

## 8155 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/485



### Description:

28 AWG stranded (7x36) TC conductors, Datalene® insulation, overall Beldfoil® (100% coverage) + TC braid shield (65% coverage), 28 AWG stranded TC drain wire, PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

##### AWG:

# Pairs	AWG	Stranding	Conductor Material
25	28	7x36	TC - Tinned Copper

#### Insulation

##### Insulation Material:

Insulation Trade Name	Insulation Material
Datalene®	FPE - Foam Polyethylene

#### Outer Shield

##### Outer Shield Material:

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Beldfoil®	Tape	Aluminum Foil-Polyester Tape w/Shorting Fold	100
2		Braid	TC - Tinned Copper	65

##### Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
28	7x36	TC - Tinned Copper

#### Outer Jacket

##### Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

#### Overall Cabling

**Overall Nominal Diameter:** 0.565 in.

#### Pair

##### Pair Color Code Chart:

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

## 8155 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/485

17	Yellow/Orange & Orange/Yellow
18	Yellow/Green & Green/Yellow
19	Yellow/Brown & Brown/Yellow
20	Yellow/Gray & Gray/Yellow
21	Purple/Blue & Blue/Purple
22	Purple/Orange & Orange/Purple
23	Purple/Green & Green/Purple
24	Purple/Brown & Brown/Purple
25	Purple/Gray & Gray/Purple

**Pair Lay Length & Direction:**

Lay Length (in.)	Twists/ft. (twist/ft)
1.000	12.000

### Mechanical Characteristics (Overall)

Operating Temperature Range:	-30°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2919)
Min. Bend Radius (Install)/Minor Axis:	5.400 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CL2
AWM Specification:	UL Style 2919 (30 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):	01/01/2004
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 UL Loading
----------------	-------------------

#### Plenum/Non-Plenum

Plenum (Y/N):	No
---------------	----

### Electrical Characteristics (Overall)

**Nom. Characteristic Impedance:**

Impedance (Ohm)
120

**Nom. Capacitance Conductor to Conductor:**

Capacitance (pF/ft)
11

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

Capacitance (pF/ft)
20

**Nominal Velocity of Propagation:**

VP (%)
78

**Nom. Conductor DC Resistance:**

DCR @ 20°C (Ohm/1000 ft)
--------------------------

## 8155 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/485

65

**Nominal Outer Shield DC Resistance:**

**DCR @ 20°C (Ohm/1000 ft)**  
2.3

**Max. Operating Voltage - UL:**

**Voltage**  
30 V RMS (UL AWM Style 2919); 150 V RMS

**Max. Recommended Current:**

**Current**  
0.5 Amps per conductor @ 25°C

### Notes (Overall)

**Notes:** Datalene® insulation features include low dielectric constant and a dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8155 060100	100 FT	11.100 LB	CHROME	C	25 PR #28 FHDPE SH PVC
8155 0601000	1,000 FT	121.000 LB	CHROME	C	25 PR #28 FHDPE SH PVC
8155 060500	500 FT	64.000 LB	CHROME	C	25 PR #28 FHDPE SH PVC

**Notes:**

C = CRATE REEL PUT-UP.

## Introduction

Belden® paired cable products are manufactured in a variety of gage sizes, dimensions, insulation materials, shielding configurations, and jacketing materials including Plenum and High-Temperature versions to meet the technical requirements of many different types of systems.

Paired cables allow balanced signal transmission, which results in lower crosstalk through common mode rejection. Due to the improved noise immunity of twisted pairs, they generally permit higher data speeds than multi-conductor cables.

As an aid to proper cable selection, both the suggested working voltages and the maximum temperature ratings are indicated for each applicable paired cable selection.

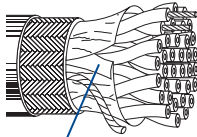
Most of our paired cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a paired cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

### Paired Cables Packaging

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

# Overall Foil/Braid Shield

Low-Capacitance Computer Cables for EIA RS-232 and EIA RS-485 Applications

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Nom. DCR		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance			
					Ft.	m	Lbs.	kg	Cond.	Shield	Inch	mm			* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m
<b>28 AWG Stranded (7x36) TC Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (65% Coverage) • 28 AWG Stranded TC Drain Wire</b>																		
<b>Datalene® Insulation • Chrome PVC Jacket</b>																		
 <p>Shorting Fold</p>	<b>8132</b>	NEC:	2	See	100	30.5	3.6	1.6	65.0Ω/M'	5.1Ω/M'	.220	5.59	120	78%	11.0	36.1	20.0	65.6
		CL2		Chart 5	500	152.4	14.5	6.6	213.0Ω/km	16.6Ω/km								
		(Tech Info Section)		1000	304.8	29.0	13.2											
	<b>8133</b>	NEC:	3	See	100	30.5	3.8	1.7	65.0Ω/M'	5.2Ω/M'	.270	6.86	120	78%	11.0	36.1	20.0	65.6
		CL2		Chart 5	500	152.4	15.0	6.8	213.0Ω/km	17.1Ω/km								
		(Tech Info Section)		1000	304.8	34.0	15.5											
	<b>8134</b>	NEC:	4	See	100	30.5	4.3	2.0	65.0Ω/M'	4.4Ω/M'	.290	7.37	120	78%	11.0	36.1	20.0	65.6
		CL2		Chart 5	500	152.4	18.0	8.2	213.0Ω/km	14.3Ω/km								
		(Tech Info Section)		1000	304.8	39.0	17.7											
	<b>8135</b>	NEC:	5	See	100	30.5	4.6	2.1	65.0Ω/M'	4.2Ω/M'	.300	7.62	120	78%	11.0	36.1	20.0	65.6
CL2		Chart 5		1000	304.8	42.0	19.1	213.0Ω/km	13.8Ω/km									
(Tech Info Section)																		
<b>8138</b>	NEC:	8	See	100	30.5	5.6	2.5	65.0Ω/M'	3.7Ω/M'	.330	8.38	120	78%	11.0	36.1	20.0	65.6	
	CL2		Chart 5	500	152.4	27.0	12.3	213.0Ω/km	12.3Ω/km									
	(Tech Info Section)		1000	304.8	52.0	23.6												
<b>8142</b>	NEC:	12.5 (12 pairs + 1 single)	See	100	30.5	6.8	3.1	65.0Ω/M'	3.1Ω/M'	.375	9.53	120	78%	11.0	36.1	20.0	65.6	
	CL2		Chart 5	500	152.4	33.0	15.0	213.0Ω/km	10.1Ω/km									
	(Tech Info Section)		1000	304.8	66.0	29.9												
<b>8148</b>	NEC:	18	See	100	30.5	8.5	3.9	65.0Ω/M'	2.6Ω/M'	.465	11.81	120	78%	11.0	36.1	20.0	65.6	
	CL2		Chart 5	500	152.4	47.5	21.6	213.0Ω/km	8.4Ω/km									
	(Tech Info Section)		1000	304.8	92.0	41.8												
<b>8155</b>	NEC:	25	See	100	30.5	11.1	5.0	65.0Ω/M'	2.3Ω/M'	.565	14.35	120	78%	11.0	36.1	20.0	65.6	
	CL2		Chart 5	500	152.4	64.0	29.1	213.0Ω/km	7.6Ω/km									
	(Tech Info Section)		1000	304.8	121.0	55.0												

DCR = DC Resistance • TC = Tinned Copper

\*Capacitance between conductors.

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

Datalene insulation features include low dielectric constant and a dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.