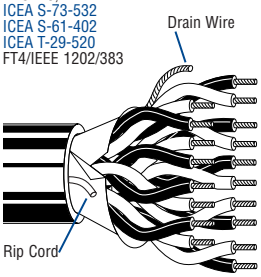
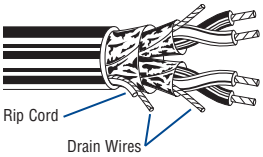
Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

UL Instrumentation Cable

600V Tray Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
16 AWG Pairs Stranded (19x29) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9487**	1	E2	500 1000	152.4 304.8	25.5 54.0	11.6 24.5	.048	1.22	.295	7.49	70	311	3.00	76.20
															
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9342**	1	E2	500 1000	152.4 304.8	27.5 56.0	12.7 25.4	.048	1.22	.296	7.52	105	467	3.00	76.20
															
16 AWG Pairs Stranded (7x24) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1118A**	1	E2	10000 †	3048.0	550.0	249.5	.047	1.19	.294	7.47	105	467	3.00	76.20
	**3090A**	1	E1	2500 †	762.0	150.0	68.0	.047	1.19	.295	7.49	105	467	3.00	76.20
	1069A	2	E1	7500 †	2286.0	712.5	323.2	.047	1.19	.456	11.58	179	796	4.60	116.84
	1527A	3	E1	7500 †	2286.0	1042.5	472.9	.047	1.19	.482	12.24	241	1072	4.80	121.92
	1070A	4	E1	7500 †	2286.0	1357.5	615.8	.063	1.60	.560	14.22	321	1428	5.60	142.24
	1071A	8	E1	7500 †	2286.0	2242.5	1017.2	.063	1.60	.676	17.17	607	2700	6.80	172.72
	1072A	12	E1	5000 †	1524.0	1047.5	475.2	.063	1.60	.812	20.63	893	3972	8.10	205.74
	1073A	16	E1	2500 †	762.0	1442.5	654.3	.085	2.16	.946	24.03	1178	5240	9.30	236.22
	1074A	24	E1	1250 †	381.0	2115.0	959.4	.085	2.16	1.158	29.41	1749	7780	11.60	294.64
	1089A	36	E1	1250 †	381.0	1388.7	629.9	.085	2.16	1.321	33.55	2606	11592	13.20	335.28
	1090A	50	E1	Bulk ††	Bulk	—	—	.085	2.16	1.551	39.40	3606	16040	15.50	393.70
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1055A**	2	E1	7500 †	2286.0	885.0	401.8	.047	1.19	.476	12.09	223	992	4.16	105.66
	**1037A**	3	E1	7500 †	2286.0	1072.5	486.5	.047	1.19	.504	12.80	290	1290	5.00	127.0
	1039A	4	E1	7500 †	2286.0	1472.5	667.9	.063	1.60	.584	14.83	411	1828	5.80	147.32
	1040A	6	E1	5000 †	1524.0	1435.0	650.9	.063	1.60	.682	17.32	428	1904	6.80	172.72
	1041A	8	E1	5000 †	1524.0	1805.0	818.8	.063	1.60	.738	18.75	786	3496	7.40	187.96
	1042A	12	E1	2500 †	762.0	1327.5	602.2	.085	2.16	.935	23.75	1161	5164	9.40	238.76
	1043A	16	E1	2500 †	762.0	1765.0	800.6	.085	2.16	1.035	26.29	1537	6837	10.40	264.16
	1044A	20	E1	2500 †	762.0	2062.5	935.6	.085	2.16	1.146	29.11	1912	8505	11.50	292.10
	1045A	24	E1	1250 †	381.0	1241.3	563.1	.085	2.16	1.272	32.31	2287	10173	12.70	322.58
	1046A	36	E1	Bulk ††	Bulk	—	—	.085	2.16	1.454	36.93	3413	15182	14.50	368.30
	1047A	50	E1	Bulk ††	Bulk	—	—	.120	3.05	1.781	45.24	4726	21022	17.80	452.12

E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:		
1234	**A**	**E**
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

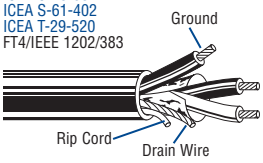
**For 1000 and 3000 Series cables only.

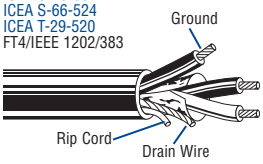
UL Instrumentation Cable

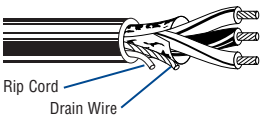
600V Tray Cables

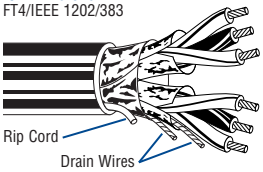
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
16 AWG Pairs Stranded (7x24) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3090AE**	1	E1	1000 5000 †	304.8 1524.0	65.0 340.0	29.5 154.4	.048	1.22	.390	9.91	130	578	3.90	99.06
Overall Beldfoil Shield (100% Coverage) • XLPE Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-66-524 ICEA T-29-520 FT4/IEEE 1202/383	**3090CE**	1	E1	1000 5000 †	3048.0 1524.0	81.0 450.0	39.8 204.3	.048	1.22	.390	9.91	130	578	3.90	99.06
16 AWG Triads Stranded (7x24) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1119A**	1	E2	500 † 1000 † 10000 †	152.4 304.8 3048.0	35.0 68.0 700.0	15.9 30.9 317.5	.047	1.19	.310	7.87	129	574	3.10	78.74
	3091A	1	E1	10000 †	3048.0	750.0	340.2	.047	1.19	.310	7.87	129	574	3.10	78.74
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1097A**	4	E1	5000 †	1524.0	1415.0	641.8	.063	1.60	.640	16.26	554	2464	6.40	162.56
	1098A	8	E1	2500 †	762.0	1350.0	612.4	.085	2.16	.872	22.15	1072	4768	8.70	220.98
	1099A	12	E1	2500 †	762.0	1875.0	850.5	.085	2.16	1.047	26.59	1590	7073	10.50	266.70
	3118A	16	E1	Bulk ††	Bulk	—	—	.084	2.13	1.234	31.34	1771	7878	12.25	311.15
	1100A	24	E1	Bulk ††	Bulk	—	—	.085	2.16	1.434	36.42	3144	13985	14.30	363.22
	3130A	36	E1	Bulk ††	Bulk	—	—	.110	2.79	1.773	45.03	3600	16013	18.00	457.20









E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234 Start with Part No. **A** Add or replace letter code for desired conductor, insulation & jacket **E** Add for Exposed Run rating if desired

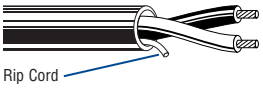
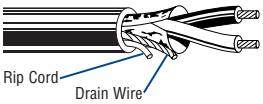
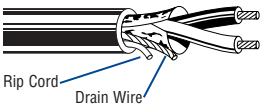
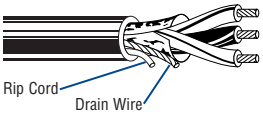
Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

UL Instrumentation Cable

600V Tray Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
14 AWG Pairs Stranded (42x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9488**	1	E2	1000	304.8	77.0	34.9	.048	1.22	.359	9.12	107	476	3.75	95.25
															
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9343**	1	E2	500 1000	152.4 304.8	42.5 86.0	19.1 39.0	.048	1.22	.358	9.09	160	712	3.75	95.25
															
14 AWG Pairs Stranded (7x22) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3080A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.342	8.69	160	712	3.50	88.90
															
14 AWG Triads Stranded (7x22) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3081A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.361	9.17	200	890	3.50	88.90
															

E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

*Bulk = Check length available for specific construction.

To Specify:

1234 Start with Part No. **A** Add or replace letter code for desired conductor, insulation & jacket **E** Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

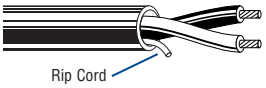
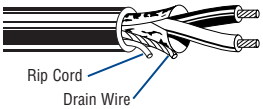
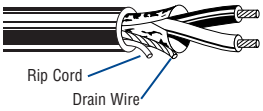
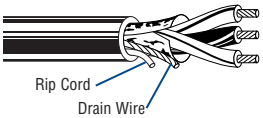
Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

UL Instrumentation Cable

600V Tray Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
12 AWG Pairs Stranded (37x27) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9489**	1	E2	1000	304.8	88.0	39.9	.045	1.14	.380	9.65	170	756	3.75	95.25
															
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9344**	1	E2	500 1000	152.4 304.8	54.0 111.0	24.5 50.4	.045	1.14	.384	9.75	253	1125	3.75	95.25
															
12 AWG Pairs Stranded (7x20) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3103A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.380	9.65	253	1125	3.80	96.52
															
12 AWG Triads Stranded (7x20) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3104A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.401	10.19	315	1401	4.00	101.60
															

E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

*Bulk = Check length available for specific construction.

To Specify:

1234 Start with Part No. **A** Add or replace letter code for desired conductor, insulation & jacket **E** Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

UL Control Cable

600V Type TC Cables — Overview

Introduction

Belden offers a wide selection of UL-rated 600V Tray Cable for a variety of control applications.

Multi-conductor versions are available as standards from 18 to 1 AWG. 1/0 through 4/0 are also available as custom made constructions. These are unshielded and shielded versions that come with various insulation and jacket combinations.

These TC cables are installed in cable trays, ducts and conduit and can be used in direct burial applications. They are extensively used in manufacturing facilities, especially in the process industries such as petrochemical, steel, pulp and paper, cement and mining.

These flexible, space efficient cables can be substantially more economical than traditional wiring methods.

Construction

Soft annealed bare or tinned copper conductors, with various insulation and jacketing options as seen in chart below.

Application

These cables are suitable for installation in wet or dry locations. Cable jackets are resistant to sunlight, moisture and vapor penetration. The cables can be used in raceways (supported by messenger wire), outdoor applications and direct burial applications.

Unshielded

Cabled non-shielded conductors provide a minimal O.D. allowing greater tray and conduit fill. Non-shielded control cable may be utilized when recommended by the equipment manufacturer and used in a metallic conduit.

Overall Shield

Recommended for use in control applications where signals are transmitted in excess of 100 millivolts, except in areas where high voltage and current sources create excessive noise interference. The Beldfoil® shield with drain wire provides 100% coverage for maximum shield effectiveness. Copper tape shield available upon request.

Only 2-conductor round constructions can be shielded. Flat constructions cannot be shielded.

Tray Cable Construction Options

UL Listed for MC and TC				
Insulation/Jacket	Max. Temp Rating		Flame Tests	Ratings*
	Wet	Dry		
PVC-Nylon/PVC (THHN or THWN) 14 AWG & larger	75°C	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-61-402
PVC-Nylon/PVC (TFN or TFFN) 16 & 18 AWG	NA	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-61-402
XLPE/PVC or CPE (XHHW–2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-66-524
XLPE/PVC or CPE (RFH–2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-66-524
FRPO/PVC 18 AWG & larger	—	75°C	UL 1685	
TPE/TPE	75°C	90°C	UL 1685	
FRPO/PVC	75°C	90°C	UL 1685	
XLPE/Haloarrest® (XHHW-2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	TC-LS
XLPE/Haloarrest (RFH-2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	TC-LS
FEP/PVC	90°C	90°C	UL 1685	

CPE = Chlorinated Polyethylene • FEP = Fluorinated Ethylene-propylene • FRPO = Flame-retardant Polyolefin • PVC = Polyvinyl Chloride • TPE = Thermoplastic Elastomer • XLPE = Cross-linked Polyethylene

*Applicable to TC-rated cables only.

Ground Wire

- Non-insulated, bare copper ground wires are included for constructions 8 through 1 AWG. Non-insulated, bare copper, full sized ground wires may be requested on other constructions.
- All shielded PVC-Nylon/PVC constructions include full sized ground (drain) wires.

Color Code

Multi-conductor control cables (10 AWG to 18 AWG) are printed alpha-numerically in addition to being color coded per ICEA Table E2.

8 AWG and larger are black and numbered per ICEA Method 4.

Refer to Technical Information Section for ICEA color code charts.

Specifications

- UL Subject 1277 Type TC
- XLPE/Haloarrest jacketed cables are UL 1277 TC-LS rated
- UL Subject 1424 (per outline for NPLF requirements dated May 3, 1979)
- UL 1685 (UL 1581) Vertical Flame Test comparable to IEEE 383-1974 (70,000 BTU/hr) Flame Test
- Approved for cable tray use in Class 1, Division 2 areas, per NEC Articles 340, 318 and 501, and for Class 1 circuits as permitted in Article 725
- PVC-Nylon/PVC, XLPE/PVC and XLPE/CPE constructed cables meet IEEE 1202/IEEE 383-2003/FT4 (70,000 BTU/hr) Flame Test

TC-ER Rated Cables

As an option, Belden offers all PVC-nylon/PVC, XLPE/PVC and XLPE/CPE jacketed tray cables with a TC-ER (Exposed Run) rating, formerly referred to as Open Wiring.

Per NEC Article 336, a TC-ER rated cable may be installed in an industrial establishment between a cable tray and the utilization equipment or device. A TC-ER rated cable must meet the crush and impact requirements of UL Type MC cable. By eliminating the need for metal conduit and/or armor, using a TC-ER rated cable results in savings in both installation and maintenance.

Standard lengths may be subject to tolerance. Custom lengths may be available upon request. Contact the Belden Electronics Division Customer Service Department for additional information. 1-800-BELDEN-1

UL Control Cable

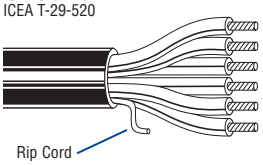
600V Type TC Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

18 AWG Multi-conductor Stranded (7x26) Bare Copper Conductors

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520

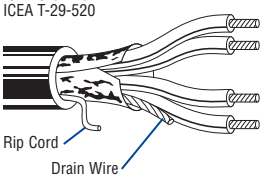


Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	27916A†	2	E2	Bulk	Bulk	33.0	49.1	.045	1.14	.180 x .266	4.57 x 6.76	44	195.8	2.7	68.58
	27325A††	2	E2	Bulk	Bulk	34.0	50.6	.045	1.14	.270	6.86	44	195.8	2.7	68.58
	27334A	3	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.280	7.11	66	293.7	2.8	71.12
	27326A	4	E2	Bulk	Bulk	52.0	77.4	.045	1.14	.310	7.87	88	391.6	3.1	78.74
	27335A	5	E2	Bulk	Bulk	62.0	92.3	.045	1.14	.330	8.38	110	489.5	3.3	83.82
	27600A	6	E2	Bulk	Bulk	72.0	107.2	.045	1.14	.350	8.89	132	587.4	3.5	88.90
	27327A	7	E2	Bulk	Bulk	79.0	117.6	.045	1.14	.350	8.89	154	685.3	3.5	88.90
	27601A	8	E2	Bulk	Bulk	89.0	132.5	.045	1.14	.390	9.83	176	783.2	3.8	96.52
	27336A	9	E2	Bulk	Bulk	104.0	154.8	.045	1.14	.410	10.41	198	881.1	4.1	104.14
	27328A	10	E2	Bulk	Bulk	111.0	165.2	.060	1.52	.450	11.43	220	979.0	4.5	114.30
	27602A	11	E2	Bulk	Bulk	—	—	.060	1.52	.450	11.43	242	1076.9	4.5	114.30
	27329A	12	E2	Bulk	Bulk	127.0	189.0	.060	1.52	.450	11.43	264	1174.8	4.5	114.30
	27603A	13	E2	Bulk	Bulk	142.0	211.3	.060	1.52	.470	11.94	286	1272.7	4.7	119.38
	27604A	14	E2	Bulk	Bulk	—	—	.060	1.52	.480	12.19	308	1370.6	4.8	121.92
	27605A	15	E2	Bulk	Bulk	175.0	260.4	.060	1.52	.510	12.95	330	1468.5	5.1	129.54
	27606A	16	E2	Bulk	Bulk	167.0	248.5	.060	1.52	.500	12.70	352	1566.4	5.0	127.00
	27607A	17	E2	Bulk	Bulk	—	—	.060	1.52	.570	14.48	374	1664.3	5.7	144.78
	27608A	18	E2	Bulk	Bulk	196.0	291.7	.060	1.52	.570	14.48	396	1762.2	5.7	144.78
	27609A	19	E2	Bulk	Bulk	202.0	300.6	.060	1.52	.570	14.48	418	1860.1	5.7	144.78
	27610A	20	E2	Bulk	Bulk	214.0	318.5	.060	1.52	.600	15.24	440	1958.0	5.9	149.86
	27611A	25	E2	Bulk	Bulk	258.0	384.0	.060	1.52	.660	16.76	550	2447.5	6.6	167.64
	27612A	30	E2	Bulk	Bulk	300.0	446.5	.060	1.52	.690	17.53	660	2937.0	6.6	167.64
	27613A	37	E2	Bulk	Bulk	360.0	535.8	.080	2.03	.740	18.80	814	3622.3	7.4	187.96
	27614A	50	E2	Bulk	Bulk	511.0	760.5	.080	2.03	.910	23.11	1100	4895.0	9.1	231.14
	27632A	60	E2	Bulk	Bulk	627.0	933.1	.080	2.03	.960	24.38	1320	5874.0	9.6	243.84

18 AWG Multi-conductor Stranded (7x26) Bare Copper Conductors • Overall Beldfoil® Shield (100% Coverage) with Drain Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520



	27325AS	2	E2	Bulk	Bulk	34.0	50.6	.045	1.14	.270	6.86	67	298	2.70	68.58
	27334AS	3	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.280	7.11	90	400	2.80	71.12
	27326AS	4	E2	Bulk	Bulk	60.0	89.3	.045	1.14	.300	7.62	112	498	3.10	81.28

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	**B**	PVC-Nylon/PVC
C	**D**	XLPE/PVC
E	**F**	FRPO/PVC
G	**H**	XLPE/TPE
K	**L**	TPE/TPE
M	**N**	PVC-Nylon/Oil Res II
Q	**R**	XLPE/CPE
S	**T**	XLPE/Haloarrest®

UL Control Cable

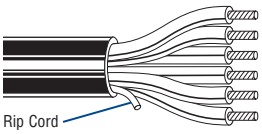
600V Type TC Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

16 AWG Multi-conductor Stranded (7x24) Bare Copper Conductors

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520

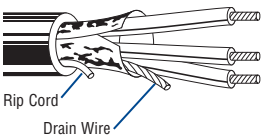


Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
27917A†	2	E2	Bulk	Bulk	42.0	62.5	.045	1.14	.190 x .290	4.83 x 7.37	70	312	2.9	73.66
27337A††	2	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.299	7.60	70	312	2.9	73.66
27331A	3	E2	Bulk	Bulk	55.0	81.9	.045	1.14	.307	7.80	105	467	3.1	78.74
27338A	4	E2	Bulk	Bulk	69.0	102.7	.045	1.14	.332	8.18	140	623	3.3	83.82
27339A	5	E2	Bulk	Bulk	83.0	123.5	.045	1.14	.360	9.14	175	779	3.6	91.44
27615A	6	E2	Bulk	Bulk	96.0	142.9	.045	1.14	.390	9.91	210	935	3.9	99.06
27323A	7	E2	Bulk	Bulk	106.0	157.7	.045	1.14	.390	9.91	245	1090	3.9	99.06
27616A	8	E2	Bulk	Bulk	122.0	181.6	.045	1.14	.420	10.67	280	1246	4.2	106.68
27340A	9	E2	Bulk	Bulk	138.0	200.4	.045	1.14	.450	11.43	315	1402	4.5	114.30
27617A	10	E2	Bulk	Bulk	149.0	221.7	.045	1.14	.490	12.45	350	1558	4.9	124.46
27618A	11	E2	Bulk	Bulk	161.0	239.6	.045	1.14	.490	12.45	385	1713	4.9	124.46
27341A	12	E2	Bulk	Bulk	174.0	258.9	.045	1.14	.500	12.70	420	1869	5.0	127.00
27619A	13	E2	Bulk	Bulk	203.0	302.1	.045	1.14	.570	14.48	455	2025	5.7	144.78
27620A	14	E2	Bulk	Bulk	223.0	331.8	.045	1.14	.570	14.48	490	2181	5.7	144.78
27621A	15	E2	Bulk	Bulk	229.0	340.8	.060	1.52	.590	14.99	525	2336	5.9	149.86
27330A	16	E2	Bulk	Bulk	241.0	358.7	.045	1.14	.600	15.24	560	2492	6.0	152.40
27622A	17	E2	Bulk	Bulk	267.0	397.3	.060	1.52	.630	16.00	595	2648	6.3	160.02
27623A	18	E2	Bulk	Bulk	—	—	.060	1.52	.630	16.00	630	2804	6.3	160.02
27624A	19	E2	Bulk	Bulk	287.0	427.1	.060	1.52	.630	16.00	665	2959	6.3	160.02
27625A	20	E2	Bulk	Bulk	304.0	452.4	.060	1.52	.660	16.76	700	3115	6.6	167.64
27324A	25	E2	Bulk	Bulk	367.0	546.1	.080	2.03	.730	18.54	875	3894	7.3	185.42
27626A	30	E2	Bulk	Bulk	428.0	636.9	.080	2.03	.770	19.56	1050	4673	7.7	195.58
27627A	37	E2	Bulk	Bulk	514.0	764.8	.080	2.03	.830	21.08	1295	5763	8.3	210.82
27628A	50	E2	Bulk	Bulk	723.0	1075.8	.080	2.03	1.000	25.40	1750	7788	10.0	254.00
27633A	60	E2	Bulk	Bulk	844.0	1255.9	.080	2.03	1.100	27.94	2100	9345	11.0	279.40

16 AWG Multi-conductor Stranded (7x24) Bare Copper Conductors • Overall Beldfoil® Shield (100% Coverage) with Drain Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520



Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
27337AS	2	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.302	7.67	94	418	3.00	76.20
27331AS	3	E2	Bulk	Bulk	55.0	81.8	.045	1.14	.320	8.13	130	578	3.20	81.28

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

UL Control Cable

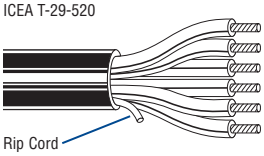
600V Type TC Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

14 AWG Multi-conductor Stranded (7x22) Bare Copper Conductors

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520

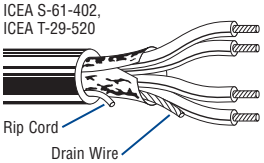


Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	27080A†	2	E2	1000 Bulk	304.8 Bulk	61.0 61.0	27.7 27.7	.045	1.14	.210 x .320	5.33 x 8.13	108	481	3.5	88.90
	27636A††	2	E2	Bulk	Bulk	62.0	92.3	.045	1.14	.320	8.13	108	481	3.2	81.28
	27081A	3	E2	1000 Bulk	304.8 Bulk	86.0 86.0	39.0 39.0	.045	1.14	.340	8.64	162	721	3.4	86.36
	27082A	4	E2	1000 Bulk	304.8 Bulk	110.0 110.0	49.9 49.9	.045	1.14	.360	9.14	216	961	3.6	91.44
	27083A	5	E2	Bulk	Bulk	118.0	175.6	.045	1.14	.400	10.16	270	1202	3.9	99.06
	27084A	6	E2	Bulk	Bulk	140.0	208.3	.045	1.14	.434	11.02	324	1442	4.3	109.22
	27085A	7	E2	Bulk	Bulk	153.0	227.7	.045	1.14	.433	11.00	378	1682	4.3	109.22
	27086A	8	E2	Bulk	Bulk	173.0	257.5	.045	1.14	.480	12.19	432	1922	4.7	119.38
	27087A	9	E2	Bulk	Bulk	196.0	291.7	.045	1.14	.510	12.95	486	2163	5.1	129.54
	27088A	10	E2	Bulk	Bulk	230.0	342.3	.060	1.52	.588	14.94	540	2403	5.7	144.78
	27089A	11	E2	Bulk	Bulk	251.0	373.6	.060	1.52	.595	15.11	594	2643	5.9	149.86
	27090A	12	E2	Bulk	Bulk	270.0	401.8	.060	1.52	.595	15.11	648	2884	5.9	149.86
	27091A	13	E2	Bulk	Bulk	—	—	.060	1.52	.640	16.26	702	3124	6.3	160.02
	27092A	14	E2	Bulk	Bulk	308.0	458.3	.060	1.52	.640	16.26	756	3364	6.3	160.02
	27093A	15	E2	Bulk	Bulk	330.0	491.1	.060	1.52	.670	17.02	810	3605	6.7	170.18
	27094A	16	E2	Bulk	Bulk	343.0	510.5	.060	1.52	.671	17.04	864	3845	6.6	167.64
	27095A	17	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	918	4085	7.0	177.80
	27096A	18	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	972	4325	7.0	177.80
	27097A	19	E2	Bulk	Bulk	396.0	589.3	.060	1.52	.705	17.91	1026	4566	7.0	177.80
	27098A	20	E2	Bulk	Bulk	425.0	632.5	.060	1.52	.735	18.67	1080	4806	7.4	187.96
	27099A	21	E2	Bulk	Bulk	438.0	651.7	.060	1.52	.740	18.80	1134	5046	7.4	187.96
	27100A	22	E2	Bulk	Bulk	—	—	.060	1.52	.760	19.30	1188	5287	7.6	193.04
	27101A	23	E2	Bulk	Bulk	—	—	.060	1.52	.760	19.30	1242	5527	7.6	193.04
	27102A	24	E2	Bulk	Bulk	495.0	736.7	.060	1.52	.810	20.57	1296	5767	8.1	205.74
	27103A	25	E2	Bulk	Bulk	560.0	833.4	.060	1.52	.810	20.57	1350	6008	8.1	205.74
	27104A	26	E2	Bulk	Bulk	—	—	.060	1.52	.810	20.57	1404	6248	8.1	205.74
	27105A	27	E2	Bulk	Bulk	587.0	873.5	.080	2.03	.870	22.10	1458	6488	8.7	220.98
	27106A	28	E2	Bulk	Bulk	—	—	.080	2.03	.910	23.11	1512	6728	9.1	231.14
	27107A	29	E2	Bulk	Bulk	680.0	1012.0	.080	2.03	.910	23.11	1566	6969	9.1	231.14
	27108A	30	E2	Bulk	Bulk	639.0	950.8	.080	2.03	.902	22.91	1620	7209	9.0	228.60
	27629A	37	E2	Bulk	Bulk	768.0	1142.9	.080	2.03	.975	24.77	1998	8891	9.7	246.38
	27912A	50	E2	Bulk	Bulk	1080.0	1607.3	.080	2.03	1.138	28.91	2700	12015	11.3	287.02

14 AWG Multi-conductor Stranded (7x22) Bare Copper Conductors • Overall Beldfoil® Shield (100% Coverage) with Drain Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532, ICEA S-95-658
ICEA S-61-402,
ICEA T-29-520



	27081AS	3	E2	Bulk	Bulk	80.0	119.1	.045	1.14	.340	8.64	99	440	3.4	86.36
	27082AS	4	E2	Bulk	Bulk	105.0	156.3	.045	1.14	.391	9.93	273	1214	3.9	99.06

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

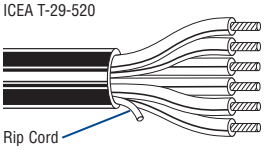
Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

UL Control Cable

600V Type TC Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Cond.	Color Code	Standard Lengths		Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs./ 1000′	kg/km	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
12 AWG Multi-conductor Stranded (7x20) Bare Copper Conductors															
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27109A**†	2	E2	1000 Bulk	304.8 Bulk	74.0 74.0	110.0 110.0	.045	1.14	.220 x .350	5.59 x 8.89	172	765	3.5	88.90
	27641A††	2	E2	Bulk	Bulk	86.0	128.0	.045	1.14	.360	9.14	172	765	3.6	91.44
	27110A	3	E2	1000 Bulk	304.8 Bulk	110.0 110.0	163.7 163.7	.045	1.14	.374	9.50	258	1148	3.7	93.98
	27111A	4	E2	1000 Bulk	304.8 Bulk	134.0 134.0	199.0 199.0	.045	1.14	.410	10.41	344	1531	4.1	104.14
	27112A	5	E2	Bulk	Bulk	165.0	245.6	.045	1.14	.450	11.43	430	1914	4.5	114.30
	27113A	6	E2	Bulk	Bulk	197.0	293.2	.045	1.14	.480	12.19	516	2296	4.8	121.92
	27114A	7	E2	Bulk	Bulk	216.0	321.5	.045	1.14	.480	12.19	602	2679	4.8	121.92
	27115A	8	E2	Bulk	Bulk	263.0	391.4	.060	1.52	.560	14.22	688	3062	5.6	142.24
	27116A	9	E2	Bulk	Bulk	297.0	442.0	.060	1.52	.600	15.24	774	3444	6.0	152.40
	27117A	10	E2	Bulk	Bulk	324.0	482.2	.060	1.52	.660	16.76	860	3827	6.6	167.64
	27118A	11	E2	Bulk	Bulk	—	—	.060	1.52	.670	17.02	946	4210	6.7	170.18
	27119A	12	E2	Bulk	Bulk	378.0	562.5	.060	1.52	.670	17.02	1032	4592	6.7	170.18
	27120A	13	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	1118	4975	7.0	177.80
	27121A	14	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	1204	5358	7.0	177.80
	27122A	15	E2	Bulk	Bulk	468.0	696.5	.060	1.52	.740	18.80	1290	5741	7.4	187.96
	27123A	16	E2	Bulk	Bulk	490.0	729.2	.060	1.52	.750	19.05	1376	6123	7.5	190.50
	27124A	17	E2	Bulk	Bulk	—	—	.060	1.52	.770	19.56	1462	6506	7.7	195.58
	27125A	18	E2	Bulk	Bulk	—	—	.060	1.52	.770	19.56	1548	6889	7.7	195.58
	27126A	19	E2	Bulk	Bulk	568.0	845.3	.060	1.52	.790	20.07	1634	7271	7.9	200.66
	27127A	20	E2	Bulk	Bulk	640.0	952.4	.080	2.03	.870	22.10	1720	7654	8.7	220.98
	27128A	21	E2	Bulk	Bulk	—	—	.080	2.03	.870	22.10	1806	8037	8.7	220.98
	27129A	22	E2	Bulk	Bulk	—	—	.080	2.03	.890	22.61	1892	8419	8.9	226.06
	27130A	23	E2	Bulk	Bulk	—	—	.080	2.03	.890	22.61	1978	8802	8.9	226.06
	27131A	24	E2	Bulk	Bulk	—	—	.080	2.03	.940	23.88	2064	9185	9.4	238.76
	27132A	25	E2	Bulk	Bulk	775.0	1153.4	.080	2.03	.960	24.38	2150	9568	9.6	243.84
	27133A	26	E2	Bulk	Bulk	—	—	.080	2.03	.960	24.38	2236	9950	9.6	243.84
	27134A	27	E2	Bulk	Bulk	828.0	1232.2	.080	2.03	.960	24.38	2322	10333	9.6	243.84
	27135A	28	E2	Bulk	Bulk	—	—	.080	2.03	.990	25.15	2408	10716	9.9	251.46
	27136A	29	E2	Bulk	Bulk	—	—	.080	2.03	.990	25.15	2494	11098	9.9	251.46
	27137A	30	E2	Bulk	Bulk	910.0	1354.3	.080	2.03	1.020	25.91	2580	11481	10.2	259.08
	27630A	37	E2	Bulk	Bulk	1100.0	1637.0	.080	2.03	1.090	27.69	3182	14160	10.9	276.86
	27634A	50	E2	Bulk	Bulk	1450.0	2157.9	.080	2.03	1.300	33.02	4300	19135	13.0	330.20



E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil® Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

UL Control Cable

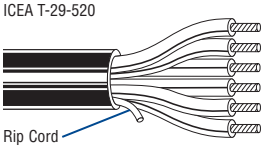
600V Type TC Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

10 AWG Multi-conductor Stranded (7x18) Bare Copper Conductors

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520

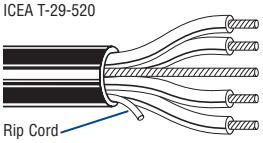


Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	27138A†	2	E2	Bulk	Bulk	83.0	123.5	.045	1.14	.260 x .420	6.60 x 10.67	296	1317	4.2	106.68
	27643A††	2	E2	Bulk	Bulk	131.0	195.0	.045	1.14	.420	10.67	296	1317	4.2	106.68
	27139A	3	E2	1000 Bulk	304.8 Bulk	164.0 164.0	244.0 244.0	.045	1.14	.450	11.43	444	1976	4.5	114.30
	27140A	4	E2	1000 Bulk	304.8 Bulk	216.0 216.0	321.0 321.0	.045	1.14	.490	12.45	592	2634	4.9	124.46
	27141A	5	E2	Bulk	Bulk	276.0	410.7	.060	1.52	.570	14.48	740	3293	5.7	144.78
	27142A	6	E2	Bulk	Bulk	329.0	489.6	.060	1.52	.620	15.75	888	3952	6.2	157.48
	27143A	7	E2	Bulk	Bulk	361.0	537.2	.060	1.52	.620	15.75	1036	4610	6.2	157.48
	27144A	8	E2	Bulk	Bulk	411.0	611.7	.060	1.52	.680	17.27	1184	5269	6.8	172.72
	27145A	9	E2	Bulk	Bulk	465.0	692.0	.060	1.52	.720	18.29	1332	5927	7.2	182.88
	27146A	10	E2	Bulk	Bulk	542.0	806.6	.060	1.52	.790	20.07	1480	6586	7.9	200.66
	27147A	11	E2	Bulk	Bulk	582.0	866.0	.060	1.52	.790	20.07	1628	7245	7.9	200.66
	27148A	12	E2	Bulk	Bulk	620.0	922.7	.080	2.03	.820	20.83	1776	7903	8.2	208.28

8 AWG Multi-conductor Stranded (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520



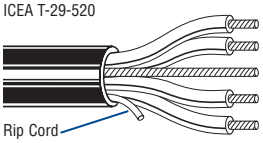
	27149A	2	**	Bulk	Bulk	220.0	327.4	.060	1.52	.560	14.22	384	1709	5.6	142.24
	27150A	3	**	1000 Bulk	304.8 Bulk	354.0 354.0	527.0 527.0	.060	1.52	.590	14.99	576	2563	5.9	149.86
	27151A	4	**	Bulk	Bulk	394.0	327.4	.060	1.52	.650	16.51	768	3418	6.5	165.10

**ICEA Method 4 Color Code

6 AWG Multi-conductor Stranded (7x14) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520



	27152A	2	**	Bulk	Bulk	316.0	434.6	.060	1.52	.630	16.00	610	2715	6.3	160.02
	27153A	3	**	1000 Bulk	304.8 Bulk	477.0 477.0	710.0 710.0	.060	1.52	.670	17.02	915	4072	6.7	170.18
	27154A	4	**	Bulk	Bulk	519.0	759.0	.060	1.52	.730	18.54	1220	5429	7.3	185.42

**ICEA Method 4 Color Code

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil® Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

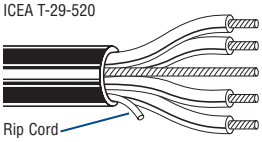
Bare	Tinned	Insulation/Jacket
A	**B**	PVC-Nylon/PVC
C	**D**	XLPE/PVC
E	**F**	FRPO/PVC
G	**H**	XLPE/TPE
K	**L**	TPE/TPE
M	**N**	PVC-Nylon/Oil Res II
Q	**R**	XLPE/CPE
S	**T**	XLPE/Haloarrest®

UL Control Cable

600V Type TC Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Cond.	Color Code	Standard Lengths		Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs./ 1000′	kg/km	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
4 AWG Multi-conductor Stranded (7x12) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire															
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27155A**	2	**	Bulk	Bulk	455.0	677.1	.060	1.52	.770	19.56	970	4317	7.7	195.58
	27156A	3	**	Bulk	Bulk	630.0	937.6	.080	2.03	.820	20.83	1455	6475	8.2	208.28
	27157A	4	**	Bulk	Bulk	850.0	1265.0	.080	2.03	.950	24.13	1940	8633	9.5	241.30

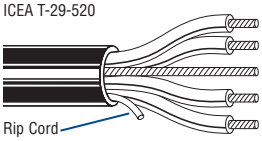


**ICEA Method 4 Color Code

2 AWG Multi-conductor Stranded (7x10) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27158A**	2	**	Bulk	Bulk	716.0	1065.6	.080	2.03	.970	24.64	1544	6871	9.7	246.38
	27159A	3	**	Bulk	Bulk	960.0	1428.7	.080	2.03	.990	25.15	2316	10306	9.9	251.46
	27160A	4	**	Bulk	Bulk	1213.0	1805.2	.080	2.03	1.090	27.69	3088	13742	10.9	276.86

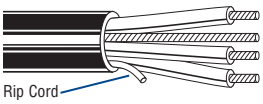


**ICEA Method 4 Color Code

1 AWG Multi-conductor Stranded (19x14) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27161A**	3	**	Bulk	Bulk	—	—	.080	2.03	1.120	28.45	2919	12990	11.2	284.48



**ICEA Method 4 Color Code

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	A	S
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil® Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

CSA Instrumentation & Thermocouple Tray Cable

300V TC/CIC

Paired and Triad Constructions

Cable Specifications

- CSA C22.2 #239 Control and Instrumentation
- CSA C22.2 #230 Type TC
- CSA FT4 70,000 BTU Flame Test
- PVC Insulation 90°C Dry & 75°C Wet
- XLPE Insulation Optional 90°C Dry and Wet
- -40°C Cold Bend, -25°C Cold Impact
- -25°C Installation temp
- Per CEC Part 1, Suitable for use in hazardous locations:
  Class 1 – Zone 2
  Class 2 – Division 2
- Sun Res/UV resistant
- Direct Burial

To Create a Part Number

Add suffixes for Conductor, Insulation and Jacket Type and Shielding as shown below:

A = Bare Copper Conductor or Thermocouple alloy, PVC insulation, PVC Jacket

B = Tinned Copper Conductor, PVC Insulation, PVC Jacket

C = Bare Copper Conductor or Thermocouple alloy, XLPE Insulation, PVC Jacket

D = Tinned Copper Conductor, XLPE Insulation, PVC Jacket

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1 = Overall Foil Shield + Drain Wire

2 = Individual and Overall Foil Shield + Drain Wire

Sample Part Number:

22001B2 = 300V, 2-Pair 20 AWG Tinned Copper Conductor cable with PVC Insulation, PVC Jacket, with Individual and Overall Foil Shields plus Drain Wire

Thermocouple Color Codes

ANSI Symbol	Jacket Color	Insulation Color Code	
		Positive (+)	Negative (-)
EX	Purple	Purple	Red
JX	Black	White	Red
KX	Yellow	Yellow	Red
TX	Blue	Blue	Red

Copper Color Codes

Pairs/Triads	Color Combination
Pairs	Black & White
Triads	Black, White & Red

No. of Pairs	Part Numbers				
	7 Strand Copper	Solid EX Chromel/ Constantan	Solid JX Iron/ Constantan	Solid KX Chromel/ Alumel	Solid TX Copper/ Constantan
20 AWG					
1	22000	21100	21114	21128	21142
2	22001	21101	21115	21129	21143
4	22002	21102	21116	21130	21144
6	22003	21103	21117	21131	21145
8	22004	21104	21118	21132	21146
10	22005	21105	21119	21133	21147
12	22006	21106	21120	21134	21148
16	22007	21107	21121	21135	21149
20	22008	21108	21122	21136	21150
24	22009	21109	21123	21137	21151
30	22010	21110	21124	21138	21152
36	22011	21111	21125	21139	21153
40	22012	21112	21126	21140	21154
50	22013	21113	21127	21141	21155
18 AWG					
1	22027	21156	21170	21184	21198
2	22028	21157	21171	21185	21199
4	22029	21158	21172	21186	21200
6	22030	21159	21173	21187	21201
8	22031	21160	21174	21188	21202
10	22032	21161	21175	21189	21203
12	22033	21162	21176	21190	21204
16	22034	21163	21177	21191	21205
20	22035	21164	21178	21192	21206
24	22036	21165	21179	21193	21207
30	22037	21166	21180	21194	21208
36	22038	21167	21181	21195	21209
40	22039	21168	21182	21196	21210
50	22040	21169	21183	21197	21211
16 AWG					
1	22054	21212	21226	21240	21254
2	22055	21213	21227	21241	21255
4	22056	21214	21228	21242	21256
6	22057	21215	21229	21243	21257
8	22058	21216	21230	21244	21258
10	22059	21217	21231	21245	21259
12	22060	21218	21232	21246	21260
16	22061	21219	21233	21247	21261
20	22062	21220	21234	21248	21262
24	22063	21221	21235	21249	21263
30	22064	21222	21236	21250	21264
36	22065	21223	21237	21251	21265
40	22066	21224	21238	21252	21266
50	22067	21225	21239	21253	21267

Triad Constructions, Copper Conductor

No. of Triads	Part Numbers		
	20 AWG (7 Strand)	18 AWG (7 Strand)	16 AWG (7 Strand)
1	22014	22041	22068
2	22015	22042	22069
4	22016	22043	22070
6	22017	22044	22071
8	22018	22045	22072
10	22019	22046	22073
12	22020	22047	22074
16	22021	22048	22075
20	22022	22049	22076
24	22023	22050	22077
30	22024	22051	22078
36	22025	22052	22079

CSA Control and Power Cable

600V and 1000V TC/CIC Multi-conductor Cables

Cable Specifications

- CSA C22.2 #230 Type TC
- CSA C22.2 #239 Control and Instrumentation (600V only)
- CSA C22.2 #38 Type TC (1000V only)
- CSA FT4 70,000 BTU Flame Test
- 90°C Dry & Wet
- -40°C Cold Bend, -25°C Cold Impact
- -25°C Installation temp
- Per CEC Part 1, Suitable for use in hazardous locations:
  Class 1 — Zone 2
  Class 2 — Division 2
- Sunlight Resistant/UV Resistant
- Direct Burial

To Create a Part Number

Add suffix “S” for Overall Foil Shielding

Sample Part Number:

21500S = 600V CSA Tray Control Cable 2-conductor, 14 AWG Bare Copper Conductor with XLPE Insulation, PVC Jacket, and Overall Foil Shield

Color Codes

No. of Conductors	Color Combination
2	Black & White
3	Black, Red & Blue
4	Black, Red, Blue & White
5 or more	Black & Number Coded

No. of Conductors	Part Numbers					
	14 AWG (7 Strand)		12 AWG (7 Strand)		10 AWG (7 Strand)	
	600V	1000V	600V	1000V	600V	1000V
2	21500	21300	21550	21350	21600	21400
3	21501	21301	21551	21351	21601	21401
4	21502	21302	21552	21352	21602	21402
5	21503	21303	21553	21353	21603	21403
6	21504	21304	21554	21354	21604	21404
7	21505	21305	21555	21355	21605	21405
8	21506	21306	21556	21356	21606	21406
9	21507	21307	21557	21357	21607	21407
10	21508	21308	21558	21358	21608	21408
11	21509	21309	21559	21359	21609	21409
12	21510	21310	21560	21360	21610	21410
13	21511	21311	21561	21361	21611	21411
14	21512	21312	21562	21362	21612	21412
15	21513	21313	21563	21363	21613	21413
16	21514	21314	21564	21364	21614	21414
17	21515	21315	21565	21365	21615	21415
18	21516	21316	21566	21366	21616	21416
19	21517	21317	21567	21367	21617	21417
20	21518	21318	21568	21368	21618	21418
21	21519	21319	21569	21369	21619	21419
22	21520	21320	21570	21370	21620	21420
23	21521	21321	21571	21371	21621	21421
24	21522	21322	21572	21372	21622	21422
25	21523	21323	21573	21373	21623	21423
26	21524	21324	21574	21374	21624	21424
27	21525	21325	21575	21375	21625	21425
28	21526	21326	21576	21376	21626	21426
29	21527	21327	21577	21377	21627	21427
30	21528	21328	21578	21378	21628	21428
31	21529	21329	21579	21379	21629	21429
32	21530	21330	21580	21380	21630	21430
33	21531	21331	21581	21381	21631	21431
34	21532	21332	21582	21382	21632	21432
35	21533	21333	21583	21383	21633	21433
36	21534	21334	21584	21384	21634	21434
37	21535	21335	21585	21385	21635	21435
38	21536	21336	21586	21386	21636	21436
39	21537	21337	21587	21387	21637	21437
40	21538	21338	21588	21388	21638	21438
41	21539	21339	21589	21389	21639	21439
42	21540	21340	21590	21390	21640	21440
43	21541	21341	21591	21391	21641	21441
44	21542	21342	21592	21392	21642	21442
45	21543	21343	21593	21393	21643	21443
46	21544	21344	21594	21394	21644	21444
47	21545	21345	21595	21395	21645	21445
48	21546	21346	21596	21396	21646	21446
49	21547	21347	21597	21397	21647	21447
50	21548	21348	21598	21398	21648	21448

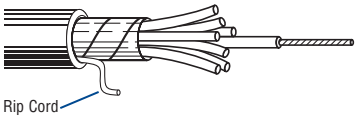
No. of Cond.	Part Numbers									
	8 AWG (7 Strand)		6 AWG (7 Strand)		4 AWG (7 Strand)		3 AWG (7 Strand)		2 AWG (7 Strand)	
	600V	1000V	600V	1000V	600V	1000V	600V	1000V	600V	1000V
2	21650	21450	21653	21453	21656	21456	21659	21459	21662	21462
3	21651	21451	21654	21454	21657	21457	21660	21460	21663	21463
4	21652	21452	21655	21455	21658	21458	21661	21461	21664	21464

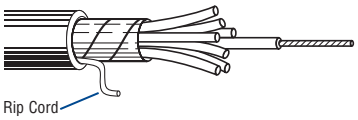
No. of Cond.	Part Numbers									
	1 AWG (19 Strand)		1/0 AWG (19 Strand)		2/0 AWG (19 Strand)		3/0 AWG (19 Strand)		4/0 AWG (19 Strand)	
	600V	1000V	600V	1000V	600V	1000V	600V	1000V	600V	1000V
2	21665	21465	21668	21468	21671	21471	21674	21474	21677	21477
3	21666	21466	21669	21469	21672	21472	21675	21475	21678	21478
4	21667	21467	21670	21470	21673	21473	21676	21476	21679	21479

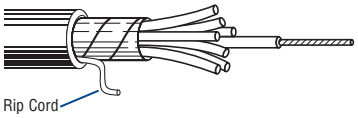
CSA Control Cable

600V CIC Multi-conductor Cables

Description	Part Number	No. of Cond.	Cable Weight		Insulation Thickness		Jacket Thickness		Nominal OD	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm
14 AWG Stranded (7x22) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22100**	2	62	92	.030	.76	.045	1.14	.367	9.32
	22101	3	81	121	.030	.76	.045	1.14	.388	9.86
	22102	4	101	150	.030	.76	.045	1.14	.423	10.74
	22103	5	122	182	.030	.76	.045	1.14	.462	11.74
	22104	6	143	213	.030	.76	.045	1.14	.504	12.80
	22105	7	160	238	.030	.76	.045	1.14	.504	12.80
	22106	8	197	293	.030	.76	.060	1.52	.576	14.63
	22107	9	220	327	.030	.76	.060	1.52	.618	15.70
	22108	10	226	336	.030	.76	.060	1.52	.669	17.00
	22110	12	279	415	.030	.76	.060	1.52	.689	17.50
	22114	16	357	531	.030	.76	.060	1.52	.764	19.41
-25°C Installed -40°C to +90°C (Dry) (75°C Wet)	**22118**	20	467	695	.030	.76	.080	2.03	.886	22.50
12 AWG Stranded (7x20) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22120**	2	82	122	.030	.76	.045	1.14	.405	10.29
	22121	3	109	162	.030	.76	.045	1.14	.429	10.90
	22122	4	140	208	.030	.76	.045	1.14	.469	11.91
	22123	5	170	253	.030	.76	.045	1.14	.515	13.08
	22124	6	214	319	.030	.76	.060	1.52	.591	15.01
	22125	7	240	357	.030	.76	.060	1.52	.591	15.01
	22126	8	270	402	.030	.76	.060	1.52	.639	16.23
	22127	9	302	449	.030	.76	.060	1.52	.687	17.45
	22128	10	336	500	.030	.76	.060	1.52	.745	18.92
	22130	12	390	580	.030	.76	.060	1.52	.768	19.51
	22134	16	584	869	.030	.76	.080	2.03	.893	22.68
-25°C Installed -40°C to +90°C (Dry) (75°C Wet)	**22138**	20	655	975	.030	.76	.080	2.03	.992	25.20
10 AWG Stranded (7x18) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22140**	2	148	220	.030	.76	.045	1.14	.736	18.69
	22141	3	189	281	.030	.76	.045	1.14	.763	19.38
	22142	4	248	369	.030	.76	.060	1.52	.839	21.31
	22143	5	293	436	.030	.76	.060	1.52	.891	22.63
	22144	6	338	503	.030	.76	.060	1.52	.944	23.98
	22145	7	378	563	.030	.76	.060	1.52	.944	23.98
	22146	8	424	631	.030	.76	.060	1.52	.999	25.38
	22147	9	469	698	.030	.76	.060	1.52	1.074	27.28
	22148	10	548	816	.030	.76	.080	2.03	1.182	30.02
	22150	12	631	939	.030	.76	.080	2.03	1.209	30.71
	22152	14	717	1067	.030	.76	.080	2.03	1.255	31.88
-25°C Installed -40°C to +90°C (Dry) (75°C Wet)	**22154**	16	805	1198	.030	.76	.080	2.03	1.307	33.20



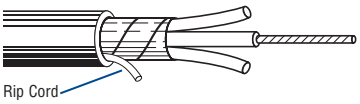




CSA Control Cable

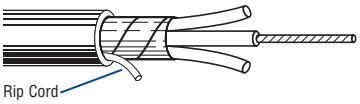
600V CIC Multi-conductor Cables

Description	Part Number	No. of Cond.	Cable Weight		Insulation Thickness		Jacket Thickness		Nominal OD	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm
8 AWG Stranded (7x16) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22160**	2	240	357	.045	1.14	.060	1.52	.863	21.92
	22161	3	308	458	.045	1.14	.060	1.52	.898	22.81
	22162	4	379	564	.045	1.14	.060	1.52	.957	24.31



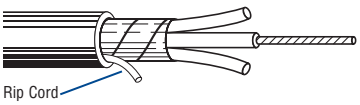
-25°C Installed
-40°C to +90°C (Dry) (75°C Wet)

6 AWG Stranded (7x14) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22170**	2	279	415	.060	1.52	.060	1.52	.711	18.06
	22171	3	383	570	.060	1.52	.060	1.52	.756	19.20



-25°C Installed
-40°C to +90°C (Dry) (75°C Wet)

4 AWG Stranded (7x12) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22180**	2	390	580	.060	1.52	.060	1.52	.800	20.32
	22181	3	580	863	.060	1.52	.080	2.03	.891	22.63



-25°C Installed
-40°C to +90°C (Dry) (75°C Wet)

CSA Control Cable

1000V Variable Frequency Drive Cable

Cable Specifications

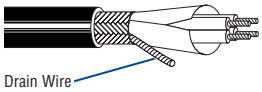
- CSA C22.2 #38 Type TC
- CSA C22.2 #230 Type TC
- CSA FT4 70,000 BTU Flame Test
- 90°C Dry and Wet
- -40°C Cold Bend, -25°C Cold Impact
- -25°C Installation temp
- Per CEC Part 1, Suitable for Use in Hazardous Locations:
  Class 1 — Zone 2
  Class 2 — Division 2
- Sunlight Resistant/UV Resistant
- Direct Burial

14 to 2 AWG with Foil/Braid Shield

Belden's classic line of VFD cables, with foil/braid shield, is offered in 14 to 2 AWG, and continues to be the highest-performing solution in the market. The oversized XLPE insulation provides the lowest capacitance available in a VFD cable. Its highly effective dual shielding provides the lowest resistance to ground path, which improves common mode current containment. Included are a full-size, insulated green ground wire with a yellow stripe, as well as a drain wire for ease of installation and termination. The 85% braid coverage offers optimum EMI low frequency noise protection, while the 100% aluminum/Mylar tape offers RFI high frequency noise protection. Cables are round and smooth for proper sealing of glands and molding applications.

Large AWG (1 to 4/0) with Copper Tape Shield, Symmetrical Design

Belden's symmetrical design combines the benefits of our classic line of VFD cables, with additional features for use on larger, more powerful AC motor drives. Its highly effective shielding provides a low resistance ground path, which improves common mode current containment. The spirally applied dual copper tapes provide improved flexibility and EMI/RFI noise protection. Three symmetrical bare ground wires provide a balanced ground system. This reduces the likelihood of premature motor bearing or motor insulation failure.

Description	Part Number	AWG	Stranding	Shield
14 to 2 AWG (3) Stranded Bare Copper Circuit Conductors + (1) Full-sized PVC Insulated Ground • Overall Beldfoil® (100% Coverage) + TC Braid Shield (85% Coverage) • Full Size TC Drain Wire (ICEA Method 4 Color Code: Black and Numbered, Green/Yellow Ground)				
XLPE Insulation • Black Sunlight- and Oil-resistant PVC Jacket				
1000V CSA TC FT4 RW90 Circuit Conductors  	**29550**	14	7	Beldfoil (100% Coverage) + TC Braid (85% Coverage)
	29551	12	7	
	29552	10	7	
	29553	8	7	
	29554	6	7	
	29555	4	7	
	29556	2	7	
1 to 4/0 AWG (3) Stranded Bare Copper Circuit Conductors + (3) Symmetrical Bare Copper Grounds • (2) Spiral Copper Tape Shields				
XLPE Insulation • Black Sunlight- and Oil-resistant PVC Jacket				
1000V CSA TC FT4 XHHW-2 Circuit Conductors 	**29557**	1	19	(2) Spiral Copper Tapes
	29558	1/0	19	
	29559	2/0	19	
	29560	3/0	19	
	29561	4/0	19	

Products listed are subject to minimum order quantities.