

9681 Multi-Conductor - Low Capacitance Cable for EIA RS-232/422 Applications



Description:

24 AWG stranded (7x32) TC conductors, polyethylene insulation, twisted pairs, overall Beldfoil shield (100% coverage), 24 AWG stranded TC drain wire, PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	24	7x32	TC - Tinned Copper

Insulation

Insulation Material:

Insulation Material
PE - Polyethylene

Outer Shield

Outer Shield Material:

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

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire	Conductor Material
24	7x32		TC - Tinned Copper

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling

Overall Nominal Diameter: 0.307 in.

Pair

Pair Color Code Chart:

Number	Color
1	White/Blue & Blue/White
2	White/Orange & Orange/White
3	White/Green & Green/White
4	White/Brown & Brown/White

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +80°C
Non-UL Temperature Rating:	80°C (UL AWM Style 2919)
Bulk Cable Weight:	40.900 lbs/1000 ft.
Max. Recommended Pulling Tension:	44 lbs.
Min. Bend Radius (Install)/Minor Axis:	3 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

9681 Multi-Conductor - Low Capacitance Cable for EIA RS-232/422 Applications

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
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Plenum/Non-Plenum

Plenum (Y/N):	No
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Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)

100

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)

15.5

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)

27.5

Nominal Velocity of Propagation:

VP (%)

66

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

24

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

14.4

Max. Operating Voltage - UL:

Voltage

30 V RMS (UL AWM Style 2919); 300 V RMS

Max. Recommended Current:

Current

2.1 Amps per conductor @ 25°C

Put Ups and Colors:

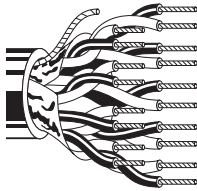
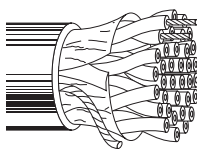
Item #	Putup	Ship Weight	Color	Notes	Item Desc
9681 0601000	1,000 FT	43.000 LB	CHROME	C	4 PR #24 PER FS PVC
9681 060500	500 FT	23.000 LB	CHROME	C	4 PR #24 PER FS PVC

Notes:

C = CRATE REEL PUT-UP.

Overall Beldfoil® Shield

Low-Capacitance Computer Cables for EIA RS-232 and EIA RS-422 Applications

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Nom. DCR		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance			
					Ft.	m	Lbs.	kg	Cond.	Shield	Inch	mm			* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m
24 AWG Stranded (7x32) TC Conductors • Twisted Pairs • Overall Beldfoil Shield (100% Coverage) • 24 AWG Stranded TC Drain Wire																		
Polyethylene Insulation • Chrome PVC Jacket																		
 UL AWM Style 2919 (30V 80°C)	9680	NEC: 3 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	17.0 38.0	7.7 17.3	24.0Ω/M' 78.7Ω/km	14.4Ω/M' 47.2Ω/km	.282 7.16	100	66%	15.5	50.8	27.5	90.2		
	9681	NEC: 4 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	24.0 45.0	10.9 20.5	24.0Ω/M' 78.7Ω/km	14.4Ω/M' 47.2Ω/km	.307 7.80	100	66%	15.5	50.8	27.5	90.2		
	9682	NEC: 6 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	29.5 56.0	13.4 25.5	24.0Ω/M' 78.7Ω/km	13.1Ω/M' 43.0Ω/km	.342 8.69	100	66%	15.5	50.8	27.5	90.2		
	9683	NEC: 9 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	38.0 79.0	17.2 35.9	24.0Ω/M' 78.7Ω/km	12.0Ω/M' 39.4Ω/km	.397 10.10	100	66%	15.5	50.8	27.5	90.2		
	9684	NEC: 12.5 CM CEC: CM	(12 prs.+ 1 single) See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	49.5 97.0	22.6 44.1	24.0Ω/M' 78.7Ω/km	12.0Ω/M' 39.4Ω/km	.445 11.30	100	66%	15.5	50.8	27.5	90.2		
Datalene® Insulation • Chrome PVC Jacket																		
 UL AWM Style 2919 (30V 80°C)	1419A	NEC: 2 CM CEC: CM FT1	See Chart 5 (Tech Info Section)	500 1000 10000	152.4 304.8 3048.0	13.5 30.0 310.0	6.1 13.6 140.9	24.0Ω/M' 78.7Ω/km	15.1Ω/M' 49.5Ω/km	.248 6.30	100	78%	13	42.7	22	72		
	1420A	NEC: 3 CM CEC: CM FT1	See Chart 5 (Tech Info Section)	500 1000 10000	152.4 304.8 3048.0	15.0 34.0 340.0	6.8 15.5 154.5	24.0Ω/M' 78.7Ω/km	15.1Ω/M' 49.5Ω/km	.261 6.63	100	78%	13	42.7	22	72		
	1421A	NEC: 4 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	16.5 37.0	7.5 16.8	24.0Ω/M' 78.7Ω/km	14.4Ω/M' 47.2Ω/km	.280 7.11	100	78%	13	42.7	22	72		
	1422A	NEC: 5 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	23.0 43.0	10.5 19.5	24.0Ω/M' 78.7Ω/km	14.4Ω/M' 47.2Ω/km	.294 7.47	100	78%	13	42.7	22	72		
	1423A	NEC: 6 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000 10000	152.4 304.8 3048.0	25.0 48.0 500.0	11.4 21.8 227.3	24.0Ω/M' 78.7Ω/km	13.0Ω/M' 42.7Ω/km	.319 8.10	100	78%	13	42.7	22	72		
	1424A	NEC: 12.5 CM CEC: CM	(12 prs.+ 1 single) See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	43.0 85.0	19.5 38.6	24.0Ω/M' 78.7Ω/km	13.0Ω/M' 42.7Ω/km	.418 10.62	100	78%	13	42.7	22	72		
1425A	NEC: 15 CM CEC: CM	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	53.0 99.0	24.1 45.0	24.0Ω/M' 78.7Ω/km	11.2Ω/M' 36.7Ω/km	.473 12.01	100	78%	13	42.7	22	72			

DCR = DC Resistance • TC = Tinned Copper

*Capacitance between conductors.

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

Datalene insulation features include low dielectric constant and a dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.