

8446 Multi-Conductor - Audio, Control, Communication and Instrumentation Cable

**Description:**

22 and 18 AWG stranded (7x30 and 16x30) tinned copper conductors cabled, PVC insulation, PVC jacket.

Physical Characteristics (Overall)**Conductor****AWG:**

# Conductors	AWG	Stranding	Conductor Material
4	22	7x30	TC - Tinned Copper
2	18	16x30	TC - Tinned Copper

Insulation**Insulation Material:**

Insulation Material	Wall Thickness (in.)	AWG
PVC - Polyvinyl Chloride	.010	22
PVC - Polyvinyl Chloride	.019	18

Outer Shield**Outer Shield Material:**

Outer Shield Material
Unshielded

Outer Jacket**Outer Jacket Material:**

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	.032

Overall Cabling**Overall Cabling Lay Length & Direction:**

Length (in.)	Twists (ft.)
2.25	5.3

Overall Cabling Color Code Chart:

Number	Color	AWG	Group/Cond. Color
1	22-Red	22	Red
2	Green	22	Green
3	Brown	22	Brown
4	Blue, 18-Black	22	Blue
1	White	18	Black
2		18	White

Overall Nominal Diameter:

0.236 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2576)
Bulk Cable Weight:	38 lbs/1000 ft.
Max. Recommended Pulling Tension:	78 lbs.
Min. Bend Radius (Install)/Minor Axis:	2.250 in.

8446 Multi-Conductor - Audio, Control, Communication and Instrumentation Cable

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMG
CEC/C(UL) Specification:	CMG
AWM Specification:	UL Style 2576 (150 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):	04/01/2005
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

UL Flame Test:	UL1685 FT4 Loading
C(UL) Flame Test:	FT4

Plenum/Non-Plenum

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

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)

30

Nom. Capacitance Cond. to Other Cond. & Ground:

Capacitance (pF/ft)

54

Nom. Conductor DC Resistance:

Description DCR @ 20°C (Ohm/1000 ft)

22 AWG	15.5
18 AWG	6.8

Max. Operating Voltage - UL:

Voltage

150 V RMS (UL AWM Style 2576)
300 V RMS

Max. Recommended Current:

Description Current

22 AWG	2.5 Amps per conductor @ 25°C
18 AWG	5.6 Amps per conductor @ 25°C

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8446 060U1000	1,000 FT	41.000 LB	CHROME		4#22 2#18 PVC PVC
8446 060U500	500 FT	21.500 LB	CHROME		4#22 2#18 PVC PVC
8446 060100	100 FT	4.700 LB	CHROME		4#22 2#18 PVC PVC
8446 0601000	1,000 FT	43.000 LB	CHROME	C	4#22 2#18 PVC PVC
8446 060500	500 FT	21.500 LB	CHROME	C	4#22 2#18 PVC PVC

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
Conductor Size: (AWG)	28				
	24	✓	✓	✓	
	22				✓
	20				
	18				
Page No.		4.18	4.17	4.11	4.19
Insulation:	S-R PVC		✓	✓	✓
	Polyethylene				
	Polypropylene				
	Datalene®†	✓			
Shield:	Overall Foil			✓	
	Drain Wire	✓		✓	
	Overall Foil/Braid	✓	✓		✓
	Braid Coverage	65%	65%		65%
Drain Wire Overall:		Yes	No	Yes	No
No. of Cond. Available:	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		✓	✓	✓
Capacitance ** (pF/ft.)		12.0	30.0	30.0	35.0

*All cables are UL-listed.

**Capacitance may vary on some cables.

† Foam high density polyethylene.

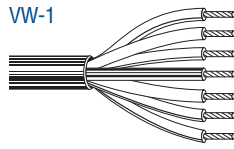
Unshielded

Audio, Control, Communication and Instrumentation Cables

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

14 AWG Stranded (19x27) Tinned Copper Conductors • Conductors Cabled**PVC Insulation • Chrome PVC Jacket**

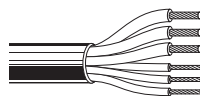
600V RMS 80°C VW-1 	8627	—	4	See Chart 2 (Tech Info Section)	100	30.5	13.8	6.3	.045	1.14	.045	1.14	.490	12.45
					500	152.4	76.5	34.7						
					1000	304.8	149.0	67.6						
	9623	—	5	See Chart 2 (Tech Info Section)	100	30.5	18.1	8.3	.045	1.14	.060	1.52	.573	14.55
					500	152.4	99.5	45.1						
					1000	304.8	197.0	89.4						
	8628	—	7	See Chart 2 (Tech Info Section)	100	30.5	23.9	11.0	.045	1.14	.060	1.52	.623	15.82
					500	152.4	128.0	58.1						
					1000	304.8	255.0	115.8						
	8629	—	12	See Chart 2 (Tech Info Section)	100	30.5	44.6	20.2	.045	1.14	.065	1.65	.824	20.93
					500	152.4	222.0	100.8						
					1000	304.8	454.0	206.1						

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		Nominal Capacitance			
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

22 and 18 AWG Stranded (7x30 and 16x30) Tinned Copper Conductors • Conductors Cabled**PVC Insulation • Chrome PVC Jacket**

UL AWM Style 2576 (150V 80°C) 	8446	NEC: CMG CEC: CMG FT4	6: 4 Unshld 22 (7x30) 2 Unshld 18 (16x30)	Red, Green, Brown, Blue Black, White	100	30.5	4.7	2.1	.010	.25	.032	.81	.236	5.99	30	98	54	177
					U-500	U-152.4	21.5	9.8										
					500	152.4	21.5	9.8										
					U-1000	U-304.8	41.0	18.6	.019	.48								
					1000	304.8	43.0	19.5										

20 and 16 AWG Stranded (7x28 and 19x28) Tinned Copper Conductors • Conductors Cabled**PVC Insulation • Chrome PVC Jacket**

NEC Article 800 (90°C) 	9686	NEC: CM	6: 3 Unshld 20 (7x28) 3 Unshld 16 (19x28)	Green, Blue, Purple Black, Red, Yellow	U-500	U-152.4	32.5	14.7	.012	.30	.032	.81	.295	7.49	20	66	36	118
									.013	.33					30	98	54	177

*Capacitance between conductors.

**Nominal capacitance conductor to conductor and shield.