

DM-CBL-P-SP500

DigitalMedia™ Cable, plenum-rated, 500 ft spool

Crestron DM-CBL-P cable provides a high-performance, single-cable wiring solution for DigitalMedia (DM) systems in a commercial plenum application. Within a single plenum-rated jacket, DM-CBL-P contains one high-bandwidth/low-crosstalk shielded 4-twisted pair (STP) cable, one CAT5e unshielded 4-twisted pair (UTP) cable, and one DMNet cable.

The STP "Video Data" cable, which connects to the 'D' port of a DigitalMedia device, is of a specialized construction designed to allow the longest possible cable lengths^[1] for transporting high-definition digital video and audio. The Cat5e "Data Management" cable, which connects to the 'M' port, carries high-speed Ethernet and other data, plus 5V DC power. Finally, the DMNet cable carries additional proprietary control signals and 24V DC power.

Wiring a DigitalMedia system using DM-CBL-P is simple, requiring just one cable to be run to each DM receiver (i.e. Room Controller) and transmitter location^[1]. Foot markers are printed on the outer jacket making it easy to determine the exact length of each cable run when commissioning the installed system.

Termination of a DM cable is accomplished using one standard RJ45 (not provided) for 'M', one detachable terminal block (provided with each DM device) for DMNet, and one Crestron **DM-CONN** shielded RJ45 (sold separately) for 'D'. The DM-CONN connector enables fast and reliable termination of the shielded twisted-pair cable without requiring any special tools.

For non-plenum applications, use DM-CBL-NP.

SPECIFICATIONS

'D' Video Data

Construction: Four twisted pair, each pair isolated by an internal spline within an inner jacket, shield, braid, and overall jacket

(4) Twisted Pairs: Colors: Blue/white, orange/white, green/white, brown/white;

Conductors: 24 AWG x8 solid copper;

Insulation: 0.0055 inch thick FEP;

Outer Diameter (per conductor): 1.028 ±0.02 mm;

Shield: Aluminum/Mylar tape w/aluminum on the outside;

Braid: Tin/copper (45% coverage);

Mutual Capacitance: 5600 pF / 100 m;

Capacitance Unbalance: 330 pF / 100 m;

Inner Jacket: Color: Natural;

Material: Low-smoke PVC;

Jacket: Color: Blue;

Material: Low-smoke PVC;

Thickness: 0.018 inch;

'M' Data Management (CAT5E)

(4) Twisted Pairs: Colors: Blue/white, orange/white,

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green/white, brown/white;
Conductors: 24 AWG x8 solid copper;
Insulation: 0.0077 inch thick FEP;
Shield: none;
Mutual Capacitance: 14 pF / ft nominal;
Capacitance Unbalance: 330 pF / 100 m maximum;
Characteristic Impedance: 100 ohms \pm 15% (0.772 to 100 MHz);
Velocity of Propagation: 70%;
Conductor DC Resistance: 28.6 ohms / 1000 ft maximum;
Jacket: Color: Yellow;
Material: Low-smoke PVC;
Ripcord: yes;
Thickness: 0.018 inch;

'DMNet' Control & Power

Construction: (1) 22 AWG shielded pair (control) and (1) 18 AWG pair (power) w/overall jacket
Control Pair: Colors: Gray/orange;
Conductors: 22 AWG x2 stranded copper;
Insulation: 0.025 inch thick foam FEP;
Shield: Aluminum/Polyester (100% coverage) w/aluminum on the inside;
Drain: 24 AWG tinned stranded copper;
Capacitance: 12.5 pF / ft, nominal;
Power Pair: Colors: Red/black;
Conductors: 18 AWG x2 stranded copper;
Insulation: 0.01 inch thick low-smoke PVC;
Jacket: Color: Gray;
Material: Low-smoke PVC;
Ripcord: yes;
Thickness: 0.0325 inch;

Outer Jacket

Color: Blue w/yellow stripe
Composite Construction: All wires contained in a Mylar wrap

w/overall outer jacket
Material: Low-smoke PVC, flexible
Ripcord: yes
Thickness: 0.03 inch
Outer Diameter: 0.58 inch (14.73 mm) nominal
Minimum Recommended Bend Radius: 4.5 inches
Maximum Pull Tension: 73 lbf

Rating

NEC Article 800; UL Subject 444, Type CMP; CSA Type CMP

Notes:

1. The maximum allowable cable length depends on multiple factors. One or more DM Repeaters (Model **DM-DR**) may be required. Refer to the Crestron DigitalMedia Design Guide, Doc. #4789 for complete wiring guidelines.