

## 8623 Multi-Conductor - Audio, Control and Instrumentation Cable



### Description:

16 AWG stranded (19x29) tinned copper conductors, conductors cabled, PVC insulation, PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

##### AWG:

# Conductors	AWG	Stranding	Conductor Material
15	16	19x29	TC - Tinned Copper

#### Insulation

##### Insulation Material:

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	.031

##### Insulation Resistance:

500 Megaohms/1000 ft.

#### Outer Shield

##### Outer Shield Material:

Outer Shield Material
Unshielded

#### Outer Jacket

##### Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	.060

#### Overall Cabling

##### Overall Cabling Lay Length & Direction:

Length (in.)	Twists (ft.)
9.11	1.3

##### Overall Cabling Color Code Chart:

Number	Color
1	Black
2	White
3	Red
4	Green
5	Orange
6	Blue
7	White/Black
8	Red/Black
9	Green/Black
10	Orange/Black
11	Blue/Black
12	Black/White
13	Red/White
14	Green/White
15	Blue/White

##### Overall Nominal Diameter:

0.694 in.

### Mechanical Characteristics (Overall)

## 8623 Multi-Conductor - Audio, Control and Instrumentation Cable

Operating Temperature Range:	-20°C To +80°C
UL Temperature Rating:	80°C
Bulk Cable Weight:	283.700 lbs/1000 ft.
Max. Recommended Pulling Tension:	456 lbs.
Min. Bend Radius (Install)/Minor Axis:	6.700 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

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):	10/01/2005
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

Other Flame Test:	VW-1, FT1
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### Electrical Characteristics (Overall)

#### Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
19.5

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
4.4

#### Max. Operating Voltage - UL:

Voltage
600 V RMS

#### Max. Recommended Current:

Current
5 Amps per conductor @ 25°C

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8623 060100	100 FT	32.300 LB	CHROME	C	15 #16 PVC FRPVC
8623 0601000	1,000 FT	312.000 LB	CHROME	C	15 #16 PVC FRPVC
8623 060500	500 FT	154.500 LB	CHROME	C	15 #16 PVC FRPVC

#### Notes:

C = CRATE REEL PUT-UP.

## Introduction

Belden® multi-conductor cables are manufactured in a wide variety of gage sizes, dimensions, insulation materials, shielding configurations, and jacketing materials including Plenum and High-Temperature versions. These cables meet the technical requirements of many different types of systems. In fact, Belden offers one of the broadest lines of UL Listed, NEC and CEC multi-conductor cables available from any single source.

Applications for multi-conductor cables include computers, communications, instrumentation, sound, control, audio, and data transmission. Each of these cables is designed to protect signal integrity under critical conditions by reducing hum, noise, and crosstalk.

To assist you in selecting the proper cable for your application, both the suggested working voltages and the maximum temperature ratings are indicated for each applicable product in this section.

Most of our multi-conductor cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a multi-conductor cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

### Multi-Conductor Cables Packaging

Belden's unique UnReel® cable dispenser is available for many of the multi-conductor products listed in this section. The letter "U" before the specified put-up length denotes UnReel packaging.

## Selection Guide

### Shielded Multi-Conductor Computer Cables for RS-232 Applications

Specifications		Cable Series*			
		9925	9608	9533	9939
<b>Conductor Size:</b> (AWG)	28				
	24	✓	✓	✓	
	22				✓
	20				
	18				
Page No.		4.18	4.17	4.11	4.19
<b>Insulation:</b>	S-R PVC		✓	✓	✓
	Polyethylene				
	Polypropylene				
	Datalene®†	✓			
<b>Shield:</b>	Overall Foil			✓	
	Drain Wire	✓		✓	
	Overall Foil/Braid	✓	✓		✓
	Braid Coverage	65%	65%		65%
<b>Drain Wire Overall:</b>		Yes	No	Yes	No
<b>No. of Cond. Available:</b>	1				
	2				
	3	✓	✓	✓	✓
	4	✓	✓	✓	✓
	5	✓	✓	✓	✓
	6	✓	✓	✓	✓
	7	✓	✓	✓	✓
	8	✓	✓	✓	✓
	9	✓	✓	✓	✓
	10	✓	✓	✓	✓
	11				
	12				
	13				
	15	✓	✓	✓	✓
	17				
	18				
	19				
	20			✓	
	25	✓	✓	✓	✓
	27				
30			✓		
31					
37	✓	✓		✓	
40			✓		
50		✓	✓	✓	
<b>Capacitance ** (pF/ft.)</b>		12.0	30.0	30.0	35.0

\*All cables are UL-listed.

\*\*Capacitance may vary on some cables.

† Foam high density polyethylene.

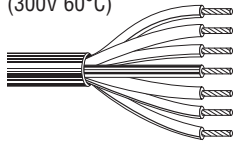
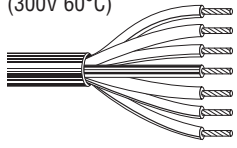
# Unshielded

## Audio, Control and Instrumentation Cables Plenum-Rated and Non-Plenum

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD	
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm

**18 AWG** Stranded (19x30) Tinned Copper Conductors • Conductors Cabled *(continued)*

**PVC Insulation • Chrome PVC Jacket**


	<b>8619</b>	UL AWM Style 2598 (300V 60°C)	NEC: 19	See	100	30.5	20.3	9.2	.017	.43	.045	1.14	.490	12.45
		CMG	Chart 2R	500	152.4	101.0	45.9							
		CEC: CMG FT4	(Tech Info Section)	1000	304.8	198.0	90.0							
	<b>9626</b>		NEC: 25	See	100	30.5	29.1	13.2	.017	.43	.060	1.52	.612	15.54
			CMG	Chart 2R	500	152.4	139.5	63.3						
			CEC: CMG FT4	(Tech Info Section)	1000	304.8	277.0	125.8						

**Plenum • FEP Insulation • Red FEP Jacket**

	<b>88489</b>	300V RMS	NEC: 4	Black, White, Red, Green	500 <sup>†</sup>	152.4	14.5	6.6	.007	.18	.009	.23	.161	4.09
			CMP		1000 <sup>†</sup>	304.8	29.0	13.2						
			CEC: CMP FT6											

Suitable for Outdoor and Direct Burial applications.

**Plenum • FEP Insulation • Natural Flamarrest® Jacket**

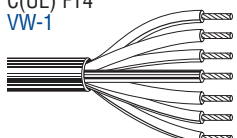
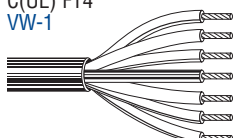
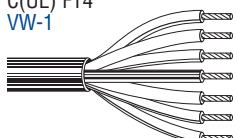
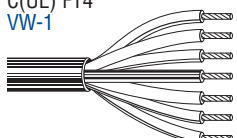
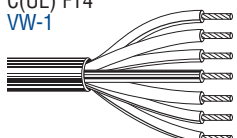
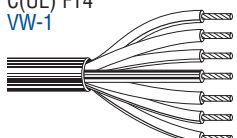
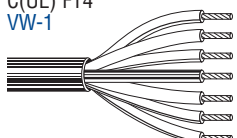
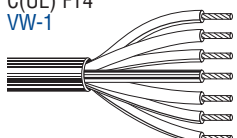
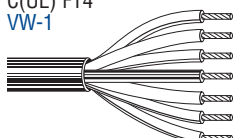
	<b>82489</b>	300V RMS	NEC: 4	Black, White, Red, Green	U-1000 <sup>†</sup>	U-304.8	31.0	14.1	.007	.18	.014	.36	.170	4.32
			CMP		1000 <sup>†</sup>	304.8	29.0	13.2						
			CEC: CMP FT6											

**16 AWG** Stranded (19x29) Tinned Copper Conductors • Conductors Cabled

**PVC Insulation • Cabled Wire (No Jacket)**

	<b>9498</b>	UL AWM Style 1007 (300V 80°C) VV-1	—	3	Orange, Black, Orange w/ Black Stripe	1000	304.8	42.0	19.1	.027	.69	—	—	.243	6.17

**PVC Insulation • Chrome PVC Jacket**

	<b>8620</b>	600V RMS 80°C C(UL) FT4 VV-1	—	4	See Chart 2	100	30.5	8.9	4.0	.031	.79	.042	1.07	.376	9.55
					(Tech Info Section)	500	152.4	44.0	20.0						
						1000	304.8	88.0	40.0						
	<b>9620</b>		—	5	See Chart 2	100	30.5	11.0	5.0	.031	.79	.042	1.07	.411	10.44
					(Tech Info Section)	500	152.4	53.5	24.3						
						1000	304.8	109.0	49.5						
	<b>8621</b>		—	7	See Chart 2R	100	30.5	13.2	6.0	.031	.79	.045	1.14	.458	11.63
					(Tech Info Section)	500	152.4	73.5	33.4						
						1000	304.8	143.0	65.0						
	<b>9721</b>		—	8	See Chart 2R	100	30.5	27.3	12.4	.031	.79	.045	1.14	.496	12.60
					(Tech Info Section)	500	152.4	136.5	62.0						
						1000	304.8	269.0	122.1						
	<b>9621</b>		—	9	See Chart 2R	100	30.5	17.0	7.8	.031	.79	.045	1.14	.533	13.54
					(Tech Info Section)	500	152.4	94.0	42.7						
						1000	304.8	181.0	82.2						
	<b>8622</b>		—	12	See Chart 2R	100	30.5	27.0	12.3	.031	.79	.060	1.52	.627	15.93
					(Tech Info Section)	500	152.4	126.5	57.4						
						1000	304.8	251.0	114.0						
	<b>8623</b>		—	15	See Chart 2R	100	30.5	32.5	14.8	.031	.79	.060	1.52	.694	17.63
					(Tech Info Section)	500	152.4	155.5	70.6						
						1000	304.8	314.0	142.6						
	<b>8624</b>		—	19	See Chart 2R	100	30.5	36.8	16.7	.031	.79	.065	1.65	.740	18.80
					(Tech Info Section)	500	152.4	178.5	81.0						
						1000	304.8	361.0	164.0						
	<b>9622</b>		—	25	See Chart 2R	100	30.5	49.0	22.2	.031	.79	.065	1.65	.879	22.33
					(Tech Info Section)	500	152.4	236.0	107.1						
						1000	304.8	480.0	217.9						

<sup>†</sup>Spools and/or UnReel® cartons are one piece, but length may vary ± 10% for spools and ± 5% for UnReel from length shown.