

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



For more Information  
please call  
1-800-Belden1



**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. (in.)
1.000	22	7x30	TC - Tinned Copper	0.030

**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 Cabling:**  
Overall Nominal Diameter: 0.351 in.

**Pair:**  
Pair Color Code Chart

Number	Color
1	Blue & Orange

Pair Lay Length & Direction

Lay Length (in.)
4.000

**Mechanical Characteristics (Overall):**

Operating Temperature Range	-40°C To +75°C
UL Temperature Rating	75°C
Bulk Cable Weight:	40 lbs/1000 ft.
Max. Recommended Pulling Tension:	32 lbs.
Min. Bend Radius (Install)/Minor Axis:	3.500 in.

**Applicable Specifications and Agency Compliance (Overall):**

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**Applicable Standards:**

CEC/C(UL) Specification	CM
EU CE Mark (Y/N)	Yes
EU RoHS Compliant (Y/N)	Yes
EU RoHS Compliance Date (mm/dd/yyyy)	01/01/2004

**Flame Test:**

UL Flame Test	UL1685 UL Loading
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**Plenum/Non-Plenum:**

Plenum (Y/N)	No
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**Electrical Characteristics (Overall):**

Unaveraged Impedance

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Impedance (Ohm)
	1.000			150.000

Nom. Inductance

Inductance (µH/ft)
0.300

Nom. Capacitance Conductor to Shield

Capacitance (pF/ft)
16.000

Nom. Mutual Capacitance

Capacitance (pF/ft)
8.500

Maximum Capacitance Unbalance

Capacitance (pF/ft)
0.460

Nominal Velocity of Propagation

VP (%)
78

Nom. Conductor DC Resistance

DCR @ 20°C (Ohm/1000 ft)
17.100

Ind. Pair Nominal Shield DC Resistance @ 20 Deg. C: 3.300 Ohm/1000 ft

Nom. Attenuation

Freq. (MHz)	Attenuation (dB/100 ft.)
0.250	0.180
0.625	0.260
1.250	0.340
3.125	0.550

Max. Attenuation

Freq. (MHz)
0.625
1.250
3.125

Max. Operating Voltage - UL

Voltage
300 V RMS

Max. Recommended Current

Description	Current
Per Conductor	2.5 Amps

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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	1,000 FT	47.000 LB	ORANGE	C	#22 PR FPE/LDPE FS PVC ORG
3078F 0032500	2,500 FT	122.500 LB	ORANGE	C	#22 PR FPE/LDPE FS PVC ORG
3078F 003500	500 FT	24.500 LB	ORANGE	C	#22 PR FPE/LDPE FS PVC ORG

**Notes:**

C = CRATE REEL PUT-UP.

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