

503PTZ Composite - For PTZ Cameras: CCTV + Control + Power



Description:

(1) coax-20 AWG solid BC cond., gas-injected foam HDPE insul., 95% BC braid shield, PVC jkt., cabled with (1) pair-18 AWG stranded (19x30) BC cond., PO insul., Beldfoil® shield, PVC jkt., cabled with (2) cond.-14 AWG (19x27) BC cond.,PVC insul., PVC jkt.

Coax

Physical Characteristics

Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	20	Solid	BC - Bare Copper	0.032

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
Gas-injected FHDP - Foam High Density Polyethylene	0.145

Outer Shield

Outer Shield Material:

Type	Outer Shield Material	Coverage (%)
Braid	BC - Bare Copper	95.000

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Diameter:

Nom. Dia. (in.)
0.227

Outer Jacket Color Code Chart:

Number	Color
Video	Black

Applicable Specifications and Agency Compliance

Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

EU CE Mark: Yes

RG Type: 59/U

Flame Test

UL Flame Test: UL1666 Vertical Shaft

Suitability

Suitability - Indoor: Yes

Electrical Characteristics

Nom. Characteristic Impedance:

Impedance (Ohm)

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75

Nom. Inductance:

Inductance (µH/ft)
0.097

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
16.300

Nominal Velocity of Propagation:

VP (%)
83.000

Nominal Delay:

Delay (ns/ft)
1.220

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
10.000

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
3.500

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1.000	0.300
5.000	0.650
10.000	0.900
50.000	1.900
100.000	2.600
200.000	3.600
400.000	5.000
700.000	7.000
900.000	8.000
1000.000	8.500

Max. Operating Voltage - UL: 300 V RMS

Twisted Pair

Physical Characteristics

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material	Dia. (in.)
1	18	19x30	BC - Bare Copper	0.044

Insulation

Insulation Material:

Insulation Material Dia. (in.)
PO - Polyolefin 0.080

Twisted Pair Color Code Chart:

Number	Color
1	Blue and White/Blue

Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
20	7x28	TC - Tinned Copper

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Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Diameter:

Nom. Dia. (in.)
0.219

Outer Jacket Color Code Chart:

Number	Color
1	Blue

Applicable Specifications and Agency Compliance Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

Flame Test

UL Flame Test: UL1666 Vertical Shaft

Suitability

Suitability - Indoor: Yes

Electrical Characteristics

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
44.000

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
26.000

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
6.500

Max. Operating Voltage - Other:

Voltage
300 V RMS

Max. Recommended Current:

Description	Current
Data/Control	5.2 Amps

Multi Conductor

Physical Characteristics

Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material	Dia. (in.)
2	14	19x27	BC - Bare Copper	0.074

Insulation

Insulation Material:

Insulation Material
PVC - Polyvinyl Chloride

Insulation Color Code Chart:

Number	Color
1	Red
2	Black

Outer Jacket

Outer Jacket Diameter:

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Nom. Dia. (in.)

0.244

Outer Jacket Color Code Chart:

Number Color

1	White
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Applicable Specifications and Agency Compliance Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

Flame Test

UL Flame Test: UL1666 Vertical Shaft

Suitability

Suitability - Indoor: Yes

Electrical Characteristics

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)

21.000

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

2.520

Max. Operating Voltage - Other:

Voltage

300 V RMS

Max. Recommended Current:

Current

5 Amps per conductor @ 25°C

Physical Characteristics (Overall)

Conductor

Outer Jacket

Outer Jacket Material:

Outer Jacket Material

Unjacketed

Overall Cabling

Overall Nominal Diameter: 0.496 in.

Mechanical Characteristics (Overall)

Operating Temperature Range: -10°C To +75°C

Separation Temperature Range: 0°C To +75°C

Bulk Cable Weight: 97.000 lbs/1000 ft.

Max. Recommended Pulling Tension: 190.000 lbs.

Min. Bend Radius (Install)/Minor Axis: 5.000 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

EU Directive 2000/53/EC (ELV): Yes

EU Directive 2002/95/EC (RoHS): Yes

EU RoHS Compliance Date (mm/dd/yyyy): 08/22/2006

EU Directive 2002/96/EC (WEEE): Yes

EU Directive 2003/11/EC (BFR): Yes

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CA Prop 65 (CJ for Wire & Cable): Yes

MII Order #39 (China RoHS): Yes

Plenum/Non-Plenum

Plenum (Y/N): No

Notes (Overall)

Notes: RG59 CCTV + 1 STP 18 AWG Control Grade + 2C 14 AWG CMR. Individually jacketed and color coded components, cabled around and each fused to a central binding spline. Cold environment installation: When installing cables that have been stored at ambient temperatures of 32 degrees Fahrenheit (0 degrees Centigrade) or lower, Belden recommends conditioning of the cable for 12 hours at room temperature prior to individual cable leg separation. Banana Peel® US PATENT 7049523.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
503PTZ 0001000	1,000 FT	101.000 LB	NONE	C	2C18 + 2C14 + 1 RG59 PVC

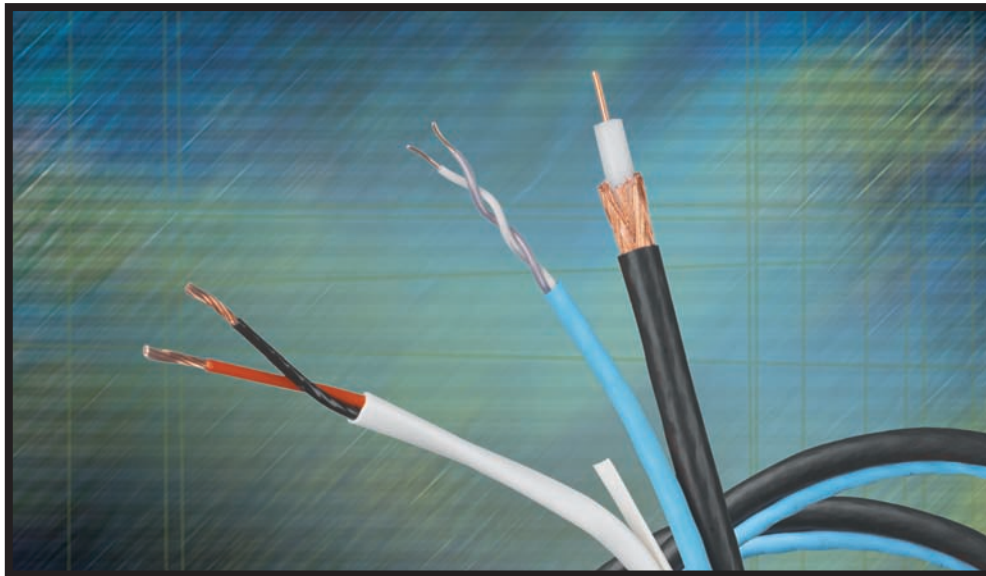
Notes:

C = CRATE REEL PUT-UP.

NP 256

Composite Surveillance Monitoring Cables

To suit your CCTV/Surveillance installation needs, Belden® offers Banana Peel® Composite cables for pan/tilt/zoom (PTZ) cameras. Video is achieved with coax, optical fiber or UTP cables; power and control cables complete the composite.



Belden Extends Its CCTV Camera Cable Line With More New Generation® Banana Peel PTZ Composite Cables, and Fiber Plus Copper Composites

Wherever you look today – our offices and public spaces such as hospitals, airports, amusement parks, retail establishments, universities, casinos, sports stadiums and correctional facilities all have a surveillance system in place to monitor the people visiting their facilities and the people working within them.

But whatever the type of equipment used, the objective of these systems is clear: protect the people involved with the facility and the facility's assets.

Surveillance System Camera Technology

Although traditional analog cameras are frequently used in security systems, the use of Digital Signal Processed (DSP) cameras is trending upwards – in part because they produce high quality images and they are better able to handle diverse or extreme lighting conditions. Also, camera users typically have more control setting options, plus DVRs (digital video recorders) enable users to quickly sort through their recorded images, while requiring less storage space than videotapes. Both DSP cameras and DVRs could be handled with existing coax technology.

From an applications standpoint, there are two types of security cameras available: Fixed and PTZ (pan/tilt/zoom). If you consider a CCTV set-up in a casino, the fixed cameras would be appropriate for high-risk, fixed areas – entrances and exits, cash registers, etc.

The PTZ cameras would be more appropriate for the gaming tables since the cameras must be made to move or zoom in on a particular exchange at the table or a particular customer.

New Generation Banana Peel Composite Cables For PTZ Installations

For both riser and plenum PTZ applications, Belden offers composite cables that feature its revolutionary new Banana Peel design. Banana Peel PTZ cables offer the following:

- No overall jacket – Banana Peel cables feature a patent-pending design that affixes the individual cables to a center spline, eliminating the need for an overall jacket.
- The absence of the overall jacket eliminates a whole step in the termination process: the stripping of the jacket.
- Reduces installation time by requiring less set-up, pulling and termination time with the Banana Peel versus individual cables.
- Short circuits, caused by contact with the center conductor while stripping off the outer jacket can be prevented.
- The individual cables are color-coded for easy identification.
- Eliminates the need for pulling several individual components by using an all-in-one Banana Peel cable (reducing installation costs and time).

New Generation® PTZ Banana Peel® composite cables are comprised of the following components in order to accommodate control encoding schemes or protocols such as Manchester, Sensornet and RS-422:

- Video: Coax, Optical Fiber, or UTP
- Power: 2/C Copper
- Control: STP, TP/OAS, or UTP

Availability

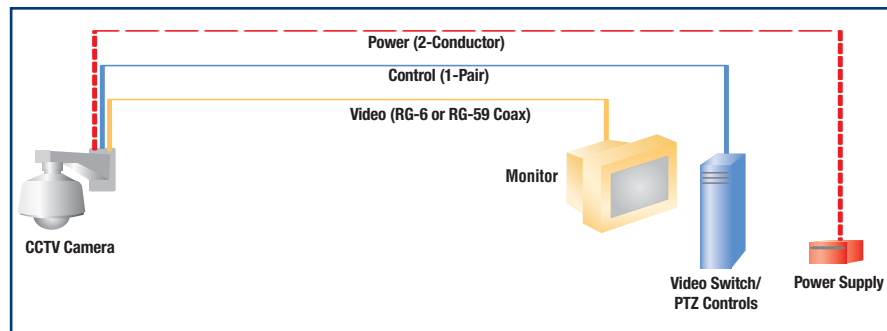
Belden offers a wide range of New Generation cables for pan/tilt/zoom camera applications that meet all your installation needs – whether large or small in scope – in both Plenum-rated and Non-plenum versions. An exceptional line of single coaxes, coaxial/twisted pair composites and unshielded multi-conductor constructions are also available for fixed camera applications.

PTZ Camera Manufacturers Cross-Reference*

Manufacturer	Belden Part No.	Video	Power	Control
Sony, Toshiba, GE Interlogix	500PTZ and 600PTZ	RG-59	2c 18 AWG	1 UTP, 23 AWG
Pelco, American Dynamics	501PTZ and 601PTZ	RG-59	2c 18 AWG	1 STP, 22 AWG (8761-type)
Bosch, American Dynamics	502PTZ and 602PTZ	RG-59	2c 18 AWG	1 STP, 18 AWG (8760-type)
Various	503PTZ	RG-59	2c 14 AWG	2 TP, 22 OAS (5541FE-type)
Various	504PTZ	RG-59	2c 14 AWG	1 STP, 18 AWG (8760-type)

*Always use cables recommended by the camera manufacturer. Check their specs to determine recommended power AWG size and control configuration.

PTZ Banana Peel Layout



PTZ Camera Cable

Banana Peel Composite Cables, Plenum and Riser-rated
The Cable Without a Jacket®



Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Overall Nom. OD		Component Descriptions	Component Jacket Material & Colors	Component Nom. OD	
			Ft.	m	Lbs.	kg	Inch	mm			Inch	mm

Composite • (1) RG-59/U Coax + (1) STP 18 AWG + 2/c 14 AWG (NEC CMR and CEC CMG FT4)

Individual Riser-Rated PVC Jackets • No Overall Jacket													
		503PTZ new	CMR/CMG Vertical Shaft UL 1666	1000	304.8	104.0	47.3	.496	12.6	Video: (1) RG-59 543945 Type	PVC Black	.227	5.77
										Control: (1) STP 18 AWG 8760 Type	PVC Blue	.219	5.56
										Power: 2/c 14 AWG 5100UE Type	PVC White	.244	6.20

Composite • (1) RG-59/U Coax + (2) TP 22 AWG OAS + 2/c 14 AWG (NEC, CMR and CEC CMG FT4)

Individual Riser-Rated PVC Jackets • No Overall Jacket													
		504PTZ new	CMR/CMG Vertical Shaft UL 1666	1000	304.8	93.0	42.3	.496	12.6	Video: (1) RG-59 543945 Type	PVC Black	.227	5.77
										Control: (2) TP 22 AWG OAS 5541FE Type	PVC Blue	.219	5.56
										Power: 2/c 14 AWG 5100UE Type	PVC White	.244	6.20