# **Detailed Specifications & Technical Data**

#### **METRIC MEASUREMENT VERSION**



## 8451 Multi-Conductor - Single-Pair Cable

For more Information please call

1-800-Belden1



### **General Description:**

22 AWG stranded (7x30) TC conductors, polypropylene insulation, paper wrap, twisted pair, overall Beldfoil shield (100% coverage), 22 AWG stranded TC drain wire, PVC jacket.

Physical Characteristics (Overall)	
Conductor	
AWG: # Pairs AWG Stranding Conductor Material	
1 22 7x30 TC - Tinned Copper	
Total Number of Conductors:	2
Insulation	
Insulation Insulation Material:	
Insulation Material Wall Thickness (mm)	
PP - Polypropylene 0.2032	
Outer Shield	
Outer Shield Material:	
Outer Shield Trade Name Type Outer Shield Material Covered Beldfoil® (Z-Fold®) Tape   Aluminum Foil-Polyester Tape   100	erage (%)
Outer Shield Drain Wire AWG:	
AWG Stranding Drain Wire Conductor Material	
22   7x30   TC - Tinned Copper	
Outer Jacket	
Outer Jacket Material:	
Outer Jacket Material	
PVC - Polyvinyl Chloride	
Overall Cable	
Overall Nominal Diameter:	3.505 mm
Pair	
Pair Color Code Chart:	
Number Color  1 Black & Red	
Mechanical Characteristics (Overall)	
Operating Temperature Range:	-20°C To +75°C
Bulk Cable Weight:	22.323 Kg/Km
Max. Recommended Pulling Tension:	120.101 N
Min. Bend Radius/Minor Axis:	38.100 mm
Applicable Specifications and Agency Compliance (Ov	orall)
Applicable Specifications and Agency Compliance (Ov Applicable Standards & Environmental Programs	eran)
NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMG
EU Directive 2011/65/EU (ROHS II):	Yes
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

Page 1 of 3 09-11-2017

## **Detailed Specifications & Technical Data**

#### **METRIC MEASUREMENT VERSION**



## 8451 Multi-Conductor - Single-Pair Cable

	CA Prop 65 (CJ for Wire & Cable):	Yes			
	MII Order #39 (China RoHS):	Yes			
Flame Test					
	UL Flame Test:	UL1666 Vertical Shaft			
	CSA Flame Test:	FT4			
Plenum/Non-Plenum					
	Plenum (Y/N):	No			

#### **Electrical Characteristics (Overall)**

Nom. Characteristic Impedance:

Impedance (Ohm)

Nom. Inductance:

Inductance (µH/m) 0.55777

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m) 111.554

Nom. Capacitance Cond. to Other Conductor & Shield:

219.827

Nominal Velocity of Propagation:

VP (%) 66

Nominal Delay:

Delay (ns/m) 4.9215

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km) 46.2621

Max. Operating Voltage - UL:

Voltage 300 V RMS

Max. Recommended Current:

Current 2.9 Amps per conductor @ 25°C

## Notes (Overall)

Notes: Unique paper separator facilitates jacket stripping.

## **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8451 008U1000	1,000 FT	16.000 LB	GRAY		2 #22 PP SHLD PVC FR
8451 008U500	500 FT	8.500 LB	GRAY		2 #22 PP SHLD PVC FR
8451 0081000	1,000 FT	16.000 LB	GRAY	С	2 #22 PP SHLD PVC FR
8451 008500	500 FT	8.000 LB	GRAY		2 #22 PP SHLD PVC FR
8451 010U1000	1,000 FT	16.000 LB	BLACK		2 #22 PP SHLD PVC FR
8451 010U500	500 FT	8.500 LB	BLACK		2 #22 PP SHLD PVC FR
8451 010100	100 FT	2.200 LB	BLACK		2 #22 PP SHLD PVC FR
8451 0101000	1,000 FT	16.000 LB	BLACK	С	2 #22 PP SHLD PVC FR
8451 01010000	10,000 FT	160.000 LB	BLACK		2 #22 PP SHLD PVC FR
8451 01015000	15,000 FT	240.000 LB	BLACK		2 #22 PP SHLD PVC FR
8451 010500	500 FT	8.000 LB	BLACK		2 #22 PP SHLD PVC FR
8451 0105000	5,000 FT	80.000 LB	BLACK		2 #22 PP SHLD PVC FR

Notes: C = CRATE REEL PUT-UP.

Page 2 of 3 09-11-2017

## **Detailed Specifications & Technical Data**

#### METRIC MEASUREMENT VERSION



## 8451 Multi-Conductor - Single-Pair Cable

Revision Number: 1 Revision Date: 07-30-2013

© 2017 Belden, Inc All Rights Reserved

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product

product. ´ Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 2014/35/EU).