

8318 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232 Applications



Description:

22 AWG stranded (7x30) tinned copper conductors, semi-rigid PVC insulation, twisted pairs, overall Beldfoil® (100% coverage) + tinned copper braid shield (65% coverage), PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
18	22	7x30	TC - Tinned Copper

Insulation

Insulation Material:

Insulation Material
S-R PVC - Semi-Rigid Polyvinyl Chloride

Outer Shield

Outer Shield Material:

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

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling

Overall Nominal Diameter: 0.540 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
13	Red & Orange
14	Green & White
15	Green & Blue
16	Green & Yellow
17	Green & Brown
18	Green & Orange

Pair Lay Length & Direction:

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Lay Length (in.)	Twists/ft. (twist/ft)
1.1	11

Mechanical Characteristics (Overall)

Operating Temperature Range:	-30°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2464)
Bulk Cable Weight:	175 lbs/1000 ft.
Max. Recommended Pulling Tension:	380 lbs.
Min. Bend Radius (Install)/Minor Axis:	5.400 in.

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):	10/01/2005
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. Characteristic Impedance:

Impedance (Ohm)
70

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
35

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)
63

Nominal Velocity of Propagation:

VP (%)
60

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
15.0

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
3

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Max. Operating Voltage - UL:

Voltage

300 V RMS (UL AWM Style 2464)

Max. Recommended Current:

Current

1.4 Amps per conductor @ 25°C

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8318 060100	100 FT	17.100 LB	CHROME	C	18 PR #22 PVC SHLD PVC
8318 0601000	1,000 FT	190.000 LB	CHROME	C	18 PR #22 PVC SHLD PVC
8318 060500	500 FT	94.500 LB	CHROME	C	18 PR #22 PVC SHLD 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.

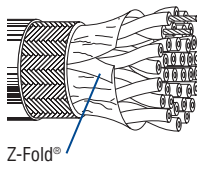
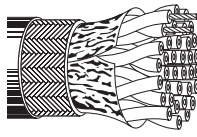
Most of our paired cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a paired cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

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 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		
22 AWG Stranded (7x30) Tinned Copper Conductors • Twisted Pairs • Overall Beldfoil® (100% Coverage) + TC Braid Shield (65% Coverage)																				
Semi-rigid PVC Insulation • Chrome PVC Jacket																				
UL AWM Style 2464 (300V 80°C)  Z-Fold®	8302	NEC:	2	See	100	30.5	4.5	2.0	15.0Ω/M'	5.7Ω/M'	.260	6.60	70	60%	40	131	72	236		
		CMG		Chart 3	500	152.4	19.0	8.6	49.2Ω/km	18.7Ω/km										
		CEC:		(Tech Info Section)	1000	304.8	41.0	18.6												
			CMG FT4																	
	8303	NEC:	3	See	100	30.5	5.2	2.4	15.0Ω/M'	6.2Ω/M'	.270	6.86	70	60%	35	115	63	207		
		CMG		Chart 3	500	152.4	25.5	11.6	49.2Ω/km	20.3Ω/km										
		CEC:		(Tech Info Section)	1000	304.8	48.0	21.8												
			CMG FT4																	
	8304	NEC:	4	See	100	30.5	6.7	3.0	15.0Ω/M'	4.9Ω/M'	.320	8.13	70	60%	35	115	63	207		
		CMG		Chart 3	500	152.4	32.5	14.7	49.2Ω/km	16.1Ω/km										
CEC:		(Tech Info Section)		1000	304.8	65.0	29.5													
		CMG FT4																		
8305	NEC:	5	See	100	30.5	7.2	3.3	15.0Ω/M'	4.8Ω/M'	.322	8.18	70	60%	35	115	63	207			
	CMG		Chart 3	500	152.4	35.0	15.9	49.2Ω/km	15.7Ω/km											
	CEC:		(Tech Info Section)	1000	304.8	67.0	30.4													
		CMG FT4																		
8306	NEC:	6	See	100	30.5	8.0	3.6	15.0Ω/M'	5.0Ω/M'	.348	8.84	70	60%	35	115	63	207			
	CMG		Chart 3	500	152.4	39.5	18.0	49.2Ω/km	16.4Ω/km											
	CEC:		(Tech Info Section)	1000	304.8	79.0	35.8													
		CMG FT4																		
8307	NEC:	7	See	100	30.5	8.6	3.9	15.0Ω/M'	5.0Ω/M'	.348	8.84	70	60%	35	115	63	207			
	CMG		Chart 3	500	152.4	42.0	19.0	49.2Ω/km	16.4Ω/km											
	CEC:		(Tech Info Section)	1000	304.8	85.0	38.6													
		CMG FT4																		
8308	NEC:	8	See	100	30.5	10.4	4.7	15.0Ω/M'	4.4Ω/M'	.384	9.75	70	60%	35	115	63	207			
	CMG		Chart 3	500	152.4	50.0	22.7	49.2Ω/km	14.4Ω/km											
	CEC:		(Tech Info Section)	1000	304.8	101.0	46.0													
		CMG FT4																		
UL AWM Style 2464 (300V 80°C) 	8310	NEC:	10	See	100	30.5	11.1	5.0	15.0Ω/M'	4.1Ω/M'	.440	11.18	70	60%	35	115	63	207		
		CMG		Chart 3	500	152.4	60.5	27.4	49.2Ω/km	13.4Ω/km										
		CEC:		(Tech Info Section)	1000	304.8	121.0	54.9												
			CMG FT4																	
	8312	NEC:	12	See	100	30.5	12.9	5.9	15.0Ω/M'	4.2Ω/M'	.455	11.56	70	60%	35	115	63	207		
		CMG		Chart 3	500	152.4	72.0	32.8	49.2Ω/km	13.8Ω/km										
		CEC:		(Tech Info Section)	1000	304.8	140.0	63.8												
			CMG FT4																	
	8315	NEC:	15	See	100	30.5	15.7	7.1	15.0Ω/M'	3.8Ω/M'	.502	12.75	70	60%	35	115	63	207		
		CMG		Chart 3	500	152.4	85.5	39.0	49.2Ω/km	12.5Ω/km										
CEC:		(Tech Info Section)		1000	304.8	167.0	76.1													
		CMG FT4																		
8318	NEC:	18	See	100	30.5	17.7	8.0	15.0Ω/M'	3.0Ω/M'	.535	13.59	70	60%	35	115	63	207			
	CMG		Chart 3	500	152.4	97.5	44.2	49.2Ω/km	9.8Ω/km											
	CEC:		(Tech Info Section)	1000	304.8	196.0	89.1													
		CMG FT4																		
8325	NEC:	25	See	100	30.5	23.1	10.5	15.0Ω/M'	2.9Ω/M'	.620	15.75	70	60%	35	115	63	207			
	CMG		Chart 3	500	152.4	126.0	57.4	49.2Ω/km	9.5Ω/km											
	CEC:		(Tech Info Section)	1000	304.8	246.0	112.1													
		CMG FT4																		

DCR = DC Resistance • TC = Tinned Copper

*Capacitance between conductors.

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