Product: OSP6F

Category 6 Outside Plant F/UTP Cable

Product Description

CAT6 (250 MHz), 4 Pair, F/UTP-Foil Shielded, Outdoor OSP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented X-Spline, Gel-Filled, UV resistant LLDPE Inner Jacket, Overall Beldfoil® Shield with Drain Wire, Ripcord, UV Resistance LLDPE Outer Jacket

Technical Specifications

Product Overview

Suitable Applications:	OSP-Outside, Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, 350MHz Category 6, Duct

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Material
Polyolefin

Bonded-Pair:	N/A

Color Chart

Number	Color
1	White & Blue
2	White & Orange
3	White & Green
4	White & Brown

Inner Jacket Material

Material	Nominal Diameter	Ripcord
PE - Polyethylene	0.26 in	No

Water Penetration:	GR 421CORE para. 4.3.5.1, ANSI/ICEA S107704 para. 8.2.1, ANSI/ICEA S-99-689

Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Alum / Poly	Beldfoil®	100.0 %	TC - Tinned Copper	26

Outer Jacket Material

Material	Nominal Diameter	Ripcord
PE - Polyethylene	0.360 in	Yes

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance	Max DCR Unbalanced Between Pairs [%]

93.8 Ohm/km	3.0 %	5.0 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
160 pF/100m	15.7 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	65.0 %

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.0 dB/100m	74.3 dB	72.3 dB	70.3 dB	67.8 dB	64.8 dB	20.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	35.0 dB
4 MHz	3.8 dB/100m	65.3 dB	63.3 dB	59.5 dB	55.7 dB	52.7 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	23.0 dB
8 MHz	5.3 dB/100m	60.8 dB	58.8 dB	53.4 dB	49.7 dB	46.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	16.9 dB
10 MHz	6.0 dB/100m	59.3 dB	57.3 dB	51.4 dB	47.8 dB	44.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	15.0 dB
16 MHz	7.6 dB/100m	56.3 dB	54.3 dB	46.7 dB	43.7 dB	40.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	38.0 dB	10.9 dB
20 MHz	8.5 dB/100m	54.8 dB	52.8 dB	44.3 dB	41.7 dB	38.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	37.0 dB	9.0 dB
25 MHz	9.5 dB/100m	53.3 dB	51.3 dB	41.8 dB	39.8 dB	36.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	36.0 dB	7.0 dB
31.25 MHz	10.7 dB/100m	51.9 dB	49.9 dB	39.2 dB	37.9 dB	34.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm	35.1 dB	5.1 dB
62.5 MHz	15.4 dB/100m	47.4 dB	45.4 dB	30.0 dB	31.8 dB	28.8 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	32.0 dB	
100 MHz	19.8 dB/100m	44.3 dB	42.3 dB	22.5 dB	27.8 dB	24.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 15 Ohm	30.0 dB	
155 MHz	25.2 dB/100m	41.5 dB	39.5 dB	14.3 dB	23.9 dB	20.9 dB	18.8 dB	100 ± 22 Ohm	100 ± 15 Ohm	28.1 dB	
200 MHz	29.0 dB/100m	39.8 dB	37.8 dB	8.8 dB	21.7 dB	18.7 dB	18.0 dB	100 ± 22 Ohm	100 ± 15 Ohm	27.0 dB	
250 MHz	32.8 dB/100m	38.3 dB	36.3 dB	3.5 dB	19.8 dB	16.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 15 Ohm	26.0 dB	

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	-40°C To +60°C
Non-UL Temp Rating:	+75°C
Storage Temp Range:	-40°C To +75°C
Operating Temp Range:	-40°C To +75°C

Mechanical Characteristics

Cold Bend Test:	-40°C Compliance Per UL 1581
Bulk Cable Weight:	49 lbs/1000ft
Max Recommended Pulling Tension:	25 lbs
Min Bend Radius During Installation:	3.75 in
Min Bend Radius/Minor Axis:	3.0 in

Standards

NEC/(UL) Specification:	N/A
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class E
Data Category:	Category 6
ANSI Compliance:	S-116-732-2013 Category 6, ANSI/NEMA WC-66 Category 6
Telecommunications Standards:	ANSI/TIA 568-C.2 Category 6
IEEE Specification:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Other Specification:	Verified Category 6, ANSI/ICEA S-56-434 Outdoor Use and ANSI/ICEA S-99-689 Broadband Outdoor Use

Applicable Environmental and Other Programs

Environmental Space:	Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/EC (BFR):	Yes

EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	No
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2017-04-12

Suitability

Suitability - Aerial:	Yes - When supported by messenger wire
Suitability - Burial:	Yes - Engineered burial only
Suitability - Hazardous Locations:	No
Suitability - Indoor:	No
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No

Part Number

Variants

Item #	Color	Putup Type	Length	UPC
OSP6F 0101000	Black	Reel	1,000 ft	612825400868

Patent:	http://www.belden.com/p

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. Not Suitable for Direct Burial. Belden recommends using an entrance demarcation point when transitioning inside buildings with gel-filled OSP cables due to the cable design containing gel specific for wet outdoor environments. The suggested transition point is the REVConnect core coupler, part number RVACPKUBK-S1.

History

Update and Revision:	Revision Number: 0.184 Revision Date: 04-28-2020