



BLACK BOX[®]

NETWORK SERVICES

RS-232 TYPE CABLES BY BELDEN[®]

Wire your RS-232, CAD/CAM, and RS-422 applications with cables built to last by Belden and expertly supported by Black Box.

PC/Instrument Cables

These cables are ideal for interconnecting RS-232 type devices that use just a few wire pairs to communicate: PCs and modems or printers, for example.

They are built with 24-AWG 7-x-32 stranded tinned-copper twisted pairs, insulated with S-R PVC, overall shielded (100%) with aluminum-polyester Beldfoil[®] and jacketed with chrome PVC. They have a 24-AWG stranded tinned-copper drain wire.

Specifications

Compliance: NEC CM, CSA PCC FT 4 and Type T2

Maximum Voltage: 300 V

Max. Temperature: 176°F (80°C)

Nominal Velocity of Propagation: 60% of the speed of light

Nom. DC Resistance (Conductors): 78.7 Ω/km (24 Ω/1000 ft.)

Nominal Impedance: 75 Ω

Nominal Mutual Capacitance:
9501: 131 pF/m (40 pF/ft.);
All others: 98 pF/m (30 pF/ft.)

Nominal Capacitance to Shield:
9501: 243 pF/m (74 pF/ft.);
All others: 164 pF/m (50 pF/ft.)

Attenuation: From -1.3 dB/100 m (-0.4 dB/100 ft.) at 100 kHz to -6.1 dB/100 m (-2 dB/100 ft.) at 1 MHz to -26.2 dB/100 m (-8 dB/100 ft.) at 10 MHz

0 to 50% Rise Time: From 0.24 μs at 152.4 m (500 ft.) to 0.41 μs at 304.8 m (1000 ft.)

Maximum Data Rate: From 500 kbps at 304.8 m (1000 ft.) to 800 kbps at 152.4 m (500 ft.) to 5 Mbps at 30.5 m (100 ft.)

Length: 152.4m (other lengths available on a quote basis)

Heavy-Traffic Cables

If you need to send lots of data across short distances—for example, between a CAD/CAM workstation and an industrial plotter—these cables are for you.

They are built with 24-AWG 7-x-32 stranded tinned-copper twisted pairs, insulated with S-R PVC, overall shielded (100%) with aluminum-polyester Beldfoil[®] plus overall shielded (65%) with tinned copper braid, and jacketed with chrome PVC.

Specifications

Compliance: NEC CM, CSA PCC FT 4 and (except 8348, 8355) Type T2

Maximum Voltage: 300 V

Max. Temperature: 80°C (176°F)

Nominal Velocity of Propagation: 60% of the speed of light

Nom. DC Resistance (Conductors): 78.7 Ω/km (24 Ω/1000 ft.)

Nominal Impedance: 75 Ω

Nominal Mutual Capacitance: 98 pF/m (30 pF/ft.)

Nominal Capacitance to Shield: 164 pF/m (50 pF/ft.)

Attenuation: From -1.5 dB/100 m (-0.5 dB/100 ft.) at 100 kHz to -4.3 dB/100 m (-1.3 dB/100 ft.) at 1 MHz to -15.2 dB/100 m (-5 dB/100 ft.) at 10 MHz

0 to 50% Rise Time: From 0.1 μs at 152.4 m (500 ft.) to 0.5 μs at 304.8 m (1000 ft.)

Maximum Data Rate: From 850 kbps at 304.8 m (1000 ft.) to 3 Mbps at 152.4 m (500 ft.) to over 10 Mbps at 30.5 m (100 ft.)

Length: 152.4 m (other lengths available on a quote basis)

Long-Distance Cables

For long-distance RS-232 or RS-422 connections, use these low-capacitance, low-noise cables.

They are built with 24-AWG 7-x-32 stranded tinned-copper twisted pairs, insulated with Datalene[®], overall shielded (100%) with aluminum-polyester Beldfoil[®] plus overall shielded (65%) with tinned copper braid, and jacketed with chrome PVC. They have a 24-AWG stranded tinned-copper drain wire.

Specifications

Compliance: NEC CM, CSA PCC FT 1

Maximum Voltage: 30 V

Max. Temperature: 176°F (80°C)

Nominal Velocity of Propagation: 78% of the speed of light

Nom. DC Resistance (Conductors): 78.7 Ω/km (24 Ω/1000 ft.)

Nominal Impedance: 100 Ω

Nominal Mutual Capacitance: 41 pF/m (12.5 pF/ft.)

Nominal Capacitance to Shield: 72.2 pF/m (22 pF/ft.)

Attenuation: From -0.7 dB/100 m (-0.2 dB/100 ft.) at 100 kHz to -2.3 dB/100 m (-0.7 dB/100 ft.) at 1 MHz to -7.6 dB/100 m (-2.5 dB/100 ft.) at 10 MHz

0 to 50% Rise Time: From 60 ns at 152.4 m (500 ft.) to 120 ns at 304.8 m (1000 ft.)

Maximum Data Rate: From 600 kbps at 1.5 km (5000 ft.) to 6 Mbps at 304.8 m (1000 ft.) to 10 Mbps at 152.4 m (500 ft.)

Length: 152.4 m (other lengths available on a quote basis)

Ordering Information

ITEM	CODE
PC/Instrument Cables (Shielded 24 AWG PVC)	
1-Pair (Outer diameter is 0.156" [3.96 mm]; weight of 500-ft. reel is 7.4 lb. [3.4 kg])	9501
2-Pair (Outer diameter is 0.222" [5.64 mm]; 500-ft. reel is 14.7 lb. [6.7 kg])	9502
3-Pair (Outer diameter is 0.232" [5.89 mm]; 500-ft. reel is 15.3 lb. [7 kg])	9503
4-Pair (Outer diameter is 0.265" [6.73 mm]; 500-ft. reel is 18.9 lb. [8.6 kg])	9504
5-Pair (Outer diameter is 0.289" [7.34 mm]; 500-ft. reel is 22.7 lb. [10.3 kg])	9505

Ordering Information

ITEM	CODE
Heavy-Traffic Cables (Shielded 24 AWG PVC Chrome)	
2-Pair (Outer diameter is 0.250" [6.35 mm]; 500-ft. reel is 17.9 lb. [8.1 kg])	8332
3-Pair (Outer diameter is 0.265" [6.73 mm]; 500-ft. reel is 21.2 lb. [9.6 kg])	8333
4-Pair (Outer diameter is 0.288" [7.32 mm]; 500-ft. reel is 23.4 lb. [10.6 kg])	8334
5-Pair (Outer diameter is 0.295" [7.49 mm]; 500-ft. reel is 26.5 lb. [12 kg])	8335
6-Pair (Outer diameter is 0.310" [7.87 mm]; 500-ft. reel is 30.1 lb. [13.7 kg])	8336
7-Pair (Outer diameter is 0.321" [8.15 mm]; 500-ft. reel is 30.7 lb. [14 kg])	8337
10-Pair (Outer diameter is 0.385" [9.78 mm]; 500-ft. reel is 44.3 lb. [20.1 kg])	8340
12.5-Pair (12 wire pairs + 1 unpaired wire) (Outer diameter is 0.405" [10.29 mm]; 500-ft. reel is 53.2 lb. [24.2 kg])	8342
15-Pair (Outer diameter is 0.445" [11.30 mm]; 500-ft. reel is 61.1 lb. [27.8 kg])	8345
18-Pair (Outer diameter is 0.480" [12.19 mm]; 500-ft. reel is 72.1 lb. [32.8 kg])	8348
25-Pair (Outer diameter is 0.550" [13.97 mm]; 500-ft. reel is 95.2 lb. [43.3 kg])	8355

Ordering Information

ITEM	CODE
Long-Distance Cables (Shielded 24 AWG PVC Chrome)	
2-Pair (Outer diameter is 0.270" [6.86 mm]; 500-ft. reel is 19.8 lb. [9 kg])	8102
3-Pair (Outer diameter is 0.283" [7.19 mm]; 500-ft. reel is 22.4 lb. [10.2 kg])	8103
4-Pair (Outer diameter is 0.302" [7.67 mm]; 500-ft. reel is 25.8 lb. [11.7 kg])	8104
5-Pair (Outer diameter is 0.316" [8.03 mm]; 500-ft. reel is 27.9 lb. [12.7 kg])	8105
6-Pair (Outer diameter is 0.341" [8.66 mm]; 500-ft. reel is 33.8 lb. [15.4 kg])	8106
7-Pair (Outer diameter is 0.341" [8.66 mm]; 500-ft. reel is 35.1 lb. [16 kg])	8107
8-Pair (Outer diameter is 0.370" [9.40 mm]; 500-ft. reel is 39.6 lb. [18 kg])	8108
10-Pair (Outer diameter is 0.427" [10.85 mm]; 500-ft. reel is 47.9 lb. [21.8 kg])	8110
12.5-Pair (12 wire pairs + 1 unpaired wire) (Outer diameter is 0.440" [11.18 mm]; 500-ft. reel is 52.4 lb. [23.8 kg])	8112
15-Pair (Outer diameter is 0.495" [12.57 mm]; 500-ft. reel is 62.8 lb. [28.5 kg])	8115
18-Pair (Outer diameter is 0.537" [13.64 mm]; 500-ft. reel is 75.4 lb. [34.3 kg])	8118
25-Pair (Outer diameter is 0.632" [16.05 mm]; 500-ft. reel is 96.6 lb. [43.9 kg])	8125



Black Box offers the best warranty program in the industry—Fido Protection®. For more information, request **FaxBack 22512**.