



Product: [9815](#)

100Ω Twinax, #20-1c TC/1c BC, PO, Duofoil® + 2 TC Braids, PE Jkt, Direct Burial

Product Description

100 Ohm Twinax, 20 AWG stranded (7x28) .037" one tinned/ one bare copper conductors, polyethylene insulation, Duofoil® + tinned copper braid shield (95% coverage), high-density polyethylene jacket.

Technical Specifications

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Construction n x D	No. of Conductors
20	7x28	TC - Tinned Copper	Stranded	1
20	7x28	BC - Bare Copper	Stranded	1

Conductor Count: 2

Insulation

Material	Nominal Wall Thickness
PE - Polyethylene	0.024 in

Color Chart

Number	Color
1	Natural & Natural

Inner Jacket

Material	Nominal Diameter	Nominal Wall Thickness
PE - Polyethylene	0.236 in	0.035 in

Outer Shield

Type	Layer	Material	Material Trade Name	Coverage [%]
Tape	1	Tri-Laminate (Alum+Poly+Alum)	Duofoil®	100%
Braid	2	Tinned Copper (TC)		95%

Table Notes: Polyethylene Grease

Outer Jacket

Material	Nominal Diameter	Nominal Wall Thickness
PE - Polyethylene	0.33 in	0.034 in

Table Notes: HDPE

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Outer Shield DCR	Outer Conductor DCR
9.5 Ohm/1000ft	2 Ohm/1000ft	2 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Conductor	Nom. Capacitance Conductor to Other Conductor to Shield	Nom. Capacitance Conductor to Shield
14.5 pF/ft	23 pF/ft	14.5 pF/ft

Inductance

Nominal Inductance

0.155 µH/ft

Impedance

Nominal Characteristic Impedance

100 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
1 MHz	0.4 dB/100ft
10 MHz	1.1 dB/100ft
50 MHz	2.5 dB/100ft
100 MHz	4.1 dB/100ft
200 MHz	6.4 dB/100ft
400 MHz	10.2 dB/100ft

Delay

Max. Delay Skew	Nominal Delay	Nominal Velocity of Propagation (VP) [%]
66 ns/100m	1.54 ns/ft	66%

High Frequency

Frequency [MHz]

1 MHz
10 MHz
50 MHz
100 MHz
200 MHz
400 MHz

Voltage

Non-UL Voltage Rating

600 V RMS

Electrical Characteristics Notes: Capacitance conductor to shield: 23.0 pF/ft

Temperature Range

Operating Temperature Range: -55°C To +80°C

Mechanical Characteristics

Bulk Cable Weight:	62 lbs/1000ft
Max. Pull Tension:	115 lbs
Min. Bend Radius/Minor Axis:	3.5 in

Standards

CPR Euroclass: Fca

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Burial: Yes

Plenum/Non-Plenum

Plenum (Y/N): No

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
9815 010500	Black	Reel	500 ft	612825259053
9815 0101000	Black	Reel	1,000 ft	612825259039

Footnote: C - CRATE REEL PUT-UP.

Product Notes

Notes: Polyethylene flooding grease applied over outer shield.

History

Update and Revision: Revision Number: 0.344 Revision Date: 05-05-2023

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