

## 9451SB Multi-Conductor - Audio, Control and Instrumentation Shipboard Cable



For more Information  
please call

1-800-Belden1



### General Description:

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

### Usage (Overall)

Suitable Applications: Audio, Control, or Instrumentation for Marine Shipboard and Offshore use

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
1	22	7x30	TC - Tinned Copper

Total Number of Conductors: 2

#### 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	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
22	7x30	TC - Tinned Copper

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (mm)
LSZH - Low Smoke Zero Halogen	0.8128

### Overall Cable

Overall Nominal Diameter: 4.064 mm

### Pair

Pair Color Code Chart:

Number	Color
1	Black & Red

### Mechanical Characteristics (Overall)

Operating Temperature Range:	-30°C To +105°C
UL Temperature Rating:	105°C
Bulk Cable Weight:	26.788 Kg/Km
Max. Recommended Pulling Tension:	120.101 N
Min. Bend Radius/Minor Axis:	44.450 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMG-LS
CEC/C(UL) Specification:	CMG-LS
EU Directive 2011/65/EU (ROHS II):	Yes
IEEE Specification:	Std. 45 clause 23
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes

## METRIC MEASUREMENT VERSION

### 9451SB Multi-Conductor - Audio, Control and Instrumentation Shipboard Cable

EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	08/01/2005
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
Other Specification:	UL444, ABS Type Approval Certificate 05-HS500072B

#### Flame Test

UL Flame Test:	UL1685 FT4 Loading, Limited Smoke
CSA Flame Test:	FT4
IEC Flame Test:	60332-1, 60332-3-22 (Category A)
IEEE Flame Test:	1202

#### Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes
Sunlight Resistance:	Yes

#### Plenum/Non-Plenum

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

##### Nom. Characteristic Impedance:

Impedance (Ohm)  
45

##### Nom. Inductance:

Inductance (µH/m)  
0.55777

##### Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m)  
114.835

##### Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/m)  
219.827

##### Nominal Velocity of Propagation:

VP (%)  
66

##### Nominal Delay:

Delay (ns/m)  
4.9215

##### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)  
46.2621

##### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)  
46.9183

##### Max. Operating Voltage - UL:

Voltage  
300 V RMS

##### Max. Recommended Current:

Current  
2.9 Amps per conductor @ 25°C

#### Notes (Overall)

**Notes:** The jacket and shield are bonded so both can be removed on automatic stripping equipment. Drain wire is inside foil shield.

#### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9451SB 0101000	1,000 FT	20.000 LB	BLACK	C	2 #22 PP FS FRNHPO

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**Notes:**

C = CRATE REEL PUT-UP.

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