

9439 Multi-Conductor - Audio, Control and Instrumentation Cable



Description:

20 AWG stranded (7x28) tinned copper conductors, conductors cabled, PVC insulation, PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material
7	20	7x28	TC - Tinned Copper

Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	.013

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.)
3.50	3.4

Overall Cabling Color Code Chart:

Number	Color
1	White
2	Red
3	Green
4	Brown
5	Blue
6	Orange (around Black)
7	Black

Overall Nominal Diameter: 0.260 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2464)
Bulk Cable Weight:	41.600 lbs/1000 ft.
Max. Recommended Pulling Tension:	86 lbs.
Min. Bend Radius (Install)/Minor Axis:	2.600 in.

9439 Multi-Conductor - Audio, Control 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 2464 (300 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

C(UL) Flame Test:	FT4
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Plenum/Non-Plenum

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

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
27

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
10.7

Max. Operating Voltage - UL:

Voltage
300 V RMS (UL AWM Style 2464)

Max. Recommended Current:

Current
2.8 Amps per conductor @ 25°C

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9439 060U1000	1,000 FT	51.000 LB	CHROME		7 #20 PVC FRPVC
9439 060U500	500 FT	26.000 LB	CHROME		7 #20 PVC FRPVC
9439 060100	100 FT	5.700 LB	CHROME		7 #20 PVC FRPVC
9439 0601000	1,000 FT	53.000 LB	CHROME	C	7 #20 PVC FRPVC
9439 060500	500 FT	27.000 LB	CHROME	C	7 #20 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
Conductor Size: (AWG)	28				
	24	✓	✓	✓	
	22				✓
	20				
	18				
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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.

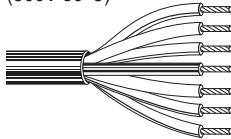
† Foam high density polyethylene.

Unshielded

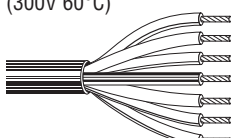
Audio, Control and Instrumentation Cables Non-Plenum

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

20 AWG Stranded (7x28) Tinned Copper Conductors • Conductors Cabled

PVC Insulation • Chrome PVC Jacket																		
UL AWM Style 2464 (300V 80°C) 	9444	NEC:	4	See Chart 1 (Tech Info Section)	100	30.5	4.0	1.8	.013	.33	.032	.81	.217	5.51				
		CMG			U-500	U-152.4	16.5	7.5										
		CEC:			500	152.4	16.5	7.5										
		CMG FT4			U-1000	U-304.8	32.0	14.5										
					1000	304.8	33.0	15.0										
	9445	NEC:	5	See Chart 1 (Tech Info Section)	100	30.5	4.4	2.1	.013	.33	.032	.81	.239	6.07				
		CMG			U-500	U-152.4	20.0	9.1										
		CEC:			500	152.4	19.5	8.9										
		CMG FT4			U-1000	U-304.8	38.0	17.2										
					1000	304.8	40.0	18.2										
	9439	NEC:	7	See Chart 1 (Tech Info Section)	100	30.5	5.7	2.6	.013	.33	.032	.81	.260	6.60				
		CMG			U-500	U-152.4	26.0	11.9										
		CEC:			500	152.4	27.0	12.3										
		CMG FT4			U-1000	U-304.8	51.0	23.1										
					1000	304.8	53.0	24.1										
	9455	NEC:	9	See Chart 1 (Tech Info Section)	100	30.5	7.1	3.2	.013	.33	.035	.89	.317	8.05				
		CMG			U-500	152.4	35.0	15.9										
		CEC:			1000	304.8	67.0	30.4										
		CMG FT4																
	9457	NEC:	12	See Chart 1 (Tech Info Section)	100	30.5	9.2	4.2	.013	.33	.035	.89	.338	8.58				
		CMG			U-500	152.4	45.0	20.4										
		CEC:			1000	304.8	88.0	40.0										
		CMG FT4																
	9458	NEC:	15	See Chart 2R (Tech Info Section)	100	30.5	12.6	5.7	.013	.33	.040	1.02	.389	9.88				
		CMG			U-500	152.4	60.5	27.5										
		CEC:			1000	304.8	118.0	53.6										
		CMG FT4																

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

PVC Insulation • Chrome PVC Jacket																	
UL AWM Style 2598 (300V 60°C) 	8489	NEC:	4	See Chart 1 (Tech Info Section)	100	30.5	5.1	2.3	.017	.43	.032	.81	.257	6.53			
		CMG			U-500	U-152.4	23.5	10.7									
		CEC:			500	152.4	24.0	10.9									
		CMG FT4			U-1000	U-304.8	46.0	20.9									
					1000	304.8	48.0	21.8									
	8465	NEC:	5	See Chart 1 (Tech Info Section)	100	30.5	6.4	2.9	.017	.43	.033	.84	.282	7.16			
		CMG			U-500	U-152.4	29.5	13.5									
		CEC:			500	152.4	30.0	13.6									
		CMG FT4			U-1000	U-304.8	58.0	26.3									
					1000	304.8	60.0	27.4									
	8467	NEC:	7	See Chart 1 (Tech Info Section)	100	30.5	8.3	3.8	.017	.43	.037	.94	.314	7.98			
		CMG			U-500	152.4	40.5	18.4									
		CEC:			1000	304.8	79.0	35.9									
		CMG FT4															
	8469	NEC:	9	See Chart 1 (Tech Info Section)	100	30.5	10.5	4.8	.017	.43	.037	.94	.364	9.25			
		CMG			U-500	152.4	26.0	11.8									
		CEC:			500	152.4	51.5	23.4									
		CMG FT4			1000	304.8	105.0	47.7									
	8466	NEC:	12	See Chart 2R (Tech Info Section)	100	30.5	13.2	6.0	.017	.43	.040	1.02	.412	10.46			
		CMG			U-500	152.4	32.5	14.8									
		CEC:			500	152.4	66.0	30.0									
		CMG FT4			1000	304.8	131.0	59.5									
	8468	NEC:	15	See Chart 2R (Tech Info Section)	100	30.5	17.9	8.1	.017	.43	.045	1.14	.500	12.70			
		CMG			U-500	152.4	89.5	40.6									
		CEC:			1000	304.8	175.0	79.5									
		CMG FT4															