

## 9533 Multi-Conductor - Computer Cable for EIA RS-232 Applications



### Description:

24 AWG stranded (7x32) tinned copper conductors, conductors cabled, PVC insulation, overall Beldfoil® shield (100% coverage), 24 AWG stranded tinned copper drain wire, PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

##### AWG:

# Conductors	AWG	Stranding	Conductor Material
3	24	7x32	TC - Tinned Copper

#### Insulation

##### Insulation Material:

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

#### Outer Shield

##### Outer Shield Material:

Outer Shield Trade Name	Outer Shield Material	Coverage (%)
Beldfoil®	Aluminum Foil-Polyester Tape	100

##### Outer Shield Drain Wire AWG:

AWG Stranding	Drain Wire	Conductor Material
24	7x32	TC - Tinned Copper

#### Outer Jacket

##### Outer Jacket Material:

Outer Jacket Trade Name	Outer Jacket Material	Nom. Wall Thickness (in.)
Beldfoil®	PVC - Polyvinyl Chloride	.032

#### Overall Cabling

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

Length (in.)
1.50

##### Overall Cabling Color Code Chart:

Number	Color
1	Black
2	White
3	Red

Overall Nominal Diameter: 0.162 in.

### Mechanical Characteristics (Overall)

Operating Temperature Range:	-30°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2464)
Bulk Cable Weight:	16 lbs/1000 ft.
Max. Recommended Pulling Tension:	16.500 lbs.
Min. Bend Radius (Install)/Minor Axis:	1.750 in.

## 9533 Multi-Conductor - Computer Cable for EIA RS-232 Applications

### 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)
33

#### Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)
65

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
25

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
18

#### Max. Operating Voltage - UL:

Voltage
300 V RMS (UL AWM Style 2464)

#### Max. Recommended Current:

Current
1.75 Amps per conductor @ 25°C

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9533 060U1000	1,000 FT	18.000 LB	CHROME		3 #24 PVC FS PVC
9533 060U500	500 FT	9.500 LB	CHROME		3 #24 PVC FS PVC
9533 060100	100 FT	2.400 LB	CHROME		3 #24 PVC FS PVC
9533 0601000	1,000 FT	18.000 LB	CHROME	C	3 #24 PVC FS PVC
9533 060500	500 FT	9.000 LB	CHROME		3 #24 PVC FS 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
<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

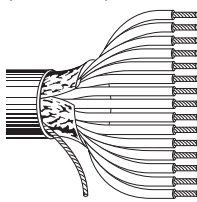
\*All cables are UL-listed.

\*\*Capacitance may vary on some cables.

† Foam high density polyethylene.

# Overall Beldfoil® Shield

## Computer Cables for EIA RS-232 Applications

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
<b>24 AWG Stranded (7x32) TC Conductors • Conductors Cabled • Overall Beldfoil Shield (100% Coverage) • 24 AWG Stranded TC Drain Wire</b>																		
<b>Semi-rigid PVC Insulation • Chrome PVC Jacket</b>																		
 <p>UL AWM Style 2464 (300V 80°C)</p>	<b>9533</b>	NEC: 3 CMG: CEC: CMG FT4	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	2.7 9.5 9.0 18.0 18.0	1.2 4.3 4.1 8.2 8.2	.010 .25 .032 .81 .162	4.11	33	108	65	213					
	<b>9534</b>	NEC: 4 CMG: CEC: CMG FT4	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	3.0 11.0 11.5 21.0 22.0	1.4 5.0 5.2 9.5 10.0	.010 .25 .032 .81 .184	4.67	33	108	65	213					
	<b>9535</b>	NEC: 5 CMG: CEC: CMG FT4	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	3.2 12.0 11.0 23.0 22.0	1.5 5.4 5.0 10.4 10.0	.010 .25 .032 .81 .189	4.80	33	108	65	213					
	<b>9536</b>	NEC: 6 CMG: CEC: CMG FT4	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	3.6 14.5 12.5 27.0 29.0	1.6 6.6 5.7 12.3 13.2	.010 .25 .032 .81 .209	5.31	33	108	65	213					
	<b>9537</b>	NEC: 7 CMG: CEC: CMG FT4	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	3.7 15.0 13.5 29.0 30.0	1.7 6.8 6.2 13.2 13.7	.010 .25 .032 .81 .209	5.31	33	108	65	213					
	<b>9538</b>	NEC: 8 CMG: CEC: CMG FT4	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	3.8 17.0 15.0 32.0 34.0	1.7 7.7 6.8 14.6 15.4	.010 .25 .032 .81 .224	5.69	33	108	65	213					
	<b>9539</b>	NEC: 9 CMG: CEC: CMG FT4	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	4.2 20.0 17.0 37.0 38.0	1.9 9.1 7.8 16.9 17.3	.010 .25 .032 .81 .244	6.20	30	98	55	180					
	<b>9540</b>	NEC: 10 CMG: CEC: CMG FT4	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	4.3 19.5 18.0 38.0 36.0	2.0 8.9 8.2 17.2 16.4	.010 .25 .032 .81 .244	6.20	30	98	55	180					
	<b>9541</b>	NEC: 15 CMG: CEC: CMG FT4	See Chart 2R (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	5.9 27.5 28.0 54.0 56.0	2.7 12.5 12.7 24.5 25.4	.010 .25 .032 .81 .284	7.21	30	98	55	180					
	<b>9542</b>	NEC: 20 CMG: CEC: CMG FT4	See Chart 2R (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	7.3 34.0 35.5 69.0 69.0	3.3 15.4 16.1 31.3 31.3	.010 .25 .032 .81 .314	7.98	30	98	55	180					
<b>9543</b>	NEC: 25 CMG: CEC: CMG FT4	See Chart 2R (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	8.7 44.0 44.0 86.0 86.0	4.0 20.0 20.0 39.0 39.0	.010 .25 .032 .81 .339	8.61	30	98	55	180						
<b>9544</b>	NEC: 30 CMG: CEC: CMG FT4	See Chart 2R (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	10.3 51.5 51.5 102.0 102.0	4.7 23.4 23.4 46.3 46.3	.010 .25 .040 1.02 .380	9.65	30	98	55	180						
<b>9545</b>	NEC: 40 CMG: CEC: CMG FT4	See Chart 2R (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	13.5 65.0 65.0 130.0 130.0	6.1 29.5 29.5 59.0 59.0	.010 .25 .040 1.02 .430	10.92	30	98	55	180						
<b>9546</b>	NEC: 50 CMG: CEC: CMG FT4	See Chart 2R (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	16.4 81.5 81.5 168.0 168.0	7.4 37.0 37.0 76.3 76.3	.010 .25 .045 1.14 .490	12.45	30	98	55	180						

TC = Tinned Copper

\*Capacitance between conductors. \*\*Capacitance between one conductor and other conductors connected to shield.