UL Instrumentation Cable

300V Power-Limited Tray Cables — Overview

Construction

Soft annealed bare or tinned copper with PVC flame retardant insulation and jacket. Other insulation and jacket options are available (see table below). Communication wire included on all multi-pair/multi-triad 1000 and 3000 series part numbers, 22 AWG (7x30) bare copper, orange PVC insulation. Nylon rip cord included in all PVC/PVC instrumentation cables.

Other Construction Options:

UL Listed for PLTC	
Insulation/Jacket	**Max. Temp Rating**
XLPE/PVC	90°C
XLPE/CPE	90°C
PVC/PVC	105°C
PVC/CPE	105°C
PE/PVC	75°C
FPE/PVC	75°C
TPE/TPE	105°C
XLPE/Haloarrest®	90°C

Armoring Capabilities

Belden also has the capability to protect electronic, instrumentation and control cables with interlocking or continuous armor and smooth or corrugated protective metal tapes.

To Specify Part Number

1	2	3456
Overall Jacket Type	Armor Type	Core Trade Number

Overall Jacket

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

Armor

Code	Material
2	Aluminum Interlock
3	Steel Interlock
8	Continuously Corrugated Aluminum

Application

Cable jackets are resistant to sunlight, moisture and vapor penetration. PVC/PVC constructions, with 3 conductors or more and 20 AWG or larger, are suitable for direct burial.

Unshielded

Twisted non-shielded pairs and triads 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 create excessive noise interference. The Beldfoil® shield with drain wire provides 100% coverage for maximum shield effectiveness.

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.

Specifications

- UL Subject 13
- UL Subject 2250
- NEC Article 725 Class 2 and Class 3 Circuits
- NEC Type PLTC Listed, which is approved for cable tray use in Class 1, Division 2, hazardous areas and non-hazardous areas, cable trays, raceways, conduit and supported by messenger wires.
- Sunlight-resistant.
- Oil-resistant per UL Class 43
- NEC Type ITC per Article 727. ITC cables may carry up to 5 amps at 150V, which is significantly greater than that allowed for PLTC only cables. ITC cables may also be installed in specific applications, per the NEC, in addition to those allowed for PLTC.
- UL 1685 (UL 1581) Vertical Tray Flame Test comparable to IEEE 383-1974 (70,000 BTU/hr.) Flame Test.
- PVC/PVC constructions are CMG, FT4, IEEE 1202 and IEEE 383-2003 rated, and meet ICEA T-29-520 Flame Test.
- Design options — call 1-800-BELDEN-1 or 1-800-BELDEN-3.

PLTC-ER

As an option, Belden offers all PVC insulated, PVC jacketed instrumentation cables, and several other insulation and jackets, with a PLTC-ER (Exposed Run) rating, formerly referred to as Open Wiring.

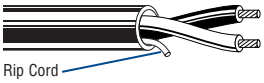
Per NEC Article 725, a PLTC-ER rated cable may be installed in an industrial establishment between a cable tray and the utilization equipment or device. A PLTC-ER rated cable must meet the crush and impact requirements of UL Type MC cable By eliminating the need for metal conduit and/or armor, using a PLTC-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 or 1-800-BELDEN-3.

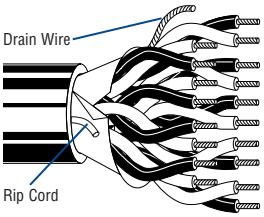
UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

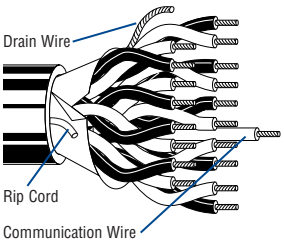
Description	Part No.	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
22 AWG Pairs Stranded (7x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9407**	1	E2	U-500 U-1000	U-152.4 U-304.8	10.0 19.0	4.3 8.2	.037	.94	.198	5.03	19	84	2.00	50.80



Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	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
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9322**	1	E2	U-500 U-1000	U-152.4 U-304.8	11.0 22.0	5.0 10.0	.037	.94	.201	5.10	28	124	2.00	50.80
	9512	2	E2	500 1000	152.4 304.8	22.0 42.0	10.0 19.1	.042	1.07	.310	7.82	46	204	3.00	76.20
	9513	3	E2	500 1000	152.4 304.8	26.5 51.0	11.6 23.2	.042	1.07	.324	8.23	63	280	3.25	82.55
	9514	4	E2	500 1000	152.4 304.8	33.0 67.0	14.8 30.5	.042	1.07	.356	9.04	80	355	3.50	88.90
	9516	6	E2	500 1000	152.4 304.8	45.0 89.0	20.4 40.4	.053	1.35	.418	10.62	118	524	4.25	107.95
	9520	9	E2	500 1000	152.4 304.8	64.5 121.0	29.3 55.0	.053	1.35	.482	12.29	172	765	4.75	120.65
	9521	11	E2	500 1000	152.4 304.8	73.0 147.0	32.7 66.4	.053	1.35	.506	12.85	200	889	5.35	135.89
	9524	15	E2	500 1000	152.4 304.8	89.5 178.0	40.7 80.9	.053	1.35	.594	15.09	280	1245	6.00	152.40
	9526	19	E2	500 1000	152.4 304.8	114.5 224.0	52.0 101.8	.063	1.60	.644	16.36	350	1557	6.33	160.78
	9527	27	E2	500 1000 †	152.4 304.8	156.5 321.0	71.1 145.9	.063	1.60	.763	19.38	500	2224	7.50	190.50



Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	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
22 AWG Pairs Stranded (7x30) Bare Copper Conductors* • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3000A****	2	E1	Bulk††	Bulk	—	—	.043	1.09	.310	7.87	46	204	3.00	76.20
	3004A**	4	E1	Bulk††	Bulk	—	—	.042	1.07	.357	9.01	80	355	3.50	88.90
	3006A**	8	E1	Bulk††	Bulk	—	—	.053	1.35	.450	11.43	172	765	4.75	120.65
	3008A**	12	E1	Bulk††	Bulk	—	—	.053	1.35	.536	13.61	210	934	5.00	127.00
	3010A**	16	E1	Bulk††	Bulk	—	—	.053	1.35	.594	15.09	290	1290	6.00	152.40
	3012A**	24	E1	Bulk††	Bulk	—	—	.065	1.65	.749	19.02	440	1957	7.50	190.50
	3014A**	50	E1	Bulk††	Bulk	—	—	.075	1.91	1.017	25.80	915	4070	9.50	241.30



PVC = Polyvinyl Chloride

*For tinned copper conductors, order with B suffix.
**For Exposed Run rated cable (3000 series only), order with E suffix, e.g. 3000AE.

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

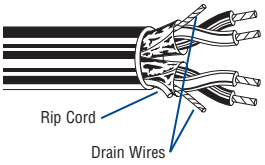
E1, E2 = Refer to Industrial Technical Information section for color code.
Alternate color coding available upon request.

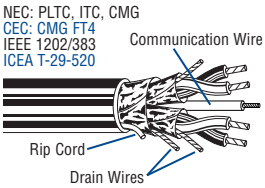
Multiple pair or triad cables have each pair/triad numbered for ease of identification.

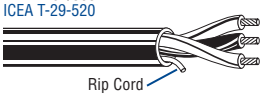
UL Instrumentation Cable

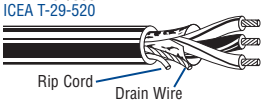
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

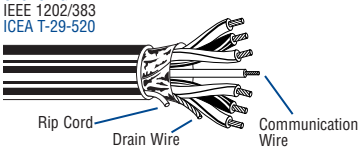
Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
22 AWG Pairs Stranded (7x30) Tinned Copper Conductors • Twisted Pairs															
Individually Shielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9328**	2	E2	500 1000	152.4 304.8	23.5 46.0	10.2 20.9	.042	1.07	.323	8.20	54	240	3.00	76.20
	9329	3	E2	500 1000	152.4 304.8	29.5 60.0	13.4 27.3	.042	1.07	.341	8.66	54	240	3.50	88.90
	9330	4	E2	500 1000	152.4 304.8	39.0 75.0	17.7 34.0	.042	1.07	.372	9.45	110	489	3.50	88.90
	9331	6	E2	500 1000	152.4 304.8	55.0 111.0	24.5 50.4	.053	1.35	.457	11.61	101	449	4.33	109.98
	9332	9	E2	500 1000	152.4 304.8	75.0 145.0	34.1 65.9	.053	1.35	.530	13.46	160	711	5.00	127.00
	9333	11	E2	500 1000	152.4 304.8	89.0 177.0	40.5 80.5	.053	1.35	.592	15.04	160	711	5.50	139.70
	9335	19	E2	500 1000	152.4 304.8	141.5 287.0	64.3 130.5	.063	1.60	.711	18.06	264	1174	6.50	165.10
22 AWG Pairs Stranded (7x30) Bare Copper Conductors* • Twisted Pairs															
Individually Shielded + Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3001A**†	2	E1	Bulk††	Bulk	—	—	.042	1.07	.324	8.23	54	240	3.25	82.55
	3005A†	4	E1	Bulk††	Bulk	—	—	.043	1.09	.360	9.14	115	511	3.50	88.90
	3007A†	8	E1	Bulk††	Bulk	—	—	.053	1.35	.497	12.62	250	1112	5.25	133.35
	3009A†	12	E1	Bulk††	Bulk	—	—	.053	1.35	.570	14.48	300	1334	5.75	146.05
	3011A†	16	E1	Bulk††	Bulk	—	—	.064	1.63	.674	17.12	350	1557	6.25	158.75
	3013A†	24	E1	Bulk††	Bulk	—	—	.065	1.65	.800	20.32	540	2402	8.00	203.20
	3015A†	50	E1	Bulk††	Bulk	—	—	.075	1.91	1.050	26.67	1330	5916	10.50	266.70
22 AWG Triads Stranded (7x30) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9491**	1	E1	U-500 U-1000	U-152.4 U-304.8	12.5 23.0	5.7 10.4	.037	.94	.208	5.28	29	129	2.00	50.80
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9363**	1	E1	U-500 U-1000	U-152.4 U-304.8	13.5 26.0	6.1 11.8	.037	.94	.208	5.28	29	129	2.00	50.80
22 AWG Triads Stranded (7x30) Bare Copper Conductors* • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3002A**	2	E1	Bulk††	Bulk	—	—	.043	1.09	.330	8.38	62	275	3.50	88.90
										For Exposed Run rated cable, order 3002AE					
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3003A**	2	E1	Bulk††	Bulk	—	—	.043	1.09	.330	8.38	82	364	3.25	82.55
										For Exposed Run rated cable, order 3003AE					

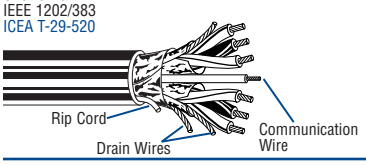












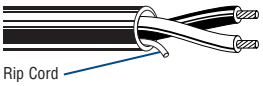
*For tinned copper conductors, order with B suffix.
†For Exposed Run rated 3000 series cables, order with "E" suffix, e.g. 3001AE.

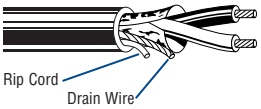
E1, E2 = Refer to Technical Information section for color code. Alternate color coding available upon request.
Multiple pair or triad cables have each pair/triad numbered for ease of identification.
††Bulk = Check length available for specific construction.

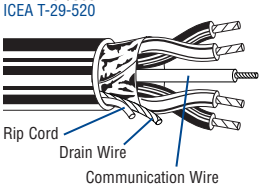
UL Instrumentation Cable

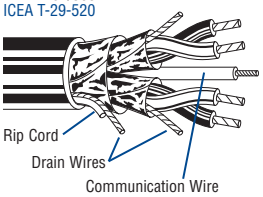
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

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
20 AWG Pairs Stranded (19x32) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9408**	1	E2	U-500 U-1000	U-152.4 U-304.8	12.0 23.0	5.5 10.4	.037	.94	.214	5.44	31	138	2.00	50.80
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9320**	1	E2	U-500 U-1000	U-152.4 U-304.8	14.5 28.0	6.6 12.7	.037	.94	.217	5.51	40	178	2.00	50.80
20 AWG Pairs Stranded (7x28) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1033A**	1	E1	1000 10000 †	304.8 3048.0	30.0 270.0	13.6 122.5	.037	.94	.213	5.41	42	187	2.25	57.15
	3016A	2	E1	Bulk ††	Bulk	—	—	.042	1.07	.332	8.43	92	409	3.75	95.25
	1056A	4	E1	10000 †	3048.0	820.0	372.0	.053	1.35	.408	10.36	135	601	4.25	107.95
	1057A	8	E1	10000 †	3048.0	1410.0	640.2	.053	1.35	.472	11.99	247	1099	5.00	127.00
	1058A	12	E1	7500 †	2286.0	1455.0	660.0	.053	1.35	.564	14.33	359	1597	6.00	152.40
	1059A	16	E1	5000 †	1524.0	1275.0	578.9	.064	1.63	.649	16.48	232	1032	6.50	165.10
	1060A	24	E1	5000 †	1524.0	1735.0	787.7	.064	1.63	.786	19.96	695	3092	8.25	209.55
	1061A	36	E1	2500 †	762.0	1300.0	590.2	.074	1.88	.960	24.38	1031	4587	10.00	254.00
	1062A	50	E1	2500 †	762.0	1825.0	827.8	.074	1.88	1.117	28.37	1423	6330	11.50	292.10
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1075A**	2	E1	10000 †	3048.0	650.0	294.8	.042	1.07	.337	8.56	97	432	3.75	95.25
	1076A	4	E1	7500 †	2286.0	787.5	357.5	.053	1.35	.411	10.44	171	761	4.50	114.30
	1077A	8	E1	7500 †	2286.0	1297.5	588.6	.053	1.35	.514	13.06	320	1424	5.50	139.70
	1078A	12	E1	7500 †	2286.0	1942.5	881.1	.064	1.63	.637	16.18	468	2082	6.75	171.45
	1079A	16	E1	5000 †	1524.0	1555.0	705.4	.064	1.63	.704	17.88	617	2745	7.50	190.50
	1091A	20	E1	Bulk ††	Bulk	—	—	.064	1.63	.780	19.81	765	3403	8.25	209.55
	1080A	24	E1	2500 †	762.0	1142.5	518.2	.074	1.88	.863	21.92	914	4066	9.00	228.60
	1081A	36	E1	2000 †	609.6	1436.0	651.9	.074	1.88	1.035	26.29	1359	6046	10.50	266.70
	1082A	50	E1	2000 †	609.6	1858.0	843.5	.074	1.88	1.215	30.86	1878	8355	12.75	323.85









F-R = Flame-retardant

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

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.

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**

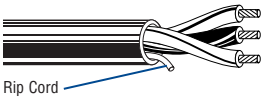
Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

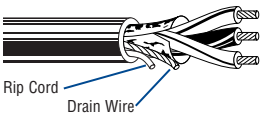
**For 1000 and 3000 Series cables only.

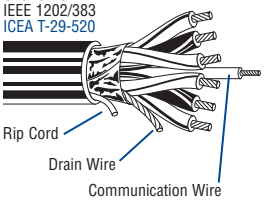
UL Instrumentation Cable

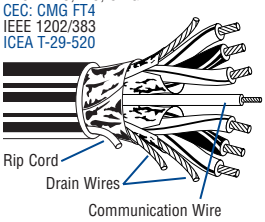
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of 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
20 AWG Triads Stranded (19x32) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9492**	1	E1	U-500 U-1000	U-152.4 U-304.8	15.5 29.0	7.0 13.2	.037	.94	.225	5.72	46	205	2.25	57.15
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9364**	1	E1	U-500 U-1000	U-152.4 U-304.8	17.0 32.0	7.7 14.5	.037	.94	.228	5.79	46	205	2.25	57.15
20 AWG Triads Stranded (7x28) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1526A**	1	E1	10000 †	3048.0	310.0	140.6	.037	.94	.215	5.46	42	187	2.20	55.88
	3017A	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.360	9.14	97	432	3.60	91.44
	3020A	4	E1	Bulk ††	Bulk	—	—	.055	1.40	.470	11.94	174	774	4.75	120.65
	3021A	8	E1	Bulk ††	Bulk	—	—	.055	1.40	.560	14.22	330	1468	5.00	127.00
	3022A	12	E1	Bulk ††	Bulk	—	—	.066	1.68	.710	18.03	485	2158	7.00	177.80
	3023A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.821	20.85	600	2669	7.75	196.85
	3024A	24	E1	Bulk ††	Bulk	—	—	.074	1.88	1.031	26.19	920	4093	9.25	234.95
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3018A**	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.372	9.45	102	454	3.75	95.25
	1083A	4	E1	10000 †	3048.0	1410.8	640.9	.053	1.35	.451	11.46	228	1014	4.50	114.30
	1084A	8	E1	7500 †	2286.0	1755.0	796.1	.064	1.63	.575	10.81	432	1922	5.75	146.05
	1085A	12	E1	5000 †	1524.0	1735.0	787.0	.064	1.63	.714	18.14	636	2829	7.15	181.61
	1092A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.793	20.14	841	3741	7.90	200.66
	1086A	24	E1	2500 †	762.0	1602.5	726.9	.074	1.88	.992	25.20	1250	5561	9.90	251.46
	3067A	36	E1	Bulk ††	Bulk	—	—	.074	1.88	1.292	32.82	1875	6273	13.00	330.20









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

E1 = 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.

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**

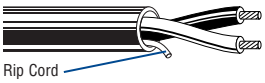
Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

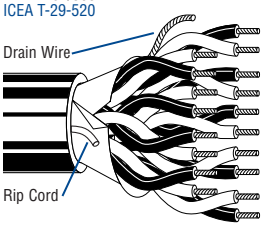
**For 1000 and 3000 Series cables only.

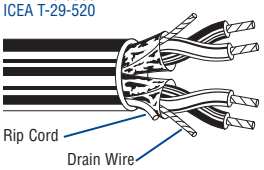
UL Instrumentation Cable

300V Power-Limited 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 Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9409**	1	E2	U-500 U-1000	U-152.4 U-304.8	15.0 28.0	6.8 12.7	.037	.94	.230	5.84	49	218	2.25	57.15
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9318**	1	E2	U-500 U-1000	U-152.4 U-304.8	17.5 33.0	7.9 15.0	.037	.94	.233	5.92	60	267	2.25	57.15
	9552	2	E2	500 1000	152.4 304.8	35.5 69.0	16.1 31.4	.042	1.07	.368	9.34	65	289	3.70	93.98
	9553	3	E2	500 1000	152.4 304.8	49.5 98.0	22.0 49.4	.053	1.35	.411	10.44	145	645	4.10	104.14
	9554	4	E2	500 1000	152.4 304.8	57.0 112.0	25.8 50.8	.053	1.35	.447	11.35	187	832	4.50	114.30
	9556	6	E2	500 1000	152.4 304.8	78.5 153.0	35.7 69.5	.053	1.35	.497	12.62	270	1201	5.00	127.00
	9559	9	E2	500 1000	152.4 304.8	108.0 215.0	49.0 97.6	.053	1.35	.579	14.71	395	1757	5.80	147.32
	9563	11	E2	500 1000	152.4 304.8	133.0 270.0	60.4 122.5	.063	1.60	.665	16.89	478	2126	6.75	171.45
	9565	15	E2	500 1000	152.4 304.8	169.0 342.0	76.8 155.5	.063	1.60	.739	18.77	640	2847	7.50	190.50
Individually Shielded (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9368**	2	E2	500 1000	152.4 304.8	37.5 73.0	17.0 33.2	.042	1.07	.378	9.60	125	556	3.75	95.25
	9369	3	E2	500 1000	152.4 304.8	55.0 109.0	25.0 49.5	.053	1.35	.423	10.74	220	979	4.25	107.95
	3029A	4	E1	Bulk †	Bulk	—	—	.053	1.35	.461	11.71	296	1317	4.50	114.30
	9388	4	E2	500 1000	152.4 304.8	71.5 135.0	32.5 61.4	.053	1.35	.461	11.71	296	1317	4.60	116.84
	9389	6	E2	500 1000	152.4 304.8	97.0 190.0	44.1 86.4	.053	1.35	.538	13.67	440	1957	5.25	133.35
	9390	9	E2	500 1000	152.4 304.8	137.5 270.0	63.0 123.6	.064	1.63	.652	16.56	666	2963	6.50	165.10
	9391	11	E2	500 1000	152.4 304.8	158.5 321.0	72.0 145.9	.064	1.63	.729	18.52	815	3626	7.25	184.15
	9392	15	E2	500 1000	152.4 304.8	209.0 428.0	95.0 194.5	.064	1.63	.808	20.52	1100	4893	8.00	203.20







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.

†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**

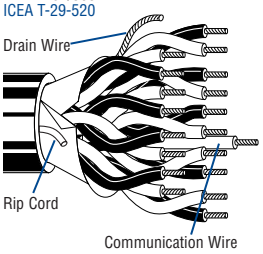
Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

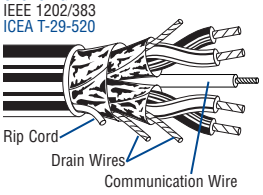
**For 1000 and 3000 Series cables only.

UL Instrumentation Cable

300V Power-Limited 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 (7x26) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1032A**	1	E1	1000 10000 †	304.8 3048.0	38.0 380.0	17.2 172.5	.037	.94	.233	5.92	67	298	2.50	63.50
	3025A	2	E1	10000 †	3048.0	760.0	344.7	.042	1.07	.375	9.53	121	538	3.50	88.90
	1529A	3	E1	7500 †	2286.0	735.0	333.4	.053	1.35	.415	10.54	165	734	4.25	107.95
	1466A	4	E1	7500 †	2286.0	892.5	404.8	.053	1.35	.452	11.48	211	939	4.50	114.30
	1467A	8	E1	7500 †	2286.0	1477.5	670.8	.053	1.35	.523	13.28	390	1735	5.50	139.70
	1468A	12	E1	5000 †	1524.0	1375.0	624.3	.064	1.63	.673	17.09	560	2491	6.75	171.45
	3034A	16	E1	Bulk ††	Bulk	—	—	.066	1.68	.713	18.11	640	2847	7.25	184.15
	1471A	24	E1	2500 †	762.0	1292.5	586.3	.074	1.88	.932	23.67	1105	4916	9.25	234.95
	1472A	36	E1	1250 †	381.0	910.0	413.1	.074	1.88	1.062	26.97	1644	7313	10.50	266.70
	3041A	50	E1	Bulk ††	Bulk	—	—	.074	1.88	1.240	31.50	2240	10049	12.75	323.85
Individually Shielded + Overall Beldfoil (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1474A**	2	E1	7500 †	2286.0	720.0	326.9	.053	1.35	.408	10.16	149	663	4.00	101.60
	1475A	4	E1	7500 †	2286.0	1065.0	483.1	.053	1.35	.468	11.89	267	1188	4.75	120.65
	1476A	8	E1	5000 †	1524.0	1185.0	538.0	.053	1.35	.594	15.10	501	2229	6.00	152.40
	1477A	12	E1	5000 †	1524.0	1740.0	789.3	.064	1.63	.737	18.72	779	3465	7.25	184.15
	3035A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.836	21.20	725	3225	8.50	215.90
	1480A	24	E1	2500 † 5000 †	762.0 1524.0	1712.5 3390.0	777.5 1539.1	.074	1.88	1.019	25.88	1443	6419	10.25	260.35
	1481A	36	E1	Bulk ††	Bulk	—	—	.074	1.88	1.163	29.54	2148	9556	11.75	298.45
	3042A	50	E1	Bulk ††	Bulk	—	—	.084	2.13	1.389	35.28	2935	13057	14.00	355.60





E1 = 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**

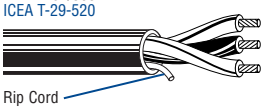
Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

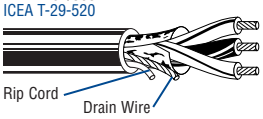
**For 1000 and 3000 Series cables only.

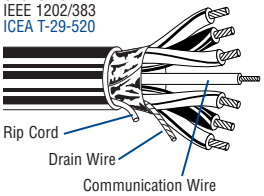
UL Instrumentation Cable

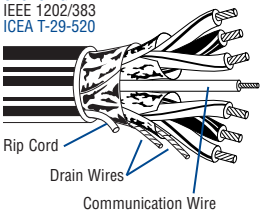
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of 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 Triads Stranded (19x30) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9493**	1	E1	U-500 U-1000	U-152.4 U-304.8	20.0 38.0	9.1 17.2	.037	.94	.242	6.15	62	276	2.25	57.15
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9365**	1	E1	U-500 U-1000	U-152.4 U-304.8	22.0 43.0	10.0 19.5	.037	.94	.245	6.22	74	329	2.50	63.50
18 AWG Triads Stranded (7x26) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1036A**	1	E1	1000 10000 †	304.8 3048.0	43.0 430.0	19.5 195.1	.037	.94	.236	5.99	90	400	2.40	60.96
	3027A	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.420	10.67	165	734	4.25	107.95
	3030A	4	E1	Bulk ††	Bulk	—	—	.055	1.40	.521	13.20	240	1068	4.50	114.30
	3032A	8	E1	Bulk ††	Bulk	—	—	.064	1.63	.580	14.70	501	2229	5.75	146.05
	3036A	16	E1	Bulk ††	Bulk	—	—	.077	1.96	.900	22.86	1050	4671	9.00	228.60
	3038A	24	E1	Bulk ††	Bulk	—	—	.077	1.96	1.020	25.91	1450	6450	10.25	260.35
Individually Shielded + Overall Beldfoil (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3028A**	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.450	11.43	175	779	4.50	114.30
	3031A	4	E1	Bulk ††	Bulk	—	—	.053	1.35	.533	13.50	255	1134	5.25	133.35
	3033A	8	E1	Bulk ††	Bulk	—	—	.064	1.63	.654	16.50	560	2491	6.50	165.10
	3068A	12	E1	Bulk ††	Bulk	—	—	.063	1.60	.840	21.30	800	3559	8.50	215.90
	3037A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	.974	24.70	1320	5872	10.50	266.70
	3039A	24	E1	Bulk ††	Bulk	—	—	.074	1.88	1.200	30.50	1620	7207	11.25	285.75









E1 = 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**

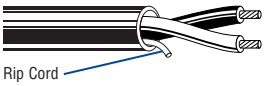
Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

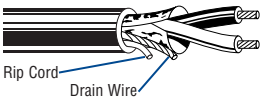
**For 1000 and 3000 Series cables only.

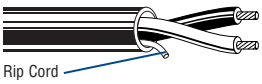
UL Instrumentation Cable

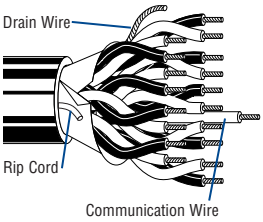
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

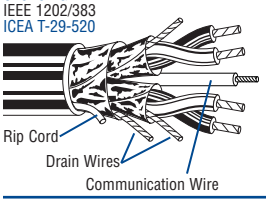
Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
16 AWG Pairs Stranded (19x29) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9410**	1	E2	U-500 U-1000	U-152.4 U-304.8	18.5 36.0	8.4 16.3	.037	.94	.254	6.45	78	347	2.50	63.50
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9316**	1	E2	U-500 U-1000	U-152.4 U-304.8	21.5 41.0	9.8 18.6	.037	.94	.256	6.50	90	400	2.50	63.50
16 AWG Pairs Stranded (7x24) Bare Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Black PVC Jacket (See chart below for other insulation and jacket options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1035A**	1	E1	1000 10000 †	304.8 3048.0	40.0 400.0	18.1 181.4	.037	.94	.254	6.45	71	318	2.50	63.50
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1030A**	1	E1	1000 10000 †	304.8 3048.0	46.0 480.0	20.9 217.7	.037	.94	.257	6.53	94	418	2.50	63.50
	3043A	2	E1	Bulk ††	Bulk	—	—	.053	1.35	.437	11.10	83	369	4.50	114.30
	1528A	3	E1	7500 †	2286.0	967.5	438.9	.053	1.35	.457	11.61	250	1112	4.75	120.65
	1484A	4	E1	7500 †	2286.0	1200.0	544.8	.053	1.35	.495	12.57	330	1468	5.00	127.00
	1485A	8	E1	7500 †	2286.0	2010.0	911.7	.053	1.35	.597	15.16	616	2740	6.00	152.40
	1486A	12	E1	5000 †	1524.0	1965.0	892.1	.064	1.63	.741	18.80	892	3968	7.50	190.50
	3050A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.831	21.10	661	2940	8.50	215.90
	1489A	24	E1	1250 †	381.0	923.8	419.4	.074	1.88	1.032	26.20	1749	7780	10.50	266.70
	1490A	36	E1	1250 †	381.0	1313.8	596.4	.074	1.88	1.178	29.80	2606	11592	11.75	298.45
	3056A	50	E1	Bulk ††	Bulk	—	—	.088	2.24	1.550	39.37	3615	16082	15.50	393.70
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1492A**	2	E1	7500 †	2286.0	885.0	401.8	.053	1.35	.450	11.43	232	1032	4.50	114.30
	1493A	4	E1	7500 †	2286.0	1387.5	629.4	.055	1.40	.512	13.11	420	1868	5.00	127.00
	1494A	8	E1	5000 †	1524.0	1640.0	743.9	.066	1.68	.687	17.50	795	3537	7.00	177.80
	1495A	12	E1	2500 †	762.0	1202.5	545.5	.066	1.68	.822	20.73	1170	5205	8.25	209.55
	3051A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	.936	23.77	661	2940	10.00	254.00
	1498A	24	E1	5000 †	1524.0	4340.0	1968.6	.074	1.88	1.149	29.18	2296	10214	11.50	292.10
	1499A	36	E1	Bulk ††	Bulk	—	—	.084	2.13	1.334	33.88	3167	14088	13.50	342.90
	3057A	50	E1	Bulk ††	Bulk	—	—	.088	2.24	1.600	40.64	2066	9190	16.00	406.40











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**

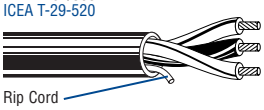
Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

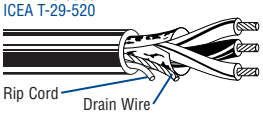
**For 1000 and 3000 Series cables only.

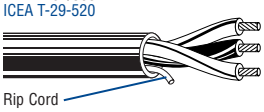
UL Instrumentation Cable

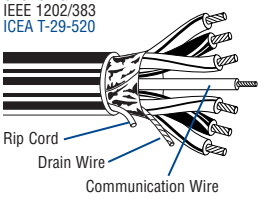
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

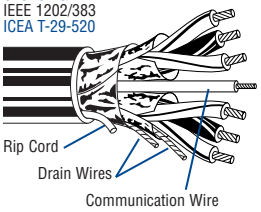
Description	Part No.	No. of Triads	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
16 AWG Triads Stranded (19x29) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9494**	1	E1	U-500 U-1000	U-152.4 U-304.8	24.5 48.0	11.1 21.8	.037	.94	.268	6.81	91	405	2.75	69.85
Overall Beldfoil® Shield (100% Coverage)• PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9366**	1	E1	U-500 U-1000	U-152.4 U-304.8	27.5 54.0	12.5 24.5	.037	.94	.270	6.86	116	516	2.75	69.85
16 AWG Triads Stranded (7x24) Bare Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1034A**	1	E1	1000 4000 †	304.8 1219.2	51.0 208.0	23.2 94.4	.037	.94	.268	6.81	107	476	2.75	69.85
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1031A**	1	E1	1000 10000 †	304.8 3048.0	58.0 610.0	26.4 276.7	.037	.94	.271	6.88	130	578	2.75	69.85
	3044A	2	E1	Bulk ††	Bulk	—	—	.053	1.35	.483	12.27	259	1152	4.75	120.65
	3046A	4	E1	Bulk ††	Bulk	—	—	.053	1.35	.570	14.40	473	2104	5.75	146.05
	3048A	8	E1	Bulk ††	Bulk	—	—	.063	1.60	.760	19.30	902	4013	7.50	190.50
	3052A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	1.032	26.21	1758	7821	11.25	285.75
	3054A	24	E1	Bulk ††	Bulk	—	—	.074	1.88	1.180	29.90	2615	11633	11.75	298.45
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3045A**	2	E1	Bulk ††	Bulk	—	—	.053	1.35	.506	12.80	304	1352	5.00	127.00
	3047A	4	E1	Bulk ††	Bulk	—	—	.053	1.35	.569	14.45	563	2505	6.00	152.40
	3049A	8	E1	Bulk ††	Bulk	—	—	.064	1.63	.764	19.41	1081	4809	8.00	203.20
	3069A	12	E1	Bulk ††	Bulk	—	—	.074	1.88	.998	25.35	1500	6673	10.00	254.00
	3053A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	1.150	29.20	2117	9418	11.50	292.10
	3055A	24	E1	Bulk ††	Bulk	—	—	.084	2.13	1.320	33.53	3153	14026	13.25	336.55











E1 = 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

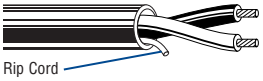
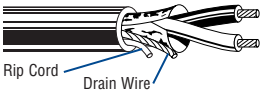
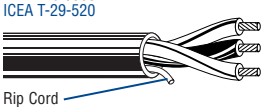
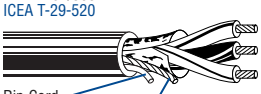
Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

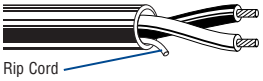
Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
14 AWG Pairs Stranded (42x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9411**	1	E2	U-500 1000	U-152.4 304.8	28.0 60.0	12.7 27.3	.042	1.07	.322	8.18	124	552	3.25	82.55
 Rip Cord															
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9314**	1	E2	U-500 1000	U-152.4 304.8	32.5 66.0	14.7 29.9	.042	1.07	.324	8.23	140	623	3.25	82.55
 Rip Cord, Drain Wire															
14 AWG Triads Stranded (42x30) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9495**	1	E1	500 1000	152.4 304.8	43.5 86.0	19.7 39.0	.042	1.07	.340	8.64	186	827	3.50	88.90
 Rip Cord															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9367**	1	E1	500 1000	152.4 304.8	43.5 88.0	19.7 40.0	.042	1.07	.343	8.71	188	836	3.50	88.90
 Rip Cord, Drain Wire															

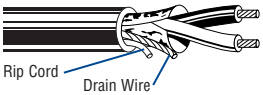
E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

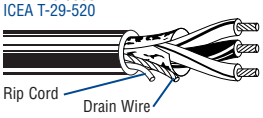
UL Instrumentation Cable

300V Power-Limited 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 (65x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9412**	1	E2	500 1000	152.4 304.8	41.5 83.0	18.8 37.7	.042	1.07	.370	9.40	197	876	4.25	107.95
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9312**	1	E2	500 1000	152.4 304.8	49.0 96.0	22.3 43.6	.042	1.07	.373	9.47	225	1001	4.25	107.95
12 AWG Triads Stranded (7x20) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**3102A**	1	E1	Bulk †	Bulk	—	—	.053	1.35	.432	11.00	315	1401	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	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/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

UL Instrumentation Cable

Thermocouple Extension Cables and Thermocouple Wire — Overview

Construction Thermocouple Extension Cable

Conductor material determined by the thermocouple extension wire type. FEP or PVC insulated with FEP or PVC jacket. Nylon rip cord included in all PVC-jacketed thermocouple extension cables. Communication wire included on all multi-pair, PVC constructions — 22 AWG (7x30) bare copper orange PVC insulation.

NOTE: The temperature ranges in Table A are applicable only to the thermocouple conductors and not to the cable. The cable must never be exposed to temperatures higher than the maximum temperature ratings shown in Table B.

Table B: Other Insulation/Jacket Options

UL Listed for PLTC	
Insulation/Jacket	**Max. Temp Rating**
XLPE/PVC	90°C
XLPE/CPE	90°C
PVC/PVC	105°C
PVC/CPE	105°C
PE/PVC	75°C
FPE/PVC	75°C
TPE/TPE	105°C
XLPE/Haloarrest®	90°C
FEP/FEP	200°C

Application

Unshielded

Parallel non-shielded extension wire may be utilized in low noise environments when recommended by the instrument manufacturer.

Overall Shield

Recommended, 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.

Individually Shielded

Individually shielded pairs are recommended for use in applications where optimum noise rejection is required.

PVC Insulated, PVC Jacketed Cable Specifications

- UL Subject 13
- UL 1685 (UL 1581) Vertical Tray Flame Test comparable to IEEE 383-1974 (70,000 BTU) Flame Test
- ANSI/MC 96.1–1982
- NEC CMG
- NEC Type PLTC Listed, which is approved for cable tray use in Class 1, Division 2, hazardous areas and non-hazardous areas, cable trays, raceways, conduit and supported by messenger wires.
- NEC Type ITC Listed, which is approved for cable tray use, raceways hazardous locations according to Articles 501, 502, 503 and 504; or as aerial on a cable messenger, and under raised floors in control rooms and rack rooms where arranged to prevent damage to the cable. Usages are allowed based on qualified persons servicing all installations.
- PVC/PVC constructions are CMG, FT4, IEEE 1202 and IEEE 383-2003 rated, and meet ICEA T-29-520 Flame Test.
- UL 1277 TC versions approved for use in Class 1 trays available as special.

Shielded Twisted Pair

(FEP insulated, FEP jacketed cable specifications)

- UL Subject 13
- NFPA 262 (UL 910 Steiner Tunnel Flame Test) comparable to FT6 Flame Test
- ANSI/MC 96.1–1982
- NEC Type CL3P/PLTC Listed, which is approved for use in ducts, plenums and other space used for environmental air.
- UL 1277 TC versions approved for use in Class 1 trays available as special.

Thermocouple Wire

Conductor material determined by the thermocouple type. FEP insulated and jacketed flat constructions.

FEP thermocouple wire is impervious to chemical attack and is flame retardant.

Table A: Thermocouple Identification and Limits of Error — Reference Junction 0°C*

ANSI Symbol	Temperature Range (°C) *(conductor only)*	Limits of Error Standard (°C)	Jacket Color	Insulation Color Code		Conductor Identification	
				Positive (+)	Negative (-)	Positive (+)	Negative (-)
E	0 to 340 340 to 540	±1.7°C ±.50%	Brown	Purple	Red	Chromel® Non-magnetic	Constantan Silver Color
J	0 to 293 293 to 480	±2.2°C ±.75%	Brown	White	Red	Iron Magnetic	Constantan Non-magnetic
K	0 to 293 293 to 980	±2.2°C ±.75%	Brown	Yellow	Red	Chromel Non-magnetic	Alumel® Magnetic
T	0 to 133 133 to 260	±1.0°C ±.75%	Brown	Blue	Red	Copper Copper Color	Constantan Non-magnetic
EX	0 to 200	±1.7°C	Purple	Purple	Red	Chromel	Constantan
JX	0 to 200	±2.2°C	Black	White	Red	Iron	Constantan
KX	0 to 200	±2.2°C	Yellow	Yellow	Red	Chromel	Alumel
TX	0 to 100	±1.0°C	Blue	Blue	Red	Copper	Constantan

Limits of error per ANSI MC96.1-1982. Limits shown do not include system or installation error. Percentages refer to the temperature being measured.

*The Temperature Range and Limits of Error are for standard grade thermocouples, Reference ANSI MC96.1-1982 for special grade thermocouples. The Temperature Ranges for type E, J, K and T thermocouple wires listed above pertain to 20 AWG wire.

Additional constructions available upon request.

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

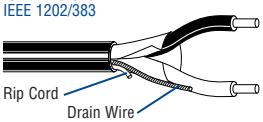
UL Instrumentation Cable

Thermocouple Extension Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

20 AWG Pairs Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)

Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • PVC Jacket

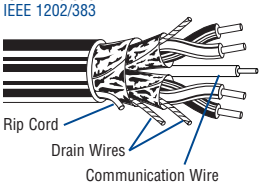
300V 105°C
NEC: PLTC, ITC, CMG
CEC: CMG FT4
ICEA T-29-520
IEEE 1202/383



Description	Part No.	ANSI Type	No. of Pairs	Color Code	Jacket Color	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Insulation Thickness Inch	Insulation Thickness mm	Nominal OD Inch	Nominal OD mm
	3111A	JX	1	White, Red	Black	5000 †	1524.0	115.0	52.2	.016	.41	.206	5.23
	3112A	KX	1	Yellow, Red	Yellow	5000 †	1524.0	120.0	54.5	.016	.41	.206	5.23
	3113A	TX	1	Blue, Red	Blue	5000 †	1524.0	115.0	52.2	.016	.41	.206	5.23

Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket

300V 105°C
NEC: PLTC, ITC, CMG
CEC: CMG FT4
ICEA T-29-520
IEEE 1202/383

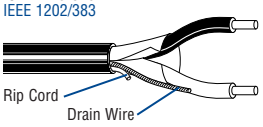


	3115A	JX	2	White, Red	Black	5000 †	1524.0	315.0	143.0	.016	.41	.332	8.43
	1006A	JX	4	White, Red	Black	5000 †	1524.0	480.0	217.9	.016	.41	.383	9.73
	1012A	KX	4	Yellow, Red	Yellow	5000 †	1524.0	530.0	240.6	.016	.41	.383	9.73
	1013A	KX	8	Yellow, Red	Yellow	5000 †	1524.0	825.0	374.6	.016	.41	.503	12.78
	1014A	KX	12	Yellow, Red	Yellow	5000 †	1524.0	1195.0	542.5	.016	.41	.603	15.32

16 AWG Pairs Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)

Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket

300V 105°C
NEC: PLTC, ITC, CMG
CEC: CMG FT4
ICEA T-29-520
IEEE 1202/383



	1101A	EX	1	Purple, Red	Purple	10000 †	3048.0	450.0	204.3	.017	.43	.248	6.30
	1000A	JX	1	White, Red	Black	1000 10000 †	304.8 3048.0	42.0 420.0	19.1 190.7	.017	.43	.248	6.30
	1018A	KX	1	Yellow, Red	Yellow	1000 10000 †	304.8 3048.0	42.0 420.0	19.1 190.7	.017	.43	.248	6.30
	1023A	TX	1	Blue, Red	Blue	10000 †	3048.0	450.0	204.3	.017	.43	.248	6.30

Multiple pair cables have each pair numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.

UL Instrumentation Cable

High-Temperature Thermocouple Extension Cables and Thermocouple Wire
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	ANSI Type	No. of Pairs/ Cond.	Color Code	Jacket Color	Standard Lengths		Standard Unit Weight		Insulation Thickness		Nominal OD	
						Ft.	m	Lbs.	kg	Inch	mm	Inch	mm
High-Temp Extension Cable • 20 AWG Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Unshielded • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P	**83932**	KX	2/c	Yellow, Red	Yellow	500 † 1000 †	152.4 304.8	6.5 12.0	3.0 5.4	.010	.25	.076 x .128	1.93 x 3.25
	83934	TX	2/c	Blue, Red	Blue	1000 †	304.8	13.0	6.0	.010	.25	.076 x .128	1.93 x 3.25
High-Temp Extension Cable • 20 AWG Stranded (7x28) Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Unshielded • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P	**83930**	JX	2/c	White, Red	Black	500 † 1000 †	152.4 304.8	7.5 13.0	3.4 6.0	.010	.25	.082 x .140	2.08 x 3.56
Plenum • Overall Beldfoil® Shield (100% Coverage) • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P Drain Wire	**83955**	EX	1 pr.	Purple, Red	Purple	500 † 1000 †	152.4 304.8	9.0 16.0	4.1 7.3	.010	.25	.145	3.68
	83950	JX	1 pr.	White, Red	Black	500 † 1000 †	152.4 304.8	9.5 16.0	4.3 7.3	.010	.25	.145	3.68
	83952	KX	1 pr.	Yellow, Red	Yellow	500 † 1000 †	152.4 304.8	9.5 16.0	4.3 7.3	.010	.25	.145	3.68
	83954	TX	1 pr.	Blue, Red	Blue	500 † 1000 †	152.4 304.8	9.0 17.0	4.1 7.7	.010	.25	.145	3.68
High-Temp Extension Cable • 16 AWG Pairs Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Overall Beldfoil Shield (100% Coverage) • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P Drain Wire	**1114A**	EX	1	Purple, Red	Purple	5000 †	1524.0	160.0	72.6	.010	.25	.172	4.37
	1115A	JX	1	White, Red	Black	5000 †	1524.0	155.0	70.4	.010	.25	.172	4.37
	1116A	KX	1	Yellow, Red	Yellow	5000 †	1524.0	160.0	72.6	.010	.25	.171	4.34
	1117A	TX	1	Blue, Red	Blue	5000 †	1524.0	160.0	72.6	.010	.25	.172	4.37
High-Temp Extension Cable • 16 AWG Pairs Stranded (7x24) Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Overall Beldfoil Shield (100% Coverage) • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P Drain Wire	**83951**	JX	1	White, Red	Black	500 † 1000 †	152.4 304.8	16.0 35.0	7.3 15.9	.010	.25	.189	4.80
	83953	KX	1	Yellow, Red	Yellow	500 † 1000 †	152.4 304.8	16.0 32.0	7.3 14.5	.010	.25	.187	4.75
High-Temp Thermocouple Wire • 20 AWG Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Unshielded • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P	**83915**	E	2/c	Purple, Red	Brown	500 † 1000 †	152.4 304.8	7.0 13.0	3.2 6.0	.010	.25	.076 x .128	1.93 x 3.25
	83900	J	2/c	White, Red	Brown	100 500 † 1000 †	30.5 152.4 304.8	2.1 7.0 13.0	1.0 3.2 6.0	.010	.25	.076 x .128	1.93 x 3.25
	83905	K	2/c	Yellow, Red	Brown	100 500 † 1000 †	30.5 152.4 304.8	2.1 7.0 12.0	1.0 3.2 5.4	.010	.25	.076 x .128	1.93 x 3.25
	83910	T	2/c	Blue, Red	Brown	100 500 † 1000 †	30.5 152.4 304.8	2.1 7.0 12.0	1.0 3.2 5.4	.010	.25	.076 x .128	1.93 x 3.25

FEP = Fluorinated Ethylene-propylene

Multiple pair cables have each pair numbered for ease of identification.

†Final put-up length may vary ±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

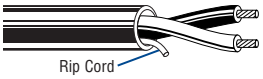
Standard lengths may be subject to tolerance. Custom lengths may be available upon request. Contact the Belden Electronics Division Customer Service Department for additional information. 1-800-BELDEN-1.

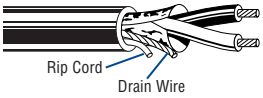
UL Instrumentation Cable

600V Tray Cables

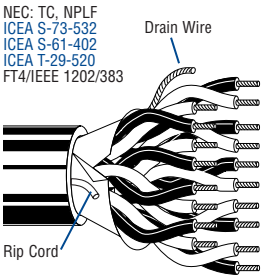
Industrial Grade Sunlight- and Oil-Resistant Jackets

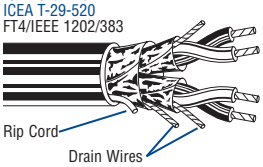
Description	Part No.	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
18 AWG Pairs Stranded (19x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • 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	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®

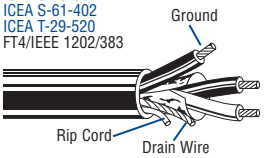
**For 1000 and 3000 Series cables only.

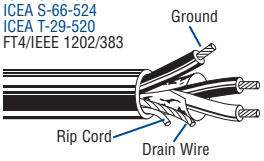
UL Instrumentation Cable

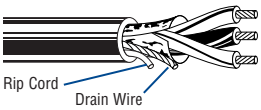
600V Tray Cables

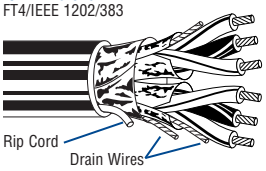
Industrial Grade Sunlight- and Oil-Resistant Jackets

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
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









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

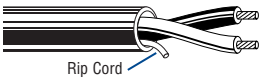
Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

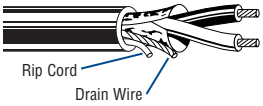
UL Instrumentation Cable

600V Tray Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

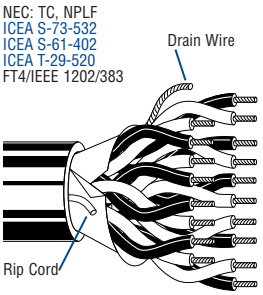
Description	Part No.	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
16 AWG Pairs Stranded (19x29) Tinned Copper Conductors • Twisted Pairs															
Unshielded • 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

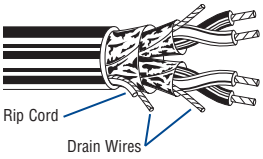




16 AWG Pairs Stranded (7x24) Bare Copper Conductors • Twisted Pairs

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®

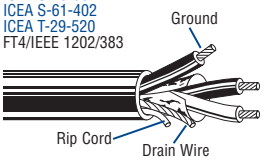
**For 1000 and 3000 Series cables only.

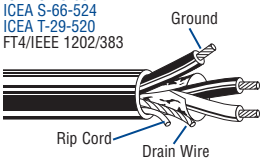
UL Instrumentation Cable

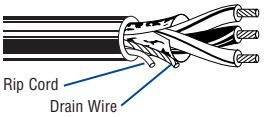
600V Tray Cables

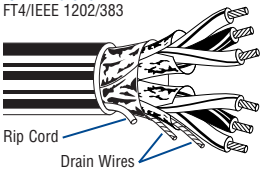
Industrial Grade Sunlight- and Oil-Resistant Jackets

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	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

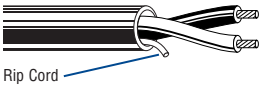
Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

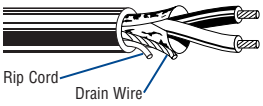
UL Instrumentation Cable

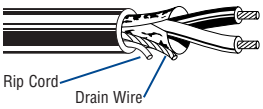
600V Tray Cables

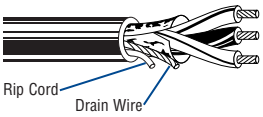
Industrial Grade Sunlight- and Oil-Resistant Jackets

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	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®

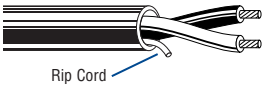
**For 1000 and 3000 Series cables only.

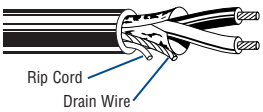
UL Instrumentation Cable

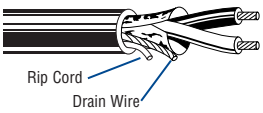
600V Tray Cables

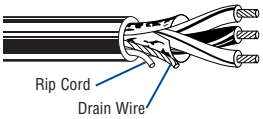
Industrial Grade Sunlight- and Oil-Resistant Jackets

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
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	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.

OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения **«JONHON»**, а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов **«FORSTAR»**.

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

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