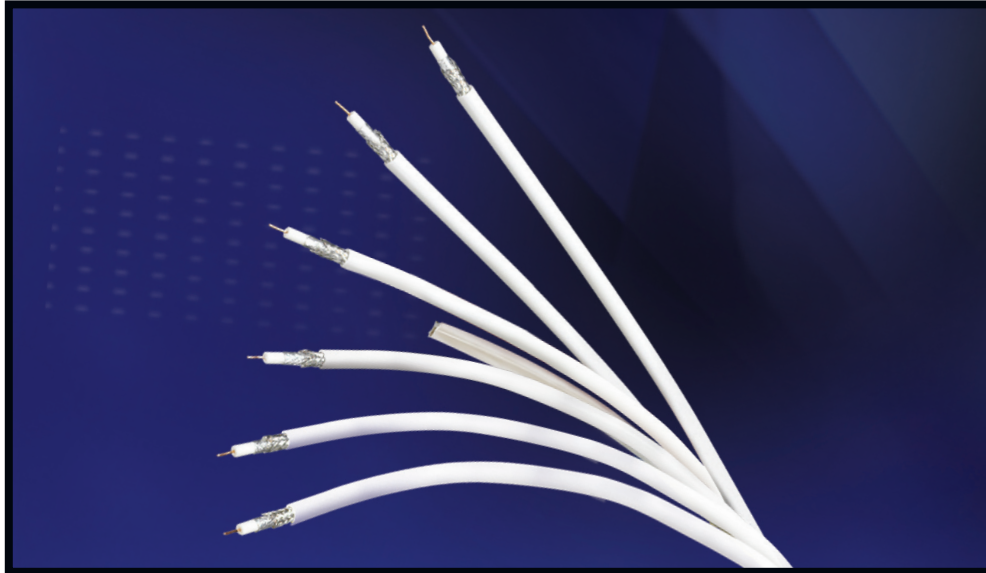


NP 291

### **Banana Peel® Plenum DS-3 and DS-4 Coax Cables**

Belden® DS-3 and DS-4 coax bundles meet the requirements of Telcordia GR-139-CORE and feature Belden's patented Banana Peel composite cable construction to reduce installation time/labor.



### **Belden Introduces a New Series of Coax Composites Specifically Designed for Central Office and Data Center Digital Signal (DS) Interconnect and Cross-connect Applications**

Belden, the cable technology leader in high-speed data transmission, introduces new plenum DS-3 and DS-4 coax cables for use in telco and data center networks, as well as other large and complex installations.

The great ease-of-installation of these new bundled coax products is derived from Belden's proprietary Banana Peel construction. They are available in two sizes, 23 AWG (735A plenum-rated) and 20 AWG (734A plenum-rated), each size offered in a 3-count and a 6-count configuration. Both sizes are UL-approved and all of the new cables conform to the requirements of Telcordia GR-139-CORE.

#### **DS-3 and DS-4 Transmission Formats**

Digital Signal Level 3 (DS-3) and Level 4 (DS-4) are the transmission formats used in telephone equipment to carry traffic in Central Office facilities. DS-3 is a signal capable of 672 multiplexed voice channels, or 28 T-1s. DS-3 systems operate at a transmission rate of 44.736 Mb/s and a frequency of 22.368 MHz. DS-4 has a channel capacity of 4,032 voice channels, a transmission rate of 274,176 Mb/s, and a frequency of 137.088 MHz.

#### **DS-3 and DS-4 Cables**

Telcordia GR-139-CORE (Generic Requirements for Central Office Coaxial Cable) is the standard that contains and defines the requirements for coax cable utilized in DS-3 and DS-4 systems. 734A\* and 735A\* are industry references for coax made for central office applications.

#### **Cross-connect or Interconnect Applications**

Cross-connect or interconnect applications are those within a DSX. A DSX frame is an array of equipment operating at a particular digital transmission rate. Interconnect cables carry signals between a DSX and a multiplexer or other transmission equipment. Digital Multiplexers (MUX) combine and de-combine individual voice channels for transmission or distribution. DS-3 and DS-4 signals are also carried within and between patch panels, transmitters, receivers and telephone switches.

#### **Belden's Banana Peel Feature Means Time and Labor Savings**

The proprietary Banana Peel construction in Belden's new network coax decreases labor time and costs by dispensing with the outer

\*Lucent Technologies reference specification. Belden equivalent.

jacket, thereby eliminating a whole step in the termination process. You simply peel the individual cables off the center spline and terminate.

With no overall jacket, the composite has a smaller OD, especially as compared to that of similarly bundled cables. This is a critical factor in tight or densely-packed plenum spaces. The cable's bend radius is also improved, making it possible to use a smaller-sized conduit. Bundled coax cables are notoriously stiff, especially when rated for plenum use, and the jackets of traditional CMP-rated cables are also difficult to strip for termination. However, Belden's Banana Peel feature overcomes both of these drawbacks.

With no overall jacket, Belden's coax bundles are markedly more flexible than overall jacketed versions. And instead of using a fluoropolymer jacket that makes

the individual coaxes difficult to dress, Belden's new plenum-rated central office cables have PVC Flamarrest individual jackets that are much easier to strip and terminate.

### Features

- Manufactured and tested to meet Telcordia GR-139-CORE
- Silver-plated copper conductor where specified
- UL listed to NEC and CEC Type CMP
- Belden's proprietary Banana Peel cable construction enables a smaller outer diameter by eliminating the jacket

### Benefits

- Consumes less space in equipment closets, equipment racks – wherever cable density is high


- Compatible with standard connectors
- Suitable for NEC installations
- Banana Peel construction means faster installation, money savings and space savings in the plenum; no need to pull several cables individually

### Applications


- Plenum cable runs in telco central office facilities; as telcos deliver more TV to the home, cable upgrades in the central office will be required
- Plenum wiring in data center facilities
- Various other data/telecom cable runs requiring DS-3/DS-4 signaling

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
				Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	Stand. Signal (Mb/s)	MHz	dB/ 100 Ft.

**23 AWG Solid .016" (.40 mm) Silver-plated Copper Conductor(s) • Belfoil® (100% Coverage) + Tinned Copper Braid Shield (93% Coverage)**

Plenum • Foam FEP Insulation • White Flamarrest® Jacket																						
	735AS3P	NEC:	3	500	152.4	25.5	11.3	23 AWG	0.77	1.96	Beldfoil	.280	7.11	75	76%	17.7	58.0	CEPT-1	1.0	.6	2.0	
		CMP	1000	304.8	47.9	21.4	(solid)		Coax OD:	+93% TC									CEPT-2	4.2	1.1	3.6
		CEC:					.016"	.129	3.28	Braid								100% Sweep tested.	20	10.0	1.7	5.6
		CMP FT6					SPC			5.3Ω/M'								RL: 30dB min. at	CEPT-3	17.2	2.2	7.2
							41.0Ω/M'			17.4Ω/km								15 MHz to 95 MHz.	DS-3	22.4	2.5	8.2
							134.5Ω/km												STS-1	25.9	2.7	8.9
																			89.472	44.7	3.6	11.8
	735AS6P	NEC:	6	500	152.4	52.9	24.1	23 AWG	0.77	1.96	Beldfoil	.405	10.29	75	76%	17.7	58.0	CEPT-4	69.6	4.5	14.8	
		CMP	1000	304.8	106.0	48.3	(solid)		Coax OD:	+93% TC									STS-3	77.8	4.8	15.7
		CEC:					.016"	.129	3.28	Braid									200	100.0	5.5	18.0
		CMP FT6					SPC			5.3 Ω/M'									DS-4	137.1	6.4	21.0
							41.0Ω/M'			17.4 Ω/km									400	200.0	7.8	25.6
							134.5Ω/km															

**20 AWG Solid .032" (.81 mm) Bare Copper Conductor(s) • Belfoil® (100% Coverage) + Tinned Copper Braid Shield (85% Coverage)**

Plenum • Foam FEP Insulation • White Flamarrest® Jacket																						
	734AS3P	NEC:	3	500	152.4	63.0	28.7	20 AWG	.148	3.76	Beldfoil	.475	12.00	75	80%	16.8	55.1	CEPT-1	1.0	.6	2.0	
		CMP	1000	304.8	116.4	53.1	(solid)		Coax OD:	+85% TC									CEPT-2	4.2	1.1	3.6
		CEC:					.032" BC	.215	5.46	Braid								100% Sweep tested.	20	10.0	1.7	5.6
		CMP FT6					10.0Ω/M'			2.4Ω/M'								RL: 30dB min. at	CEPT-3	17.2	2.2	7.2
							32.8Ω/km			7.9Ω/km								15 MHz to 95 MHz.	DS-3	22.4	2.5	8.2
																			STS-1	25.9	2.7	8.9
																			89.472	44.7	3.6	11.8
	734AS6P	NEC:	6	500	152.4	120.5	55.0	20 AWG	.148	3.76	Beldfoil	.675	17.14	75	80%	16.8	55.1	CEPT-4	69.6	4.5	14.8	
		CMP	1000	304.8	232.5	106.0	(solid)		Coax OD:	+85% TC									STS-3	77.8	4.8	15.7
		CEC:					.032" BC	.215	5.46	Braid									200	100.0	5.5	18.0
		CMP FT6					10Ω/M'			2.4Ω/M'									DS-4	137.1	6.4	21.0
							32.8Ω/km			7.9Ω/km									400	200.0	7.8	25.6

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • SPC = Silver-plated Copper • TC = Tinned Copper