

**7876S Composite - Composite Data, Audio, Video, Security and Control Cable**

|   |  |   |
|---|--|---|
|  |  | <p><b>For more information please call</b><br/><b>1-800-Belden1</b></p> <p><u><b>See Put-ups and Colors</b></u></p> |
|---|--|---|

**Description:**

Banana Peel® Composite - (2) Cat 5e 4-bonded-pairs. 24 AWG unshielded plus (2) Series 6 Coax with Duobond Plus® Bonded Tri-shield. Polyolefin Insulation on the pairs; Gas-injected FPE Insulation on the coax, F-R PVC jacket. No overall jacket.

**SUITABLE APPLICATIONS:**

|                       |   |
|-----------------------|---|
| Suitable Applications | HDTV, DBS, CATV, CCTV, Multimedia, Voice, Video, Data, High Speed Internet, Networked Computing, Distributed Video, Distributed Audio, Security Monitoring, Energy Monitoring |
|-----------------------|---|

**PHYSICAL CHARACTERISTICS:**

**COAX:**

|                           |          |
|---------------------------|----------|
| Number of Coax            | 2        |
| Series Type (Single Coax) | Series 6 |

**CONDUCTOR :**

|                         |                  |
|-------------------------|------------------|
| Coax AWG                | 18               |
| Coax Stranding          | Solid            |
| Coax Conductor Diameter | .040 in.         |
| Coax Conductor Material | BC - Bare Copper |

**INSULATION :**

|                          |                                      |
|--------------------------|--------------------------------------|
| Coax Insulation Material | Gas-injected FPE - Foam Polyethylene |
| Coax Insulation Diameter | .180 in.                             |

**OUTER SHIELD :**

|                                       |                 |
|---------------------------------------|-----------------|
| Coax Outer Shield Material Trade Name | Duobond Plus®   |
| Coax Outer Shield Type                | Tape/Braid/Tape |
| Coax Outer Shield Material :          |                 |

| Layer Number | Trade Name      | Type  | Material   | % Coverage (%) |
|--------------|-----------------|-------|--|----------------|
| 1            | Bonded Duofoil® | Tape  | Bonded Aluminum Foil-Polyester Tape-Aluminum Foil      | 100            |
| 2            |                 | Braid | AL - Aluminum  | 77             |
| 3            |                 | Tape  | Bonded Aluminum Foil-Polyester Tape with Shorting Fold | 100            |

**OUTER JACKET :**

|                            |                          |
|----------------------------|--------------------------|
| Coax Outer Jacket Material | PVC - Polyvinyl Chloride |
| Coax Outer Jacket Diameter | .275 in.                 |

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**TWISTED PAIR CABLE(S):**

**CONDUCTOR :**

|                                 |                  |
|---------------------------------|------------------|
| Number of Pairs                 | 8                |
| Twisted Pair AWG                | 24               |
| Twisted Pair Stranding          | Solid            |
| Twisted Pair Conductor Diameter | .020 in.         |
| Twisted Pair Conductor Material | BC - Bare Copper |

**INSULATION :**

|                                  |                 |
|----------------------------------|-----------------|
| Twisted Pair Insulation Material | PO - Polyolefin |
| Twisted Pair Insulation Diameter | .035 in.        |

Twisted Pair Color Code Chart :

| Number | Color                          |
|--------|--------------------------------|
| 1      | White/Blue Stripe and Blue     |
| 2      | White/Orange Stripe and Orange |
| 3      | White/Green Stripe and Green   |
| 4      | White/Brown Stripe and Brown   |

**OUTER JACKET :**

|                                    |                          |
|------------------------------------|--------------------------|
| Twisted Pair Outer Jacket Material | PVC - Polyvinyl Chloride |
| Twisted Pair Outer Jacket Diameter | .204 in.                 |
| Twisted Pair Outer Jacket Ripcord  | Yes                      |

**OVERALL CABLING:**

**OUTER SHIELD :**

|                                       |            |
|---------------------------------------|------------|
| Overall Cabling Outer Shield Material | Unshielded |
|---------------------------------------|------------|

**OUTER JACKET :**

|                                       |            |
|---------------------------------------|------------|
| Overall Cabling Outer Jacket Material | Unjacketed |
|---------------------------------------|------------|

**OVERALL DIAMETER :**

|  |          |
|--|----------|
| Overall Composite Cabling Nominal Diameter | .550 in. |
|--|----------|

**MECHANICAL CHARACTERISTICS:**

**OVERALL CABLING:**

|  |                  |
|--|------------------|
| Overall Cabling Operating Temperature Range      | -10°C To +75°C   |
| Overall Cabling Separation Temperature Range     | 0°C To +75°C     |
| Overall Cabling Bulk Cable Weight                | 120 lbs/1000 ft. |
| Overall Cabling Max. Recommended Pulling Tension | 262 lbs.         |
| Overall Cabling Min. Bend Radius (Install)       | 4 in.            |

**APPLICABLE SPECIFICATIONS AND AGENCY COMPLIANCE:**

**OVERALL CABLING:**

**APPLICABLE STANDARDS :**

|  |     |
|--|-----|
| Overall Cabling NEC/(UL) Specification | CMR |
|--|-----|

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|  |                                   |
|--|-----------------------------------|
| Overall Cabling CEC/C(UL) Specification          | CMG                               |
| Overall Cabling IEC Specification                | ISO/IEC 11801, Category 5e        |
| Overall Cabling EU RoHS Compliant (Y/N)          | Yes                               |
| Overall Cabling EU RoHS Compliance (mm/dd/yyyy): | 01/01/2004                        |
| Overall Cabling TIA/EIA Specification            | ANSI/TIA/EIA-568-B.2, Category 5e |
| Overall Cabling Other Specification              | NEMA WC-63.1, Category 5e         |

**FLAME TEST :**

|                                  |              |
|----------------------------------|--------------|
| Overall Cabling UL Flame Test    | UL1666 Riser |
| Overall Cabling C(UL) Flame Test | FT4          |

**PLENUM/NON-PLENUM :**

|                              |   |
|------------------------------|---|
| Overall Cabling Plenum (Y/N) | N |
|------------------------------|---|

**ELECTRICAL CHARACTERISTICS:**

**COAX:**

|   |                  |
|---|------------------|
| Coax Nom. Characteristic Impedance            | 75 Ohms          |
| Coax Nom. Inductance                          | .097 $\mu$ H/ft  |
| Coax Nom. Capacitance Conductor to Shield     | 16.2 pF/ft       |
| Coax Nominal Velocity of Propagation          | 83 %             |
| Coax Nominal Delay                            | 1.2 ns/ft        |
| Coax Nom. Conductor DC Resistance @ 20 Deg. C | 6.4 Ohms/1000 ft |
| Coax Nom. Inner Shield DC Resistance          | 4.6 Ohms/1000 ft |
| Coax Minimum Structural Return Loss :         |                  |

| Description | Frequency (MHz) | Start Frequency (MHz) | Stop Frequency (MHz) | Minimum Structural Return Loss (dB) |
|-------------|-----------------|-----------------------|----------------------|-------------------------------------|
|             |                 | 5                     | 1000                 | 20                                  |
|             |                 | 1000                  | 2250                 | 15                                  |
|             |                 | 2250                  | 3000                 | 10                                  |

Coax Nom. Attenuation :

| Description | Frequency (MHz) | Start Frequency (MHz) | Stop Frequency (MHz) | Nom. Attenuation (dB/100 ft.) |
|-------------|-----------------|-----------------------|----------------------|-------------------------------|
|             | 5               |                       |                      | 0.5                           |
|             | 55              |                       |                      | 1.4                           |
|             | 211             |                       |                      | 2.6                           |
|             | 500             |                       |                      | 4.1                           |
|             | 750             |                       |                      | 5.1                           |
|             | 862             |                       |                      | 5.5                           |
|             | 1000            |                       |                      | 6.0                           |
|             | 1450            |                       |                      | 7.8                           |
|             | 1800            |                       |                      | 8.6                           |
|             | 2250            |                       |                      | 9.8                           |
|             | 3000            |                       |                      | 11.3                          |

Coax Max. Attenuation :

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| Description | Frequency (MHz) | Start Frequency (MHz) | Stop Frequency (MHz) | Max. Attenuation (dB/100 ft.) |
|-------------|-----------------|-----------------------|----------------------|-------------------------------|
|             | 5               |                       |                      | .67                           |
|             | 55              |                       |                      | 1.60                          |
|             | 211             |                       |                      | 2.87                          |
|             | 500             |                       |                      | 4.48                          |
|             | 750             |                       |                      | 5.59                          |
|             | 862             |                       |                      | 5.98                          |
|             | 1000            |                       |                      | 6.54                          |
|             | 1450            |                       |                      | 8.0                           |
|             | 1800            |                       |                      | 8.8                           |
|             | 2250            |                       |                      | 10.0                          |
|             | 3000            |                       |                      | 11.9                          |

Coax Max. Operating Voltage - UL 350 V RMS

Coax Shield Effectiveness :

| Description | Frequency (MHz) | Start Frequency (MHz) | Stop Frequency (MHz) | Shield Effectiveness (dB) |
|-------------|-----------------|-----------------------|----------------------|---------------------------|
|             |                 | 5                     | 50                   | 105                       |
|             |                 | 50                    | 1000                 | 125                       |

Coax Other Electrical Characteristic 1 Coax Sweep tested to 3.0 GHz.

**TWISTED PAIR CABLE(S):**

**PREMISE :**

Twisted Pair Premise Cable Electricals Table 1 :

| Frequency (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min. Return Loss (dB) | Min. Structural Return Loss (dB) |
|-----------------|-----------------------------|----------------|------------------|---------------|-----------------|-----------------------|----------------------------------|
| 1.0             | 2.0                         |                | 62.3             |               | 60              | 20.0                  |                                  |
| 4.0             | 4.1                         |                | 53.3             |               | 49              | 23.0                  |                                  |
| 8.0             | 5.8                         |                | 48.8             |               | 43              | 24.5                  |                                  |
| 10.0            | 6.5                         |                | 47.3             |               | 41              | 25.0                  |                                  |
| 16.0            | 8.2                         |                | 44.3             |               | 36              | 25.0                  |                                  |
| 20.0            | 9.3                         |                | 42.8             |               | 34              | 25.0                  |                                  |
| 25.0            | 10.4                        |                | 41.3             |               | 31              | 24.3                  |                                  |
| 31.25           | 11.7                        |                | 39.9             |               | 28              | 23.6                  |                                  |
| 62.5            | 17.0                        |                | 35.4             |               | 19              | 21.5                  |                                  |
| 100             | 22.0                        |                | 32.3             |               | 11              | 20.1                  |                                  |

Twisted Pair Premise Cable Electricals Table 2 :

## 7876S Composite - Composite Data, Audio, Video, Security and Control Cable

| Frequency (MHz) | Input (Unfitted) Impedance (Ohms) | Fitted Impedance (Ohms) | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-----------------|-----------------------------------|-------------------------|------------------|--------------------|
| 1.0             | 100 +/- 15%                       |                         |                  | 60.8               |
| 4.0             | 100 +/- 15%                       |                         |                  | 48.7               |
| 8.0             | 100 +/- 15%                       |                         |                  | 42.7               |
| 10.0            | 100 +/- 15%                       |                         |                  | 40.8               |
| 16.0            | 100 +/- 15%                       |                         |                  | 36.7               |
| 20.0            | 100 +/- 15%                       |                         |                  | 34.7               |
| 25.0            | 100 +/- 15%                       |                         |                  | 32.8               |
| 31.25           | 100 +/- 15%                       |                         |                  | 30.9               |
| 62.5            | 100 +/- 15%                       |                         |                  | 24.8               |
| 100             | 100 +/- 15%                       |                         |                  | 20.8               |

### MULTICONDUCTOR CABLE(S):

|   |  |
|---|--|
| Multi-Conductor Nom. Mutual Capacitance @ 1 kHz   | 15 pF/ft   |
| Multi-Conductor Nominal Velocity of Propagation   | 70 %   |
| Multi-Conductor Max. Cond.DC Resist. @ 20 Deg. C  | 9.38 Ohms/100 m                                      |
| Multi-Conductor Max. Operating Voltage - UL       | 300 V RMS  |
| Multi-Conductor Other Electrical Characteristic 1 | Third party verified to TIA/EIA-568-B.2, Category 5E |

### NOTES:

#### OVERALL CABLING:

|                                 |   |
|---------------------------------|---|
| Overall Cabling Notes           | Shielding effectiveness determined from screening attenuation measurement when tested in accordance with IEC 61196-1. |
| Overall Cabling Notes - cont'd. | Banana Peel® US PATENT 7049523  |

#### PUT-UPS AND COLORS:

| Item          | Description              | Put-Up (ft.) | Ship Weight (lbs.) | Jacket Color | Notes |
|---------------|--------------------------|--------------|--------------------|--------------|-------|
| 7876S 000500  | 2 RG6 DB PLUS + 2 CAT 5E | 500          | 63                 | NONE         | C     |
| 7876S 0001000 | 2 RG6 DB PLUS + 2 CAT 5E | 1000         | 119                | NONE         | C     |

C = CRATE REEL PUT-UP.

Revision Number: 6      Revision Date: 08-02-2006

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