

## 8305 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
5	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: 0.322 in.

#### Pair

##### Pair Color Code Chart:

Number	Color
1	Black & Red
2	Black & White
3	Black & Green
4	Black & Blue
5	Black & Yellow

##### 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 2464)
Bulk Cable Weight:	63 lbs/1000 ft.
Min. Bend Radius (Install)/Minor Axis:	3.200 in.

## 8305 Multi-Conductor - Low Capacitance 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:	No
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)
4.8

#### Max. Operating Voltage - UL:

Voltage
300 V RMS (UL AWM Style 2464)

#### Max. Recommended Current:

Current
2.1 Amps per conductor @ 25°C

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8305 060100	100 FT	7.200 LB	CHROME		5 #22 PR PVC SHLD PVC
8305 0601000	1,000 FT	67.000 LB	CHROME	C	5 #22 PR PVC SHLD PVC

ENGLISH MEASUREMENT VERSION

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## 8305 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232 Applications

8305 060500	500 FT	35.000 LB	CHROME	C	5 #22 PR PVC SHLD PVC
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**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.

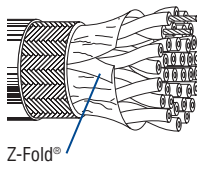
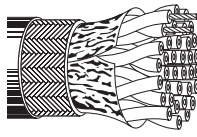
Most of our paired cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a paired cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

### 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	
<b>22 AWG Stranded (7x30) Tinned Copper Conductors • Twisted Pairs • Overall Beldfoil® (100% Coverage) + TC Braid Shield (65% Coverage)</b>																			
<b>Semi-rigid PVC Insulation • Chrome PVC Jacket</b>																			
UL AWM Style 2464 (300V 80°C)  Z-Fold®	<b>8302</b>	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																
	<b>8303</b>	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																
	<b>8304</b>	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																	
<b>8305</b>	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																	
<b>8306</b>	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																	
<b>8307</b>	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																	
<b>8308</b>	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) 	<b>8310</b>	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																
	<b>8312</b>	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																
	<b>8315</b>	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																	
<b>8318</b>	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																	
<b>8325</b>	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.