Detailed Specifications & Technical Data



ENGLISH MEASUREMENT VERSION

8451 Multi-Conductor - Single-Pair Cable

For more Information please call

1-800-Belden1



General Description:

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

| 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 (in.) PP - Polypropylene .008 | |
| Outer Shield Outer Shield Material: | |
| Outer Shield Trade Name Type Outer Shield Material | Coverage (%) |
| Beldfoil® (Z-Fold®) Tape Aluminum Foil-Polyester Tap | pe 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 PVC - Polyvinyl Chloride | |
| Overall Cable | |
| | |
| Overall Nominal Diameter: Pair Pair Pair | 0.138 in. |
| Pair Pair Color Code Chart: Number Color 1 Black & Red | 0.138 in. |
| Pair Pair Color Code Chart: Number Color | 0.138 in. |
| Pair Pair Color Code Chart: Number Color 1 Black & Red | 0.138 in. -20°C To +75°C |
| Pair Pair Color Code Chart: Number Color 1 Black & Red Mechanical Characteristics (Overall) | |
| Pair Pair Color Code Chart: Number Color 1 Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: | -20°C To +75°C |
| Pair Pair Color Code Chart: Number Color 1 Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: | -20°C To +75°C 15 lbs/1000 ft. |
| Pair Pair Color Code Chart: Number Color 1 Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. |
| Pair Pair Color Code Chart: Number Color 1 Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. |
| Pair Pair Color Code Chart: Number Color Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. |
| Pair Pair Color Code Chart: Number Color 1 Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc Applicable Standards & Environmental Programs | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. 2e (Overall) |
| Pair Pair Color Code Chart: Number Color Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc Applicable Standards & Environmental Programs NEC/(UL) Specification: | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. ce (Overall) |
| Pair Pair Color Code Chart: Number Color Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc Applicable Standards & Environmental Programs NEC/(UL) Specification: CEC/C(UL) Specification: | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. ce (Overall) CMR CMG |
| Pair Pair Color Code Chart: Number Color Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc Applicable Standards & Environmental Programs NEC/(UL) Specification: CEC/C(UL) Specification: EU Directive 2011/65/EU (ROHS II): | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. cMR CMR CMG Yes |
| Pair Pair Color Code Chart: Number Color Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc Applicable Standards & Environmental Programs NEC/(UL) Specification: CEC/C(UL) Specification: EU Directive 2011/65/EU (ROHS II): EU CE Mark: | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. ce (Overall) CMR CMR CMG Yes Yes |
| Pair Pair Color Code Chart: Number Color Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc Applicable Standards & Environmental Programs NEC/(UL) Specification: CEC/C(UL) Specification: EU Directive 2011/65/EU (ROHS II): EU CE Mark: EU Directive 2000/53/EC (ELV): | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. cMR CMR CMG Yes Yes Yes |
| Pair Pair Color Code Chart: Number Color Black & Red Mechanical Characteristics (Overall) Operating Temperature Range: Bulk Cable Weight: Max. Recommended Pulling Tension: Min. Bend Radius/Minor Axis: Applicable Specifications and Agency Complianc Applicable Standards & Environmental Programs NEC/(UL) Specification: EU Directive 2011/65/EU (ROHS II): EU Directive 2000/53/EC (ELV): EU Directive 2002/95/EC (RoHS): | -20°C To +75°C 15 lbs/1000 ft. 27 lbs. 1.500 in. ce (Overall) CMR CMG Yes Yes Yes Yes |

Detailed Specifications & Technical Data





8451 Multi-Conductor - Single-Pair Cable

| CA Prop 85 (CJ for Wire 3 Cable): Yes MI Coder 33 (China Ro15): Yes UL Flame Test: UL 1666 Verical Shaft CSA Flame Test: FI4 Pomum Perum (Wh): Non-Cable No Electrical Characteristics (Overall) No Non-Aracteristic Impedance: No Impedance (Mint) No Inductance: Non-Cable Shaft Non-Capacitance Conductor to Conductor: Non-Spacitance (Pff) 3d Non-Spacitance (Pff) 3d Non-Spacitance (Pff) 3d Non-Spacitance (Pff) 15 Spacitance (Pff) 15 Spacitance (Pff) 15 Spacitance (Pff) 15 Spacitance (Pff) 16 Spacitance (Pff) 15 Spacitance (Pff) 16 Spacitance (Pff) 15 Spacitance (Pff) 16 Spacitance (Pff) 16 Spacitance (Pff) 16 Spacitance (Pff) 16 | | |
|--|---|-----------------------|
| Flame Test UL 1966 Vertical Shaft GRA Flame Test: UL 1966 Vertical Shaft GRA Flame Test: FT4 Plenum (YiN): No Electrical Characteristics (Overall) No Nom. Abracteristic Impedance (Onm) | CA Prop 65 (CJ for Wire & Cable): | Yes |
| U. Flame Test: UL 1666 Vertical Shaft ESA Flame Test: F14 Penum (Y/N): No Entrice (Characteristics (Overall) No Source Characteristics (Overall) No Nom: Characteristics (Overall) No Momentations (PM) Source Notations (PM) 3d Nom Nom: Separatines Conductor to Conductor: Source Notations (PM) 3d Source Notations (PM) 3d <th>MII Order #39 (China RoHS):</th> <th>Yes</th> | MII Order #39 (China RoHS): | Yes |
| CSA Flame Test: FT4 Plenum/Non-Plenum No Plenum/Yny: No Electrical Characteristics (Overall) No Nom. Characteristics (Overall) No Mom. Characteristics (Overall) No Af Impedance (Min) 45 Impedance (Min) 45 Impedance (Min) 45 Impedance (Min) 47 Impedance (Min) 57 Impedance (Min) 58 Impedance | Flame Test | |
| Plenum/Von-Plenum Penum (YiN): No Electrical Characteristics (Overall) Nom. Characteristic Impedance: Impedance (Unit) 45 Nom. Inductance: Inductance (Unit) 17 Nom. Capacitance Conductor to Conductor: Capacitance Conductor to Conductor & Shield: Capacitance Fortil 34 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (Fortil) 34 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (Fortil) 34 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (Fortil) 34 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (Fortil) 34 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (Fortil) 34 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (Cond. to Other Cond. to O | UL Flame Test: | UL1666 Vertical Shaft |
| Plenum (Yi): Not Contractoristics (Overall) Nom. Naractifistic Impedance: Impedance (Onin) 4 | CSA Flame Test: | FT4 |
| Electrical Characteristics (Overall) Nom. Characteristic Impedance: Impedance (Ohm) 46 Nom. Inductance: Inductance (HIM) 17 Nom. Sepacitance Conductor to Conductor: Capacitance (PfM) 34 Nom. Capacitance (Conductor & Shield: Capacitance (Conductor & Shield: Capacitance (Conductor of Conductor & Shield: Capacitance (Conductor of Propagation: VP (%) 86 Nominal Delay: Delay (nsM) 1.5 Nominal Outer Shield DC Resistance: DCR @ 20° (Ohm/1000 ft) 14.1 Nominal Outer Shield DC Resistance: DCR @ 20° (Ohm/1000 ft) 14.1 Nominal Outer Shield DC Resistance: DCR @ 20° (Ohm/1000 ft) 14.1 Max. Operating Voltage - UL: Voltage 30 VTMS Max. Recommended Current: Current | Plenum/Non-Plenum | |
| Nom. Characteristic Impedance: Impedance (Ohm) 45 Mom. Inductance: Inductance (uHft) 17 Nom. Capacitance Conductor to Conductor: Capacitance (pFft) 34 Som. Capacitance (pFff) 34 Som. Capacitance (pFff) 37 Som. Capacitance (pFff) 67 Som. Som. Intel Velocity of Propagation: VP (%) 66 Nom. Intel Velocity of Propagation: VP (%) 67 Sominal Delay: Delay (ns/ft) 1.5 Som. Som. Som Conductor DC Resistance: DR2 20°C (Ohm/1000 ff) 14.5 Sominal Outer Shield DC Resistance: DR2 20°C (Ohm/1000 ff) 14.1 Max. Operating Voltage - UL: Voltage 300 vTMS Succommended Current: Current Current | Plenum (Y/N): | No |
| Nom. Characteristic Impedance: Impedance (Ohm) 45 Mom. Inductance: Inductance (uHft) 17 Nom. Capacitance Conductor to Conductor: Capacitance (pFft) 34 Som. Capacitance (pFff) 34 Som. Capacitance (pFff) 37 Som. Capacitance (pFff) 67 Som. Som. Intel Velocity of Propagation: VP (%) 66 Nom. Intel Velocity of Propagation: VP (%) 67 Sominal Delay: Delay (ns/ft) 1.5 Som. Som. Som Conductor DC Resistance: DR2 20°C (Ohm/1000 ff) 14.5 Sominal Outer Shield DC Resistance: DR2 20°C (Ohm/1000 ff) 14.1 Max. Operating Voltage - UL: Voltage 300 vTMS Succommended Current: Current Current | Electrical Characteristics (Overall) | |
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| Inductance (µH/I) 17 Nom. Capacitance (pF/ft) 34 Nom. Capacitance (pF/ft) 67 67 66 Nominal Velocity of Propagation: VP (%) 66 Nominal Delay: Delay (nsft) 1.5 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/1000 ft) 1.4.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 1.4.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 1.4.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 1.4.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 1.4.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 1.4.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 1.4.5 Nominal Outer Shield DC Resistance: Nominal Outer Shield DC Resistance: Nominal Outer Shield DC Resistance: | | |
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| Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/ft) 67 Nominal Velocity of Propagation: VP (%) 66 Nominal Delay: Delay (ns/ft) 1.5 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/1000 ft) 14.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 14.1 Max. Operating Voltage - UL: Voltage 300 V RMS Max. Recommended Current: | | |
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| 67 Nominal Velocity of Propagation: VP (%) 66 Nominal Delay: Delay (ns/ft) 1.5 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/1000 ft) 14.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 14.1 Max. Operating Voltage - UL: Voltage 300 V RMS Max. Recommended Current: Current | Nom. Capacitance Cond. to Other Conductor & Shield: | |
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| Delay (ns/ft) 1.5 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/1000 ft) 14.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 14.1 Max. Operating Voltage - UL: Voltage 300 V RMS Max. Recommended Current: Current | Nominal Delay: | |
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| 14.5 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft) 14.1 Max. Operating Voltage - UL: Voltage 300 V RMS Max. Recommended Current: Current | Nom. Conductor DC Resistance: | |
| DCR @ 20°C (Ohm/1000 ft) 14.1 Max. Operating Voltage - UL: Voltage 300 V RMS Max. Recommended Current: Current | | |
| 14.1 Max. Operating Voltage - UL: Voltage 300 V RMS Max. Recommended Current: Current | Nominal Outer Shield DC Resistance: | |
| Max. Operating Voltage - UL: Voltage 300 V RMS Max. Recommended Current: Current | | |
| Voltage 300 V RMS Max. Recommended Current: Current | | |
| Max. Recommended Current: Current | Voltage | |
| Current | | |
| 2.9 Amps per conductor @ 25°C | | |
| | 2.9 Amps per conductor @ 25°C | |
| | Notes (Overall) | |

Notes (Overall)

Notes: Unique paper separator facilitates jacket stripping.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|-----------|-------------|-------|-------|----------------------|
| 8451 008U1000 | 1,000 FT | 16.000 LB | GRAY | | 2 #22 PP SHLD PVC FR |
| 8451 008U500 | 500 FT | 8.500 LB | GRAY | | 2 #22 PP SHLD PVC FR |
| 8451 0081000 | 1,000 FT | 16.000 LB | GRAY | С | 2 #22 PP SHLD PVC FR |
| 8451 008500 | 500 FT | 8.000 LB | GRAY | | 2 #22 PP SHLD PVC FR |
| 8451 010U1000 | 1,000 FT | 16.000 LB | BLACK | | 2 #22 PP SHLD PVC FR |
| 8451 010U500 | 500 FT | 8.500 LB | BLACK | | 2 #22 PP SHLD PVC FR |
| 8451 010100 | 100 FT | 2.200 LB | BLACK | | 2 #22 PP SHLD PVC FR |
| 8451 0101000 | 1,000 FT | 16.000 LB | BLACK | С | 2 #22 PP SHLD PVC FR |
| 8451 01010000 | 10,000 FT | 160.000 LB | BLACK | | 2 #22 PP SHLD PVC FR |
| 8451 01015000 | 15,000 FT | 240.000 LB | BLACK | | 2 #22 PP SHLD PVC FR |
| 8451 010500 | 500 FT | 8.000 LB | BLACK | | 2 #22 PP SHLD PVC FR |
| 8451 0105000 | 5,000 FT | 80.000 LB | BLACK | | 2 #22 PP SHLD PVC FR |

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Revision Number: 1 Revision Date: 07-30-2013

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