

Instrumentation

Design Standards	2
Overall Shielded (OS) PVC	5
Individual and Overall Shielded (ISOS) PVC.....	7
Overall Shielded (OS) PVC Armoured.....	9
Individual and Overall Shielded (ISOS) PVC Armoured	11
Overall Shielded (OS) XLPE	13
Individual and Overall Shielded (ISOS) XLPE.....	15
Overall Shielded (OS) XLPE Armoured.....	17
Individual and Overall Shielded (ISOS) XLPE Armoured	19
Overall Shielded (OS) PVC Served Wire Armour (SWA)	21
Individual and Overall Shielded (ISOS) PVC Served Wire Armour (SWA).....	23
Overall Shielded (OS) XLPE Served Wire Armour (SWA)	25
Individual and Overall Shielded (ISOS) XLPE Served Wire Armour (SWA).....	27

Thermocouple

Design Standards	28
Overall Shielded (OS) PVC	31
Individual and Overall Shielded (ISOS) PVC.....	33
Overall Shielded (OS) PVC Armoured.....	35
Individual and Overall Shielded (ISOS) PVC Armoured	37
Overall Shielded (OS) XLPE	39
Individual and Overall Shielded (ISOS) XLPE.....	41
Overall Shielded (OS) XLPE Armoured.....	43
Individual and Overall Shielded (ISOS) XLPE Armoured	45

Instrumentation and Thermocouple Tray Cable

Design Standards	46
Overall Shielded (OS) PVC	49
Individual and Overall Shielded (ISOS) PVC.....	51
Overall Shielded (OS) Fire Retardant (FR) XLPE	53
Individual and Overall Shielded (ISOS) Fire Retardant (FR) XLPE.....	55

Power and Control Tray Cable

Design Standards	56
Fire Retardant (FR) PVC	59
Fire Retardant (FR) XLPE Power	61
Fire Retardant (FR) XLPE Control.....	63

Teck 90 and ARMCON® Cable

Design Standards	64
XLPE Teck 90 Power	67
XLPE Teck 90 Control	69
XLPE ARMCON®	71

Composite Cables	72
Electrical Characteristics, Instrumentation and Thermocouple	74
Installation Data, Instrumentation and Thermocouple	75
Thermocouple Grade Alloy Identification and Characteristics	76
Power and Control Maximum Pulling Tensions	77

Instrumentation

Conductors: 7 strand concentric, Class B bare or tinned copper wire. Available in 20 to 14 AWG (0.5190 to 2.08 mm²) for 150/300 V and 18 to 10 AWG (0.823 to 5.27 mm²) for 600 V.

Primary Insulation: PVC compound - rated as 105°C (221°F) dry, 75°C (167°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 75 for Type TW75-40 insulation.

XLPE compound - rated as 105°C (221°F) dry, 90°C (194°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 38 for Type RW90-40 insulation.

Insulation Thickness:

AWG	mm ²	150 V		300 V		600 V	
		mm ²	in	mm ²	in	mm ²	in
20 - 19	0.519 - 0.653	0.38	0.015	0.51	0.020	---	---
18 - 14	0.823 - 2.08	0.51	0.020	0.64	0.025	0.76	0.030
12 - 10	3.31 - 5.27	---	---	---	---	0.76	0.030

Conductor Assembly: Two or three conductors are twisted together to form a pair or triad. The individually shielded pairs and triads have a finished lay of 51 mm (2 in). Unshielded pairs and triads have staggered lays to prevent electromagnetic interference and cross talk.

Individual Shielding: When specified, pairs and triads are shielded with 100% coverage aluminum/polyester tape and a seven strand tinned copper drain wire is used. The shielding tape is designed to provide total shield isolation from all other shields.

Conductor Identification: Pairs are black, white and alpha numeric coded.
Triads are black, white, red and alpha numeric coded.

Overall Shielding: Assembled pairs and triads are overall shielded with 100% coverage aluminum/polyester tape and a 20 AWG (0.5190 mm²) seven strand tinned copper drain wire.

Jacket: 90°C to -40°C (194°F to -40°F) Fire Retardant PVC for unarmoured cables
90°C to -40°C (194°F to -40°F) Fire Retardant Low Acid Gas PVC for armoured cables

Instrumentation cable standard colours are black or intrinsically safe blue. The inner jacket under the armour is black. Other colours are available upon request.

Armouring Optional: CSA certified interlocked aluminum or interlocked galvanized steel armour is suitable for use in Hazardous Locations. In Group B, C and D atmospheres, the individually shielded pairs or triads may be extended through a sealing gland without removing the shielding tape. These cables are marked HLBCD in accordance with CSA C22.2 No. 174.

Served wire armour consisting of strands of galvanized steel wire wound concentrically over the jacketed core is available and is recommended for vertical riser applications.

Zetabon® is a hermetically sealed aluminum barrier integral with a bonded outer FR CPE jacket and is recommended for use in direct burial applications. Please note, however, that this armour is not presently recognized by the CSA.

Zetabon® is a registered trademark of DOW-Dupont.

Armour Outer Covering: 90°C to -40°C (194°F to -40°F) Fire Retardant (FR) Low Acid Gas (LAG) PVC

Instrumentation cable standard colours are grey or intrinsically safe blue. Other colours are available upon request.

Standard Performance

Features:

Cables meet cold impact/bend test at -40°C (-40°F). It is recommended, however, that cables not be installed if the cable temperature is below -10°C (14°F).

Interlocked armoured constructions CSA Certified for use in Hazardous Locations

Sunlight Resistant

Flame Test rated FT4

CSA Certifications: CSA C22.2 No. 239, Control and Instrumentation Cables

CSA C22.2 No. 174, Cables and Cable Glands for Use in Hazardous Locations

PVC Insulated

O
S
P
V
C

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

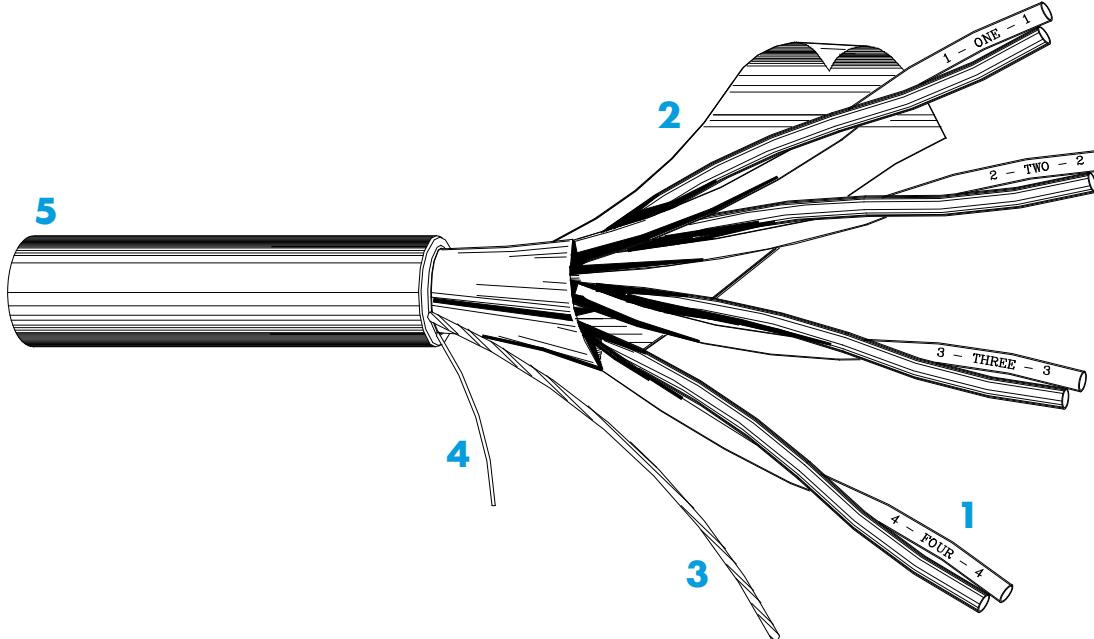
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 3 for 300 V or 6 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded PVC

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V						600 V									
		Jacket Thickness		OD mm	in	Mass kg/km	Mass lb/Mft	Jacket Thickness		OD mm	in	Mass kg/km	Mass lb/Mft				
mm	in							mm	in								
20 AWG (0.5190 mm²)																	
1 Pair	6X021M2001	1.14	0.045	6.44	0.25	48	32	Not Available									
2 Pair	6X021M2002	1.14	0.045	9.56	0.38	82	55										
4 Pair	6X021M2004	1.14	0.045	10.99	0.43	122	82										
6 Pair	6X021M2006	1.14	0.045	12.57	0.50	164	110										
8 Pair	6X021M2008	1.52	0.060	14.58	0.57	225	151										
12 Pair	6X021M2012	1.52	0.060	16.98	0.67	309	208										
16 Pair	6X021M2016	1.52	0.060	18.99	0.75	389	261										
24 Pair	6X021M2024	2.03	0.080	23.46	0.92	592	398										
36 Pair	6X021M2036	2.03	0.080	26.47	1.04	819	550										
50 Pair	6X021M2050	2.03	0.080	31.29	1.23	1095	736										
18 AWG (0.823 mm²)																	
1 Pair	6X021M1801	1.14	0.045	7.46	0.30	63	42	1.14	0.045	7.96	0.31	71	48				
2 Pair	6X021M1802	1.14	0.045	11.34	0.45	110	74	1.14	0.045	12.23	0.48	121	81				
4 Pair	6X021M1804	1.14	0.045	13.12	0.52	172	116	1.52	0.060	14.97	0.59	212	142				
6 Pair	6X021M1806	1.52	0.060	16.00	0.63	259	174	1.52	0.060	17.17	0.68	287	193				
8 Pair	6X021M1808	1.52	0.060	17.42	0.69	323	217	1.52	0.060	18.85	0.74	355	239				
12 Pair	6X021M1812	1.52	0.060	20.43	0.80	447	300	2.03	0.080	23.23	0.91	542	364				
16 Pair	6X021M1816	2.03	0.080	24.02	0.95	621	417	2.03	0.080	26.00	1.02	684	460				
24 Pair	6X021M1824	2.03	0.080	28.28	1.11	867	583	2.03	0.080	30.70	1.21	960	645				
36 Pair	6X021M1836	2.03	0.080	32.05	1.26	1217	818	2.03	0.080	34.85	1.37	1345	904				
50 Pair	6X021M1850	2.03	0.080	38.10	1.50	1638	1,101	2.03	0.080	41.50	1.63	1811	1,217				
16 AWG (1.31 mm²)																	
1 Pair	6X021M1601	1.14	0.045	8.14	0.32	80	54	1.14	0.045	8.65	0.34	86	58				
2 Pair	6X021M1602	1.14	0.045	12.46	0.49	139	93	1.14	0.045	13.35	0.53	149	100				
4 Pair	6X021M1604	1.52	0.060	15.23	0.60	247	166	1.52	0.060	16.29	0.64	269	181				
6 Pair	6X021M1606	1.52	0.060	17.53	0.69	339	228	1.52	0.060	18.80	0.74	366	246				
8 Pair	6X021M1608	1.52	0.060	19.19	0.76	425	286	1.52	0.060	20.61	0.81	460	309				
12 Pair	6X021M1612	2.03	0.080	23.66	0.93	648	435	2.03	0.080	25.39	1.00	702	472				
16 Pair	6X021M1616	2.03	0.080	26.49	1.04	822	552	2.03	0.080	28.47	1.12	891	599				
24 Pair	6X021M1624	2.03	0.080	31.31	1.23	1166	784	2.03	0.080	33.72	1.33	1264	849				
36 Pair	6X021M1636	2.03	0.080	35.55	1.40	1652	1,110	2.03	0.080	38.34	1.51	1795	1,206				
50 Pair	6X021M1650	2.03	0.080	42.35	1.67	2238	1,504	2.79	0.110	47.36	1.86	2579	1,733				
16 AWG (1.31 mm²)																	
1 Triad	6X031M1601	1.14	0.045	8.67	0.34	101	68	1.14	0.045	9.21	0.36	109	73				
2 Triad	6X031M1602	1.52	0.060	15.57	0.61	212	142	1.52	0.060	16.66	0.66	231	155				
4 Triad	6X031M1604	1.52	0.060	18.15	0.71	343	230	1.52	0.060	19.47	0.77	371	249				
6 Triad	6X031M1606	2.03	0.080	22.86	0.90	526	353	2.03	0.080	24.38	0.96	572	384				
8 Triad	6X031M1608	2.03	0.080	24.66	0.97	657	442	2.03	0.080	26.47	1.04	712	478				
12 Triad	6X031M1612	2.03	0.080	29.86	1.18	927	623	2.03	0.080	32.14	1.27	1007	677				
16 Triad	6X031M1616	2.03	0.080	33.21	1.31	1183	795	2.03	0.080	35.80	1.41	1283	862				
24 Triad	6X031M1624	2.03	0.080	41.11	1.62	1703	1,114	2.79	0.110	46.00	1.81	1994	1,340				

1-800 668 4842

PVC Insulated

I
S
O
S

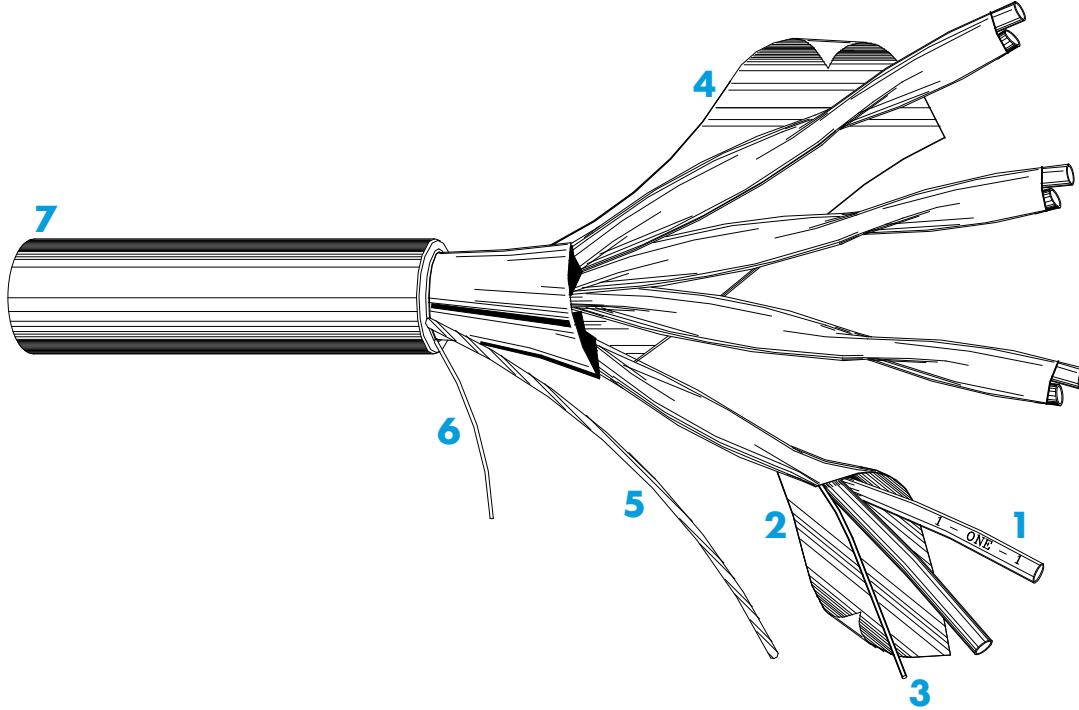
P
V
C

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable
CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)
-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 3 for 300 V or 6 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Tinned copper braid shielded cables are available upon request

Individual and Overall Shielded PVC

INSTRUMENTATION

Number of Pairs or Triads	Part Number	Jacket Thickness mm	Jacket Thickness in	300 V				600 V			
				OD mm	OD in	Mass kg/km	Mass lb/Mft	OD mm	OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²)											
1 Pair	6X021M2001	1.14	0.045	6.44	0.25	48	32	Not Available			
2 Pair	6X022M2002	1.14	0.045	10.95	0.43	100	67				
4 Pair	6X022M2004	1.14	0.045	11.90	0.47	150	101				
6 Pair	6X022M2006	1.14	0.045	13.23	0.52	203	136				
8 Pair	6X022M2008	1.52	0.060	15.11	0.59	277	186				
12 Pair	6X022M2012	1.52	0.060	18.11	0.71	389	261				
16 Pair	6X022M2016	1.52	0.060	20.07	0.79	493	331				
24 Pair	6X022M2024	2.03	0.080	25.67	1.01	759	510				
36 Pair	6X022M2036	2.03	0.080	29.20	1.15	1061	713				
50 Pair	6X022M2050	2.03	0.080	35.24	1.39	1432	962				
18 AWG (0.823 mm²)											
1 Pair	6X021M1801	1.14	0.045	7.46	0.29	63	42	1.14	0.045	7.96	0.31
2 Pair	6X022M1802	1.14	0.045	12.98	0.51	132	89	1.52	0.060	14.78	0.58
4 Pair	6X022M1804	1.52	0.060	14.95	0.59	226	152	1.52	0.060	16.07	0.63
6 Pair	6X022M1806	1.52	0.060	16.51	0.65	305	205	1.52	0.060	18.03	0.71
8 Pair	6X022M1808	1.52	0.060	17.98	0.71	379	255	1.52	0.060	19.41	0.76
12 Pair	6X022M1812	2.03	0.080	22.77	0.90	582	391	2.03	0.080	24.58	0.97
16 Pair	6X022M1816	2.03	0.080	25.20	0.99	736	495	2.03	0.080	27.23	1.07
24 Pair	6X022M1824	2.03	0.080	30.85	1.21	1048	704	2.03	0.080	33.44	1.32
36 Pair	6X022M1836	2.03	0.080	35.24	1.39	1479	994	2.03	0.080	38.27	1.51
50 Pair	6X022M1850	2.03	0.080	42.76	1.68	2007	1,349	2.79	0.110	48.12	1.89
16 AWG (1.31 mm²)											
1 Pair	6X021M1601	1.14	0.045	8.14	0.32	80	54	1.14	0.045	8.65	0.34
2 Pair	6X022M1602	1.52	0.060	15.04	0.59	190	128	1.52	0.060	16.05	0.63
4 Pair	6X022M1604	1.52	0.060	16.35	0.64	296	199	1.52	0.060	17.49	0.69
6 Pair	6X022M1606	1.52	0.060	18.29	0.72	403	271	1.52	0.060	19.56	0.77
8 Pair	6X022M1608	1.52	0.060	19.76	0.78	508	341	1.52	0.060	21.20	0.83
12 Pair	6X022M1612	2.03	0.080	25.02	0.99	779	523	2.03	0.080	26.81	1.06
16 Pair	6X022M1616	2.03	0.080	27.74	1.09	991	666	2.03	0.080	29.77	1.17
24 Pair	6X022M1624	2.03	0.080	34.10	1.34	1427	959	2.03	0.080	36.69	1.44
36 Pair	6X022M1636	2.03	0.080	39.03	1.54	2041	1,372	2.03	0.080	42.05	1.66
50 Pair	6X022M1650	2.79	0.110	49.06	1.93	2933	1,971	---	---	---	---
18 AWG (1.31 mm²)											
1 Pair	6X031M1601	1.14	0.045	8.67	0.34	101	68	1.14	0.045	9.21	0.36
2 Pair	6X032M1602	1.52	0.060	15.95	0.63	235	158	1.52	0.060	17.04	0.67
4 Pair	6X032M1604	1.52	0.060	18.58	0.73	387	260	1.52	0.060	19.90	0.78
6 Pair	6X032M1606	1.52	0.060	20.07	0.79	532	357	2.03	0.080	22.86	0.90
8 Pair	6X032M1608	2.03	0.080	23.13	0.91	724	487	2.03	0.080	24.78	0.97
12 Pair	6X032M1612	2.03	0.080	27.93	1.10	1034	695	2.03	0.080	29.97	1.18
16 Pair	6X032M1616	2.03	0.080	31.01	1.22	1329	893	2.03	0.080	33.35	1.31
24 Pair	6X032M1624	2.03	0.080	38.28	1.51	1927	1,295	2.03	0.080	41.25	1.62

PVC Insulated Armoured

O
S
P
V
C

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

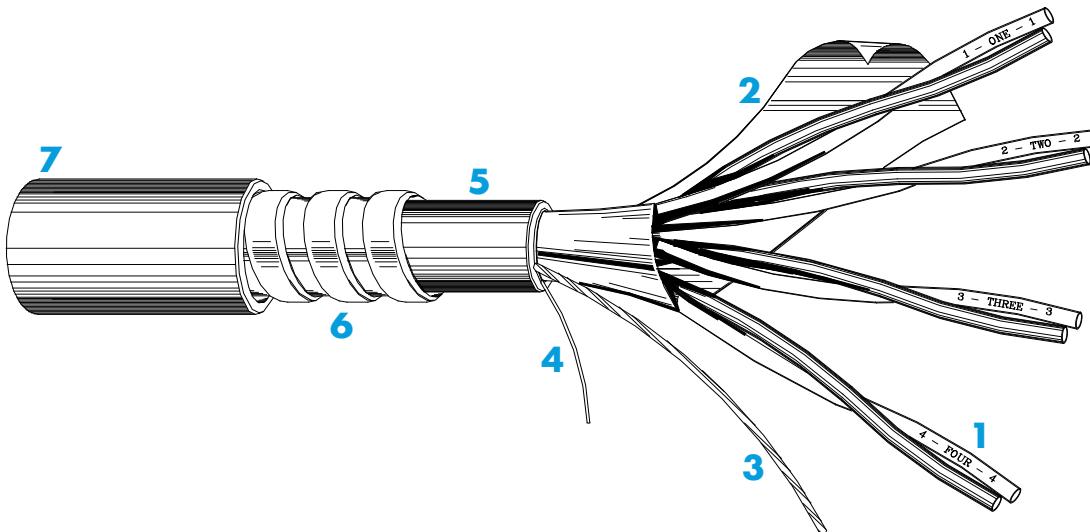
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire with each pair or triad
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
6. Aluminum or galvanized steel interlocked armour
7. Grey 90°C, -40°C (194°F, -40°F) FR LAG PVC jacket, sunlight resistant (other colours available upon request)

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 3 for 300 V or 6 for 600 V
Y in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded PVC Armoured

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V						600 V					
		OD mm	OD in	Aluminum kg/km	Steel lb/Mft	OD mm	OD in	Aluminum kg/km	Steel kg/km	Steel lb/Mft			
20 AWG (0.5190 mm²)													
1 Pair	6XY21M2001	15.1	0.59	214	144	375	252	Not Available					
2 Pair	6XY21M2002	18.2	0.71	301	202	497	334						
4 Pair	6XY21M2004	19.4	0.76	360	242	576	387						
6 Pair	6XY21M2006	21.6	0.85	445	299	690	464						
8 Pair	6XY21M2008	23.2	0.91	525	353	799	537						
12 Pair	6XY21M2012	25.8	1.01	648	435	962	646						
16 Pair	6XY21M2016	29.1	1.14	852	573	1329	893						
24 Pair	6XY21M2024	33.5	1.32	1145	769	1716	1,153						
36 Pair	6XY21M2036	36.0	1.42	1422	956	2047	1,376						
50 Pair	6XY21M2050	40.5	1.59	1785	1,200	2502	1,681						
18 AWG (0.823 mm²)													
1 Pair	6XY21M1801	16.3	0.64	253	170	423	284	16.9	0.66	271	182	448	301
2 Pair	6XY21M1802	20.1	0.79	358	241	584	392	20.7	0.81	379	255	615	413
4 Pair	6XY21M1804	22.0	0.86	449	302	704	473	23.9	0.94	521	350	806	542
6 Pair	6XY21M1806	24.7	0.97	594	399	888	597	26.0	1.02	642	431	956	642
8 Pair	6XY21M1808	25.8	1.01	663	446	976	656	28.8	1.13	801	538	1278	859
12 Pair	6XY21M1812	30.1	1.18	916	616	1421	955	33.5	1.32	1095	736	1666	1,120
16 Pair	6XY21M1816	34.1	1.34	1187	798	1771	1,190	36.0	1.42	1287	865	1911	1,284
24 Pair	6XY21M1824	37.9	1.49	1508	1,013	2172	1,460	40.5	1.59	1649	1,108	2367	1,591
36 Pair	6XY21M1836	40.5	1.59	1913	1,286	2641	1,775	43.9	1.73	2129	1,431	2924	1,965
50 Pair	6XY21M1850	47.1	1.85	2486	1,671	3348	2,250	51.8	2.04	2853	1,917	4012	2,696
16 AWG (1.31 mm²)													
1 Pair	6XY21M1601	16.9	0.66	278	187	455	306	17.5	0.69	298	200	484	325
2 Pair	6XY21M1602	22.0	0.86	425	286	680	457	23.9	0.94	495	333	779	523
4 Pair	6XY21M1604	25.2	0.99	594	399	898	603	26.4	1.04	640	430	964	648
6 Pair	6XY21M1606	29.6	1.17	839	564	1330	894	32.6	1.28	991	666	1522	1,023
8 Pair	6XY21M1808	31.6	1.24	965	648	1496	1,005	34.1	1.34	1119	752	1703	1,144
12 Pair	6XY21M1812	36.7	1.44	1315	884	1953	1,312	39.2	1.54	1436	965	2127	1,429
16 Pair	6XY21M1816	39.8	1.57	1562	1,050	2266	1,523	41.1	1.62	1685	1,132	2427	1,631
24 Pair	6XY21M1824	45.8	1.80	2085	1,401	2920	1,962	50.5	1.99	2408	1,618	3534	2,375
16 AWG (1.31 mm²)													
1 Pair	6XY21M1601	16.9	0.66	280	188	457	307	17.5	0.69	295	198	482	324
2 Pair	6XY21M1602	21.3	0.84	407	274	652	438	21.9	0.86	427	287	682	458
4 Pair	6XY21M1604	23.9	0.94	557	374	841	565	25.2	0.99	598	402	902	606
6 Pair	6XY21M1606	26.0	1.02	694	466	1008	677	27.3	1.07	743	499	1076	723
8 Pair	6XY21M1608	28.8	1.13	870	585	1348	906	30.8	1.21	940	632	1457	979
12 Pair	6XY21M1612	33.5	1.32	1202	808	1773	1,191	35.3	1.39	1292	868	1903	1,279
16 Pair	6XY21M1616	36.0	1.42	1426	958	2050	1,378	38.6	1.52	1543	1,037	2220	1,492
24 Pair	6XY21M1624	41.1	1.62	1867	1,255	2598	1,746	42.7	1.68	2023	1,359	2791	1,876
36 Pair	6XY21M1636	44.6	1.75	2449	1,646	3258	2,189	47.0	1.85	2643	1,776	3505	2,355
50 Pair	6XY21M1650	52.4	2.06	3294	2,214	4469	3,003	57.4	2.26	3767	2,531	5073	3,409
16 AWG (1.31 mm²)													
1 Triad	6XY31M1601	17.5	0.69	311	209	497	334	18.1	0.71	328	220	524	352
2 Triad	6XY31M1602	23.9	0.94	522	351	806	542	25.2	0.99	560	376	864	581
4 Triad	6XY31M1604	26.4	1.04	693	466	1016	683	29.5	1.16	828	556	1319	886
6 Triad	6XY31M1606	33.9	1.33	1150	773	1707	1,147	35.1	1.38	1224	822	1808	1,215
8 Triad	6XY31M1608	34.8	1.37	1235	830	1833	1,232	36.1	1.42	1315	884	1939	1,303
12 Triad	6XY31M1612	39.8	1.57	1603	1,077	2307	1,550	41.2	1.62	1715	1,152	2456	1,650
16 Triad	6XY31M1616	42.0	1.65	1929	1,296	2685	1,804	44.5	1.75	2080	1,398	2889	1,941
24 Triad	6XY31M1624	51.2	2.01	2731	1,835	3873	2,603	56.2	2.21	3153	2,119	4426	2,974

PVC Insulated Armoured

I
S
O
S

P
V
C

A
R
M
O
U
R
E
D

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

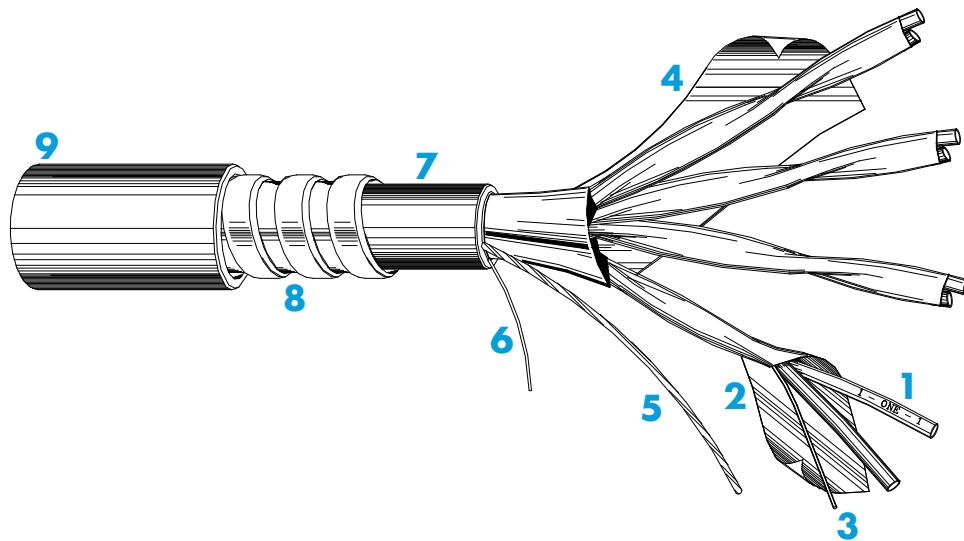
-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2

Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
8. Aluminum or galvanized steel interlocked armour
9. Grey 90°C, -40°C (194°F, -40°F) FR LAG PVC jacket, sunlight resistant (other colours available upon request)

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 3 for 300 V or 6 for 600 V
Y in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Tinned copper braid shielded cables are available upon request

Individual and Overall Shielded PVC Armoured

Number of Pairs or Triads	Part Number	300 V						600 V					
		OD mm	OD in	Aluminum kg/km	Steel lb/Mft	OD mm	OD in	Aluminum kg/km	Steel kg/km	Steel lb/Mft			
20 AWG (0.5190 mm²)													
1 Pair	6XY21M2001	15.3	0.60	224	151	384	258	Not Available					
2 Pair	6XY22M2002	19.4	0.76	339	228	555	373						
4 Pair	6XY22M2004	20.7	0.81	408	274	644	433						
6 Pair	6XY22M2006	22.2	0.87	495	333	750	504						
8 Pair	6XY22M2008	23.8	0.94	587	394	871	585						
12 Pair	6XY22M2012	26.4	1.04	739	497	1062	714						
16 Pair	6XY22M2016	29.6	1.17	968	650	1459	980						
24 Pair	6XY22M2024	35.4	1.40	1350	907	1960	1,317						
36 Pair	6XY22M2036	38.8	1.53	1738	1,168	2415	1,623						
50 Pair	6XY22M2050	43.9	1.73	2217	1,490	3012	2,024						
18 AWG (0.823 mm²)													
1 Pair	6XY21M1801	16.2	0.64	253	170	423	284	16.9	0.66	271	182	448	301
2 Pair	6XY22M1802	21.9	0.86	409	275	664	446	23.2	0.91	471	317	746	501
4 Pair	6XY22M1804	23.8	0.94	536	360	820	551	24.5	0.96	576	387	870	585
6 Pair	6XY22M1806	25.3	1.00	650	437	954	641	26.6	1.05	713	479	1037	697
8 Pair	6XY22M1808	26.4	1.04	729	490	1052	707	29.6	1.17	909	611	1400	941
12 Pair	6XY22M1812	32.8	1.29	1123	755	1680	1,129	34.7	1.37	1246	837	1844	1,239
16 Pair	6XY22M1816	34.7	1.37	1314	883	1912	1,285	37.3	1.47	1472	989	2123	1,427
24 Pair	6XY22M1824	40.7	1.60	1763	1,185	2481	1,667	42.6	1.68	1967	1,322	2735	1,838
36 Pair	6XY22M1836	43.9	1.73	2264	1,521	3059	2,056	47.1	1.85	2561	1,721	3423	2,300
50 Pair	6XY22M1850	53.0	2.09	3077	2,068	4268	2,868	58.1	2.29	3679	2,472	5001	3,361
16 AWG (1.31 mm²)													
1 Pair	6XY21M1601	16.9	0.66	280	188	457	307	17.5	0.69	298	200	484	325
2 Pair	6XY22M1602	23.8	0.94	500	336	784	527	24.5	0.96	523	351	817	549
4 Pair	6XY22M1604	25.1	0.99	625	420	929	624	25.7	1.01	656	441	970	652
6 Pair	6XY22M1606	27.3	1.07	779	523	1112	747	29.6	1.17	906	609	1397	939
8 Pair	6XY22M1608	29.6	1.17	983	661	1474	991	30.9	1.22	1042	700	1560	1,048
12 Pair	6XY22M1612	34.7	1.37	1357	912	1955	1,314	36.6	1.44	1448	973	2086	1,402
16 Pair	6XY22M1616	37.3	1.47	1619	1,088	2270	1,525	40.1	1.58	1762	1,184	2466	1,657
24 Pair	6XY22M1624	42.6	1.68	2187	1,470	2955	1,986	45.8	1.80	2352	1,581	3187	2,142
36 Pair	6XY22M1636	47.7	1.88	2902	1,950	3777	2,538	52.4	2.06	3239	2,177	4414	2,966
50 Pair	6XY22M1650	58.7	2.31	4150	2,789	5489	3,689	---	---	---	---	---	---
16 AWG (1.31 mm²)													
1 Triad	6XY31M1601	17.5	0.69	311	209	497	334	18.1	0.71	328	220	524	352
2 Triad	6XY32M1602	24.5	0.96	554	372	848	570	25.7	1.01	593	398	907	610
4 Triad	6XY32M1604	27.0	1.06	746	501	1080	726	29.6	1.17	891	599	1382	929
6 Triad	6XY32M1606	30.3	1.19	1019	685	1523	1,023	33.9	1.33	1242	835	1800	1,209
8 Triad	6XY32M1608	32.8	1.29	1266	851	1824	1,226	34.7	1.37	1358	913	1955	1,314
12 Triad	6XY32M1612	37.9	1.49	1674	1,125	2361	1,587	40.1	1.58	1811	1,217	2516	1,691
16 Triad	6XY32M1616	40.7	1.60	2044	1,374	2762	1,856	42.0	1.65	2174	1,461	2929	1,968
24 Triad	6XY32M1624	47.0	1.85	2775	1,865	3637	2,444	51.8	2.04	3110	2,090	4268	2,868

1-800 668 4842

XLPE Insulated

O
S
X
L
P
E

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

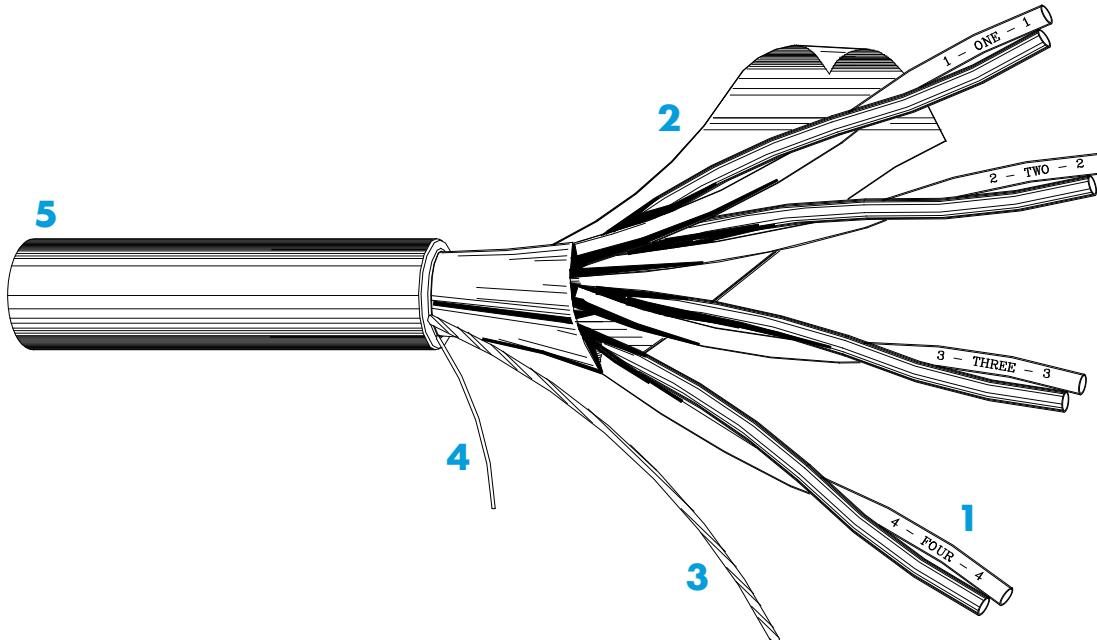
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 38, Thermoset Insulated Conductors

FT1 rated (Vertical Tray Flame Test)

-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 4 for 300 V or 9 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Unshielded or tinned copper braid shielded cables are available upon request
This cable is also available with FR XLPE insulation to meet the FT4 Vertical Tray Flame Test

Overall Shielded XLPE

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V						600 V									
		Jacket Thickness		OD mm	in	Mass kg/km	Mass lb/Mft	Jacket Thickness		OD mm	in	Mass kg/km	Mass lb/Mft				
mm	in	mm	in					mm	in								
20 AWG (0.5190 mm²)																	
1 Pair	6X021M2001	1.14	0.045	6.44	0.25	46	31	Not Available									
2 Pair	6X021M2002	1.14	0.045	9.56	0.38	78	52										
4 Pair	6X021M2004	1.14	0.045	10.99	0.43	114	77										
6 Pair	6X021M2006	1.14	0.045	12.57	0.50	152	102										
8 Pair	6X021M2008	1.52	0.060	14.58	0.57	210	141										
12 Pair	6X021M2012	1.52	0.060	16.98	0.67	286	192										
16 Pair	6X021M2016	1.52	0.060	18.99	0.75	358	241										
24 Pair	6X021M2024	2.03	0.080	26.46	0.92	546	367										
36 Pair	6X021M2036	2.03	0.080	26.47	1.04	750	504										
50 Pair	6X021M2050	2.03	0.080	31.29	1.23	999	671										
18 AWG (0.823 mm²)																	
1 Pair	6X021M1801	1.14	0.045	7.46	0.29	60	40	1.14	0.045	7.96	0.31	71	48				
2 Pair	6X021M1802	1.14	0.045	11.34	0.45	105	71	1.14	0.045	12.23	0.48	121	81				
4 Pair	6X021M1804	1.14	0.045	13.12	0.52	162	109	1.52	0.060	14.97	0.59	212	142				
6 Pair	6X021M1806	1.52	0.060	15.90	0.63	243	163	1.52	0.060	17.17	0.68	267	179				
8 Pair	6X021M1808	1.52	0.060	17.42	0.69	303	204	1.52	0.060	18.85	0.74	355	239				
12 Pair	6X021M1812	1.52	0.060	20.43	0.80	417	280	2.03	0.080	23.23	0.91	542	364				
16 Pair	6X021M1816	2.03	0.080	24.02	0.95	580	390	2.03	0.080	26.00	1.02	684	460				
24 Pair	6X021M1824	2.03	0.080	28.28	1.11	806	542	2.03	0.080	30.70	1.21	960	645				
36 Pair	6X021M1836	2.03	0.080	32.05	1.26	1125	756	2.03	0.080	34.85	1.37	1345	904				
50 Pair	6X021M1850	2.03	0.080	38.10	1.50	1511	1,015	2.03	0.080	41.50	1.63	1811	1,217				
16 AWG (1.31 mm²)																	
1 Pair	6X021M1601	1.14	0.045	8.14	0.32	77	52	1.14	0.045	8.65	0.34	86	58				
2 Pair	6X021M1602	1.14	0.045	12.46	0.49	133	89	1.14	0.045	13.35	0.53	149	100				
4 Pair	6X021M1604	1.52	0.060	15.23	0.60	235	158	1.52	0.060	16.29	0.64	269	181				
6 Pair	6X021M1606	1.52	0.060	17.50	0.69	321	216	1.52	0.060	18.76	0.74	344	231				
8 Pair	6X021M1608	1.52	0.060	19.19	0.76	400	269	1.52	0.060	20.61	0.81	460	309				
12 Pair	6X021M1612	2.03	0.080	23.66	0.93	612	411	2.03	0.080	25.39	1.00	702	472				
16 Pair	6X021M1616	2.03	0.080	26.49	1.04	774	520	2.03	0.080	28.47	1.12	891	599				
24 Pair	6X021M1624	2.03	0.080	31.31	1.23	1093	734	2.03	0.080	33.72	1.33	1264	849				
36 Pair	6X021M1636	2.03	0.080	35.55	1.40	1543	1,037	2.03	0.080	38.34	1.51	1795	1,206				
50 Pair	6X021M1650	2.03	0.080	42.35	1.67	2086	1,402	2.79	0.110	47.36	1.86	2579	1,733				
16 AWG (1.31 mm²)																	
1 Triad	6X031M1601	1.14	0.045	8.67	0.34	97	65	1.14	0.045	9.21	0.36	109	73				
2 Triad	6X031M1602	1.52	0.060	15.57	0.61	202	136	1.52	0.060	16.66	0.66	231	155				
4 Triad	6X031M1604	1.52	0.060	18.15	0.71	325	218	1.52	0.060	17.47	0.69	371	249				
6 Triad	6X031M1606	2.03	0.080	22.76	0.90	498	335	2.03	0.080	24.40	0.96	537	361				
8 Triad	6X031M1608	2.03	0.080	24.66	0.97	620	417	2.03	0.080	26.47	1.04	712	478				
12 Triad	6X031M1612	2.03	0.080	29.86	1.18	871	585	2.03	0.080	32.14	1.27	1007	677				
16 Triad	6X031M1616	2.03	0.080	33.21	1.31	1109	745	2.03	0.080	35.80	1.41	1283	862				
24 Triad	6X031M1624	2.03	0.080	41.11	1.62	1592	1,070	2.79	0.110	46.00	1.81	1994	1,340				

1-800 668 4842

XLPE Insulated

I
S
O
S

X
L
P
E

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

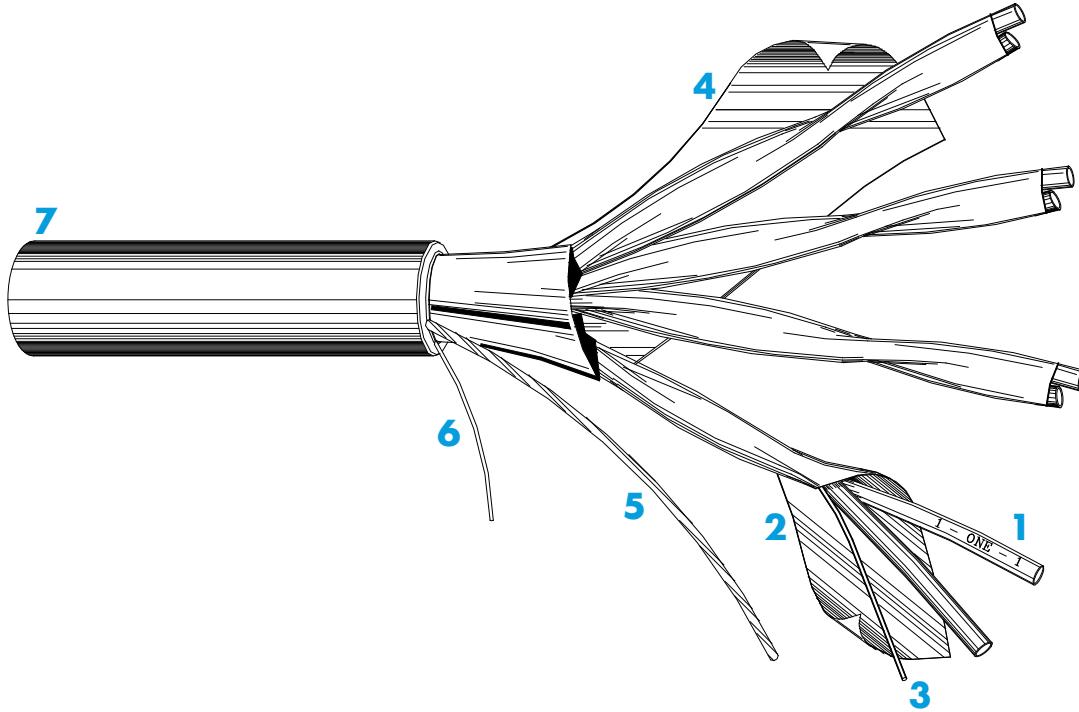
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 38, Thermoset Insulated Conductors

FT1 rated (Vertical Flame Test)

-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 4 for 300 V or 9 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Tinned copper braid shielded cables are available upon request
This cable is also available with FR XLPE insulation to meet FT4 Vertical Tray Flame Test

Individual and Overall Shielded XLPE

INSTRUMENTATION

Number of Pairs or Triads	Part Number	Jacket Thickness mm	Jacket Thickness in	300 V				600 V			
				OD mm	OD in	Mass kg/km	Mass lb/Mft	OD mm	OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²)											
1 Pair	6X021M2001	1.14	0.045	6.44	0.25	46	31	Not Available			
2 Pair	6X022M2002	1.14	0.045	10.95	0.43	97	65				
4 Pair	6X022M2004	1.14	0.045	11.90	0.47	143	96				
6 Pair	6X022M2006	1.14	0.045	13.23	0.52	192	129				
8 Pair	6X022M2008	1.52	0.060	15.11	0.59	262	176				
12 Pair	6X022M2012	1.52	0.060	18.11	0.71	366	246				
16 Pair	6X022M2016	1.52	0.060	20.07	0.80	462	310				
24 Pair	6X022M2024	2.03	0.080	25.67	1.01	713	479				
36 Pair	6X022M2036	2.03	0.080	29.20	1.15	992	667				
50 Pair	6X022M2050	2.03	0.080	35.24	1.39	1336	898				
18 AWG (0.823 mm²)											
1 Pair	6X021M1801	1.14	0.045	7.46	0.29	60	40	1.14	0.045	7.96	0.31
2 Pair	6X022M1802	1.14	0.045	12.98	0.51	127	85	1.52	0.060	14.78	0.58
4 Pair	6X022M1804	1.52	0.060	14.95	0.59	216	145	1.52	0.060	16.07	0.63
6 Pair	6X022M1806	1.52	0.060	16.61	0.65	289	194	1.52	0.060	17.91	0.71
8 Pair	6X022M1808	1.52	0.060	17.98	0.71	359	241	1.52	0.060	19.41	0.76
12 Pair	6X022M1812	2.03	0.080	22.77	0.90	551	370	2.03	0.080	24.58	0.97
16 Pair	6X022M1816	2.03	0.080	25.20	0.99	695	467	2.03	0.080	27.23	1.07
24 Pair	6X022M1824	2.03	0.080	30.85	1.21	987	663	2.03	0.080	33.44	1.32
36 Pair	6X022M1836	2.03	0.080	35.24	1.39	1387	932	2.03	0.080	38.27	1.51
50 Pair	6X022M1850	2.03	0.080	42.76	1.68	1879	1,263	2.79	0.110	48.12	1.89
1 Triad	6X031M1801	1.14	0.045	7.99	0.31	74	50	1.14	0.045	8.52	0.34
2 Triad	6X032M1802	1.52	0.060	14.58	0.57	177	119	1.52	0.060	15.67	0.62
4 Triad	6X032M1804	1.52	0.060	16.92	0.67	280	188	1.52	0.060	18.25	0.72
6 Triad	6X032M1806	1.52	0.060	18.49	0.73	374	251	1.52	0.060	19.95	0.79
8 Triad	6X032M1808	1.52	0.060	20.03	0.79	469	315	2.03	0.080	22.73	0.89
12 Triad	6X032M1812	2.03	0.080	25.35	1.39	721	485	2.03	0.080	27.41	1.08
16 Triad	6X032M1816	2.03	0.080	28.11	1.11	914	614	2.03	0.080	30.44	1.20
24 Triad	6X032M1824	2.03	0.080	34.57	1.36	1310	880	2.03	0.080	37.54	1.48
16 AWG (1.31 mm²)											
1 Pair	6X021M1601	1.14	0.045	8.14	0.32	77	52	1.14	0.045	8.65	0.34
2 Pair	6X022M1602	1.52	0.060	15.04	0.59	184	124	1.52	0.060	16.05	0.63
4 Pair	6X022M1604	1.52	0.060	16.35	0.64	284	191	1.52	0.060	17.49	0.69
6 Pair	6X022M1606	1.52	0.060	18.24	0.72	385	259	1.52	0.060	19.53	0.77
8 Pair	6X022M1608	1.52	0.060	19.76	0.78	483	325	1.52	0.060	21.20	0.83
12 Pair	6X022M1612	2.03	0.080	25.02	0.99	742	499	2.03	0.080	26.81	1.06
16 Pair	6X022M1616	2.03	0.080	27.74	1.09	943	634	2.03	0.080	29.77	1.17
24 Pair	6X022M1624	2.03	0.080	34.10	1.34	1355	911	2.03	0.080	36.69	1.44
36 Pair	6X022M1636	2.03	0.080	39.03	1.54	1932	1,298	2.03	0.080	42.05	1.66
50 Pair	6X022M1650	2.79	0.110	49.06	1.93	2781	1,869	---	---	---	---
1 Triad	6X031M1601	1.14	0.045	8.67	0.34	97	65	1.14	0.045	9.21	0.36
2 Triad	6X032M1602	1.52	0.060	15.95	0.63	225	151	1.52	0.060	17.04	0.67
4 Triad	6X032M1604	1.52	0.060	18.58	0.73	369	248	1.52	0.060	19.90	0.78
6 Triad	6X032M1606	1.52	0.060	20.35	0.80	504	339	2.03	0.080	22.89	0.90
8 Triad	6X032M1608	2.03	0.080	23.13	0.91	687	462	2.03	0.080	24.75	0.97
12 Triad	6X032M1612	2.03	0.080	27.93	1.10	979	658	2.03	0.080	29.59	1.16
16 Triad	6X032M1616	2.03	0.080	31.01	1.22	1255	843	2.03	0.080	33.35	1.31
24 Triad	6X032M1624	2.03	0.080	38.28	1.51	1816	1,220	2.03	0.080	41.25	1.62

1-800 668 4842

XLPE Insulated Armoured

O
S

X
L
P
E

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 38, Thermoset Insulated Conductors

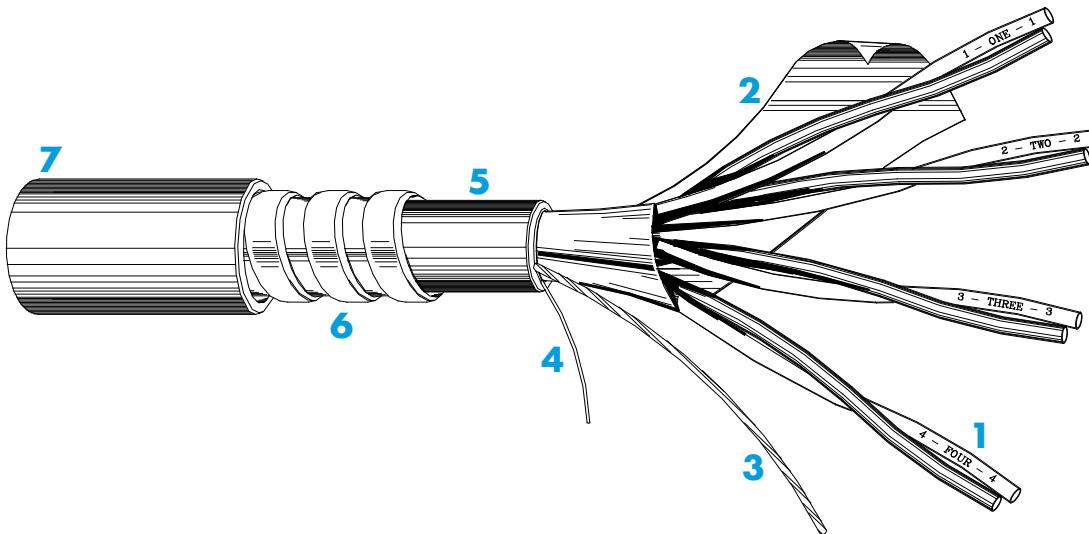
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
6. Aluminum or galvanized steel interlocked armour
7. Grey 90°C, -40°C (194°F, -40°F) FR LAG PVC jacket, sunlight resistant (other colours available upon request)

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 4 for 300 V or 9 for 600 V
Y in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded XLPE Armoured

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V						600 V					
		OD mm	OD in	Aluminum kg/km	Steel lb/Mft	OD mm	OD in	Aluminum kg/km	Steel lb/Mft	kg/km	lb/Mft	kg/km	lb/Mft
20 AWG (0.5190 mm²)													
1 Pair	6XY21M2001	15.3	0.60	222	149	383	257	Not Available					
2 Pair	6XY21M2002	18.1	0.71	297	200	494	332						
4 Pair	6XY21M2004	19.4	0.76	353	237	569	382						
6 Pair	6XY21M2006	21.5	0.85	433	291	678	456						
8 Pair	6XY21M2008	23.2	0.91	510	343	784	527						
12 Pair	6XY21M2012	25.7	1.01	625	420	939	631						
16 Pair	6XY21M2016	29.0	1.14	821	552	1299	873						
24 Pair	6XY21M2024	33.5	1.32	1099	739	1670	1,122						
36 Pair	6XY21M2036	36.0	1.42	1353	909	1978	1,329						
50 Pair	6XY21M2050	40.7	1.60	1714	1,152	2432	1,634						
18 AWG (0.823 mm²)													
1 Pair	6XY21M1801	16.2	0.64	251	169	420	282	16.9	0.66	268	180	445	299
2 Pair	6XY21M1802	20.0	0.79	353	237	579	389	20.7	0.81	373	251	608	409
4 Pair	6XY21M1804	21.9	0.86	439	295	694	466	23.8	0.94	508	341	793	533
6 Pair	6XY21M1806	24.7	0.97	578	388	872	586	26.0	1.02	623	419	936	629
8 Pair	6XY21M1808	25.7	1.01	642	431	956	642	28.7	1.13	775	521	1253	842
12 Pair	6XY21M1812	30.3	1.19	604	607	1409	947	33.5	1.32	1057	710	1627	1,093
16 Pair	6XY21M1816	34.1	1.34	1146	770	1730	1,163	36.0	1.42	1235	830	1860	1,250
24 Pair	6XY21M1824	38.2	1.50	1470	988	2134	1,434	40.4	1.59	1571	1,056	2289	1,538
36 Pair	6XY21M1836	40.7	1.60	1846	1,241	2575	1,730	43.9	1.73	2013	1,353	2808	1,887
50 Pair	6XY21M1850	47.1	1.85	2358	1,585	3220	2,164	51.8	2.04	2692	1,809	3850	2,587
16 AWG (1.31 mm²)													
1 Pair	6XY21M1601	16.9	0.66	274	184	451	303	17.5	0.69	293	197	480	323
2 Pair	6XY21M1602	21.9	0.86	417	280	672	452	23.8	0.94	485	326	769	517
4 Pair	6XY21M1604	25.0	0.99	579	389	883	593	26.3	1.04	621	417	944	634
6 Pair	6XY21M1606	29.6	1.17	816	548	1307	878	32.6	1.28	962	646	1493	1,003
8 Pair	6XY21M1808	31.4	1.24	934	628	1465	984	34.0	1.34	1080	726	1664	1,118
12 Pair	6XY21M1812	36.5	1.44	1268	852	1906	1,281	39.1	1.54	1377	925	2068	1,390
16 Pair	6XY21M1816	40.0	1.57	1524	1,024	2229	1,498	41.0	1.61	1606	1,079	2348	1,578
24 Pair	6XY21M1824	45.8	1.80	1992	1,339	2827	1,900	50.4	1.99	2290	1,539	3416	2,296
16 AWG (1.31 mm²)													
1 Pair	6XY21M1601	16.9	0.66	277	186	454	305	17.5	0.69	292	196	478	321
2 Pair	6XY21M1602	21.3	0.84	400	269	646	434	21.9	0.86	420	282	675	454
4 Pair	6XY21M1604	23.8	0.94	544	366	829	557	25.1	0.99	583	392	887	596
6 Pair	6XY21M1606	26.0	1.02	676	454	990	665	27.3	1.07	720	484	1053	708
8 Pair	6XY21M1608	28.7	1.13	846	569	1324	890	30.7	1.21	910	612	1427	959
12 Pair	6XY21M1612	33.5	1.32	1166	784	1736	1,167	35.4	1.39	1247	838	1858	1,249
16 Pair	6XY21M1616	36.0	1.42	1377	925	2001	1,345	38.5	1.52	1482	996	2160	1,452
24 Pair	6XY21M1624	41.1	1.62	1794	1,206	2525	1,697	42.6	1.68	1932	1,298	2700	1,814
36 Pair	6XY21M1636	44.5	1.75	2340	1,572	3149	2,116	47.1	1.85	2506	1,684	3368	2,263
50 Pair	6XY21M1650	52.4	2.06	3142	2,111	4317	2,901	57.5	2.26	3577	2,404	4883	3,281
16 AWG (1.31 mm²)													
1 Triad	6XY31M1601	17.5	0.69	306	206	493	331	18.1	0.71	322	216	519	349
2 Triad	6XY31M1602	23.8	0.94	512	344	797	536	25.0	0.99	549	369	853	573
4 Triad	6XY31M1604	26.3	1.04	674	453	998	671	29.3	1.16	805	541	1296	871
6 Triad	6XY31M1606	33.9	1.33	1122	754	1680	1,129	35.1	1.38	1189	799	1773	1,191
8 Triad	6XY31M1608	34.7	1.36	1198	805	1796	1,207	35.9	1.41	1269	853	1893	1,272
12 Triad	6XY31M1612	39.8	1.56	1548	1,040	2252	1,513	41.0	1.61	1645	1,105	2387	1,604
16 Triad	6XY31M1616	42.0	1.65	1856	1,247	2611	1,755	44.5	1.75	1988	1,336	2796	1,879
24 Triad	6XY31M1624	51.1	2.01	2620	1,761	3762	2,528	56.2	2.21	3015	2,026	4288	2,882

XLPE Insulated Armoured

I
S
O
S
X
L
P
E
A
R
M
O
U
R
E
D

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 38, Thermoset Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

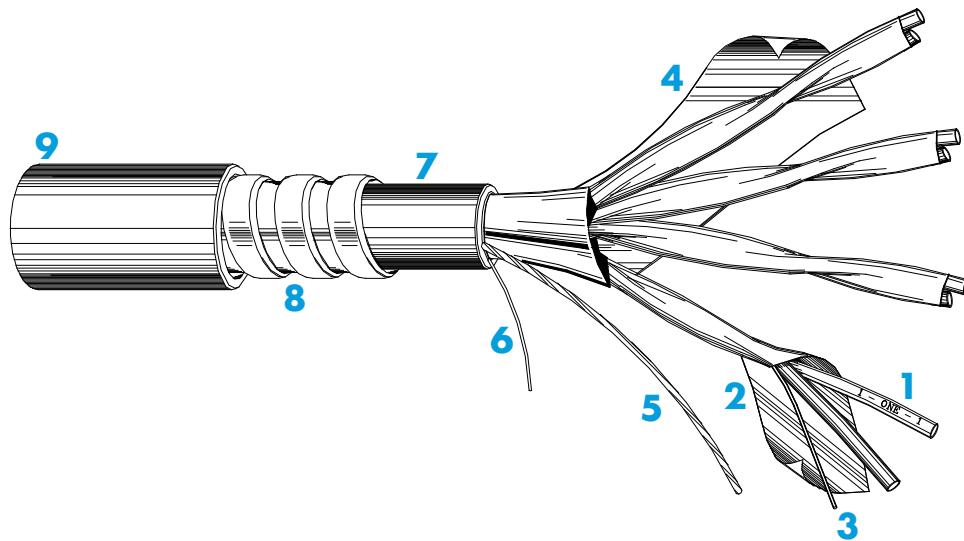
-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2

Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
8. Aluminum or galvanized steel interlocked armour
9. Grey 90°C, -40°C (194°F, -40°F) FR LAG PVC jacket, sunlight resistant (other colours available upon request)

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: The minimum bend radius is equal to 12 times the nominal OD

X in the part number is to be replaced with 4 for 300 V or 9 for 600 V

Y in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour

150 V cable is available upon request

14 AWG (2.08 mm²) cable is available upon request

Tinned copper braid shielded cables are available upon request

Individual and Overall Shielded XLPE Armoured

Number of Pairs or Triads	Part Number	300 V						600 V					
		OD mm	OD in	Aluminum kg/km	Steel lb/Mft	OD mm	OD in	Aluminum kg/km	Steel kg/km	Steel lb/Mft			
20 AWG (0.5190 mm²)													
1 Pair	6XY21M2001	15.3	0.60	222	149	383	257	Not Available					
2 Pair	6XY22M2002	19.4	0.76	335	225	551	370						
4 Pair	6XY22M2004	20.9	0.82	414	278	636	427						
6 Pair	6XY22M2006	22.2	0.87	483	325	738	496						
8 Pair	6XY22M2008	23.8	0.94	571	384	856	575						
12 Pair	6XY22M2012	26.4	1.04	716	481	1039	698						
16 Pair	6XY22M2016	29.4	1.16	919	618	1410	948						
24 Pair	6XY22M2024	35.4	1.39	1304	876	1914	1,286						
36 Pair	6XY22M2036	38.5	1.52	1645	1,105	2322	1,560						
50 Pair	6XY22M2050	43.9	1.73	2121	1,425	2916	1,960						
18 AWG (0.823 mm²)													
1 Pair	6XY21M1801	16.2	0.64	251	169	420	282	16.9	0.66	268	180	445	299
2 Pair	6XY22M1802	21.9	0.86	404	271	659	443	23.2	0.91	465	312	739	497
4 Pair	6XY22M1804	23.8	0.94	525	353	810	544	24.5	0.96	563	378	857	576
6 Pair	6XY22M1806	25.3	1.00	635	427	939	631	26.6	1.05	694	466	1017	683
8 Pair	6XY22M1808	26.4	1.04	708	476	1032	694	29.4	1.16	865	581	1356	911
12 Pair	6XY22M1812	32.8	1.29	1092	734	1650	1,109	34.7	1.37	1207	811	1805	1,213
16 Pair	6XY22M1816	34.7	1.37	1274	856	1871	1,257	37.3	1.47	1420	954	2071	1,392
24 Pair	6XY22M1824	40.4	1.59	1677	1,127	2394	1,609	42.6	1.68	1889	1,269	2658	1,786
36 Pair	6XY22M1836	43.9	1.73	2172	1,460	2967	1,994	47.1	1.85	2445	1,643	3307	2,222
50 Pair	6XY22M1850	53.0	2.09	2949	1,982	4141	2,783	58.1	2.29	3518	2,364	4840	3,252
16 AWG (1.31 mm²)													
1 Pair	6XY21M1601	16.9	0.66	277	186	454	305	17.5	0.69	293	197	480	323
2 Pair	6XY22M1602	23.8	0.94	494	332	778	523	24.5	0.96	516	347	810	544
4 Pair	6XY22M1604	25.1	0.99	613	412	917	616	25.7	1.01	641	431	955	642
6 Pair	6XY22M1606	27.3	1.07	761	511	1094	735	29.6	1.17	883	593	1374	923
8 Pair	6XY22M1608	29.4	1.16	941	632	1432	962	30.6	1.21	993	667	1511	1,015
12 Pair	6XY22M1612	34.7	1.37	1321	888	1918	1,289	36.6	1.44	1403	943	2040	1,371
16 Pair	6XY22M1616	37.3	1.47	1571	1,056	2222	1,493	39.8	1.57	1676	1,126	2381	1,600
24 Pair	6XY22M1624	42.6	1.68	2114	1,421	2882	1,994	45.8	1.80	2261	1,519	3096	2,801
36 Pair	6XY22M1636	47.7	1.88	2793	1,877	3668	2,465	52.4	2.06	3102	2,085	4277	2,874
50 Pair	6XY22M1650	58.7	2.31	3999	2,687	5337	3,586	---	---	---	---	---	---
16 AWG (1.31 mm²)													
1 Triad	6XY31M1601	17.5	0.69	306	206	493	331	18.1	0.71	322	216	519	349
2 Triad	6XY32M1602	24.5	0.96	545	366	839	564	25.7	1.01	582	391	895	601
4 Triad	6XY32M1604	27.0	1.06	728	489	1061	713	29.4	1.16	849	571	1340	900
6 Triad	6XY32M1606	30.3	1.19	991	666	1496	1,005	33.9	1.33	1208	812	1765	1,186
8 Triad	6XY32M1608	32.8	1.29	1229	826	1787	1,201	34.7	1.37	1312	882	1909	1,283
12 Triad	6XY32M1612	37.9	1.49	1618	1,087	2282	1,534	39.8	1.57	1717	1,154	2422	1,628
16 Triad	6XY32M1616	40.4	1.59	1945	1,307	2663	1,790	42.0	1.65	2081	1,398	2836	1,906
24 Triad	6XY32M1624	47.1	1.85	2664	1,790	3526	2,369	51.8	2.04	2971	1,997	4130	2,775

1-800 668 4842

PVC Insulated Served Wire Armour

O
S

P
V
C

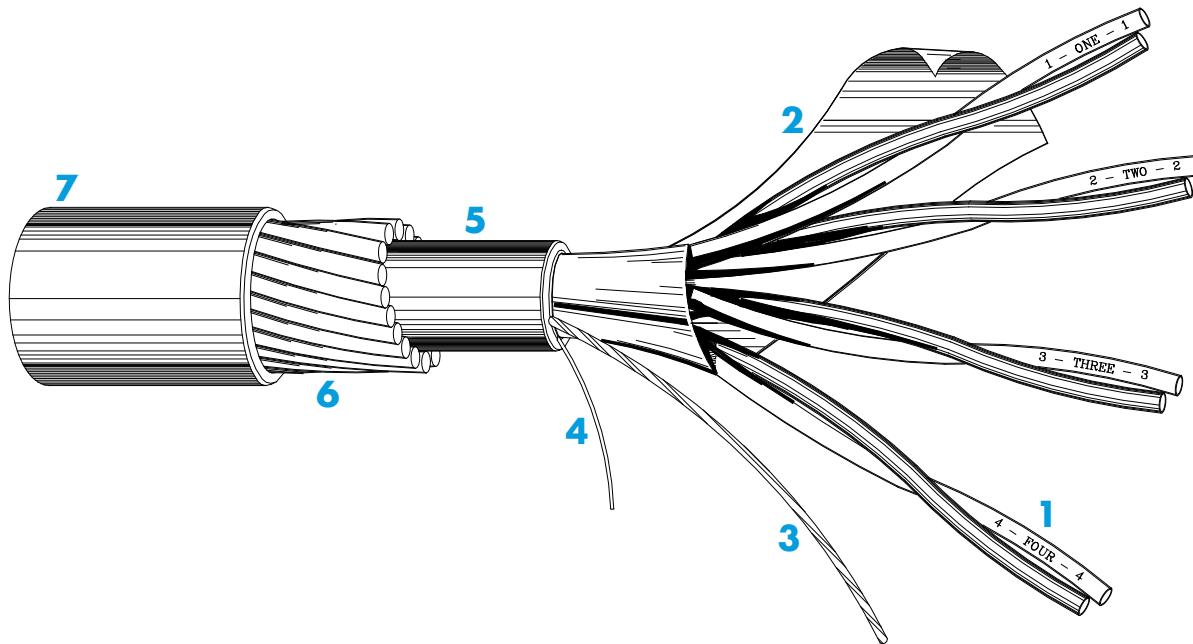
S
W
A

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial, raceways or vertical cable applications and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable
CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)
-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester overall tape shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket
6. Galvanized steel served wire armour, minimum 85% coverage
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 3 for 300 V or 6 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded PVC SWA

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V				600 V					
		OD mm	OD in	Mass kg/km	Mass lb/Mft	OD mm	OD in	Mass kg/km	Mass lb/Mft		
20 AWG (0.5190 mm²)											
1 Pair	6X321M2001	10.7	0.42	179	120			Not Available			
2 Pair	6X321M2002	14.0	0.55	295	198						
4 Pair	6X321M2004	15.5	0.61	368	247						
8 Pair	6X321M2008	20.3	0.80	658	442						
12 Pair	6X321M2012	24.1	0.95	961	646						
16 Pair	6X321M2016	26.2	1.03	1108	744						
1 Triad	6X331M2001	11.2	0.44	197	132						
2 Triad	6X331M2002	15.7	0.62	354	238						
4 Triad	6X331M2004	18.8	0.74	562	378						
8 Triad	6X331M2008	24.9	0.98	989	665						
12 Triad	6X331M2012	28.4	1.12	1241	834						
18 AWG (0.823 mm²)											
1 Pair	6X321M1801	11.7	0.46	212	142	12.2	0.48	230	155		
2 Pair	6X321M1802	16.5	0.65	380	255	17.3	0.68	408	274		
4 Pair	6X321M1804	18.8	0.74	568	382	20.8	0.82	659	443		
8 Pair	6X321M1808	24.6	0.97	998	671	25.9	1.02	1074	722		
12 Pair	6X321M1812	27.4	1.08	1229	826	---	---	---	---		
1 Triad	6X331M1801	12.2	0.48	237	159	12.7	0.50	256	172		
2 Triad	6X331M1802	19.3	0.76	547	368	21.1	0.83	636	427		
4 Triad	6X331M1804	23.6	0.93	897	603	24.9	0.98	968	650		
8 Triad	6X331M1808	28.4	1.12	1258	845	---	---	---	---		
16 AWG (1.31 mm²)											
1 Pair	6X321M1601	12.4	0.49	239	161	13.2	0.52	287	193		
2 Pair	6X321M1602	18.3	0.72	512	344	19.1	0.75	549	369		
4 Pair	6X321M1604	23.6	0.93	695	467	22.1	0.87	745	501		
8 Pair	6X321M1608	26.4	1.04	1163	781	27.7	1.09	1240	833		
1 Triad	6X331M1601	13.2	0.52	302	203	13.7	0.54	316	212		
2 Triad	6X331M1602	21.3	0.84	671	451	23.9	0.94	864	581		
4 Triad	6X331M1604	25.1	0.99	1040	699	26.7	1.05	1110	746		

PVC Insulated Served Wire Armour

I
S
O
S

P
V
C

S
W
A

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial, raceways or vertical cable applications and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

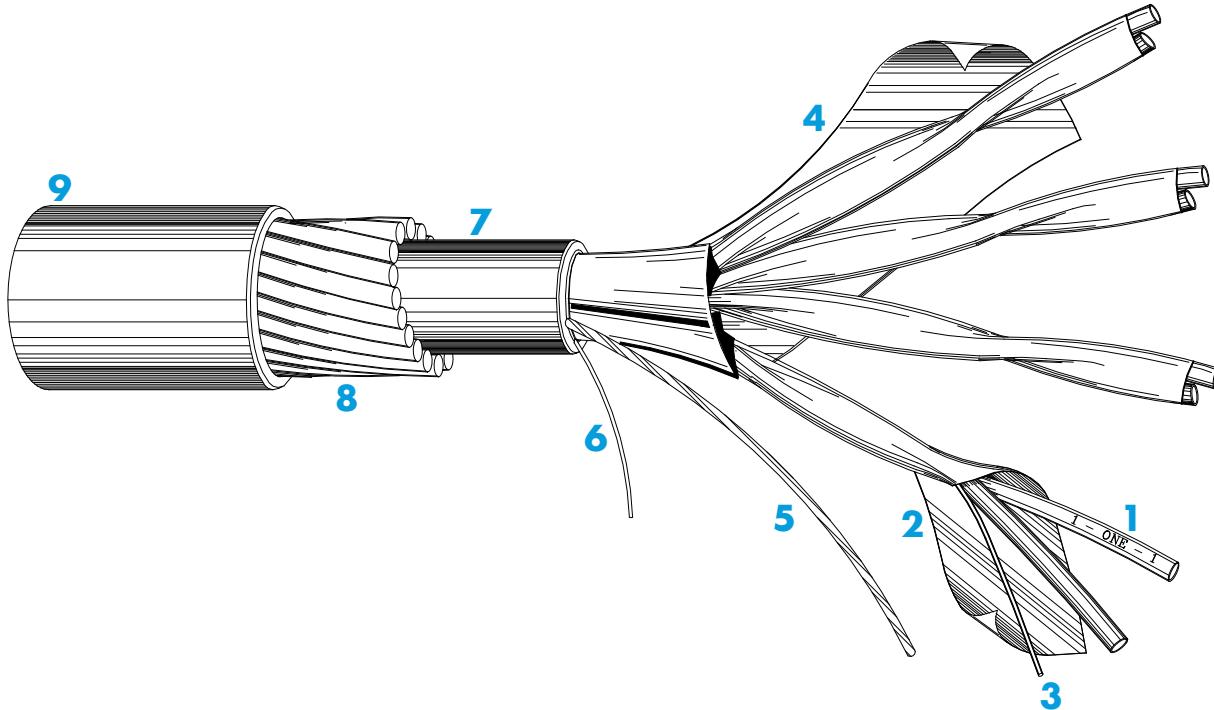
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Aluminum/polyester overall tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket
8. Galvanized steel served wire armour, minimum 85% coverage
9. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 3 for 300 V or 6 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Tinned copper braid shielded cables are available upon request

Individual and Overall Shielded PVC SWA

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V					600 V				
		OD mm	OD in	Mass kg/km	Mass lb/Mft		OD mm	OD in	Mass kg/km	Mass lb/Mft	
20 AWG (0.5190 mm²)											
1 Pair	6X321M2001	10.7	0.42	179	120						Not Available
2 Pair	6X322M2002	15.5	0.61	347	233						
4 Pair	6X322M2004	17.0	0.67	429	288						
8 Pair	6X322M2008	21.1	0.83	724	486						
12 Pair	6X322M2012	25.1	0.99	1085	729						
16 Pair	6X322M2016	27.2	1.07	1253	842						
1 Triad	6X331M2001	11.2	0.44	197	132						
2 Triad	6X332M2002	16.8	0.66	392	263						
4 Triad	6X332M2004	19.3	0.76	604	406						
8 Triad	6X332M2008	23.9	0.94	989	665						
12 Triad	6X332M2012	27.2	1.07	1267	851						
18 AWG (0.823 mm²)											
1 Pair	6X321M1801	11.7	0.46	212	142	12.2	0.48	230	155		
2 Pair	6X322M1802	18.8	0.74	519	349	20.6	0.81	607	408		
4 Pair	6X322M1804	20.8	0.82	673	452	21.8	0.86	731	491		
8 Pair	6X322M1808	25.1	0.99	1075	722	26.4	1.04	1172	788		
1 Triad	6X332M1801	12.2	0.48	237	159	12.7	0.50	256	172		
2 Triad	6X332M1802	20.3	0.80	620	417	21.3	0.84	670	450		
4 Triad	6X332M1804	24.1	0.95	948	637	25.4	1.00	1033	694		
8 Triad	6X332M1808	27.2	1.07	1260	847	---	---	---	---		
16 AWG (1.31 mm²)											
1 Pair	6X321M1601	12.4	0.49	239	161	13.2	0.52	287	193		
2 Pair	6X322M1602	20.8	0.82	638	429	21.8	0.86	678	456		
4 Pair	6X322M1604	22.1	0.87	782	525	24.6	0.97	991	666		
8 Pair	6X322M1608	26.9	1.06	1248	839	28.2	1.11	1346	904		
1 Triad	6X332M1601	13.2	0.52	302	203	13.7	0.54	316	212		
2 Triad	6X332M1602	21.6	0.85	708	476	24.1	0.95	908	610		
4 Triad	6X332M1604	25.7	1.01	1104	742	26.9	1.06	1174	789		

XLPE Insulated Served Wire Armour

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial, raceways or vertical cable applications and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

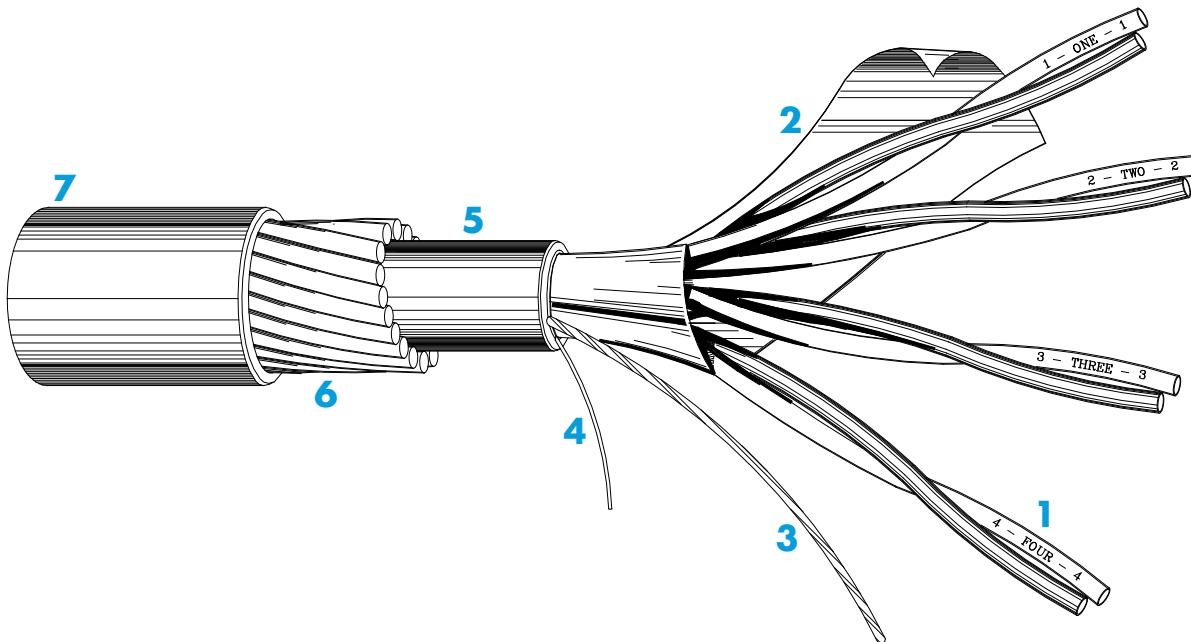
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 38, Thermoset Insulated Conductors

FT1 rated (Vertical Tray Flame Test)

-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester overall tape shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket
6. Galvanized steel served wire armour, minimum 85% coverage
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD

X in the part number is to be replaced with 4 for 300 V or 9 for 600 V

150 V cable is available upon request

14 AWG (2.08 mm²) cable is available upon request

Unshielded or tinned copper braid shielded cables are available upon request

This cable is also available with FR XLPE insulation to meet the FT4 Vertical Tray Flame Test

Overall Shielded XLPE SWA

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V					600 V				
		OD mm	OD in	Mass kg/km	Mass lb/Mft		OD mm	OD in	Mass kg/km	Mass lb/Mft	
20 AWG (0.5190 mm²)											
1 Pair	6X321M2001	10.7	0.42	177	119				Not Available		
2 Pair	6X321M2002	14.0	0.55	291	196						
4 Pair	6X321M2004	15.5	0.61	360	242						
8 Pair	6X321M2008	20.3	0.80	642	431						
12 Pair	6X321M2012	24.1	0.95	936	629						
16 Pair	6X321M2016	26.2	1.03	1075	722						
1 Triad	6X331M2001	11.2	0.44	194	130						
2 Triad	6X331M2002	15.7	0.62	348	234						
4 Triad	6X331M2004	18.8	0.74	550	370						
8 Triad	6X331M2008	24.9	0.98	964	648						
12 Triad	6X331M2012	28.4	1.12	1204	809						
18 AWG (0.823 mm²)											
1 Pair	6X321M1801	11.7	0.46	209	140	12.2	0.48	226	152		
2 Pair	6X321M1802	16.5	0.65	374	251	17.3	0.68	400	269		
4 Pair	6X321M1804	18.8	0.74	555	373	20.8	0.82	643	432		
8 Pair	6X321M1808	24.6	0.97	972	653	25.9	1.02	1041	699		
12 Pair	6X321M1812	27.4	1.08	1190	800	---	---	---	---	---	
1 Triad	6X331M1801	12.2	0.48	233	157	12.7	0.50	250	168		
2 Triad	6X331M1802	19.3	0.76	537	361	21.1	0.83	624	419		
4 Triad	6X331M1804	23.6	0.93	877	589	24.9	0.98	943	634		
8 Triad	6X331M1808	28.4	1.12	1219	819	---	---	---	---	---	
16 AWG (1.31 mm²)											
1 Pair	6X321M1601	12.4	0.49	236	159	13.2	0.52	283	190		
2 Pair	6X321M1602	18.3	0.72	505	339	19.1	0.75	540	363		
4 Pair	6X321M1604	23.6	0.93	680	457	22.1	0.87	726	488		
8 Pair	6X321M1608	26.4	1.04	1132	761	27.7	1.09	1201	807		
1 Triad	6X331M1601	13.2	0.52	297	200	13.7	0.54	309	208		
2 Triad	6X331M1602	21.3	0.84	660	443	23.9	0.94	850	571		
4 Triad	6X331M1604	25.1	0.99	1017	683	26.7	1.05	1081	726		

XLPE Insulated Served Wire Armour

I
S
O
S

X
L
P
E

S
W
A

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial, raceways or vertical cable applications and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

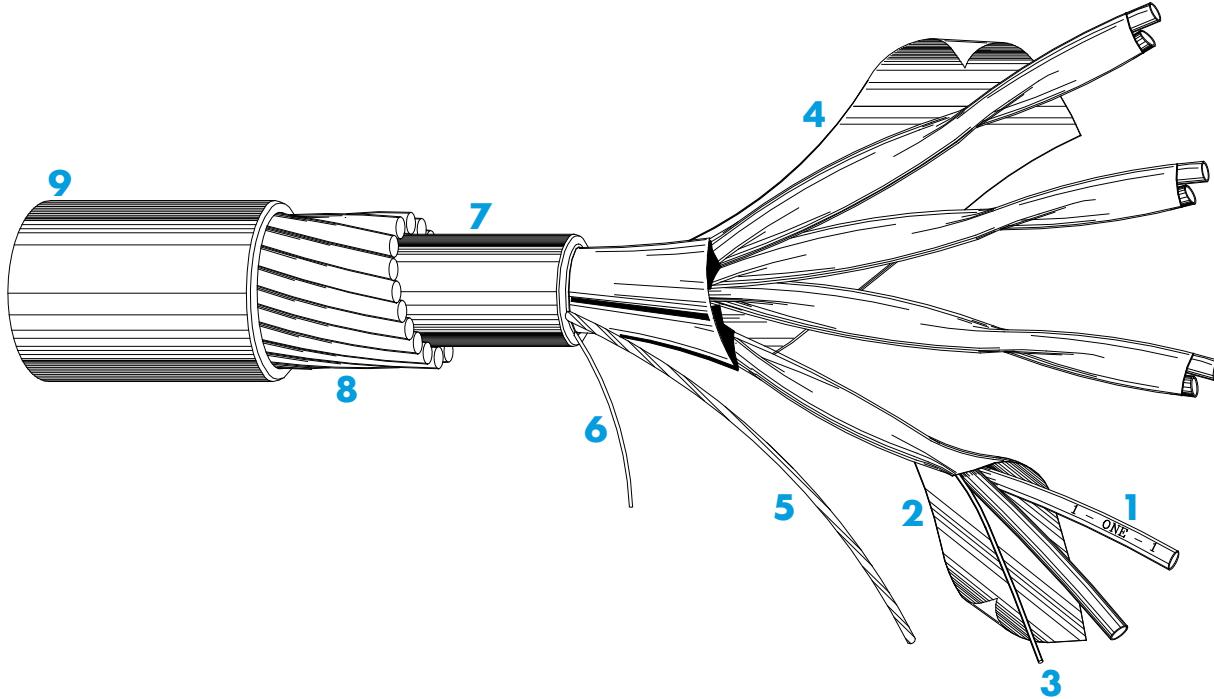
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 38, Thermoset Insulated Conductors

FT1 rated (Vertical Flame Test)

-40°C (-40°F) rated

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Aluminum/polyester overall tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket
8. Galvanized steel served wire armour, minimum 85% coverage
9. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 4 for 300 V or 9 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Tinned copper braid shielded cables are available upon request
This cable is also available with FR XLPE insulation to meet the FT4 Vertical Tray Flame Test

Individual and Overall Shielded XLPE SWA

INSTRUMENTATION

Number of Pairs or Triads	Part Number	300 V					600 V				
		OD mm	OD in	Mass kg/km	Mass lb/Mft		OD mm	OD in	Mass kg/km	Mass lb/Mft	
20 AWG (0.5190 mm²)											
1 Pair	6X321M2001	10.7	0.42	177	119				Not Available		
2 Pair	6X322M2002	15.5	0.61	343	230						
4 Pair	6X322M2004	17.0	0.67	421	283						
8 Pair	6X322M2008	21.1	0.83	708	476						
12 Pair	6X322M2012	25.1	0.99	1060	712						
16 Pair	6X322M2016	27.2	1.07	1220	820						
1 Triad	6X332M2001	11.2	0.44	194	130						
2 Triad	6X332M2002	16.8	0.66	386	259						
4 Triad	6X332M2004	19.3	0.76	592	398						
8 Triad	6X332M2008	23.9	0.94	985	662						
12 Triad	6X332M2012	27.2	1.07	1230	826						
18 AWG (0.823 mm²)											
1 Pair	6X321M1801	11.7	0.46	209	140	12.2	0.48	226	152		
2 Pair	6X322M1802	18.8	0.74	513	345	20.6	0.81	599	402		
4 Pair	6X322M1804	20.8	0.82	660	443	21.8	0.86	715	480		
8 Pair	6X322M1808	25.1	0.99	1049	705	26.4	1.04	1139	765		
1 Triad	6X331M1801	12.2	0.48	233	157	12.7	0.50	250	168		
2 Triad	6X332M1802	20.3	0.80	611	411	21.3	0.84	658	442		
4 Triad	6X332M1804	24.1	0.95	929	624	25.4	1.00	1008	677		
8 Triad	6X332M1808	27.2	1.07	1221	820	---	---	---	---		
16 AWG (1.31 mm²)											
1 Pair	6X321M1601	12.4	0.49	236	159	13.2	0.52	283	190		
2 Pair	6X322M1602	20.8	0.82	631	424	21.8	0.86	669	450		
4 Pair	6X322M1604	22.1	0.87	767	515	24.6	0.97	972	653		
8 Pair	6X322M1608	26.9	1.06	1217	818	28.2	1.11	1307	878		
1 Triad	6X331M1601	13.2	0.52	297	200	13.7	0.54	309	208		
2 Triad	6X332M1602	21.6	0.85	697	468	24.1	0.95	894	601		
4 Triad	6X332M1604	25.7	1.01	1081	726	26.9	1.06	1145	769		

Thermocouple

Conductors: Solid alloy wire, matched and calibrated to ANSI MC 96.1, standard limits of error, thermocouple extension grade. Thermocouple grade and special limits of error alloys are available.

Primary Insulation: PVC compound - rated as 105°C (221°F) dry, 75°C (167°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 75 for Type TW75-40 insulation.

XLPE compound - rated as 105°C (221°F) dry, 90°C (194°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 38 for Type RW90-40 insulation.

Insulation Thickness:

AWG	mm ²	150 V		300 V		600 V	
		mm	in	mm	in	mm	in
20 - 19	0.519 - 0.653	0.38	0.015	0.51	0.020	---	---
18 - 14	0.823 - 2.08	0.51	0.020	0.64	0.025	0.76	0.030
12 - 10	3.31 - 5.27	---	---	---	---	0.76	0.030

Conductor Assembly: Two conductors are twisted together to form a pair. The individually shielded pairs have a finished lay of 64 mm (2.5 in). Unshielded pairs have staggered lays to prevent electromagnetic interference and cross talk.

Individual Shielding: When specified, pairs are shielded with 100% coverage aluminum/polyester tape. The shielding tape is designed to provide total shield isolation from all other shields.

Thermocouple pairs are provided with a layer of clear polyester tape under the shielding tape and have a solid tinned copper drain wire. A stranded tinned copper drain wire is optional.

Conductor Identification: The individual conductor insulation is colour coded as per ANSI specifications for proper identification of the ANSI cable type and distinction between the positive and negative wires.

Overall Shielding: Assembled pairs are overall shielded with 100% coverage aluminum/polyester tape and a 20 AWG (0.5190 mm²) seven strand tinned copper drain wire.

Jacket: 90°C to -40°C (194°F to -40°F) Fire Retardant PVC for unarmoured cables
90°C to -40°C (194°F to -40°F) Fire Retardant Low Acid Gas PVC for armoured cables

Thermocouple cables are coloured as per the ANSI colour corresponding to the thermocouple alloy type contained in the construction. The inner jacket under the armour is black. Other colours are available upon request.

Armouring (Optional): CSA certified interlocked aluminum or interlocked galvanized steel armour is suitable for use in Hazardous Locations. In Group B, C and D atmospheres, the individually shielded pairs may be extended through a sealing gland without removing the shielding tape. These cables are marked HLBCD in accordance with CSA C22.2 No. 174.

Zetabon® is a hermetically sealed aluminum barrier integral with a bonded outer FR CPE jacket and is recommended for use in direct burial applications. Please note, however, that this armour is not presently recognized by the CSA.

Armour Outer Covering: 90°C to -40°C (194°F to -40°F) Fire Retardant (FR) Low Acid Gas (LAG) PVC

Thermocouple cables are coloured as per the ANSI colour corresponding to the thermocouple alloy type contained in the construction. Other colours are available upon request.

Standard Performance

Features:

Cables meet cold impact/bend test at -40°C (-40°F). It is recommended, however, that cables not be installed if the cable temperature is below -10°C (14°F).

Interlocked armoured constructions CSA Certified for use in Hazardous Locations
Sunlight Resistant
Flame Test rated FT4

CSA Certifications: CSA C22.2 No. 239, Control and Instrumentation Cables
CSA C22.2 No. 174, Cables and Cable Glands for Use in Hazardous Locations

Zetabon® is a registered trademark of DOW-Dupont

PVC Insulated

O
S
P
V
C

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

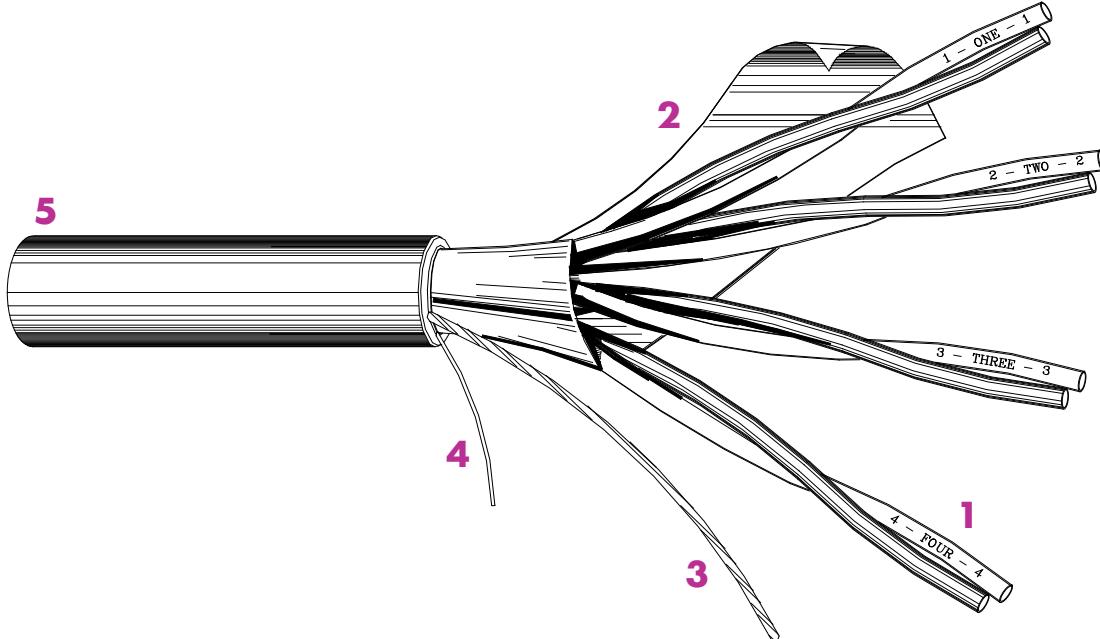
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with PVC, TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant, colour code per ANSI MC 96.1



Note: Weights will vary based on thermocouple extension alloys
The minimum bend radius is equal to 12 times the nominal OD
150 V and 600 V cables are available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded PVC

T
H
E
R
M
O
C
O
U
P
L
E

Number of Pairs	Part Number	Jacket Thickness		Nominal OD		Mass	
		mm	in	mm	in	kg/km	lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	73021M2001	1.14	0.045	6.43	0.25	48	32
2	73021M2002	1.14	0.045	9.17	0.36	78	52
4	73021M2004	1.14	0.045	10.50	0.41	116	78
8	73021M2008	1.14	0.045	13.16	0.52	193	130
12	73021M2012	1.52	0.060	16.21	0.64	295	198
16	73021M2016	1.52	0.060	18.10	0.71	370	249
24	73021M2024	1.52	0.060	21.31	0.84	516	647
36	73021M2036	2.03	0.080	25.21	0.99	779	523
50	73021M2050	2.03	0.080	29.76	1.17	1038	698
18 AWG (0.823 mm²) 300 V							
1	73021M1801	1.14	0.045	7.34	0.29	61	41
2	73021M1802	1.14	0.045	10.77	0.42	104	70
4	73021M1804	1.14	0.045	12.41	0.49	162	109
8	73021M1808	1.52	0.060	16.48	0.65	305	205
12	73021M1812	1.52	0.060	19.30	0.76	421	283
16	73021M1816	2.03	0.080	22.72	0.89	582	391
24	73021M1824	2.03	0.080	23.88	0.94	815	548
36	73021M1836	2.03	0.080	30.24	1.19	1142	767
50	73021M1850	2.03	0.080	35.88	1.41	1534	1,031
16 AWG (1.31 mm²) 300 V							
1	73021M1601	1.14	0.045	7.90	0.31	78	52
2	73021M1602	1.14	0.045	11.75	0.46	131	88
4	73021M1604	1.52	0.060	14.39	0.57	234	157
8	73021M1608	1.52	0.060	18.06	0.75	402	270
12	73021M1612	1.52	0.060	21.21	0.84	564	379
16	73021M1616	2.03	0.080	24.90	0.98	778	523
24	73021M1624	2.03	0.080	29.38	1.16	1104	742
36	73021M1636	2.03	0.080	33.31	1.31	1561	1,049
50	73021M1650	2.03	0.080	39.64	1.56	2113	1,420

PVC Insulated

I
S
O
S

P
V
C

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

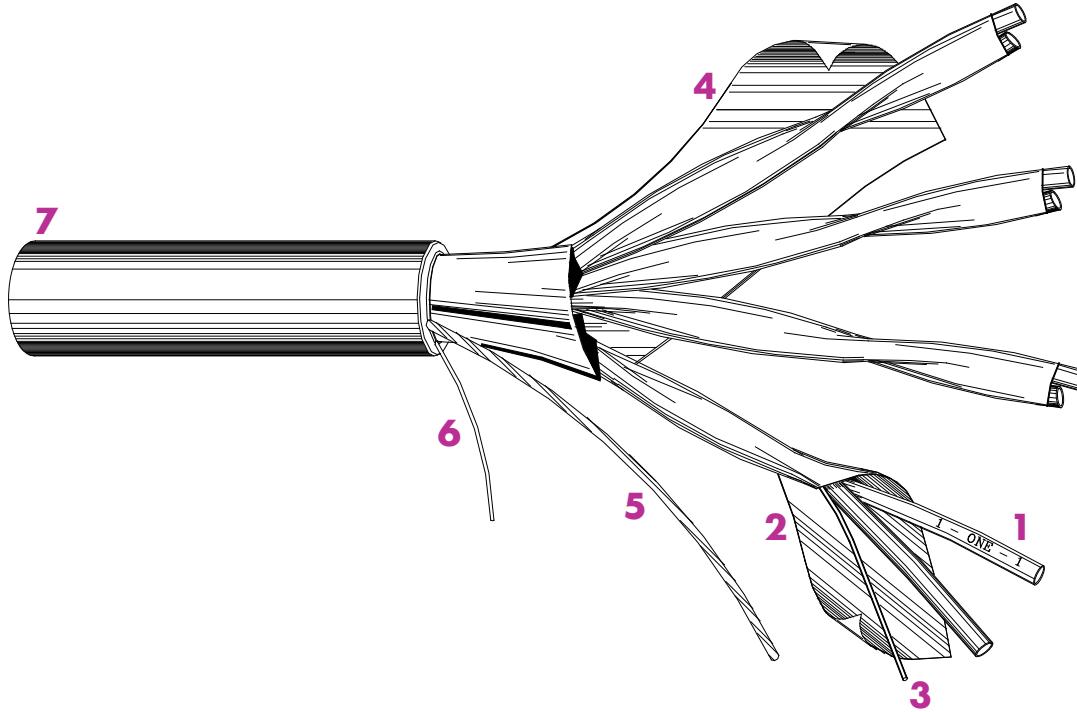
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with PVC, TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape overall shield over individual pairs
3. Solid tinned copper drain wire with each pair
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant, colour code per ANSI MC 96.1



Note: Weights will vary based on thermocouple extension alloys

The minimum bend radius is equal to 12 times the nominal OD

150 V and 600 V cables are available upon request

Individual and Overall Shielded PVC

T
H
E
R
M
O
C
O
U
P
L
E

Number of Pairs	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	73021M2001	1.14	0.045	6.43	0.25	48	32
2	73022M2002	1.14	0.045	10.69	0.42	100	67
4	73022M2004	1.14	0.045	11.61	0.46	149	100
8	73022M2008	1.52	0.060	14.76	0.58	275	185
12	73022M2012	1.52	0.060	17.67	0.70	387	260
16	73022M2016	1.52	0.060	19.56	0.77	489	329
24	73022M2024	2.03	0.080	25.03	0.99	754	507
36	73022M2036	2.03	0.080	28.45	1.12	1054	708
50	73022M2050	2.03	0.080	34.29	1.35	1423	956
18 AWG (0.823 mm²) 300 V							
1	73021M1801	1.14	0.045	7.34	0.29	61	41
2	73022M1802	1.14	0.045	12.52	0.49	128	86
4	73022M1804	1.52	0.060	14.43	0.57	220	148
8	73022M1808	1.52	0.060	17.32	0.68	369	248
12	73022M1812	1.52	0.060	20.89	0.82	519	349
16	73022M1816	2.03	0.080	24.28	0.96	716	481
24	73022M1824	2.03	0.080	29.68	1.17	1017	683
36	73022M1836	2.03	0.080	33.88	1.33	1438	966
50	73022M1850	2.03	0.080	41.07	1.62	1948	1,309
16 AWG (1.31 mm²) 300 V							
1	73021M1601	1.14	0.045	7.90	0.31	78	52
2	73022M1602	1.52	0.060	14.38	0.57	184	124
4	73022M1604	1.52	0.060	15.67	0.62	283	190
8	73022M1608	1.52	0.060	18.90	0.74	489	329
12	73022M1612	2.03	0.080	23.94	0.94	750	504
16	73022M1616	2.03	0.080	26.52	1.04	954	641
24	73022M1624	2.03	0.080	32.55	1.28	1373	923
36	73022M1636	2.03	0.080	37.21	1.46	1963	1,319
50	73022M1650	2.79	0.110	46.80	1.84	2821	1,896

PVC Insulated Armoured

O
S
P
V
C

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

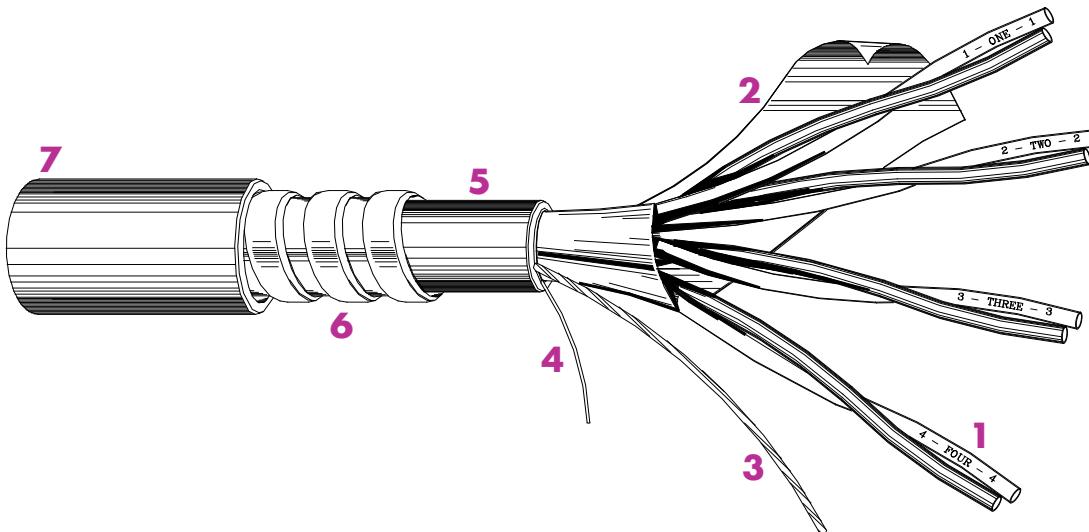
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2 Hazardous Locations

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with PVC, TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
6. Aluminum or galvanized steel interlocked armour
7. 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket, sunlight resistant, colour code per ANSI MC 96.1

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: X in the part number should be replaced with 1 for Steel or 2 for Aluminum Armour
Weights will vary based on thermocouple extension alloys
The minimum bend radius is equal to 12 times the nominal OD
150 V and 600 V cables are available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded PVC Armoured

Number of Pairs	Part Number	Mass					
		Nominal OD mm	Nominal OD in	Aluminum kg/km	Aluminum lb/Mft	Steel kg/km	Steel lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	73X21M2001	15.3	0.60	215	144	375	252
2	73X21M2002	18.3	0.72	299	201	495	333
4	73X21M2004	19.6	0.77	356	240	572	385
8	73X21M2008	22.1	0.87	472	317	727	489
12	73X21M2012	24.7	0.97	616	414	910	612
16	73X21M2016	26.5	1.04	721	485	1045	702
24	73X21M2024	30.8	1.21	999	672	1517	1,020
36	73X21M2036	34.8	1.37	1360	914	1958	1,316
50	73X21M2050	39.4	1.55	1706	1,147	2397	1,611
18 AWG (0.823 mm²) 300 V							
1	73X21M1801	16.3	0.64	252	170	422	284
2	73X21M1802	19.6	0.77	344	232	560	377
4	73X21M1804	21.4	0.84	432	291	677	455
8	73X21M1808	25.2	0.99	636	428	940	632
12	73X21M1812	29.5	1.16	880	592	1371	922
16	73X21M1816	33.1	1.30	1126	757	1684	1,132
24	73X21M1824	36.9	1.45	1433	963	2071	1,392
36	73X21M1836	39.9	1.57	1823	1,225	2527	1,698
50	73X21M1850	44.7	1.76	2336	1,570	3144	2,113
16 AWG (1.31 mm²) 300 V							
1	73X21M1601	17.0	0.67	278	187	455	306
2	73X21M1602	20.9	0.82	390	262	625	420
4	73X21M1604	23.4	0.92	535	360	810	545
8	73X21M1608	26.5	1.04	753	506	1077	724
12	73X21M1612	31.8	1.25	1078	725	1609	1,082
16	73X21M1616	34.8	1.37	1359	914	1957	1,315
24	73X21M1624	39.4	1.55	1767	1,188	2458	1,652
36	73X21M1636	42.7	1.68	2323	1,561	3092	2,078
50	73X21M1650	50.1	1.97	3117	2,095	4226	2,840

PVC Insulated Armoured

I
S
O
S

P
V
C

A
R
M
O
U
R
E
D

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

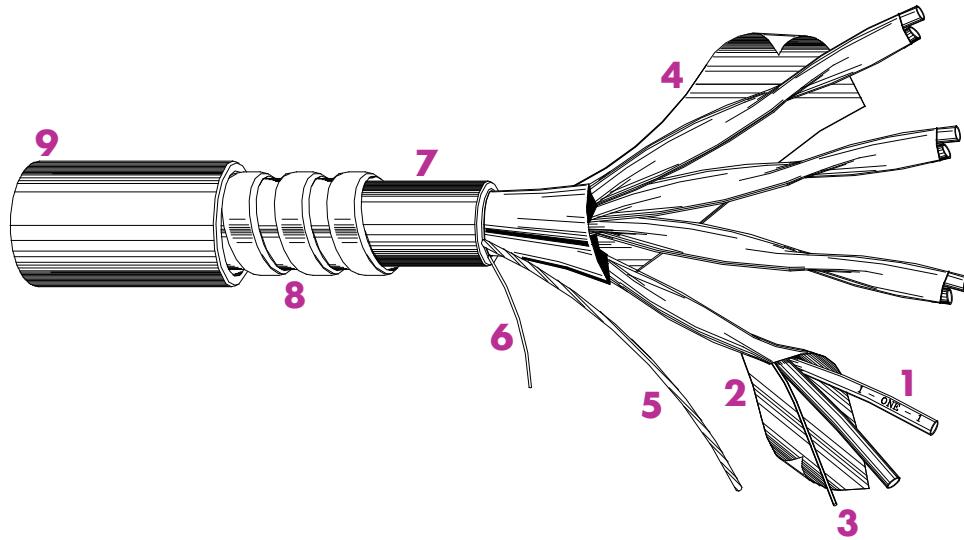
-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2

Hazardous Locations

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with PVC, TW75, 105°C (221°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape shield over individual pairs
3. Solid tinned copper drain wire with each pair
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
8. Aluminum or galvanized steel interlocked armour
9. 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket, sunlight resistant, colour code per ANSI MC 96.1

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: X in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour
Weights will vary based on thermocouple extension alloys
The minimum bend radius is equal to 12 times the nominal OD
150 V and 600 V cables are available upon request

Individual and Overall Shielded PVC Armoured

T
H
E
R
M
O
C
O
U
P
L
E

Number of Pairs	Part Number	Mass					
		Nominal OD mm	Nominal OD in	Aluminum kg/km	Aluminum lb/Mft	Steel kg/km	Steel lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	73X21M2001	15.0	0.59	215	144	375	252
2	73X22M2002	19.4	0.76	340	228	556	374
4	73X22M2004	20.0	0.79	399	268	625	420
8	73X22M2008	23.2	0.91	577	388	851	572
12	73X22M2012	26.4	1.04	738	496	1061	713
16	73X22M2016	29.4	1.16	949	638	1439	967
24	73X22M2024	34.7	1.37	1335	897	1933	1,299
36	73X22M2036	37.9	1.49	1698	1,141	2362	1,587
50	73X22M2050	43.2	1.70	2199	1,478	2980	2,003
18 AWG (0.823 mm²) 300 V							
1	73X21M1801	16.2	0.64	252	169	422	284
2	73X22M1802	21.3	0.84	398	267	643	432
4	73X22M1804	23.2	0.91	522	351	796	535
8	73X22M1808	25.7	1.01	710	477	1024	688
12	73X22M1812	30.6	1.21	1002	673	1520	1,021
16	73X22M1816	34.1	1.34	1284	863	1869	1,256
24	73X22M1824	39.8	1.57	1697	1,140	2401	1,614
36	73X22M1836	42.6	1.68	2201	1,479	2969	1,995
50	73X22M1850	51.8	2.04	2994	2,012	4152	2,790
16 AWG (1.31 mm²) 300 V							
1	73X21M1601	16.9	0.66	278	187	455	306
2	73X22M1602	23.2	0.91	485	326	760	511
4	73X22M1604	24.5	0.96	605	407	899	604
8	73X22M1608	28.7	1.13	936	629	1414	950
12	73X22M1612	34.1	1.34	1319	886	1903	1,279
16	73X22M1616	36.6	1.44	1572	1,056	2210	1,485
24	73X22M1624	41.1	1.62	2085	1,401	2827	1,900
36	73X22M1636	46.4	1.83	2802	1,883	3651	2,453
50	73X22M1650	56.8	2.24	4000	2,688	5290	3,555

XLPE Insulated

O
S
X
L
P
E

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

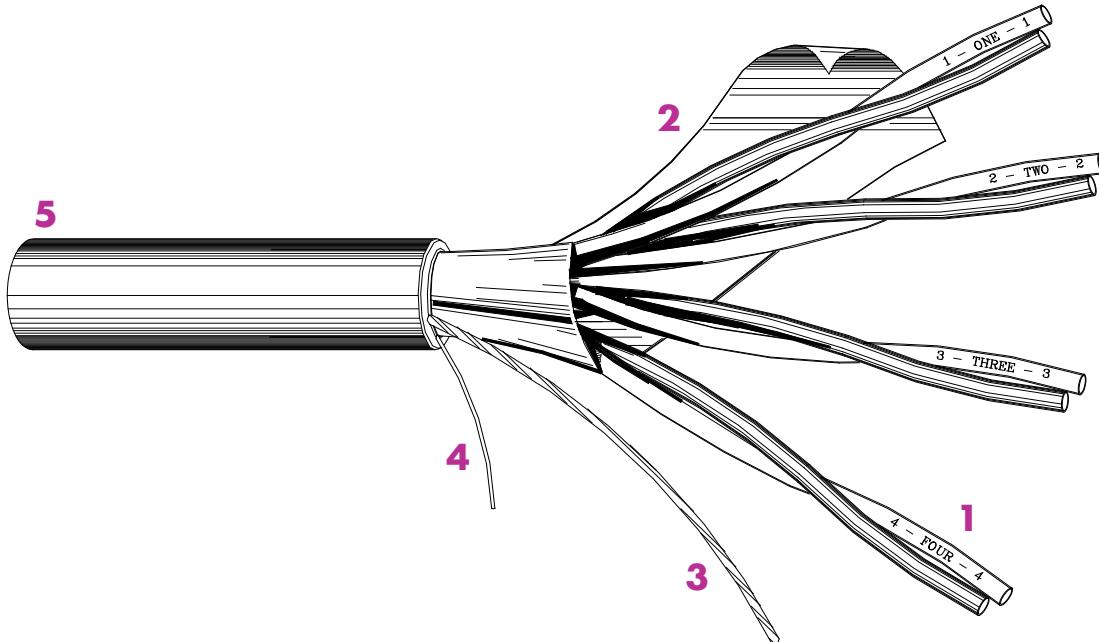
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 38, Thermoset Insulated Conductors

FT1 rated (Vertical Tray Flame Test)

-40°C (-40°F) rated

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with XLPE, RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant, colour code per ANSI MC 96.1



Note: Weights will vary based on thermocouple extension alloys
The minimum bend radius is equal to 12 times the nominal OD
150 V and 600 V cables are available upon request
This cable is also available with FR XLPE insulation to meet the FT4 Vertical Tray Flame Test
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded XLPE

T
H
E
R
M
O
C
O
U
P
L
E

Number of Pairs	Part Number	Jacket Thickness		Nominal OD		Mass	
		mm	in	mm	in	kg/km	lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	74021M2001	1.14	0.045	6.43	0.25	46	31
2	74021M2002	1.14	0.045	9.17	0.36	75	50
4	74021M2004	1.14	0.045	10.50	0.41	109	73
8	74021M2008	1.14	0.045	13.16	0.52	178	120
12	74021M2012	1.52	0.060	16.21	0.64	272	183
16	74021M2016	1.52	0.060	18.10	0.71	340	228
24	74021M2024	1.52	0.060	21.31	0.84	471	317
36	74021M2036	2.03	0.080	25.21	0.99	711	478
50	74021M2050	2.03	0.080	29.76	1.17	944	634
18 AWG (0.823 mm²) 300 V							
1	74021M1801	1.14	0.045	7.34	0.29	59	40
2	74021M1802	1.14	0.045	10.77	0.42	99	67
4	74021M1804	1.14	0.045	12.41	0.49	152	102
8	74021M1808	1.52	0.060	16.48	0.65	283	190
12	74021M1812	1.52	0.060	19.30	0.76	389	261
16	74021M1816	2.03	0.080	22.72	0.89	540	363
24	74021M1824	2.03	0.080	26.72	1.05	751	505
36	74021M1836	2.03	0.080	30.24	1.19	1046	703
50	74021M1850	2.03	0.080	35.88	1.41	1400	941
16 AWG (1.31 mm²) 300 V							
1	74021M1601	1.14	0.045	7.90	0.31	74	50
2	74021M1602	1.14	0.045	11.75	0.46	124	83
4	74021M1604	1.52	0.060	14.39	0.57	222	149
8	74021M1608	1.52	0.060	18.06	0.71	377	253
12	74021M1612	1.52	0.060	21.21	0.84	526	353
16	74021M1616	2.03	0.080	24.90	0.98	728	489
24	74021M1624	2.03	0.080	29.38	1.16	1024	688
36	74021M1636	2.03	0.080	33.31	1.31	1448	973
50	74021M1650	2.03	0.080	39.64	1.56	1957	1.315

XLPE Insulated

I
S
O
S

X
L
P
E

This cable is suitable for use in raceways (except in cable trays), direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

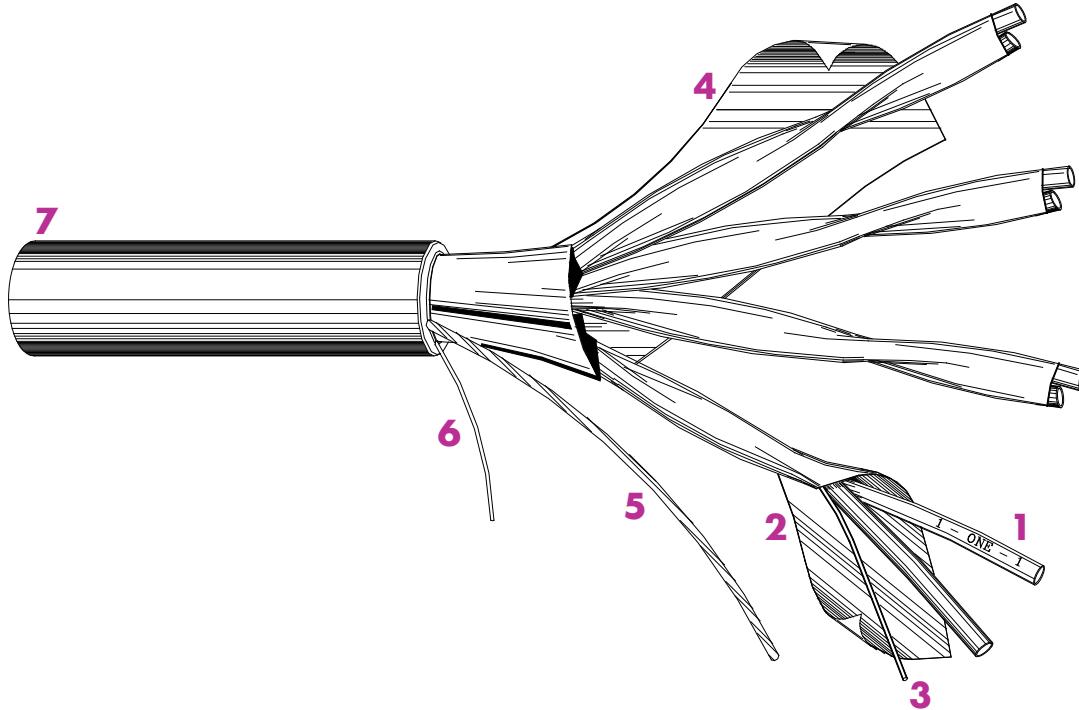
CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 38, Thermoplastic Insulated Conductors

FT1 rated (Vertical Tray Flame Test)

-40°C (-40°F) rated

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with XLPE, RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape overall shield over individual pairs
3. Solid tinned copper drain wire with each pair
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant, colour code per ANSI MC 96.1



Note: Weights will vary based on thermocouple extension alloys

The minimum bend radius is equal to 12 times the nominal OD

150 V and 600 V cables are available upon request

This cable is also available with FR XLPE insulation to meet the FT4 Vertical Tray Flame Test

Individual and Overall Shielded XLPE

T
H
E
R
M
O
C
O
U
P
L
E

Number of Pairs	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	74021M2001	1.14	0.045	6.43	0.25	46	31
2	74022M2002	1.14	0.045	10.69	0.42	96	65
4	74022M2004	1.14	0.045	11.61	0.46	142	95
8	74022M2008	1.52	0.060	14.76	0.58	260	175
12	74022M2012	1.52	0.060	17.67	0.70	364	245
16	74022M2016	1.52	0.060	19.56	0.77	459	308
24	74022M2024	2.03	0.080	25.03	0.99	709	476
36	74022M2036	2.03	0.080	28.45	1.12	987	663
50	74022M2050	2.03	0.080	34.29	1.35	1329	893
18 AWG (0.823 mm²) 300 V							
1	74021M1801	1.14	0.045	7.34	0.29	59	40
2	74022M1802	1.14	0.045	12.52	0.49	123	83
4	74022M1804	1.52	0.060	14.36	0.57	210	141
8	74022M1808	1.52	0.060	17.30	0.68	347	233
12	74022M1812	1.52	0.060	20.82	0.82	487	327
16	74022M1816	2.03	0.080	24.23	0.95	673	452
24	74022M1824	2.03	0.080	29.65	1.17	953	640
36	74022M1836	2.03	0.080	33.86	1.33	1341	901
50	74022M1850	2.03	0.080	41.05	1.62	1814	1,219
16 AWG (1.31 mm²) 300 V							
1	74021M1601	1.14	0.045	7.90	0.31	74	50
2	74022M1602	1.52	0.060	14.43	0.57	178	120
4	74022M1604	1.52	0.060	15.62	0.61	271	182
8	74022M1608	1.52	0.060	18.85	0.74	464	312
12	74022M1612	2.03	0.080	23.84	0.94	713	479
16	74022M1616	2.03	0.080	26.42	1.04	904	607
24	74022M1624	2.03	0.080	32.49	1.28	1298	872
36	74022M1636	2.03	0.080	37.17	1.46	1850	1,243
50	74022M1650	2.79	0.110	46.79	1.84	2665	1,791

XLPE Insulated Armoured

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 38, Thermoset Insulated Conductors

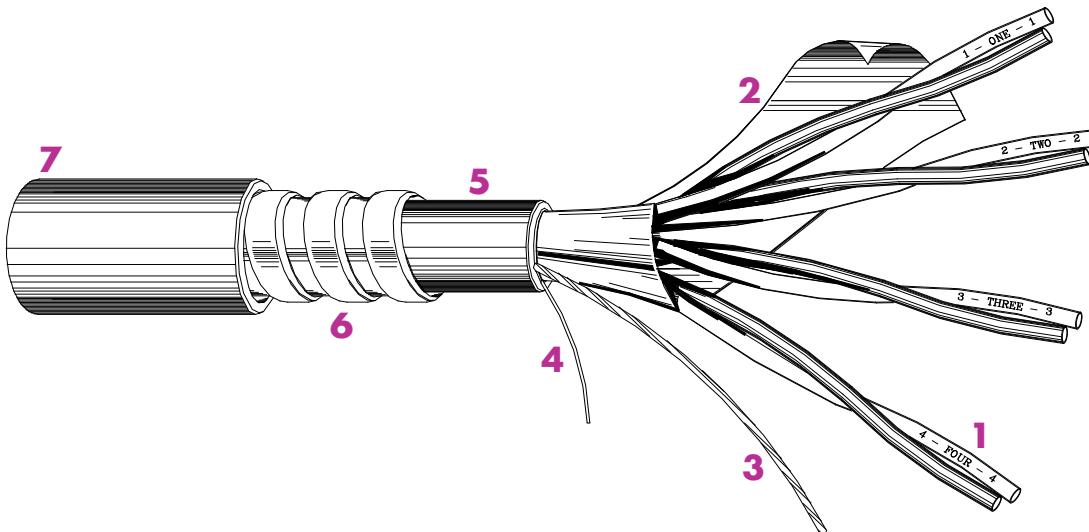
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2 Hazardous Locations

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with XLPE, RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
6. Aluminum or galvanized steel interlocked armour
7. 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket, sunlight resistant, colour code per ANSI MC 96.1

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: X in the part number should be replaced with 1 for Steel or 2 for Aluminum Armour
Weights will vary based on thermocouple extension alloys
The minimum bend radius is equal to 12 times the nominal OD
150 V and 600 V cables are available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded XLPE Armoured

Number of Pairs	Part Number	Nominal OD mm	Nominal OD in	Mass			
				Aluminum kg/km	Aluminum lb/Mft	Steel kg/km	Steel lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	74X21M2001	15.3	0.60	213	143	374	252
2	74X21M2002	18.3	0.72	295	198	491	330
4	74X21M2004	19.6	0.77	349	235	565	380
8	74X21M2008	22.1	0.87	457	307	712	479
12	74X21M2012	24.7	0.97	594	399	888	597
16	74X21M2016	26.5	1.04	691	465	1015	682
24	74X21M2024	30.8	1.21	954	641	1472	989
36	74X21M2036	34.8	1.37	1293	869	1890	1,270
50	74X21M2050	39.4	1.55	1612	1,083	2303	1,548
18 AWG (0.823 mm²) 300 V							
1	74X21M1801	16.3	0.64	250	168	419	282
2	74X21M1802	19.6	0.77	339	228	555	373
4	74X21M1804	21.4	0.84	421	283	666	448
8	74X21M1808	25.2	0.99	615	414	918	617
12	74X21M1812	29.5	1.16	848	570	1339	900
16	74X21M1816	33.1	1.30	1083	728	1641	1,103
24	74X21M1824	36.9	1.45	1369	920	2007	1,349
36	74X21M1836	39.9	1.57	1726	1,160	2431	1,634
50	74X21M1850	44.7	1.76	2202	1,480	3010	2,023
16 AWG (1.31 mm²) 300 V							
1	74X21M1601	17.0	0.67	275	185	452	304
2	74X21M1602	20.9	0.82	384	258	619	416
4	74X21M1604	23.4	0.92	523	352	797	536
8	74X21M1608	26.5	1.04	728	490	1052	707
12	74X21M1612	31.8	1.25	1040	699	1571	1,056
16	74X21M1616	34.8	1.37	1309	880	1907	1,282
24	74X21M1624	39.4	1.55	1692	1,137	2383	1,601
36	74X21M1636	42.7	1.68	2211	1,486	2979	2,002
50	74X21M1650	50.1	1.97	2960	1,989	4070	2,735

XLPE Insulated Armoured

I
S
O
S

X
L
P
E

A
R
M
O
U
R
E
D

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 38, Thermoset Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

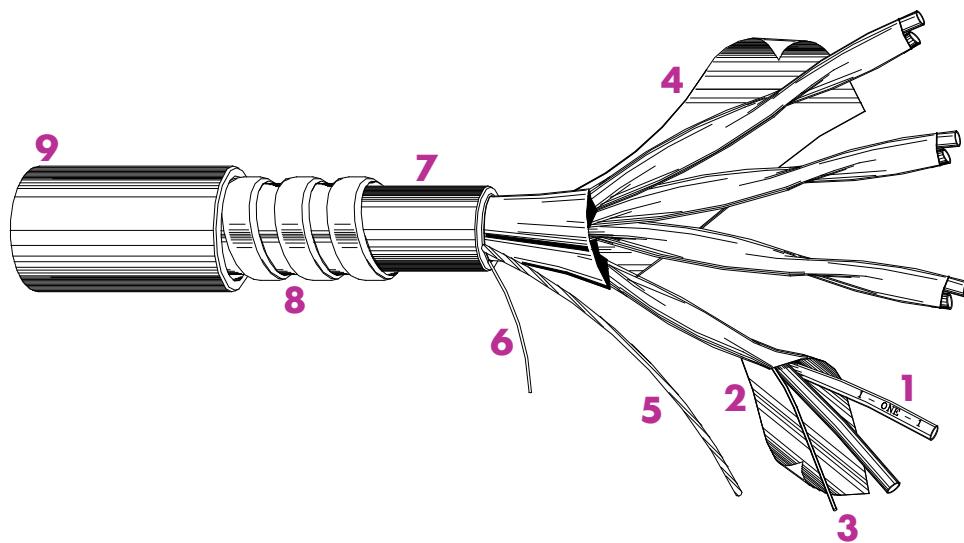
-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2

Hazardous Locations

1. Solid thermocouple alloy wires, matched and calibrated to ANSI MC 96.1, insulated with XLPE, RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs colour coded per ANSI MC 96.1
Multi pair cables have number coding printed on the positive conductor
2. Aluminum/polyester tape shield over individual pairs
3. Solid tinned copper drain wire with each pair
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
8. Aluminum or galvanized steel interlocked armour
9. 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket, sunlight resistant, colour code per ANSI MC 96.1

The cable is also available with an intrinsically safe blue outer jacket, suitable for installation in Class I, Zone 0 Hazardous Locations.



Note: X in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour
Weights will vary based on thermocouple extension alloys
The minimum bend radius is equal to 12 times the nominal OD
150 V and 600 V cables are available upon request

Individual and Overall Shielded XLPE Armoured

T
H
E
R
M
O
C
O
U
P
L
E

Number of Pairs	Part Number	Mass					
		Nominal OD mm	Nominal OD in	Aluminum kg/km	Aluminum lb/Mft	Steel kg/km	Steel lb/Mft
20 AWG (0.5190 mm²) 300 V							
1	74X21M2001	15.0	0.59	213	143	374	251
2	74X22M2002	19.4	0.76	336	226	552	371
4	74X22M2004	20.0	0.79	392	263	617	415
8	74X22M2008	23.2	0.91	562	378	836	562
12	74X22M2012	26.4	1.04	715	480	1039	698
16	74X22M2016	29.4	1.16	918	617	1409	947
24	74X22M2024	34.7	1.37	1290	867	1887	1,268
36	74X22M2036	37.9	1.49	1630	1,095	2294	1,542
50	74X22M2050	43.2	1.70	2104	1,414	2886	1,939
18 AWG (0.823 mm²) 300 V							
1	74X21M1801	16.2	0.64	250	168	419	282
2	74X22M1802	21.3	0.84	392	263	638	429
4	74X22M1804	23.2	0.91	511	343	785	528
8	74X22M1808	25.7	1.01	689	463	1002	673
12	74X22M1812	30.6	1.21	970	652	1488	1,000
16	74X22M1816	34.1	1.34	1242	835	1826	1,227
24	74X22M1824	39.8	1.57	1632	1,097	2337	1,570
36	74X22M1836	42.6	1.68	2105	1,415	2873	1,931
50	74X22M1850	51.8	2.04	2860	1,922	4019	2,701
16 AWG (1.31 mm²) 300 V							
1	74X21M1601	16.9	0.66	275	185	452	304
2	74X22M1602	23.2	0.91	479	322	754	507
4	74X22M1604	24.5	0.96	592	398	886	595
8	74X22M1608	28.7	1.13	911	612	1389	933
12	74X22M1612	34.1	1.34	1281	861	1865	1,253
16	74X22M1616	36.6	1.44	1522	1,023	2160	1,452
24	74X22M1624	41.1	1.62	2010	1,351	2752	1,849
36	74X22M1636	46.4	1.83	2689	1,807	3538	2,378
50	74X22M1650	56.8	2.24	3844	2,583	5133	3,449

Instrumentation and Thermocouple

Conductors: Instrumentation tray cables - seven strand concentric, Class B bare or tinned copper wire. Available in 20 to 14 AWG (0.5190 to 2.08 mm²) for 300 V and 18 to 10 AWG (0.823 to 5.27 mm²) for 600 V.

Thermocouple tray cables - solid alloy wire, matched and calibrated to ANSI MC 96.1, standard limits of error, thermocouple extension grade. Thermocouple grade and special limits of error alloys are available.

Primary Insulation: PVC compound - rated as 75°C (167°F) dry, 75°C (167°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 75 for Type TW75-40 insulation.

XLPE compound - rated as 105°C (221°F) dry, 90°C (194°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 38 for Type RW90-40 insulation.

Insulation Thickness:

AWG	300 V		600 V	
	mm ²	mm ²	in	mm ²
20 - 19	0.519 - 0.653	0.76	0.030	---
18 - 14	0.823 - 2.08	0.76	0.030	0.76
12 - 10	3.31 - 5.27	---	---	0.76
				0.030

Conductor Assembly: Two or three conductors are twisted together to form a pair or triad. The individually shielded pairs and triads have a finished lay of 51 mm (2 in). Unshielded pairs and triads have staggered lays to prevent electromagnetic interference and cross talk.

Individual Shielding: When specified, pairs and triads are shielded with 100% coverage aluminum/polyester tape and a seven strand tinned copper drain wire is used. The shielding tape is designed to provide total shield isolation from all other shields.

Thermocouple pairs are provided with a layer of clear polyester tape under the shielding tape and have a solid tinned copper drain wire. A stranded tinned copper drain wire is optional.

Conductor Identification: Instrumentation tray cables - pairs are black, white and alpha numeric coded; triads are black, white, red and alpha numeric coded.

Thermocouple tray cables - the individual conductor insulation is colour coded as per ANSI specifications for proper identification of the ANSI cable type and distinction between the positive and negative wires.

Overall Shielding: Assembled pairs and triads are overall shielded with 100% coverage aluminum/polyester tape and a 20 AWG (0.5190 mm²) seven strand tinned copper drain wire.

Jacket: 90°C to -40°C (194°F to -40°F) Fire Retardant PVC

Instrumentation cable standard colours are black or intrinsically safe blue. Thermocouple cables are coloured as per the ANSI colour corresponding to the thermocouple alloy type contained in the construction. Other colours are available upon request.

Standard Performance

Features: Cables meet cold impact/bend test at -40°C (-40°F). It is recommended, however, that cables not be installed if the cable temperature is below -10°C (14°F).

Cables are CSA Certified for use in Hazardous Locations
Sunlight Resistant
Flame Test rated FT4

CSA Certifications: CSA C22.2 No. 239, Control and Instrumentation Cables
CSA C22.2 No. 230, Tray Cables

PVC Insulated

O
S
P
V
C

This cable is suitable for use in raceways, ventilated, non-ventilated and ladder type cable trays, direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 230, Tray Cable

CSA C22.2 No. 239, Control and Instrumentation Cable

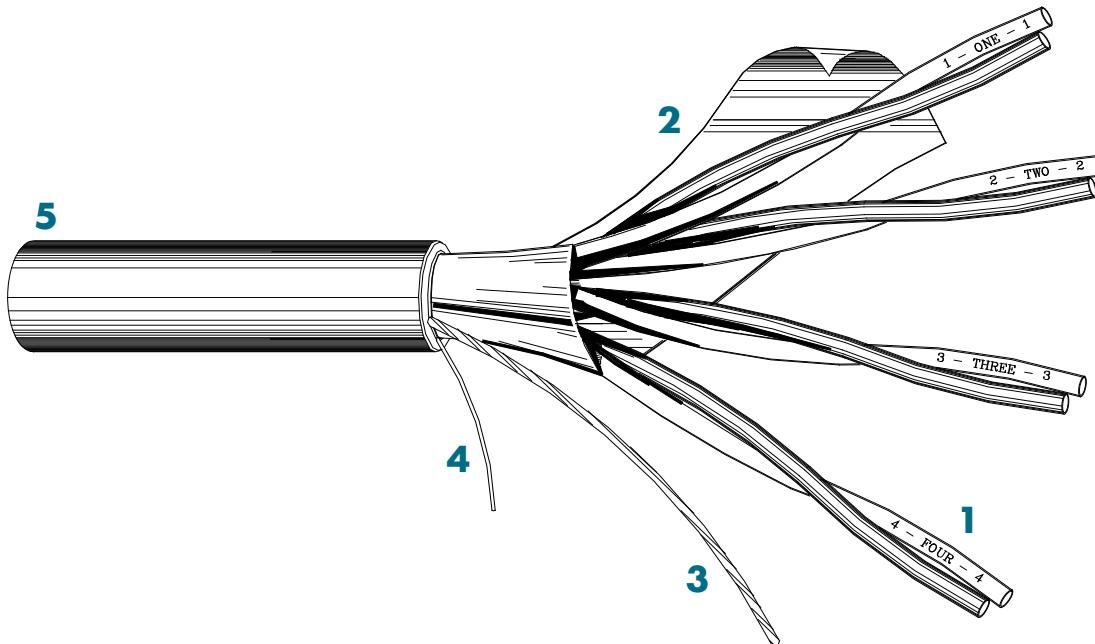
CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

Type TC rated, suitable for installation in Class I, Zone 2 (Div 2), and Class II, Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 75°C (167°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number should be replaced with 3 for 300 V or 6 for 600 V
14 AWG (2.08 mm²) cable is available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded PVC

T
R
A
Y

C
A
B
L
E

Number of Pairs or Triads	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²) 300 V							
1 Pair	4X021M2001	1.14	0.045	7.6	0.299	58	39
2 Pair	4X021M2002	1.14	0.045	11.4	0.45	115	77
4 Pair	4X021M2004	1.14	0.045	13.2	0.520	154	104
8 Pair	4X021M2008	1.52	0.060	17.9	0.703	292	196
12 Pair	4X021M2012	2.03	0.080	22.6	0.890	448	301
16 Pair	4X021M2016	2.03	0.080	25.0	0.985	549	369
24 Pair	4X021M2024	2.03	0.080	30.7	1.209	779	523
36 Pair	4X021M2036	2.03	0.080	35.1	1.381	1064	715
50 Pair	4X021M2050	2.03	0.080	40.5	1.594	1413	949
1 Triad	4X031M2001	1.14	0.045	8.0	0.314	71	47
2 Triad	4X031M2002	1.14	0.045	12.6	0.497	146	98
4 Triad	4X031M2004	1.52	0.060	15.4	0.607	227	152
8 Triad	4X031M2008	1.52	0.060	19.8	0.781	393	264
12 Triad	4X031M2012	2.03	0.080	25.1	0.988	600	403
16 Triad	4X031M2016	2.03	0.080	27.8	1.095	744	500
24 Triad	4X031M2024	2.03	0.080	34.3	1.350	1066	716
18 AWG (0.823 mm²) 300/600 V							
1 Pair	4X021M1801	1.14	0.045	8.1	0.319	69	46
2 Pair	4X021M1802	1.14	0.045	12.3	0.484	137	92
4 Pair	4X021M1804	1.52	0.060	15.0	0.592	216	145
8 Pair	4X021M1808	1.52	0.060	19.3	0.761	371	249
12 Pair	4X021M1812	2.03	0.080	24.4	0.962	568	382
16 Pair	4X021M1816	2.03	0.080	27.1	1.066	703	472
24 Pair	4X021M1824	2.03	0.080	33.3	1.313	1003	674
36 Pair	4X021M1836	2.03	0.080	38.2	1.503	1397	939
50 Pair	4X021M1850	2.79	0.110	45.7	1.798	2002	1,345
1 Triad	4X031M1801	1.14	0.045	8.5	0.335	86	57
2 Triad	4X031M1802	1.52	0.060	14.4	0.566	202	136
4 Triad	4X031M1804	1.52	0.060	16.6	0.655	288	194
8 Triad	4X031M1808	2.03	0.080	22.5	0.886	549	369
12 Triad	4X031M1812	2.03	0.080	27.2	1.070	774	520
16 Triad	4X031M1816	2.03	0.080	30.2	1.188	969	651
24 Triad	4X031M1824	2.03	0.080	37.3	1.469	1401	941
16 AWG (1.31 mm²) 300/600 V							
1 Pair	4X021M1601	1.14	0.045	8.7	0.343	87	58
2 Pair	4X021M1602	1.52	0.060	14.1	0.556	193	130
4 Pair	4X021M1604	1.52	0.060	16.3	0.642	274	184
8 Pair	4X021M1608	2.03	0.080	22.1	0.870	521	350
12 Pair	4X021M1612	2.03	0.080	26.6	1.049	732	492
16 Pair	4X021M1616	2.03	0.080	29.6	1.165	914	614
24 Pair	4X021M1624	2.03	0.080	36.5	1.438	1318	886
36 Pair	4X021M1636	2.03	0.080	41.9	1.649	1854	1,246
50 Pair	4X021M1650	2.79	0.110	48.9	1.927	2650	1,781
1 Triad	4X031M1601	1.14	0.045	9.2	0.361	109	73
2 Triad	4X031M1602	1.52	0.060	15.6	0.614	250	168
4 Triad	4X031M1604	1.52	0.060	18.1	0.712	368	247
8 Triad	4X031M1608	2.03	0.080	24.5	0.965	712	478
12 Triad	4X031M1612	2.03	0.080	29.7	1.168	1012	680
16 Triad	4X031M1616	2.03	0.080	33.0	1.300	1275	857
24 Triad	4X031M1624	2.03	0.080	40.9	1.611	1855	1,246

PVC Insulated

I
S
O
S

P
V
C

This cable is suitable for use in raceways, ventilated, non-ventilated and ladder type cable trays, direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 230, Tray Cable

CSA C22.2 No. 239, Control and Instrumentation Cable

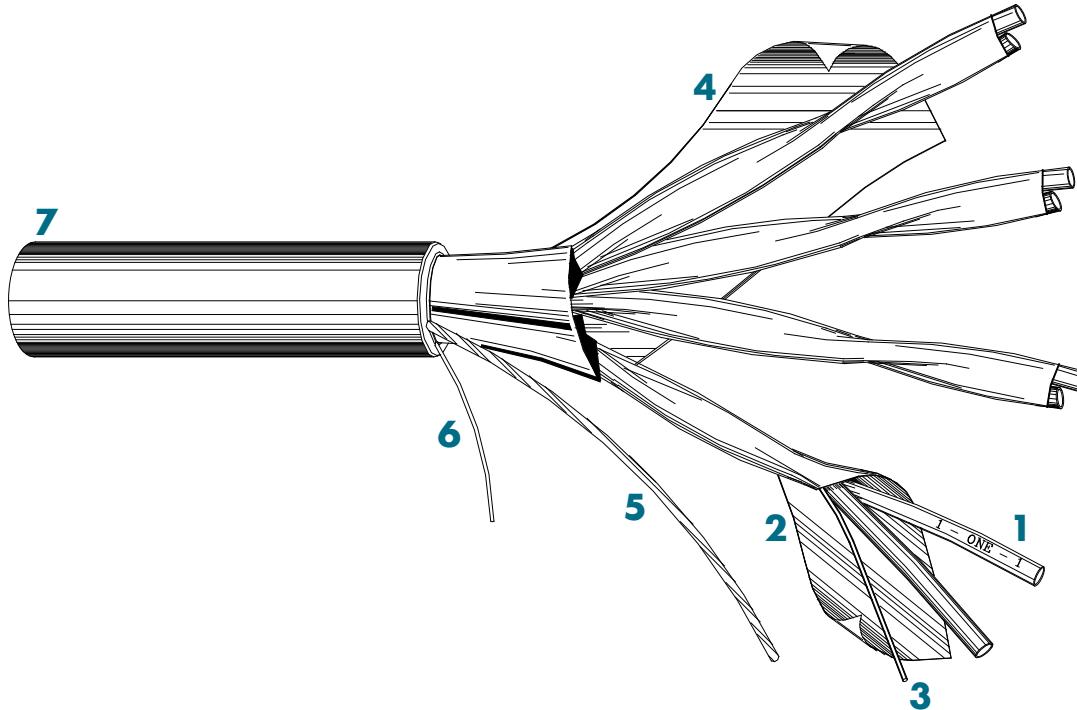
CSA C22.2 No. 75, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

Type TC BCD rated, suitable for installation in Class I, Zone 2 (Div 2), and Class II Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with PVC, Type TW75, 75°C (167°F) dry, 75°C (167°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with 3 for 300 V or 6 for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Tinned copper braid shielded cables are available upon request

Individual and Overall Shielded PVC

T
R
A
Y

C
A
B
L
E

Number of Pairs or Triads	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²) 300 V							
1 Pair	4X021M2001	1.14	0.045	7.6	0.299	58	39
2 Pair	4X022M2002	1.14	0.045	11.9	0.470	132	89
4 Pair	4X022M2004	1.52	0.060	14.6	0.575	207	139
8 Pair	4X022M2008	1.52	0.060	18.7	0.738	355	239
12 Pair	4X022M2012	2.03	0.080	23.7	0.933	544	366
16 Pair	4X022M2016	2.03	0.080	26.3	1.034	672	452
24 Pair	4X022M2024	2.03	0.080	32.3	1.271	958	644
36 Pair	4X022M2036	2.03	0.080	36.9	1.454	1332	895
50 Pair	4X022M2050	2.79	0.110	44.2	1.740	1912	1,285
1 Triad							
1 Triad	4X031M2001	1.14	0.045	8.0	0.314	71	47
2 Triad	4X032M2002	1.52	0.060	14.1	0.553	189	127
4 Triad	4X032M2004	1.52	0.060	16.2	0.639	266	179
8 Triad	4X032M2008	1.52	0.060	21.0	0.825	462	310
12 Triad	4X032M2012	2.03	0.080	26.5	1.043	708	476
16 Triad	4X032M2016	2.03	0.080	29.4	1.158	883	593
24 Triad	4X032M2024	2.03	0.080	36.3	1.430	1271	854
18 AWG (0.823 mm²) 300/600 V							
1 Pair	4X021M1801	1.14	0.045	8.1	0.319	69	46
2 Pair	4X022M1802	1.14	0.045	12.9	0.506	158	106
4 Pair	4X022M1804	1.52	0.060	15.7	0.619	252	170
8 Pair	4X022M1808	1.52	0.060	20.3	0.797	439	295
12 Pair	4X022M1812	2.03	0.080	25.6	1.008	669	450
16 Pair	4X022M1816	2.03	0.080	28.4	1.118	837	563
24 Pair	4X022M1824	2.03	0.080	35.0	1.379	1203	808
36 Pair	4X022M1836	2.03	0.080	40.1	1.580	1689	1,135
50 Pair	4X022M1850	2.79	0.110	48.0	1.889	2412	1,621
1 Triad							
1 Triad	4X031M1801	1.14	0.045	8.5	0.335	86	57
2 Triad	4X032M1802	1.52	0.060	15.1	0.595	225	151
4 Triad	4X032M1804	1.52	0.060	17.5	0.689	324	218
8 Triad	4X032M1808	2.03	0.080	23.7	0.933	626	421
12 Triad	4X032M1812	2.03	0.080	28.7	1.129	882	593
16 Triad	4X032M1816	2.03	0.080	31.9	1.255	1105	743
24 Triad	4X032M1824	2.03	0.080	39.5	1.554	1605	1,078
16 AWG (1.31 mm²) 300/600 V							
1 Pair	4X021M1601	1.14	0.045	8.7	0.343	87	58
2 Pair	4X022M1602	1.52	0.060	14.7	0.580	219	147
4 Pair	4X022M1604	1.52	0.060	17.0	0.671	320	215
8 Pair	4X022M1608	2.03	0.080	23.1	0.909	617	414
12 Pair	4X022M1612	2.03	0.080	27.9	1.098	867	583
16 Pair	4X022M1616	2.03	0.080	31.0	1.220	1093	735
24 Pair	4X022M1624	2.03	0.080	38.3	1.509	1585	1,065
36 Pair	4X022M1636	2.79	0.110	45.5	1.791	2383	1,601
1 Triad							
1 Triad	4X031M1601	1.14	0.045	9.2	0.361	109	73
2 Triad	4X032M1602	1.52	0.060	16.4	0.644	279	188
4 Triad	4X032M1604	1.52	0.060	19.0	0.748	417	280
8 Triad	4X032M1608	2.03	0.080	25.8	1.015	808	543
12 Triad	4X032M1612	2.03	0.080	31.3	1.231	1151	773
16 Triad	4X032M1616	2.03	0.080	34.8	1.371	1459	980
24 Triad	4X032M1624	2.79	0.110	44.8	1.762	2264	1,521

FR XLPE Insulated

This cable is suitable for use in raceways, ventilated, non-ventilated and ladder type cable trays, direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 230, Tray Cable

CSA C22.2 No. 239, Control and Instrumentation Cable

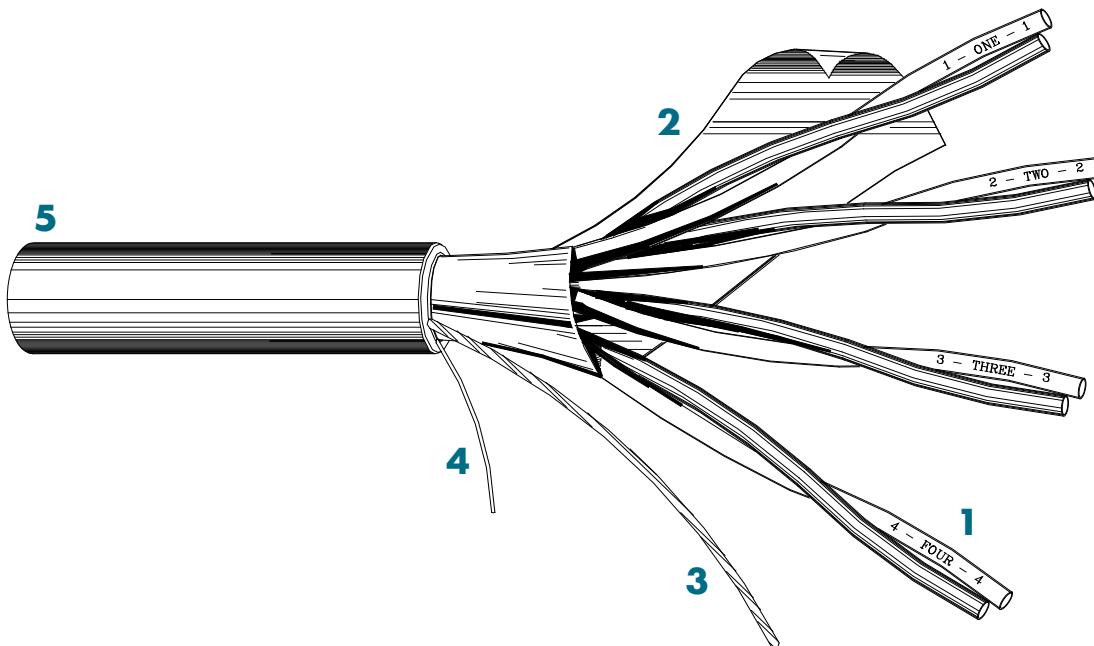
CSA C22.2 No. 38, Thermoset Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

Type TC rated, suitable for installation in Class I, Zone 2 (Div 2), and Class II, Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with FR XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield
3. 7 strand tinned copper drain wire
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with B for 300 V or C for 600 V
14 AWG (2.08 mm²) cable is available upon request
Unshielded or tinned copper braid shielded cables are available upon request

Overall Shielded FR XLPE

T
R
A
Y

C
A
B
L
E

Number of Pairs or Triads	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²) 300 V							
1 Pair	4X021M2001	1.52	0.060	8.35	0.33	74	50
2 Pair	4X021M2002	1.14	0.045	11.35	0.45	100	67
4 Pair	4X021M2004	1.14	0.045	13.12	0.52	153	103
8 Pair	4X021M2008	1.52	0.060	17.43	0.69	285	192
12 Pair	4X021M2012	1.52	0.060	20.44	0.81	391	263
16 Pair	4X021M2016	2.03	0.080	24.02	0.95	545	366
24 Pair	4X021M2024	2.03	0.080	28.29	1.12	754	507
36 Pair	4X021M2036	2.03	0.080	32.06	1.27	1047	704
50 Pair	4X021M2050	2.03	0.080	38.10	1.50	1402	942
18 AWG (0.823 mm²) 300/600 V							
1 Pair	4X021M1801	1.52	0.060	8.86	0.35	85	37
2 Pair	4X021M1802	1.14	0.045	12.23	0.48	121	81
4 Pair	4X021M1804	1.52	0.060	14.97	0.59	212	142
8 Pair	4X021M1808	1.52	0.060	18.85	0.74	355	239
12 Pair	4X021M1812	2.03	0.080	23.23	0.91	542	364
16 Pair	4X021M1816	2.03	0.080	26.00	1.02	684	460
24 Pair	4X021M1824	2.03	0.080	30.70	1.21	960	645
36 Pair	4X021M1836	2.03	0.080	34.85	1.37	1345	904
50 Pair	4X021M1850	2.03	0.080	41.50	1.63	1811	1,217
16 AWG (1.31 mm²) 300/600 V							
1 Pair	4X021M1601	1.14	0.045	8.65	0.34	86	58
2 Pair	4X021M1602	1.14	0.045	13.35	0.53	149	100
4 Pair	4X021M1604	1.52	0.060	16.29	0.64	269	181
8 Pair	4X021M1608	1.52	0.060	20.61	0.81	460	309
12 Pair	4X021M1612	2.03	0.080	25.39	1.00	702	472
16 Pair	4X021M1616	2.03	0.080	28.47	1.12	891	599
24 Pair	4X021M1624	2.03	0.080	33.72	1.33	1264	849
36 Pair	4X021M1636	2.03	0.080	38.34	1.51	1795	1,206
50 Pair	4X021M1650	2.79	0.110	47.36	1.86	2579	1,733
18 AWG (0.823 mm²) 300/600 V							
1 Triad	4X031M1601	1.14	0.045	9.21	0.36	109	73
2 Triad	4X031M1602	1.52	0.060	16.66	0.66	231	155
4 Triad	4X031M1604	1.52	0.060	17.47	0.69	371	249
8 Triad	4X031M1608	2.03	0.080	26.47	1.04	712	478
12 Triad	4X031M1612	2.03	0.080	32.14	1.27	1007	677
16 Triad	4X031M1616	2.03	0.080	35.80	1.41	1283	862
24 Triad	4X031M1624	2.79	0.110	46.00	1.81	1994	1,340

FR XLPE Insulated

I
S
O
S

F
R

X
L
P
E

This cable is suitable for use in raceways, ventilated, non-ventilated and ladder type cable trays, direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 230, Tray Cable

CSA C22.2 No. 239, Control and Instrumentation Cable

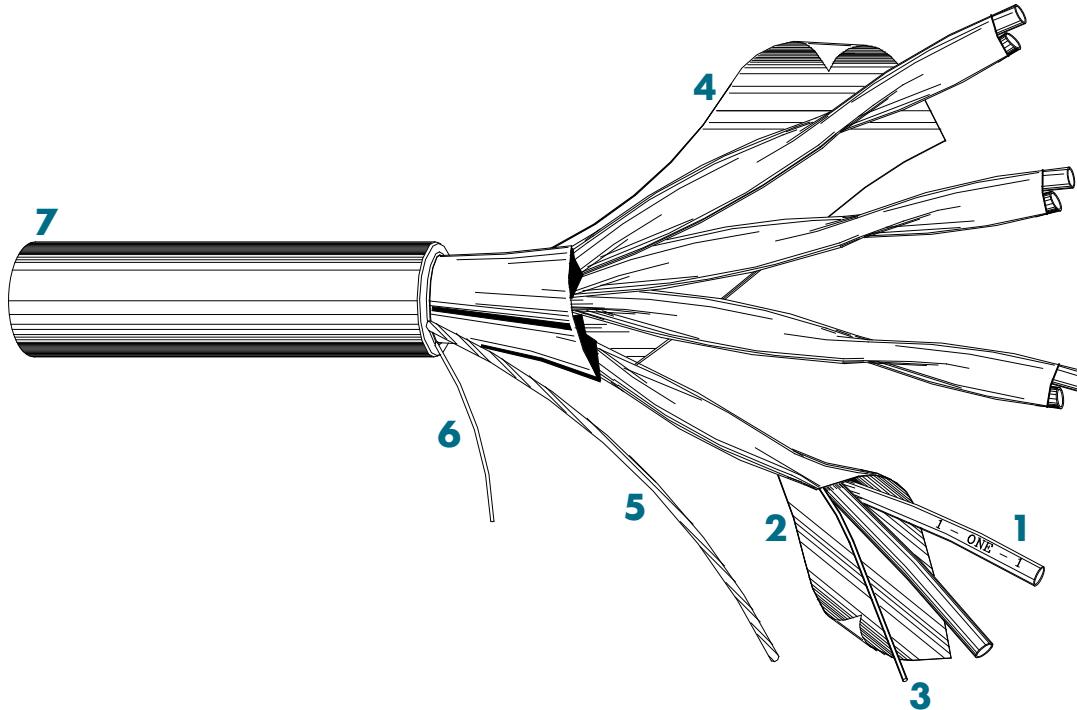
CSA C22.2 No. 38, Thermoplastic Insulated Conductors

FT4 rated (70,000 BTU Vertical Flame Test)

-40°C (-40°F) rated

Type TC BCD rated, suitable for installation in Class I, Zone 2 (Div 2), and Class II, Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: Pairs - Black and White
Triads - Black, White and Red
Multi-pair and multi-triad cables have black number coding printed on the white conductor
2. Aluminum/polyester tape overall shield over individual pairs or triads
3. 7 strand tinned copper drain wire with each pair or triad
4. Overall aluminum/polyester tape shield
5. 7 strand tinned copper drain wire
6. Nylon ripcord for jacket removal
7. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
X in the part number is to be replaced with B for 300 V or C for 600 V
150 V cable is available upon request
14 AWG (2.08 mm²) cable is available upon request
Tinned copper braid shielded cables are available upon request

Individual and Overall Shielded FR XLPE

T
R
A
Y

C
A
B
L
E

Number of Pairs or Triads	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft
20 AWG (0.5190 mm²) 300 V							
1 Pair	4X021M2001	1.52	0.060	8.35	0.33	74	50
2 Pair	4X022M2002	1.14	0.045	12.98	0.51	128	86
4 Pair	4X022M2004	1.52	0.060	14.95	0.59	219	147
8 Pair	4X022M2008	1.52	0.060	17.99	0.71	364	245
12 Pair	4X022M2012	2.03	0.080	22.78	0.90	559	376
16 Pair	4X022M2016	2.03	0.080	25.20	1.00	705	474
24 Pair	4X022M2024	2.03	0.080	30.85	1.22	1003	674
36 Pair	4X022M2036	2.03	0.080	35.25	1.39	1411	948
50 Pair	4X022M2050	2.03	0.080	42.76	1.69	1912	1,285
1 Triad							
1 Triad	4X031M2001	1.14	0.045	7.99	0.37	74	50
2 Triad	4X032M2002	1.52	0.060	14.58	0.58	177	119
4 Triad	4X032M2004	1.52	0.060	16.92	0.67	278	187
8 Triad	4X032M2008	1.52	0.060	20.03	0.79	466	313
12 Triad	4X032M2012	2.03	0.080	25.35	1.00	716	481
16 Triad	4X032M2016	2.03	0.080	28.11	1.11	908	610
24 Triad	4X032M2024	2.03	0.080	34.57	1.36	1301	874
18 AWG (0.823 mm²) 300/600 V							
1 Pair	4X022M1801	1.52	0.060	8.86	0.35	85	57
2 Pair	4X022M1802	1.52	0.060	14.78	0.58	171	115
4 Pair	4X022M1804	1.52	0.060	16.07	0.63	256	172
8 Pair	4X022M1808	1.52	0.060	19.41	0.76	434	292
12 Pair	4X022M1812	2.03	0.080	24.58	0.97	668	449
16 Pair	4X022M1816	2.03	0.080	27.23	1.07	845	568
24 Pair	4X022M1824	2.03	0.080	33.44	1.32	1208	812
36 Pair	4X022M1836	2.03	0.080	38.27	1.51	1713	1,151
50 Pair	4X022M1850	2.79	0.110	48.12	1.89	2476	1,664
1 Triad							
1 Triad	4X031M1801	1.14	0.045	8.52	0.34	88	59
2 Triad	4X032M1802	1.52	0.060	15.67	0.62	208	140
4 Triad	4X032M1804	1.52	0.060	18.25	0.72	335	225
8 Triad	4X032M1808	2.03	0.080	22.73	0.89	621	417
12 Triad	4X032M1812	2.03	0.080	27.41	1.08	879	591
16 Triad	4X032M1816	2.03	0.080	30.44	1.20	1123	755
24 Triad	4X032M1824	2.03	0.080	37.54	1.48	1619	1,088
16 AWG (1.31 mm²) 300/600 V							
1 Pair	4X021M1601	1.14	0.045	8.65	0.34	86	48
2 Pair	4X022M1602	1.52	0.060	16.05	0.63	204	137
4 Pair	4X022M1604	1.52	0.060	17.49	0.69	316	212
8 Pair	4X022M1608	1.52	0.060	21.20	0.83	543	365
12 Pair	4X022M1612	2.03	0.080	26.81	1.06	833	560
16 Pair	4X022M1616	2.03	0.080	29.77	1.17	1061	713
24 Pair	4X022M1624	2.03	0.080	36.69	1.44	1529	1,027
36 Pair	4X022M1636	2.03	0.080	42.05	1.66	2183	1,467
1 Triad							
1 Triad	4X031M1601	1.14	0.045	9.21	0.36	109	73
2 Triad	4X032M1602	1.52	0.060	17.04	0.67	254	171
4 Triad	4X032M1604	1.52	0.060	19.90	0.78	415	279
8 Triad	4X032M1608	2.03	0.080	24.75	0.97	780	524
12 Triad	4X032M1612	2.03	0.080	29.59	1.16	1110	746
16 Triad	4X032M1616	2.03	0.080	33.35	1.31	1427	959
24 Triad	4X032M1624	2.03	0.080	41.25	1.62	2068	1,390

Power and Control Tray Cable

D
E
S
I
G
N

Conductors: 7 strand concentric, Class B bare or tinned copper wire. Available in 20 to 14 AWG (0.5190 to 2.08 mm²) for 300 V and 18 to 2 AWG (0.823 to 33.08 mm²) for 600 V, and 14 to 2 AWG (2.08 to 33.08 mm²) for 1000 V.

Primary Insulation: PVC compound - rated as 75°C (167°F) dry, 75°C (167°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 75 for Type TW75-40 insulation.

FR XLPE compound - rated as 105°C (221°F) dry, 90°C (194°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 38 for Type RW90-40 insulation.

Insulation Thickness:

AWG	mm ²	300 V		600 V		1000 V	
		mm ²	in	mm ²	in	mm ²	in
20 - 19	0.519 - 0.653	0.76	0.030	---	---	---	---
18 - 16	0.823 - 1.29	0.76	0.030	0.76	0.030	---	---
14	2.08	0.76	0.030	0.76	0.030	1.14	0.045
12 - 10	3.31 - 5.27	---	---	0.76	0.030	1.14	0.045
8	8.24	---	---	1.14	0.045	1.14	0.045
6 - 2	13.06 - 33.08	---	---	1.52	0.060	1.52	0.060

Conductor Identification: 2 conductor cables are colour coded black and white
3 conductor cables are colour coded black, red and blue
4 conductor cables are colour coded black, red, blue and white
5 or more conductor cables are black and alpha numeric coded

Bonding Conductor: Bare copper bonding conductor sized in accordance with Table 16 of the Canadian Electrical Code.

Bonding Conductor Sizes:	Conductor Size		Bonding Conductor Size	
	AWG	mm ²	AWG	mm ²
20	0.519	20	0.519	
18	0.823	18	0.823	
16	1.31	16	1.31	
14 - 12	2.08 - 3.31	14	2.08	
10	5.27	12	3.31	
8	8.35	10	5.27	
6 - 4	13.3 - 21.2	8	8.35	
2	33.6	6	13.3	

Jacket: 90°C to -40°C (194°F to -40°F) Fire Retardant (FR) PVC

Power and control tray cable standard colour is black. Other colours are available upon request.

Standard Performance

Features: Cables meet cold impact/bend test at -40°C (-40°F). It is recommended, however, that cables not be installed if the cable temperature is below -10°C (14°F).

Cables are CSA Certified for use in Hazardous Locations
Sunlight Resistant
Flame Test rated FT4

CSA Certifications: CSA C22.2 No. 239, Control and Instrumentation Cables
CSA C22.2 No. 230, Tray Cables
CSA C22.2 No. 38, Thermoset Insulated Conductors

FR PVC Insulated Tray

F
R
P
V
C

This cable is suitable for use in raceways, ventilated, non-ventilated and ladder type cable trays, direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 230, Tray Cable

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 75, Thermoplastic Insulated Conductors

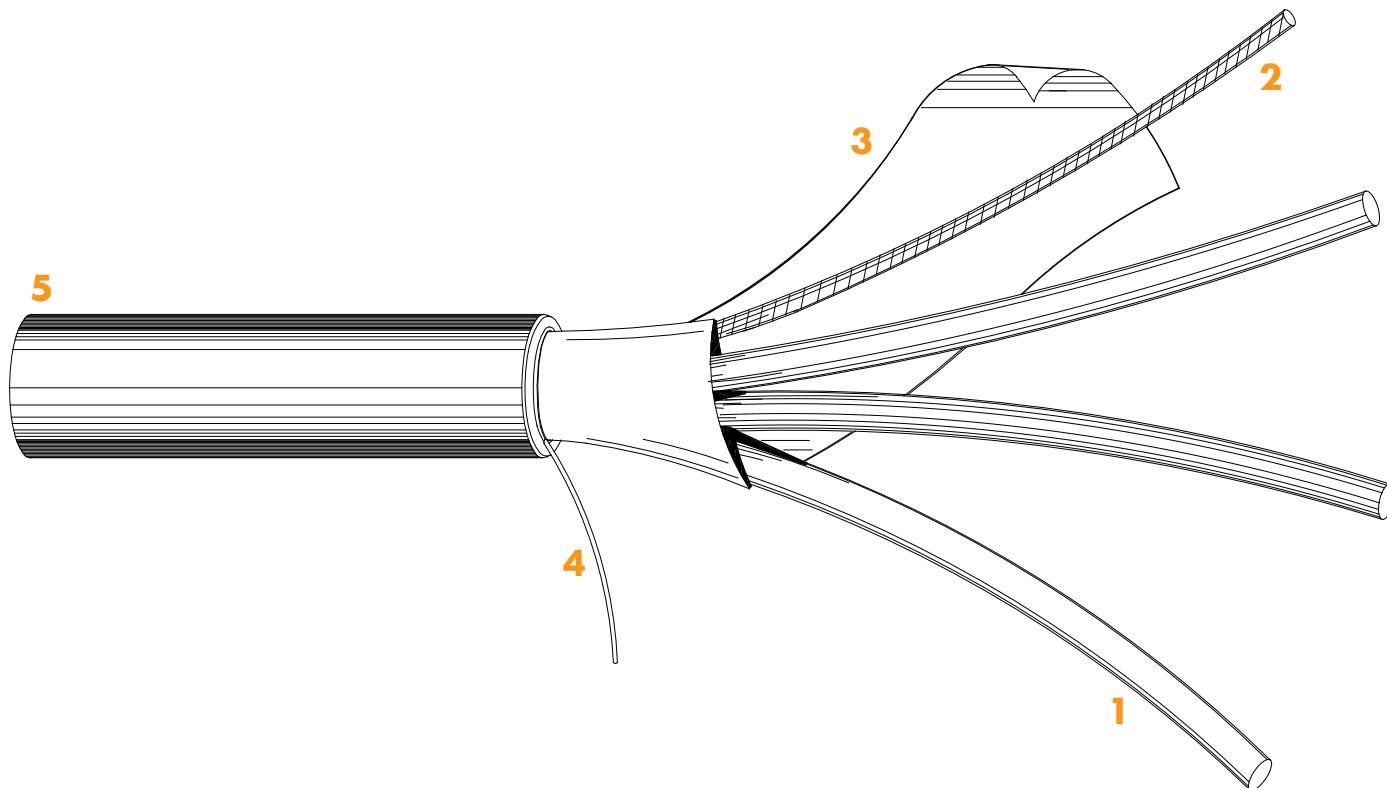
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

Type TC rated, suitable for installation in Class I, Zone 2 (Div 2), and Class II, Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with FR PVC, Type TW75, 75°C (167°F) dry, 75°C (167°F) wet
Conductor Colour Code:

2 conductors	- Black and White
3 conductors	- Black, Red and Blue
4 conductors	- Black, Red, Blue and White
5 or more conductors	- Black and Alpha Numeric Coded
2. 7 strand (bare or tinned) bonding conductor, sized in accordance with Table 16 of the Canadian Electrical Code
3. Clear Polyester jacket separator tape
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 6 times the nominal OD

300 V control cable is available upon request

Aluminum/polyester shielded or tinned copper braid shielded cables are available upon request

Number of Conductors	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft	Ampacity at 30°C
14 AWG (2.08 mm²) 600 V								
2	46010M1402	1.14	0.045	9.5	0.37	118	79	15.0
3	46010M1403	1.14	0.045	10.0	0.39	150	101	15.0
4	46010M1404	1.14	0.045	10.9	0.43	183	123	12.0
5	46010M1405	1.14	0.045	11.9	0.47	216	145	12.0
6	46010M1406	1.14	0.045	13.0	0.51	250	168	12.0
7	46010M1407	1.52	0.060	14.8	0.58	307	206	10.5
8	46010M1408	1.52	0.060	15.9	0.62	343	231	10.5
10	46010M1410	1.52	0.060	17.2	0.68	410	276	10.5
12	46010M1412	1.52	0.060	17.8	0.70	471	317	10.5
15	46010M1415	1.52	0.060	19.7	0.78	570	383	10.5
20	46010M1420	2.03	0.080	22.9	0.90	775	521	10.5
25	46010M1425	2.03	0.080	25.3	0.99	940	632	9.0
30	46010M1430	2.03	0.080	26.7	1.05	1097	737	9.0
40	46010M1440	2.03	0.080	30.9	1.21	1421	955	9.0
50	46010M1450	2.03	0.080	34.7	1.36	1742	1,171	7.5
12 AWG (3.31 mm²) 600 V								
2	46010M1202	1.14	0.045	10.5	0.41	149	100	20.0
3	46010M1203	1.14	0.045	11.1	0.44	195	131	20.0
4	46010M1204	1.14	0.045	12.1	0.48	242	163	16.0
6	46010M1206	1.52	0.060	15.2	0.60	361	243	16.0
10	46010M1210	1.52	0.060	19.2	0.76	556	374	14.0
12	46010M1212	1.52	0.060	19.8	0.78	645	434	14.0
15	46010M1215	2.03	0.080	23.1	0.91	833	560	14.0
20	46010M1220	2.03	0.080	25.5	1.00	1065	716	14.0
25	46010M1225	2.03	0.080	28.2	1.11	1300	874	12.0
30	46010M1230	2.03	0.080	29.9	1.18	1524	1,024	12.0
10 AWG (5.27 mm²) 600 V								
2	46010M1002	1.14	0.045	11.7	0.46	208	140	30.0
3	46010M1003	1.14	0.045	12.4	0.49	275	185	30.0
4	46010M1004	1.52	0.060	14.4	0.56	366	246	24.0
6	46010M1006	1.52	0.060	17.0	0.67	509	342	24.0
10	46010M1010	2.03	0.080	22.7	0.89	837	563	21.0
15	46010M1015	2.03	0.080	25.9	1.02	1180	793	21.0
20	46010M1020	2.03	0.080	28.6	1.13	1518	1,020	21.0

FR XLPE Insulated Tray

F
R

X
L
P
E

This cable is suitable for use in raceways, ventilated, non-ventilated and ladder type cable trays, direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 230, Tray Cable

CSA C22.2 No. 38, Thermoset Insulated Conductors

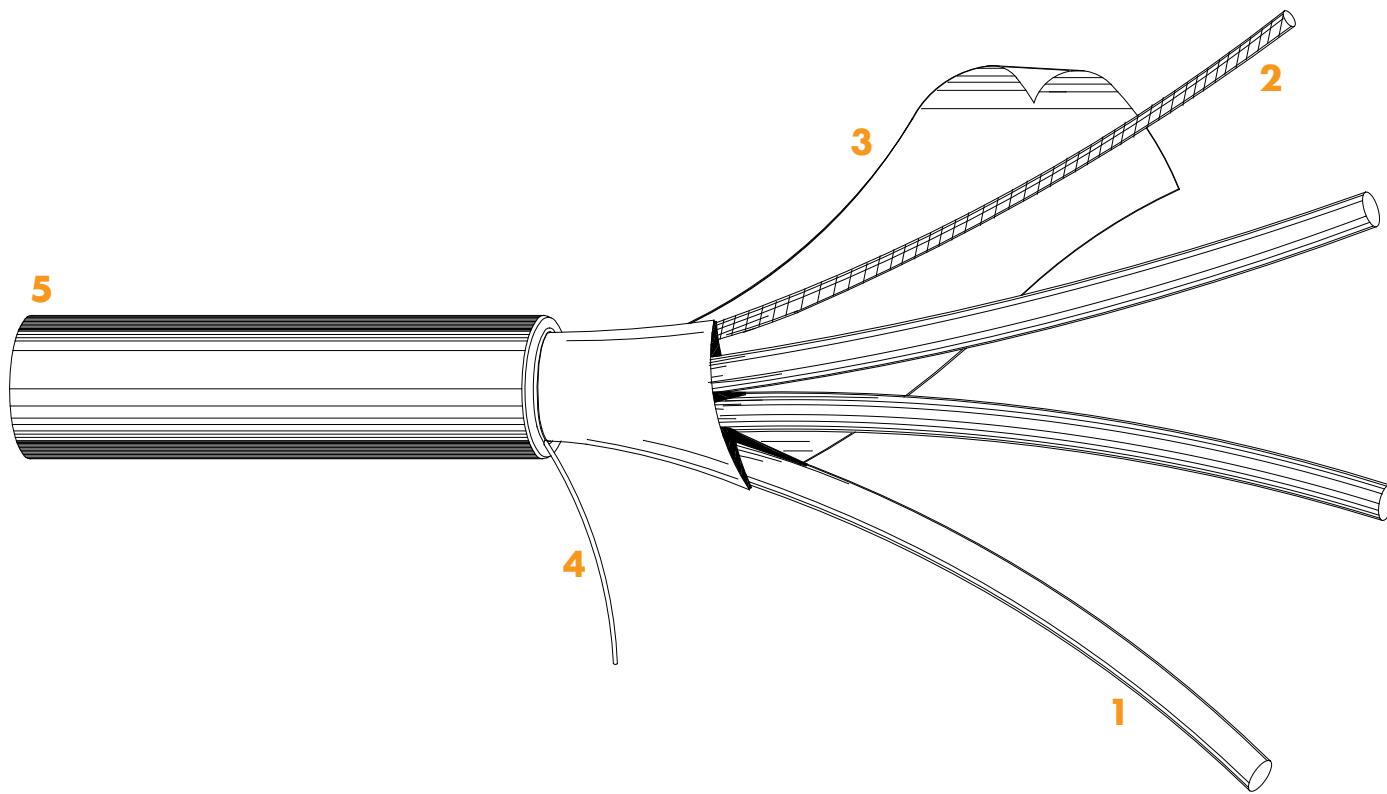
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

Type TC rated, suitable for installation in Class I, Zone 2 (Div 2), and Class II, Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with FR XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code:

2 conductors	- Black and White
3 conductors	- Black, Red and Blue
4 conductors	- Black, Red, Blue and White
2. 7 strand (bare or tinned) bonding conductor, sized in accordance with Table 16 of the Canadian Electrical Code
3. Clear Polyester jacket separator tape
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 6 times the nominal OD
600 V power cable is available upon request

Number of Conductors	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft	Ampacity at 30°C
14 AWG (2.08 mm²) 1000 V								
2	4D010M1402	1.14	0.045	10.9	0.43	139	93	15.0
3	4D010M1403	1.14	0.045	11.7	0.46	178	120	15.0
4	4D010M1404	1.14	0.045	12.7	0.50	220	148	12.0
12 AWG (3.31 mm²) 1000 V								
2	4D010M1202	1.14	0.045	11.9	0.47	173	116	20.0
3	4D010M1203	1.14	0.045	12.7	0.50	227	153	20.0
4	4D010M1204	1.52	0.060	14.7	0.58	306	206	16.0
10 AWG (5.27 mm²) 1000 V								
2	4D010M1002	1.14	0.045	13.2	0.52	234	157	30.0
3	4D010M1003	1.52	0.060	15.0	0.59	333	224	30.0
4	4D010M1004	1.52	0.060	16.3	0.64	415	279	20.4
8 AWG (8.35 mm²) 1000 V								
2	4D010M0802	1.52	0.060	15.7	0.62	352	237	45.0
3	4D010M0803	1.52	0.060	16.5	0.65	465	312	45.0
4	4D010M0804	1.52	0.060	18.3	0.72	581	390	36.0
6 AWG (13.3 mm²) 1000 V								
2	4D010M0602	1.52	0.060	18.8	0.74	535	359	65.0
3	4D010M0603	1.52	0.060	20.1	0.79	715	480	65.0
4	4D010M0604	2.03	0.080	23.1	0.91	949	638	52.0
4 AWG (21.2 mm²) 1000 V								
2	40010M0402	1.52	0.060	21.3	0.84	715	480	85.0
3	40010M0403	2.03	0.080	23.6	0.93	1029	691	85.0
4	40010M0404	2.03	0.080	26.2	1.03	1303	876	68.0
2 AWG (33.6 mm²) 1000 V								
2	40010M0202	2.03	0.080	25.4	1.00	1112	747	120.0
3	40010M0203	2.03	0.080	26.9	1.06	1521	1,022	120.0
4	40010M0204	2.03	0.080	29.7	1.17	1937	1,302	96.0

FR XLPE Insulated Tray

F
R

X
L
P
E

This cable is suitable for use in raceways, ventilated, non-ventilated and ladder type cable trays, direct earth burial, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 230, Tray Cable

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 38, Thermoset Insulated Conductors

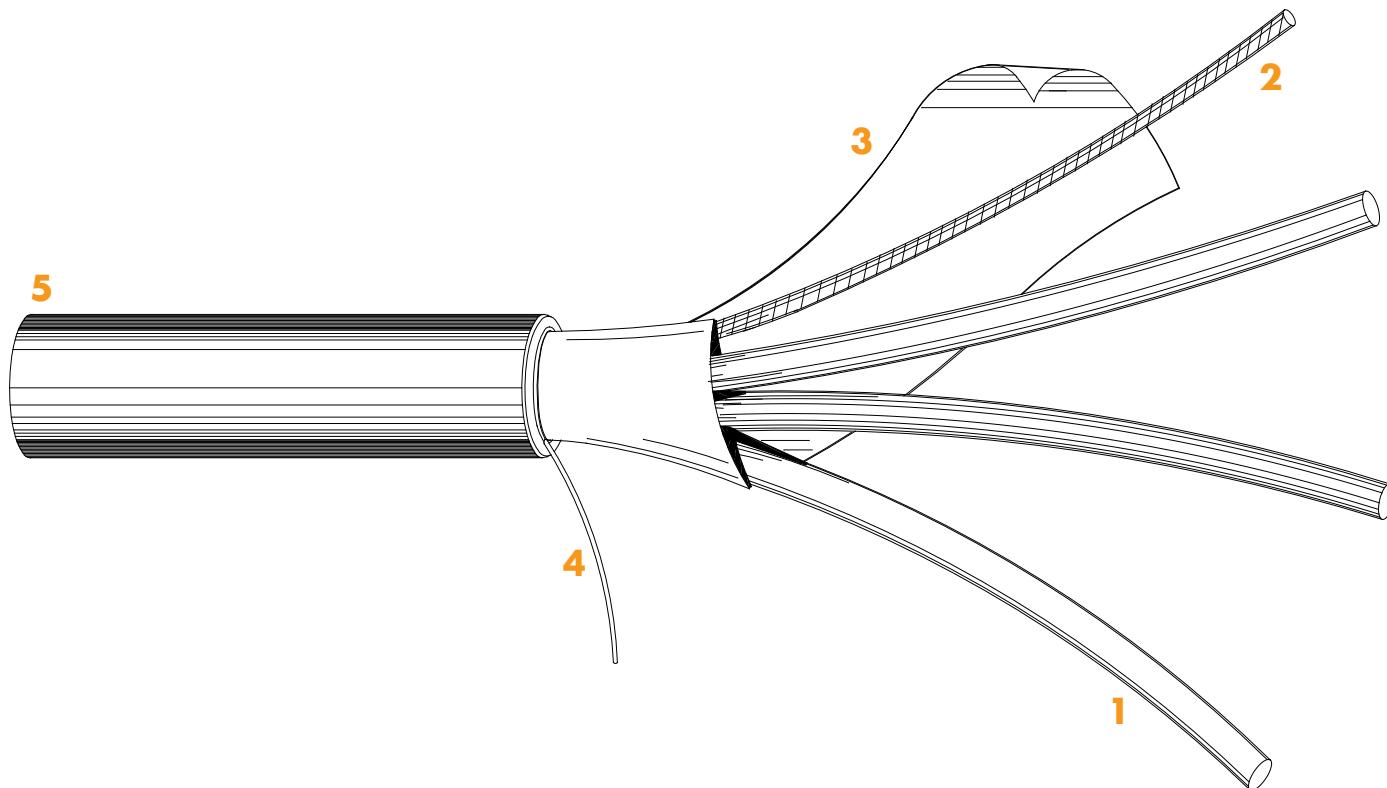
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

Type TC rated, suitable for installation in Class I, Zone 2 (Div 2), and Class II, Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with FR XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code:

2 conductors	- Black and White
3 conductors	- Black, Red and Blue
4 conductors	- Black, Red, Blue and White
5 or more conductors	- Black and Alpha Numeric Coded
2. 7 strand (bare or tinned) bonding conductor, sized in accordance with Table 16 of the Canadian Electrical Code
3. Clear Polyester jacket separator tape
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 6 times the nominal OD

300 V control cable is available upon request

Aluminum/polyester shielded or tinned copper braid shielded cables are available upon request

Number of Conductors	Part Number	Jacket Thickness mm	Jacket Thickness in	Nominal OD mm	Nominal OD in	Mass kg/km	Mass lb/Mft	Ampacity at 30°C
14 AWG (2.08 mm²) 600 V								
2	4C010M1402	1.14	0.045	9.5	0.37	119	80	15.0
3	4C010M1403	1.14	0.045	10.0	0.39	151	101	15.0
4	4C010M1404	1.14	0.045	10.9	0.43	184	124	12.0
5	4C010M1405	1.14	0.045	11.9	0.47	218	146	12.0
6	4C010M1406	1.14	0.045	13.0	0.51	253	170	12.0
7	4C010M1407	1.52	0.060	14.8	0.58	310	208	10.5
8	4C010M1408	1.52	0.060	15.9	0.62	346	233	10.5
10	4C010M1410	1.52	0.060	17.2	0.68	414	278	10.5
12	4C010M1412	1.52	0.060	17.8	0.70	476	320	10.5
15	4C010M1415	1.52	0.060	19.7	0.78	576	387	10.5
20	4C010M1420	2.03	0.080	22.9	0.90	783	526	10.5
25	4C010M1425	2.03	0.080	25.3	0.99	950	638	9.0
30	4C010M1430	2.03	0.080	26.7	1.05	1108	745	9.0
40	4C010M1440	2.03	0.080	30.9	1.21	1437	966	9.0
50	4C010M1450	2.03	0.080	34.7	1.36	1761	1,183	7.5
12 AWG (3.31 mm²) 600 V								
2	4C010M1202	1.14	0.045	10.5	0.41	150	101	20.0
3	4C010M1203	1.14	0.045	11.1	0.44	196	132	20.0
4	4C010M1204	1.14	0.045	12.1	0.48	244	164	16.0
6	4C010M1206	1.52	0.060	15.2	0.60	364	245	16.0
10	4C010M1210	1.52	0.060	19.2	0.76	561	377	14.0
12	4C010M1212	1.52	0.060	19.8	0.78	650	437	14.0
15	4C010M1215	2.03	0.080	23.1	0.91	841	565	14.0
20	4C010M1220	2.03	0.080	25.5	1.00	1075	722	14.0
25	4C010M1225	2.03	0.080	28.2	1.11	1312	882	12.0
30	4C010M1230	2.03	0.080	29.9	1.18	1539	1,034	12.0
10 AWG (5.27 mm²) 600 V								
2	4C010M1002	1.14	0.045	11.7	0.46	209	140	30.0
3	4C010M1003	1.14	0.045	12.4	0.49	276	185	30.0
4	4C010M1004	1.52	0.060	14.4	0.56	368	247	24.0
6	4C010M1006	1.52	0.060	17.0	0.67	513	345	24.0
10	4C010M1010	2.03	0.080	22.7	0.89	843	566	21.0
15	4C010M1015	2.03	0.080	25.9	1.02	1189	799	21.0
20	4C010M1020	2.03	0.080	28.6	1.13	1530	1,028	21.0

Teck 90 and ARMCON® Cable

Conductors: 7 strand concentric, Class B bare or tinned copper wire.

Teck 90 is available in 14 to 2 AWG (2.08 to 33.08 mm²) for 600 V and 1000 V cable. 6 to 2 AWG (13.06 to 33.08 mm²) are compressed strand copper wire.

ARMCON® is available in 18 and 16 AWG (0.519 and 1.29 mm²) for 600 V.

Primary Insulation: XLPE compound - rated as 105°C (221°F) dry, 90°C (194°F) wet and -40°C (-40°F) in accordance with CSA Standards C22.2 No. 239 and C22.2 No. 38 for Type RW90-40 insulation.

Insulation Thickness:

AWG	mm ²	600 V		1000 V	
		mm ²	in	mm ²	in
18 - 16	0.823 - 1.29	0.76	0.030	---	---
14 - 10	2.08 - 5.27	0.76	0.030	1.14	0.045
8	8.24	1.14	0.045	1.14	0.045
6 - 2	13.06 - 33.08	1.52	0.060	1.52	0.060

Conductor Identification: Teck 90 cables:

2 conductor cables are colour coded black and white

3 conductor cables are colour coded black, red and blue

4 conductor cables are colour coded black, red, blue and white

5 or more conductor cables are black and alpha numeric coded

ARMCON® cables:

Conductor #1 is white, the remaining conductors are black and alpha numeric coded. Other colour codes are available upon request.

Bonding Conductor: Bare copper bonding conductor sized in accordance with Table 16 of the Canadian Electrical Code.

Bonding Conductor Sizes:	Conductor Size		Bonding Conductor Size	
	AWG	mm ²	AWG	mm ²
18	0.823	18	0.823	
16	1.31	16	1.31	
14 - 12	2.08 - 3.31	14	2.08	
10	5.27	12	3.31	
8	8.35	10	5.27	
6 - 4	13.3 - 21.2	8	8.35	
2	33.6	6	13.3	

Jacket: 90°C to -40°C (194°F to -40°F) Fire Retardant (FR) Low Acid Gas (LAG) PVC

The standard inner jacket under the armour is black. Other colours are available upon request.

Armouring: CSA certified interlocked aluminum or interlocked galvanized steel armour is suitable for use in hazardous locations. These cables are marked HL in accordance with CSA C22.2 No. 174.

Armour Outer Covering: 90°C to -40°C (194°F to -40°F) FR LAG PVC

Teck 90 cable standard colour is black. ARMCON® cable standard colour is blue. Other colours are available upon request.

Standard Performance

Features: Cables meet cold impact/bend test at -40°C (-40°F). It is recommended, however, that cables not be installed if the cable temperature is below -10°C (14°F).

Cables are CSA Certified for use in Hazardous Locations
Sunlight Resistant
Flame Test rated FT4

CSA Certifications: CSA C22.2 No. 131, Teck 90 Cables

CSA C22.2 No. 239, Control and Instrumentation Cables

CSA C22.2 No. 174, Cables and Cable Glands for use in Hazardous Locations

XLPE Insulated Teck 90

X
L
P
E

T
E
C
K

9
0

P
O
W
E
R

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

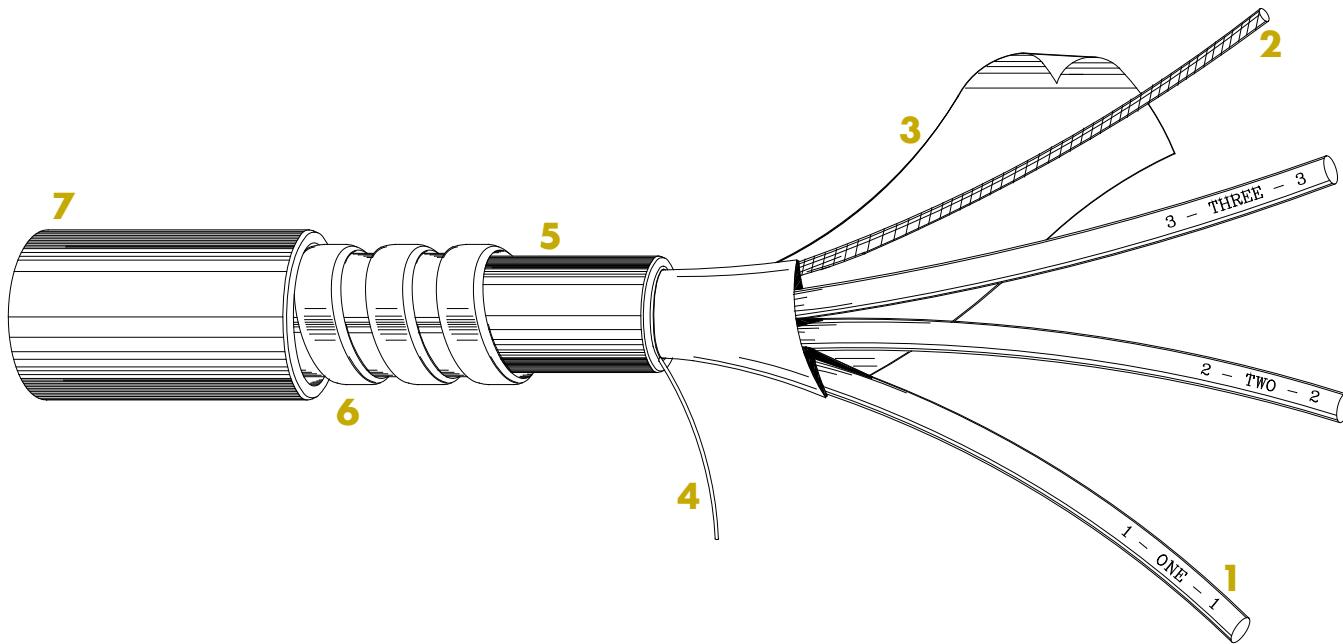
CSA C22.2 No. 131, Teck 90 Cable
CSA C22.2 No. 174, Hazardous Locations
CSA C22.2 No. 38, Thermoset Insulated Conductors

FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code: 2 conductors - Black and White
3 conductors - Black, Red and Blue
4 conductors - Black, Red, Blue and White
2. 7 strand (bare or tinned) bonding conductor, sized in accordance with Table 16 of the Canadian Electrical Code
3. Clear polyester jacket separator tape
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
6. Aluminum or galvanized steel interlocked armour
7. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
Y in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour
600 V cable is available upon request

Number and Size of Conductors	Part Number	Inner Jacket		Nominal Diameter		Outer Jacket		Nominal Mass				Ampacity at 30°C Amps
		mm	in	mm	in	mm	in	Aluminum Armour kg/km	Steel Armour kg/km	Aluminum Armour lb/Mft	Steel Armour lb/Mft	
14 AWG (2.08 mm²)												
2/14	80Y10M1402	11.0	0.43	17.1	0.67	20.0	0.79	378	254	604	406	15.0
3/14	80Y10M1403	11.7	0.46	17.7	0.70	20.7	0.81	422	284	658	442	15.0
4/14	80Y10M1404	12.8	0.50	18.3	0.76	21.3	0.84	469	315	714	480	12.0
12 AWG (3.31 mm²)												
2/12	80Y10M1202	12.0	0.47	17.7	0.70	20.7	0.81	420	282	655	440	20.0
3/12	80Y10M1203	12.8	0.50	18.3	0.76	21.3	0.84	478	321	723	486	20.0
4/12	80Y10M1204	14.8	0.58	20.2	0.79	23.2	0.91	584	392	858	577	16.0
10 AWG (5.27 mm²)												
2/10	80Y10M1002	13.2	0.52	19.0	0.75	22.0	0.87	498	335	753	506	30.0
3/10	80Y10M1003	14.8	0.58	20.2	0.79	23.2	0.91	613	412	888	597	30.0
4/10	80Y10M1004	16.2	0.64	22.1	0.87	25.1	0.99	718	482	1021	686	24.0
8 AWG (8.35 mm²)												
2/8	80Y10M0802	15.6	0.61	21.5	0.85	24.5	0.96	655	440	949	638	45.0
3/8	80Y10M0803	16.6	0.65	22.1	0.87	25.1	0.99	771	518	1074	722	45.0
4/8	80Y10M0804	18.2	0.82	24.1	0.95	27.0	1.06	908	610	1241	834	36.0
6 AWG (13.3 mm²)												
2/6	80Y10M0602	18.7	0.74	25.8	1.02	28.7	1.13	953	640	1430	961	65.0
3/6	80Y10M0603	20.0	0.79	27.1	1.07	30.0	1.18	1142	767	1647	1,107	65.0
4/6	80Y10M0604	23.1	0.91	30.2	1.19	33.5	1.32	1447	972	2018	1,356	52.0
4 AWG (21.2 mm²)												
2/4	80Y10M0402	21.2	0.83	28.3	1.11	31.5	1.24	1197	804	1728	1,161	85.0
3/4	80Y10M0403	23.7	0.93	30.2	1.19	33.5	1.32	1538	1,034	2109	1,417	85.0
4/4	80Y10M0404	26.0	1.02	32.8	1.29	36.0	1.42	1846	1,241	2470	1,660	68.0
2 AWG (33.6 mm²)												
2/2	80Y10M0202	25.3	1.00	32.1	1.26	35.4	1.39	1666	1,120	2277	1,530	120.0
3/2	80Y10M0203	26.9	1.06	33.4	1.31	36.6	1.44	2080	1,398	2718	1,826	120.0
4/2	80Y10M0204	29.7	1.17	36.6	1.44	39.8	1.57	2540	1,707	3244	2,180	96.0

XLPE Insulated Teck 90

X
L
P
E

T
E
C
K

9
0

C
O
N
T
R
O
L

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 131, Teck 90 Cable
CSA C22.2 No. 174, Hazardous Locations
CSA C22.2 No. 38, Thermoset Insulated Conductors

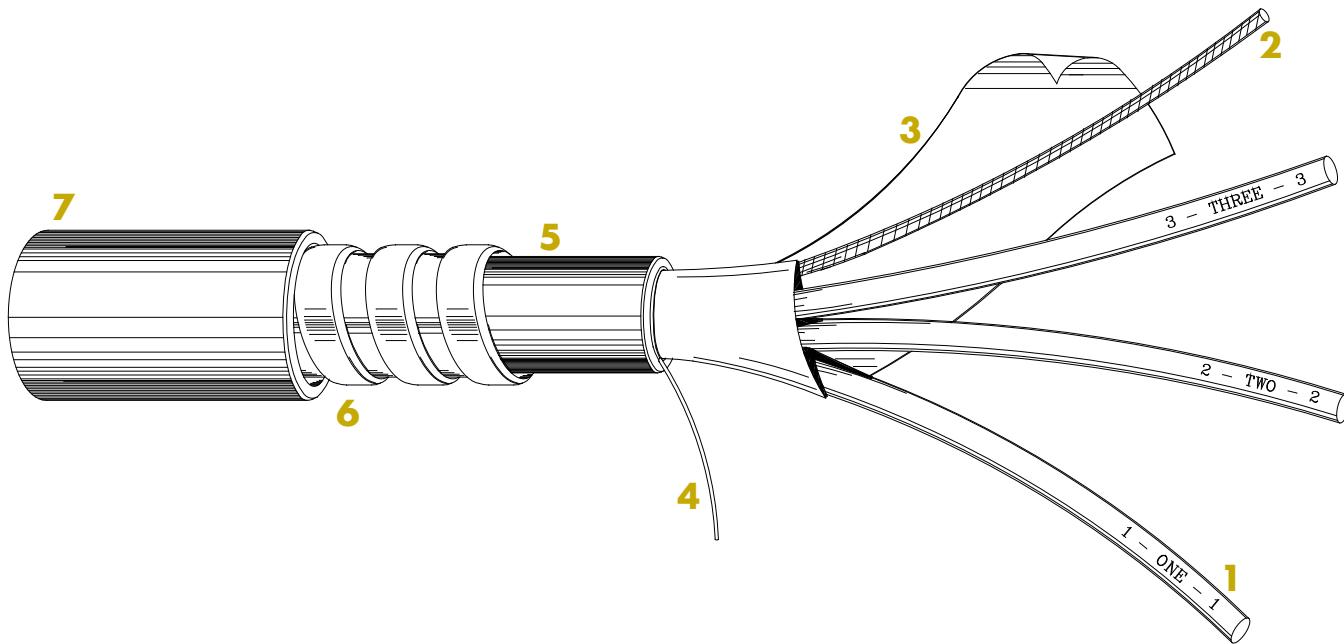
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2 Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
Conductor Colour Code:

2 conductors	- Black and White
3 conductors	- Black, Red and Blue
4 conductors	- Black, Red, Blue and White
5 or more conductors	- Black and Alpha Numeric Coded
2. 7 strand (bare or tinned) bonding conductor, sized in accordance with Table 16 of the Canadian Electrical Code
3. Clear polyester jacket separator tape
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
6. Aluminum or galvanized steel interlocked armour
7. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD
Y in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour

Number of Conductors	Part Number	Nominal Diameter				Nominal Mass				Ampacity at 30°C Amps	
		Inner Jacket		Armour		Outer Jacket		Aluminium Armour		Steel Armour	
		mm	in	mm	in	mm	in	kg/km	lb/Mft	kg/km	lb/Mft
14 AWG (2.08 mm²)											
2	86Y10M1402	9.5	0.37	15.2	0.60	18.1	0.71	332	223	529	355
3	86Y10M1403	10.0	0.39	15.8	0.62	18.8	0.74	371	249	577	388
4	86Y10M1404	10.3	0.41	16.4	0.65	19.4	0.76	412	277	628	422
5	86Y10M1405	11.9	0.47	17.7	0.70	20.7	0.81	462	310	697	468
6	86Y10M1406	13.0	0.51	19.0	0.75	21.9	0.86	513	345	768	516
7	86Y10M1407	14.8	0.58	20.2	0.80	23.2	0.91	590	396	865	581
8	86Y10M1408	15.9	0.63	21.5	0.85	24.5	0.96	643	432	937	630
10	86Y10M1410	17.2	0.68	22.8	0.90	25.7	1.01	725	487	1039	698
12	86Y10M1412	17.8	0.70	23.4	0.92	26.4	1.04	791	532	1115	749
15	86Y10M1415	19.7	0.78	26.4	1.04	29.4	1.16	991	666	1481	995
20	86Y10M1420	22.8	0.90	29.6	1.17	32.8	1.29	1268	852	1825	1,226
30	86Y10M1430	26.7	1.05	33.4	1.31	36.6	1.44	1639	1,101	2276	1,529
40	86Y10M1440	30.8	1.21	37.2	1.46	40.4	1.59	2013	1,353	2731	1,835
50	86Y10M1450	34.7	1.37	39.8	1.57	43.2	1.70	2392	1,607	3174	2,133
12 AWG (3.31 mm²)											
2	86Y10M1202	10.5	0.41	16.4	0.65	19.4	0.76	382	257	598	402
3	86Y10M1203	11.1	0.44	17.1	0.67	20.0	0.79	434	292	660	444
4	86Y10M1204	12.1	0.48	17.7	0.70	20.7	0.81	489	329	724	487
5	86Y10M1205	13.2	0.52	19.0	0.75	21.9	0.86	553	372	808	543
6	86Y10M1206	15.2	0.60	20.9	0.82	23.8	0.94	653	439	938	630
7	86Y10M1207	16.5	0.65	22.1	0.87	25.1	0.99	721	485	1025	689
8	86Y10M1208	17.7	0.70	23.4	0.92	26.4	1.04	788	530	1111	747
10	86Y10M1210	19.2	0.76	25.8	1.02	28.7	1.13	972	653	1450	974
12	86Y10M1212	19.8	0.78	26.4	1.04	29.4	1.16	1067	717	1557	1,046
15	86Y10M1215	23.1	0.91	29.6	1.17	32.8	1.29	1331	894	1888	1,269
20	86Y10M1220	25.5	1.00	32.1	1.26	35.4	1.39	1597	1,073	2208	1,484
30	86Y10M1230	29.8	1.17	36.6	1.44	39.8	1.57	2112	1,419	2817	1,893
10 AWG (5.27 mm²)											
2	86Y10M1002	11.7	0.46	17.7	0.70	20.7	0.81	459	308	694	466
3	86Y10M1003	12.4	0.49	18.3	0.72	21.3	0.84	532	358	777	522
4	86Y10M1004	14.4	0.57	20.2	0.80	23.2	0.91	651	437	925	622
6	86Y10M1006	17.0	0.67	22.8	0.90	25.7	1.01	827	556	1141	767
10	86Y10M1010	22.7	0.89	29.6	1.17	32.8	1.29	1343	902	1900	1,277
15	86Y10M1015	25.9	1.02	32.8	1.29	36.0	1.42	1729	1,162	2353	1,581
20	86Y10M1020	28.6	1.13	35.3	1.39	38.5	1.52	2098	1,410	2776	1,865

XLPE Insulated ARMCON®

X
L
P
E

A
R
M
C
O
N
®

This cable is suitable for use in ventilated, non ventilated and ladder type cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations in -40°C (-40°F) environments.

CSA C22.2 No. 239, Control and Instrumentation Cable

CSA C22.2 No. 174, Hazardous Locations

CSA C22.2 No. 38, Thermoset Insulated Conductors

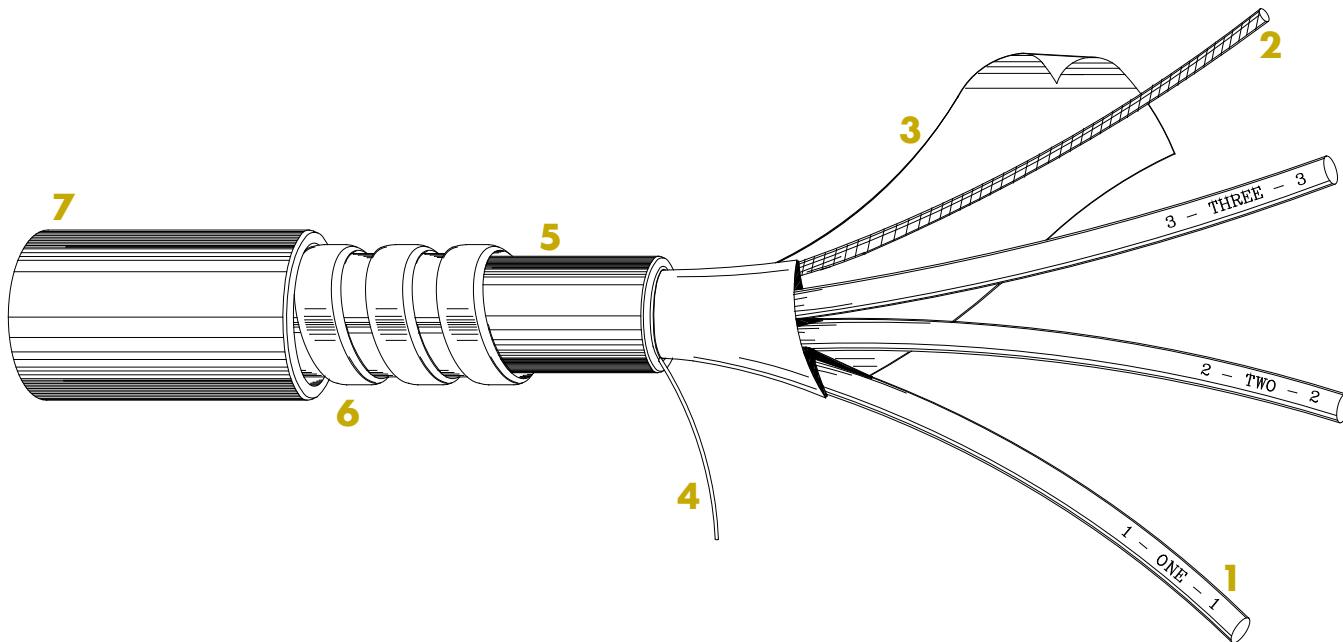
FT4 rated (70,000 BTU Vertical Tray Flame Test)

-40°C (-40°F) rated

HL rated, suitable for installation in Class I, Zone 1 (Div 1) and Zone 2 (Div 2), and Class II, Div 1 and Div 2

Hazardous Locations

1. 7 strand copper wire (bare or tinned) insulated with XLPE, Type RW90, 105°C (221°F) dry, 90°C (194°F) wet
- Conductor Colour Code: Conductor #1 is white, the remaining conductors are black and alpha numeric coded
2. 7 strand (bare or tinned) bonding conductor, same size as conductor
3. Clear polyester jacket separator tape
4. Nylon ripcord for jacket removal
5. Black 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket
6. Aluminum or galvanized steel interlocked armour
7. Blue 90°C to -40°C (194°F to -40°F) FR LAG PVC jacket, sunlight resistant (other colours available upon request)



Note: The minimum bend radius is equal to 12 times the nominal OD

Y in the part number is to be replaced with 1 for Steel or 2 for Aluminum Armour

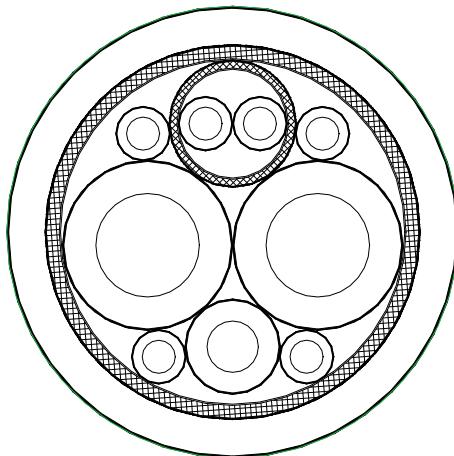
18 AWG (0.823mm²) is available upon request

Number of Conductors	Part Number	Nominal Diameter								Aluminum Armour kg/km	Ampacity at 30°C Amps
		Inner Jacket		Armour		Outer Jacket					
		mm	in	mm	in	mm	in	lb/Mft			
16 AWG (1.31 mm²)											
2	69Y10M1602	8.7	0.34	14.5	0.57	17.5	0.69	295	198	10.0	
3	69Y10M1603	9.2	0.36	15.2	0.60	18.1	0.71	325	218	10.0	
4	69Y10M1604	10.0	0.39	15.8	0.62	18.8	0.74	357	240	8.0	
5	69Y10M1605	10.9	0.43	16.4	0.65	19.4	0.76	389	261	8.0	
6	69Y10M1606	11.8	0.46	17.7	0.70	20.7	0.81	431	290	8.0	
7	69Y10M1607	12.7	0.50	18.3	0.72	21.3	0.84	464	312	7.0	
8	69Y10M1608	14.4	0.57	20.2	0.80	23.2	0.91	541	364	7.0	
10	69Y10M1610	15.6	0.62	21.5	0.85	24.5	0.96	604	406	7.0	
12	69Y10M1612	16.1	0.64	21.5	0.85	24.5	0.96	645	433	7.0	
15	69Y10M1615	17.8	0.70	23.4	0.92	26.4	1.04	740	497	7.0	
20	69Y10M1620	19.7	0.78	26.4	1.04	29.6	1.17	968	650	7.0	
25	69Y10M1625	22.9	0.90	29.6	1.17	32.8	1.29	1186	797	6.0	
30	69Y10M1630	24.1	0.95	30.9	1.22	34.1	1.34	1313	882	6.0	
40	69Y10M1640	27.9	1.10	34.7	1.37	38.2	1.50	1623	1,091	6.0	
50	69Y10M1650	31.3	1.23	37.8	1.49	41.3	1.63	1897	1,275	5.0	
60	69Y10M1660	32.3	1.27	38.6	1.52	42.0	1.65	2159	1,450	5.0	
18 AWG (0.823 mm²)											
2	69Y10M1802	7.9	0.31	14.0	0.55	16.8	0.66	267	179	5.0	
3	69Y10M1803	8.4	0.33	14.7	0.58	17.5	0.69	291	196	5.0	
4	69Y10M1804	9.1	0.36	15.2	0.60	18.0	0.71	317	213	4.0	
5	69Y10M1805	9.9	0.39	16.0	0.63	18.8	0.74	344	231	4.0	
6	69Y10M1806	10.7	0.42	16.5	0.65	19.3	0.76	370	249	4.0	
7	69Y10M1807	11.4	0.45	17.8	0.70	20.6	0.81	406	273	3.5	
8	69Y10M1808	12.4	0.49	18.5	0.73	21.3	0.84	433	291	3.5	
10	69Y10M1810	14.0	0.55	20.3	0.80	23.1	0.91	518	348	3.5	
12	69Y10M1812	14.5	0.57	20.3	0.80	23.1	0.91	546	367	3.5	
15	69Y10M1815	16.0	0.63	22.4	0.88	25.1	0.99	624	419	3.5	
20	69Y10M1820	17.5	0.69	23.6	0.93	26.4	1.04	719	483	3.5	
25	69Y10M1825	19.8	0.78	26.4	1.04	29.5	1.16	902	606	3.0	
30	69Y10M1830	20.8	0.82	27.7	1.09	30.7	1.21	996	669	3.0	
40	69Y10M1840	25.1	0.99	32.3	1.27	35.3	1.39	1309	880	3.0	
50	69Y10M1850	27.9	1.10	35.3	1.39	38.6	1.52	1523	1,023	2.5	
60	69Y10M1860	28.7	1.13	36.1	1.42	39.1	1.54	1712	1,150	2.5	

Composite cables are the best way to integrate several cables that run between common destinations.

Combine different cable elements under a common jacket or armour and save on total installed cost through the faster, easier installation of one cost efficient cable. Provide us with the application environment of the overall cable or simply select from any of the options listed here.

Our Customer Service Representatives and Product Engineering group will work with you to combine instrumentation, control, power and electronic cables under a common armour or jacket. Composite cables can be constructed with components supplied by ShawFlex or provided by the customer.



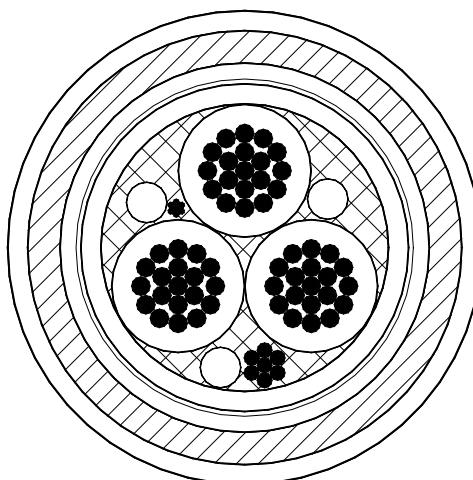
Power, Control and Instrumentation Cable

Wire Selection

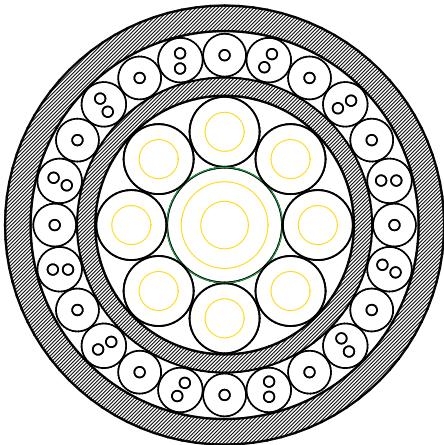
- Bare Copper
- Solid
- Flexible Stranded
- Thermocouple Extension Alloys
- Tinned Copper
- Stranded
- Extra Flexible Stranded
- Specialty Wire

Insulation Options

- UL, CSA or ICEA standard approved materials
- Thermoplastic PVC
- PVC/Nylon
- Thermoplastic PE
- TPE (Thermoplastic Elastomer)
- XLPE
- FR XLPE
- Colour Coding
- Specified as per temperature rating requirements
- New materials constantly being introduced



Power and Control Cable



High Integrity Cable

Shielding Options

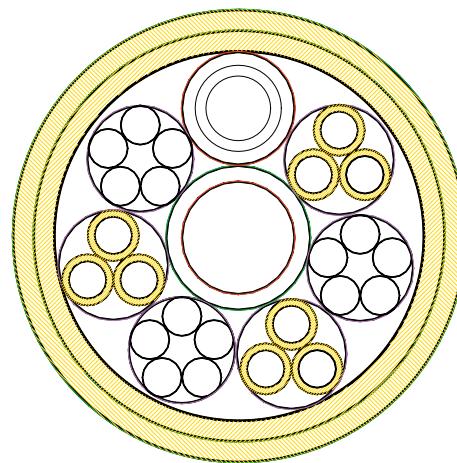
- Aluminum/polyester tape with tinned copper drain wire, overall shield and/or over each cable subcomponent
- Helically applied copper tape
- Corrugated longitudinally applied copper tape
- Braided Shield - tinned or bare copper, aluminum, bronze
- Specialty tapes such as bronze and copper/polyester

Cabling Options

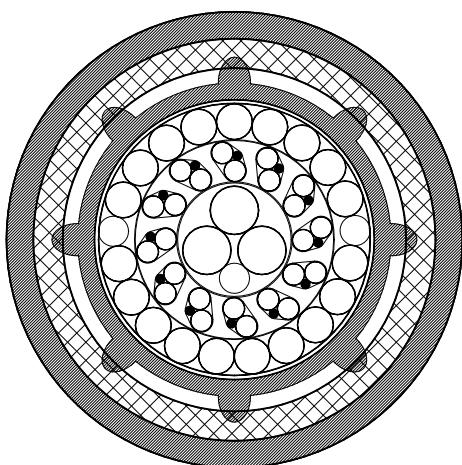
- Common lay
- Alternating layers reverse lay cabling
- Integration of different types of cables such as coaxial, loose tube fibre optic, or other data or non data cables, whether jacketed or not jacketed

Armouring Options

- UL/CSA Aluminum Interlocked Armour
- UL/CSA Steel Interlocked Armour
- UL/CSA Steel Wire Armour
- UL Zetabon® Moisture/Chemical Barrier
- Braid Armoured - tinned or bare copper, aluminum , bronze
- Combinations of the above



Umbilical Cable



Mine Shaft Cable

Jacketing Options

- UL, CSA or ICEA standard approved materials
- FR PVC
- Polyethylene
- CPE (Chlorinated Polyethylene)
- CSPE (Hypalon®)
- TPE (Thermoplastic Elastomer)
- Polyurethane FR
- Metre Marking
- Colour options available
- Specialty engineered PVCs for sunlight resistance, oil resistance, lower temperature performance, low acid gas and radiation resistance

Electrical Characteristics, Instrumentation and Thermocouple

CHARACTERISTICS

Size (AWG)	C-C pf/m	Nominal Capacitance				Characteristic				Inductance		Conductor Resistance		
		Unshielded Pairs		Shielded Pairs		Impedance		(mH/ 1,000 m loop)		(mH/ 1,000 ft loop)		(ohms/ 1,000 m loop)	(ohms/ 1,000 ft loop)	
C-C pf/ft	C-S pf/m	C-S pf/ft	C-C pf/m	C-C pf/ft	C-S pf/m	C-S pf/ft	Unshielded Pairs (ohms)	Shielded Pairs (ohms)	1,000 m loop)	1,000 ft loop)				
PVC Insulated														
150 V														
20	102	31	171	52	164	50	308	94	73	46	0.645	0.197	69	21.0
18	102	31	171	52	161	49	302	92	74	47	0.659	0.201	45	13.6
16	112	34	187	57	180	55	338	103	67	41	0.618	0.188	28	8.5
14	121	37	203	62	203	62	381	116	61	37	0.582	0.178	18	5.4
300 V														
20	92	28	154	47	141	43	266	81	82	53	0.702	0.214	69	21.0
18	92	28	154	47	141	43	266	81	81	53	0.702	0.214	45	13.6
16	101	31	171	52	161	49	302	92	73	46	0.657	0.200	28	8.5
14	112	34	187	57	180	55	338	103	67	41	0.616	0.188	18	5.4
600 V														
18	85	26	144	44	128	39	239	73	89	58	0.742	0.226	45	13.6
16	95	29	161	49	144	44	272	83	79	51	0.692	0.211	28	8.5
14	105	32	177	54	164	50	308	94	72	45	0.648	0.197	18	5.4
XLPE Insulated														
150 V														
20	46	14	75	23	75	23	141	43	107	67	0.645	0.197	69	21.0
18	46	14	75	23	72	22	135	41	109	69	0.659	0.201	45	13.6
16	52	16	89	27	82	25	154	47	99	61	0.618	0.188	28	8.5
14	56	17	92	28	95	29	177	54	90	54	0.582	0.178	18	5.4
300 V														
20	43	13	72	22	66	20	125	38	121	78	0.702	0.214	69	21.0
18	43	13	72	22	66	20	125	38	120	78	0.702	0.214	45	13.6
16	46	14	75	23	72	22	135	41	108	69	0.657	0.200	28	8.5
14	52	16	89	27	82	25	154	47	98	61	0.616	0.188	18	5.4
600 V														
18	39	12	66	20	59	18	112	34	129	85	0.742	0.226	45	13.6
16	43	13	72	22	66	20	125	38	117	76	0.692	0.211	28	8.5
14	49	15	82	25	75	23	141	43	106	67	0.648	0.197	18	5.4

C-C: Conductor to Conductor
C-S: Conductor to Shield

Instrumentation and Thermocouple

Instrumentation and thermocouple cables may be pulled using the conductors. In order to support and to prevent pulling the core out of the jacket or armour it is recommended that a Kellems (basket) grip be secured over the jacket. For armoured constructions, the outer covering and armour should be stripped back to allow the grip to be secured to the inner jacket, armour and outer covering.

The maximum pulling tensions are based on a maximum pulling force of 3.63 kg/0.51mm² (8.00 lb/1,000 circular mils) of conductor area.

Number of Pairs or Triads	Maximum Pulling Tension							
	20 AWG (0.519 mm ²) kg	20 AWG (0.519 mm ²) lb	18 AWG (0.823 mm ²) kg	18 AWG (0.823 mm ²) lb	16 AWG (1.31 mm ²) kg	16 AWG (1.31 mm ²) lb	14 AWG (2.08 mm ²) kg	14 AWG (2.08 mm ²) lb
Unshielded Pairs or Triads								
1 Pair	7	15	12	26	19	42	30	66
2 Pair	15	33	24	53	38	84	60	132
4 Pair	29	64	47	104	75	165	119	262
8 Pair	59	130	94	207	150	331	239	527
12 Pair	89	196	141	311	225	496	358	789
16 Pair	118	260	186	410	299	659	477	1,052
24 Pair	178	392	282	622	450	992	716	1,579
36 Pair	267	589	423	933	674	1,486	1,074	2,368
50 Pair	370	816	588	1,296	936	2,064	1,491	3,287
1 Triad	11	24	18	40	28	62	45	99
2 Triad	22	49	35	77	56	123	89	196
4 Triad	44	97	71	157	112	247	179	395
8 Triad	89	196	141	311	225	496	358	789
12 Triad	133	296	212	467	337	743	537	1,184
16 Triad	178	392	282	622	450	992	716	1,579
24 Triad	267	589	423	933	674	1,486	1,074	2,368
Shielded Pairs or Triads								
1 Pair	11	24	15	33	24	53	39	86
2 Pair	22	49	31	68	49	108	78	172
4 Pair	44	97	62	137	98	216	157	346
8 Pair	89	196	124	273	197	434	313	690
12 Pair	133	293	186	410	295	650	470	1,036
16 Pair	178	392	247	545	394	869	627	1,382
24 Pair	267	589	371	818	591	1,303	941	2,075
36 Pair	400	882	557	1,228	886	1,953	1,411	3,111
50 Pair	555	1,224	773	1,704	1,230	2,712	1,960	4,321
1 Triad	15	33	21	46	34	75	54	119
2 Triad	29	64	43	95	68	150	108	238
4 Triad	59	130	85	187	136	300	216	476
8 Triad	118	260	171	377	272	600	433	955
12 Triad	178	392	256	564	408	899	649	1,431
16 Triad	237	522	342	754	543	1,197	865	1,907
24 Triad	355	783	512	1,129	815	1,797	1,299	2,864

Thermocouple Extension Grade Alloy Identification and Characteristics

T
H
E
R
M
O
C
O
U
P
L
E

Identification

A thermocouple extension grade alloy is a metal having such temperature/electromotive force (EMF) characteristics relative to the thermocouple with which the alloy is intended to be used to that, when properly connected to the thermocouple, the reference junction is transferred to the other end of the wires.

ANSI Type	Alloy Identification		ANSI Colour Codes			Temperature Range*	Standard Limits of Error**
	Positive Wire	Negative Wire	Positive Wire	Negative Wire	Outer Jacket		
EX	Tophel™	Cupron™	Purple	Red	Purple	0 to 200°C 32 to 392°F	±1.7°C ±3.1°F
JX	Iron	Cupron™	White	Red	Black	0 to 200°C 32 to 392°F	±2.2°C ±4.0°F
KX	Tophel™	Nial™	Yellow	Red	Yellow	0 to 200°C 32 to 392°F	±2.2°C ±4.0°F
NX	Nicrosil	Nisil	Orange	Red	Orange	0 to 200°C 32 to 392°F	±2.2°C ±4.0°F
RX	Copper	Copper Alloy II	Black	Red	Green	0 to 200°C 32 to 392°F	±5.0°C ±9.0°F
SX	Copper	Copper Alloy II	Black	Red	Green	0 to 200°C 32 to 392°F	±5.0°C ±9.0°F
TX	Copper	Cupron™	Blue	Red	Blue	0 to 200°C 32 to 392°F	±1.0°C ±1.8°F

*Temperature range based on 20 AWG (0.5190 mm²) wire.

**Reference junction at 0°C (32°F).

Trademarks of Carpenter

Electrical

Since thermocouple based temperature measuring systems depend upon the unique EMF characteristics of the thermocouple pair alloy combination, it is vital that the correct alloys be used. A quick measurement of the loop resistance and comparison with the following table will confirm that the correct type has been installed.

AWG Size	EX	Nominal DC Loop Resistance (ohms/1,000 ft loop)					TX
		JX	KX	NX	SX/RX		
20	710	375	601	780	38	311	
18	447	236	378	491	24	196	
16	281	148	238	308	15	123	

Power and Control Maximum Pulling Tensions

P
O
W
E
R
&
C
O
N
T
R
O
L

Number of Conductors	16 AWG (1.31 mm ²)	14 AWG (2.08 mm ²)	12 AWG (3.31 mm ²)	10 AWG (5.27 mm ²)
	kg	lb	kg	lb
2	28	62	45	99
3	37	82	60	132
4	47	103	75	165
5	56	124	90	197
6	65	144	104	230
7	75	165	119	263
8	84	185	134	296
10	103	227	164	362
12	121	268	194	428
15	150	330	239	526
20	196	433	313	691
25	243	536	388	855
30	290	639	463	1,020
40	383	845	612	1,349
50	477	1,051	761	1,678
60	570	1,257	910	2,007
	8 AWG (8.35 mm ²)	6 AWG (13.3 mm ²)	4 AWG (21.2 mm ²)	2 AWG (33.6 mm ²)
2	158	348	250	552
3	218	480	345	761
4	278	612	440	971