Detailed Specifications & Technical Data

METRIC MEASUREMENT VERSION



3078F Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus Cable





For more Information please call

1-800-Belden1



General Description:

22 AWG stranded (7x30) tinned copper conductors, FHDPE insulation, Beldfoil® shield (100% coverage), tinned copper drain wire, PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material	Dia. (mm)
1	22	7x30	TC - Tinned Copper	0.762

Total Number of Conductors: 2

Insulation

Insulation Material:

Insulation Material				
FHDPE - Foam High Density Polyethylene				

Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)	
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100	

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
20	7x28	TC - Tinned Copper

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Nominal Diameter: 8.915 mm

Pair

Pair Color Code Chart:



Pair Lay Length & Direction:

Lay Length (mm) 101.6

Mechanica	Characteristics (Overall)
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Operating Temperature Range:	-40°C To +75°C
UL Temperature Rating:	75°C
Bulk Cable Weight:	59.528 Kg/Km
Max. Recommended Pulling Tension:	142.342 N
Min. Bend Radius/Minor Axis:	88.900 mm

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Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

CEC/C(UL) Specification:	CM	
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	
lame Test		
UL Flame Test:	UL1685 UL Loading	

No

Surface Printing (Overall)

Electrical Characteristics (Overall)

Unaveraged Impedance:

Plenum/Non-Plenum Plenum (Y/N):

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Impedance (Ohm)
	1.0			150

Nom. Inductance:

Inductance (µH/m) 0.9843

Nom. Capacitance Conductor to Shield:

Capacitance (pF/m) 52.496

Nom. Mutual Capacitance:

Capacitance (pF/m) 27.8885

Maximum Capacitance Unbalance:

Capacitance (pF/m) 1.50926

Nominal Velocity of Propagation:

VP (%) 78

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km) 56.1051

Ind. Pair Nominal Shield DC Resistance @ 20 10.827 Ohm/km Deg. C:

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
.25	0.59058
.625	0.85306
1.25	1.11554
3.125	1.80455

Max. Attenuation:

() Freq. (MHz)

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1.00071	.625
1.29928	1.25
2.00141	3.125

Max. Operating Voltage - UL:

Voltage 300 V RMS

Max. Recommended Current:

Description	Current
Per Conductor	2.5 Amps

Other Electrical Characteristic 1: ISA/IEC SP50 Requirements: Impedance @ 250 kHz, 625 kHz, 1.25 MHz, and

3.125 MHz: 150 +/- 10% Ohms

Other Electrical Characteristic 2: 1.0 and 2.5 MBits/sec

Notes (Overall)

Notes: Tape around pair has shorting fold. CPE & LSOH Jacket optional.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
3078F 0031000	305 MT	21.319 KG	ORANGE	С	#22 PR FPE/LDPE FS PVC
3078F 0032500	762 MT	55.565 KG	ORANGE	С	#22 PR FPE/LDPE FS PVC
3078F 003500	152 MT	11.113 KG	ORANGE	С	#22 PR FPE/LDPE FS PVC

C = CRATE REEL PUT-UP.

Test Reports

i) UL Test Reports are available on-line through the UL Client Document Access web portal. ii) UL Inspection Reports are also available through the UL Client Document Access web portal.

b) CŚA

i) CSA "Descriptive Report and Test Results" documents are available on the CSA Gateway Portal.

ii) CSA Inspection Reports are maintained on the CSA issued 'flash drive' at each manufacturing location.

Revision Number: 1 Revision Date: 09-19-2008

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^{*} other test data may be available if requested at time of order.