

9684 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422



Description:

24 AWG stranded (7x32) TC conductors, polyethylene insulation, twisted pairs, overall Beldfoil shield (100% coverage), 24 AWG stranded TC drain wire, PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

| # Conductors | # Pairs | AWG | Stranding | Conductor Material |
|--------------|---------|-----|-----------|--------------------|
| 1 | 12 | 24 | 7x32 | TC - Tinned Copper |

Insulation

Insulation Material:

| Insulation Material |
|---------------------|
| PE - Polyethylene |

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 |
|-----|-----------|------------|--------------------|
| 24 | 7x32 | | TC - Tinned Copper |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material |
|--------------------------|
| PVC - Polyvinyl Chloride |

Overall Cabling

Overall Nominal Diameter: 0.445 in.

Pair

Pair Color Code Chart:

| Number | Color |
|--------|-----------------------------|
| 1 | White/Blue & Blue/White |
| 2 | White/Orange & Orange/White |
| 3 | White/Green & Green/White |
| 4 | White/Brown & Brown/White |
| 5 | White/Gray & Gray/White |
| 6 | Red/Blue & Blue/Red |
| 7 | Red/Orange & Orange/Red |
| 8 | Red/Green & Green/Red |
| 9 | Red/Brown & Brown/Red |
| 10 | Red/Gray & Gray/Red |
| 11 | Black/Blue & Blue/Black |
| 12 | Black/Orange & Orange/Black |
| Single | Gray |

Pair Lay Length & Direction:

| Lay Length (in.) | Twists/ft. (twist/ft) |
|------------------|-----------------------|
| 1.250 | 9.600 |

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Mechanical Characteristics (Overall)

| | |
|--|--------------------------|
| Operating Temperature Range: | -20°C To +80°C |
| Non-UL Temperature Rating: | 80°C (UL AWM Style 2919) |
| Bulk Cable Weight: | 96.400 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 133 lbs. |
| Min. Bend Radius (Install)/Minor Axis: | 4.500 in. |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|---------------------------|
| NEC/(UL) Specification: | CM |
| CEC/C(UL) Specification: | CM |
| AWM Specification: | UL Style 2919 (30 V 80°C) |
| EU CE Mark: | Yes |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004 |
| 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 |

Flame Test

| | |
|----------------|-------------------|
| UL Flame Test: | UL1685 UL Loading |
|----------------|-------------------|

Plenum/Non-Plenum

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)

100

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)

15.5

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)

27.5

Nominal Velocity of Propagation:

VP (%)

66

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

24

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

12

Max. Operating Voltage - UL:

Voltage

30 V RMS (UL AWM Style 2919); 300 V RMS

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Max. Recommended Current:

Current

2.1 Amps per conductor @ 25°C

Put Ups and Colors:

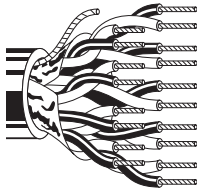
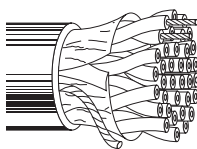
| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|--------------|----------|-------------|--------|-------|-------------------------|
| 9684 0601000 | 1,000 FT | 93.000 LB | CHROME | C | 12PR+1#24 FRHDPE FS PVC |
| 9684 060500 | 500 FT | 47.500 LB | CHROME | C | 12PR+1#24 FRHDPE FS PVC |

Notes:

C = CRATE REEL PUT-UP.

Overall Beldfoil® Shield

Low-Capacitance Computer Cables for EIA RS-232 and EIA RS-422 Applications

| Description | Part No. | UL NEC/ C(UL) CEC Type | No. of Pairs | Color Code | Standard Lengths | | Standard Unit Weight | | Nom. DCR | | Nominal OD | | Nom. Imp. (Ω) | Nom. Vel. of Prop. | Nom. Capacitance | | | |
|---|--------------------------|-------------------------------|--|--|----------------------|--------------------------|-------------------------|-----------------------|----------------------|----------------------|---------------|-----|---------------------|-----------------------------|------------------|---------------|------------------|----------------|
| | | | | | Ft. | m | Lbs. | kg | Cond. | Shield | Inch | mm | | | * pF/ Ft. | * pF/ m | ** pF/ Ft. | ** pF/ m |
| 24 AWG Stranded (7x32) TC Conductors • Twisted Pairs • Overall Beldfoil Shield (100% Coverage) • 24 AWG Stranded TC Drain Wire | | | | | | | | | | | | | | | | | | |
| Polyethylene Insulation • Chrome PVC Jacket | | | | | | | | | | | | | | | | | | |
|  <p>UL AWM Style 2919 (30V 80°C)</p> | 9680 | NEC: CM CEC: CM | 3 | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 17.0 38.0 | 7.7 17.3 | 24.0Ω/M' 78.7Ω/km | 14.4Ω/M' 47.2Ω/km | .282 7.16 | 100 | 66% | 15.5 | 50.8 | 27.5 | 90.2 | |
| | 9681 | NEC: CM CEC: CM | 4 | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 24.0 45.0 | 10.9 20.5 | 24.0Ω/M' 78.7Ω/km | 14.4Ω/M' 47.2Ω/km | .307 7.80 | 100 | 66% | 15.5 | 50.8 | 27.5 | 90.2 | |
| | 9682 | NEC: CM CEC: CM | 6 | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 29.5 56.0 | 13.4 25.5 | 24.0Ω/M' 78.7Ω/km | 13.1Ω/M' 43.0Ω/km | .342 8.69 | 100 | 66% | 15.5 | 50.8 | 27.5 | 90.2 | |
| | 9683 | NEC: CM CEC: CM | 9 | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 38.0 79.0 | 17.2 35.9 | 24.0Ω/M' 78.7Ω/km | 12.0Ω/M' 39.4Ω/km | .397 10.10 | 100 | 66% | 15.5 | 50.8 | 27.5 | 90.2 | |
| | 9684 | NEC: CM CEC: CM | 12.5 (12 prs.+ 1 single) | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 49.5 97.0 | 22.6 44.1 | 24.0Ω/M' 78.7Ω/km | 12.0Ω/M' 39.4Ω/km | .445 11.30 | 100 | 66% | 15.5 | 50.8 | 27.5 | 90.2 | |
| Datalene® Insulation • Chrome PVC Jacket | | | | | | | | | | | | | | | | | | |
|  <p>UL AWM Style 2919 (30V 80°C)</p> | 1419A | NEC: CM CEC: CM FT1 | 2 | See Chart 5 (Tech Info Section) | 500 1000 10000 | 152.4 304.8 3048.0 | 13.5 30.0 310.0 | 6.1 13.6 140.9 | 24.0Ω/M' 78.7Ω/km | 15.1Ω/M' 49.5Ω/km | .248 6.30 | 100 | 78% | 13 | 42.7 | 22 | 72 | |
| | 1420A | NEC: CM CEC: CM FT 1 | 3 | See Chart 5 (Tech Info Section) | 500 1000 10000 | 152.4 304.8 3048.0 | 15.0 34.0 340.0 | 6.8 15.5 154.5 | 24.0Ω/M' 78.7Ω/km | 15.1Ω/M' 49.5Ω/km | .261 6.63 | 100 | 78% | 13 | 42.7 | 22 | 72 | |
| | 1421A | NEC: CM CEC: CM | 4 | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 16.5 37.0 | 7.5 16.8 | 24.0Ω/M' 78.7Ω/km | 14.4Ω/M' 47.2Ω/km | .280 7.11 | 100 | 78% | 13 | 42.7 | 22 | 72 | |
| | 1422A | NEC: CM CEC: CM | 5 | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 23.0 43.0 | 10.5 19.5 | 24.0Ω/M' 78.7Ω/km | 14.4Ω/M' 47.2Ω/km | .294 7.47 | 100 | 78% | 13 | 42.7 | 22 | 72 | |
| | 1423A | NEC: CM CEC: CM | 6 | See Chart 5 (Tech Info Section) | 500 1000 10000 | 152.4 304.8 3048.0 | 25.0 48.0 500.0 | 11.4 21.8 227.3 | 24.0Ω/M' 78.7Ω/km | 13.0Ω/M' 42.7Ω/km | .319 8.10 | 100 | 78% | 13 | 42.7 | 22 | 72 | |
| | 1424A | NEC: CM CEC: CM | 12.5 (12 prs.+ 1 single) | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 43.0 85.0 | 19.5 38.6 | 24.0Ω/M' 78.7Ω/km | 13.0Ω/M' 42.7Ω/km | .418 10.62 | 100 | 78% | 13 | 42.7 | 22 | 72 | |
| 1425A | NEC: CM CEC: CM | 15 | See Chart 5 (Tech Info Section) | 500 1000 | 152.4 304.8 | 53.0 99.0 | 24.1 45.0 | 24.0Ω/M' 78.7Ω/km | 11.2Ω/M' 36.7Ω/km | .473 12.01 | 100 | 78% | 13 | 42.7 | 22 | 72 | | |

DCR = DC Resistance • TC = Tinned Copper

*Capacitance between conductors.

**Capacitance between one conductor and other conductors connected to shield.

Datalene insulation features include low dielectric constant and a dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.