

Detailed Specifications & Technical Data



7876S Composite - Composite Data, Audio, Video, Security and Control Cable

	<p>For more information please call 1-800-Belden1</p> <p><u>See Put-ups and Colors</u></p>
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Description:

Banana Peel™ Composite - (2) Cat 5e 4-bonded-pairs. 24 AWG unshielded plus (2) Series 6 Coax with Duobond Plus® Bonded Tri-shield. Polyolefin Insulation on the pairs; Gas-injected FPE Insulation on the coax, F-R PVC jacket. No overall jacket.

PHYSICAL CHARACTERISTICS:

COAX:

COAX CONDUCTOR :	
Number of Coax	2
Series Type (Single Coax)	Series 6

COAX CONDUCTOR :	
Coax AWG	18
Coax Stranding	Solid
Coax Conductor Diameter	.040 in.
Coax Conductor Material	BC - Bare Copper

COAX INSULATION :	
Coax Insulation Material	Gas-injected FPE - Foam Polyethylene
Coax Insulation Diameter	.180 in.

COAX SHIELD :	
Coax Shield Material Trade Name	Duobond Plus®
Coax Shield Type	Tape/Braid/Tape

Coax Shield Material :

Layer Number	Trade Name	Type	Material	Coverage (%)
1	Bonded Duofoil®	Tape	Bonded Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	AL-Aluminum	80
3		Tape	Bonded Aluminum Foil-Polyester Tape with Shorting Fold	100

Coax Shield % Coverage	100 %
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COAX INNER JACKET :	
Coax Inner Jacket Material	PVC - Polyvinyl Chloride
Coax Inner Jacket Diameter	.275 in.

TWISTED PAIR CABLE(S):

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TWISTED PAIR CABLE CONDUCTOR :

Number of Pairs	8
Twisted Pair AWG	24
Twisted Pair Stranding	Solid
Twisted Pair Conductor Diameter	.020 in.
Twisted Pair Conductor Material	BC - Bare Copper

TWISTED PAIR CABLE INSULATION :

Twisted Pair Insulation Material	PO - Polyolefin
Twisted Pair Nom. Insulation Wall Thickness	.009 in.
Twisted Pair Insulation Diameter	.035 in.

PAIR:

Pair Color Code Chart :

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

TRIAD:

INNER SHIELD :

Triad Inner Shield Material	Unshielded
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INNER JACKET :

Triad Inner Jacket Material	PVC - Polyvinyl Chloride
Triad Inner Jacket Diameter	.200 in.

OVERALL CABLING:

Overall Cabling Color Code Chart :

Number	Color
1	Cat 5e - Blue
2	Coax - Black
3	Cat 5e- Green
4	Coax - White

OUTER SHIELD:

Outer Shield Material	Unshielded
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OUTER JACKET:

Outer Jacket Material	Unjacketed
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OVERALL CABLING:

Overall Nominal Diameter	.550 in.
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MECHANICAL CHARACTERISTICS:

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Operating Temperature Range	-10°C To +75°C
Bulk Cable Weight	120 lbs/1000 ft.
Max. Recommended Pulling Tension	262 lbs.
Min. Bend Radius (Install)	4 in.

APPLICABLE SPECIFICATIONS AND AGENCY COMPLIANCE:

APPLICABLE STANDARDS:

NEC/(UL) Specification	CMR
CEC/C(UL) Specification	CMG
IEC Specification	ISO/IEC 11801, Category 5
TIA/EIA Specification	ANSI/TIA/EIA-568-B.2, Category 5e
Other Specification	NEMA WC-63.1, Category 5e

FLAME TEST:

UL Flame Test	UL1666 Riser
C(UL) Flame Test	FT4

PLENUM/NON-PLENUM:

Plenum (Y/N)	N
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ELECTRICAL CHARACTERISTICS:

COAX:

Coax Nom. Characteristic Impedance	75 Ohms
Coax Nom. Inductance	.097 µH/ft
Coax Nom. Capacitance Conductor to Shield	16.2 pF/ft
Coax Nominal Velocity of Propagation	83 %
Coax Nominal Delay	1.2 ns/ft
Coax Nom. Conductor DC Resistance @ 20 Deg. C	6.4 Ohms/1000 ft
Coax Nominal Shield DC Resistance	4.6 Ohms/1000 ft

Coax Typical Structural Return Loss :

Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Typical Structural Return Loss (dB)
		5	2250	15

Coax Nom. Attenuation :

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Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Nom. Attenuation (dB/100 ft.)
	5			0.5
	55			1.4
	211			2.6
	500			4.1
	750			5.1
	862			5.5
	1000			6.0
	1450			7.9
	1800			8.4
	2250			10.1

Coax Max. Attenuation :

Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Max. Attenuation (dB/100 ft.)
	5			.67
	55			1.60
	211			3.02
	500			4.72
	750			5.83
	862			6.27
	1000			6.78
	1450			8.30
	1800			9.30
	2250			10.60

Coax Max. Operating Voltage - UL 350 V RMS

Coax Shield Effectiveness :

Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Shield Effectiveness (dB)
		5	50	105
		50	1000	125

Coax Other Electrical Characteristic 1 Coax Sweep Tested to 2.25 GHz.

PAIRS AND/OR MULTICONDUCTOR:

Nom. Mutual Capacitance	15 pF/ft
Maximum Capacitance Unbalance (pF/100 m)	330.0 pF/100 m
Nominal Velocity of Propagation	70 %
Maximum Delay (ns/100 m)	538 ns/100 m
Maximum Delay Skew (ns/100 m)	45 ns/100 m
Maximum Conductor DC Resistance @ 20 Deg. C	9.38 Ohms/100 m
Maximum DCR Unbalanced	5.0 %
Max. Operating Voltage - UL	300 V RMS
Other Maximum Continuous Currents	1.4 Amps Per Conductor @ 25°C
Other Electrical Characteristic 1	Third party verified to TIA/EIA-568-B.2, Category 5E

ELECTRICAL CHARACTERISTICS - PREMISE:

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Premise Cable Electricals Table 1 :

Frequency (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACR (dB)	Min. PSACR (dB)	Min. Return Loss (dB)	Min. Structural Return Loss (dB)
1.0	2.0		62.3		60	20.0	
4.0	4.1		53.3		49	23.0	
8.0	5.8		48.8		43	24.5	
10.0	6.5		47.3		41	25.0	
16.0	8.2		44.3		36	25.0	
20.0	9.3		42.8		34	25.0	
25.0	10.4		41.3		31	24.3	
31.25	11.7		39.9		28	23.6	
62.5	17.0		35.4		19	21.5	
100	22.0		32.3		11	20.1	

Premise Cable Electricals Table 2 :

Frequency (MHz)	Input (Unfitted) Impedance (Ohms)	Fitted Impedance (Ohms)	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1.0	100 +/- 15%			60.8
4.0	100 +/- 15%			48.7
8.0	100 +/- 15%			42.7
10.0	100 +/- 15%			40.8
16.0	100 +/- 15%			36.7
20.0	100 +/- 15%			34.7
25.0	100 +/- 15%			32.8
31.25	100 +/- 15%			30.9
62.5	100 +/- 15%			24.8
100	100 +/- 15%			20.8

NOTES:

Notes

Overall jacket sequentially marked.

PUT-UPS AND COLORS:

Item	Description	Put-Up (ft.)	Ship Weight (lbs.)	Jacket Color	Notes
7876S 0001000	BONDED FILLER COMPOSITE	1000	126	NONE	C
7876S 000500	BONDED FILLER COMPOSITE	500	66	NONE	C

C = CRATE REEL PUT-UP.

Revision Number: 1

Revision Date: 08-15-2003

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