Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

9767 Multi-Conductor - CM Rated Cable

Description:

22 AWG stranded (7x30) TC conductor, polypropylene insulation, twisted pairs individually shielded with Beldfoil® (100% coverage), overall PVC jacket and 22 AWG stranded TC drain wire.

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material	Dia. (in.)
37	22	7x30	TC - Tinned Copper	.030

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
PP - Polypropylene	.050

Inner Shield

Inner Shield Material:

Inner Shield Trade Name	Type	Inner Shield Material	Coverage (%)
Beldfoil® (Z-Fold®)	Tape	Aluminum Foil-Polyester Tape	100

Inner Shield Drain Wire AWG:

AWG
22

Inner Shield Drain Wire Stranding: Stranded

Inner Shield Drain Wire Conductor Material: TC - Tinned Copper

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling

Overall Nominal Diameter: 0.800 in.

Pair

Pair Color Code Chart:

Number	Color
1	Black & Red
2	Black & White
3	Black & Green
4	Black & Blue
5	Black & Yellow
6	Black & Brown
7	Black & Orange
8	Red & White
9	Red & Green

10	Red & Blue
11	Red & Yellow
12	Red & Brown
13	Red & Orange
14	Green & White
15	Green & Blue
16	Green & Yellow
17	Green & Brown
18	Green & Orange
19	White & Blue
20	White & Yellow
21	White & Brown
22	White & Orange
23	Blue & Yellow
24	Blue & Brown
25	Blue & Orange
26	Brown & Yellow
27	Brown & Orange
28	Orange & Yellow
29	Purple & Orange
30	Purple & Red
31	Purple & White
32	Purple & Green
33	Purple & Blue
34	Purple & Yellow
35	Purple & Brown
36	Purple & Black
37	Gray & White

Pair Lay Length & Direction:

Lay Length (in.)	Twists/ft. (twist/ft)
1.750	6.850

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2919)
Bulk Cable Weight:	416.300 lbs/1000 ft.
Max. Recommended Pulling Tension:	368 lbs.
Min. Bend Radius (Install)/Minor Axis:	8.400 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CM
CEC/C(UL) Specification:	CM
AWM Specification:	UL Style 2919 (30 V 80°C)
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Flame Test

UL Flame Test:	UL1685 UL Loading

Plenum/Non-Plenum

Plenum (Y/N):	No

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
50

Nom. Inductance:

Inductance (µH/ft)
0.18

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
30

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)
55

Nominal Velocity of Propagation:

VP (%)
66

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
15

Ind. Pair Nominal Shield DC Resistance @ 20 Deg. C:	10.600 Ohm/1000 ft

Max. Operating Voltage - UL:

Voltage
30 V RMS (UL AWM Style 2919)
300 V RMS (CM)

Max. Recommended Current:

Current
1 Amp per conductor @ 25°C

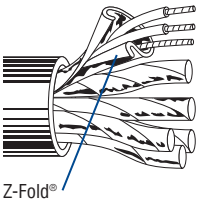
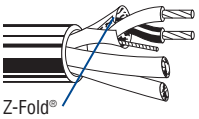
Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9767 0601000	1,000 FT	458.000 LB	CHROME	C D	37 FS PR #22 HDPE PVC
9767 060500	500 FT	212.500 LB	CHROME	C D	37 FS PR #22 HDPE PVC

Notes:
C = CRATE REEL PUT-UP.
D = FINAL PUT-UP LENGTH MAY VARY -0% TO +20% FROM LENGTH SHOWN.

Individually Shielded

Audio, Control and Instrumentation Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Nom. DCR Cond.	Nom. DCR Shield	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance * pF/ Ft.	Nom. Capacitance * pF/ m	Nom. Capacitance ** pF/ Ft.	Nom. Capacitance ** pF/ m
22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Individually Shielded w/Beldfoil® (100% Coverage) • 22 AWG Stranded TC Drain Wire																		
Polypropylene Insulation • Chrome PVC Jacket																		
UL AWM Style 2919 (30V 80°C)  Z-Fold®	**8777**	NEC: CM CEC: CM	3	See Chart 3 (Tech Info Section)	100 250 U-500 500 U-1000 1000 1640 3280 5000 10000 ††	30.5 76.2 U-152.4 152.4 U-304.8 304.8 499.9 999.7 1524.0 3048.0	4.7 10.0 21.0 20.0 41.0 44.0 70.5 141.0 215.0 460.0	2.1 4.5 9.5 9.1 18.6 20.0 32.0 64.0 97.6 208.8	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.273	6.93	50	66%	30	98	55	180
	8778	NEC: CM CEC: CM	6	See Chart 3 (Tech Info Section)	100 250 500 1000	30.5 76.2 152.4 304.8	8.4 19.0 43.0 83.0	3.8 8.6 19.5 37.7	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.362	9.19	50	66%	30	98	55	180
	8774	NEC: CM CEC: CM	9	See Chart 3 (Tech Info Section)	100 250 500 1000	30.5 76.2 152.4 304.8	11.5 29.5 57.5 113.0	5.2 13.4 26.1 51.3	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.417	10.59	50	66%	30	98	55	180
	8775	NEC: CM CEC: CM	11	See Chart 3 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	12.1 65.5 130.0	5.5 29.7 59.0	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.464	11.79	50	66%	30	98	55	180
	9768	NEC: CM CEC: CM	12	See Chart 3 (Tech Info Section)	100 250 500 1000	30.5 76.2 152.4 304.8	13.2 36.5 73.5 143.0	6.0 16.5 33.4 65.0	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.464	11.79	50	66%	30	98	55	180
	8776	NEC: CM CEC: CM	15	See Chart 3 (Tech Info Section)	100 250 500 1000	30.5 76.2 152.4 304.8	17.8 49.5 98.0 197.0	8.1 22.5 44.5 89.5	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.548	13.92	50	66%	30	98	55	180
	9769	NEC: CM CEC: CM	17	See Chart 3 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	20.0 109.0 215.0	9.1 49.5 97.7	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.577	14.66	50	66%	30	98	55	180
	8769	NEC: CM CEC: CM	19	See Chart 3 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	22.9 123.0 244.0	10.4 55.8 110.8	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.603	15.32	50	66%	30	98	55	180
	8773	NEC: CM CEC: CM	27	See Chart 3 (Tech Info Section)	100 250 † 500 1000	30.5 76.2 152.4 304.8	33.9 83.8 163.0 341.0	15.4 38.0 74.0 154.8	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.709	18.00	50	66%	30	98	55	180
	9767	NEC: CM CEC: CM	37	See Chart 3 (Tech Info Section)	500 † 1000 †	152.4 304.8	224.0 481.0	101.8 218.6	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.800	20.32	50	66%	30	98	55	180
Polypropylene Insulation • Black Low-Smoke, Zero-Halogen Jacket																		
U300V RMS, Non-conduit  Z-Fold®	**8777SB** new	NEC: CMG-LS CEC: CMG-LS FT4 Limited Smoke	3	See Chart 3 (Tech Info Section)	U-500 † U-1000 1000 †	U-152.4 U-304.8 304.8	19.5 38.0 39.0	8.9 17.3 17.7	15.0Ω/M′ 49.2Ω/km	10.6Ω/M′ 34.8Ω/km	.273	6.93	50	66%	30	98	55	180

DCR = DC Resistance • TC = Tinned Copper

See Attenuation, Rise Time and Bit Rate Data for this series on page 5.39.

*Capacitance between conductors.
**Capacitance between one conductor and other conductors connected to shield.

† Spools are one piece, but length may vary -0 to +20% from length shown.
†† Final put-up length may vary -10% to +20% from length shown. May contain 2 pieces. Minimum length of any one piece is 1500 ft.

For Plenum versions of 8777, see 88777, 87777 or 82777.

For Plenum versions of 8778, see 88778, 87778 or 82778.