Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

8115 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422

Description:

24 AWG stranded (7x32) TC conductors, Datalene® insulation, twisted pairs, overall Beldfoil® (100% coverage) + TC braid shield (65% coverage), 24 AWG stranded TC drain wire, PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
15	24	7x32	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
24	7x32	TC - Tinned Copper

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling

Overall Nominal Diameter: 0.477 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

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Mechanical Characteristics (Overall)

Operating Temperature Range:	-30°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2919)
Bulk Cable Weight:	120 lbs/1000 ft.
Max. Recommended Pulling Tension:	170.500 lbs.
Min. Bend Radius (Install)/Minor Axis:	4 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CM
CEC/C(UL) Specification:	CM
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)
100

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
12.5

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)
22

Nominal Velocity of Propagation:

VP (%)
78

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
24

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
2.6

Max. Operating Voltage - UL:

Voltage
30 V RMS (UL AWM Style 2919)
300 V RMS

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Max. Recommended Current:

Current
.88 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
8115 0601000	1,000 FT	114.000 LB	CHROME	C	15 PR #24 FHDPE SH PVC
8115 060500	500 FT	62.500 LB	CHROME	C	15 PR #24 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.

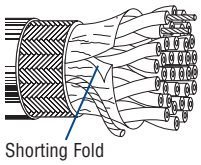
Overall Foil/Braid Shield

Low-Capacitance Computer Cables for EIA RS-232 and EIA RS-422 Applications

24 AWG Stranded (7x32) TC Conductors • Twisted Pairs • Overall Beldfoil® (100% Coverage) + TC Braid Shield (65% Coverage) • Drain Wire†

Datalene® Insulation • Chrome PVC Jacket

UL AWM Style 2919
(30V 80°C)



Shorting Fold

Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Nom. DCR Cond.	Nom. DCR Shield	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance * pF/ Ft.	Nom. Capacitance * pF/ m	Nom. Capacitance ** pF/ Ft.	Nom. Capacitance ** pF/ m
8102	NEC: CM CEC: CM	2	See Chart 5 (Tech Info Section)	100 500 1000 10000	30.5 152.4 304.8 3048.0	4.1 17.0 38.0 380.0	1.9 7.7 17.3 172.7	24.0Ω/M′ 78.7Ω/km	4.6Ω/M′ 15.1Ω/km	.270	6.86	100	78%	12.5	41	22	72.2
8103	NEC: CM CEC: CM	3	See Chart 5 (Tech Info Section)	100 500 1000 10000	30.5 152.4 304.8 3048.0	4.6 19.5 42.0 430.0	2.1 8.9 19.1 195.5	24.0Ω/M′ 78.7Ω/km	3.8Ω/M′ 12.5Ω/km	.283	7.19	100	78%	12.5	41	22	72.2
8104	NEC: CM CEC: CM	4	See Chart 5 (Tech Info Section)	100 500 1000 10000	30.5 152.4 304.8 3048.0	5.1 21.0 46.0 490.0	2.3 9.5 20.9 222.7	24.0Ω/M′ 78.7Ω/km	4.1Ω/M′ 13.5Ω/km	.302	7.67	100	78%	12.5	41	22	72.2
8105	NEC: CM CEC: CM	5	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	5.8 28.0 53.0	2.6 12.7 24.1	24.0Ω/M′ 78.7Ω/km	4.2Ω/M′ 13.8Ω/km	.316	8.03	100	78%	12.5	41	22	72.2
8106	NEC: CM CEC: CM	6	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	6.3 30.5 58.0	2.9 13.9 26.4	24.0Ω/M′ 78.7Ω/km	3.5Ω/M′ 11.5Ω/km	.341	8.66	100	78%	12.5	41	22	72.2
8107	NEC: CM CEC: CM	7	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	6.8 33.0 63.0	3.1 15.0 28.6	24.0Ω/M′ 78.7Ω/km	3.5Ω/M′ 11.5Ω/km	.341	8.66	100	78%	12.5	41	22	72.2
8108	NEC: CM CEC: CM	8	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	7.6 37.5 72.0	3.5 17.1 32.8	24.0Ω/M′ 78.7Ω/km	2.7Ω/M′ 8.9Ω/km	.370	9.40	100	78%	12.5	41	22	72.2
8110	NEC: CM CEC: CM	10	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	8.1 45.5 90.0	3.7 20.7 40.9	24.0Ω/M′ 78.7Ω/km	2.4Ω/M′ 7.9Ω/km	.427	10.85	100	78%	12.5	41	22	72.2
8112	NEC: CM CEC: CM	12.5 (12 pairs + 1 single)	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	9.2 51.0 101.0	4.2 23.3 45.9	24.0Ω/M′ 78.7Ω/km	2.4Ω/M′ 7.9Ω/km	.440	11.18	100	78%	12.5	41	22	72.2
8115	NEC: CM CEC: CM	15	See Chart 5 (Tech Info Section)	500 1000	152.4 304.8	63.5 116.0	28.9 52.7	24.0Ω/M′ 78.7Ω/km	2.6Ω/M′ 8.5Ω/km	.495	12.57	100	78%	12.5	41	22	72.2
8118	NEC: CM CEC: CM	18	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	13.3 70.5 144.0	6.0 32.0 65.5	24.0Ω/M′ 78.7Ω/km	2.1Ω/M′ 6.9Ω/km	.537	13.64	100	78%	12.5	41	22	72.2
8125	NEC: CM CEC: CM	25	See Chart 5 (Tech Info Section)	100 500 1000	30.5 152.4 304.8	20.7 98.0 191.0	9.4 44.5 86.8	24.0Ω/M′ 78.7Ω/km	2.0Ω/M′ 6.6Ω/km	.632	16.05	100	78%	12.5	41	22	72.2

†24 AWG stranded TC drain wire.

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.