Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

9747 Multi-Conductor - Audio, Control and Instrumentation Cable

Description:

22 AWG stranded (7x30) tinned copper conductors, PVC insulation, twisted pairs, PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
12	22	7x30	TC - Tinned Copper

Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	.010

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	.040

Overall Cabling

Overall Nominal Diameter:	0.425 in.

Pair

Pair Color Code Chart:

Number	Color
1	Black & Red
2	Black & White
3	Black & Green
4	Black & Blue
5	Black & Yellow
6	Black & Brown
7	Black & Orange
8	Red & White
9	Red & Green
10	Red & Blue
11	Red & Yellow
12	Red & Brown

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +80°C
Non-UL Temperature Rating:	80°C (UL AWM Style 2576)
Bulk Cable Weight:	99 lbs/1000 ft.
Max. Recommended Pulling Tension:	109 lbs.
Min. Bend Radius (Install)/Minor Axis:	4.250 in.

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

Electrical Characteristics (Overall)

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
25.5

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
14.7

Max. Operating Voltage - UL:

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

Max. Recommended Current:

Current
1.4 Amps per conductor @ 20°C

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9747 060100	100 FT	11.500 LB	CHROME	C	12 #22 PR PVC PVC
9747 0601000	1,000 FT	109.000 LB	CHROME	C	12 #22 PR PVC PVC
9747 060500	500 FT	55.000 LB	CHROME	C	12 #22 PR 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

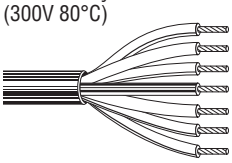
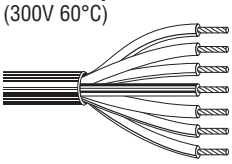
Shielded Multi-Conductor Computer Cables for RS-232 Applications

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 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: CMG CEC: CMG FT4	4	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	4.0 16.5 16.5 32.0 33.0	1.8 7.5 7.5 14.5 15.0	.013	.33	.032	.81	.217	5.51
	9445	NEC: CMG CEC: CMG FT4	5	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	4.4 20.0 19.5 38.0 40.0	2.1 9.1 8.9 17.2 18.2	.013	.33	.032	.81	.239	6.07
	9439	NEC: CMG CEC: CMG FT4	7	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	5.7 26.0 27.0 51.0 53.0	2.6 11.9 12.3 23.1 24.1	.013	.33	.032	.81	.260	6.60
	9455	NEC: CMG CEC: CMG FT4	9	See Chart 1 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	7.1 35.0 67.0	3.2 15.9 30.4	.013	.33	.035	.89	.317	8.05
	9457	NEC: CMG CEC: CMG FT4	12	See Chart 1 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	9.2 45.0 88.0	4.2 20.4 40.0	.013	.33	.035	.89	.338	8.58
	9458	NEC: CMG CEC: CMG FT4	15	See Chart 2R (Tech Info Section)	100 500 1000	30.5 152.4 304.8	12.6 60.5 118.0	5.7 27.5 53.6	.013	.33	.040	1.02	.389	9.88
18 AWG Stranded (19x30) Tinned Copper Conductors • Conductors Cabled														
PVC Insulation • Chrome PVC Jacket														
UL AWM Style 2598 (300V 60°C) 	**8489**	NEC: CMG CEC: CMG FT4	4	See Chart 1 (Tech Info Section)	100 250 U-500 500 U-1000 1000	30.5 76.2 U-152.4 152.4 U-304.8 304.8	5.1 12.0 23.5 24.0 46.0 48.0	2.3 5.4 10.7 10.9 20.9 21.8	.017	.43	.032	.81	.257	6.53
	8465	NEC: CMG CEC: CMG FT4	5	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	6.4 29.5 30.0 58.0 60.0	2.9 13.5 13.6 26.3 27.4	.017	.43	.033	.84	.282	7.16
	8467	NEC: CMG CEC: CMG FT4	7	See Chart 1 (Tech Info Section)	100 250 500 1000	30.5 76.2 152.4 304.8	8.3 20.0 40.5 79.0	3.8 9.1 18.4 35.9	.017	.43	.037	.94	.314	7.98
	8469	NEC: CMG CEC: CMG FT4	9	See Chart 1 (Tech Info Section)	100 250 500 1000	30.5 76.2 152.4 304.8	10.5 26.0 51.5 105.0	4.8 11.8 23.4 47.7	.017	.43	.037	.94	.364	9.25
	8466	NEC: CMG CEC: CMG FT4	12	See Chart 2R (Tech Info Section)	100 250 500 1000	30.5 76.2 152.4 304.8	13.2 32.5 66.0 131.0	6.0 14.8 30.0 59.5	.017	.43	.040	1.02	.412	10.46
	8468	NEC: CMG CEC: CMG FT4	15	See Chart 2R (Tech Info Section)	100 500 1000	30.5 152.4 304.8	17.9 89.5 175.0	8.1 40.6 79.5	.017	.43	.045	1.14	.500	12.70

For Plenum versions of 8489, see 88489 or 82489.