# INDUSTRIAL CATALOG

# Markets Served

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 Commercial Construction
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# INDUSTRIAL CATALOG

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TRAY CABLE

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#### Conductor:

- Stranded Tinned Copper

#### Insulation:

- Polyvinyl Chloride (PVC)

#### Standards:

- UL Style 1007 80°C AWM
- UL Style 1569 105°C AWM
- VW-1
- RHS Cmpliant

#### Additional Information:

- Standard put up 500 ft., 1000 ft., and bulk reels
- All colors may be striped
- Can be provided in twisted configurations

Part #	AWG	Voltage	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
L824ST-XX	24	300	7×30	.016"	.054"	2.8
L822ST-XX	22	300	7×30	.016"	.059"	3.9
L820ST-XX	20	300	10×30	.016"	.069"	6.0
L818ST-XX	18	300	16×30	.016"	.079"	7.3
L816ST-XX	16	300	26×30	.016"	.089"	10.9

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insert the color number in the XX location.

Jacket Num.	Color	Jacket Num.	Color
01	Black	02	White
03	Red	04	Green
05	Blue	06	Gray
07	Orange	08	Yellow
09	Purple	10	Brown



## HOOK UP WIRE

MTW - TEW - AWM UL 1015, UL 1032, UL 1230 105°C - 600 Volt/1000 Volt



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#### Conductor:

- Tinned or bare copper
- Stranded or solid

#### Insulation:

- Color coded Polyvinyl Chloride (PVC)

#### Applications:

 Internal wiring of electrical and electronic equipment and appliances, internal wiring of panels and meters, point to point wiring

#### Standards:

- UL 1015, UL Style 1015, AWM 1015
- UL Style TEW, MTW Hook Up Wire
- UL Style 1015 600V 105°C
- UL Style 1032 1000V 90°C
- UL Style 1230 600V 105°C Dry; 60°C Wet
- Passes UL VW-1 Flame Test
- RoHS Compliant

Part #	AWG	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
L722ST-XX	22	7	.030"	.095"	6.3
L720ST-XX	20	10	.030"	.099"	7.6
L720SO-XX	20	Solid	.030"	.096"	7.6
L718ST-XX	18	16	.030"	.108"	10
L718SO-XX	18	Solid	.030"	.105"	10
L716ST-XX	16	26	.030"	.120"	14
L716SO-XX	16	Solid	.030"	.117"	14
L714ST-XX	14	41	.030"	.133"	20
L714SO-XX	14	Solid	.030"	.131"	20
L712ST-XX	12	65	.030"	.153"	30
L712SO-XX	12	Solid	.030"	.146"	30
L710ST-XX	10	105	.030"	.189"	42
L710SO-XX	10	Solid	.030"	.168"	42
L708ST-XX	8	133	.045"	.255"	74
L706ST-XX	6	133	.060"	.335"	116
L704ST-XX	4	133	.060"	.380"	167
L702ST-XX	2	133	.060"	.450"	265
		High Flex S	Strand		
L708F-XX	8	168	.050"	.255"	71
L706F-XX	6	266	.060"	.330"	119
L704F-XX	4	420	.060"	.380"	173
L703F-XX	3	525	.060"	.400"	220
L702F-XX	2	665	.060"	.440"	264
L701F-XX	1	836	.080"	.510"	342
L71/0F-XX	1/0	1064	.080"	.560"	417
L72/0F-XX	2/0	1330	.085"	.620"	508
L73/0F-XX	3/0	1672	.085"	.680"	636
L74/0F-XX	4/0	2109	.085"	.740"	789
L7250F-XX	250 MCM	2451	.100"	.800"	955
L7350F-XX	350 MCM	3458	.100"	.950"	1273
L7500F-XX	500 MCM	5054	.100"	1.160"	1800

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insert the color number in the XX location.

Jacket Num.	Color	Jacket Num.	Color
01	Black	02	White
03	Red	04	Green
05	Blue	06	Gray
07	Orange	08	Yellow
09	Purple	10	Brown



## **APPLIANCE & FIXTURE WIRE**

High-Temperature Lead Wire SFF-2/SRML

150°C - 600 Volt - UL Listed



#### Conductor:

- Flexible stranded tinned copper

#### Insulation:

- Silicone rubber

#### Jacket:

- Fiberglass braid with a high temperature finish

### Applications:

- Suitable for UV, ozone and moisture exposure
- Suitable for applications to -60°C

#### Standards:

- UL Listed

Part #	AWG	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
C61801-XX	18	16	.030"	.120"	12
C61601-XX	16	26	.030"	.130"	16
C61401-XX	14	41	.030"	.150"	22
C61201-XX	12	65	.030"	.170"	32
C61001-XX	10	105	.045"	.230"	54

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insert the color number in the XX location.

Jacket Num.	Color	Jacket Num.	Color
01	Black	02	White
03	Red	04	Green
05	Blue	06	Gray
07	Orange	08	Yellow
09	Purple	10	Brown



## **APPLIANCE & FIXTURE WIRE**

High-Temperature Lead Wire

SF-2 200°C - 600 Volt - UL Listed

C71801-XX	18	7	.030"	.120"	
C71601-XX	16	7	.030"	.130"	
C71401-XX	14	7	.030"	.145"	
C71201-XX	12	19	.030"	.165"	

Stranding

#### Applications:

Conductor:

Insulation:

Jacket:

- Silicone rubber

- Stranded tinned copper

- Fiberglass braid with a high temperature finish

- Suitable for UV, ozone and moisture exposure
- Suitable for applications to -40°C

#### Standards:

- UL Listed

C71201-XX	12	19	.030"	.165"	32
C71001-XX	10	19	.045"	.220"	54

Insulation

Thickness

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insert the color number in the -XX location

AWG

## Available Colors:

Part #

Jacket Num.	Color	Jacket Num.	Color
01	Black	02	White
03	Red	04	Green
05	Blue	06	Gray
07	Orange	08	Yellow
09	Purple	10	Brown





Nom. O.D.

Lbs./M'

12.5

16

22

**HOOK-UP & LEAD WIRE** 

Switchboard Type SIS\* 90°C - 600 Volt - VW-1



#### Conductor:

- Stranded tinned copper

#### Insulation:

- Moisture and flame retardant Cross-linked Polyethylene (XLPE) VW-1

#### Applications:

- Switchboard wiring, industrial control panel and other types of control apparatus.

#### Additional Information:

- Available in larger sizes
- Also available in Class B stranding
- All colors may be striped
- All colors may be twisted
- Acceptable as motor leads or for internal wiring of appliances
- \* Sizes 18 AWG and 16 AWG are not listed as type SIS switchboard, but rather as "Suitable for SIS and are not VW-1 Rated." Listed as Appliance Wiring Material per UL Style 3173 and rated by UL as 600 Volts, 125°C; 90°C when used as Type SIS.

Part #	AWG	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
C81801-XX*	18	16	.030"	.107"	11
C81601-XX*	16	26	.030"	.117"	13
C81401-XX	14	41	.030"	.133"	20
C81407-XX	14	7	.030"	.132"	20
C81201-XX	12	65	.030"	.153"	30
C81207-XX	12	7	.030"	.152"	30
C81001-XX	10	105	.030"	.195"	42
C80801-XX	8	133	.045"	.261"	74
C80601-XX	6	133	.060"	.305"	107
C80401-XX	4	133	.045"	.368"	163
C80201-XX	2	133	.045"	.434"	243

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insert the color number in the XX location.

Jacket Num.	Color	Jacket Num.	Color
01	Black	02	White
03	Red	04	Green
05	Blue	06	Gray
07	Orange	08	Yellow
09	Purple	10	Brown



## LEAD WIRE

EPDM UL 3374/3340 125°C Flexing / 150°C Non-Flexing 600 Volt



#### Conductor:

- Stranded Tinned Copper

#### Insulation:

Standards:

- Ethylene Propylene (EPDM)

- UL 758 - Styles 3340/3374

Part #	AWG	Stranding	Nom. O.D.	Lbs./M'
B91001-01	10	7×15/30	.212"	46
B90801-01	8	7×12/29	.293"	79
B90601-01	6	7×19/27	.335"	112
B90401-01	4	7×19/25	.365"	168
B90201-01	2	7×19/23	.435"	264
B90101-01	1	7×37/25	.532"	323
B91/001-01	1/0	7×37/24	.591"	400
B92/001-01	2/0	7×37/23	.625"	492
B93/001-01	3/0	7×37/22	.685"	590
B94/001-01	4/0	7×37/21	.745"	743



## LEAD WIRE

Type TGGT PTFE Insulation - Fiberglass Jacket 250°C - 600 Volt - UL 5256/5251



#### Conductor:

- Stranded nickel coated (2%) copper

#### Insulation:

- Polytetrafluoroethylene (PTFE) tape with glass serve

#### Jacket:

- Fiberglass braid with a high temperature finish

#### Applications:

- Internal wiring of heating equipment, cooking equipment, and heat producing apparatus in domestic and industrial cooking environments.
- Ideal for use in equipment wiring in iron and steel mills, cement kilns, and glass plants.

#### Standards`:

- UL Style 5256

			TFE Wall	Fiberglass	Fiber-glass		
Part #	AWG	Stranding	Thick.	Serve	Braid	Nom. O.D.	Lbs./M'
C41801	18	16	.007"	.004"	.005"	.078"	13
C41601	16	26	.011"	.004"	.005"	.092"	17
C41401	14	41	.011"	.004"	.005"	.113"	23
C41201	12	65	.011"	.004"	.005"	.127"	32
C41001	10	105	.011"	.004"	.005"	.155"	48
C40801	8	133	.011"	.004"	.005"	.210"	72
C40601	6	133	.014"	.006"	.006"	.265"	120
C40401	4	133	.014"	.006"	.006"	.320"	175
C40201	2	133	.014"	.006"	.006"	.390"	270
C40101	1	259	.020"	.015"	.017"	.485"	320
C41/001	1/0	259	.020"	.015"	.017"	.535"	397
C42/001	2/0	259	.020"	.015"	.017"	.585"	490
C43/001	3/0	259	.020"	.015"	.017"	.645"	598
C44/001	4/0	259	.020"	.015"	.017"	.710"	765



#### Conductor:

**LEAD WIRE** 

Fiberglass Braid 450°C - 600 Volt

- Flexible stranded 27% nickel plated, annealed copper

**Type MG - Single Conductor** 

#### Insulation:

- Glass reinforced mica tape

#### Jacket:

- Fiberglass braid with a high temperature finish

#### Applications:

- Internal wiring of domestic and commercial ovens and cooking appliances in very high temperature environments.
- Ideal for use in equipment wiring in iron and steel mills, cement kilns, and glass plants.
- 450° continuous / 538°C temporary

#### Standards:

- UL Style 5107, 5359

		o	Nominal Thickness			
Part #	AWG	Stranding	Insulation	Jacket	Nom. O.D.	Lbs./M'
C31801	18	16	.025"	.007"	.115"	12
C31601	16	26	.025"	.007"	.125"	16
C31401	14	41	.025"	.007"	.140"	23
C31201	12	65	.025"	.007"	.160"	31
C31001	10	105	.030"	.017"	.210"	52
C30801	8	133	.030"	.017"	.265"	78
C30601	6	133	.030"	.017"	.310"	115
C30401	4	133	.030"	.017"	.365"	175
C30201	2	133	.035"	.020"	.450"	260
C30101	1	259	.035"	.020"	.490"	320
C31/001	1/0	259	.035"	.020"	.535"	400
C32/001	2/0	259	.035"	.020"	.590"	505
C33/001	3/0	259	.035"	.020"	.650"	620
C34/001	4/0	259	.035"	.020"	.710"	760



#### LEAD WIRE

Type MG - Multi-Conductor Fiberglass Braid 450°C - 600 Volt



#### Conductor:

- Flexible stranded 27% nickel plated, annealed copper

#### Insulation:

- Glass reinforced mica tape

#### Jacket:

- Fiberglass braid with a high temperature finish

### Applications:

- Internal wiring of domestic and commercial ovens and cooking appliances in very high temperature environments
- Ideal for use in equipment wiring in iron and steel mills, cement kilns, and glass plants
- 450° continuous / 538°C temporary

#### Standards:

- NEMA WC 3 Flame Propagation Test

- IEEE-383

Dort #	AWG	O and a stars		Nominal Thickness			Lbo /M'
Part #	AWG	Conductors	Stranding	Insulation	Jacket	Nom. O.D.	Lbs./M'
C31803	18	3	16	.025"	.007"	.327"	55
C31804	18	4	16	.025"	.007"	.345"	69
C31403	14	3	41	.025"	.017"	.390"	93
C31405	14	5	41	.025"	.017"	.469"	147
C31202	12	2	65	.025"	.017"	.400"	87
C31203	12	3	65	.025"	.017"	.426"	120



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## MOTOR LEAD WIRE SRG-K 200°C - 600 Volt



#### Conductor:

- Annealed tinned copper

#### Insulation:

- Silicone rubber, fiberglass braid

#### Jacket:

- Aramid fiber braid

#### Color Code:

- Stocked in K2/E2 color code with a black jacket. Other options available upon request.

#### Applications:

- Used for leads to motors, transformers or other electrical equipment where hazardous and/or high temperature conditions exist requiring flexible heat resistant conductors at 600 volts

#### Standards:

- NEMA WC 3 Flame Propagation Test
- IEEE-383 Vertical Cable Tray Flame Test

Part #	AWG	Conductors	Stranding	Kevlar Thickness	Nom. O.D.	Lbs./M'
C51403	14	3	7	.030"	.400"	75
C51404	14	4	7	.030"	.435"	100
C51405	14	5	7	.030"	.480"	125
C51407	14	7	7	.030"	.520"	170
C51203	12	3	19	.030"	.430"	110
C51204	12	4	19	.030"	.475"	145
C51205	12	5	19	.030"	.520"	175
C51207	12	7	19	.030"	.570"	240

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

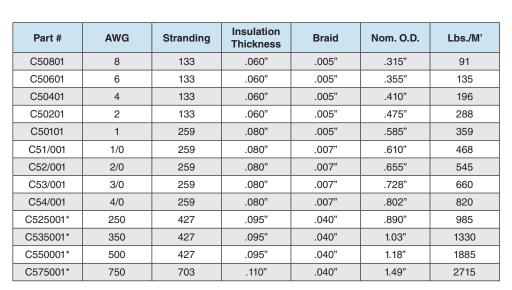
Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe		



## MOTOR LEAD WIRE

## SRML

150°C - 600 Volt



Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

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### Conductor:

- Flexible stranded tinned copper

#### Insulation:

- Silicone rubber

## Jacket:

- Fiberglass braid with a high temperature finish

#### Applications:

 Used in wiring of electrical equipment in hazardous locations where exposure to temperature does not exceed 200°C

#### Standards:

- UL Style 3231, 3101, 3127, 3069, 3070



## **BUILDING WIRE** XHHW-2 90°C - 600 Volt



#### Conductor:

- Bare annealed copper, Class B stranding

#### Insulation:

- Moisture and flame retardant thermoset Cross-linked Polyethylene (XLPE)

#### Applications:

- Recognized for use as general purpose wiring at maximum conductor temperature of 90°C in dry and wet locations
- For installation in air, conduit, or other recognized raceways in circuits not exceeding 600 volts
- Tray cable ratings available upon request for sizes 1/0 AWG and larger
- Sunlight-resistant available

#### Standards:

- National Electric Code (NEC)
- UL 44 Standard for Rubber Insulated Wire and Cable
- UL Listed as Type XHHW-2
- OSHA Acceptable
- UL 1685

#### Features:

- General purpose use in construction:
- Residential
- Commercial
- Institutional
- Industrial construction

#### **Additional Information:**

- All colors may be striped
- Can be provided in twisted configurations

Part #	AWG	Stranding	Insulation Thickness.	Nom. O.D.	Lbs./M'	
Stranded						
M714ST-XX	14	7	.030"	.133"	18	
M712ST-XX	12	7	.030"	.158"	27	
M710ST-XX	10	7	.030"	.180"	40	
M708ST-XX	8	7	.045"	.240"	75	
M706ST-XX	6	7	.045"	.280"	112	
M704ST-XX	4	7	.045"	.328"	153	
M703ST-XX	3	7	.045"	.355"	186	
M702ST-XX	2	7	.045"	.380"	262	
M701ST-XX	1	19	.055"	.434"	300	
M71/0ST-XX	1/0	19	.055"	.473"	363	
M72/0ST-XX	2/0	19	.055"	.517"	452	
M73/0ST-XX	3/0	19	.055"	.567"	562	
M74/0ST-XX	4/0	19	.055"	.623"	702	
M7250ST-XX	250	37	.065"	.705"	835	
M7300ST-XX	300	37	.065"	.760"	990	
M7350ST-XX	350	37	.065"	.810"	1155	
M7400ST-XX	400	37	.065"	.850"	1337	
M7500ST-XX	500	37	.065"	.940"	1630	
M7600ST-XX	600	61	.110"	1.04"	1965	
M7100ST-XX	1000	61	.110"	1.30"	3235	
		S	olid			
M714SO-XX	14	Solid	.030"	.139"	21	
M712SO-XX	12	Solid	.030"	.155"	27	
M710SO-XX	10	Solid	.030"	.179"	40	
M708SO-XX	8	Solid	.045"	.220"	66	
M706SO-XX	6	Solid	.045"	.260"	100	
M704SO-XX	4	Solid	.045"	.300"	153	

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insert the color number in the XX location.

#### Available Colors:

Jacket Num.	Color	Jacket Num.	Color
01	Black	02	White
03	Red	04	Green
05	Blue	06	Gray
07	Orange	08	Yellow
09	Purple	10	Brown
11	Pink	12	Tan



**BUILDING WIRE** 

## BUILDING WIRE XLPE/USE-2 - RHH - RHW-2 90°C - 600 Volt



#### Conductor:

- Bare annealed copper, Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Cross-linked Polyethylene (XLPE), black

#### Applications:

**BUILDING WIRE** 

- Recognized for use as general purpose wiring at maximum conductor temperature of 90°C in dry and wet locations
- For installation in air, conduit, or other recognized raceways in circuits not exceeding 600 volts
- Tray cable rated available upon request for 1/0 and larger

#### Standards:

- National Electric Code (NEC)
- UL 44 Type RHH or RHW-2
- UL 854 Type USE-2
- UL 1581 VW-1
- 1/0 & larger: IEEE 383, IEEE 1202 - OSHA Acceptable

#### Features:

- Conductor for reduced diameter
- General purpose use in construction:
- Residential
- Commercial
- Institutional
- Industrial construction

#### Additional Information:

- Can be provided in twisted configurations up to 10 AWG
- Sunlight and/or oil resistant available upon request

Part #	AWG	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
M614ST-XX	14	7	.045"	.162"	22
M612ST-XX	12	7	.045"	.188"	30
M610ST-XX	10	7	.045"	.212"	45
M608ST-XX	8	7	.060"	.270"	73
M606ST-XX	6	7	.060"	.310"	107
M604ST-XX	4	7	.060"	.360"	161
M602ST-XX	2	7	.060"	.420"	244
M601ST-XX	1	19	.080"	.490"	325
M61/0ST-XX	1/0	19	.080"	.530"	399
M62/0ST-XX	2/0	19	.080"	.580"	491
M63/0ST-XX	3/0	19	.080"	.630"	585
M64/0ST-XX	4/0	19	.080"	.690"	751
M6250ST-XX	250	37	.095"	.770"	865
M6300ST-XX	300	37	.095"	.820"	1030
M6350ST-XX	350	37	.095"	.880"	1190
M6400ST-XX	400	37	.095"	.920"	1350
M6500ST-XX	500	37	.110"	1.03"	1670
M6600ST-XX	600	61	.110"	1.11"	2015
M6750ST-XX	750	61	.110"	1.22"	2495
M61000ST-XX	1000	61	.110"	1.35"	3290

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insert the color number in the XX location.

Jacket Num.	Color	Jacket Num.	Color
01	Black	02	White
03	Red	04	Green
05	Blue	06	Gray
07	Orange	08	Yellow
09	Purple	10	Brown



BUILDING WIRE RHH - RHW-2 UL Photovoltaic 90°C - 600 Volt



#### Conductor:

- 18 AWG 2 AWG Tinned coated compressed copper, Class C stranding per ASTM B33 and B8
- 1 AWG 4/0 Tinned coated compressed copper, Class B stranding per ASTM B33 and B8

#### Insulation:

- Flame-retardant Cross-linked Polyethylene (XLPE), black

#### Applications:

 Single conductor, sunlight resistant, photovoltaic wire rated 90°C wet or dry, 600V for interconnection wiring of grounded and ungrounded photovoltaic power systems as described in Section 690.31(A) and other applicable parts of the National Electrical Code, NFPA 70

#### Standards:

- UL 4703 Type PV
- National Electric Code (NEC)
- UL 44 Type RHH or RHW-2
- UL 854 Type USE-2
- UL 1581 VW-1
- 1/0 & larger: IEEE 383, IEEE 1202
- OSHA Acceptable

Part #	AWG	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
PV31801	18	19	0.060"	.176"	14
PV31601	16	19	0.060"	.187"	18
PV31401	14	19	0.060"	.198"	27
PV31201	12	19	0.060"	.216"	36
PV31001	10	19	0.060"	.235"	51
PV30801	8	19	0.075"	.295"	80
PV30601	6	19	0.075"	.335"	115
PV30401	4	19	0.075"	.385"	170
PV30201	2	19	0.075"	.450"	253
PV30101	1	19	0.095"	.515"	333
PV31/001	1/0	19	0.095"	.555"	410
PV32/001	2/0	19	0.095"	.600"	502
PV33/001	3/0	19	0.095"	.650"	620
PV34/001	4/0	19	0.095"	.705"	767

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Colors available upon request



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## INSTRUMENTATION CABLE PVC Jacket & Insulation Overall Shield 105°C - 300 Volt - UL PLTC/ITC

16 AWG - 22 AWG



#### Conductor:

- Annealed Tinned Copper
- 19 strands Class C

#### Insulation:

- Polyvinyl Chloride (PVC)
- Color code: Black, Red

#### Shield:

- Aluminum Mylar Tape - 100% coverage

#### Drain Wire:

- 7 Strand Tinned Copper

#### Jacket:

- Polyvinyl Chloride (PVC)

#### Applications:

- Cable is suitable for use in Class I Divison II hazardous locations
- Cable is UL approved for Sunlight
- Resistant and Direct Burial Applications - Recommended Operating Voltage:
  - 300V

#### Standards:

- UL listed as type PLTC & CL3 per UL standard 13 and as type ITC per UL standard 2250
- Meets IEEE 1202 flame test
- All materials used in the manufacture of this cable are RoHS compliant

Part #	AWG	Conductors	Nominal Thickness		Jacket	Nom. O.D.	Lbs./M'	
Part #	AWG	Conductors	Insulation	Jacket	Color	Nom. O.D.	LUS./IVI	
KT32202	22	2	.013"	.037"	Gray	.191"	19	
KT32002	20	2	.016"	.037"	Gray	.220"	29	
KT31802	18	2	.016"	.037"	Gray	.242"	37	
KT31602	16	2	.016"	.037"	Gray	.256"	45	



PVC Jacket & Insulation Single Pair & Triad 105°C - 300 Volt - UL PLTC/ITC



#### Conductor:

- Annealed bare copper

- 7 Strands Class B

#### Insulation:

- Polyvinyl Chloride (PVC)

#### Shield:

- Aluminum Mylar Tape - 100% coverage

#### Drain Wire:

- 7 Strand tinned copper

#### Jacket:

- Black Polyvinyl Chloride (PVC)

#### Applications:

- Cable is suitable for use in Class I Division II hazardous locations
- Cable is UL approved for Sunlight
- Resistant and Direct Burial Applications

#### Standards:

- UL listed as type PLTC & CL3 per UL standard 13 and as type ITC per UL standard 2250
- Meets IEEE 1202 flame test
- All materials used in the manufacture of this cable are RoHS compliant

Part #	AWG	Pairs	Triads	Nominal	Iominal Thickness		Lbs./M'
Fart #	AWG	Pairs	maus	Insulation	Jacket	O.D.	LDS./IVI
			S	hielded			
K32202	22	1	-	.013"	.040"	.191"	22
K32002	20	1	-	.016"	.035"	.215"	27
K42003	20	-	1	.016"	.035"	.217"	31
K31802	18	1	-	.016"	.035"	.226"	33
K41803	18	-	1	.016"	.035"	.247"	42
K31602	16	1	-	.016"	.035"	.254"	44
K31602-05*	16	1	-	.016"	.035"	.254"	44
K41603	16	-	1	.016"	.035"	.266"	56
	-	N	onshielde	d (Non Standar	d)		•
K11602	16	1	-	.016"	.035"	.247"	38

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*K31602-05 has a blue jacket

Pairs	Black and White
Triads	Black, White, and Red



PVC Jacket PVC Insulation Individual & Overall Shielded Pairs 105°C - 300 Volt - UL PLTC/ITC



#### Conductor:

Annealed Bare Copper7 Strands Class B

#### Insulation:

- Polyvinyl Chloride (PVC)

#### Individual Shield:

- FFE Aluminum Mylar - 100% coverage

#### Pair Drain Wire:

- 7 Strand Tinned Copper

#### **Overall Shield:**

- Aluminum Mylar Tape - 100% coverage

- Drain Wire:
- 7 Strand Tinned Copper

#### Jacket:

INSTRUMENTATION

- Black Polyvinyl Chloride (PVC) with ripcord

#### Applications:

- Cable is suitable for use in Class I Division II hazardous locations
- Cable is UL approved for Sunlight Resistant and Direct Burial Applications

#### Standards:

- UL listed as type PLTC & CL3 per UL standard 13 and as type ITC per UL standard 2250
- Meets CSA standard C22.2 #239 C(UL) CIC 300V 90°C
- Meets IEEE 1202 flame test
- All materials used in the manufacture of this cable are RoHS compliant

D. 1 /		Ditte	Nominal	Thickness		1.1 (0.01)
Part #	AWG	Pairs	Insulation	Jacket	Nom. O.D.	Lbs./M'
L32002	20	2	.018"	.040"	.339"	58
L32004	20	4	.018"	.050"	.410"	101
L32008	20	8	.018"	.050"	.553"	175
L32012	20	12	.018"	.060"	.688"	261
L32016	20	16	.018"	.060"	.760"	330
L32020	20	20	.018"	.060"	.783"	390
L32024	20	24	.018"	.060"	.867"	462
L32036	20	36	.018"	.070"	1.076"	687
L32050	20	50	.018"	.070"	1.185"	906
L31802	18	2	.016"	.040"	.335"	71
L31804	18	4	.016"	.050"	.425"	125
L31808	18	8	.016"	.050"	.559"	220
L31812	18	12	.016"	.060"	.699"	326
L31816	18	16	.016"	.060"	.753"	410
L31820	18	20	.016"	.060"	.817"	501
L31824	18	24	.016"	.070"	.941"	613
L31836	18	36	.016"	.070"	1.061"	868
L31850	18	50	.016"	.080"	1.252"	1198
L31602	16	2	.016"	.050"	.410"	106
L31603	16	3	.016"	.050"	.462"	140
L31604	16	4	.016"	.050"	.505"	173
L31606	16	6	.016"	.060"	.623"	256
L31608	16	8	.016"	.060"	.676"	323
L31612	16	12	.016"	.060"	.771"	454
L31616	16	16	.016"	.060"	.851"	581
L31620	16	20	.016"	.070"	1.008"	738
L31624	16	24	.016"	.070"	1.051"	859
L31636	16	36	.016"	.080"	1.271"	1265
L31650	16	50	.01 6"	.080"	1.439"	1704

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Туре	Color
Pairs	Black, White & Numbered



PVC Jacket PVC Insulation

**Overall Shielded Pairs** 

105°C - 300 Volt - UL PLTC/ITC



#### Conductor:

- Annealed Bare Copper

## - 7 Strands Class B

Insulation:

- Polyvinyl Chloride (PVC)

#### Shield:

- Aluminum Mylar Tape - 100% coverage

#### Drain Wire:

- 7 Strand Tinned Copper

#### Jacket:

- Black Polyvinyl Chloride (PVC) with ripcord

#### Applications:

- Cable is suitable for use in Class I Division II hazardous locations
- Cable is UL approved for Sunlight Resistant Applications
- Recommended Operating Voltage: 300V

#### Standards:

- UL listed as type PLTC & CL3 per UL standard 13 and as type ITC per UL standard 2250
- Meets IEEE 1202 flame test
- All materials used in the manufacture of this cable are RoHS compliant

D. 1."		D. L.	Nominal Thickness			11
Part #	AWG	Pairs	Insulation	Jacket	Nom. O.D.	Lbs./M'
L12002	20	2	.018"	.040"	.255"	41
L12004	20	4	.018"	.040"	.373"	78
L12008	20	8	.018"	.050"	.502"	141
L12012	20	12	.018"	.050"	.604"	198
L12016	20	16	.018"	.060"	.689"	264
L12024	20	24	.018"	.060"	.826"	373
L12036	20	36	.018"	.070"	.989"	546
L11802	18	2	.015"	.042"	.325"	82
L11804	18	4	.015"	.042"	.357"	133
L11808	18	8	.015"	.060"	.646"	285
L11602	16	2	.015"	.042"	.344"	109
L11604	16	4	.015"	.053"	.442"	197
L11608	16	8	.015"	.060"	.726"	259
L11612	16	12	.015"	.060"	.755"	408
L11616	16	16	.015"	.070"	.845"	526
L11620	16	20	.015"	.070"	.905"	655
L11624	16	24	.015"	.070"	1.13"	803
L11636	16	36	.015"	.070"	1.17"	1122
L11650	16	50	.015"	.080"	1.36"	1544

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

Туре	Color
Pairs	Black, White & Numbered



**INSTRUMENTATION** 

PVC Jacket & Insulation Individual & Overall Shielded Triads 105°C - 300 Volt - UL PLTC/ITC



#### Conductor:

- Annealed Bare Copper
- 7 Strands Class B

#### Insulation:

- Polyvinyl Chloride (PVC)

#### Individual Shield:

- FFE Aluminum Mylar Tape - 100% coverage

#### Triad Drain Wire:

- 7 Strand Tinned Copper

#### **Overall Shield:**

- FFE Aluminum Mylar Tape - 100% coverage

#### Drain Wire:

- 7 Strand Tinned Copper

#### Jacket:

INSTRUMENTATION

- Black Polyvinyl Chloride (PVC) with ripcord

#### Applications:

- Cable is suitable for use in Class I
- Division II hazardous locations - Cable is UL approved for Sunlight Resistant Applications

#### Standards:

- UL listed as type PLTC & CL3 per UL standard 13 and as type ITC per UL standard 2250
- Meets IEEE 1202 flame test
- All materials used in the manufacture of this cable are RoHS compliant

Part #	AWG	Triads	Nominal 1	hickness	Nom. O.D.	Lbs./M'	
Fait#	AWG	maus	Insulation	Jacket	Nom. O.D.	LUS./W	
L62002	20	2	.018"	.050"	.433"	88	
L62004	20	4	.018"	.050"	.500"	133	
L62008	20	8	.018"	.050"	.596"	226	
L62012	20	12	.018"	.060"	.812"	349	
L62024	20	24	.018"	.070"	1.103"	652	
L62036	20	36	.018"	.080"	1.318"	954	
L61802	18	2	.015"	.040"	.321"	77	
L61804	18	4	.015"	.050"	.444"	143	
L61808	18	8	.015"	.060"	.691"	275	
L61812	18	12	.015"	.060"	.840"	412	
L61816	18	16	.015"	.070"	.960"	550	
L61820	18	20	.015"	.070"	1.06"	668	
L61824	18	24	.015"	.070"	1.15"	785	
L61836	18	36	.015"	.080"	1.37"	1151	
L61602	16	2	.015"	.040"	.367"	104	
L61604	16	4	.015"	.050"	.502"	195	
L61608	16	8	.015"	.060"	.786"	375	
L61612	16	12	.015"	.070"	.970"	597	
L61616	16	16	.015"	.070"	1.08"	765	
L61620	16	20	.015"	.070"	1.20"	933	
L61624	16	24	.015"	.080"	1.31"	1125	
L61636	16	36	.015"	.080"	1.54"	1620	

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Туре	Color
Triads	Black, White, Red & Numbered



PVC Jacket & Insulation Individual & Overall Shielded Pairs 90°C - 600 Volt - UL Type TC-ER



#### Conductor:

- Annealed Bare Copper
- 7 Strands Class B

#### Insulation:

- Polyvinyl Chloride (PVC) & Nylon

#### Individual Shield:

- Foil Free Edged Aluminum Mylar Tape
- 100% coverage

#### Pair Drain Wire:

- 7 Strand Tinned Copper

#### Drain Wire:

- 7 Strand Tinned Copper

#### **Overall Shield:**

- Aluminum Mylar Tape - 100% coverage

#### Jacket:

- Black Polyvinyl Chloride (PVC)

#### Applications:

- Refer to NEC (NFPA 70) article 1277 for installation guidelines
- Cable is suitable for use in Class I
- Division II hazardous locations
- UL approved for Direct Burial, Sunlight and Oil Resistant applications

#### Standards:

- RoHS compliant
- UL 1581 & 1202 (FT-4)
- UL 1277 Type TC-ER

			Nominal			
Part #	AWG	Pairs	Insulation	Jacket	Nom. O.D.	Lbs./M
L41802	18	2	.015"	.045"	.373"	77
L41803	18	3	.015"	.045"	.435"	104
L41804	18	4	.015"	.045"	.445"	125
L41806	18	6	.015"	.060"	.578"	196
L41808	18	8	.015"	.060"	.599"	237
L41812	18	12	.015"	.060"	.725"	337
L41816	18	16	.015"	.080"	.891"	470
L41820	18	20	.015"	.080"	.912"	555
L41824	18	24	.015"	.080"	1.003"	652
L41836	18	36	.015"	.080"	1.221"	934
L41850	18	50	.015"	.080"	1.411"	1251
L41602	16	2	.015"	.045"	.425"	103
L41603	16	3	.015"	.045"	.493"	140
L41604	16	4	.015"	.060"	.544"	189
L41606	16	6	.015"	.060"	.648"	266
L41608	16	8	.015"	.060"	.708"	333
L41612	16	12	.015"	.080"	.886"	509
L41616	16	16	.015"	.080"	.971"	640
L41620	16	20	.015"	.080"	1.061"	776
L41624	16	24	.015"	.080"	1.136"	908
L41636	16	36	.015"	.080"	1.334"	1302
L41650	16	50	.015"	.080"	1.571"	1762
L41402	14	2	.015"	.045"	.496"	144
L41404	14	4	.015"	.060"	.616"	262
L41408	14	8	.015"	.060"	.757"	461
L41412	14	12	.015"	.080"	.958"	698
L41416	14	16	.015"	.080"	1.060"	894
L41420	14	20	.015"	.080"	1.150"	1089
L41424	14	24	.015"	.080"	1.291"	1291
L41436	14	36	.015"	.080"	1.494"	1861
L41450	14	50	.015"	.110"	1.774"	2629

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Туре	Color
Pairs	Black, White & Numbered



## INSTRUMENTATION CABLE PVC Jacket & Insulation

Overall Shielded Pairs 90°C - 600 Volt - UL Type TC-ER



#### Conductor:

- Annealed Bare Copper

- 7 Strands Class B

#### Insulation:

- Polyvinyl Chloride (PVC) & Nylon

#### Shield:

- Aluminum Mylar Tape - 100% coverage

#### Drain Wire:

- 7 Strand Tinned Copper

#### Jacket:

- Black Polyvinyl Chloride (PVC)

#### Applications:

- Refer to NEC (NFPA 70) article 1277 for installation guidelines
- Cable is suitable for use in Class I Division II hazardous locations
- UL approved for Direct Burial, Sunlight and Oil Resistant applications
- Cold Bend Rating -40°C

#### Standards:

INSTRUMENTATION

- RoHS compliant
- UL 1581 & 1202 (FT-4)
- UL 1277 Type TC-ER

Part #	AWG	Pairs	Nominal	Thickness	Nom. O.D.	Lbs./M
Fart #	AWG	Pairs	Insulation	Jacket	Nom. O.D.	LDS./M
L21802	18	2	.015"	.045"	.346"	67
L21804	18	4	.015"	.045"	.450"	109
L21806	18	6	.015"	.060"	.557"	166
L21808	18	8	.015"	.060"	.628"	210
L21812	18	12	.015"	.060"	.731"	288
L21816	18	16	.015"	.060"	.786"	360
L21824	18	24	.015"	.080"	.971"	547
L21836	18	36	.015"	.080"	1.331"	804
L21602	16	2	.015"	.045"	.417"	91
L21603	16	3	.015"	.045"	.443"	117
L21604	16	4	.015"	.045"	.487"	146
L21605	16	5	.015"	.060"	.567"	192
L21606	16	6	.015"	.060"	.643"	229
L21608	16	8	.015"	.060"	.666"	279
L21612	16	12	.015"	.060"	.778"	388
L21616	16	16	.015"	.080"	.934"	537
L21624	16	24	.015"	.080"	1.151"	766
L21402	14	2	.020"	.050"	.565"	120
L21404	14	4	.020"	.060"	.600"	257
L21406	14	6	.020"	.060"	.685"	295
L21408	14	8	.020"	.060"	.773"	428
L21412	14	12	.020"	.080"	.985"	655
L21416	14	16	.020"	.080"	1.10"	835
L21420	14	20	.020"	.080"	1.19"	1035
L21424	14	24	.020"	.080"	1.33"	1250
L21436	14	36	.020"	.080"	1.55"	1675
L21450	14	50	.020"	.110"	1.83"	2435

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Туре	Color
Pairs	Black, White & Numbered



## INSTRUMENTATION CABLE CPE Jacket - EPR Insulation Individual & Overall Shielded Pairs

90°C - 600 Volt - UL Type TC-ER



#### Conductor:

- Tinned, annealed copper per ASTM B33 - Class B stranding per ASTM B8

#### Insulation:

- Flame retardant Ethylene Propylene Rubber (EPR), Type II

#### Individual Shield:

- Aluminum/mylar shielding tape

#### Pair & Overall Drain Wires:

- Stranded, tinned copper

#### **Overall Shield:**

- Aluminum/mylar shielding tape

#### Jacket:

- Lead-free, flame retardant, thermoplastic Chlorinated Polyethylene (CPE)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC

#### Approvals:

- IEEE 383
- IEEE 1202
- UL 1581/UL 2556 VW-1
- UL 1685 Vertical Flame Test
- UL 1277 Type TC-ER

Davit #	414/0	Deine	Nominal	Thickness	Nom OD	
Part #	AWG	Pairs	Insulation	Jacket	Nom. O.D.	Lbs./M'
AF61801**	18	1	.025"	.045"	.300"	42
AF61802	18	2	.025"	.045"	.473"	83
AF61804	18	4	.025"	.060"	.586"	152
AF61806	18	6	.025"	.060"	.669"	206
AF61808	18	8	.025"	.060"	.751"	259
AF61812	18	12	.025"	.080"	.948"	398
AF61816	18	16	.025"	.080"	1.05"	502
AF61818	18	18	.025"	.080"	1.10"	553
AF61820	18	20	.025"	.080"	1.14"	603
AF61824	18	24	.025"	.080"	1.25"	709
AF61836	18	36	.025"	.080"	1.47"	1008
AF61850	18	50	.025"	.110"	1.76"	1454
AF61601	16	1	.025"	.045"	.318"	59
AF61602	16	2	.025"	.045"	.516"	103
AF61603	16	3	.025"	.060"	.591"	189
AF61604	16	4	.025"	.060"	.637"	231
AF61606	16	6	.025"	.080"	.775"	295
AF61608	16	8	.025"	.060"	.821"	330
AF61612	16	12	.025"	.080"	1.04"	506
AF61616	16	16	.025"	.080"	1.15"	643
AF61620	16	20	.025"	.080"	1.25"	777
AF61624	16	24	.025"	.080"	1.38"	916
AF61636	16	36	.025"	.080"	1.62"	1312
AF61650	16	50	.025"	.110"	1.93"	1883

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*\* Part number AF61801 does NOT have individually shielded pairs, only overall shielded pairs. ER Rating only applies to 3 conductors or more.

Туре	Color
Pairs	Black, White & Numbered



PVC Jacket & Insulation Individual & Overall Shielded Triads 90°C - 600 Volt - UL Type TC-ER



#### Conductor:

- Annealed bare copper
- 7 Strands Class B

#### Insulation:

- Polyvinyl Chloride (PVC) & Nylon

#### Individual Shield:

- Aluminum Mylar Tape - 100% coverage

#### Drain Wire:

- Stranded, tinned copper

#### Triad Drain Wire:

- 7 Strand Tinned Copper

## Overall Shield:

- Aluminum Mylar Tape - 100% coverage

#### Jacket:

INSTRUMENTATION

- Black Polyvinyl Chloride (PVC)

#### Applications:

- Refer to NEC (NFPA 70) article 1277 for installation guidelines
- Cable is suitable for use in Class I Division II hazardous locations
- UL approved for Direct Burial, Sunlight and Oil Resistant applications

#### Standards:

- RoHS compliant
- UL 1581 & 1202 (FT-4)
- UL 1277 Type TC-ER
- Meets -40°C bend test

Part #	AWG	Triads	Nominal	Thickness	Nom. O.D.	Lbs./M'	
Fart #	AWG	maus	Insulation	Jacket	Nom. O.D.	E03./W	
L51804	18	4	.015"	.060"	.567"	184	
L51808	18	8	.015"	.060"	.743"	326	
L51812	18	12	.015"	.080"	.901"	491	
L51824	18	24	.015"	.080"	1.221"	889	
L51602	16	2	.015"	.060"	.567"	155	
L51604	16	4	.015"	.060"	.638"	251	
L51608	16	8	.015"	.080"	.857"	476	
L51612	16	12	.015"	.080"	1.076"	684	
L51616	16	16	.015"	.080"	1.191"	872	
L51624	16	24	.015"	.080"	1.331"	1231	
L51636	16	36	.015"	.110"	1.754"	1904	

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Туре	Color
Triads	Black, White & Red Numbered



## INSTRUMENTATION CABLE CPE Jacket - EPR Insulation Individual & Overall Shielded Triads

90°C - 600 Volt - UL Type TC-ER



#### Conductor:

- Tinned, annealed copper per ASTM B33
- Class B stranding per ASTM B8

#### Insulation:

- Flame retardant Ethylene Propylene Rubber (EPR), Type II

#### Individual Shield:

- Aluminum/mylar shielding tape

#### Triad & Overall Drain Wires:

- Stranded, tinned copper

#### **Overall Shield:**

- Aluminum/mylar shielding tape

#### Jacket:

- Lead-free, flame retardant,
- thermoplastic Chlorinated Polyethylene (CPE)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC

#### Approvals:

#### - IEEE 383

- IEEE 1202
- UL 1581/UL 2556 VW-1
- UL 1685 Vertical Flame Test
- UL 1277 Type TC-ER

Part #	AWG	Triads	Nominal	Thickness	Name O.D.	1.1
Part #	AWG	Thads	Insulation	Jacket	Nom. O.D.	Lbs./M'
AF71802	18	2	.025"	.060"	.560"	127
AF71804	18	4	.025"	.060"	.655"	201
AF71808	18	8	.025"	.080"	.885"	365
AF71812	18	12	.025"	.080"	1.07"	547
AF71816	18	16	.025"	.080"	1.18"	693
AF71820	18	20	.025"	.080"	1.31"	841
AF71824	18	24	.025"	.080"	1.42"	985
AF71836	18	36	.025"	.080"	1.67"	1407
AF71601	16	1	.025"	.045"	.336"	75
AF71602	16	2	.025"	.060"	.615"	159
AF71604	16	4	.025"	.060"	.725"	261
AF71606	16	6	.025"	.060"	.850"	395
AF71608	16	8	.025"	.080"	.975"	530
AF71612	16	12	.025"	.080"	1.18"	721
AF71616	16	16	.025"	.080"	1.31"	922
AF71620	16	20	.025"	.080"	1.46"	1121
AF71624	16	24	.025"	.080"	1.58"	1323
AF71636	16	36	.025"	.110"	1.92"	2012

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

Туре	Color
Triads	Black, White, Red & Numbered



**INSTRUMENTATION** 

**LSZH Jacket - XLPE Insulation Overall Shielded Pairs/Triads** 90°C - 600 Volt - Type TC-LS



#### Conductor:

- Tinned, annealed copper per ASTM B33
- Class B stranding per ASTM B8

#### Insulation:

- Cross-Linked Polyethylene (XLPE), Low Smoke and Flame retardant
- Color code per ICEA Method 1:
- Pairs Black and white
- Triads Black, white and red
- One conductor in each pair/triad is printed alpha-numerically for easy identification

#### Shield:

- Individual pairs are 100% individually
- shielded with aluminum/polyester tape - Overall shield is aluminum/polyester in contact with drain wire

## Drain Wire:

INSTRUMENTATION

- Stranded, tinned copper

#### Jacket:

- Lead-free, flame retardant, sunlight resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH)

#### **Applications:**

- In free air, raceways, aerial or direct burial
- In wet or dry locations - Permitted for use in Class 1 Division 2
- industrial hazardous locations per NEC

#### Standards:

- RoHS compliant
- IEEE 1202
- UL 1581
- UL 1685 Vertical Flame Test
- \* UL 1277 Type TC-LS

Part #	AWG	Pairs/Triads	Jacket Thickness	Nom. O.D.	Lbs./M'
LZ21601	16	1 Pair	0.045"	0.345"	32
LZ21601T	16	1 Triad	0.045"	0.360"	72



## INSTRUMENTATION CABLE LSZH Jacket - XLPE Insulation Individual & Overall Shielded Pairs

90°C - 600 Volt - Type TC-LS



#### Conductor:

- Tinned, annealed copper per ASTM B33
- Class B stranding per ASTM B8

#### Insulation:

- Cross-Linked Polyethylene (XLPE), Low Smoke and Flame retardant
- Color code per ICEA Method 1; pairs black and white with one conductor in each pair printed for alpha-numeric identification

#### Shield:

- Individual pairs are 100% individually

shielded with aluminum/polyester tape - Overall shield is aluminum/polyester in

contact with drain wire

#### Pair & Overall Drain Wires:

- Stranded, tinned copper

#### Jacket:

- Lead-free, flame retardant, sunlight resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH)

#### Applications:

- In free air, raceways, aerial or direct burial
- In wet or dry locations
- Permitted for use in Class 1 Division 2 industrial hazardous locations per NEC

#### Standards:

- RoHS compliant
- IEEE 1202
- UL 1581
- UL 1685 Vertical Flame Test
- \* UL 1277 Type TC-LS

Part #	AWG	Pairs	Jacket Thickness	Nom. O.D.	Lbs./M'
LZ41802	18	2	0.045"	0.510"	92
LZ41804	18	4	0.060"	0.630"	167
LZ41602	16	2	0.060"	0.585"	130
LZ41604	16	4	0.060"	0.675"	204
LZ41606	16	6	0.060"	0.800"	301
LZ41608	16	8	0.080"	0.915"	394
LZ41612	16	12	0.080"	1.110"	548





**CPE Jacket - EPR Insulation** 

Pairs

**Overall Shield** 

#### 90°C - 600 Volt

#### Conductor:

- Solid thermocouple extension wire

#### Insulation:

- Ethylene Propylene Rubber (EPR)

#### **Overall Shield:**

- Aluminum mylar shield with drain wire

#### Jacket

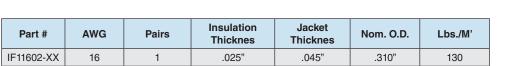
- Black, flame-retardant, sunlight resistant, Chlorinated Polyethylene (CPE)

#### **Applications:**

- For use as a 600 volt, multi pair thermocouple instrumentation cable where flame-retardance, and moisture/ chemical resistance is critical. Cable can be installed in free air, in raceways or direct burial

#### Standards:

- UL Type TC 90°C
- UL 1277
- IEEE 383
- IEEE 1202
- NEC 501-4(b)
- VW-1



Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Jacket Colors

Jacket	Jacket Color	Conductor Color	Metals
JX	Black	White/Red	Iron/Constantan
КХ	Yellow	Yellow/Red	Chromel/Alumel
ТХ	Blue	Blue/Red	Copper/Constantan
EX	Purple	Purple/Red	Chromel/Constantan



CPE Jacket - EPR Insulation Multiple Pairs Individual & Overall Shield

90°C - 600 Volt

#### Nominal Thickness Part # AWG Pairs Nom. O.D. Lbs./M' Insulation Jacket IF62004-XX 20 4 .025" .050" .385" 41 IF62008-XX 20 8 .025" .050" .515" 75 IF62012-XX 20 12 .025" .060" .620" 126 IF62016-XX 20 16 .025" .060" .700" 191 IF62020-XX 20 .025" .060" .775" 217 20 IF62024-XX 20 24 .025" .845" 243 .060" IF62036-XX 20 36 .025" .070" .990" 297

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Jacket Colors

Jacket	Jacket Color	Conductor Color	Metals
JX	Black	White/Red	Iron/Constantan
КХ	Yellow	Yellow/Red	Chromel/Alumel
ТХ	Blue	Blue/Red	Copper/Constantan
EX	Purple	Purple/Red	Chromel/Constantan



#### Conductor:

- Solid thermocouple extension wire

#### Insulation:

- Ethylene Propylene Rubber (EPR)

#### **Overall Shield:**

- Aluminum mylar shield with drain wire

#### Individual Shield:

- Aluminum mylar shield with drain wire

#### Jacket

- Black, flame-retardant, sunlight resistant, Chlorinated Polyethylene (CPE)

#### Applications:

- For use as a 600 volt, multi pair thermocouple instrumentation cable where flame-retardance, and moisture/ chemical resistance is critical. Cable can be installed in free air, in raceways or direct burial

#### Standards:

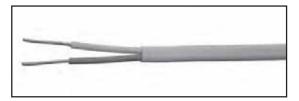
- UL Type TC 90°C
- UL 1277
- IEEE 383
- IEEE 1202
- NEC 501-4(b)
- VW-1



**PVC Jacket & Insulation** 

Shielded & Nonshielded

105°C - 300 Volt - UL Type PLTC



#### Conductor:

- Solid thermocouple extension wire

#### Insulation:

- Polyvinyl Chloride (PVC)

#### **Overall Shield:**

- Polyester backed aluminum tape

### Drain Wire

- Stranded uninsulated tinned copper

#### Jacket

- 90°C flame-retardant Polyvinyl Chloride (PVC)

#### Standards:

- UL Listed Type PLTC (Standard for shielded product only)
- UL Listed under Subject 13
- Passes IEEE 383 70,000 BTU Flame Test

Part #	AWG	Nominal	Thickness	Nom. O.D.		Conductor		
Part #	AWG	Insulation	Jacket	Nom. O.D.	Lbs./M'	Colors		
Shielded								
I32002-JX	20	.015"	.035"	.180"	17	white/red		
132002-KX	20	.015"	.035"	.180"	17	yellow/red		
132002-TX	20	.015"	.035"	.180"	17	blue/red		
132002-EX	20	.015"	.035"	.180"	17	purple/red		
I11602-JX	16	.015"	.035"	.218"	35	white/red		
I11602-KX	16	.015"	.035"	.218"	35	yellow/red		
I11602-TX	16	.015"	.035"	.218"	35	blue/red		
I11602-EX	16	.015"	.035"	.218"	35	purple/red		
		Nonshielded -	- Duplex Parallel (	Non UL Listed)				
I42002 -JX	20	.015"	.015"	.092" x .154"	14	white/red		
142002 -KX	20	.015"	.015"	.092" x .154"	14	yellow/red		
142002 -TX	20	.015"	.015"	.092" x .154"	14	blue/red		
142002 -EX	20	.015"	.015"	.092" x .154"	14	purple/red		
I21602-JX	16	.015"	.015"	.111" x .192"	24	white/red		
l21602-KX	16	.015"	.015"	.111" x .192"	24	yellow/red		
I21602-TX	16	.015"	.015"	.111" x .192"	24	blue/red		
I21602-EX	16	.015"	.015"	.111" x .192"	24	purple/red		

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Jacket Colors

Jacket	Jacket Color	Conductor Color	Metals
JX	Black	White/Red	Iron/Constantan
КХ	Yellow	Yellow/Red	Chromel/Alumel
ТХ	Blue	Blue/Red	Copper/Constantan
EX	Purple	Purple/Red	Chromel/Constantan



THERMOCOUPLE

**PVC Jacket & Insulation Multiple Pairs Individual & Overall Shield** 105°C - 300 Volt - UL Type PLTC



Nominal Thickness

#### Conductor:

(PVC)

Applications:

Standards:

Test

- UL Listed Type PLTC - UL Listed under Subject 13

- For use in wet or dry locations, temperatures up to 105°C, in thermocouple systems which have multiple pair construction requirements - The Polyvinyl Chloride (PVC) jacket can be used in many environments as

a result of resistance to acids, alkalies, moisture, abrasion, and weather

- Passes IEEE 383 - 70,000 BTU Flame

- Solid thermocouple extension wire

Insulation:	Part #	AWG	Pairs	Insulation	Jacket	Nom. O.D.	Lbs./M'
- Polyvinyl Chloride (PVC)	162002-XX	20	2	.016"	.042"	.370"	60
	162004-XX	20	4	.016"	.053"	.448"	103
Individual Shield: - Polyester backed aluminum tape	162008-XX	20	8	.016"	.053"	.569"	169
	162012-XX	20	12	.016"	.064"	.689"	248
Color Code:	l62016-XX	20	16	.016"	.064"	.761"	310
- Per ANSI MC 96.1	162020-XX	20	20	.016"	.064"	.823"	371
Pair Identification:	162024-XX	20	24	.016"	.074"	.931"	449
- One conductor of each pair is numbered	162036-XX	20	36	.016"	.074"	1.034"	629
Overall Shield:	I61602-XX	16	2	.016"	.053"	.464"	109
- Polyester backed aluminum tape	l61604-XX	16	4	.016"	.053"	.536"	165
	l61608-XX	16	8	.016"	.064"	.710"	299
Drain Wire - Stranded uninsulated tinned copper	l61612-XX	16	12	.016"	.064"	.835"	402
	l61616-XX	16	16	.016"	.074"	.947"	530
Jacket	l61624-XX	16	24	.016"	.074"	1.136"	756
	l61636-XX	16	36	.016"	.085"	1.289"	1094
- 90°C flame-retardant Polyvinyl Chloride							

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### **Jacket Colors**

Jacket	Jacket Color	Conductor Color	Metals
JX	Black	White/Red	Iron/Constantan
КХ	Yellow	Yellow/Red	Chromel/Alumel
ТХ	Blue	Blue/Red	Copper/Constantan
EX	Purple	Purple/Red	Chromel/Constantan



THERMOCOUPLE

## THERMOCOUPLE EXTENSION CABLE

FEP Jacket & Insulation Single Pair 200°C - 300 Volt

- Conductor:
- Solid thermocouple extension wire

#### Insulation:

- Flame-retardant extruded Fluoropolymer (FEP)

#### Jacket

- Flame-retardant extruded Fluoropolymer (FEP)

#### Standards:

- NEC/UL Type PLTC

Part #	AWG	Nominal	Thickness	Nom. O.D.	Lbs./M'	
Fail #	AWG	Insulation	Jacket	Nom. O.D.	LDS./W	
I72402-XX	24	.008"	.010"	.056" x .092"	5.7	
I72202-XX	22	.008"	.010"	.061" x .102"	7.6	
I72002-XX	20	.008"	.010"	.068" x .116"	11	
I71802-XX	18	.008"	.010"	.076" x .132"	15	
I71602-XX	16	.008"	.010"	.087" x .154"	22	
I71402-XX	14	.008"	.010"	.104" x .188"	34	

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Available in other insulation and jacket materials.

Also available in thermocouple grade.

#### Jacket Colors

Jacket	Jacket Color	Conductor Color	Metals
JX	Black	White/Red	Iron/Constantan
КХ	Yellow	Yellow/Red	Chromel/Alumel
ТХ	Blue	Blue/Red	Copper/Constantan
EX	Purple	Purple/Red	Chromel/Constantan



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# THERMOCOUPLE EXTENSION CABLE

**FEP Jacket & Insulation Multiple Pairs** Individual & Overall Shield 200°C - 300V

Conductor: - Solid thermocouple extension wire

#### Insulation:

- Flame-retardant extruded Fluoropolymer (FEP)

#### Individual Shield:

- Polyester backed aluminum tape

#### **Overall Shield:**

- Polyester backed aluminum tape

#### **Drain Wire**

- 20 AWG 7 strand tinned copper

#### Jacket

- Flame-retardant extruded Fluoropolymer (FEP)

#### Standards:

- NEC/UL Type PLTC

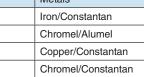
			Nominal	Thickness		
Part #	AWG	Pairs	Insulation	Jacket	Nom. O.D.	Lbs./M'
182001-XX	20	1	.010"	.015"	.150"	22
182002-XX	20	2	.010"	.015"	.263"	41
182004-XX	20	4	.010"	.020"	.318"	75
182008-XX	20	8	.010"	.020"	.414"	126
182012-XX	20	12	.010"	.020"	.505"	191
182016-XX	20	16	.010"	.025"	.548"	243
182020-XX	20	20	.010"	.025"	.611"	297
182024-XX	20	24	.010"	.025"	.682"	347
182036-XX	20	36	.010"	.030"	.774"	513
l81601-XX	16	1	.010"	.020"	.190"	40
I81602-XX	16	2	.010"	.020"	.345"	73
I81604-XX	16	4	.010"	.020"	.405"	128
181608-XX	16	8	.010"	.025"	.544"	238
l81612-XX	16	12	.010"	.025"	.649"	345
l81616-XX	16	16	.010"	.030"	.737"	451
l81620-XX	16	20	.010"	.030"	.802"	551
l81624-XX	16	24	.010"	.030"	.897"	655
l81636-XX	16	36	.010"	.030"	1.01"	950

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Available in other insulation and jacket materials.

#### Jacket Colors

Jacket	Jacket Color	Conductor Color	Metals
JX	Black	White/Red	Iron/Constantan
КХ	Yellow	Yellow/Red	Chromel/Alumel
ТХ	Blue	Blue/Red	Copper/Constantan
EX	Purple	Purple/Red	Chromel/Constantan



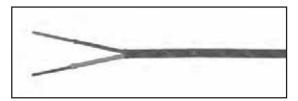






# THERMOCOUPLE CABLE Fiberglass Jacket Fiberglass Insulation

510°C



#### Conductor:

- Solid or stranded thermocouple wire per ASTM E230 & ANSI MC96.1
- Parallel Conductors

#### Insulation:

- Braided fiberglass with high temperature impregnation maintained to 200°C

#### Jacket

- Braided fiberglass with high temperature impregnation
- Color: Brown
- Applications:
- Used for heat treatment, temperature sensors, furnace surveys, and testing
- Steel and aluminum industry and plastic processing equipment

#### Standards:

- Good moisture, chemical, and abrasion resistance
- High temperature stability
- Continuous use up to 510°C (950°F)
- Single exposure up to 650°C (1200°F)

	[				
Part #	AWG	Nominal Thickness		Nom. O.D.	Lbs./M'
i art #	71110	Insulation	Jacket		Eboli/m
I52402-X	24	.005"	.005"	.040" x .070"	4
I52202-X	22	.005"	.005"	.045" x .080"	5
I52002-X	20	.005"	.005"	.052" x .094"	8
I51802-X	18	.005"	.005"	.060" x .110"	13
I51602-X	16	.005"	.005"	.070" x .130"	21
I51402-X	14	.005"	.005"	.100" x .180"	29
I51402-X	14	.005"	.005"	.100" x .180"	29

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\* Insert the letter designation (E, J, K or T) to indicate the thermocouple type.

#### Jacket Colors

Jacket	Jacket Color	Conductor Color	Metals
J	Black/Brown	White/Red	Iron/Constantan
К	Yellow/Brown	Yellow/Red	Chromel/Alumel
Т	Blue/Brown	Blue/Red	Copper/Constantan
E	Purple/Brown	Purple/Red	Chromel/Constantan



# 600 Volt

# TRAY CABLE

**PVC Jacket** 

PVC/Nylon Insulation

90°C - 600 Volt - UL Type TC-ER\*

# 16 AWG & 18 AWG E-2 Color Code

\_\_\_\_

Conductor:

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon)

#### Jacket:

- Lead-free, flame-retardant, sunlightresistant Polyvinyl Chloride (PVC)

#### **Applications:**

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burialClass 1, Division 2 industrial
- hazardous locations per NEC - Permitted for Exposed Run (ER) use
- in accordance with NEC for 3 or more conductors

#### Standards:

- RoHS compliant
- IEEE 383
- IEEE 1202
- UL 83 NEC Type THHN/THWN conductors
- UL 1581
- \* UL 1277 Type TC-ER for 3 or more conductors

A11812	18	12	.045"	.460
A11815	18	15	.045"	.510
A11819	18	19	.060"	.570
A11825	18	25	.060"	.655
A11830	18	30	.060"	.695"
A11837	18	37	.060"	.745
A11602F*	16	2 Flat	.045"	.200" x .310"
A11602R*	16	2	.045"	.300"
A11603	16	3	.045"	.315"
A11604	16	4	.045"	.340"
A11605	16	5	.045"	.370"
A11606	16	6	.045"	.390"
A11607	16	7	.045"	.400"
A11609	16	9	.045"	.460"
A11610	16	10	.045"	.500"
A11612	16	12	.045"	.515"
A11615	16	15	.060"	.605"
A11616	16	16	.060"	.594"
A11619	16	19	.060"	.635"
A11620	16	20	.060"	.700"
A11625	16	25	.060"	.735"
A11630	16	30	.060"	.775"

Conductors

2 Flat

2

3

4

5

7

9

10

Jacket

.045"

.045"

.045"

.045"

.045"

.045"

.045"

.045"

AWG

18

18

18

18

18

18

18

18

Part #

A11802F\*

A11802R\*

A11803

A11804

A11805

A11807

A11809

A11810

Lbs./M'

36

38

46

56

65

82

105

114

131

162

209

266

310

371

48

50

60

74

97

100

111

141

154

548

730



Nom. O.D.

.190" x .285"

.270"

.285

.310

.335

.360

.420

.450

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

.080"

.080"

.880"

1.03"

37

50

\*ER Rating only applies to 3 conductors or more

16

16

Color Code: ICEA Method 1, Table E-2

A11637

A11650



**PVC Jacket** 

PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC-ER\*

#### 14 AWG

#### E-2 Color Code

#### Conductor:

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon)

#### Jacket:

- Lead-free, flame-retardant, sunlightresistant Polyvinyl Chloride (PVC)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC
- Permitted for Exposed Run (ER) use in accordance with NEC for 3 or more conductors

#### Standards:

- RoHS compliant
- IEEE 383
- IEEE 1202
- UL 83 NEC Type THHN/THWN conductors
- UL 1581
- \* UL 1277 Type TC-ER for 3 or more conductors

A11412	14	12	.060"	.610"	267	
A11415	14	15	.060"	.636"	325	
A11416	14	16	.060"	.653"	340	
A11419	14	19	.080"	.710"	396	
A11420	14	20	.080"	.745"	465	
A11425	14	25	.080"	.870"	548	
A11430	14	30	.080"	.915"	637	
A11437	14	37	.080"	.985"	766	
A11440	14	40	.080"	1.00"	848	
A11450	14	50	.080"	1.15"	1020	
A11460	14	60	.080"	1.21"	1200	
Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.						

Conductors

2 Flat

2

3

4

5

6

7

9

10

Jacket

.045"

.045"

.045"

.045"

.045'

.045"

.045"

.060'

.060'

\*ER Rating only applies to 3 conductors or more

#### Color Code Chart:

Part #

A11402F

A11402R\*

A11403

A11404

A11405

A11406

A11407

A11409

A11410

AWG

14

14

14

14

14

14

14

14

14

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black	38	Red
39	Blue	40	Orange
41	Yellow	42	Brown
43	Red w/ Black Stripe	44	Blue w/ Black Stripe
45	Orange w/ Black Stripe	46	Yellow w/ Black Stripe
47	Brown w/ Black Stripe	48	Black w/ Red Stripe
49	Blue w/ Red Stripe	50	Orange w/ Red Stripe
51	Yellow w/ Red Stripe	52	Brown w/ Red Stripe
53	Black w/ Blue Stripe	54	Red w/ Blue Stripe
55	Orange w/ Blue Stripe	56	Yellow w/ Blue Stripe
57	Brown w/ Blue Stripe	58	Black w/ OrangeStripe
59	Red w/ Orange Stripe	60	Blue w/ Orange Stripe



Lbs./M'

62

64

80

100

118

139

153

213

231



Nom. O.D.

.240" x .325"

.320"

.345"

.375"

.410"

.430"

.445"

.550'

.595'

#### **PVC Jacket**

**PVC/Nylon Insulation** 90°C - 600 Volt - UL Type TC-ER\* 10 AWG & 12 AWG

# E-2 Color Code

Conductor:

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon)

#### Jacket:

- Lead-free, flame-retardant, sunlightresistant Polyvinyl Chloride (PVC)

#### **Applications:**

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial - Class 1, Division 2 industrial
- hazardous locations per NEC - Permitted for Exposed Run (ER) use
- in accordance with NEC for 3 or more conductors

#### Standards:

- RoHS compliant
- IEEE 383
- IEEE 1202
- UL 83 NEC Type THHN/THWN conductors
- UL 1581
- \* UL 1277 Type TC-ER for 3 or more conductors

A11202R*	12	2	.045"	.355"	85
A11203	12	3	.045"	.385"	110
A11204	12	4	.045"	.420"	138
A11205	12	5	.045"	.445"	165
A11206	12	6	.045"	.495"	195
A11207	12	7	.045"	.500"	217
A11209	12	9	.060"	.615"	297
A11210	12	10	.060"	.665"	325
A11212	12	12	.060"	.685"	377
A11215	12	15	.060"	.765"	475
A11216	12	16	.060"	.765"	490
A11219	12	19	.060"	.800"	568
A11220	12	20	.080"	.895"	645
A11225	12	25	.080"	.985"	775
A11230	12	30	.080"	1.04"	913
A11237	12	37	.080"	1.12"	1100
A11002F*	10	2 Flat	.045"	.280" x .430"	125
A11002R*	10	2	.045"	.420"	128
A11003	10	3	.045"	.465"	165
A11004	10	4	.045"	.505"	209
A11005	10	5	.060"	.590"	268
A11007	10	7	.060"	.640"	350
A11009	10	9	.060"	.745"	452
A11012	10	12	.080"	.875"	610
A11016	10	16	.080"	.975"	817
A11019	10	19	.080"	1.02"	1060

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*ER Rating only applies to 3 conductors or more

AWG

12

Conductors

2 Flat

Jacket

.045"

Part #

A11202F\*

#### **Color Code Chart:**

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe		



Lbs./M'

83



Nom. O.D.

.260" x .360"

# 600 Volt

# TRAY CABLE PVC Jacket PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC-ER Method 4 Color Code



#### Conductor:

- Bare, annealed copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon)

#### Jacket:

- Black, sunlight and moisture resistant Polyvinyl Chloride (PVC) with ripcord

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC
- Permitted for Exposed Run (ER) use in accordance with NEC for 3 or more conductors

#### Standards:

- UL 83 NEC Type THHN/THWN
- conductors
- UL 1277 Type TC-ER

#### AWG Part # Conductors Nom. O.D. Lbs./M' Jacket A10803 8 3 .060" .588" 295 A10603 6 З .060" .680" 426

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Color	Code	Chart:

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four



# 600 Volt

# TRAY CABLE PVC Jacket PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC-ER Black/White/Green Conductors



#### Conductor:

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon)

#### Jacket:

- Lead-free, flame-retardant, sunlightresistant Polyvinyl Chloride (PVC)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC
- Permitted for Exposed Run (ER) use in accordance with NEC for 3 or more conductors

#### Standards:

- RoHS compliant

#### - IEEE 383

- IEEE 1202
- UL 83 NEC Type THHN/THWN conductors
- UL 1581
- UL 1277 Type TC-ER

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
A11403-BWG	14	3	.045"	.345"	80
A11203-BWG	12	3	.045"	.385"	110
A11003-BWG	10	3	.045"	.465"	165

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	White
3	Green		





#### PVC Jacket

PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC-ER\*

3- & 4-Conductor with Ground

#### Method 4 Color Code

#### Conductor:

- Bare, annealed copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon)

#### Jacket:

- Lead-free, flame-retardant, sunlightresistant Polyvinyl Chloride (PVC)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC
- Permitted for Exposed Run (ER) use in accordance with NEC for 3 or more conductors

#### Standards:

- RoHS compliant
- IEEE 383
- IEEE 1202
- NEC Type THHN/THWN conductors
- UL 1581
- \* UL 1277 Type TC-ER

Dout #	A14/C	Conductors	Ground	Nominal	Thickness	Nom O D	
Part #	AWG	Conductors	AWG	Insulation	Jacket	Nom. O.D.	Lbs./M'
A31403	14	3	14	.020"	.045"	.375"	99
A31203	12	3	12	.020"	.045"	.388"	110
A31003	10	3	10	.026"	.060"	.460"	168
A30803	8	3	10	.036"	.060"	.600"	270
A30603	6	3	8	.036"	.060"	.690"	393
A30403	4	3	8	.048"	.080"	.900"	650
A30203	2	3	6	.048"	.080"	1.03"	941
A30103	1	3	6	.059"	.080"	1.21"	1395
A31/003	1/0	3	6	.059"	.080"	1.28"	1447
A32/003	2/0	3	6	.059"	.080"	1.35"	1737
A33/003	3/0	3	4	.059"	.080"	1.43"	2200
A34/003	4/0	3	4	.059"	.080"	1.58"	2595
A325003	250	3	4	.070"	.110"	1.79"	3177
A335003	350	3	3	.070"	.110"	2.02"	4334
A350003	500	3	2	.070"	.110"	2.27"	5890
A375003	750	3	1	.080"	.110"	2.82"	9060
A30804	8	4	10	.036"	.060"	.655"	338
A30604	6	4	8	.036"	.060"	.760"	504
A30404	4	4	8	.048"	.080"	.985"	824
A30204	2	4	6	.048"	.080"	1.13"	1197
A30104	1	4	6	.059"	.080"	1.28"	1630
A31/004	1/0	4	6	.059"	.080"	1.41"	1873
A32/004	2/0	4	6	.059"	.080"	1.49"	2252
A33/004	3/0	4	4	.059"	.080"	1.56"	2900
A34/004	4/0	4	4	.059"	.110"	1.82"	3471
A325004	250	4	4	.070"	.110"	1.98"	4107
A335004	350	4	3	.070"	.110"	2.24"	5585
A350004	500	4	2	.070"	.110"	2.56"	7694

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four



2014 Industrial Catalog



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PVC Jacket PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC-ER\* DuPont Construction\*\* Method 4 Color Code

#### Conductor:

- Bare, annealed copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with Nylon tape

#### Jacket:

- Black, sunlight and moisture resistant, flame retardant Polyvinyl Chloride (PVC) with ripcord

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC
- Permitted for Exposed Run (ER) use in accordance with NEC for 3 or more conductors

#### Standards:

- UL 83 NEC Type THHN/THWN conductors
- UL 1277 Type TC-ER

# \*\*DuPont Construction:

- Black insulation with white printed numbered conductors
- Nylon fillers
- Mylar tape around shield

A141404	14	4	.045"	.361"	95
A141405	14	5	.045"	.395"	119
A141407	14	7	.045"	.439"	152
A141409	14	9	.045"	.510"	200
A141412	14	12	.060"	.610"	267
A141415	14	15	.060"	.636"	325
A141419	14	19	.060"	.690"	400
A141437	14	37	.080"	.985"	766
A141202*	12	2 Flat	.045"	.225" x .355"	77
A141203	12	3	.045"	.384"	108
A141204	12	4	.045"	.419"	137
A141207	12	7	.045"	.490"	217
A141003	10	3	.045"	.456"	158
A141004	10	4	.045"	.498"	202

Jacket

.045"

.045"

Conductors

2 Flat

3

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*ER Rating only applies to 3 conductors or more

AWG

14

14

#### Color Code Chart:

Part #

A141402\*

A141403

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four



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Lbs./M'

57

79



Nom. O.D.

.207" x .320"

.370"

# 600 Volt

# TRAY CABLE PVC Jacket PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC - ER

# Conductor:

E-1 Color Code

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon)

#### Jacket:

- Lead-free, flame-retardant, sunlightresistant Polyvinyl Chloride (PVC)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC
- Permitted for Exposed Run (ER) use in accordance with NEC for 3 or more conductors

#### Standards:

- RoHS compliant
- IEEE 383
- IEEE 1202
- UL 83 NEC Type THHN/THWN conductors
- UL 1581
- UL 1277 Type TC-ER

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
A161404	14	4	.045"	.375"	100
A161407	14	7	.045"	.445"	153
A161204	12	4	.045"	.420"	138
A161004	10	4	.045"	.505"	209

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	White
3	Red	4	Green
5	Orange	6	Blue
7	White w/ Black Stripe		



(800) 292-OMNI

# UNSHIELDED COMPOSITE TRAY CABLE

**PVC Jacket** 

**PVC/Nylon Insulation** 

90°C-Dry/75°C-Wet - 600 Volt - UL Type TC-ER

# 4 Control Conductors - 3 Power Conductors - 1 Ground

#### Method 4 Color Code

#### Conductor:

- Bare, annealed copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with Nylon tape

#### Jacket:

- Black, sunlight and moisture resistant, flame retardant Polyvinyl Chloride (PVC) with ripcord

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Approved for direct burial
- Class 1, Division 2 industrial hazardous locations per NEC
- Permitted for Exposed Run (ER) use in accordance with NEC for 3 or more conductors

#### Standards:

- RoHS compliant
- THHN/THWN-2 per UL 83
- UL 1277 Type TC-ER

Part #	Control Conductor Size	Insulation Thickness	Power Size-AWG	Insulation Thickness	Ground AWG	Jacket Thickness	Nom. O.D.	Lbs./M'
AC31003	14	.045"	10	.045"	10	.060"	.575"	288
AC31203	14	.045"	12	.045"	12	.060"	.515"	220
AC30203	12	.004"	2	.007"	6	.080"	1.02"	1050
AC30403	12	.004"	4	.007"	6	.080"	.890"	760
AC30603	12	.004"	6	.006"	8	.060"	.720"	530
AC30803	12	.004"	8	.006"	8	.060"	.675"	405

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Color	Code	Chart:
-------	------	--------

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four



#### 2014 Industrial Catalog

PVC Jacket XLPE Insulation (XHHW-2) 90°C - 600 Volt - UL Type TC-ER\* E-2 Color Code



#### Conductor:

- Fully annealed bare copper Class B

#### Insulation:

- Cross-Linked Polyethylene (XLPE)

# - XHHW-2 Jacket:

- Black sunlight resistant Polyvinyl Chloride (PVC)

#### **Applications:**

- Used as power and control cables in dry and wet locations
- Can be installed in cable trays, raceways, and open air
- Suitable for exposure to weather, direct burial, and for Class 1 Division 2 hazardous locations as per NEC

#### Standards:

- UL 44
- UL 1277
- UL 1581
- \* UL 1277 Type TC-ER for 3 conductors or more

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
A51402F*	14	2 Flat	.045"	.260" x .400"	62
A51402*	14	2	.045"	.370"	73
A51403	14	3	.045"	.390"	93
A51404	14	4	.045"	.425"	116
A51405	14	5	.045"	.465"	140
A51407	14	7	.045"	.505"	176
A51409	14	9	.060"	.620"	245
A51412	14	12	.060"	.700"	312
A51415	14	15	.060"	.735"	386
A51419	14	19	.060"	.815"	461
A51425	14	25	.080"	.985"	641
A51430	14	30	.080"	1.05"	740
A51437	14	37	.080"	1.13"	888
A51202*	12	2 Flat	.045"	.270" x .430"	86
A51202R*	12	2	.045"	.410"	96
A51203	12	3	.045"	.435"	125
A51204	12	4	.045"	.475"	157
A51205	12	5	.045"	.520"	191
A51207	12	7	.060"	.595"	260
A51209	12	9	.060"	.695"	340
A51212	12	12	.060"	.780"	429
A51219	12	19	.080"	.955"	681
A51225	12	25	.080"	1.10"	885
A51230	12	30	.080"	1.18"	1029
A51237	12	37	.080"	1.27"	1241
A51002*	10	2 Flat	.045"	.290" x .480"	114
A51002R*	10	2	.045"	.455"	130
A51003	10	3	.045"	.485"	173
A51003-BWG	10	3	.045"	.485"	173
A51004	10	4	.060"	.560"	236
A51005	10	5	.060"	.615"	287
A51007	10	7	.060"	.670"	371
A51009	10	9	.060"	.785"	479
A51012	10	12	.080"	.920"	644
A51014	10	14	.080"	1.05"	809

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### **Color Code Chart:**

- Use Color Code Chart ICEA Method 1, Table E-2
- BWG is for Black, White & Green conductors



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2014 Industrial Catalog

**TRAY CABLE** 

#### **PVC Jacket**

**XLPE Insulation (XHHW-2)** 90°C - 600 Volt - UL Type TC-ER

#### 3- & 4-Conductor with Ground E-2 & Method 4 Color Codes

#### Conductor:

- Annealed copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Cross-Linked Polyethylene (XLPE)
- XHHW-2 per UL 44

#### Ground Conductor:

- Stranded bare copper per UL 1277

#### Jacket:

- Lead-free, flame-retardant, sunlightresistant, Polyvinyl Chloride (PVC)

#### Applications:

- Used as power and control cables in dry and wet locations
- Can be installed in cable trays, raceways, and open air
- Suitable for exposure to weather, direct burial and for Class 1 Division 2 hazardous locations as per NEC

#### Standards:

- UL Type TC 600 Volt
- UL Type XHHW-2, VW-1 Conductors
- IEEE 1202 (70,000 BTU/hr) / CSA FT4
- IEEE 383 (70,000 BTU/hr)
- UL Subject 1277 (70,000 BTU/hr)
- Meets cold bend test of -25\*C per UL 1277 Section 15

200			-	1.07
350	4	.110"	3	2.23"
500	4	.110"	2	2.56"
750	4	.140"	1	3.14"
12	3	.045"	12	.450"
10	3	.045"	10	.495"
8	3	.060"	10	.660"
6	3	.060"	8	.745"
4	3	.080"	8	.890"
2	3	.080"	6	1.02"
1	3	.080"	6	1.12"
1/0	3	.080"	6	1.24"

.080"

.080"

.110"

.110"

.110"

.140"

Jacket

Thickness

.060"

.060"

.080"

.080"

.080"

.080"

.110"

110"

Ground

AWG

10

8

8

6

6

6

4

4

6

4

4

3

2

1

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart 8 AWG - 750:

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four

#### Color Code Chart 10 AWG and 12 AWG:

AWG

8

6

4

2

1/0

2/0

4/0

250

2/0

4/0

250

350

500

750

Conductors

4

4

4

4

4

4

4

4

3

3

3

3

3

3

Part #

A60804

A60604

A60404

A60204

A61/004

A62/004

A64/004

A625004

A635004

A650004

A675004

A61203

A61003

A60803

A60603

A60403

A60203

A60103

A61/003

A62/003

A64/003

A625003

A635003

A650003

A675003

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	Black	2	Red
3	Blue		



Lbs./M'

416

594

872

1284

1910

2311

3598

4213

5686

7869

11495

141

198

335

476

693

967

1199

1493

1797

2709

3270

4396

6065

8831

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Nom. O.D.

.725"

.820"

.975"

1.12"

1.37"

1.48"

1.81"

197"

1.34"

1.58"

1.78"

2.01"

2.31"

2.84"

**FRAY CABLE** 

**CPE Jacket** 

EPR Insulation - XHHW-2 (VW-1) 90°C - 600 Volt - UL Type TC-ER\* 14 AWG & 16 AWG

# E-2 Color Code

#### Conductor:

- Fully annealed stranded tinned copper per ASTM B33
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant ethylene propylene rubber (EPR)

#### Jacket:

- Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE)

#### Applications:

- Used as power and control cables in dry and wet locations
- Can be installed in cable trays, raceways, and open air
- Suitable for exposure to weather, direct burial, and for Class 1 Division 2 hazardous locations as per NEC

#### Standards:

- IEEE 383 & 1202
- UL 44 (Type XHHW-2)
- UL 1581 VW-1
- \* UL 1277 Type TC-ER for 3 conductors or more

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
AF11609	16	9	.045"	.499"	187
AF11612	16	12	.060"	.590"	219
AF11624	16	24	.060"	.773"	386
AF11637	16	37	.080"	.948"	596
AF11402F*	14	2 Flat	.045"	.365" x .230"	61
AF11402*	14	2	.045"	.370"	71
AF11403	14	3	.045"	.390"	92
AF11404	14	4	.045"	.425"	115
AF11405	14	5	.045"	.465"	139
AF11407	14	7	.045"	.505"	183
AF11409	14	9	.060"	.620"	250
AF11412	14	12	.060"	.700"	317
AF11415	14	15	.080"	.758"	393
AF11419	14	19	.060"	.815"	468
AF11425	14	25	.080"	.985"	645
AF11430	14	30	.080"	1.05"	747
AF11437	14	37	.080"	1.13"	897

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*ER Rating only applies to 3 conductors or more

#### Color Code Chart:

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black		



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**TRAY CABLE** 

**CPE Jacket** 

EPR Insulation - XHHW-2 (VW-1) 90°C - 600 Volt - UL Type TC-ER\* 10 AWG & 12 AWG

# E-2 Color Code

#### Conductor:

- Fully annealed stranded tinned copper per ASTM B33
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant ethylene propylene rubber (EPR)

#### Jacket:

- Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE)

#### Applications:

- Used as power and control cables in dry and wet locations
- Can be installed in cable trays, raceways, and open air
- Suitable for exposure to weather, direct burial, and for Class 1 Division 2 hazardous locations as per NEC

#### Standards:

- IEEE 383 & 1202
- UL 44 (Type XHHW-2)
- UL 1581 VW-1
- Meets -40°C bend test
- \* UL 1277 Type TC-ER for 3 conductors or more

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
AF11202F*	12	2 Flat	.045"	.400" x .245"	82
AF11202*	12	2	.045"	.420"	94
AF11203	12	3	.045"	.435"	124
AF11204	12	4	.045"	.475"	157
AF11205	12	5	.045"	.520"	191
AF11207	12	7	.060"	.595"	268
AF11209	12	9	.060"	.695"	347
AF11212	12	12	.060"	.780"	437
AF11215	12	15	.060"	.910"	565
AF11219	12	19	.080"	.955"	688
AF11225	12	25	.080"	1.01"	894
AF11230	12	30	.080"	1.18"	1040
AF11237	12	37	.080"	1.27"	1256
AF11002F*	10	2 Flat	.045"	.445" x .270"	113
AF11002*	10	2	.045"	.455"	128
AF11003	10	3	.045"	.485"	172
AF11004	10	4	.060"	.560"	234
AF11005	10	5	.060"	.615"	284
AF11007	10	7	.060"	.670"	381
AF11009	10	9	.060"	.785"	488
AF11012	10	12	.080"	.920"	651
AF11015	10	15	.080"	1.02"	810
AF11019	10	19	.080"	1.08"	967
AF11024	10	24	.080"	1.36"	1221
AF11037	10	37	.080"	2.10"	1885

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*ER Rating only applies to 3 conductors or more

#### **Color Code Chart:**

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black		



(800) 292-OMNI

# CPE Jacket

EPR Insulation - XHHW-2 (VW-1) 90°C - 600 Volt - UL Type TC-ER 3 & 4 Conductor with Ground Method 4 Color Code

#### Conductor:

- Tinned, annealed copper per ASTM B33
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant ethylene propylene rubber (EPR)

#### Jacket:

- Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE)

#### Applications:

- Used as power and control cables in dry and wet locations
- Can be installed in cable trays, raceways, and open air
- Suitable for exposure to weather, direct burial and for Class 1 Division 2 hazardous locations as per NEC

#### Standards:

- IEEE 383 & 1202
- UL 44 (Type XHHW-2)
- UL 1581 VW-1
- \* UL 1277 Type TC-ER for 3 conductors or more

			Ground	Nominal	Thickness		
Part #	AWG	Conductors	AWG	Insulation	Jacket	Nom. O.D.	Lbs./M'
AF30803	8	3	10	.045"	.060"	.657"	359
AF30603	6	3	8	.045"	.060"	.739"	513
AF30403	4	3	8	.045"	.080"	.880"	721
AF30203	2	3	6	.045"	.080"	1.01"	1063
AF30103	1	3	6	.055"	.080"	1.15"	1190
AF31/003	1/0	3	6	.055"	.080"	1.23"	1528
AF32/003	2/0	3	6	.055"	.080"	1.32"	1830
AF33/003	3/0	3	4	.055"	.080"	1.42"	2500
AF34/003	4/0	3	4	.055"	.080"	1.55"	2768
AF325003	250	3	4	.065"	.110"	1.78"	3298
AF335003	350	3	3	.065"	.110"	2.00"	3643
AF350003	500	3	2	.065"	.110"	2.29"	6116
AF375003	750	3	1	.080"	.140"	2.81"	9101
AF30804	8	4	10	.045"	.060"	.719"	439
AF30604	6	4	8	.045"	.060"	.811"	627
AF30404	4	4	8	.045"	.080"	.965"	897
AF30204	2	4	6	.045"	.080"	1.11"	1368
AF30104	1	4	6	.055"	.080"	1.21"	1430
AF31/004	1/0	4	6	.055"	.080"	1.34"	1934
AF32/004	2/0	4	6	.055"	.080"	1.46"	2332
AF33/004	3/0	4	4	.055"	.080"	1.60"	2870
AF34/004	4/0	4	4	.055"	.110"	1.79"	3630
AF325004	250	4	4	.065"	.110"	1.96"	4210
AF335004	350	4	3	.065"	.110"	2.21"	4743
AF350004	500	4	2	.065"	.110"	2.54"	7881
AF375004	750	4	1	.080"	.140"	3.11"	11746

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four



(800) 292-OMNI



CPE Jacket EPR Insulation - XHHW-2 (VW-1) 90°C - 600 Volt - UL Type TC-ER\* E-1 Color Code



#### Conductor:

- Fully annealed stranded tinned copper per ASTM B33
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant ethylene propylene rubber (EPR)

#### Jacket:

- Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE)

#### Applications:

- Used as power and control cables in dry and wet locations
- Can be installed in cable trays, raceways, and open air
- Suitable for exposure to weather, direct burial, and for Class 1 Division 2 hazardous locations as per NEC

#### Standards:

- IEEE 383 & 1202
- UL 44 (Type XHHW-2)
- UL 1581 VW-1
- \* UL 1277 Type TC-ER for 3 conductors or more

Davit #	414/0	Ormalizations	Nominal 1	Thickness	Nom. O.D.	
Part #	AWG	Conductors	Insulation	Jacket	NOM. U.D.	Lbs./M'
AF161402*	14	2 Flat	.030"	.045"	.235" x .365"	70
AF161403	14	3	.030"	.045"	.390"	85
AF161404	14	4	.030"	.045"	.425"	105
AF161405	14	5	.030"	.045"	.445"	125
AF161407	14	7	.030"	.045"	.505"	173
AF161409	14	9	.030"	.060"	.620"	240
AF161412	14	12	.030"	.060"	.670"	295
AF161202*	12	2 Flat	.030"	.045"	.250" x .410"	95
AF161203	12	3	.030"	.045"	.430"	120
AF161204	12	4	.030"	.045"	.470"	150
AF161205	12	5	.030"	.045"	.495"	180
AF161207	12	7	.030"	.060"	.600"	250
AF161212	12	12	.030"	.060"	.750"	410
AF161002*	10	2 Flat	.030"	.045"	.275" x .460"	130
AF161003	10	3	.030"	.045"	.480"	160
AF161004	10	4	.030"	.060"	.560"	220
AF161005	10	5	.030"	.060"	.615"	284
AF161007	10	7	.030"	.060"	.670"	381
AF161009	10	9	.030"	.060"	.785"	488
AF161012	10	12	.030"	.080"	.950"	651

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*AF161202 has flat construction.

\*ER Rating only applies to 3 conductors or more.

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	White
3	Red	4	Green
5	Orange	6	Blue
7	White w/ Black Stripe	8	Red w/ Black Stripe
9	Green w/ Black Stripe	10	Orange w/ Black Stripe
11	Blue w/ Black Stripe	12	Black w/ White Stripe



PVC Jacket

PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC-ER\*

# 18 AWG & 16 AWG

E-2 Color Code

#### Conductor:

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with Nylon

# - Aluminum/polymer tape

Shield:

- Drain Wire:
- Stranded, tinned copper

#### Jacket:

- Lead-free, flame retardant, sunlight resistant Polyvinyl Chloride (PVC)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Class 1, Division 2 industrial hazardous locations per NEC

#### Standards:

- UL 1581
- UL 66 NEC Type TFN conductors
- IEEE 1202
- RoHS compliant
- \* UL 1277 Type TC-ER for 3 or more conductors

A21802*	18	2	.045"	.280"	40
A21803	18	3	.045"	.290"	49
A21804	18	4	.045"	.310"	58
A21805	18	5	.045"	.340"	70
A21807	18	7	.045"	.370"	89
A21808	18	8	.045"	.404"	105
A21809	18	9	.045"	.462"	121
A21810	18	10	.045"	.460"	127
A21812	18	12	.045"	.520"	160
A21819	18	19	.060"	.650"	245
A21825	18	25	.060"	.690"	270
A21837	18	37	.060"	.740"	365
A21602*	16	2	.045"	.300"	52
A21603	16	3	.045"	.320"	63
A21604	16	4	.045"	.350"	77
A21605	16	5	.045"	.370"	91
A21607	16	7	.045"	.410"	119
A21609	16	9	.045"	.470"	150
A21610	16	10	.045"	.495"	168
A21612	16	12	.045"	.510"	185
A21619	16	19	.060"	.675"	300
A21625	16	25	.060"	.727"	377
A21637	16	37	.080"	.945"	595

Jacket

Conductors

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*ER Rating only applies to 3 conductors or more

AWG

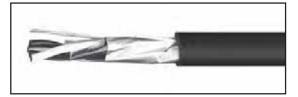
Part #

#### **Color Code Chart:**

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black		



Lbs./M'



Nom. O.D.



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# **TRAY CABLE**

**PVC Jacket** 

PVC/Nylon Insulation 90°C - 600 Volt - UL Type TC-ER\*

14 AWG - 10 AWG

# E-2 Color Code

#### Conductor:

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with Nylon

#### Shield: - Aluminum/polymer tape

# Drain Wire:

- Stranded, tinned copper

#### Jacket:

- Lead-free, flame retardant, sunlight resistant Polyvinyl Chloride (PVC)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Class 1, Division 2 industrial hazardous locations per NEC

#### Standards:

- UL 1581
- UL 83 NEC Type THHN/THWN
- conductors - IEEE 1202
- RoHS compliant
- \* UL 1277 Type TC-ER for 3 or more
- conductors

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
A21402*	14	2	.045"	.330"	67
A21403	14	3	.045"	.350"	84
A21404	14	4	.045"	.380"	104
A21405	14	5	.045"	.400"	123
A21407	14	7	.045"	.440"	161
A21409	14	9	.060"	.528"	215
A21412	14	12	.060"	.635"	285
A21415	14	15	.060"	.695"	360
A21419	14	19	.080"	.750"	415
A21425	14	25	.080"	.804"	529
A21430	14	30	.080"	.888"	670
A21437	14	37	.080"	1.02"	810
A21202*	12	2	.045"	.370"	93
A21203	12	3	.045"	.390"	120
A21204	12	4	.045"	.420"	150
A21205	12	5	.045"	.550"	185
A21207	12	7	.045"	.600"	235
A21209	12	9	.060"	.655"	315
A21212	12	12	.060"	.685"	377
A21219	12	19	.060"	.800"	568
A21225	12	25	.080"	.958"	790
A21237	12	37	.080"	1.10"	1100
A21002	10	2	.045"	.430"	133
A21003	10	3	.045"	.460"	174
A21004	10	4	.045"	.500"	216
A21005	10	5	.060"	.625"	290
A21012	10	12	.080"	.820"	580

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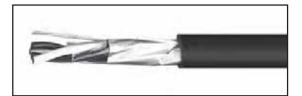
Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*ER Rating only applies to 3 conductors or more

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black		



PVC Jacket PVC/Nylon Insulation 3 & 4 Conductor with Ground 90°C-Dry/75°C-Wet - 600 Volt - UL Type TC-ER Method 4 Color Code



#### Conductor:

- Stranded bare copper

#### Insulation:

- Polyvinyl Chloride (PVC)/Nylon

#### Shield:

- Overall copper tape
- 100% coverage

#### Jacket:

- Sunlight resistant Polyvinyl Chloride (PVC)

#### Applications:

- In all raceways, or direct burial
- In wet or dry locations

#### Standards:

- UL 1277 Type TC-ER
- IEEE 1202

#### Features:

- Oil and chemical resistance
- Sunlight, cold bend, and cold impact resistance
- Rated at 90°C dry, 75°C wet

Part #	AWG	Conductors	Ground	Nominal Thickness		Nom. O.D.	Lbs./M'
Part #	AWG	Conductors	AWG	Insulation	Jacket	Nom. O.D.	LDS./IVI
A40803	8	3	10	.036"	.060"	.620"	342
A40603	6	3	8	.036"	.060"	.705"	474
A40403	4	3	6	.048"	.080"	.895"	710
A40203	2	3	6	.048"	.080"	1.02"	1039
A40804	8	4	10	.036"	.060"	.670"	415
A40604	6	4	8	.036"	.060"	.765"	585
A40404	4	4	6	.048"	.080"	.985"	840
A40204	2	4	6	.048"	.080"	1.12"	1168

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

# Color Code Chart:

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four

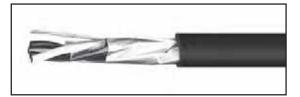


**TRAY CABLE** 

# Shielded

# **TRAY CABLE**

PVC Jacket PVC/Nylon Insulation 90°C-Dry/75°C-Wet - 600 Volt - UL Type TC-ER\* E-1 Color Code



#### Conductor:

- Fully annealed stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) with Nylon

# Shield:

- Aluminum/polymer tape

#### Drain Wire:

- Stranded, tinned copper

#### Jacket:

- Lead-free, flame retardant, sunlight resistant Polyvinyl Chloride (PVC)

#### Applications:

- In free air, raceways and direct burial
- In wet or dry locations
- Class 1, Division 2 industrial
- hazardous locations per NEC

#### Standards:

- UL 1581
- UL 83 NEC Type THHN/THWN
- conductors
- IEEE 1202
- RoHS compliant
- \* UL 1277 Type TC-ER for 3 or more conductors

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
A171802*	18	2	.045"	.280"	40
A171803	18	3	.045"	.290"	49
A171602*	16	2	.045"	.300"	52
A171603	16	3	.045"	.320"	63
A171402*	14	2	.045"	.328"	67

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\*ER Rating only applies to 3 conductors or more

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	White
3	Red		



# Shielded

# TRAY CABLE

CPE Jacket EPR Insulation 90°C - 600 Volt - UL Type TC-ER\* E-2 Color Code

#### Back to Table of Contents >

Lbs./M'



Nom. O.D.

#### Conductor:

Tinned, annealed copper per ASTM B33Class B stranding per ASTM B8

#### Insulation:

- Flame retardant Ethylene Propylene Rubber (EPR)

#### Shield:

Aluminum/polymer tape

#### Drain Wire:

- Stranded, tinned copper

#### Jacket:

- Lead-free, flame retardant, thermoplastic Chlorinated Polyethylene (CPE)

#### **Applications:**

- Used as power and control cables in dry and wet locations
- Can be installed in cable trays, raceways, and open air
- Suitable for exposure to weather, direct burial, and for Class 1 Division 2 hazardous locations as per NEC

#### Standards:

- UL 44 Type XHHW-2
- UL 1581/UL 2556 (VW-1)
- UL 1685 Vertical Flame Test
- IEEE 383
- IEEE 1202
- \* UL 1277 Type TC-ER for 3 or more conductors

AF21802*	18	2	.045"	.300"	45
AF21803	18	3	.045"	.316"	55
AF21602*	16	2	.045"	.324"	52
AF21603	16	3	.045"	.342"	68
AF21604	16	4	.045"	.480"	95

Conductors

Nom. Jacket

Thick

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

Part #

AWG

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange



# UNSHIELDED TRAY CABLE LSZH Jacket XLPE Insulation 90°C - 600 Volt - Type TC-LS-ER\* E-2 Color Code

Conductor:

- Stranded bare copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Cross-Linked Polyethylene (XLPE), Low Smoke and Flame retardant

#### Jacket:

- Lead-free, flame retardant, sunlight resistant, Low-Smoke, Zero-halogen Polyolefin (LSZH)

#### Applications:

- In free air, raceways, aerial or direct burial
- In wet or dry locations
- Class 1 Division 2
- Permitted for Exposed Runs in three or more conductors

#### Standards:

- UL 44 Type XHHW-2
- UL 1277 Type TC-LS-ER
- UL 1581 VW-1
- UL 1685 Vertical Flame Test
- IEEE 1202
- ROHS Compliant
- \* NEC approved as -ER for 3 or more conductors

Part #	AWG	Conductors	Jacket Thickness	Nom. O.D.	Lbs./M'
AZ11402F*	14	2 Flat	0.045"	.365 x .323"	61
AZ11403	14	3	0.045"	0.390"	92
AZ11404	14	4	0.045"	0.425"	115
AZ11405	14	5	0.045"	0.465"	139
AZ11407	14	7	0.045"	0.505"	173
AZ11409	14	9	0.060"	0.620"	240
AZ11412	14	12	0.060"	0.700"	301
AZ11419	14	19	0.060"	0.815"	468
AZ11202F*	12	2 Flat	0.045"	.400" x .245"	82
AZ11203	12	3	0.045"	0.435"	124
AZ11204	12	4	0.045"	0.475"	157
AZ11205	12	5	0.045"	0.520"	191
AZ11207	12	7	0.060"	0.595"	268
AZ11209	12	9	0.060"	0.695"	337
AZ11212	12	12	0.060"	0.765"	428
AZ11219	12	19	0.060"	0.940"	688
AZ11002F*	10	2 Flat	0.045"	.455" x .270"	113
AZ11003	10	3	0.045"	0.485"	172
AZ11004	10	4	0.060"	0.560"	234
AZ11005	10	5	0.060"	0.615"	284
AZ11007	10	7	0.060"	0.670"	381
AZ11009	10	9	0.060"	0.760"	464
AZ11012	10	12	0.080"	0.905"	651

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Color Code: ICEA Method 1, Table E-2, no white or green conductors





# UNSHIELDED TRAY CABLE LSZH Jacket XLPE Insulation 90°C - 600 Volt - Type TC-LS-ER 3-Conductor with Ground

# E-2 & Method 4 Color Codes

# 

#### Conductor:

- Bare, annealed copper per ASTM B3
- Class B stranding per ASTM B8

#### Insulation:

- Lead-free, flame retardant, low-smoke Cross-linked Polyethylene (XLPE)

#### Jacket:

- Lead-free, flame retardant, sunlight resistant, Low-Smoke, Zero-halogen Polyolefin (LSZH)

#### Applications:

- In free air, raceways, aerial or direct burial
- In wet or dry locations
- Permitted for use in Class 1 Division 2 industrial hazardous locations per NEC

#### Standards:

- UL 44 Type XHHW-2
- UL 1277 Type TC-LS-ER
- UL 1581 VW-1
- UL 1685 Vertical Flame Test
- IEEE 1202
- ROHS Compliant

Part #	AWG	Conductors	Ground	Jacket Thickness	Nom. O.D.	Lbs./M'
AZ31403	14	3	14	0.045"	0.430"	118
AZ31203	12	3	12	0.045"	0.480"	160
AZ31003	10	3	10	0.060"	0.565"	237
AZ30803	8	3	10	0.060"	0.655"	314
AZ30603	6	3	8	0.060"	0.740"	456
AZ30403	4	3	8	0.060"	0.880"	642
AZ30203	2	3	6	0.080"	1.010"	979
AZ31/003	1/0	3	6	0.080"	1.225"	1439
AZ32/003	2/0	3	6	0.080"	1.300"	1720
AZ34/003	4/0	3	4	0.080"	1.540"	2614
AZ335003	350	3	3	0.110"	1.960"	4187
AZ350003	500	3	2	0.110"	2.245"	5847

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart 8 AWG - 500:

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four

#### Color Code Chart 10 AWG - 14 AWG:

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	Black	2	Red
3	Blue		



**PVC Insulation & Jacket** 

**PORTABLE CORD** 

105°C - 300 Volt

PORTABLE CORD

#### Conductor:

Type SJT

- Fully annealed stranded bare copper

#### Insulation:

- Premium-grade, color coded Polyvinyl Chloride (PVC)

#### Jacket:

- White Polyvinyl Chloride (PVC)
- Temperature range: -20°C to 105°C

#### Applications:

- For use in most hospital equipment

#### Standards:

- UL Listed
- CSA Certified

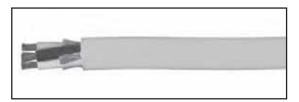
Part #	AWG	Conductors	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
BJT1803-02	18	3	16/30	.030"	.320"	42
BJT1603-02	16	3	26/30	.030"	.340"	83
BJT1403-02	14	3	41/30	.030"	.365"	108
BJT1203-02	12	3	65/30	.030"	.430"	164
BJT1003-02	10	3	104/30	.030"	.585"	228

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color
2	Black, White
3	Black, White, Green



# SJOOW Synthetic Rubber Insulation Oil-Resistant Thermoset Jacket 90°C - 300 Volt



#### Conductor:

- Fully annealed stranded bare copper

#### Insulation:

- Color coded synthetic rubber (EPDM) oil and water resistant per UL-62

#### Cabling:

- Conductors are assembled round with fillers as needed and a separator is applied over the assembly

#### Jacket:

- Oil resistant thermoset (Black CPE) per UL-62

#### Applications:

- Designed for hard usage with portable tools, small motors and power extensions and is sunlight, water, oil and weather resistant and suitable for outdoor applications

#### Standards:

- UL Flexible Cord UL 62
- MSHA Approved

Part #	AWG	Conductors	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
BJ11802	18	2	16" x 30"	.030"	.285"	51
BJ11803	18	3	16" x 30"	.030"	.305"	63
BJ11803-08*	18	3	16" x 30"	.030"	.305"	63
BJ11804	18	4	16" x 30"	.030"	.330"	76
BJ11602	16	2	26" x 30"	.030"	.310"	60
BJ11603	16	3	26" x 30"	.030"	.330"	76
BJ11604	16	4	26" x 30"	.030"	.365"	95
BJ11602	16	2	26" x 30"	.030"	.310"	60
BJ11603	16	3	26" x 30"	.030"	.330"	76
BJ11604	16	4	26" x 30"	.030"	.365"	95
BJ11404	14	4	41" x 30"	.030"	.410"	121
BJ11203	12	3	65" x 30"	.030"	.430"	146
BJ11203-08*	12	3	65" x 30"	.030"	.430"	146
BJ11204	12	4	65" x 30"	.030"	.475"	185
BJ11003	10	3	104" x 30"	.045"	.580"	242
BJ11004	10	4	104" x 30"	.045"	.655"	304

\* Part numbers ending in -08 have a yellow jacket.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
2	Black, White	3	Black, White, Green
4	Black, White, Green, Red		



# PORTABLE CORD

Type SOOW - 2-4 Conductor EPDM Insulation - CPE Jacket 90°C - 600 Volt



#### Conductor:

- Fully annealed stranded bare copper

#### Insulation:

- Ethylene Propylene Diene Monomer (EPDM)

#### Jacket:

- Chlorinated Polyethylene (CPE)

#### Applications:

- Portable tools and equipment
- Portable appliances
- Small motors and associated machinery

#### Standards:

- UL Flexible Cord UL Subject 62
- MSHA Approved

Part #	AWG	Conductors	Insulation Thickness	Nom. O.D.	Lbs./M
B11802	18	2	.030"	.345"	72
B11803	18	3	.030"	.365"	84
B11804	18	4	.030"	.390"	101
B11602	16	2	.030"	.370"	80
B11603	16	3	.030"	.390"	103
B11604	16	4	.030"	.420"	119
B11402	14	2	.045"	.510"	158
B11403	14	3	.045"	.535"	172
B11404	14	4	.045"	.575"	208
B11202	12	2	.045"	.570"	195
B11203	12	3	.045"	.595"	229
B11204	12	4	.045"	.650"	280
B11002	10	2	.045"	.620"	235
B11003	10	3	.045"	.660"	295
B11004	10	4	.045"	.715"	353
B10802	8	2	.045"	.615"	280
B10803	8	3	.060"	.655"	354
B10804	8	4	.060"	.785"	450
B10603	6	3	.050"	.800"	515
B10604	6	4	.050"	.845"	620
B10605	6	5	.050"	.945"	750
B10402	4	2	.050"	.890"	500
B10403	4	3	.050"	.940"	670
B10404	4	4	.050"	1.01"	835
B10405	4	5	.050"	1.135"	1065
B10203	2	3	.055"	1.090"	1030
B10204	2	4	.055"	1.17"	1285
B10205	2	5	.055"	1.435"	1620

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

\* 8 AWG not recognized by UL, but is available.

No. of Conductors	Color
2	Black, White
3	Black, White, Green
4	Black, White, Red, Green
5	Black, White, Red, Green, Orange



# PORTABLE CORD

Type SOOW - 5-30 Conductor EPDM Insulation - CPE Jacket 90°C - 600 Volt



#### Conductor:

- Fully annealed stranded bare copper

#### Insulation:

- Ethylene Propylene Diene Monomer (EPDM)

#### Jacket:

- Chlorinated Polyethylene (CPE)

#### Applications:

- Portable tools and equipment
- Portable appliances
- Small motors and associated machinery

#### Standards:

- UL Flexible Cord UL Subject 62
- MSHA Approved

Part #	AWG	Conductors	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
B11805	18	5	16/30	.030"	.465"	141
B11806	18	6	16/30	.030"	.495"	152
B11807	18	7	16/30	.030"	.520"	172
B11808	18	8	16/30	.030"	.530"	177
B11810	18	10	16/30	.030"	.595"	225
B11812	18	12	16/30	.030"	.600"	240
B11814	18	14	16/30	.030"	.630"	265
B11820	18	20	16/30	.030"	.795"	382
B11824	18	24	16/30	.030"	.850"	451
B11605	16	5	26/30	.030"	.495"	167
B11606	16	6	26/30	.030"	.520"	182
B11607	16	7	26/30	.030"	.540"	194
B11608	16	8	26/30	.030"	.575"	218
B11610	16	10	26/30	.030"	.620"	255
B11612	16	12	26/30	.030"	.660"	296
B11614	16	14	26/30	.030"	.730"	352
B11616	16	16	26/30	.030"	.740"	383
B11620	16	20	26/30	.030"	.810"	457
B11624	16	24	26/30	.030"	.925"	563
B11630	16	30	26/30	.030"	1.010"	767
B11405	14	5	41/30	.045"	.645"	269
B11406	14	6	41/30	.045"	.710"	317
B11407	14	7	41/30	.045"	.755"	347
B11408	14	8	41/30	.045"	.760"	430
B11410	14	10	41/30	.045"	.820"	427
B11412	14	12	41/30	.045"	.855"	493
B11414	14	14	41/30	.045"	1.00"	601
B11416	14	16	41/30	.045"	1.03"	678
B11420	14	20	41/30	.045"	1.12"	806
B11424	14	24	41/30	.045"	1.26"	1003
B11205	12	5	65/30	.045"	.715"	333
B11206	12	6	65/30	.045"	.740"	412
B11207	12	7	65/30	.045"	.790"	465
B11208	12	8	65/30	.045"	.825"	526
B11209	12	9	65/30	.045"	.900"	517
B11210	12	10	65/30	.045"	1.00"	649
B11212	12	12	65/30	.045"	1.01"	669
B11214	12	14	65/30	.045"	1.02"	731
B11216	12	16	65/30	.045"	1.135"	933
B11220	12	20	65/30	.045"	1.17"	989
B11224	12	24	65/30	.045"	1.435"	1273
B11230	12	30	65/30	.045"	1.455"	1492
B11005	10	5	104/30	.045"	.770"	472
B11006	10	6	104/30	.045"	.875"	565
B11007	10	7	104/30	.045"	.900"	552
B11009	10	9	104/30	.045"	1.00"	667
B10805	8	5	65/26	.060"	.830"	560

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

- refer to ICEA Method 1, Table E-1



2014 Industrial Catalog

UL Type SEOOW/CSA STOOW

**Thermoplastic Elastomer Insulation & Jacket** 

PORTABLE CORD

105°C - 600 Volts

# PORTABLE CORD

# Conductor:

- Fully annealed stranded bare copper

#### Insulation:

- Thermoplastic Elastomer

#### Cabling:

- Conductors are assembled round with fillers as needed and a separator is applied over the assembly

#### Jacket:

- Thermoplastic Elastomer, black, white, or yellow
- Temperature range: -50°C to 105°C

#### Applications:

- Indoor applications for:
- Portable power tools
- Industrial and consumer lighting fixtures
- Office equipment power supplies
- Construction site power
- Industrial floor care equipment

#### Standards:

- UL Flexible Cord UL 62
- MSHA Approved

#### Features:

- Lightweight
- Oil-resistant jacket
- Non-marking
- Very good flexibility
- Excellent molding characteristics
- Water-resistant jacket, insulation, and fillers
- UL Listed and c(UL) Listed for Indoor or Outdoor Use (18-10 AWG)

AWG	Conductors	Stranding	Insulation Thickness	Nom O D	Lbs./M'	
71170					2000/111	
18	7			0.355"	60	
-					75	
-	-				90	
					70	
					70	
					70	
					90	
					90	
-					90	
	4				105	
-					105	
					105	
					125	
14			0.045"		125	
					125	
14	3	41/30	0.045"	0.541"	160	
14	3	41/30	0.045"	0.541"	160	
14					160	
14	4				185	
14	4				185	
14					185	
12					160	
					160	
					160	
					205	
12	3		0.045"		205	
12	3	65/30	0.045"	0.614"	205	
12	4	65/30	0.045"	0.665"	250	
12	4		0.045"		250	
12	4	65/30	0.045"		250	
10	2	104/30	0.045"		200	
10		104/30	0.045"	0.629"	200	
10		104/30	0.045"	0.629"	200	
10	3	104/30	0.045"	0.661"	260	
10	3	104/30	0.045"	0.661"	260	
10	3	104/30	0.045"	0.661"	260	
10	4	104/30	0.045"	0.718"	320	
10	4	104/30	0.045"	0.718"	320	
-	4	104/30	0.045"	0.718"	320	
BE11004-08         10         4         104/30         0.045"         0.718"         320           NON-UL TYPE SEOOW – 600 VOLT						
	NON-	UL TYPE SEOC	JW – 600 VOLI			
8	NON-	UL TYPE SEOC 96/28	0.048"	0.783"	402	
-	-			0.783" 0.783"	402 402	
8	4	96/28	0.048"	-	-	
8	4 4	96/28 96/28	0.048" 0.048"	0.783"	402	
8 8 8	4 4 4	96/28 96/28 96/28	0.048" 0.048" 0.048"	0.783" 0.783"	402 402	
	$\begin{array}{c} 14 \\ 14 \\ 14 \\ 14 \\ 14 \\ 14 \\ 12 \\ 12 \\$	UL           18         2           18         3           18         4           16         2           16         2           16         3           16         3           16         3           16         4           16         4           16         4           16         4           16         4           16         4           16         4           16         4           16         4           16         4           16         4           16         4           16         4           14         2           14         2           14         3           14         4           12         2           12         2           12         3           12         3           12         4           12         4           10         2           10         2           10         3           10	UL TYPE SEOOW           18         2         16/30           18         3         16/30           18         4         16/30           16         2         26/30           16         2         26/30           16         2         26/30           16         3         26/30           16         3         26/30           16         3         26/30           16         3         26/30           16         4         26/30           16         4         26/30           16         4         26/30           16         4         26/30           16         4         26/30           16         4         26/30           16         4         26/30           16         4         26/30           14         2         41/30           14         2         41/30           14         3         41/30           14         4         41/30           14         4         41/30           14         4         41/30           12         2	UL TYPE SEOW - 600 VOLT           18         2         16/30         0.030"           18         3         16/30         0.030"           18         4         16/30         0.030"           16         2         26/30         0.030"           16         2         26/30         0.030"           16         2         26/30         0.030"           16         3         26/30         0.030"           16         3         26/30         0.030"           16         3         26/30         0.030"           16         4         26/30         0.030"           16         4         26/30         0.030"           16         4         26/30         0.030"           16         4         26/30         0.030"           16         4         26/30         0.030"           14         2         41/30         0.045"           14         2         41/30         0.045"           14         3         41/30         0.045"           14         4         41/30         0.045"           14         4         41/30         0.045" <td>UL TYPE SEOOW - 600 VOLT           18         2         16/30         <math>0.030^{\circ}</math> <math>0.372^{\circ}</math>           18         3         16/30         <math>0.030^{\circ}</math> <math>0.372^{\circ}</math>           18         4         16/30         <math>0.030^{\circ}</math> <math>0.402^{\circ}</math>           16         2         26/30         <math>0.030^{\circ}</math> <math>0.381^{\circ}</math>           16         2         26/30         <math>0.030^{\circ}</math> <math>0.402^{\circ}</math>           16         3         26/30         <math>0.030^{\circ}</math> <math>0.400^{\circ}</math>           16         3         26/30         <math>0.030^{\circ}</math> <math>0.400^{\circ}</math>           16         4         26/30         <math>0.030^{\circ}</math> <math>0.434^{\circ}</math>           14         2         41/30         <math>0.045^{\circ}</math> <math>0.515^{\circ}</math>           14         2         41/30         <math>0.045^{\circ}</math> <math>0.541^{\circ}</math>           14</td>	UL TYPE SEOOW - 600 VOLT           18         2         16/30 $0.030^{\circ}$ $0.372^{\circ}$ 18         3         16/30 $0.030^{\circ}$ $0.372^{\circ}$ 18         4         16/30 $0.030^{\circ}$ $0.402^{\circ}$ 16         2         26/30 $0.030^{\circ}$ $0.381^{\circ}$ 16         2         26/30 $0.030^{\circ}$ $0.402^{\circ}$ 16         3         26/30 $0.030^{\circ}$ $0.400^{\circ}$ 16         3         26/30 $0.030^{\circ}$ $0.400^{\circ}$ 16         4         26/30 $0.030^{\circ}$ $0.434^{\circ}$ 14         2         41/30 $0.045^{\circ}$ $0.515^{\circ}$ 14         2         41/30 $0.045^{\circ}$ $0.541^{\circ}$ 14	

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Jacket:

# Part # EndingJacket Color-01Black-02White-08Yellow

#### **Color Code Chart:**

No. of Conductors	Color
2	Black, White
3	Black, White, Green
4	Black, White, Red, Green

\* Green conductor for grounding only



# PORTABLE CORD

Super Vu-Tron<sup>®</sup> Entertainment Industry & Stage Lighting Cable 105°C - 600 Volt - UL Type SC



#### Conductor:

 - 8 AWG through 4/0 AWG fully annealed stranded bare copper per ASTM B-172

#### Jacket:

- Super Vu-Tron<sup>®</sup> 105°C, black
- Temperature range: -50°C to 105°C

#### **Applications:**

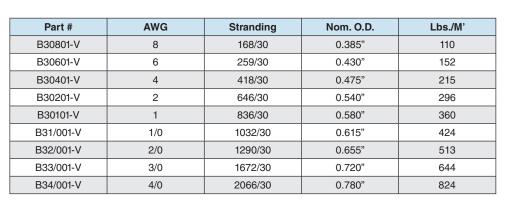
- Portable power systems
  Entertainment industry activities such as theater, television, night clubs,
- motion pictures, mobile communication vans, spotlights and sound systems - Other similar applications that would
- require temporary power

#### Features:

- Water resistant
- Sunlight resistant
- Designed to withstand severe environmental conditions
- Withstands exposure to oil, acids, alkalies, heat, flame, moisture and chemicals
- Meets or exceeds flame test requirements of MSHA, CSA and UL
- Indent print

#### Approvals:

- UL Listed
- CSA Certified



Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Super Vu-Tron<sup>®</sup> is a registered trademark of General Cable.



# Flexible and Portable Cord

**PORTABLE CORD** 

# PORTABLE CORD

Super Vu-Tron<sup>®</sup> Welding Cable 90°C - 600 Volt - RHH/RHW



#### Conductor:

- 6 through 4/0 AWG fully annealed stranded bare copper per ASTM B-172 Class M

#### Jacket:

- Super Vu-Tron®, Orange
- Temperature Range: -50°C to +90°C

#### **Applications:**

- Secondary voltage resistance welding leads
- Power supply applications not exceeding 600 Volt AC
- Sizes 1/0 and larger for permanent wiring in conduit or tray of 600V power supplies, hoists, cranes, or other applications where flexible power leads must be installed in conduit, raceways or trays

#### Features:

- Excellent flexibility to last longer in flex applications
- Abrasion-resistant
- Resists oils and solvents
- Rated -50°C for use in cold environments
- Weather-resistant
- Ozone-resistant
- Safety-colored for high visibility
- Assured longer service life, saving money in replacement costs, maintenance cost and downtime
- MSHA approved for flame resistance
- Sunlight-resistant

#### Standards:

- UL Listed
- CSA Certified
- MSHA Approved
- Meets UL Vertical Flame Test per UL 854

Part #	AWG	Cond. Stand	Nom. O.D.	Lbs./M'
B20601-V	6	660/34	.370"	125
B20401-V	4	1045/34	.415"	191
B20201-V	2	1666/34	.475"	259
B20101-V	1	2090/34	.530"	331
B21/001-V	1/0	2640/34	.575"	401
B22/001-V	2/0	3300/34	.630"	511
B23/001-V	3/0	4180/34	.700"	615
B24/001-V	4/0	5225/34	.800"	844

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Commi Call Super Vu-Tron® is a registered trademark of General Cable.



Super Vu-Tron® Supreme Types SJOOW/SOOW 105°C - 300 & 600 Volt



#### Conductor:

- 18 through 10 AWG fully annealed stranded tinned copper per ASTM B-174

#### Insulation:

- Ethylene Propylene Diene Monomer (EPDM)

#### Jacket:

- Super Vu-Tron® Supreme, yellow
- Temperature Range: -50°C to +105°C UL/CSA
- Voltage Rating: 300 Volts Type SJOOW; 600 Volts Type SOOW

#### Applications:

- Machine tools
- Power tools
- Dockside power applications
- Motor leads
- Portable machinery
- Cranes
- Submersible pumps

#### Features:

- Excellent flexibility in cold temperatures
- Last longer in flex applications
- Integral Flexfill®
- Ozone- and weather-resistant
- UL Listed and CSA Certified for indoor and outdoor use
- Water-resistant
- Safety-colored
- High heat and flame resistance
- Resistant to oils, acids, and chemicals
- Excellent abrasion and cut resistance
- Sequential footage markings

#### Standards:

- UL Flexible Cord UL Subject 62
- CSA Flexible Cord C22.2-49
- MSHA Approved

- OSHA Acceptable

Part #	AWG	Conductors	Stranding.	Nom. Insu. Thick.	Nom. O.D.	Lbs./M'
		Type SJO	OW – 300 Volt	– UL/CSA		
BJ11802-V	18	2	41/34	.030"	.310"	56
BJ11803-V	18	3	41/34	.030"	.320"	65
BJ11804-V	18	4	41/34	.030"	.345"	80
BJ11602-V	16	2	65/34	.030"	.315"	68
BJ11603-V	16	3	65/34	.030"	.335"	80
BJ11604-V	16	4	65/34	.030"	.370"	95
BJ11402-V	14	2	105/34	.030"	.370"	90
BJ11403-V	14	3	105/34	.030"	.375"	110
BJ11404-V	14	4	105/34	.030"	.405"	130
		Type SO	OW – 600 Volt -	- UL/CSA		
B11802-V	18	2	41/34	.030"	.365"	75
B11803-V	18	3	41/34	.030"	.375"	80
B11804-V	18	4	41/34	.030"	.400"	110
B11602-V	16	2	65/34	.030"	.370"	75
B11603-V	16	3	65/34	.030"	.395"	100
B11604-V	16	4	65/34	.030"	.425"	120
B11605-V	16	5	65/34	.030"	.515"	150
B11402-V	14	2	105/34	.045"	.510"	155
B11403-V	14	3	105/34	.045"	.525"	165
B11404-V	14	4	105/34	.045"	.575"	215
B11405-V	14	5	105/34	.045"	.675"	285
B11202-V	12	2	168/34	.045"	.590"	200
B11203-V	12	3	168/34	.045"	.600"	250
B11204-V	12	4	168/34	.045"	.650"	280
B11205-V	12	5	168/34	.045"	.730"	315
B11003-V	10	3	259/34	.045"	.660"	320
B11004-V	10	4	259/34	.045"	.710"	375
B11005-V	10	5	259/34	.045"	.770"	432

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

May not be suitable for all installations per National Electric Code.

Commit Calls Super Vu-Tron® is a registered trademark of General Cable.

Cond. Num.	Color	Cond. Num.	Color
2	Black, White	3	Black, White, Green
4	Black, White, Green, Red	5	Black, White, Green, Red, Orange



# EPDM Jacket 90°C - 600 Volt

PORTABLE CORD Welding Cable



#### Conductor:

- Fully annealed stranded bare copper, class K stranding

#### Jacket:

- Black, premium-grade Ethylene Propylene Diene Monomer (EPDM)

#### Applications:

- Portable tools and equipment
- Portable appliances
- Small motors and associated machinery

Part #	AWG	Stronding	Nom. O.D.	Lbs./M'
		Stranding		
B20601	6	259/30	.380"	135
B20601-03	6	259/30	.380"	135
B20601-04	6	259/30	.380"	135
B20401	4	374/30	.400"	172
B20401-03	4	374/30	.400"	172
B20401-04	4	374/30	.400"	172
B20201	2	625/30	.470"	260
B20201-03	2	625/30	.470"	260
B20201-04	2	625/30	.470"	260
B20101	1	778/30	.500"	317
B20101-03	1	778/30	.500"	317
B20101-04	1	778/30	.500"	317
B21/001	1/0	990/30	.565"	400
B21/001-03	1/0	990/30	.565"	400
B21/001-04	1/0	990/30 .565"		400
B22/001	2/0	1248/30	.620"	487
B22/001-03	2/0	1248/30	.620"	487
B22/001-04	2/0	1248/30	.620"	487
B23/001	3/0	1586/30	.680"	605
B23/001-03	3/0	1586/30	.680"	605
B23/001-04	3/0	1586/30	.680"	605
B24/001	4/0	2054/30	.750"	827
B24/001-03	4/0	2054/30	.750"	827
B24/001-04	4/0	2054/30	.750"	827
B225001	250	2496/30	.830"	976
B235001	350	3432/30	.960"	1338
B250001	500	5054/30	1.20"	1995

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

May not be suitable for all installations per National Electric Code

#### Jacket:

-03	Red
-04	Green



#### **PORTABLE CORD**

Diesel Locomotive Cable (DLO) EP Insulation - XL-CPE Jacket UL RHH/RHW-2 2000V & C(UL) RW90 1000V



#### Conductor:

- Flexible, tinned, annealed, stranded copper

#### Insulation:

- Flame retardant, lead-free Cross-linked Ethylene Propylene (EP)

#### Separator:

- Suitable separator is applied between the conductor and insulation for easy stripping

#### Jacket:

- Black, flame retardant, sunlight, ozone and oil resistant, lead-free Cross-linked Chlorinated Polyethylene (XL-CPE)

#### Applications:

- For use up to 2000 V as power cables in wind turbine generator applications per UL Subject 6140
- Diesel electric locomotives
- Mining and earth-moving equipment
- General purpose use as flexible power leads
- Flexible power leads in cable trays in sizes 1/0 AWG and larger
- Accepted for listing as flame-resistant by MSHA

#### Standards:

- Type RHH/RHW-2 per UL 44, UL File # E90494
- c(UL)US Type RW90 per CSA C.22.2-38, UL File # E90494
- National Electrical Code (NEC)
- ICEA S-95-658/NEMA WC70
- "For CT Use" on 1/0 and larger in accordance with NEC
- Accepted for listing as flame resistant by MSHA
- RoHS Compliant
- Flame test compliances:
- UL 2556 VW-1
- IEEE 1202/CSA FT4 for sizes 1/0 AWG and larger

Dout #	414/0	Otres dia a	Nominal Thickness		Now OD	
Part #	AWG	Stranding	Insulation	Jacket	Nom. O.D.	Lbs./M'
B81401	14	19	.045"	.015"	.20"	30
B81201	12	19	.045"	.015"	.22"	39
B81001	10	27	.045"	.015"	.25"	56
B80801	8	37	.055"	.030"	.33"	87
B80601	6	61	.060"	.030"	.38"	131
B80401	4	105	.060"	.030"	.46"	202
B80201	2	158	.060"	.030"	.51"	285
B80101	1	224	.080"	.045"	.64"	417
B81/001	1/0	280	.080"	.045"	.70"	494
B82/001	2/0	329	.080"	.045"	.73"	587
B83/001	3/0	456	.080"	.045"	.80"	718
B84/001	4/0	551	.080"	.045"	.84"	845
B82626	262	650	.090"	.065"	.94"	1050
B83131	313	777	.090"	.065"	1.00"	1195
B83737	373	925	.090"	.065"	1.06"	1384
B84444	444	1110	.090"	.065"	1.11"	1634
B85353	535	1332	.090"	.065"	1.20"	1925
B86464	646	1609	.090"	.065"	1.29"	2307
B87777	777	1924	.090"	.065"	1.38"	2728
B89292	929	2318	.090"	.065"	1.56"	3570
B81111	1111	2745	.115"	.095"	1.77"	4232

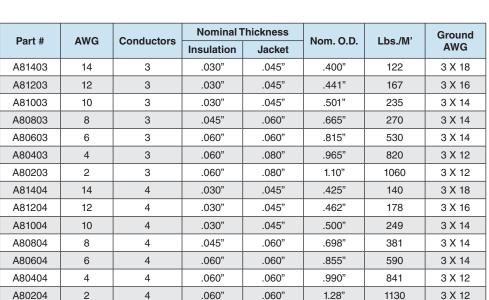
Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



Bus Drop Cable PVC Insulation & Jacket 60°C - 600 Volt

PORTABLE CORD

**Flexible and Portable Cord** 



Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

# Conductor:

- Bare stranded copper

#### Insulation:

- Color coded Polyvinyl Chloride (PVC)

#### Fillers:

- Suitable fillers are used to make the cable round

#### Ground Wires:

- Stranded, placed in spaces between individual conductors

#### Jacket:

- Gray Polyvinyl Chloride (PVC)

#### Applications:

- Connection of stationary equipment
- Polyvinyl Chloride (PVC) jacket offers excellent resistance to grease, lubricants, oils and other fluids which are used with various types of machinery

#### Standards:

- UL Listed
- RoHS compliant

#### **Color Code Chart:**

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	White
3	Red	4	Blue



**PORTABLE CORD** 

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Festoon Cable PVC Insulation & Jacket -40°C - 105°C - 600 Volt



#### Conductor:

- Soft-drawn bare copper

#### Insulation:

- Color-coded, flame- and oil-resistant Polyvinyl Chloride (PVC)

#### Jacket:

- Yellow flame- and oil-resistant Polyvinyl Chloride (PVC)

#### Applications:

- Primarily designed for use with festoon systems for the conveyance of electrical power and control to cranes, hoists, or any other equipment which travels with a lateral traversing motion
- Suitable for indoor or outdoor applications

#### Standards:

- UL listed/CSA certified flat festoon cable
- UL VW-1
- OSHA Acceptable

Part #	AWG	Conductors	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
FC11608	16	8	65/34	.030"	.225" x 1.17"	194
FC11612	16	12	65/34	.030"	.225" x 1.70"	292
FC11404	14	4	105/34	.030"	.240" x .690"	138
FC11408	14	8	105/34	.030"	.240" x 1.29"	254
FC11412	14	12	105/34	.030"	.240" x 1.82"	380
FC11204	12	4	65/30	.030"	.260" x .800"	180
FC11208	12	8	65/30	.030"	.260" x 1.44"	343
FC11004	10	4	105/30	.030"	.290" x .890"	239
FC10804	8	4	168/30	.045"	.375" x 1.225"	401
FC10604	6	4	259/30	.060"	.450" x 1.500"	635

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



### PORTABLE CORD

Reel & Pendant - 18 AWG Small Diameter Neoprene - SDN 90°C - 600 Volt - UL Type TC



### Conductor:

- Bare, soft annealed copper per ASTM B-3 - 18 AWG (16 strand)

#### Insulation:

 Each conductor is concentrically insulated with a 15 mil wall of high dielectric flame retardant polymer with 5 mil wall of clear polymide (nylon) jacket extruded over primary insulation and conforming to UL requirements

#### Cabling:

- The applicable number of conductors are cabled together with fillers as necessary with a suitable layer
- A clear mylar tape is helically applied over the core

#### Jacket:

- Gas/vapor-tight heavy duty, flame and oil resistant neoprene (black) per UL-1277 and ICEA S-73-532 part 4

#### Applications:

- To be installed in trays, raceways, troughs, channels, ducts, conduit, and by direct burial
- Recommended for wet or dry locations and outdoors in cable trays where a sunlight resistant rating is required
- Designed for control, power, lighting, telemetering, signal, relay traffic control, wherever flexible, small diameter cable is required such as cranes, hoists, and some robotics applications
- Cables can be flexed at -40°C

#### Standards:

- OSHA acceptable
- Recognized for use in Class 1 or 2, Division 2 hazardous locations
- UL Type power and control tray cables and Articles 318, 340, 500, and 501 of the NEC
- >Cables pass UL 1277 and IEEE 383 (70,000 BTU) flame tests
- Cables are rated as Type TC, 600 volts, 90°C

Part #	AWG	Conductors	Nom. Jacket Thickness	Nom. O.D.	Lbs./M'
AS11802	18	2	.045"	.275"	46
AS11803	18	3	.045"	.290"	50
AS11804	18	4	.045"	.315"	60
AS11805	18	5	.045"	.335"	71
AS11806	18	6	.045"	.365"	83
AS11807	18	7	.045"	.380"	106
AS11808	18	8	.045"	.420"	109
AS11809	18	9	.045"	.450"	120
AS11810	18	10	.045"	.455"	126
AS11811	18	11	.045"	.470"	135
AS11812	18	12	.045"	.470"	142
AS11813	18	13	.045"	.490"	153
AS11814	18	14	.045"	.490"	165
AS11815	18	15	.045"	.515"	170
AS11816	18	16	.045"	.515"	175
AS11817	18	17	.060"	.590"	230
AS11818	18	18	.060"	.590"	230
AS11819	18	19	.060"	.590"	240
AS11821	18	21	.060"	.605"	270
AS11824	18	24	.060"	.660"	285
AS11825	18	25	.060"	.680"	300
AS11830	18	30	.060"	.700"	335
AS11837	18	37	.060"	.775"	386

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black		



## PORTABLE CORD

PORTABLE CORD

Reel & Pendant - 16 AWG Small Diameter Neoprene - SDN 90°C - 600 Volt - UL Type TC

### Conductor:

- Bare, soft annealed copper per ASTM B-3
- 16 AWG (19 strand)

#### Insulation:

 Each conductor is concentrically insulated with a 15 mil wall of high dielectric flame retardant polymer with 5 mil wall of clear polymide (nylon) jacket extruded over primary insulation and conforming to UL requirements

#### Cabling:

- The applicable number of conductors are cabled together with fillers as necessary with a suitable layer
- A clear mylar tape is helically applied over the core

#### Jacket:

 Gas/vapor-tight heavy duty, flame and oil resistant neoprene (black) per UL-1277 and ICEA S-73-532 part 4

### Applications:

- To be installed in trays, raceways, troughs, channels, ducts, conduit, and by direct burial
- Recommended for wet or dry locations and outdoors in cable trays where a sunlight resistant rating is required
- Designed for control, power, lighting, telemetering, signal, relay traffic control, wherever flexible, small diameter cable is required such as cranes, hoists, and some robotics applications.
- Cables can be flexed at -40°C

#### Standards:

- OSHA acceptable
- Recognized for use in Class 1 or 2, Division 2 hazardous locations
- UL Type power and control tray cables and Articles 318, 340, 500, and 501 of the NEC
- Cables pass UL 1277 and IEEE 383 (70,000 BTU) flame tests
- Cables are rated as Type TC, 600 volts,  $90^{\circ}\mathrm{C}$

Part #	AWG	Conductors	Nom. Jacket Thickness	Nom. O.D.	Lbs./M'
AS11602	16	2	.045"	.295"	51
AS11603	16	3	.045	.305"	62
AS11604	16	4	.045"	.335"	77
AS11605	16	5	.045"	.360"	92
AS11606	16	6	.045"	.390"	107
AS11607	16	7	.045"	.415"	123
AS11608	16	8	.045"	.450"	137
AS11609	16	9	.045"	.480"	165
AS11610	16	10	.045"	.490"	165
AS11611	16	11	.045"	.500"	180
AS11612	16	12	.045"	.500"	188
AS11613	16	13	.060"	.555"	225
AS11614	16	14	.060"	.555"	240
AS11615	16	15	.060"	.590"	255
AS11616	16	16	.060"	.590"	258
AS11617	16	17	.060"	.630"	290
AS11618	16	18	.060"	.630"	290
AS11619	16	19	.060"	.630"	296
AS11621	16	21	.060"	.650"	340
AS11624	16	24	.060"	.715"	367
AS11625	16	25	.060"	.730"	380
AS11630	16	30	.060"	.750"	432
AS11637	16	37	.080"	.870"	556
AS11660	16	60	.080"	1.05"	953

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black	38	Red
39	Blue	40	Orange
41	Yellow	42	Brown
43	Red w/ Black Stripe	44	Blue w/ Black Stripe
45	Orange w/ Black Stripe	46	Yellow w/ Black Stripe
47	Brown w/ Black Stripe	48	Black w/ Red Stripe
49	Blue w/ Red Stripe	50	Orange w/ Red Stripe
51	Yellow w/ Red Stripe	52	Brown w/ Red Stripe
53	Black w/ Blue Stripe	54	Red w/ Blue Stripe
55	Orange w/ Blue Stripe	56	Yellow w/ Blue Stripe
57	Brown w/ Blue Stripe	58	Black w/ OrangeStripe
59	Red w/ Orange Stripe	60	Blue w/ Orange Stripe



Reel & Pendant - 14 AWG

Small Diameter Neoprene - SDN 90°C - 600 Volt - UL Type TC

**PORTABLE CORD** 

### Conductor:

- Bare, soft annealed copper per ASTM B-3
- 14 AWG (19 strand)

#### Insulation:

 Each conductor is concentrically insulated with a 15 mil wall of high dielectric flame retardant polymer with 5 mil wall of clear polymide (nylon) jacket extruded over primary insulation and conforming to UL requirements

#### Cabling:

- The applicable number of conductors are cabled together with fillers as necessary with a suitable layer
- A clear mylar tape is helically applied over the core

#### Jacket:

 Gas/vapor-tight heavy duty, flame and oil resistant neoprene (black) per UL-1277 and ICEA S-73-532 part 4

### Applications:

- To be installed in trays, raceways, troughs, channels, ducts, conduit, and by direct burial
- Recommended for wet or dry locations and outdoors in cable trays where a sunlight resistant rating is required
- Designed for control, power, lighting, telemetering, signal, relay traffic control, wherever flexible, small diameter cable is required such as cranes, hoists, and some robotics applications
- Cables can be flexed at -40°C

#### Standards:

- OSHA acceptable
- Recognized for use in Class 1 or 2, Division 2 hazardous locations
- UL Type power and control tray cables and Articles 318, 340, 500, and 501 of the NEC
- Cables pass UL 1277 and IEEE 383 (70,000 BTU) flame tests
- Cables are rated 600 volts, 90°C dry and 75°C wet. UL file no. E60749

Part #	AWG	Conductors	Nom. Jacket Thickness	Nom. O.D.	Lbs./M'
AS11402	14	2	.045"	.325"	78
AS11403	14	3	.045"	.340"	84
AS11404	14	4	.045"	.375"	104
AS11405	14	5	.045"	.410"	127
AS11406	14	6	.045"	.440"	147
AS11407	14	7	.045"	.475"	165
AS11408	14	8	.045"	.510"	200
AS11409	14	9	.060"	.580"	235
AS11410	14	10	.060"	.590"	246
AS11411	14	11	.060"	.605"	270
AS11412	14	12	.060"	.605"	290
AS11413	14	13	.060"	.635"	305
AS11414	14	14	.060"	.635"	325
AS11415	14	15	.060"	.665"	340
AS11416	14	16	.060"	.665"	354
AS11417	14	17	.060"	.725"	400
AS11418	14	18	.060"	.725"	410
AS11419	14	19	.060"	.725"	430
AS11421	14	21	.060"	.740"	470
AS11424	14	24	.060"	.820"	510
AS11425	14	25	.080"	.875"	520
AS11430	14	30	.080"	.905"	660
AS11437	14	37	.080"	.990"	785

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black		



### PORTABLE CORD

PORTABLE CORD

Reel & Pendant - 12 AWG Small Diameter Neoprene - SDN 90°C - 600 Volt - UL Type TC



### Conductor:

- Bare, soft annealed copper per ASTM B-3
- 12 AWG (19 strand)

#### Insulation:

 Each conductor is concentrically insulated with a 15 mil wall of high dielectric flame retardant polymer with 5 mil wall of clear polymide (nylon) jacket extruded over primary insulation and conforming to UL requirements

#### Cabling:

- The applicable number of conductors are cabled together with fillers as necessary with a suitable layer
- A clear mylar tape is helically applied over the core

#### Jacket:

- Gas/vapor-tight heavy duty, flame and oil resistant neoprene (black) per UL-1277 and ICEA S-73-532 part 4

### Applications:

- To be installed in trays, raceways, troughs, channels, ducts, conduit, and by direct burial
- Recommended for wet or dry locations and outdoors in cable trays where a sunlight resistant rating is required
- Designed for control, power, lighting, telemetering, signal, relay traffic control, wherever flexible, small diameter cable is required such as cranes, hoists, and some robotics applications
- Cables can be flexed at -40°C

#### Standards:

- OSHA acceptable
- Recognized for use in Class 1 or 2, Division 2 hazardous locations
- UL Type power and control tray cables and Articles 318, 340, 500, and 501 of the NEC
- Cables pass UL 1277 and IEEE 383 (70,000 BTU) flame tests
- Cables are rated 600 volts, 90°C dry and 75°C wet. UL file no. E60749

Part #	AWG	Conductors	Jacket	Nom. O.D.	Lbs./M'
AS11202	12	2	.045"	.365"	109
AS11203	12	3	.045"	.385"	115
AS11204	12	4	.045"	.420"	146
AS11205	12	5	.045"	.460"	177
AS11206	12	6	.045"	.500"	209
AS11207	12	7	.045"	.570"	230
AS11208	12	8	.060"	.610"	294
AS11209	12	9	.060"	.650"	325
AS11210	12	10	.060"	.665"	350
AS11211	12	11	.060"	.685"	375
AS11212	12	12	.060"	.685"	395
AS11213	12	13	.060"	.700"	430
AS11214	12	14	.060"	.720"	455
AS11215	12	15	.060"	.755"	480
AS11216	12	16	.060"	.755"	505
AS11217	12	17	.060"	.800"	530
AS11218	12	18	.060"	.800"	555
AS11219	12	19	.080"	.800"	605
AS11221	12	21	.080"	.880"	680
AS11224	12	24	.080"	.970"	773
AS11225	12	25	.080"	.970"	782
AS11230	12	30	.080"	1.03"	1032
AS11237	12	37	.080"	1.15"	1120

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe
37	Black		



## PORTABLE CORD Jumper Cable EPR Insulation 5/15kV - 90°C



### Conductor:

- Rope stranded, annealed bare copper

#### Insulation:

- Ozone resistant Ethylene Propylene Rubber (EPR), red

#### Shield:

- Semi-conducting nylon tape

### Applications:

- Used as flexible power lead for temporary connections from phase to phase in voltages from 5 KV to 15 KV

Part #	AWG	Stranding	Conductor Diameter	Nom. O.D.	Lbs./M'
B40201	2	259	.330"	.775"	420
B41/001	1/0	259	.420"	.865"	580
B42/001	2/0	259	.474"	.920"	685
B44/001	4/0	516	.540"	.985"	950
B435001	350	855	.775"	1.240"	1500
B450001	500	1235	.930"	1.395"	2055



## PORTABLE CORD





### Conductor:

- Fully annealed stranded bare copper

#### Insulation:

- Premium-grade, color-coded Ethylene Propylene Diene Monomer (EPDM)

#### Jacket:

- Heavy duty thermoset Chlorinated Polyethylene (CPE)

### Applications:

- Industrial and light- to medium-duty mining applications
- Heavy-duty service as power supply cable
- Mobile and portable electrical equipment
- Use on three-phase AC systems where grounding is required

#### Standards:

- UL Type G, G-GC
- MSHA Approved

Part #	AWG	Conductors	Stranding	Ground AWG	Insulation Thickness	Nom. O.D.	Lbs./M'		
Туре G									
B60804	8	4	133	4 # 12	.060"	1.045"	635		
B60604	6	4	259	4 # 12	.060"	1.125"	900		
B60404	4	4	259	4 # 10	.060"	1.210"	1280		
B60204	2	4	259	4 # 9	.060"	1.435"	2000		
B60104	1	4	259	4 # 8	.060"	1.650"	2660		
B61/004	1/0	4	259	4 # 7	.060"	1.720"	3140		
B62/004	2/0	4	259	4 # 6	.080"	1.860"	3780		
B63/004	3/0	4	259	4 # 5	.080"	2.075"	4500		
B64/004	4/0	4	259	4 # 4	.080"	2.155"	5520		
B625004	250	4	427	4 # 3	.095"	2.660"	6523		
B635004	350	4	888	4 # 2	.095"	2.980"	8181		
B650004	500	4	1235	4 # 1/0	.095"	3.400"	11043		
200004	000	T	1200		.000	0.100	11040		

Part #	AWG	Conductors	Stranding	Ground AWG	Ground Check AWG	Nom. O.D.	Lbs./M'		
	Type G-GC								
B60803	8	3	49	2 # 10	10	.950"	606		
B60603	6	3	65	2 # 10	10	1.00"	717		
B60403	4	3	103	2 # 8	10	1.12"	981		
B60203	2	3	133	2 # 7	10	1.30"	1387		
B60103	1	3	201	2 # 6	8	1.49"	1778		
B61/003	1/0	3	259	2 # 5	8	1.63"	2159		
B62/003	2/0	3	259	2 # 4	8	1.74"	2578		
B63/003	3/0	3	420	2 # 3	8	1.88"	3131		
B64/003	4/0	3	516	2 # 2	8	2.00"	3730		
B625003	250	3	608	2 # 2	8	2.29"	4543		
B635003	350	3	855	2 # 1/0	8	2.62"	6133		
B650003	500	3	1235	2 # 2/0	8	2.96"	10100		

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart:

Cond. Num.	Color	Cond. Num.	Color
2	Black, White	3	Black, White, Red
4	Black, White, Red, Orange		

#### Also Available:

Cond. Num.	Color	Cond. Num.	Color
2	Black, White	3	Black, White, Red
4	Black, White, Red, Blue		



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## PORTABLE CORD

Type W - Single Conductor EPDM Insulation - CPE Jacket 90°C - 600 to 2000 Volt



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### Conductor:

- Fully annealed stranded bare copper

#### Insulation:

- Premium-grade, color-coded 90°C Ethylene Propylene Diene Monomer (EPDM)

#### Jacket:

- Heavy duty thermoset Chlorinated Polyethylene (CPE)

#### Applications:

- Industrial and light- to medium-duty mining applications
- Heavy-duty service as power supply cable
- Mobile and portable electrical equipment
- AC systems where (grounded and ungrounded)

### Standards:

- MSHA Approved
- UL Type W

Part #	AWG	Stranding	Jacket Thickness	Nom. O.D.	Lbs./M'
B50801	8	133	.060"	.440"	155
B50601	6	259	.060"	.535"	267
B50401	4	259	.060"	.600"	369
B50201	2	259	.060"	.630"	458
B50101	1	259	.080"	.745"	475
B51/001	1/0	259	.080"	.775"	658
B52/001	2/0	259	.080"	.815"	730
B53/001	3/0	259	.080"	.910"	805
B54/001	4/0	259	.080"	.970"	1049
B54/001-F	4/0	2090	.095"	.970"	1049
B525001	250	627	.095"	1.08"	1425
B535001	350	855	.095"	1.20"	1971
B550001	500	1235	.095"	1.34"	2651

Type W - 2 & 3 Conductor EPDM Insulation - CPE Jacket 90°C - 600 to 2000 Volt



### Conductor:

PORTABLE CORD

- Fully annealed stranded bare copper

#### Insulation:

- Premium-grade, color-coded 90°C Ethylene Propylene Diene Monomer (EPDM)

### Jacket:

- Heavy duty thermoset Chlorinated Polyethylene (CPE)

### Applications:

- Industrial and light- to medium-duty mining applications
- Heavy-duty service as power supply cable
- Mobile and portable electrical equipment
- AC systems where (grounded and ungrounded)

#### Standards:

- MSHA Approved
- UL Type W

Part #	AWG	Conductors	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
B50802	8	2	133	.060"	.780"	365
B50602	6	2	259	.060"	.910"	515
B50402	4	2	259	.060"	1.04"	730
B50202	2	2	259	.080"	1.22"	1000
B50102	1	2	259	.080"	1.44"	1490
B51/002	1/0	2	259	.080"	1.52"	1710
B52/002	2/0	2	259	.080"	1.65"	1880
B53/002	3/0	2	259	.080"	1.77"	2420
B54/002	4/0	2	259	.080"	1.92"	2490
B50803	8	3	133	.060"	.925"	525
B50603	6	3	259	.060"	.995"	660
B50403	4	3	259	.060"	1.125"	900
B50203	2	3	259	.080"	1.285"	1300
B50103	1	3	259	.080"	1.49"	1600
B51/003	1/0	3	259	.080"	1.65"	2280
B52/003	2/0	3	259	.080"	1.75"	2680
B53/003	3/0	3	259	.080"	1.89"	3220
B54/003	4/0	3	259	.095"	2.04"	3900
B525003	250	3	627	.095"	2.39"	5070
B535003	350	3	855	.095"	2.68"	6570
B550003	500	3	1235	.095"	3.03"	8700

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
2	Black, White	3	Black, White, Green
4	Black, White, Green, Red	5	Black, White, Green, Red, Orange



## PORTABLE CORD

Type W - 4 & 5 Conductor EPDM Insulation - CPE Jacket 90°C - 600 to 2000 Volt



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### Conductor:

- Fully annealed stranded bare copper

#### Insulation:

 Premium-grade, color-coded 90°C
 Ethylene Propylene Diene Monomer (EPDM)

#### Jacket:

- Heavy duty thermoset Chlorinated Polyethylene (CPE)

#### Applications:

- Industrial and light- to medium-duty mining applications
- Heavy-duty service as power supply cable
- Mobile and portable electrical equipment
- AC systems where (grounded and ungrounded)

### Standards:

- MSHA Approved
- UL Type W

Part #	AWG	Conductors	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
B50804	8	4	133	.060"	.985"	620
B50604	6	4	259	.060"	1.09"	825
B50404	4	4	259	.060"	1.22"	1175
B50204	2	4	259	.080"	1.42"	1650
B50104	1	4	259	.080"	1.68"	2450
B51/004	1/0	4	259	.080"	1.72"	2570
B52/004	2/0	4	259	.080"	1.93"	3450
B53/004	3/0	4	259	.080"	2.055"	4050
B54/004	4/0	4	259	.080"	2.26"	4970
B535004	350	4	855	.095"	2.70"	6969
B50805	8	5	133	.060"	1.05"	675
B50605	6	5	259	.060"	1.20"	956
B50405	4	5	259	.060"	1.36"	1332
B50205	2	5	259	.080"	1.60"	2021
B51/005	1/0	5	259	.080"	2.010"	2904
B52/005	2/0	5	259	.080"	2.075"	3439
B53/005	3/0	5	420	.080"	2.260"	4112
B54/005	4/0	5	516	.080"	2.425"	5035

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

### Color Code Chart:

Cond. Num.	Color	Cond. Num.	Color
2	Black, White	3	Black, White, Green
4	Black, White, Green, Red	5	Black, White, Green, Red, Orange



PORTABLE CORD

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## **FLEXIBLE & PORTABLE CORD**

Type SHD-GC

90°C - 5kV, 8kV, 15kV, & 25kV



#### Ground Wires:

- Stranded, tinned copper

#### Ground Check Conductor:

- 8 AWG 7x19 stranded tinned copper with yellow insulation

#### Applications:

- Used for heavy mobile equipment such as drag lines, shovels, dredges, drills, other off track equipment, and for power feeders in underground mines
- Recommended maximum continuous conductor temperature is 90°C

### Standards:

- MSHA Approved
- ICEA S-68-516
- ICEA S-75-381

Part #	AWG	Conductors	Stranding	Ground AWG	Insulation Thickness	Jacket Thickness	Nom. O.D.	Lbs./M'		
5kV 100% Insulation Level										
B140603	6	3	133	10	.110"	.185"	1.56"	1560		
B140403	4	3	259	8	.110"	.185"	1.68"	1920		
B140203	2	3	259	6	.110"	.205"	1.87"	2500		
B140103	1	3	259	5	.110"	.205"	1.95"	2860		
B141/003	1/0	3	266	4	.110"	.220"	2.08"	3390		
B142/003	2/0	3	342	3	.110"	.220"	2.20"	3830		
B143/003	3/0	3	418	2	.110"	.235"	2.36"	4418		
B144/003	4/0	3	532	1	.110"	.235"	2.50"	5300		
B1425003	250	3	627	1/0	.120"	.250"	2.69"	6450		
B1435003	350	3	888	2/0	.120"	.265"	2.95"	7880		
B1450003	500	3	1221	4/0	.120"	.280"	3.31"	10440		
	^		8kV	100% Insulation I	_evel					
B150403	4	3	133	8	.150"	.205"	1.94"	2240		
B150203	2	3	133	6	.150"	.220"	2.12"	2730		
B151/003	1/0	3	259	4	.150"	.220"	2.32"	3380		
B152/003	2/0	3	259	3	.150"	.235"	2.46"	4030		
B154/003	4/0	3	259	1	.150"	.250"	2.75"	5440		
B1525003	250	3	427	1/0	.150"	.250"	2.89"	6280		
B1535003	350	3	427	2/0	.150"	.280"	3.20"	8300		
B1550003	500	3	427	4/0	.150"	.295"	3.56"	12000		
			15kV	100% Insulation	Level					
B160203	2	3	259	6	.210"	.235"	2.41"	3500		
B160103	1	3	259	5	.210"	.235"	2.52"	4080		
B161/003	1/0	3	266	4	.210"	.250"	2.64"	4610		
B162/003	2/0	3	342	3	.210"	.250"	2.73"	4890		
B163/003	3/0	3	532	1	.210"	.265"	3.05"	6820		
			25kV	100% Insulation	Level					
B171/003	1/0	3	259	4	.295"	.265"	3.05"	5250		
B172/003	2/0	3	259	3	.295"	.280"	3.20"	6000		
B173/003	3/0	3	259	1	.295"	.295"	3.50"	7710		

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



## Conductor:

- Stranded tinned copper

### Insulation:

- Ethylene Propylene Rubber (EPR) for use to 90°C

### Insulation Shielding:

- Semi-conducting layer under tinned copper and color coded nylon braid

### Strand Shield:

- Semi-conducting layer

### Jacket:

- Two-layer reinforced mold-cured Thermosetting Jacket

- Cable Identification via permanent surface marking

## FLEXIBLE & PORTABLE CORD Type MP-GC - Grounded 90°C - 5kV & 8kV

### Conductor:

- Extra flexible, stranded bare annealed copper

#### Grounding Conductor:

- Coated copper. Class B strand. Two conductors, one laid in each of the two remaining interstices

#### Insulation:

- Natural ethylene propylene rubber (EPR)

### **Extruded Stranded Shield:**

- Extruded conducting stress control layer over strand

#### **Extruded Insulation Shield:**

- Extruded conducting layer covered by an overlapped coated annealed copper tape. A color coded (black, white, and red) marker stripe is placed under the copper tape

#### Jacket:

- Yellow Chlorinated Polyethylene (CPE)

### Applications:

- For heavy duty high voltage portable power applications on mobile equipment where delivery of a heavy power load is required, such as shovels, drudges, and underground mine power distribution

#### Standards:

- Conforms to ICEA S-68-516 (NEMA WC8)
- Temperature ratings:
  - Normal Continuous 90°C
  - Emergency 130°C
  - Short Circuit 250°C

#### Features:

- EPR insulation provides excellent heat, moisture, corona, chemical, and radiation resistance, flexibility for easy handling, high dielectric strength, electrical stability under stress, and low dielectric loss
- Coated copper tape provides an effective path to ground for electrical stresses, virtually eliminates the possibility of phase to phase faults and protects against shock hazard.
- Jacket is compounded for mining service, tough and reliable, and highly resistant to tearing, punctures, abrasions, oil, and flame.

Part #	AWG	Stranding	Insulation Thickness	Ground Check AWG	Grd. Cond. Stranding	Jacket Thickness	Nom. O.D.	Lbs./M'			
	5kV 100% Insulation Level (Grounded)										
B180603	6	7	.090"	8	7	.110"	1.21"	940			
B180403	4	7	.090"	7	7	.110"	1.32"	1135			
B180203	2	7	.090"	5	7	.110"	1.45"	1530			
B181/003	1/0	19	.090"	3	7	.110"	1.63"	2150			
B182/003	2/0	19	.090"	2	7	.140"	1.74"	2660			
B184/003	4/0	19	.090"	1/0	19	.140"	2.00"	3870			
B1825003	250	37	.090"	1/0	19	.140"	2.13"	4495			
B1835003	350	37	.090"	2/0	19	.140"	2.35"	5850			
B1850003	500	37	.090"	4/0	19	.170"	2.64"	8075			
			8kV 100%	Insulation Level (	Grounded)						
B190603	6	7	.115"	10	7	.110"	1.33"	1050			
B190403	4	7	.115"	8	7	.110"	1.43"	1265			
B190203	2	7	.115"	6	7	.110"	1.55"	1690			
B190103	1	19	.115"	5	7	.110"	1.65"	2020			
B191/003	1/0	19	.115"	4	7	.110"	1.75"	2330			
B192/003	2/0	19	.115"	3	7	.140"	1.88"	2875			
B193/003	3/0	19	.115"	1	19	.140"	2.00"	3325			
B194/003	4/0	19	.115"	1/0	19	.140"	2.12"	4070			
B1925003	250	37	.115"	1/0	19	.140"	2.25"	4810			
B1935003	350	37	.115"	2/0	19	.140"	2.46"	6430			
B1950003	500	37	.115"	4/0	19	.170"	2.75"	8640			



## FLEXIBLE & PORTABLE CORD

Type MP-GC - Grounded

90°C - 15kV

### Conductor:

- Annealed stranded bare copper

#### Insulation:

- Cross-linked Polyethylene (XLPE)
- Insulation shielded with extruded semi-conducting compound bare copper tape

### Grounding:

- 2 ground wires
- Ground wires are class B strands uninsulated, annealed stranded bare copper
- Ground check has annealed stranded bare copper, separator, and yellow Cross-Linked Polyethylene (XLPE) insulation

### Applications:

 Designed for use in high voltage distribution circuits for permanent (or semi-portable) installations in bore holes, shafts, open pits, strip mines, and tunnels

### Standards:

- MSHA Approved (P-136-MSHA)
- Passes MSHA flame test
- Meets ICEA requirements
- UL listed under file no. E18966
- OSHA acceptable
- Built with flame retardant components
- Excellent heat and moisture resistance
- Resistant to most oils and chemicals

Part #	AWG Size	Conductors	Stranding	Ground AWG	Ground Check AWG	Insulation Thickness	Nom. O.D.	Lbs./M'
B450203	2	3	7	6	8	.175"	1.875"	2117
B450103	1	3	19	5	8	.175"	1.941"	2477
B451/003	1/0	3	19	4	8	.175"	2.025"	2742
B452/003	2/0	3	19	3	8	.175"	2.11"	3130
B454/003	4/0	3	19	1	8	.175"	2.33"	4385
B4525003	250	3	37	1/0	8	.175"	2.450"	5400
B4535003	350	3	37	2/0	8	.175"	2.700"	6730
B4550003	500	3	37	4/0	8	.175"	3.050"	8515

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	White
3	Red		



Classic Foil/Braid Design Full-size Insulated Ground 600 Volt

### Insulation:

- Three Stranded Tinned Copper(TC) Circuit Conductors with XLPE Insulation

#### Ground:

- One Full-sized Insulated Ground (Same AWG as Circuit Conductors)

#### Shield:

- Overall Duofoil<sup>®</sup> Shield + 85% TC Braid plus full size TC Drain Wire

#### Specifications:

- 1000V UL Flexible Motor Supply
- 600V UL 1277 Type TC-ER per 2005 NEC Article 336
- 1000V UL 2277 Type WTTC
- 1000VCSAAWMI/IIA/BFT4
- IEEE1202/383
- ULDirectBurial
- XHHW-2, RHW-2 rated circuit conductors - 14AWG and larger
- 90ºC Wet/Dry
- Suitable for Class I, II & III, Division 2
- hazardous locations - MSHA
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- CE approved
- C(UL) 600V Type CIC TC

Part #	AWG	Stranding	Lbs./M'	Nom. O.D.	Max. Pull Tension (Ibs.)	Min. Bend Radius
29500	16	26x30	185	0.53"	128	4.3"
29501	14	41x30	235	0.60"	212	4.8"
29502	12	65x30	298	0.65"	336	5.2"
29503	10	105x30	396	0.69"	592	5.5"
29504	8	7x19x29	680	0.93"	768	7.5"
29505	6	7x19x27	906	1.02"	1220	8.2"
29506	4	7x19x25	1227	1.16"	1940	9.3"
29507	2	7x19x23	1766	1.31"	3088	10.8"
29507	2	7x19x23	1766	1.31"	3088	10.8"

 $^{\rm ++}Final$  put-up may vary  $\pm$  10% from length shown.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



#### (800) 292-OMNI

### 80

Classic Foil/Braid Design Full-size Insulated Ground 2000 Volt



#### Insulation:

- Three Stranded Tinned Copper (TC) Circuit Conductors with XLPE Insulation

#### Ground:

- One Full-sized Insulated Ground (Same AWG as Circuit Conductors)

#### Shield:

**BELDEN VFD** 

- Overall Duofoil Shield + 85% TC Braid Shield plus full size TC Drain Wire

#### Jacket:

- Black Sunlight- and Oil-Resistant Polyvinyl Chloride (PVC) Jacket

### Specifications:

- 1000V UL Flexible Motor Supply - 2000V UL 1277 Type TC-ER per 2005
- NEC Article 336
- 1000V UL 2277 Type WTTC
- 1000V CSA AWM I/II A/B FT4
- IEEE 1202/383
- UL Direct Burial
- XHHW-2, RHW-2 rated circuit conductors
- 90ºC Wet/Dry
- Suitable for Class I, II & III, Division 2 hazardous locations
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- C(UL) 600V Type CIC TC

Part #	AWG	Stranding	Lbs./M'	Nom. O.D.	Max. Pull Tension (lbs.)	Min. Bend Radius
29536	14	41x30	338	0.68"	212	6.8"
29537	12	65x30	401	0.72"	336	7.3"
29538	10	105x30	481	0.79"	592	7.9"
29539	8	7x19x29	754	0.96"	768	9.6"
29540	6	7x19x27	926	1.07"	1220	10.6"
29541	4	7x19x25	1284	1.21"	1940	12.1"
29542	2	7x19x23	1756	1.36"	3088	13.6"

<sup>+</sup>Final put-up may vary ± 10% from length shown.



# Classic Foil/Braid Design with Signal Pair Full-size Insulated Ground

BELDEN VARIABLE FREQUENCY DRIVE CABLE

600 Volt

	AWG				Nom	Max. Pull	Min. Bend
Part #	Circuit Cond.	Signal Pair	Stranding	Lbs./M'	Nom. O.D.	Tension (lbs.)	Radius
29510	16	16	26x30	324	0.75"	272	7.5"
29511	14	16	26x30	340	0.82"	368	8.2"
29512	12	16	26x30	438	0.90"	527	9.0"
29513	10	16	26x30	563	0.99"	718	9.9"

<sup>++</sup>Final put-up may vary ± 10% from length shown.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

### Insulation:

- Three Stranded Tinned Copper (TC) Circuit Conductors with XLPE Insulation

### Ground:

- One Full-sized Insulated Ground (Same AWG as Circuit Conductors)

#### Shield:

- Overall Duofoil Shield + 85% TC Braid plus full size TC Drain Wire

#### Signal Pair:

- One 16 AWG Shielded Signal Pair for Brake with Drain Wire

### Jacket:

Black Sunlight- and Oil-Resistant Polyvinyl Chloride (PVC) Jacket

#### Specifications:

- 1000V UL Flexible Motor Supply
- 600V UL 1277 Type TC-ER per 2005 NEC Article 336
- 1000V CSA AWM I/II A/B FT4
- IEEE 1202/383
- UL Direct Burial
- XHHW-2, RHW-2 rated circuit
- conductors -14 AWG and larger
- 90ºC Wet/Dry
- Suitable for Class I, II & III, Division 2 hazardous locations
- MSHA
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- CE approved
- C(UL) 600V Type CIC TC





Classic Foil/Braid Design Full-size Insulated Ground Low Smoke Zero Halogen 600 Volt



### Insulation:

- Three Stranded Tinned Copper (TC) Circuit Conductors with XLPE Insulation

#### Ground:

- One Full-sized Insulated Ground (Same AWG as Circuit Conductors)

#### Shield:

**BELDEN VFD** 

- Overall Duofoil Shield + 85% TC Braid plus full size TC Drain Wire

#### Jacket:

- Black Sunlight-Resistant Haloarrest Jacket

### Specifications:

- 1000V UL Flexible Motor Supply
- 600V UL 1277 Type TC-ER per 2005 NEC Article 336
- 1000V UL 2277 Type WTTC
- 1000V CSA AWM I/II A/B FT4
- IEEE 1202/383
- UL Direct Burial
- XHHW-2, RHW-2 rated circuit
- conductors -14 AWG and larger
- 90º C Wet/Dry
- Suitable for Class I, II & III, Division 2 hazardous locations
- MSHA
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- CE approved

Part #	AWG	Stranding	Lbs./M'	Nom. O.D.	Max. Pull Tension (lbs.)	Min. Bend Radius
29500T	16	26x30	191	0.53"	128	4.3"
29501T	14	41x30	243	0.60"	212	4.8"
29502T	12	65x30	306	0.65"	336	5.2"
29503T	10	105x30	405	0.69"	592	5.5"
29504T	8	7x19x29	696	0.93"	768	7.5"
29505T	6	7x19x27	924	1.02"	1220	8.2"
29506T	4	7x19x25	1248	1.16"	1940	9.3"
29507T	2	7x19x23	1789	1.31"	3088	10.8"

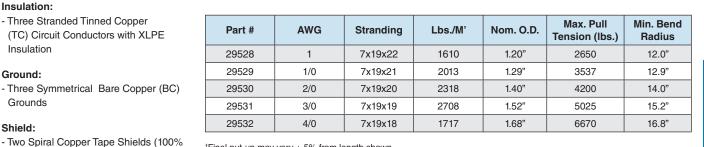
<sup>†</sup>Final put-up may vary ± 10% from length shown.



**Classic Symmetrical Design** Large AWG 600 Volt

- Three Stranded Tinned Copper

(TC) Circuit Conductors with XLPE



<sup>†</sup>Final put-up may vary  $\pm$  5% from length shown.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Insulation:

Insulation

Ground:

Shield:

Jacket:

Grounds

Coverage)

### Specifications:

- 1000V UL Flexible Motor Supply

- Black Sunlight- and Oil-Resistant Polyvinyl Chloride (PVC) Jacket

- 600V UL 1277 Type TC-ER per 2005 NEC Article 336
- 1000V UL 2277 Type WTTC
- 1000V CSA AWM I/II A/B FT4
- IEEE 1202/383
- UL Direct Burial
- XHHW-2 rated circuit conductors
- 90°C Wet/Dry
- Suitable for Class I, II & III, Division 2 hazardous locations
- MSHA
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- CE approved
- C(UL) 600V Type RW90 TC







### (800) 292-OMNI

Classic Symmetrical Design Large AWG

2000 Volt



### Insulation:

- Three Stranded Tinned Copper (TC) Circuit Conductors with XLPE Insulation

#### Ground:

- Three Symmetrical Bare Copper (BC) Grounds

#### Shield:

**BELDEN VFD** 

- Two Spiral Copper Tape Shields (100% Coverage)

#### Jacket:

- Black Sunlight- and Oil-Resistant Polyvinyl Chloride (PVC) Jacket

### Specifications:

- 1000V UL Flexible Motor Supply - 2000V UL 1277 Type TC-ER per 2005
- NEC Article 336
- 1000V UL 2277 Type WTTC
- 1000V CSA AWM I/II A/B FT4
- IEEE 1202/383
- UL Direct Burial
- XHHW-2, RHW-2 rated circuit conductors
- 90ºC Wet/Dry
- Suitable for Class I, II & III, Division 2 hazardous locations
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- CE approved
- 1 AWG through 4/0 are C(UL) 600V Type RW90 TC

Part #	AWG	Stranding	Lbs./M'	Nom. O.D.	Max. Pull Tension (lbs.)	Min. Bend Radius
29543	1	7x19x22	1693	1.36"	2650	13.6"
29544	1/0	7x19x21	2056	1.45"	3537	14.5"
29545	2/0	7x19x20	2389	1.56"	4200	15.6"
29546	3/0	7x19x19	2989	1.75"	5025	17.5"
29547	4/0	7x19x18	3264	1.88"	6670	18.8"
29533*	250 MCM	37X.0822	4077	1.91"	6000	34.4"
29534*	350 MCM	37X.0973	5486	2.13"	8400	38.4"
29535*	500 MCM	37X.1162	7364	2.41"	12000	43.4"

<sup>†</sup>Final put-up may vary  $\pm$  5% from length shown.

\*250 MCM and larger use bare copper conductors



Classic Symmetrical Design Large AWG

Low Smoke Zero Halogen

600 Volt

### Insulation:

- Three Stranded Tinned Copper (TC) Circuit Conductors with XLPE Insulation

### Ground:

- Three Symmetrical Bare Copper (BC) Grounds

#### Shield:

- Two Spiral Copper Tape Shields (100% Coverage)

#### Jacket:

- Black Sunlight-Resistant Haloarrest Jacket

#### Specifications:

- 1000V UL Flexible Motor Supply
- 600V UL 1277 Type TC-ER per 2005 NEC Article 336
- 1000V UL 2277 Type WTTC
- 1000V CSA AWM I/II A/B FT4
- IEEE 1202/383
- UL Direct Burial
- XHHW-2 rated circuit conductors
- 90º C Wet/Dry
- Suitable for Class I, II & III, Division 2 hazardous locations
- MSHA
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- CE approved

Part #	AWG	Stranding	Lbs./M'	Nom. O.D.	Max. Pull Tension (Ibs.)	Min. Bend Radius
29528T	1	7x19x22	1621	1.20"	2650	12.0"
29529T	1/0	7x19x21	2025	1.29"	3537	12.9"
29530T	2/0	7x19x20	2331	1.40"	4200	14.0"
29531T	3/0	7x19x19	2722	1.52"	5025	15.2"
29532T	4/0	7x19x18	1725	1.68"	6670	16.8"

<sup>†</sup>Final put-up may vary  $\pm$  5% from length shown.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



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**BELDEN VFD** 



Symmetrical Design

Basics

600 Volt



### Insulation:

- Three Stranded Bare Copper (BC) Circuit Conductors with XLPE Insulation

#### Ground:

- Three Symmetrical Bare Copper (BC) Grounds

#### Shield:

**BELDEN VFD** 

- Two Spiral Copper Tape Shields (100% Coverage)

#### Jacket:

- Black Sunlight- and Oil-Resistant Polyvinyl Chloride (PVC) Jacket

### Specifications:

- 600V UL 1277 Type TC-ER per 2005 NEC Article 336
- 1000V CSA AWM I/II A/B FT4
- IEEE 1202/383
- UL Direct Burial
- XHHW-2 rated circuit conductors 14 AWG and larger
- 90ºC Wet/Dry
- Suitable for Class I, II & III, Division 2 hazardous locations
- UL 1685 Vertical Tray Flame Test
- RoHS compliant
- CE approved

Part #	AWG	Stranding	Lbs./M'	Nom. O.D.	Max. Pull Tension (Ibs.)	Min. Bend Radius
29520C	16	7x24	122	0.39"	107	4.0"
29521C	14	7x22	142	0.43"	162	4.3"
29522C	12	7x20	182	0.46"	258	4.6"
29523C	10	7x18	274	0.51"	444	5.1"
29524C	8	7x16	425	0.65"	576	6.5"
29525C	6	7x14	553	0.72"	915	7.3"
29526C	4	7x12	602	0.83"	1450	8.3"
29527C	2	7x10	1105	0.99"	2300	10.0"
29528C	1	7x19x22	1314	1.13"	2650	11.5"
29529C	1/0	7x19x21	1590	1.21"	3537	12.3"
29530C	2/0	7x19x20	1885	1.31"	4200	13.3"
29531C	3/0	7x19x19	2301	1.42"	5025	14.3"
29532C	4/0	7x19x18	1420.5	1.54"	6670	15.5"

<sup>†</sup>Final put-up may vary  $\pm$  5% from length shown.



**BELDEN VFD** 

# BELDEN VARIABLE FREQUENCY DRIVE CABLE

Classic Foil/Braid & Symmetrical Interlocked Armor

600 Volt



### Jacket:

- Black Sunlight- and Oil-Resistant Polyvinyl Chloride (PVC) Jacket

#### Armor:

- Interlocked Armor

#### Specifications:

- 600V UL 1277 Type MC per 2005
- NEC Article 330
- CSA FT4
- UL Direct Burial
- XHHW-2, RHW-2 rated circuit conductors (16 to 2 AWG)
- XHHW-2 rated circuit conductors (1 to 4/0 AWG)
- 90ºC Wet/Dry
- Suitable for Class I & II, Division 2 hazardous locations
- IEEE 1202/383
- RoHS compliant
- CE approved

AWG	AL Armor Part #	Steel Armor Part #
16	1229500	1329500
14	1229501	1329501
12	1229502	1329502
10	1229503	1329503
8	1229504	1329504
6	1229505	1329505
4	1229506	1329506
2	1229507	1329507
1	1229528	1329528
1/0	1229529	1329529
2/0	1229530	1329530
3/0	1229531	1329531
4/0	1229532	1329532

 $^{\dagger}\text{Final}$  put-up may vary ± 5% from length shown.



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### Туре Р

### MARINE CABLE

Unarmored Type P Flexible Multi Conductor Power 600 V/1000 V 18 AWG & 16 AWG



### Conductor:

- Soft annealed tinned copper flexible strand

#### Insulation:

- Cross-Linked Polyolefin (XLPO)
- Color Code: Per IEEE 1580 Table 22

#### Cable Core:

- Cabled with fillers when required
- Core binder tape when required

#### Sheath:

- Mud Oil-resistant, Black Cross-Linked Chlorosulfonated Polyethylene

#### **Applications:**

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments

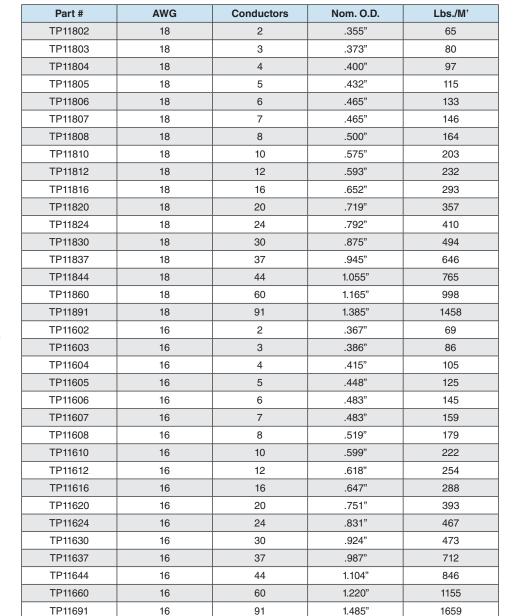
#### Features:

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
  Permitted for Exposed Run "ER" (open
- wiring) use in accordance with NEC for 3 conductors or more - Flexible stranding to facilitate ease of
- a house stranging to lacing to la
- Meets cold impact test at -40°C

#### **Compliances:**

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110 - IEEE 1580 Type P
- IEC 60092-3
- NEK 606 for mud oil resistance
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- Flame Test:
- IEEE 383
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4





### Type P

## MARINE CABLE

Unarmored Type P **Flexible Multi Conductor Power** 600 V/1000 V 14 AWG - 10 AWG

#### Conductor:

- Soft annealed tinned copper flexible strand

#### Insulation:

- Cross-Linked Polyolefin (XLPO)
- Color Code: Per IEEE 1580 Table 22

#### Cable Core:

- Cabled with fillers when required
- Core binder tape when required

#### Sheath:

- Mud Oil-resistant, Black Cross-Linked Chlorosulfonated Polyethylene

#### Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments

#### Features:

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run "ER" (open wiring) use in accordance with NEC for 3 conductors or more
- Flexible stranding to facilitate ease of cable installation and termination
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

#### **Compliances:**

### Industry:

- API-RP14F
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580 Type P
- IEC 60092-3
- NEK 606 for mud oil resistance
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- Flame Test:
- IEEE 383
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

Part #	AWG	Conductors	Nom. O.D.	Lbs./M'
TP11402	14	2	.395"	85
TP11403	14	3	.415"	107
TP11404	14	4	.455"	136
TP11405	14	5	.490"	161
TP11406	14	6	.530"	181
TP11407	14	7	.530"	208
TP11408	14	8	.575"	237
TP11410	14	10	.660"	290
TP11412	14	12	.690"	340
TP11414	14	14	.670"	352
TP11416	14	16	.790"	449
TP11420	14	20	.825"	530
TP11424	14	24	.957"	669
TP11430	14	30	1.040"	814
TP11437	14	37	1.105"	964
TP11444	14	44	1.255"	1163
TP11460	14	60	1.390"	1529
TP11491	14	91	1.740"	2377
TP11202	12	2	.435"	110
TP11203	12	3	.460"	143
TP11204	12	4	.495"	178
TP11205	12	5	.550"	220
TP11206	12	6	.585"	252
TP11207	12	7	.585"	281
TP11208	12	8	.635"	321
TP11210	12	10	.735"	397
TP11212	12	12	.740"	492
TP11216	12	16	.845"	532
TP11220	12	20	.985"	777
TP11224	12	24	1.090"	792
TP11230	12	30	1.150"	986
TP11237	12	37	1.240"	1346
TP11244	12	44	1.395"	1395
TP11260	12	60	1.570"	2155
TP11291	12	91	1.975"	2828
TP11002	10	2	.495"	154
TP11003	10	3	.520"	203
TP11004	10	4	.570"	260
TP11005	10	5	.630"	320
TP11006	10	6	.675"	371
TP11007	10	7	.675"	418
TP11008	10	8	.730"	474
TP11010	10	10	.915"	642
TP11012	10	12	.945"	743

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.





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### Туре Р

## MARINE CABLE Unarmored Type P Flexible Power 2000 V/1000 V





### Conductor:

- Soft annealed tinned copper flexible strand

#### Insulation:

- Cross-Linked Polyolefin (XLPO) Black
- Heavy-Duty (HD) Cross-Linked Polyolefin (XLPO) 4/0 and larger Black

#### Sheath:

- Mud Oil-resistant, Black Cross-Linked Chlorosulfonated Polyethylene

#### Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments

### Features:

MARINE CABLE

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Flexible stranding to facilitate ease of cable installation and termination
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

### Compliances:

- Industry:
- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580 Type P - IEC 60092-3
- NEK 606 for mud oil resistance
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

#### Flame Test:

- IEEE 383
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

Part #	AWG	Conductors	Nom. O.D.	Lbs./M'
TP10801	8	1	.380"	103
TP10601	6	1	.420"	143
TP10501	5	1	.485"	198
TP10401	4	1	.500"	232
TP10301	3	1	.540"	267
TP10201	2	1	.550"	300
TP10101	1	1	.640"	432
TP11/001	1/0	1	.700"	542
TP12/001	2/0	1	.720"	563
TP13/001	3/0	1	.810"	743
TP14/001	4/0	1	1.005"	1012
TP126201	262	1	1.040"	1181
TP131301	313	1	1.110"	1383
TP137301	373	1	1.185"	1856
TP144401	444	1	1.250"	1894
TP153501	535	1	1.345"	2188
TP164601	646	1	1.460"	2624
TP177701	777	1	1.540"	3129
TP1111101	1111	1	1.810"	4270

\* 2 kV/1000 V - 3/0 AWG and smaller constructions with Regular Duty insulation thickness

\* 2 kV/1000 V Heavy-Duty - 4/0 AWG and larger constructions with Heavy-Duty (HD) insulation thickness



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### Type P

## MARINE CABLE Unarmored Type P

**Flexible Multi Conductor Power** 600 V/1000 V 2 & 3 Conductor

### Conductor:

- Soft annealed tinned copper flexible strand

#### Insulation:

- Cross-Linked Polyolefin (XLPO)
- Color Code: Per IEEE 1580 Table 22

#### Cable Core:

- Cabled with fillers when required
- Core binder tape when required

### Sheath:

- Mud Oil-resistant, Black Cross-Linked Chlorosulfonated Polyethylene

#### Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments

#### Features:

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run "ER" (open wiring) use in accordance with NEC for 3 conductors or more
- Flexible stranding to facilitate ease of cable installation and termination
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

### **Compliances:**

### Industry:

- API-RP14F
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110 - IEEE 1580 Type P
- IEC 60092-3
- NEK 606 for mud oil resistance - UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable Flame Test:
- IEEE 383
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

Part #	AWG	Conductors	Nom. O.D.	Lbs./M'
TP10802	8	2	.594"	240
TP10602	6	2	.672"	362
TP10502	5	2	.790"	455
TP10402	4	2	.830"	540
TP10302	3	2	.935"	625
TP10202	2	2	1.005"	675
TP10102	1	2	1.171"	1045
TP11/002	1/0	2	1.269"	1240
TP12/002	2/0	2	1.345"	1545
TP13/002	3/0	2	1.559"	1845
TP14/002	4/0	2	1.685"	2330
TP126202	262	2	1.795"	2640
TP1313202	313	2	1.935"	3156
TP144402	444	2	2.280"	3656
TP153502	535	2	2.580"	4503
TP164602	646	2	2.874"	5673
TP177702	777	2	3.044"	6681
TP10803	8	3	.641"	305
TP10603	6	3	.725"	433
TP10503	5	3	.893"	642
TP10403	4	3	.936"	730
TP10303	3	3	.990"	840
TP10203	2	3	1.066"	935
TP10103	1	3	1.245"	1424
TP11/003	1/0	3	1.351"	1682
TP12/003	2/0	3	1.473"	2027
TP13/003	3/0	3	1.681"	2670
TP14/003	4/0	3	1.825"	3210
TP126203	262	3	1.966"	3660
TP131303	313	3	2.117"	4347
TP137303	373	3	2.257"	5010
TP144403	444	3	2.460"	6025
TP153503	535	3	2.681"	7195
TP164603	646	3	2.914"	8450
TP177703	777	3	3.090"	10325



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### Type P

## MARINE CABLE

Unarmored Type P Flexible Multi Conductor Power 600 V/1000 V 4 & 5 Conductor



### Conductor:

- Soft annealed tinned copper flexible strand

#### Insulation:

- Cross-Linked Polyolefin (XLPO)
- Color Code: Per IEEE 1580 Table 222

#### Cable Core:

- Cabled with fillers when required
- Core binder tape when required

#### Sheath:

- Mud Oil-resistant, Black Cross-Linked Chlorosulfonated Polyethylene

#### **Applications:**

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments

### Features:

MARINE CABLE

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
  Permitted for Exposed Run "ER" (open
- wiring) use in accordance with NEC for 3 conductors or more - Flexible stranding to facilitate ease of
- cable installation and termination
- Meets cold bend test at -55°C
  Meets cold impact test at -40°C

#### **Compliances:**

#### Industry:

- API-RP14F
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580 Type P
- IEC 60092-3
- NEK 606 for mud oil resistance
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- Flame Test:
- IEEE 383
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

Part #	AWG	Conductors	Nom. O.D.	Lbs./M'
TP10804	8	4	.699"	385
TP10604	6	4	.793"	555
TP10504	5	4	.975"	795
TP10404	4	4	1.024"	910
TP10304	3	4	1.084"	1075
TP10204	2	4	1.168"	1205
TP10104	1	4	1.368"	1830
TP11/004	1/0	4	1.486"	2140
TP12/004	2/0	4	1.638"	2565
TP13/004	3/0	4	1.877"	3360
TP14/004	4/0	4	2.005"	4020
TP126204	262	4	2.162"	4720
TP131304	313	4	2.331"	5520
TP137304	373	4	2.487"	6570
TP144404	444	4	2.710"	7975
TP153504	535	4	2.951"	9710
TP164604	646	4	2.914"	8450
TP177704	777	4	3.430"	13324
TP10805	8	5	.766"	475
TP10605	6	5	.912"	770
TP10505	5	5	1.071"	935
TP10405	4	5	1.125"	1095
TP10305	3	5	1.193"	1290
TP10205	2	5	1.287"	1520
TP10105	1	5	1.511"	2350
TP11/005	1/0	5	1.703"	2770
TP12/005	2/0	5	1.806"	3320
TP13/005	3/0	5	2.071"	4375
TP14/005	4/0	5	2.214"	5010
TP126205	262	5	2.404"	5534
TP131305	313	5	2.572"	6456
TP137305	373	5	2.705"	7555
TP144405	444	5	2.890"	8888
TP153505	535	5	3.190"	11247



## MARINE CABLE Armored & Sheathed Type P Flexible Power 2000 V/1000 V

Single Conductor



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### Conductor:

- Soft annealed tinned copper flexible strand

#### Insulation:

- Cross-Linked Polyolefin (XLPO) Black
- Heavy-Duty (HD) Cross-Linked Polyolefin (XLPO) 4/0 and larger black

#### Armor:

- Bronze braid 88% minimum coverage

### Sheath:

- Mud Oil-Resistant, Black Cross-Linked Chlorosulfonated Polyethylene

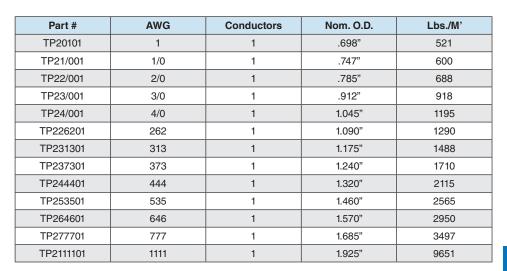
#### Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1, and Zone 1 Hazardous Locations when installed in accordance with API RP14F

#### Standards:

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Flexible stranding to facilitate ease of
- cable installation and termination
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C
- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580 Type P
- IEC 60092-3
- NEK 606 for mud oil resistance
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- Flame Test: IEEE 383, IEEE 1202, IEC 60332-3-22 Cat. A (supersedes IEC

60332-3A), CSA C222.2 No. 0.3 FT4



\* Sizes 3/0 and small constructions with Regular-Duty insulation thickness.

\* Sizes 4/0 and larger constructions with Heavy-Duty (HD) insulation thickness.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



MARINE CABLE

### MARINE CABLE

Armored & Sheathed Type P Flexible Multi Conductor Power 600 V/1000 V 2 & 3 Conductor

### Conductor:

- Soft annealed tinned copper flexible strand

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#### Insulation:

- Cross-Linked Polyolefin (XLPO)
- Color Code: per IEEE 1580 Table 22

#### Cable Core:

- Cabled with fillers when required
- Core binder tape when required

#### Sheath:

- Black Cross-Linked Chlorosulfonated Polyethylene
- Mud Oil-Resistant, Black Cross-Linked Chlorosulfonated Polyethylene

#### Armor:

MARINE CABLE

- Bronze braid 88% minimum coverage

### Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
   Suitable for use in Class I, Division 1, and Zone 1 Hazardous Locations when installed in accordance with API RP14F

#### Standards:

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
   Meets cold bend test at -55°C
- Meets cold impact test at -40°C
- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580 Type P
- IEC 60092-3
- NEK 606 for mud oil resistance
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- Flame Test: IEEE 383, IEEE 1202, IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A), CSA C222.2 No. 0.3 FT4

Part #	AWG	Conductors	Nom. O.D.	Lbs./M'
TP20802	8	2	.774"	457
TP20602	6	2	.892"	650
TP20502	5	2	1.010"	789
TP20402	4	2	1.050"	889
TP20302	3	2	1.155"	1015
TP20202	2	2	1.225"	1091
TP20102	1	2	1.391"	1525
TP21/002	1/0	2	1.489"	1758
TP22/002	2/0	2	1.565"	2093
TP23/002	3/0	2	1.839"	2615
TP24/002	4/0	2	1.945"	3149
TP24/002	4/0	2	1.945"	3149
TP226202	262	2	2.075"	3519
TP231302	313	2	2.215"	4100
TP237302	373	2	2.455"	4635
TP244402	444	2	2.650"	4822
TP253502	535	2	2.950"	5804
TP264602	646	2	3.245"	7114
TP277702	777	2	3.415"	8205
TP20803	8	3	.861"	581
TP20603	6	3	.945"	742
TP20503	5	3	1.128"	1037
TP20403	4	3	1.171"	1142
TP20303	4	3	1.225"	1247
TP20203	2	3	1.301"	1400
TP20103	1	3	1.480"	1961
TP21/003	1/0	3	1.646"	2387
TP22/003	2/0	3	1.768"	2791
TP23/003	3/0	3	2.006"	3611
TP24/003	4/0	3	2.180"	4310
TP226203	262	3	2.321"	4838
TP231303	313	3	2.472"	5610
TP237303	373	3	2.612"	6351
TP244403	444	3	2.815"	7480
TP253503	535	3	3.036"	8773
TP264603	646	3	3.285"	9915
TP277703	777	3	3.460"	11865

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Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



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### MARINE CABLE

Armored & Sheathed Type P Flexible Multi Conductor Power 600 V/1000 V 4 & 5 Conductor

### 4 & 5 Conduct

### Conductor:

- Soft annealed tinned copper flexible strand

#### Insulation:

- Cross-Linked Polyolefin (XLPO)
- Color Code: per IEEE 1580 Table 22

#### Cable Core:

- Cabled with fillers when required
- Core binder tape when required

#### Armor:

- Bronze braid 88% minimum coverage

#### Sheath:

- Black Cross-Linked Chlorosulfonated Polyethylene
- Mud Oil-Resistant, Black Cross-Linked Chlorosulfonated Polyethylene

### Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs - Suitable for use in Class I, Division 1,
- and Zone 1 Hazardous Locations when installed in accordance with API RP14F

#### Standards:

- Meets NEK 606 mud oil resistance requirements including ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C
- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580 Type P
- IEC 60092-3
- NEK 606 for mud oil resistance
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- Flame Test: IEEE 383, IEEE 1202, IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A), CSA C222.2 No. 0.3 FT4

Part #	AWG	Conductors	Nom. O.D.	Lbs./M'
TP20804	8	4	.919"	684
TP20604	6	4	1.013"	890
TP20504	5	4	1.210"	1223
TP20404	4	4	1.259"	1358
TP20304	3	4	1.319"	1547
TP20204	2	4	1.403"	1711
TP20104	1	4	1.663"	2543
TP21/004	1/0	4	1.781"	2910
TP22/004	2/0	4	1.963"	3484
TP23/004	3/0	4	2.202"	4403
TP24/004	4/0	4	2.360"	5220
TP226204	262	4	2.457"	5816
TP231304	313	4	2.626"	6697
TP237304	373	4	2.842"	8040
TP244404	444	4	3.080"	9340
TP253504	535	4	3.320"	11192
TP264604	646	4	3.460"	11874
TP277704	777	4	3.800"	15032
TP20805	8	5	.986"	800
TP20605	6	5	1.132"	1151
TP20505	5	5	1.306"	1402
TP20405	4	5	1.360"	1584
TP20305	3	5	1.428"	1806
TP20205	2	5	1.522"	2074
TP20105	1	5	1.806"	3132
TP21/005	1/0	5	1.998"	3645
TP22/005	2/0	5	2.101"	4244
TP23/005	3/0	5	2.396"	5519
TP24/005	4/0	5	2.539"	6228
TP226205	262	5	2.758"	6415
TP231305	313	5	2.926"	7399
TP237305	373	5	3.085"	8933
TP244405	444	5	3.260"	10347
TP253505	535	5	3.560"	12844





# MEDIUM VOLTAGE POWER CABLE

EPR Insulation - XL-CPE Jacket 2.4kV - MV-90 - Non-Shielded DuraSheath®

### Conductor:

- Annealed bare copper compact Class B strand

#### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black jacket material

#### Jacket:

- Lead-Free Cross-linked Chlorinated Polyethylene (XL-CPE)

#### Applications:

- Suitable for use in industrial and utility applications where ease of installation is a major concern
- Suitable for use in wet or dry locations when installed in accordance with the NEC
- For use in aerial, conduit, open tray, and underground duct installationsFor use in pulp and paper mills, petrochemical plants, other
- environmental protection systems, railroad facilities, and mining facilities

### Standards:

- National Electric Code (NEC)
- ICEA S-96-659/NEMA WC71
- UL 1072
- UL listed as type MV-90 for use in accordance with NEC, UL File #  ${\rm E90501}$
- Sizes 1/0 AWG and larger are listed and marked "FOR CT USE" in accordance with NEC and also meet IEEE 383 (70,000 BTU/hr)
- Meets EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- OSHA acceptable

#### Features:

- Rated at 90°C
- Chemical- and sunlight-resistant
- Simplification of splicing and terminating by elimination of need to handle cable shield
- Meets cold bend tests at -35°C

Part #	AWG	Insulation Thickness	Nominal Cable O.D.	Copper Weight (Lbs./M')	Net Weight (Lbs./M')
MVH10801	8	.125"	.580"	51	196
MVH10601	6	.125"	.620"	81	241
MVH10401	4	.125"	.660"	129	308
MVH10201	2	.125"	.720"	205	408
MVH10101	1	.125"	.760"	259	476
MVH11/001	1/0	.125"	.790"	326	562
MVH12/001	2/0	.125"	.840"	411	666
MVH13/001	3/0	.125"	.920"	518	823
MVH14/001	4/0	.125"	.970"	653	983
MVH125001	250	.140"	1.08"	772	1183
MVH135001	350	.140"	1.17"	1080	1545
MVH150001	500	.140"	1.30"	1544	2077
MVH175001	750	.155"	1.54"	2316	3040
MVH1100001	1000	.155"	1.70"	3086	3913

\*Splices and terminations are available for all medium voltage products.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

General Cable. DuraSheath® is a registered trademark of General Cable.



**MEDIUM VOLTAGE** 

## MEDIUM VOLTAGE POWER CABLE EPR Insulation - PVC Jacket 2.4kV - MV-90 - Non-Shielded



### Conductor:

- Compressed class B stranded copper

#### **Conductor Shield:**

- Semi-conducting thermosetting polymeric layerover conductor

#### Insulation:

- Ethylene Propylene Rubber (EPR)

#### Jacket:

- Moisture resistant, flame retardant Polyvinyl Chloride (PVC)

#### **Applications:**

- Suitable for use in wet or dry locations at maximum operating temperature of 90°C for normal operation; 130°C for emergency overload conditions; and 250°C for short circuit conditions
- May be installed in conduit, duct or aerially when properly supported by a messenger

### Standards:

- UL-1072
- ICEA S-96-659/NEMA WC 71
- ASTM B3 and B8
- RoHS Compliant

Part #	AWG	Stranding	Conductor Diameter	Min. Avg. Insul. Wall	Nom. O.D.	Lbs/M
MVE10601	6	7	.181"	.125"	.605"	231
MVE10401	4	7	.228"	.125"	.650"	296
MVE10201	2	7	.287"	.125"	.710"	396
MVE10101	1	19	.327"	.125"	.750"	465
MVE11/001	1/0	19	.367"	.125"	.790"	548
MVE12/001	2/0	19	.412"	.125"	.835"	646
MVE14/001	4/0	19	.520"	.125"	.975"	959
MVE125001	250	37	.566"	.140"	1.08"	1153
MVE135001	350	37	.670"	.140"	1.18"	1512
MVE150001	500	37	.800"	.140"	1.32"	2103
MVE175001	750	61	.983"	.155"	1.55"	2971

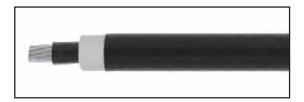
\*Splices and terminations are available for all medium voltage products.



## 2.4 kV

## MEDIUM VOLTAGE POWER CABLE

XLPE Insulation 2.4kV - MV-90-Dry Use - Nonshielded Single Conductor



### Conductor:

- Soft annealed uncoated copper
- Class B stranding

### Insulation:

- Black thermoset Cross-linked Polyethylene (XLPE)

#### **Conductor Shield**

- Semi-conducting Cross-linked Polyethylene (XLPE)

#### **Applications:**

- Per NEC, use is limited to 2400 volts
- For use in industrial and utility applications, for dry locations, in accordance with NEC

#### Standards:

- ICEA S-96-659
- NEMA WC-71
- UL 1072

Part #	AWG	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
MVX10201	2	7	.110"	.55"	281
MVX14/001	4/0	19	.110"	.78"	774

\*Splices and terminations are available for all medium voltage products.



### 5 kV / 8 kV

MEDIUM VOLTAGE POWER CABLE Non-Shielded - XLPE Insulation FAA L824 Type C - Airport Lighting Cable 5kV - Single Conductor



### Conductor:

- Annealed (soft) copper
- Class B stranding

#### Insulation:

- Cross-Linked Polyethylene (XLPE)
- Extruded concentrically over the
- conductor to the wall thickness

Conductor Shield:

- Extruded semi-conducting layer

#### **Applications:**

- Suitable for use in dry locations at continuous conductor temperature of 90°C
- May be installed in conduit, duct, or properly supported aerial installations
- Suitable for airport lighting cable applications
- Rated for Wet Location and Direct Burial Rated
- Suitable for all applications in which ICEA allows use of non-shielded cable at voltages of 2001 volts and above

#### Standards:

- FAA Specification L-824, Type C
- ICEA S-66-524
- AC150/5345-7D

Part #	AWG	Stranding	Insulation Thickness	Nom. O.D.	Lbs./M'
MVX10801	8	7	.110"	.375"	94
MVX10601	6	7	.110"	.415"	130
MVX10401	4	7	.110"	.460"	189

\*Used as Airport Lighting Cable under FAA Regulation L824-C.

\*\*Splices and terminations are available for all medium voltage products.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



**MEDIUM VOLTAGE** 

## MEDIUM VOLTAGE POWER CABLE

EPR Insulation - PVC Jacket MV-105 - 133% (5kV) or 100% (8kV) Shielded - Single Conductor - 5kV & 8kV

### Conductor:

- Annealed bare copper
- Compact, Class B stranding

#### Extruded Strand Shield (ESS):

- Extruded thermoset semi-conducting stress control layer over conductor

### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black conducting shield layers

### Extruded Insulation Shield (EIS):

- Thermoset semi-conducting polymeric layer free stripping from insulation

#### Metallic Shield:

- 5 mils annealed copper tape with an overlap of 25%

#### Jacket:

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC)



#### Applications:

- Suitable for use in wet or dry locations when installed in accordance with the NEC
- For use in aerial, direct burial, conduit, open tray, and underground duct installations
- For use in direct burial if installed in a system with a ground conductor that is in close proximity, and conforms with NEC 250.4(A)(5)

#### Standards:

- National Electric Code (NEC)
- UL 1072
- UL listed as Type MV-105 for use in accordance with NEC
- UL 1685
- IEEE 1202
- OSHA Acceptable

#### Features:

- Temperature Ratings:
- Normal: 105°C
- Emergency: 140°C
- Short Circuit: 250°C
- UL Listed as Type MV-105 for use in accordance with the NEC
- Sizes 1/0 AWG and larger are listed and marked "Sunlight Resistant For CT Use" in accordance with the NEC

Part #	AWG	Stranding	Nominal Thickness		Diameter Over	Nom. O.D.	Lbs./M'
			Insulation	Jacket	Ins.	Nom. O.D.	LUS./W
MVE20601	6	7	.115"	.060"	.440"	.650"	295
MVE20401	4	7	.115"	.060"	.480"	.700"	365
MVE20201	2	7	.115"	.060"	.540"	.750"	469
MVE20101	1	19	.115"	.060"	.580"	.790"	541
MVE21/001	1/0	19	.115"	.060"	.610"	.820"	623
MVE22/001	2/0	19	.115"	.060"	.660"	.870"	737
MVE23/001	3/0	19	.115"	.080"	.710"	.960"	907
MVE24/001	4/0	19	.115"	.080"	.760"	1.01"	1072
MVE225001	250	37	.115"	.080"	.810"	1.07"	1228
MVE235001	350	37	.115"	.080"	.910"	1.17"	1595
MVE250001	500	37	.115"	.080"	1.03"	1.32"	2158
MVE275001	750	61	.115"	.080"	1.22"	1.51"	3062
MVE2100001	1000	61	.115"	.080"	1.37"	1.67"	3940

\*Splices and terminations are available for all medium voltage products.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.



**MEDIUM VOLTAGE** 

### 5 kV / 8 kV

## MEDIUM VOLTAGE POWER CABLE

EPR Insulation - CPE Jacket MV-105 - 133% (5kV) or 100% (8kV) Shielded - Single Conductor - 5kV & 8kV UniShield®

### Conductor:

- Annealed bare copper
- Compact, Class B stranding

#### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black conducting shield layer

#### Extruded Strand Shield (ESS):

- Extruded thermoset semiconducting stress control layer over conductor

#### Composite Insulation Shield and Jacket:

- Six corrugated copper drain wires embedded in an extruded black conducting flame-retardant Chlorinated Polyethylene (CPE) composite insulation shield and jacket

#### **Applications:**

- Suitable for use in wet or dry locations when installed in accordance with NEC
- Suitable for use in aerial, direct burial, conduit, open tray, and underground duct installations
- For use in broad range of commercial, industrial, and utility projects

#### Standards:

- National Electric Code (NEC)
- UL 1072
- UL listed as Type MV-105 for use in accordance with NEC
- UL 1685
- IEEE 1202
- OSHA Acceptable

#### Features:

- Flexibility for easy handling
- Meets Cold Bend Test at -55°C
- Reduced conductor size and shield system provides the smallest premium medium-voltage shielded, jacketed power cable with full insulation
- Smaller outside dimensions may reduce the size of duct needed or increase the ampacity per duct
- All features attribute to the fastest and easiest to install
- UL Listed as Type MV-105 for use in accordance with the NEC
- Sizes 1/0 AWG and larger are listed and marked "For CT Use" in accordance with the NEC, and also meet IEEE 383 (70,000 BTU/hr)
- Temperature Rating: 105°C

Part #	AWG	Stranding	Nominal Thickness		Diameter Over	Now OD	Lbs./M'
			Insulation	Jacket	Ins.	Nom. O.D.	LDS./IVI
MVU10201	2	7	.115"	.075"	.542"	.712"	411
MVU11/001	1/0	19	.115"	.075"	.615"	.787"	563
MVU12/001	2/0	19	.115"	.080"	.658"	.837"	675
MVU14/001	4/0	19	.115"	.080"	.759"	.941"	961
MVU125001	250	37	.115"	.080"	.813"	1.00"	1122
MVU135001	350	37	.115"	.080"	.909"	1.11"	1476
MVU150001	500	37	.115"	.085"	1.03"	1.24"	2015
MVU175001	750	61	.115"	.085"	1.22"	1.48"	2893
MVU1100001	1000	61	.115"	.100"	1.38"	1.61"	3786

\*Splices and terminations are available for all medium voltage products.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Commit Cally UniShield® is a registered trademark of General Cable.



## MEDIUM VOLTAGE POWER CABLE

EPR Insulation - PVC Jacket MV-105 - 133% Insulation Level 5kV/8kV - 3 Conductor



### Conductor:

- Annealed bare copper
- Compact, Class stranding

### Extruded Strand Shield (ESS):

- Extruded thermoset semi-conducting stress-control layer over conductor

#### Grounding Conductor(s):

- 1-3 bare or covered grounding conductors may be supplied in the twisted assembly upon request

### Extruded Insulation Shield (EIS):

- Thermoset semi-conducting polymeric layer free stripping from insulation

#### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black conducting shield layers

#### Metallic Shield:

- 5 mils annealed copper tape with an overlap of 25%

#### Jacket:

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC)

#### Color Code:

- Marker tape under shield
- Black, red, blue

#### Applications:

- Suitable for use in a broad range of commercial, industrial, and utility applications, where reliability is the major concern, space is limited, and ease of installation is critical
- In wet or dry locations when installed in accordance with the NEC
- In aerial, direct burial, conduit, open tray, and undergound duct installations

### Standards:

- National Electric Code (NEC)
- UL 1072
- UL listed as Type MV-105 for use in accordance with NEC
- UL 1685
- IEEE 1202
- OSHA Acceptable

#### Features:

- UL Listed as Type MV-105 for use in accordance with the NEC
- UL labeled and marked "Sunlight Resistant For CT Use"
- Compact twisted assembly offers ease of installation and lower voltage drop characteristics as compared to multiple single conductor systems Temperature Ratings:
- Normal: 105°C
- Emergency: 140°C
- Short Circuit: 250°C

Part #	AWG	Stranding	Nominal Thickness		Ground. Cond.	Nom. O.D.	Lbs./M'
			Insulation	Jacket	Size	Nom. O.D.	LDS./W
MVE20603	6	7	.115"	.080"	6	1.29"	939
MVE20403	4	7	.115"	.080"	6	1.39"	1158
MVE20203	2	7	.115"	.080"	6	1.51"	1511
MVE21/003	1/0	19	.115"	.110"	4	1.67"	2030
MVE22/003	2/0	19	.115"	.110"	4	1.82"	2449
MVE24/003	4/0	19	.115"	.110"	3	2.07"	3438
MVE225003	250	37	.115"	.110"	3	2.15"	3893
MVE235003	350	37	.115"	.110"	2	2.36"	5009
MVE250003	500	37	.115"	.110"	1	2.64"	6763
MVE275003	750	61	.115"	.140"	1/0	3.14"	9833

\*Splices and terminations are available for all medium voltage products.



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### 15 kV

## MEDIUM VOLTAGE POWER CABLE

EPR Insulation - PVC Jacket MV - 105 - 133% Insulation Level 15kV - Single Conductor

### Conductor:

- Annealed bare copper
- Compact, Class B stranding

#### Extruded Strand Shield (ESS):

- Extruded thermoset semi-conducting stress control layer over conductor

#### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black conducting shield layers

#### Extruded Insulation Shield (EIS):

- Thermoset semi-conducting polymeric layer free stripping from insulation

#### Metallic Shield:

- 5 mils annealed copper tape with an overlap of 25%

#### Jacket:

- Flame retardant, moisture, and sunlight resistant Polyvinyl Chloride (PVC)



#### **Applications:**

- Suitable for use in wet or dry locations when installed in accordance with the NEC
- For use in aerial, direct burial, conduit, open tray, and underground duct installations
- For use in direct burial if installed in a system with a ground conductor that is in close proximity, and conforms with NEC 250.4(A)(5)

#### Standards:

- National Electric Code (NEC)
  - UL 1072
  - UL listed as Type MV-105 for use in accordance with NEC
  - UL 1685
  - IEEE 1202
  - OSHA Acceptable

#### Features:

- UL Listed as Type MV-105 for use in accordance with the NEC
- Sizes 1/0 AWG and larger are also listed and marked "Sunlight Resistant For CT Use" in accordance with the NEC, and also meet IEEE 383 (70,000 BTU/hr)
- **Temperature Ratings:**
- Normal: 105°C
- Emergency: 140°C
- Short Circuit: 250°C

Part #	AWG	Stronding	Nominal	Thickness	Diameter Over Ins.		Lbs./M'
Part #	AWG	Stranding	Insulation	Jacket	(inches)	Nom. O.D. (in.)	LDS./W
MVE30201	2	7	.220"	.080"	.750"	1.01"	685
MVE30101	1	19	.220	.080"	.790"	1.04"	765
MVE31/001	1/0	19	.220"	.080"	.830"	1.08"	861
MVE32/001	2/0	19	.220"	.080"	.870"	1.13"	979
MVE33/001	3/0	19	.220"	.080"	.920"	1.18"	1124
MVE34/001	4/0	19	.220"	.080"	.970"	1.23"	1299
MVE325001	250	37	.220"	.080"	1.02"	1.29"	1464
MVE335001	350	37	.220"	.080"	1.12"	1.41"	1875
MVE350001	500	37	.220"	.080"	1.25"	1.53"	2440
MVE375001	750	61	.220"	.080"	1.43"	1.72"	3378
MVE3100001	1000	61	.220"	.110"	1.59"	1.97"	4433

\*Splices and terminations are available for all medium voltage products.



## MEDIUM VOLTAGE POWER CABLE

XLPE Insulation - PVC Jacket MV-90 - 133% Insulation Level 15kV - Single Conductor



### Conductor:

- Bare annealed copper
- Class B stranding

#### Insulation:

- Cross-linked Polyethylene (XLPE) with a semi-conducting insulation shield

#### Shield:

- Soft annealed uncoated copper tape with 25% overlap

#### Jacket:

- Black sunlight resistant, flame retardant, Polyvinyl Chloride (PVC)

#### **Applications:**

- For use in main feeder, distribution, and branch circuits in industrial, commercial, and electric utility installations
- Suitable for installation in conduit, trough, ducts, aerial and direct burial applications

#### Standards:

- Conforms to ICEA S-93-639/NEMA
- WC74
- UL 1072

#### Features:

- UL Listed as Type MV-90 per UL Standard 1072
- Sizes 1/0 AWG and larger are also listed and marked "For CT Use" in accordance with the NEC
- Temperature Ratings:
- Normal: 90°C

**MEDIUM VOLTAGE** 

- Emergency: 130°C
- Short Circuit: 250°C

Devit #	AN/C	Ctronding	Nominal 1	<b>Thickness</b>	Diameter		Lbs./M'	
Part #	AWG	Stranding	Insulation	Jacket	Over Ins.	Nom. O.D.	LDS./IVI	
MVX30201	2	7	.220"	.080"	.780"	1.08"	621	
MVX30101	1	19	.220"	.080"	.820"	1.12"	695	
MVX31/001	1/0	19	.220"	.080"	.860"	1.16"	785	
MVX32/001	2/0	19	.220"	.080"	.910"	1.20"	896	
MVX33/001	3/0	19	.220"	.080"	.960"	1.25"	1032	
MVX34/001	4/0	19	.220"	.080"	1.01"	1.31"	1200	
MVX325001	250	37	.220"	.080"	1.07"	1.39"	1385	
MVX335001	350	37	.220"	.080"	1.17"	1.49"	1756	
MVX350001	500	37	.220"	.080"	1.30"	1.62"	2297	
MVX375001	750	61	.220"	.110"	1.49"	1.88"	3306	
MVX3100001	1000	61	.220"	.110"	1.64"	2.06"	4230	

\*Splices and terminations are available for all medium voltage products.



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### 15 kV

MEDIUM VOLTAGE POWER CABLE **EPR Insulation - CPE Jacket** MV-105 - 100% or 133% Insulation Level 15kV - Single Co nductor **UniShield®** 

#### Conductor:

- Annealed bare copper
- Compact, Class B stranding

#### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black conducting shield layers

#### **Extruded Strand Shield (ESS):**

- Extruded thermoset semi-conducting stress control layer over conductor

## **Composite Insulation Shield**

#### and Jacket:

- Six corrugated copper drain wires embedded in a extruded black conducting flame-retardant Chlorinated Polyethylene (CPE) composite insulation shield and jacket

#### Applications:

- Suitable for use in wet or dry locations when installed in accordance with the NFC
- For use in aerial, direct burial, conduit, open tray, and underground duct installations
- For use in direct burial if installed in a system with a ground conductor that is in close proximity, and conforms with NEC 250.4(A)(5)



#### Standards:

- National Electric Code (NEC)
- UL 1072
- UL listed as Type MV-105 for use in accordance with NEC
- UL 1685
- IEEE 1202
- OSHA Acceptable

#### Features:

- Flexibility for easy handling
- Meets Cold Bend Test at -55°C
- Reduced conductor size and shield system provides the smallest premium medium-voltage shielded, jacketed power cable with full insulation
- Smaller outside dimensions may reduce the size of duct needed or increase the ampacity per duct
- UL Listed as Type MV-105 for use in accordance with the NEC
- Sizes 1/0 AWG and larger are also listed and marked "For CT Use" in accordance with the NEC, and also meet IEEE 383 (70,000 BTU/hr **Temperature Ratings:**
- Normal: 105°C
- Emergency: 140°C
- Short Circuit: 250°C

Part #	AWG	Stronding	Nominal	Thickness	Diameter Over Ins.	Nom. O.D.	Lbs./M'
Fait #	AWG	Stranding	Insulation	Jacket	Diameter Over ins.	NOIII. O.D.	LDS./W
			15kV – 100% l	nsulation Level			
MVU40201	2	7	.175"	.080"	.664"	.841"	501
MVU41/001	1/0	19	.175"	.080"	.737"	.916"	661
MVU42/001	2/0	19	.175"	.080"	.780"	.960"	769
MVU44/001	4/0	19	.175"	.080"	.880"	1.07"	1079
MVU425001	250	37	.175"	.080"	.935"	1.13"	1232
MVU435001	350	37	.175"	.085"	1.03"	1.23"	1613
MVU450001	500	37	.175"	.085"	1.16"	1.36"	2149
MVU475001	750	61	.175"	.100"	1.34"	1.56"	3064
MVU4100001	1000	61	.175"	.100"	1.50"	1.72"	3936
			15kV – 133% I	nsulation Level			
MVU20201	2	7	.220"	.080"	.755"	.937"	574
MVU21/001	1/0	19	.220"	.080"	.828"	1.02"	753
MVU22/001	2/0	19	.220"	.080"	.871"	1.07"	867
MVU24/001	4/0	19	.220"	.080"	.971"	1.17"	1171
MVU225001	250	37	.220"	.085"	1.03"	1.24"	1349
MVU235001	350	37	.220"	.085"	1.12"	1.33"	1720
MVU250001	500	37	.220"	.085"	1.25"	1.46"	2267
MVU275001	750	61	.220"	.100"	1.43"	1.67"	3216
MVU2100001	1000	61	.220"	.115"	1.59"	1.86"	4164

\*Splices and terminations are available for all medium voltage products.

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

Change Chill UniShield® is a registered trademark of General Cable.



## 15 kV

## MEDIUM VOLTAGE POWER CABLE

EPR Insulation - LDPE Jacket MV-90 - 133% Insulation Level 15kV - Single Conductor

## Conductor:

- Soft-annealed copper

- Class B stranding

#### **Conductor Shield:**

- Semi-conducting Cross-linked Polyethylene (XLPE)

#### Insulation:

- Thermoset Ethylene Propylene Rubber (EPR)

#### Insulation Shield:

- Semi-conducting Cross-linked Polyethylene (XLPE)

#### **Neutral Conductor:**

- Copper concentric neutral wires

#### **Concentric Neutral:**

- Soft-annealed solid copper wires

#### Jacket:

- Black, sunlight resistant, low density Polyethylene (LDPE) encapsulating the neutral wires

- Outer jacket has three extruded red stripes for identification purposes

#### Applications:

- Underground primary cable for residential and commercial distribution circuits
- Suitable for use in wet or dry locations, installed in underground ducts or direct buried
- Wet and dry locations
- Normal: 105°C
- Emergency: 140°C
- Short Circuit: 250°C

#### Standards:

- AEIC CS8
- ICEA S-94-649; T-31-610; T-34-664

Part #	AWG	Ctronding		Nom. O.D.		Lbs./M'			
Part #	AWG	Stranding	Insulation	Jacket	Overall	LDS./IVI			
1/3 NEUTRAL									
MU325001C	250	37	1.06"	.050"	1.39"	1623			
MU335001C	350	37	1.16"	.050"	1.52"	2132			
MU350001C	500	37	1.29"	.080"	1.76"	2976			
			FULL NEUTRAL						
MU30201C	2	7	.77"	.050"	1.08"	789			
MU31/001C	1/0	19	.85"	.050"	1.20"	1095			
MU32/001C	2/0	19	.90"	.050"	1.28"	1327			
MU34/001C	4/0	19	1.01"	.050"	1.41"	1874			

\*Splices and terminations are available for all medium voltage products.



## MEDIUM VOLTAGE POWER CABLE TR-XLPE Insulation - LDPE Jacket 15kV - URD



#### Conductor:

- Compressed Class B, 7 strand aluminum or copper
- A for Aluminum
- C for Copper

#### Conductor Shield:

- Extruded semiconducting thermoset polymer

#### Insulation:

- Extruded Tree-retardant Cross-linked Polyethylene (XLPE)

#### Insulation Shield:

- Extruded semiconducting thermoset polymer

#### **Concentric Neutral:**

- Bare copper concentric neutral wires with water-swellable powder and ripcords

#### Outer Jacket:

- Black linear low-density Polyethylene (LDPE) with three longitudinal red stripes

#### Standards:

- ICEA S-94-649
- AEIC CS8
- PECO spec 125-P-18

Part #	AWG	Stranding	Insulation Thickness	Neutral AWG	Diameter Over Insulation	Nom. O.D.	Lbs./M'
MUP10201-A	2	7	.175"	10X14	.752"	.990"	482
MUP10201-C	2	7	.175"	16X14	.700"	1.06"	680

\*Splices and terminations are available for all medium voltage products.



## MEDIUM VOLTAGE POWER CABLE TR-XLPE Insulation - LDPE Jacket Full Neutral - Aluminum Conductor

15kV - URD - 133% Insulation Level



#### Conductor:

- Aluminum alloy Class B concentric compressed strand

#### **TR-XLP Insulation:**

- Natural unfilled high dielectric strength Tree-retardant Cross-linked Polyethylene (TR-XLPE) insulation
- 133% insulation level

#### Insulation Shield:

- Semiconducting extruded thermosetting insulation shield with controlled adhesion to the insulation

#### Neutral Conductor:

- Solid, bare annealed uncoated copper wires helically applied and uniformly spaced.

#### Jacket:

- Black sunlight linear low density Polyethylene (LDPE) encapsulating the neutral wires
- The outer jacket shall have three extruded red stripes (120 degrees apart) for identification

#### Applications:

- For use in underground residential distribution, as primary power cable in single-phase systems direct buried or underground in duct

#### Standards:

#### - ICEA S-94-649

- AEIC CS8

#### Features:

- Simultaneous extrusion of strand shield, insulation and insulation shield combines to form a virtually perfect cable core eliminating unequal electrical stress
- XLPE insulation offers low moisture absorption, good chemical resistance, low dielectric loss, and high dielectric strength
- Also offers tree retardant characteristics
- Temperature Ratings:
- Normal: 90ºC
- Emergency:130ºC
- Short Circuit: 250ºC

Part #	AWG	Stranding	Insulation Thickness	Neutral AWG	Diameter Over Insulation	Nom. O.D.	Lbs./M'
MVX30201A	2	7	.220"	10×14	.770"	1.11"	455
MVX30101A	1	19	.220"	13×14	.810"	1.16"	523
MVX31/001A	1/0	19	.220"	16×14	.850"	1.20"	598
MVX32/001A	2/0	19	.220"	13X12	.905"	1.28"	701
MVX33/001A	3/0	19	.220"	16×12	.955"	1.33"	813
MVX34/001A	4/0	19	.220"	13X10	1.00"	1.43"	971

\*Splices and terminations are available for all medium voltage products.



## 15 kV

## MEDIUM VOLTAGE POWER CABLE

**TR-XLPE Insulation - LDPE Jacket Full Neutral - Copper Conductor** 

15kV - URD - 133% Insulation Level

#### Conductor:

- Soft-annealed bare copper compressed Class B stranding

#### **Conductor Shield:**

- Semi-conducting Cross-linked Polyethylene (XLPE)

#### Insulation:

- Tree-retardant Cross-linked Polyethylene (TR-XLPE)

#### Insulation Shield:

- Semi-conducting Cross-linked Polyethylene (XLPE)

#### Neutral Conductor:

- Soft-annealed solid copper wires per ASTM B3, helically applied and uniformly spaced

#### Jacket:

- Black sunlight resistant low density Polyethylene (LDPE) encapsulating the neutral wires
- The outer jacket shall have three extruded red stripes(120 degrees apart) for identification



#### **Applications:**

- For use in underground residential distribution, as primary power cable in single-phase systems direct buried or underground in duct

#### Standards:

#### - ICEA S-94-649

- AEIC CS8

#### Features:

- Simultaneous extrusion of strand shield, insulation and insulation shield combines to form a virtually perfect cable core eliminating unequal electrical stress
- XLPE insulation offers low moisture absorption, good chemical resistance, low dielectric loss, and high dielectric strength
- Temperature Ratings:
- Normal: 90°C
- Emergency:130°C
- Short Circuit: 250°C

Part #	AWG	Stranding	Insulation Thickness	Neutral AWG	Nom. O.D.	Lbs./M'			
Copper Conductor									
MVX30201C	2	7	220 mils	16×14	1.07"	751			
MVX30101C	1	19	220 mils	13×12	1.14"	904			
MVX31/001C	1/0	19	220 mils	16×12	1.18"	1051			
MVX32/001C	2/0	19	220 mils	13X10	1.27"	1284			
MVX33/001C	3/0	19	220 mils	16X10	1.32"	1512			
MVX34/001C	4/0	19	220 mils	16X9	1.40"	1830			

\*Splices and terminations are available for all medium voltage products.



## MEDIUM VOLTAGE POWER CABLE

EPR Insulation - PVC Jacket MV-105 - 133% Insulation Level 15kV - 3 Conductor



#### Conductor:

- Annealed bare copper
- Compact, Class B stranding

#### Extruded Strand Shield:

- Extruded thermoset semi-conducting stress-control layer over conductor

#### Grounding Conductor(s):

- 1-3 bare or covered grounding copper conductors may be supplied in the twisted assembly upon request

#### Extruded Insulation Shield (EIS):

- Thermoset semi-conducting polymeric layer free stripping from insulation

#### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black conducting shield layers

#### Metallic Shield:

- 5 mils annealed copper tape with an overlap of 25%

#### Jacket:

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC)

#### Color Code:

**MEDIUM VOLTAGE** 

- Marker tape under shield
- Black, red, blue

#### Applications:

- Suitable for use in a broad range of commercial, industrial, and utility applications, where reliability is the major concern, space is limited, and ease of installation is critical
- Suitable for use in wet or dry locations when installed in accordance with the NEC
- For use in aerial, direct burial, conduit, open tray, and undergound duct installations

#### Standards:

- National Electric Code (NEC)
- UL 1072
- UL listed as Type MV-105 for use in accordance with NEC
- UL 1685
- IEEE 1202
- OSHA Acceptable

#### Features:

- UL Listed as Type MV-105 for use in accordance with the NEC
- UL labelled and marked "Sunlight Resistant For CT Use"
- Compact twisted assembly offers ease of installation and lower voltage drop characteristics as compared to multiple single conductor systems Temperature Ratings:
- Normal: 105°C
- Emergency: 140°C
- Short Circuit: 250°C
- **Nominal Thickness** Ground Cond. Part # AWG Stranding Nom. O.D. Lbs./M' Size Insulation Jacket 2.04" MVE30203 2 7 .220" .110" 6 2226 MVE31/003 1/0 19 .220" .110" 4 2.20" 2811 MVE32/003 2/0 19 .220" .110" 4 2.30" 3163 2.52" MVE34/003 4/0 19 .220" .110" 3 4203 MVE325003 250 37 .220' .110" 3 2.66' 4775 MVE335003 350 37 .220" .140" 2 2.94" 6182 MVE350003 500 .220' 3.21" 7686 37 .140" 1 .220" 1/0 3.61" 10,978 MVE375003 750 61 140'

\*Splices and terminations are available for all medium voltage products.



## MEDIUM VOLTAGE POWER CABLE

EPR Insulation - PVC Jacket MV-105 - 133% (25kV) or 100% (35kV) Shielded - Single Conductor - 25kV & 35kV

#### Conductor:

- Annealed bare copper
- Compact, Class B stranding

#### Extruded Strand Shield (ESS):

- Extruded thermoset semi-conducting stress control layer over conductor

#### Insulation:

- Ethylene Propylene Rubber (EPR), colored to contrast with the black conducting shield layers

#### Extruded Insulation Shield (EIS):

- Thermoset semi-conducting polymeric layer free stripping from insulation

#### Metallic Shield:

- 5 mils annealed copper tape with an overlap of 25%

#### Jacket:

- Low-friction, lead-free, flame-retardant, moisture, and sunlight resistant Polyvinyl Chloride (PVC)



#### Applications:

- Suitable for use in wet or dry locations when installed in accordance with the NEC
- For use in aerial, direct burial, conduit, open tray, and underground duct installations
- For use in direct burial if installed in a system with a ground conductor that is in close proximity, and conforms with NEC 250.4(A)(5)

#### Standards:

- National Electric Code (NEC)
  - UL 1072
- UL listed as Type MV-105 for use in accordance with NEC
- UL 1685
- IEEE 1202
- OSHA Acceptable

#### Features:

- UL Listed as Type MV-105 for use in accordance with the NEC
- Sizes 1/0 AWG and larger are also listed and marked "Sunlight Resistant For CT Use" in accordance with the NEC
- Temperature Ratings:
- Normal: 105°C
- Emergency: 140°C
- Short Circuit: 250°C

Part #	AWG	Stranding	Nominal	Thickness	Diameter Over	Nom. O.D.	Lbs./M'
Part #	AWG	Stranding	Insulation	Jacket	Ins.	Nom. O.D.	LDS./IVI
MVE41/001	1/0	19	.345"	.080"	1.08"	1.36"	1175
MVE42/001	2/0	19	.345"	.080"	1.12"	1.41"	1304
MVE43/001	3/0	19	.345"	.080"	1.17"	1.46"	1461
MVE44/001	4/0	19	.345"	.080"	1.22"	1.51"	1648
MVE425001	250	37	.345"	.080"	1.28"	1.57"	1826
MVE435001	350	37	.345"	.080"	1.37"	1.67"	2235
MVE450001	500	37	.345"	.110"	1.50"	1.85"	2934
MVE475001	750	61	.345"	.110"	1.68"	2.06"	3962
MVE4100001	1000	61	.345"	.110"	1.84"	2.22"	4917

\*Splices and terminations are available for all medium voltage products.



## 35 kV

## MEDIUM VOLTAGE POWER CABLE

URD - Primary Underground Distribution Cable TR-XLPE Insulation - LDPE Jacket 35kV - Concentric Neutral - 100%



#### Conductor:

- 1/0 AWG Class B compressed, 19 strand aluminum

#### **Conductor Shield:**

- Semi-conducting, thermosetting, supersmooth conductor shield

#### Insulation:

- Tree-retardant, Cross-linked Polyethylene (TR-XLPE) insulation, 35kV, 100% coverage

#### Insulation Shield:

- Semi-conducting thermoset

#### **Neutral Conductor:**

- 16 x #14 bare copper concentric neutral wires

#### Jacket:

- Black encapsulating linear low density Polyethylene (LDPE) jacket with three longitudinal red stripes

				Nom	. O.D.		
Part #	AWG	Stranding	Conductor	Insulation	Insulation Shield	Jacket	Lbs./M'
MUP31/001A	1/0	19	.364"	1.10"	1.19"	1.43"	910

\*Splices and terminations are available for all medium voltage products.



TECK Type Instrumentation - Pairs XLPE Insulation - PVC Jackets Individual & Overall Shield 90°C - 600 Volt

Aluminum Interlocked Armor



#### Conductor:

- Annealed bare copper, per ASTM Class B

#### Insulation:

- Cross-linked Polyethylene (XLPE)

#### Shield:

- Aluminum/mylar tape
- 100% coverage
- Stranded tinned copper drain wire

#### Armor:

- Aulminum interlocked armor

#### Inner Jacket

- Black Polyvinyl Chloride (PVC)

#### **Outer Jacket**

- Black Polyvinyl Chloride (PVC)

#### Applications:

- UL approved for Direct Burial
- Sunlight and Oil Resistant
- Rated for CT use
- Suitable for use in Class I Division II hazardous locations

#### Standards:

- UL listed as Type MC, per UL Standard 1569 for metal clad cables
- Meets UL 1581 & 1202
- RoHS Compliant
- CSA FT4

Part #	AWG	Pairs	Outer Jacket Thick.	O.D. Over Armor	Nom. O.D.	Lbs./M'
T61802P	18(7) AWG	2 Pair	.060"	.663"	.763"	267
T61804P	18(7) AWG	4 Pair	.060"	.803"	.903"	438
T61602P	16(7) AWG	2 Pair	.045"	.693"	.793"	300
T61604P	16(7) AWG	4 Pair	.060"	.866"	.966"	510
T61606P	16(7) AWG	6 Pair	.060"	1.011"	1.111"	690
T61608P	16(7) AWG	8 Pair	.060"	1.028"	1.128"	770
T61612P	16(7) AWG	12 Pair	.080"	1.241"	1.341"	1038
T61624P	16(7) AWG	24 Pair	.080"	1.577"	1.697"	1798

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code (Pairs):

Cond. Num.	Color
1	Black, White - ONE
2	Black, White - TWO
3	Black, White - THREE
4	Black, White - FOUR



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TECK Type Instrumentation - Pair or Triad XLPE Insulation - PVC Jackets Individual & Overall Shield 90°C - 600 Volt



#### Conductor:

- Annealed bare copper, per ASTM Class B

#### Insulation:

- Cross-linked Polyethylene (XLPE)

#### Shield:

- Aluminum/mylar tape
- 100% coverage
- Stranded tinned copper drain wire

#### Armor:

- Aulminum interlocked armor

#### Inner Jacket

- Black Polyvinyl Chloride (PVC)

#### **Outer Jacket**

- Black Polyvinyl Chloride (PVC)

#### Applications:

- UL approved for Direct Burial
- Sunlight and Oil Resistant
- Rated for CT use
- Suitable for use in Class I Division II hazardous locations

#### Standards:

- UL listed as Type MC, per UL Standard 1569 for metal clad cables
- Meets UL 1581 & 1202
- RoHS Compliant
- CSA FT4

Part #	AWG	Pairs/ Triads	Inner Jacket Thick.	O.D. Over Armor	Nom. O.D.	Lbs./M'
T61801P	18(7) AWG	1 Pair	.045"	.553"	.653"	188
T61601P	16(7) AWG	1 Pair	.045"	.583"	.683"	213
T61601T	16(7) AWG	1 Triad	.045"	.600"	.700"	234

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code (Triads):

Cond. Num.	Color
1	Black, White, Red - ONE
2	Black, White, Red - TWO
3	Black, White, Red - THREE
4	Black, White, Red - FOUR

#### Color Code (Pairs):

Cond. Num.	Color
1	Black, White - ONE
2	Black, White - TWO
3	Black, White - THREE
4	Black, White - FOUR



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## **ARMORED CABLE**

- Bare compressed copper - Class B stranding per ASTM B3

Aluminum Interlocked Armor **XLPE Insulation - PVC Jacket** 90°C - 600 Volt - UL Type MC 14 AWG - Multi-conductor

Part #	AWG	Conductors	Ground AWG	Insulation Thickness	Nom. Dia. Armor	Nom. O.D.	Lbs./M'
Y11403A	14	3	14	.030"	.520"	.630"	183
Y11405A	14	5	14	.030"	.590"	.690"	246
Y11407A	14	7	14	.030"	.640"	.740"	297
Y11409A	14	9	14	.030"	.700"	.800"	338
Y11412A	14	12	14	.030"	.800"	.900"	460
Y11419A	14	19	14	.030"	.990"	1.02"	621

Armor:

- Aluminum interlocked armor

- Flame-retardant Cross-linked

Polyethylene (XLPE)

#### Jacket

Conductor:

and B8 Insulation:

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride(PVC)

#### **Applications:**

- In all raceways or direct burial
- In wet or dry locations
- Permitted for use in Class I Division 2, Class II Division 2, and Class III Division 1 and 2 per NEC Article 334

#### Standards:

- UL 1569
- UL 44
- UL 1581
- UL Type MC-600 volts
- NEC Type XHHW-2 conductors
- IEEE 383
- IEEE 1202
- OSHA Acceptable

#### Features:

- Rated at 90°C wet or dry
- Sunlight resistant - Provides excellent oil and chemical
- resistance
- Excellent crush resistance
- Provides a long service life - Flame-retardant and resistant to moisture
- Cost-effective alternative to
- installations in conduit
- Meets cold bend test at -25°C

#### **Color Code Chart:**

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe		



subject to change or correction without notice. See pages 139 and 140.

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**Aluminum Interlocked Armor** 

## **ARMORED CABLE**

- Bare compressed copper - Class B stranding per ASTM B3

- Flame-retardant Cross-linked Polyethylene (XLPE)

- Aluminum interlocked armor

- Annealed bare copper Class B stranding per ASTM B8

**Aluminum Interlocked Armor XLPE Insulation - PVC Jacket** 90°C - 600 Volt - UL Type MC

Dout #		Conductors	Insulation	Ground	Nom		
Part #	AWG	Conductors	Thickness	Wire Size	Armor	Overall	Lbs./M'
Y11203A	12	3	.030"	12	.54"	.65"	215
Y11003A	10	3	.030"	10	.61"	.73"	300
Y10803A	8	3	.045"	10	.75"	.85"	410
Y10603A	6	3	.045"	8	.83"	.93"	551
Y10403A	4	3	.045"	8	.101"	1.01"	735
Y10203A	2	3	.045"	6	1.05"	1.15"	1050
Y10103A	1	3	.055"	6	1.23"	1.33"	1283
Y11/003A	1/0	3	.055"	6	1.33"	1.43"	1553
Y12/003A	2/0	3	.055"	6	1.43"	1.53"	1859
Y13/003A	3/0	3	.055"	4	1.55"	1.67"	2314
Y14/003A	4/0	3	.055"	4	1.67"	1.79"	2781
Y125003A	250	3	.065"	4	1.81"	1.93"	3356
Y135003A	350	3	.065"	3	2.05"	2.17"	4485
Y150003A	500	3	.065"	2	2.33"	2.48"	6204
Y160003A	600	3	.080"	2	2.57"	2.72"	7321
Y175003A	750	3	.080"	1	2.85"	3.00"	9062

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart (Y11203A & Y11003A):

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe

#### Color Code Chart (All Others):

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four





**3-Conductor** 

Conductor:

Insulation:

and B8

Armor:

Ground:

Jacket

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride(PVC)

#### Applications:

- In all raceways or direct burial
- In wet or dry locations
- Permitted for use in Class I Division 2, Class II Division 2, and Class III Division 1 and 2 per NEC Article 334

### Standards:

- UL 1569
- UL 44
- UL 1581
- UL Type MC-600 volts
- NEC Type XHHW-2 conductors
- IEEE 383
- IEEE 1202
- OSHA Acceptable

#### Features:

- Rated at 90°C wet or dry
- Sunlight resistant - Provides excellent oil and chemical resistance
- Excellent crush resistance
- Provides a long service life
- Flame-retardant and resistant to moisture
- Cost-effective alternative to installations in conduit
- Meets cold bend test at -25°C



- Bare compressed copper

- Class B stranding per ASTM B3

- Flame-retardant Cross-linked

- Aluminum interlocked armor

- Annealed bare copper Class B

resistant Polyvinyl Chloride(PVC)

- Permitted for use in Class I Division 2, Class II Division 2, and Class III

Division 1 and 2 per NEC Article 334

- In all raceways or direct burial

- In wet or dry locations

- UL Type MC-600 volts

- Rated at 90°C wet or dry - Sunlight resistant

- Excellent crush resistance - Provides a long service life - Flame-retardant and resistant to

- Cost-effective alternative to installations in conduit

- Meets cold bend test at -25°C

- Provides excellent oil and chemical

- NEC Type XHHW-2 conductors

stranding per ASTM B8

Polyethylene (XLPE)

Conductor:

and B8

Armor:

Ground:

Jacket

Applications:

Standards: - UL 1569 - UL 44 - UL 1581

- IEEE 383 - IEEE 1202 - OSHA Acceptable

Features:

resistance

moisture

Insulation:

**Aluminum Interlocked Armor XLPE Insulation - PVC Jacket** 90°C - 600 Volt - UL Type MC 4-Conductor

#### Nominal Thickness Nom. O.D. Ground Part # AWG Conductors Lbs./M' AWG Insulation Overall Jacket Armor Y11204A 12 4 .030" .050" 12 .58" .69" 295 .030" Y11004A 4 .050" 10 .68" .79" 10 345 Y10804A 8 4 .045" .050" 10 .81" .91" 501 Y10604A 6 4 .045" .050" 8 .91" 1.01" 686 Y10404A 4 4 .045" .050" 8 1.01" 1.11" 927 Y10204A 2 4 .045" .050" 6 1.15" 1.25" 1333 Y10104A 1 4 .055" .050" 6 1.37" 1.47" 1670 Y11/004A .055" 1.57" 1990 1/0 4 .050" 6 1.47" Y12/004A 2/0 4 .055' .060' 6 1.57" 1.69" 2416 Y13/004A 3/0 4 .055" .060" 4 1.69" 1.81" 3313 - Flame-retardant, moisture and sunlight Y14/004A 4/0 4 .055" .060" 4 1.83" 1.95" 3590

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code Chart (Y11204A & Y11004A):

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe

#### Color Code Chart (All Others):

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four

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ARMORED

## ARMORED CABLE

Aluminum Interlocked Armor EPR Insulation - PVC Jacket UL Type MV-105 or MC 5kV/8kV - 3-Conductor - Shielded

## Conductor:

- Bare copper
- Compact Class B strand

#### Shields:

- Conductor Extruded strand shield with thermoset semi-conducting extruded stress control layer over conductor
- Insulation Extruded insulation shield with thermoset semi-conducting polymeric layer free stripping from insulation
- Shield Annealed copper tape with a minimum 25% overlap

#### Insulation:

- Colored Ethylene Propylene Rubber (EPR)
- 5kV/133% insulation level
- 8kV/100% insulation level

#### Ground:

- Annealed bare copper Class B stranding per ASTM B8

#### Armor:

- Aluminum interlocked armor

#### Jacket

- Flame and sunlight resistant Yellow Polyvinyl Chloride (PVC) jacket

#### Applications:

- Installed in wet or dry locations, indoors or outdoors, in exposed or concealed work
- May be used in cable trays or on approved support in protected areas
- Permitted for use in Class I; Class II, Division 2; and Class III, Divisions 1 and 2 hazardous locations per the NEC

#### Standards:

- UL Type MV-105
- UL Type MC
- UL 1072
- IEEE 1202
- IEEE 383
- OSHA Acceptable

Part # AWG		Conductors	Ground	Nom	Lbs./M'	
Fart #	AWG	Conductors	AWG	Armor	Overall	LDS./IVI
Y20203A	2	3	1 x #6	1.51"	1.77"	1819
Y21/003A	1/0	3	1 x #4	1.60"	1.92"	2364
Y22/003A	2/0	3	1 x #4	1.69"	2.00"	2696
Y24/003A	4/0	3	1 x #3	2.09"	2.22"	3687
Y225003A	250	3	1 x #3	2.21"	2.34"	4165
Y235003A	350	3	1 x #2	2.41"	2.57"	5436
Y250003A	500	3	1 x #1	2.64"	2.84"	7170
Y275003A	750	3	1 x #1/0	3.00"	3.14"	10084

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

# **OMNI**CABLE





Aluminum Interlocked Armor EPR Insulation - PVC Jacket UL Type MV-105 or MC 15kV - 3-Conductor - Shielded



#### Conductor:

- Bare copper
- Compact Class B strand

#### Conductor Shield:

- Extruded semi-conducting thermosetting stress control layer

#### Insulation:

- Colored Ethylene Propylene Rubber (EPR)
- 133% insulation level

#### Insulation Shield:

- 5 mil copper tape with 25% overlap

#### Armor:

- A single strip of aluminum interlocked armor

#### Jacket

- Red Polyvinyl Chloride (PVC) jacket
- Flame, sunlight & moisture resistant

#### Color Code:

- Marker tape under shield
- Black, red, blue

#### **Applications:**

- Installed in wet or dry locations, indoors or outdoors, in exposed or concealed work
- May be used in cable trays or on approved support in protected areas
- Permitted for use in Class I; Class II, Division 2; and Class III, Divisions 1 and 2 hazardous locations per the NEC

#### Standards:

- UL Type MV-105
- UL Type MC
- UL 1581
- UL 1072
- IEEE 1202
- IEEE 383
- OSHA Acceptable

Part #	AWG	Conductors	Ground Jacket		Nom		
Part #	AWG	Conductors	AWG	Thickness	Armor	Overall	Lbs./M'
Y30203A	2	3	6	.060"	2.26"	2.41"	2506
Y30103A	1	3	4	.075"	2.35"	2.52"	2775
Y31/003A	1/0	3	4	.075"	2.43"	2.61"	3177
Y32/003A	2/0	3	4	.075"	2.53"	2.70"	3554
Y33/003A	3/0	3	3	.075"	2.64"	2.81"	4014
Y34/003A	4/0	3	3	.075"	2.76"	2.93"	4617
Y325003A	250	3	3	.075"	2.93"	3.10"	5177
Y335003A	350	3	2	.085"	3.14"	3.34"	6590
Y350003A	500	3	1	.085"	3.42"	3.62"	8385
Y360003A	600	3	1	.085"	3.47"	3.64"	8864
Y375003A	750	3	1/0	.085"	3.69"	3.86"	11081



ARMORED INSTRUMENTATION CABLE Continuously Corrugated Welded Cable - CCW<sup>®</sup> PVC/Nylon Insulation - PVC Jackets

Pairs & Triads - Individual & Overall Shields 105°C - 300 Volt - UL Type ITC-HL/PLTC

#### Conductor:

- Bare, annealed copper conforming to ASTM B-3 and stranded in accordance with ASTM B8 (Class B)

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) insulation and nylon covering, rated 105°C per UL Standard 13 & 2250
- Color Code: ICEA Method 1

#### Individual Shield:

- Aluminum/polyester tape with 100% coverage
- Drain wire

#### **Overall Shield:**

- Aluminum/polyester tape shield providing 100% coverage
- Drain wire

#### Armor:

- Impervious, continuously corrugated and welded aluminum per UL 1569
- Meets grounding requirements of NEC Article 250

#### Inner Jacket

- Flame-retardant Polyvinyl Chloride (PVC) per UL Standards 13 and 2250
- Low temperature performance meets ASTM D746 brittleness temperature at or below 40°C
- Nylon rip cord to facilitate jacket removal



#### **Overall Jacket**

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC) per UL Standards 13 and 2250
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40  $^{\circ}\mathrm{C}$

#### Applications:

- For use as Power Limited Tray Cable on circuits rated 150V or less and 5 amps or less in Class 2 or Class 3 circuits in accordance with NEC Article 725
- For use as instrumentation tray cable on circuits rated 150V or less and 5 amps or less in accordance with NEC article 727
- Recognized for use in Class I, II, and III, Divisions 1 and 2; or Class 1, Zones 1 and 2 hazardous locations per NEC articles 501, 502, 503 and 505.
- Installed indoors or outdoors, in wet or dry locations, in a raceway, as aerial cable on a messenger, in cable trays , or for direct burial
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by American Petroleum Institute.

#### Standards:

- UL Type PLTC and ITC-HL
- UL 13, 2250, 1569, 1309 and 1581
- IEEE 383 and 1202

Part # AWG Pairs / ]		Pairs / Triadss		Lbs./M'		
Part #	AWG	Pairs / Triadss	Core	Armor	Overall	LDS./W
XL31602	16	2 pairs	.440"	.670"	.780"	260
XL31604	16	4 pairs	.520"	.710"	.820"	334
XL61604	16	4 triads	.580"	.800"	.910"	392
XL31608	16	8 pairs	.690"	.930"	1.04"	515
XL61608	16	8 triads	.790"	1.02"	1.13"	621
XL31612	16	12 pairs	.810"	1.06"	1.17"	684
XL61612	16	12 triads	.950"	1.19"	1.30"	879
XL31624	16	24 pairs	1.10"	1.37"	1.48"	1270

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

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ARMORED

## ARMORED INSTRUMENTATION CABLE

Continuously Corrugated Welded Cable - CCW® PVC Insulation & Jackets Pair & Triad - Overall Shield 105°C - 300 Volt - UL Type ITC-HL/PLTC

#### Conductor:

- Bare, annealed copper conforming to ASTM B3 and stranded in accordance with ASTM B8 (Class B)

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) insulation, rated 105°C per UL Standard 13 & 2250
- Color Code: ICEA Method 1

#### **Overall Shield:**

- Aluminum/polyester tape shield providing 100% coverage
- Drain wire

#### Armor:

- Impervious, continuously corrugated and welded aluminum per UL 1569
- Meets grounding requirements of NEC Article 250

#### Inner Jacket

- Flame-retardant Polyvinyl Chloride (PVC) per UL Standards 13 and 2250
- Low temperature performance meets ASTM D746 brittleness temperature at or below 40°C
- Nylon rip cord to facilitate jacket removal

#### **Overall Jacket**

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC) per UL Standards 13 and 2250
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C
- Nylon ripcord

#### Applications:

- For use as Power Limited Tray Cable on circuits rated 150V or less and 5 amps or less in Class 2 or Class 3 circuits in accordance with NEC Article 725
- For use as instrumentation tray cable on circuits rated 150V or less and 5 amps or less in accordance with NEC article 727
- Recognized for use in Class I, II, and III, Divisions 1 and 2; or Class 1, Zones 1 and 2 hazardous locations per NEC articles 501, 502, 503 and 505.
- Installed indoors or outdoors, in wet or dry locations, in a raceway, as aerial cable on a messenger, in cable trays , or for direct burial
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by American Petroleum Institute.

#### Standards:

- UL Type PLTC and ITC-HL
- UL 13, 2250, 1569, 1309 and 1581
- IEEE 383 and 1202

Part #	AWG	Pairs / Triadss	Nom. O.D.			Lbs./M'
Part #	AWG	Pairs / Thadss	Core	Armor	Overall	LDS./W
XK31601	16	1 pair	.260"	.430"	.540"	135
XK41601	16	1 triad	.280"	.430"	.540"	160

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

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ARMORED INSTRUMENTATION CABLE Continuously Corrugated Welded Cable - CCW®

PVC/Nylon Insulation - PVC Jackets

Pairs & Triads - Individual & Overall Shields 90°C - 600 Volt - UL Type ITC-HL/PLTC

#### Conductor:

- Bare, annealed copper conforming to ASTM B3 and stranded in accordance with ASTM B8 (Class B)

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) insulation and nylon covering, rated 90°C per UL Standard 83
- Color Code: ICEA Method 1

#### Individual Shield:

- Isolated and individually twisted pairs or triads with an aluminum/ polyester tape shield providing 100% coverage
- Drain wire

## Overall Shield:

- Aluminum/polyester tape shield providing 100% coverage
- Drain wire

#### Armor:

- Impervious, continuously corrugated and welded aluminum per UL 1569 & 2225
- Meets grounding requirements of NEC Article 250

#### Inner Jacket

- Flame retardant Polyvinyl Chloride (PVC) per UL 1569, Black
- Low temp performance meets ASTM D746 brttleness temp at or below  $\mbox{-}40^{\circ}\mbox{C}$
- Nylon ripcord

#### **Overall Jacket**

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC) per UL Standards 1569, black
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C

#### Applications:

- For use in Class 1 remote-control and signal circuits in accordance with NEC Article 725
- Recognized for use in Class I, II, and III, Divisions 1 and 2; or Class I, Zones 1 and 2 hazardous locations per NEC articles 501, 502, 503 and 505.
- Installed indoors or outdoors, in wet or dry locations, in a raceway, as aerial cable on a messenger, in cable trays , or for direct burial
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by American Petroleum Institute

#### Standards:

#### - UL Type MC-HL

- UL 83, 1569, 2225, 1309 and 1581
- IEEE 383 and 1202

Part #	AWG	Pairs / Triads		Nom. O.D.		
Part #	AWG	Pairs / Triads	Core	Armor	Overall	Lbs./M'
XL41602	16	2 pairs	.450"	.670"	.780"	239
XL41604	16	4 pairs	.560"	.800"	.910"	342
XL41608	16	8 pairs	.700"	.930"	1.04"	502
XL41612	16	12 pairs	.850"	1.11"	1.22"	687
XL41624	16	24 pairs	1.12"	1.42"	1.53"	1140
XL41636	16	36 pairs	1.37"	1.69"	1.82"	1618
XL41650	16	50 pairs	1.57"	1.92"	1.82"	2166
XL51604	16	4 triads	.610"	.840"	2.05"	403
XL51608	16	8 triads	.820"	1.06"	1.17"	650
XL51612	16	12 triads	.980"	1.24"	1.35"	853
XL41802	18	2 pairs	.410"	.590"	.700"	225
XL41804	18	4 pairs	.480"	.650"	.750"	300
XL41808	18	8 pairs	.600"	.820"	.920"	450
XL41812	18	12 pairs	.780"	1.00"	1.10"	580
XL41824	18	24 pairs	1.08"	1.39"	1.49"	1050

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

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## ARMORED INSTRUMENTATION CABLE Continuously Corrugated Welded Cable - CCW®

PVC/Nylon Insulation - PVC Jackets Pairs & Triads - Overall Shield 90°C - 600 Volt - UL Type ITC-HL/PLTC

#### Conductor:

- Bare, annealed copper conforming to ASTM B3 and stranded in accordance with ASTM B8 (Class B)

#### Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) insulation and nylon covering, rated 90°C per UL Standard 83
- Color Code: ICEA Method 1

#### **Overall Shield:**

- Aluminum/polyester tape shield providing 100% coverage
- Stranded tinned copper drain wire, same size as insulated conductors

#### Armor:

- Impervious, continuously corrugated and welded aluminum per UL 1569 & 2225
- Meets grounding requirements of NEC Article 250

#### Inner Jacket

- Flame retardant Polyvinyl Chloride (PVC) per UL 1569, Black
- Low temp performance meets ASTM D746 brittleness temp at or
- below -40°C
- Nylon ripcord



#### **Overall Jacket**

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC) per UL Standards 1569, black
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C

#### Applications:

- For use in Class 1 remote-control and signal circuits in accordance with NEC Article 725
- Recognized for use in Class I, II, and III, Divisions 1 and 2; or Class I, Zones 1 and 2 hazardous locations per NEC articles 501, 502, 503 and 505.
- Installed indoors or outdoors, in wet or dry locations, in a raceway, as aerial cable on a messenger, in cable trays , or for direct burial
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by American Petroleum Institute

#### Standards:

- UL Type MC-HL
- UL 83, 1569, 2225, 1309 and 1581
- IEEE 383 and 1202

Doub #	414/0	Daina (Triada		Nom. O.D.		
Part #	AWG	Pairs / Triads	Core	Armor	Overall	Lbs./M'
XL21601	16	1 pair	.350"	.530"	.640"	185
XL21602	16	2 pairs	.380"	.580"	.690"	246
XL21604	16	4 pairs	.470"	.710"	.820"	333
XL21608	16	8 pairs	.660"	.890"	1.00"	466
XL21612	16	12 pairs	.800"	1.06"	1.17"	604
XL21624	16	24 pairs	1.08"	1.37"	1.48"	1040
XL21636	16	36 pairs	1.32"	1.64"	1.78"	1445
XL21650	16	50 pairs	1.48"	1.83"	1.96"	1897
XL51601	16	1 triad	.350"	.530"	.640"	195
XL21802	18	2 pairs	.410"	.590"	.700"	222
XL21804	18	4 pairs	.480"	.650"	.750"	268
XL21808	18	8 pairs	.600"	.820"	.920"	420
XL21812	18	12 pairs	.780"	1.00"	1.10"	560
XL21824	18	24 pairs	1.08"	1.39"	1.49"	969

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

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ARMORED

Continuously Corrugated Welded Cable - CCW® XLPE Insulation - PVC Jacket

90°C - 600 Volt UL - Type MC

## No Ground - Non-HL

## Conductor:

- Bare annealed copper per ASTM B-3
- Class B stranding per ASTM B8

#### Insulation:

- Cross-linked Polyethylene (XLPE) type XHHW-2 per UL 44

#### Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1569
- Meets grounding requirements of NEC Article 250

#### Jacket

- Flame-retardant, moisture and sunlightresistant Polyvinyl Chloride (PVC), black

#### Applications:

- Designed for use on power or control circuitsCan be installed in cable tray, wire ways, racks,
- or buried directly
- Suitable for exposure to hazardous locations, Type MC-HL for Classes I, II, and III Division 1 and 2

#### Features:

- Continuously corrugated armor provides an impervious barrier to moisture, gas and liquids
- Continuously corrugated armor provides EMI shielding performance

- Meets cold impact at -40°C

- Factory assembled and tested cable for use as an alternate to cable in conduit wiring systems
- 90°C continuous operating temperature, wet or drv
- 130°C emergency rating
- 250°C short circuit rating

#### Applications:

- For use as services, feeders and branch circuits for power, lighting, control, and signal circuits in accordance with NEC articles 330 and 725
- Class I and II, Division 2; Class III, Divisions 1 and 2, Zone 2 hazardous locations per NEC articles 501, 502, 503, and 505.
- Installed indoors or outdoors, wet or dry locations, directly buried, embedded in concrete, in a raceway, as aerial on a messenger, or as exposed runs secured to supports in accordance with NEC article 330

#### Standards:

- IEEE 383, 1202
- UL 44, 1569, 1309, 1581
- UL Type MC, XHHW-2, SUN RES, DIR BUR
- UL Listed Marine Shipboard

Part #	AWC	Conductors		n. O.D.	Lbs./M'
Part #	AWG	Conductors	Armor	Overall	LDS./W
XA51403	14	3	.490"	.600"	155
XA51404	14	4	.530"	.640"	183
XA51405	14	5	.580"	.690"	213
XA51407	14	7	.620"	.730"	257
XA51409	14	9	.710"	.820"	312
XA51412	14	12	.800"	.910"	386
XA51419	14	19	.930"	1.04"	544
XA51437	14	37	1.24"	1.35"	959
XA51203	12	3	.530"	.640"	192
XA51204	12	4	.580"	.690"	229
XA51205	12	5	.620"	.730"	266
XA51207	12	7	.670"	.780"	328
XA51209	12	9	.800"	.910"	410
XA51212	12	12	.890"	.990"	510
XA51219	12	19	1.02"	1.13"	731
XA51237	12	37	1.37"	1.48"	1318
XA51003	10	3	.580"	.690"	241
XA51004	10	4	.670"	.780"	301
XA51005	10	5	.710"	.820"	353
XA51007	10	7	.750"	.860"	442
XA51009	10	9	.890"	1.00"	551

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

CCW<sup>®</sup> is a registered trademark of General Cable.

#### **Color Code Chart:**

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe

Colors repeat after 36 conductors.



ARMORED



Continuously Corrugated Welded Cable - CCW® XLPE Insulation - PVC Jacket 90°C - 600 Volt - UL Type MC-HL



#### Conductor:

- Bare annealed copper per ASTM B-3
- Compressed Class B stranding per ASTM B8

#### Insulation:

- Cross-linked Polyethylene (XLPE) type XHHW-2 per UL 44

#### **Grounding Conductor:**

- Class B stranded bare copper per ASTM B3 and B8
- Cross-linked Polyethylene (XLPE) insulation, green
- Sized in accordance with NEC Table 250.122

#### Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1569 and UL 2225
- Meets grounding requirements of NEC Article 250

#### Jacket

- Black Polyvinyl Chloride (PVC), sunlight and oil resistant, per UL 1569, 90°C temperature rating

#### Applications:

- Designed for use on power or control circuits
- Can be installed in cable tray, wire ways, racks, or buried directly
- Suitable for exposure to hazardous locations, Type MC-HL for Classes I, II, and III Division 1 and 2

#### Standards:

- UL 44, XHHW-2
- UL 1309 Marine Shipboard
- UL 1569 Type MC and UL 2225 Type MC-HL
- UL 1581
- IEEE 383
- IEEE 1202

Part #	AWG	Conductors	Conductors Ground AWG		. O.D.	Lbs./M'
Fall #	AWG	Conductors	GIOUIIU AWG	Armor	Overall	LDS./W
X11403	14	3	14	.530"	.640"	192
X11404	14	4	14	.580"	.690"	222
X11405	14	5	14	.600"	.710"	245
X11406	14	6	14	.620"	.730"	267
X11408	14	8	14	.710"	.820"	321
X11409	14	9	14	.740"	.850"	377
X11411	14	11	14	.800"	.910"	395
X11418	14	18	14	.930"	1.04"	554
X11436	14	36	14	1.24"	1.35"	948
X11437	14	37	14	1.22"	1.32"	1030
X11202	12	2	12	.530"	.640"	200
X11203	12	3	12	.580"	.690"	239
X11204	12	4	12	.670"	.780"	310
X11205	12	5	12	.670"	.780"	324
X11206	12	6	12	.670"	.780"	338
X11207	12	7	12	.710"	.820"	408
X11208	12	8	12	.800"	.910"	426
X11211	12	11	12	.890"	1.00"	519
X11212	12	12	12	.885"	.995"	584
X11218	12	18	12	1.02"	1.13"	739
X11236	12	36	12	1.37"	1.48"	1302
X11002	10	2	10	.580"	.690"	253
X11003	10	3	10	.620"	.730"	303
X11004	10	4	10	.670"	.780"	348
X11006	10	6	10	.750"	.860"	451
X11008	10	8	10	.890"	1.00"	568
X11011	10	11	10	.970"	1.08"	704

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

CCW® is a registered trademark of General Cable.

#### **Color Code Chart:**

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange
5	Yellow	6	Brown
7	Red w/ Black Stripe	8	Blue w/ Black Stripe
9	Orange w/ Black Stripe	10	Yellow w/ Black Stripe
11	Brown w/ Black Stripe	12	Black w/ Red Stripe
13	Blue w/ Red Stripe	14	Orange w/ Red Stripe
15	Yellow w/ Red Stripe	16	Brown w/ Red Stripe
17	Black w/ Blue Stripe	18	Red w/ Blue Stripe
19	Orange w/ Blue Stripe	20	Yellow w/ Blue Stripe
21	Brown w/ Blue Stripe	22	Black w/ Orange Stripe
23	Red w/ Orange Stripe	24	Blue w/ Orange Stripe
25	Yellow w/ Orange Stripe	26	Brown w/ Orange Stripe
27	Black w/ Yellow Stripe	28	Red w/ Yellow Stripe
29	Blue w/ Yellow Stripe	30	Orange w/ Yellow Stripe
31	Brown w/ Yellow Stripe	32	Black w/ Brown Stripe
33	Red w/ Brown Stripe	34	Blue w/ Brown Stripe
35	Orange w/ Brown Stripe	36	Yellow w/ Brown Stripe

Colors repeat after 36 conductors.

(800) 292-OMNI

Continuously Corrugated Welded Cable - CCW® XLPE Insulation - PVC Jacket 90°C - 600 Volt - UL Type MC-HL 3-Conductor VFD & 4-Conductor



#### Conductor:

- Bare annealed copper per ASTM B-3
- 10 AWG and smaller are compressed Class B stranding per ASTM B8
- 8 AWG and larger are compact stranding per ASTM B496

#### Insulation:

- Cross-linked Polyethylene (XLPE) type XHHW-2 per UL 44

#### **Grounding Conductors:**

- Class B stranded bare copper per ASTM B3 & B8
- Sized in accordance with NEC Table 250.122

#### Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath

#### Jacket

 Black Polyvinyl Chloride (PVC), sunlight and oil resistant, per UL 1569, 90°C temperature rating

#### Applications:

- Designed for use on power or control circuits
- Can be installed in cable tray, wire ways, racks, or buried directly
- This cable has three symmetrically placed grounds to reduce problems associated with pulse - width modulated AC drives. Suitable for VFD applications.
- Suitable for exposure to hazardous locations, Type MC-HL for Classes I, II, and III Division 1 and 2

### Standards:

- UL 44, XHHW-2
- UL 1309 Marine Shipboard
- UL 1569 Type MC and UL 2225 Type MC-HL
- UL 1581
- Designated Type MC as per NEC Article 334
- IEEE 383
- IEEE 1202

Part #	AWG	Conductors	Ground	Nom	. O.D.	Lbs./M'
Part #	AWG	Conductors	AWG	Armor	Overall	LDS./IVI
X21403	14	3	3 × 18	.530"	.640"	163
X21404	14	4	3 × 18	.580"	.690"	226
X21203	12	3	3 × 16	.580"	.690"	243
X21204	12	4	3 × 16	.670"	.780"	291
X21003	10	3	3 × 14	.620"	.730"	305
X21004	10	4	3 × 14	.670"	.780"	354
X20803	8	3	3 × 14	.710"	.810"	392
X20603	6	3	3 × 12	.800"	.900"	534
X20403	4	3	3 × 12	.890"	.990"	716
X20203	2	3	3 × 10	1.02"	1.27"	1013
X20103	1	3	3 × 10	1.15"	1.26"	1119
X21/003	1/0	3	3 × 10	1.24"	1.34"	1496
X22/003	2/0	3	3 × 10	1.34"	1.44"	1801
X23/003	3/0	3	3 × 8	1.47"	1.58"	2262
X24/003	4/0	3	3 × 8	1.60"	1.73"	2722
X225003	250	3	3 × 8	1.74"	1.87"	3195
X235003	350	3	3 × 7	1.96"	2.09"	4284
X250003	500	3	3 × 6	2.28"	2.44"	6035
X275003	750	3	3 × 5	2.75"	2.92"	8854

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

CCW<sup>®</sup> is a registered trademark of General Cable.

#### Color Code Chart (6 AWG and smaller):

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange

#### Color Code Chart (4 AWG and larger):

Cond. Num.	Cond. Marking	Cond. Num.	Cond. Marking
1	"1" One	2	"2" Two
3	"3" Three	4	"4" Four



(800) 292-OMNI

2014 Industrial Catalog

Continuously Corrugated Welded Cable - CCW<sup>®</sup> Composite Power & Control XLPE Insulation - PVC Jacket 90°C - 600 Volt - UL Type MC-HL

#### Conductor:

- Bare, annealed copper conforming to ASTM B-3
- 10AWG and smaller are Class B compressed stranding per ASTM B8
- 8AWG and larger are compact stranding per ASTM B496

#### Insulation:

- Cross-linked Polyethylene (XLPE) type XHHW per UL 44, listed XHHW-2

#### Grounding Conductor:

- Class B stranded bare annealed copper per ASTM B3 and B8

#### Continuously Corrugated Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath

#### Jacket

- Flame retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC), black

#### **Applications:**

- For use as services, feeders and branch circuits for power, lighting, control, and signal circuits in accordance with NEC articles 330 and 725
- Class I, II and III, Divisions 1 and 2; Class I, Zones 1 and 2 hazardous locations per NEC articles 501, 502, 503, and 505.
- Installed indoors or outdoors, wet or dry locations, directly buried, embedded in concrete, in a raceway, as aerial on a messenger, or as exposed runs secured to supports in accordance with NEC article 330
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by the American Petroleum Institute



#### Features:

- Continuously corrugated armor provides an impervious barrier to moisture, gas and liquids
- Continuously corrugated armor provides EMI shielding performance
- Meets cold impact at -40°C
- Factory assembled and tested cable for use as an alternate to cable in conduit wiring systems
- 90°C continuous operating temperature, wet or dry
- 130°C emergency rating
- 250°C short circuit rating

#### Standards:

- UL Type MC-HL, XHHW-2
- UL Listed Marine Shipboard
- UL 44, 1309, 1569, 1581 and 2225
- IEEE 383 and 1202

Part #	Power Conductor	Control	Bare Ground	Bare Ground Nom. O.D.		Lbs./M'
Fait #	Size	Conductor Size	AWG	Armor	Overall	LDS./W
XAC31003	3 × 10AWG	4 x #12AWG	10	.750"	.860"	430
XAC30803	3 × 8AWG	4 x #12AWG	10	.890"	.990"	535
XAC30603	3 × 6AWG	4 x #12AWG	8	.930"	1.03"	660
XAC30403	3 × 4AWG	4 x #12AWG	8	.970"	1.08"	815

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

General Cable CCW<sup>®</sup> is a registered trademark of General Cable.

#### Color Code for Conductors, 6AWG and smaller:

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Yellow

#### Color Code for Conductors, 4AWG and larger:

- Black with printed numbers per ICEA Method 4



Continuously Corrugated Welded Cable - CCW® Variable Frequency Drive Cable XLPE Insulation - PVC Jacket 90°C - 600 Volt - UL Type MC-HL 4-Conductor



#### Conductor:

- Bare, annealed copper per ASTM B3
- Compact stranding per ASTM B496

#### Insulation:

- Cross-linked Polyethylene (XLPE) type XHHW per UL 44, listed XHHW-2

#### Ground:

- Class B stranded bare annealed copper per ASTM B3 and B8

#### Armor:

 Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1569 and UL 2225

#### Jacket:

- Flame retardant, moisture and sunlight resistant Polyvinyl Chloride PVC)

#### Applications:

- For use as services, feeders and branch circuits for power, lighting, control, and signal circuits in accordance with NEC articles 330 and 725
- Class I, II and III, Divisions 1 and 2; Class I, Zones 1 and 2 hazardous locations per NEC articles 501, 502, 503, and 505.
- Installed indoors or outdoors, wet or dry locations, directly buried, embedded in concrete, in a raceway, as aerial on a messenger, or as exposed runs secured to supports in accordance with NEC article 330

#### Features:

- Continuously corrugated armor provides an impervious barrier to moisture, gas and liquids
- Continuously corrugated armor provides EMI shielding performance
- Meets cold impact at -40°C
- Factory assembled and tested cable for use as an alternate to cable in conduit wiring systems
- 90°C continuous operating temperature, wet or dry
- 130°C emergency rating
- 250°C short circuit rating

#### Standards:

- UL 44, 1569, 2225, 1309, 1581
- IEEE 383, 1202

Part #	AWG	Conductors	Ground	Nom	. O.D.	Lbs./M'
Fail #	AWG	Conductors	AWG	Armor	Overall	LDS./IVI
XA60804	8	4	10	.800"	.900"	473
XA60604	6	4	8	.890"	.990"	641
XA60404	4	4	8	.970"	1.08"	860
XA60204	2	4	6	1.15"	.1.26"	1267
XA62/004	2/0	4	6	1.51"	.1.64"	2351
XA64/004	4/0	4	4	1.78"	.1.91"	3491
XA635004	350	4	3	2.19"	.2.35"	5536
XA650004	500	4	2	2.49"	.2.65"	7704

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

CCW<sup>®</sup> is a registered trademark of General Cable.

#### Color Code for 6AWG and smaller:

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	Orange

#### Color Code for 4AWG and larger:

- Black with printed numbers per ICEA Method 4



ARMORED

Continuously Corrugated Welded Cable - CCW® Variable Frequency Drive Cable EPR Insulation - PVC Jacket 105°C - UL Type MC-HL or MV-105 5kV(133%)/8kV(100%) - 3-Conductor - Shielded

#### Conductor:

- Bare annealed copper per ASTM B3
- Compact stranding per ASTM B496

#### **Extruded Strand Shield:**

- Extruded thermoset semi-conductor stress control layer over conductor per ICEA S-93-639 and UL 1072

#### Insulation:

- Ethylene Propylene Rubber (EPR)

#### **Extruded Insulation Shield:**

- Thermoset semi-conducting polymeric layer, free stripping from the insulation per ICEA S-93-639 and UL 1072

#### Shield:

- 5 mil annealed bare copper tape with 25% overlap
- Color coded polymeric identification tape laid under the shield: black, red, & blue

#### Grounding Conductor:

- Three split Class B stranded bare annealed copper grounding conductors
- Sized in accordance with UL 1072 and NEC Article 250

#### Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath

#### Jacket

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC), yellow
- Low temperature performance meets ASTM D746 brittleness temperature at or below  $40^{\circ}\text{C}$



#### **Applications:**

- Variable Frequency Drives: 3-conductor CCW armored cables with 3 symmetrical grounding wire are the preferred wiring method for use with AC motors controlled by pulse-width modulated inverters in VFD applications
- For use in feeders and branch circuits in industrial power distribution systems per NEC articles 328 and 330
- Approved for Classes I, II and III, Divisions 1 and 2; and Class I, Zones 1 and 2, hazardous locations covered under NEC Articles 501, 502, 503 and 505.
- Installed on metal racks, troughs, in raceways, in cable trays or secured to supports spaced no more than 6 feet apart
- Installed in both exposed and concealed work, wet or dry locations, directly buried or embedded in concrete

#### Features:

- Cable meets cold impact at -40°C
- 105°C continuous operating temperature, wet or dry
- 140°C emergency rating
- 250°C short circuit rating

#### Standards:

- UL 1072
- UL 1569
- UL 2225
- UL 1309
- IEEE 383 - IEEE 1202
- Nom. O.D. Insulation Part # AWG Conductors Ground AWG Lbs./M' Thickness Armor Overall XMVE20403 4 3  $3 \times 10 AWG$ .115" 1.51" 1.65" 1418 XMVE20203 2 3  $3 \times 10$ AWG .115" 1.64" 1.78" 1731  $3 \times 8AWG$ 2259 XMVE21/003 3 .115" 1.78" 1.91" 1/0 XMVE22/003 2/0 3 3 × 8AWG .115" 1.92" 2.05" 2626 XMVE24/003 3 3 × 7AWG 2.15" 2.28" 3650 4/0 .115" XMVE225003 250 3  $3 \times 7 AWG$ .115" 2.23" 2.36" 4060 XMVE235003 350 3 3 × 6AWG .115" 2.45 2.61" 5045 3 × 5AWG XMVE250003 500 3 .115" 2.75" 2.92" 7137 XMVE275003 750 3  $3 \times 4$ AWG .115" 3.32" 3.50" 10268

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

CCW<sup>®</sup> is a registered trademark of General Cable.



Continuously Corrugated Welded Cable - CCW® 133% EPR Insulation - PVC Jacket 105°C - UL Type MC-HL or MV-105 15kV - 3-Conductor - Shielded

#### Conductor:

- Bare annealed copper per ASTM B3
- Compact stranding per ASTM B496

#### Extruded Strand Shield:

- Extruded thermoset semi-conductor stress control layer over conductor per ICEA S-93-639 and UL 1072

#### Insulation:

- Ethylene Propylene Rubber (EPR)

#### **Extruded Insulation Shield:**

- Thermoset semi-conducting polymeric layer, free stripping from the insulation per ICEA S-93-639 and UL 1072

#### Shield:

- 5 mil annealed bare copper tape with 25% overlap
- Color coded polymeric identification tape laid under the shield: Black, Red, & Blue

#### **Grounding Conductor:**

- Class B stranded bare annealed copper grounding conductor
- Sized in accordance with UL 1072 and NEC Article 250

#### Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath

#### Jacket

- Flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC), red
- Low temperature performance meets ASTM D746 brittleness temperature at or below 40°C

#### Applications:

- For use in feeders and branch circuits in industrial power distribution systems per NEC articles 328 and 330
- Approved for Classes I, II and III, Divisions 1 and 2; and Class I, Zones 1 and 2, hazardous locations covered under NEC Articles 501, 502, 503 and 505
- Installed on metal racks, troughs, in raceways, in cable trays or secured to supports spaced no more than 6 feet apart
- Installed in both exposed and concealed work, wet or dry locations, directly buried or embedded in concrete

#### Features:

- Cable meets cold impact at -40°C
- 105°C continuous operating temperature, wet or dry
- 140°C emergency rating
- 250°C short circuit rating

#### Standards:

- UL 1072
- UL 1569
- UL 2225
- UL 1309
- IEEE 383
- IEEE 1202

Part #	AWG	Conductors	Ground AWG	Insulation	Nom	. O.D.	Lbs./M'
Part #	AWG	Conductors	Ground Awd	Thickness	Armor	Overall	LDS./IVI
XMVE30203	2	3	6	.220"	2.15"	2.28"	2473
XMVE31/003	1/0	3	4	.220"	2.32"	2.48"	3190
XMVE32/003	2/0	3	4	.220"	2.40"	2.56"	3630
XMVE34/003	4/0	3	3	.220"	2.62"	2.79"	4435
XMVE325003	250	3	3	.220"	2.75"	2.92"	5086
XMVE335003	350	3	2	.220"	3.03"	3.21"	6445
XMVE350003	500	3	1	.220"	3.32"	3.50"	8376
XMVE375003	750	3	1/0	.220"	3.80"	3.98"	11431

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

CCW<sup>®</sup> is a registered trademark of General Cable.





## Teck 90

## ARMORED CABLE

**TECK 90** 

Control

90°C - 600 Volt - UL Type MC-HL



#### Conductor:

- Bare copper Class B compressed concentric round to ASTM B8

#### Insulation:

- Cross-linked Polyethylene (XLPE)
- Type RW90

#### Armor:

- Aluminum interlocked armor

#### Inner Jacket:

- Lead-free, flame retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC), black

#### Outer Jacket:

 Lead-free, flame retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC), black

#### Ground:

- The conductor consists of one uninsulated stranded bare copper conductor

#### Applications:

- Suitable for use in ventilated, non-ventilated and ladder cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations
- Suitable for use in wet or dry locations when installed in accordance with the NEC

#### Standards:

- UL 1581
- IEEE 383
- IEEE 1202
- Hazardous location rating HL

- OSHA Acceptable

- CSA FT1 & FT4

- CSA Standard C22.2 No. 131 and No. 174

Part #	AWG	Conductors	Insulation	Nom	. O.D.	Lbs./M'	Ground			
Part #	AWG	Conductors	Thickness	Armor	Overall	LDS./IVI	AWG			
			600V, 1	4 AWG						
T31402	14	2	30 mils	.580"	.670"	190	14			
T31403	14	3	30 mils	.600"	.690"	218	14			
T31404	14	4	30 mils	.640"	.720"	246	14			
T31405	14	5	30 mils	.680"	.760"	276	14			
T31407	14	7	30 mils	.740"	.820"	329	14			
T31410	14	10	30 mils	.880"	.960"	450	14			
T31412	14	12	30 mils	.900"	.990"	492	14			
T31415	14	15	30 mils	.960"	1.04"	550	14			
T31420	14	20	30 mils	1.13"	1.21"	745	14			
T31425	14	25	30 mils	1.22"	1.30"	919	14			
600V, 12 AWG										
T31202	12	2	30 mils	.620"	.700"	220	14			
T31203	12	3	30 mils	.650"	.730"	259	14			
T31204	12	4	30 mils	.690"	.770"	290	14			
T31205	12	5	30 mils	.730"	.810"	412	14			
T31207	12	7	30 mils	.830"	.910"	439	14			
T31212	12	12	30 mils	1.01"	1.10"	643	14			
			600V, 1	0 AWG						
T31002	10	2	30 mils	.670"	.750"	276	12			
T31003	10	3	30 mils	.700"	.780"	317	12			
T31004	10	4	30 mils	.740"	.830"	382	12			
T31006	10	6	30 mils	.880"	.960"	515	12			
T31008	10	8	30 mils	.930"	1.02"	637	12			
T31012	10	12	30 mils	1.150"	1.230"	916	12			

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code:

- 4 Conductors or less use the color code chart below

• 5 conductors or more use numbered conductors								
	d conductors	nhered	e n	rei	or mo	ctors	conduc	. 5

Cond. Num.	Color	Cond. Num.	Color	
1	Red	2	Black	
3	Blue	4	White	



ARMORED

#### Teck 90

## ARMORED CABLE TECK 90

Control & Power 90°C - 1000 Volt - UL Type MC-HL



### Conductor:

- Bare copper Class B
- In sizes 6 AWG to 500, the conductors may be compact stranded to reduce cable diameter and weight

#### Insulation:

- Cross-linked Polyethylene (XLPE)
- Type RW90

#### Ground:

- The conductor consists of one uninsulated stranded bare copper conductor

#### Armor:

- Aluminum interlocked armor

#### Inner Jacket

 Lead-free, flame retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC), black

#### **Outer Jacket**

- Lead-free, flame retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC), black

#### Applications:

- Suitable for use in ventilated, nonventilated and ladder cable trays, direct earth burial or raceways, and for exposed or concealed wiring in wet, damp or dry locations
- Suitable for use in wet or dry locations when installed in accordance with the NEC
- Suitable for use in all hazardous locations when used with certified HL cable glands

#### Standards:

- UL 1581
- IEEE 383 and 1202
- OSHA Acceptable
- Hazardous location rating HL
- CSA FT1 & FT4
- CSA Standard C22.2 No. 131 and No. 174

Part #	AWG	Conductors	Insulation	Nom	. O.D.	Lbs./M'	Ground	
Fait#	AWG	Conductors	Thickness	Armor	Overall	LDS./W	AWG	
			11	κV				
T30803	8	3	45 mils	.860"	.940"	482	10	
T30804	8	4	45 mils	.920"	1.00"	570	10	
T30603	6	3	60 mils	1.03"	1.13"	695	8	
T30604	6	4	60 mils	1.04"	1.25"	883	8	
T30403	4	3	60 mils	1.16"	1.25"	950	8	
T30404	4	4	60 mils	1.18"	1.27"	1161	8	
T30203	2	3	60 mils	1.28"	1.37"	1300	6	
T30204	2	4	60 mils	1.45"	1.53"	1568	6	
T31/003	1/0	3	80 mils	1.56"	1.68"	1871	6	
T32/003	2/0	3	80 mils	1.65"	1.77"	2177	6	
T33/003	3/0	3	80 mils	1.75"	1.87"	2619	4	
T34/003	4/0	3	80 mils	1.86"	1.98"	3176	4	
T335003	350	3	90 mils	2.26"	2.40"	4989	3	
T350003	500	3	90 mils	2.52"	2.66"	6706	3	

Note: The data shown are approximate and subject to standard industry and manufacturer tolerances. All information is subject to change or correction without notice. See pages 139 and 140.

#### Color Code:

Cond. Num.	Color	Cond. Num.	Color
1	Black	2	Red
3	Blue	4	White



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## **Copper Conductor and Stranding Data**

Approx.	Lbs. per	Circular	Size AWG/		Cor	centric St	rand			e Lay ric Strand		y Bunch and
O.D.	1,000'	MILS	МСМ	Class AA	Class A	Class B	Class C	Class D	Class G	Class H	Class K 30 AWG	Class M 34 AWG
0.0050	0.0757	25.00	36									
0.0056	0.0954	31.52	35									
0.0063	0.1203	39.75	34									
0.0071	0.1517	50.13	33									
0.0080	0.1913	63.21	32									
0.0089	0.2413	79.70	30									
0.0100	0.3042	100.5	30									
0.0113	0.3836	126.7	29									
0.0126	0.4837	159.8	28									
0.0142	0.6100	201.5	27									
0.0159	0.7692	254.1	26									
0.0179	0.9699	320.4	25									
0.0201	1.223	404.0	24									
0.0226	1.542	509.5	23									
0.0254	1.945	642.4	22									
0.0285	2.452	810.1	21									
0.0363	3.154	1,020	20			7	19				10	26
0.0456	5.015	1,620	18			7	19				16	41
0.0576	7.974	2,580	16			7	19				26	65
0.0726	12.68	4,110	14			7	19	37	49		41	104
0.0915	20.16	6,530	12			7	19	37	49		65	186
0.1160	32.06	10,380	10			7	19	37	49		104	259
0.1600	40.42	13,090	9			7	19	37	49	133		
0.1460	51.00	16,510	8			7	19	37	49	133	168	420
0.1840	80.90	26,240	6			7	19	37	49	133	266	665
0.2320	129	41,740	4	3	7	7	19	37	49	133	420	1,064
0.2600	162	52,620	3	3	7	7	19	37	49	133	532	1,323
0.2990	205	66,630	2	3	7	7	19	37	49	133	665	1,666
0.3320	259	83,690	1	3	7	19	37	61	133	259	836	2,107
0.3730	326	105,600	1/0	7	7	19	37	61	133	259	1,064	2,646
0.4190	411	133,100	2/0	7	7	19	37	61	133	259	1,323	3,325
0.4700	518	167,800	3/0	7	7	19	37	61	133	259	1,666	4,256
0.5280	653	211,600	4/0	7	7	19	37	61	133	259	2,107	5,320
0.5750	772	250,000	250	12	19	37	61	91	259	427	2,499	6,384
0.6300	925	300,000	300	12	19	37	61	91	259	427	2,989	7,581
0.6810	1,080	350,000	350	12	19	37	61	91	259	427	3,458	8,806
0.7280	1,236	400,000	400	19	19	37	61	91	259	427	3,990	10,101
0.8130	1,542	500,000	500	19	37	37	61	91	259	427	5,054	12,691
0.8930	1,850	600,000	600	37	37	61	91	127	427	703	5,985	14,945
0.9980	2,316	750,000	750	37	61	61	91	127	427	703	7,581	18,788
1.152	3,086	1,000,000	1,000	37	61	61	91	127	427	703	10,101	25,193



Conductor	Base Color	1st Tracer	2nd Tracer	Conductor	Base Color	1st Tracer	2nd Tracer
1	Black	-	-	26	Orange	Black	White
2	White	-	-	27	Blue	Black	White
3	Red	-	-	28	Black	Red	Green
4	Green	-	-	29	White	Red	Green
5	Orange	-	-	30	Red	Black	Green
6	Blue	-	-	31	Green	Black	Orange
7	White	Black	-	32	Orange	Black	Green
8	Red	Black	-	33	Blue	White	Orange
9	Green	Black	-	34	Black	White	Orange
10	Orange	Black	-	35	White	Red	Orange
11	Blue	Black	-	36	Orange	White	Blue
12	Black	White	-	37	White	Red	Blue
13	Red	White	-	38	Black	White	Green
14	Green	White	-	39	White	Black	Green
15	Blue	White	-	40	Red	White	Green
16	Black	Red	-	41	Green	White	Blue
17	White	Red	-	42	Orange	Red	Green
18	Orange	Red	-	43	Blue	Red	Green
19	Blue	Red	-	44	Black	White	Blue
20	Red	Green	-	45	White	Black	Blue
21	Orange	Green	-	46	Red	White	Blue
22	Black	White	Red	47	Green	Orange	Red
23	White	Black	Red	48	Orange	Red	Blue
24	Red	Black	White	49	Blue	Red	Orange
25	Green	Black	White	50	Black	Orange	Red

## ICEA Method 1, Table E-1

## ICEA Method 1, Table E-2

Conductor	Base Color	Stripe	Conductor	Base Color	Stripe
1	Black	-	19	Orange	Blue
2	Red	-	20	Yellow	Blue
3	Blue	-	21	Brown	Blue
4	Orange	-	22	Black	Orange
5	Yellow	-	23	Red	Orange
6	Brown	-	24	Blue	Orange
7	Red	Black	25	Yellow	Orange
8	Blue	Black	26	Brown	Orange
9	Orange	Black	27	Black	Yellow
10	Yellow	Black	28	Red	Yellow
11	Brown	Black	29	Blue	Yellow
12	Black	Red	30	Orange	Yellow
13	Blue	Red	31	Brown	Yellow
14	Orange	Red	32	Black	Brown
15	Yellow	Red	33	Red	Brown
16	Brown	Red	34	Blue	Brown
17	Black	Blue	35	Orange	Brown
18	Red	Blue	36	Yellow	Brown

Colors repeat after 36 conductors. No green or white conductors or stripes.

## **ICEA Method 4**

A neutral or single insulation with the conductor numbers printed to provide identification. The sequence repeats after 21 conductors.



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## **Temperature Conversions**

Celsius	Fahrenheit	Celsius	Fahrenheit	Conversion Formula
-40	-40	120	248	
-30	-22	130	266	
-20	-4	140	284	
-10	14	150	302	Celsius to Fahrenheit
0	32	160	320	$F = (C \times 1.8) + 32$
10	50	170	338	
40	104	200	392	
50	122	210	410	
60	140	220	428	Fahrenheit to Celsius
80	176	240	464	C = (F - 32) / 1.8
90	194	250	482	
100	212	450	810	
110	230	538	1000	

## **Comparitive Properties of Insulation Compounds**

Insulation	Silicone	TFE	PVC	XLP	PE	EPR	TPR
Heat Resistance	0	0	G-E	G-E	G	E	G
Oil Resistance	F-G	0	G-E	G	G	F	G
Water Resistance	G-E	E	G-E	E	E	G-E	G
Alkali Resistance	F-G	E	G-E	G-E	G-E	G-E	E
Acid Resistance	F-G	E	G-E	G-E	G-E	G-E	G-E
Electrical Properties	0	E	F-G	E-O	E	E	G
Low Temp. Flexibility	0	0	P-G	G-E	F	G	G
Weather, Sun Resistance	0	0	G-E	E	E	E	G-E
Abrasion Resistance	Р	G	F-G	G-E	F	G	G
Alcohol Resistance	G	E	G-E	G-E	E	Р	E
Flame Resistance	F-G	0	E	Р	Р	Р	G

P - Poor F - Fair G - Good E - Excellent O - Outstanding

## **Comparitive Properties of Jacket Compounds**

Jacket	Neoprene	Teflon	PVC	CSPE	PE	CPE	TPR
Heat Resistance	0	0	G-E	G-E	G	E	G
Oil Resistance	F-G	0	G-E	G	G	F	G
Water Resistance	G-E	E	G-E	E	E	G-E	G
Alkali Resistance	F-G	E	G-E	G-E	G-E	G-E	E
Acid Resistance	F-G	E	G-E	G-E	G-E	G-E	G-E
Electrical Properties	0	E	F-G	E-O	E	E	G
Low Temp. Flexibility	0	0	P-G	G-E	F	G	G
Weather, Sun Resistance	0	0	G-E	E	E	E	G-E
Abrasion Resistance	Р	G	F-G	G-E	F	G	G
Alcohol Resistance	G	E	G-E	G-E	E	Р	E
Flame Resistance	F-G	0	E	Р	Р	Р	G

P - Poor F - Fair G - Good E - Excellent O - Outstanding



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Unless otherwise specified herein, Buyer's order is subject to Omni Cable's applicable Pricing Policies (to be determined in Omni Cable's sole

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Unless otherwise specified herein, pro rata payments are due as shipments are made. If shipments are delayed by Buyer, payments are due from the date when Omni Cable is ready to ship. If fabrication is delayed by Buyer, payment shall be made based on the contract price and percentage of the product completion. Products held for Buyer shall be at the risk of and at the expense of Buyer.

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3. **Taxes.** Sales, use, excise and other taxes, duties and charges imposed by federal, state, local or foreign governments with regard to the manufacture, sale or delivery of the Products are not included in the prices herein and shall be paid timely by Buyer. Buyer must provide any applicable tax exemption certificate acceptable to the appropriate taxing authority prior to shipment.

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Buyer shall inspect the Products immediately upon arrival of the Products at the facilities of Buyer or other consigned destination and, within fifteen days after arrival or stated completion, Buyer shall give written and telephonic notice to Omni Cable detailing any manner (including, but not limited to, shortages or nonconformance) in which the Products fail to conform with the terms contained herein, including but not limited to all applicable specifications and warranties. Buyer shall allow Omni Cable a reasonable time (minimum sixty days) after receipt of written notice to determine whether any nonconformance exists and correct any nonconformance with which Omni Cable concurs, and Buyer shall give full cooperation to Omni Cable in making such determination and correction. Failure by Buyer to give notice within such period shall constitute an irrevocable acceptance of the Products by Buyer, and Buyer shall be bound to pay the purchase price of the Products.

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9. Limitation of Omni Cable's Liability. In no event, whether as a result of breach of contract or warranty, negligence of Omni Cable, or otherwise, shall Omni Cable be liable for direct, indirect, consequential, incidental, punitive, exemplary, statutory, special, or other, or damage to other or related property, arising out of relating to the Products in may way, whether due to breach of express or implied warranty, defects in material or workmanship, negligence or gross negligence, delays in or failures of delivery, or otherwise, including, but not limited to, damages arising from loss of business, loss of profits, business interruption, diminution in value, delay, failure or deficiency or diminution in value of any property or products into or with which the product was/is used or was/is to be used, whether based on contract, tort, strict liability, statute, regulation or otherwise, even if Omni Cable is expressly advised about the possibility of such damages, to the fullest extent allowable by law. Nor, in any event, shall Omni Cable's liability on any claim of any sort or description exceed the price of the Products, or part thereof, which gives rise to the claim.

10. Limitation of Actions. Any action for any loss or damage with respect to the Products covered hereunder must be commenced by Buyer within one year after Buyer's cause of action has accrued, but in no event beyond the period prescribed by the applicable statute of limitations.

Installation. All Products will be installed, used and maintained by and at the risk and expense of Buyer.

Advice and Assistance. Buyer and Buyer's own engineers and other 12. Advice and Assistance. Buyer and Buyer's own engineers and other consultants are in the best position to determine whether the Products are appropriate and safe for Buyer's facilities, purposes, operations or products. Buyer shall rely solely on its own expertise or the expertise of its own engineers or other consultants, and not on any representation or advice of or on behalf of Omni Cable in choosing, purchasing, using or installing the Products. Omni Cable does not provide any architectural, engineering or other professional services to Buyer.

13. Error, Mistake or Assignment. Omni Cable reserves the right to correct any clerical or human error made in the preparation of quotations, orders, acknowledgements or invoices. Corrections shall be considered as binding amendments to the original contract of sale. No agreement is assignable without the prior written consent of Omni Cable. Any attempt to assign any of the rights, duties or obligations of this Agreement without such signed this Agreement, understands it and agrees to be bound by its Terms and Conditione. Conditions

14. **Reels.** Non-returnable wooden/plastic reels are used whenever possible and are normally included in the sales price of the wire. Wooden/plastic reels may be returned to Omni Cable for recycling. Buyer must contact the local Omni Cable sales office for details. Returnable steel reels are loaned for transportation and installation purposes only and remain the property of Omni Cable. Returnable steel reels are not included in the price of wire and shall be charged separately. All returnable steel reels are subject to the following terms:

Deposit: A deposit is required for each returnable steel reel loaned by Omni Cable. Deposits are charged as a separate item and invoiced to the Buyer at shipment. time time of shipment. *Refund of Deposit:* A full refund of Buyer's deposit will be made when steel reels are returned in good condition within one (1) year from date of shipment. Reels returned after one (1) year from date of shipment or in poor condition may be subject to a reduced credit. No steel reels may be returned without a prior written authorization signed by an authorized representative of Omni Cable.

15. Tolerance on Shipping Lengths and Quantity. All Omni Cable products will have shipping tolerances as detailed below, unless otherwise agreed upon prior to receipt of an order: -Authorized Stock Products -0 + 10% -Made-to-Order Products -0 + 10% -Special Orders or Lengths As shown on the quotation and/or acknowledgement

Tolerance percentages are applicable to individual lengths. Customer is responsible for paying any overages within the above tolerances. Claims for shipping shortages must be received in writing by Omni Cable within fifteen (15) days from date of invoice.

16. Certified Test Reports and Certificates of Compliance. The price for Certified Test Reports (CTR's) which includes the cost to perform necessary tests, collect the data, publish the original test report and maintain reports on file for a minimum of five years will be as follows: -No Charge for CTR's requested on the original purchase order prior to or with initial shipment. -\$25.00 For CTR's requested within one (1) year after initial shipment. -\$25.00 For CTR's requested one (1) year or more after initial shipment. A Certificate of Compliance (COC) is included on the packing list of each shipment from an Omni Cable shipping location at no charge. The price per order for a line item COC, which includes the cost to publish a certified, original copy will be as follows: -\$25.00 For CT's requested on the original purchase order prior to or with initial shipment.

-\$75.00 For COC's requested on the original parentse initial shipment. -\$75.00 For COC's requested within one (1) year after initial shipment. -\$150.00 For COC's requested one (1) year or more after initial shipment.

17. **Indemnification.** Buyer shall defend and indemnify Omni Cable, its directors, officers, employees, distributors and agents, and hold them harmless, from all claims, liabilities, losses, damages and expenses, including but not limited to attorneys fees and costs of defense, for or based upon, in whole or in part, personal injury, property damage or other damages, to Buyer or anyone else, arising from or caused by, in whole or in part, any actual or alleged (a) the installation, use or maintenance of the Products by Buyer or anyone other than Omni Cable itself; (b) the failure of Buyers or others to install, use or maintain the Products properly or otherwise in accordance with the specifications, instructions, warnings or recommendations furnished by Omni Cable, or applicable laws and regulations, including but not limited to the Occupational Safety and Health Act of 1970, as amended, or Mine Safety and Health Act, as amended, (c) change or modification to Products by Buyer or anyone other than Omni Cable, (d) the sole or contributing negligence, gross negligence or intentional conduct of, or other acts or omissions of, Buyer, its contractors, officers, agents, employees or invitees. Buyer hereby waives and releases Omni Cable from all rights of contribution or indemnity to which it may otherwise be entitled. Without limitation on any other provision hereof, Buyer waives and releases all claims against Omni Cable to the extent of any proceeds of insurance. Buyer receives directly or on its account or to which it is or becomes entitled, from any source, including without limitation its own insurance, and waives and releases all rights of subrogation it or its insurance carrier or any other party may otherwise have as against Omni Cable.

as against Omni Cable. **Governing Law; Miscellaneous.** This contract shall be governed by the laws of the Commonwealth of Pennsylvania and the Uniform Commercial Code as adopted and in force in the Commonwealth of Pennsylvania on the date hereof, without regard to conflict of law rules. Buyer hereby consents to jurisdiction and venue in any federal or state court in the Commonwealth of Pennsylvania. Captions used herein are for convenience only and have no substantive significance. Buyer's obligations hereunder shall not be severable or divisible, notwithstanding the acceptance of, or payment for, partial delivery or any authorization of installment deliveries. No delay or failure on the part of Omni Cable in exercising any right or remedy with respect to the sale and no partial or single exercise thereof shall constitute a waiver of any such or any other right or remedy. If any term hereof shall be illegal, void or unenforceable, the remaining terms and conditions shall continue in full force and effect. All rights and remedies of Omni Cable with respect to the sale shall be cumulative and not exclusive and shall be in addition to all other rights at law or in equity, whether set forth herein or not. Buyer shall reimburse Omni Cable for Omni Cable shall recover from Buyer all attorneys' fees and other expenses incurred by or on behalf of Omni Cable in its enforcement of any rights hereunder. In the event of any conflict between printed terms herein and terms typed, written or stamped by Omni Cable, the latter shall govern. Any notice to Omni Cable, 2 Hagerty Blvd, West Chester, PA 19382, by fax to 610-701-0199 with confirmation by Omni Cable of receipt, or by dectronic mail to <u>info@omnicable.com</u> with confirmation by Omni Cable of receipt, or otherwise as Omni Cable may designate. No modification, amendment, rescission, discharge, abandonment, substitution or waiver of the sale or these Terms shall be binding upon Omni Cable unless signed by Omni Cable. Time is of the essence with r





## Industrial

Automation Cables Industrial Networking & Protocol Cables Control Cables Tray Cables Instrumentation Cables Variable Frequency Drive Cables (VFD)

## Classics

## Coax

Multi-conductor - shielded & non-shielded Paired - shielded and non-shielded Hook-up / Lead Wire Composite Cables Twinaxial / Triaxial Cables

## **Networking Copper Cable**

UTP Cables Cat 5e & 6 Cables Datatwist<sup>®</sup> Cross-Connect Wires SCSI Paired Cables Wireless, Outdoor LAN, Wi-Fi

## **Industrial Ethernet**

Category 5e Cables Category 6 Cables Fiber Optic Cables

## IMSA

19-1 / 20-1 Traffic Signal Cable Lead-In Wire Loop Wire

## **New Generation®**

Access Control Cables Circuit Integrity (CI) Cables Communication & Control Cables Fire Alarm Cables Security & Alarm Cables Thermostat & Control Cables Alarm & Security Cables Audio / Video Cables Data & Voice Cables HDMI

## **Networking Optical Fiber Cables**

Indoor, Indoor/Outdoor, Outdoor Cables Single-mode & Multi-mode Cables Tight Buffer & Loose Tube Industrial Armored Cables

## Portable Cordage (Service)

SEO - Elastomer with Oil-Resistant Jacket
SJ - Junior
SPT - Parallel Thermoplastic
STO - Thermoplastic with Oil-Resistant Jacket
SVT - Vacuum Thermoplastic

## **Brilliance® Broadcast**

Audio Cables Video Cables AV Cables Digital AV Cables Microphone & Instrument Cables Speaker Wire & Cables Video Security Cables Wireless, Wi-Fi



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2014 Industrial Catalog



Power & Control THHN / PVC - Tray Cable XLP / PVC & CPE - Tray Cable FR-EP / CPE - Tray Cable Medium Voltage (5kV - 69kV) Shielded Constructions Various Custom Constructions Instrumentation POS and SPOS constructions TOS and STOS constructions THHN / PVC XLP / PVC XLP / CPE FR-EP / CPE 300 Volt PLTC 600 Volt TC Custom constructions/insulation/jackets available Portable Cords SO / SOOW, 2-50 Conductor Type G, GG-C, SHD-GC Type W **Bus Drop** Flexible Cables **Diesel Locomotive - DLO** Welding Cable VFD – 3 and 4 Conductor Jumper Cable – 5kV to 15kV SDN<sup>®</sup> – Reel & Pendant Alpha Wire / Lutze / LAPP USA High-Temp Lead Wires SF-2, SFF-2 in colors (UL 150°C-200°C) TGGT (UL 250°C) MG (UL 450°C) SRML, SRG, SRK, SRGT (UL 150°C-200°C) Teflon-E, EE, K, KK, PFA, Tefzel® (UL 150°C-200°C) Super High Temp Cables (UL 450°C/Non-UL 980°C) Hook-up PVC Hook-up wire (UL 1007, UL 1015, UL 1061) Irradiated PVC Hook-up wire (UL 1429, UL 1430, UL1431) Neoprene Lead Wire (UL 3044, UL 3046, UL 3048) Military Spec (M16878, M22759) Harmonized PVC Hook-up EPDM SIS – VW-1 – All colors Fiber Optics Indoor, Indoor/Outdoor, Outdoor Plenum and Riser Tight Buffer and Loose Tube Multi-mode and Single-mode Armored

Bare and Tinned Copper Stranded – Tinned and Bare Solid – Tinned and Bare Armored Cables - 600V, 5kV, 15kV Aluminum Interlocked Armor - PVC or Non-PVC jacketed Teck 90 – CSA – Control and Instrumentation **Continuous Corrugated Weld** Aluminum Cable ACSR Aluminum Conductor, Steel Reinforced Primary URD TR-XLP 15kV/25kV/35kV **XLP Triplex Service Drop Cable** XLP Triplex / Quadraplex Secondary URD Sound, Security and Alarm Thermostat Plenum, CL2P, CMP Coax - RG59, RG6, RG6 Quad Fire Alarm – FPLR, FPLP – Article 725, 760, 800 2-Hour Fire Rated Circuit Integrity (CI, CIC, RHW) Crestron / Lutron Equals **IMSA** 19-1 and 20-1 Traffic Signal Cable 50-2 Lead-In 51-1, 51-3, 51-5 Loop Detector Telephone Indoor / Outdoor High Speed Data – Cat5e, Cat6 (350-550MHz) **Direct Burial** Aerial Figure 8 **Building Wire** TFFN / TFN - Solid or Stranded THHN / THWN - Solid or Stranded XLP / USE THW XHHW-2 / XHHW-2 CT **Cathodic Protection** Photovoltaic Cable Accessories Fittings – Tray, Portable Cord, Armor **Medium Voltage Splices** Medium Voltage Terminations Lugs for MV Terminations **Crimp Connectors for MV Splices** Value Added Services Striping Dyeing Twisting Bundling **Custom Constructions** 







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