



**Product:** [9730](#) 

RS232/422 Low Cap, #24-3pr, FPO, Indiv. Foil, PVC Jkt, CM, 100Ω

## Product Description

Computer EIA RS-232/422, Digital Audio Cable, 24 AWG stranded (7x32) tinned copper conductors, Datalene® insulation, twisted pairs, individually shielded with Beldfoil® (100% coverage), 24 AWG stranded tinned copper drain wire, overall PVC jacket.

## Technical Specifications

### Product Overview

|                        |                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | rs-422 applications; computer communications; low voltage analog signals (4-20ma, 0-10v, ...); low voltage digital control (24v, ...); digital audio; panel wiring |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Physical Characteristics (Overall)

#### Conductor

| AWG | Stranding | Material           | Nominal Diameter | No. of Pairs |
|-----|-----------|--------------------|------------------|--------------|
| 24  | 7x32      | TC - Tinned Copper | 0.024 in         | 3            |

|                  |   |
|------------------|---|
| Conductor Count: | 6 |
|------------------|---|

#### Insulation

| Material                 | Material Trade Name | Nominal Wall Thickness |
|--------------------------|---------------------|------------------------|
| PE - Polyethylene (Foam) | Datalene®           | 0.019 in               |

#### Color Chart

| Number | Color         |
|--------|---------------|
| 1      | Black & Red   |
| 2      | Black & White |
| 3      | Black & Green |

#### Inner Shield Material

| Type | Material    | Material Trade Name | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
|------|-------------|---------------------|--------------|--------------------|---------------|------------------------------|
| Tape | Alum / Poly | Beldfoil® (Z-Fold®) | 100 %        | TC - Tinned Copper | 24            | 7x32                         |

#### Outer Shield Material

| Material  |
|-----------|
| No Shield |

#### Outer Jacket Material

| Material                 | Nominal Diameter | Nominal Wall Thickness |
|--------------------------|------------------|------------------------|
| PVC - Polyvinyl Chloride | 0.334 in         | 0.048 in               |

### Construction and Dimensions

#### Stranding

| Lay Direction | Twists       |
|---------------|--------------|
| Left Hand     | 6.9 twist/ft |

### Electrical Characteristics

#### Conductor DCR

| Individual Pair Nominal Shield DCR | Nominal Conductor DCR |
|------------------------------------|-----------------------|
| 15 Ohm/1000ft                      | 24 Ohm/1000ft         |

Capacitance

| Nom. Capacitance Conductor to Conductor | Nom. Capacitance Conductor to Other Conductor to Shield | Nom.Mutual Capacitance |
|-----------------------------------------|---------------------------------------------------------|------------------------|
| 12.5 pF/ft                              | 23.2 pF/ft                                              | 39 pF/ft               |

Inductance

| Nominal Inductance |
|--------------------|
| 0.23 µH/ft         |

Impedance

| Nominal Characteristic Impedance |
|----------------------------------|
| 100 Ohm                          |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 0.384 MHz       | 0.74 dB/100m        |
| 0.7056 MHz      | 0.87 dB/100m        |
| 0.768 MHz       | 0.88 dB/100m        |
| 1.024 MHz       | 0.94 dB/100m        |
| 1.4112 MHz      | 1.01 dB/100m        |
| 1.536 MHz       | 1.03 dB/100m        |
| 2.048 MHz       | 1.13 dB/100m        |
| 2.8224 MHz      | 1.29 dB/100m        |
| 3.072 MHz       | 1.35 dB/100m        |
| 4.096 MHz       | 1.57 dB/100m        |
| 5.6448 MHz      | 1.78 dB/100m        |
| 6.144 MHz       | 1.84 dB/100m        |
| 8.192 MHz       | 2.13 dB/100m        |
| 11.2896 MHz     | 2.45 dB/100ft       |
| 12.288 MHz      | 2.57 dB/100ft       |
| 24.576 MHz      | 3.57 dB/100ft       |

Delay

| Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-----------------|------------------------------------------|
| 76 ns/100m      | 76 %                                     |

High Freq

| Frequency [MHz] |
|-----------------|
| 0.384 MHz       |
| 0.7056 MHz      |
| 0.768 MHz       |
| 1.024 MHz       |
| 1.4112 MHz      |
| 1.536 MHz       |
| 2.048 MHz       |
| 2.8224 MHz      |
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| 4.096 MHz       |
| 5.6448 MHz      |
| 6.144 MHz       |
| 8.192 MHz       |
| 11.2896 MHz     |
| 12.288 MHz      |
| 24.576 MHz      |

Current

| Max. Recommended Current [A]     |
|----------------------------------|
| Amps per conductor @ 25°C: 2.5 A |

|                     |                      |
|---------------------|----------------------|
| Current Table Note: | 35C Temperature Rise |
|---------------------|----------------------|

Voltage

| UL Voltage Rating |
|-------------------|
| 300 V RMS         |

Temperature Range

|                       |                          |
|-----------------------|--------------------------|
| UL Temp Rating:       | 60°C (UL AWM Style 2493) |
| Operating Temp Range: | -20°C To +80°C           |

Mechanical Characteristics

|                                  |               |
|----------------------------------|---------------|
| Bulk Cable Weight:               | 42 lbs/1000ft |
| Max Recommended Pulling Tension: | 51 lbs        |
| Min Bend Radius/Minor Axis:      | 3.5 in        |

Standards

|                          |                   |
|--------------------------|-------------------|
| NEC Articles:            | 800               |
| NEC/(UL) Specification:  | CM                |
| CEC/C(UL) Specification: | CM                |
| UL AWM Style:            | 2919 (300 V 80°C) |
| CPR Euroclass:           | Eca               |

Applicable Environmental and Other Programs

|                                       |                               |
|---------------------------------------|-------------------------------|
| EU Directive 2000/53/EC (ELV):        | Yes                           |
| EU Directive 2003/96/EC (BFR):        | Yes                           |
| EU Directive 2011/65/EU (ROHS II):    | Yes                           |
| EU Directive 2012/19/EU (WEEE):       | Yes                           |
| EU Directive 2015/863/EU:             | Yes                           |
| EU Directive Compliance:              | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2004-01-01                    |
| MII Order #39 (China RoHS):           | Yes                           |

Suitability

|                       |     |
|-----------------------|-----|
| Suitability - Indoor: | Yes |
|-----------------------|-----|

Flammability, LS0H, Toxicity Testing

|                       |                   |
|-----------------------|-------------------|
| UL Flammability:      | UL1685 UL Loading |
| CSA Flammability:     | FT1               |
| ISO/IEC Flammability: | IEC 60332-1-2     |
| UL voltage rating:    | 300 V RMS         |

Plenum/Non-Plenum

|                |       |
|----------------|-------|
| Plenum (Y/N):  | No    |
| Plenum Number: | 89730 |

Part Number

Variants

| Item #        | Color  | Putup Type | Length    | UPC/EAN       |
|---------------|--------|------------|-----------|---------------|
| 9730.0030     | Chrome | Reel       | 30 m      | 8719605022592 |
| 9730 060100   | Chrome | Reel       | 100 ft    | 612825257608  |
| 9730.00152    | Chrome | Reel       | 152 m     | 8719605022585 |
| 9730.00305    | Chrome | Reel       | 305 m     | 8719605022608 |
| 9730 060500   | Chrome | Reel       | 500 ft    | 612825257639  |
| 9730 0601000  | Chrome | Reel       | 1,000 ft  | 612825257615  |
| 9730.001000   | Chrome | Reel       | 1,000 m   | 8719605022578 |
| 9730 0605000  | Chrome | Reel       | 5,000 ft  | 612825257646  |
| 9730 06010000 | Chrome | Reel       | 10,000 ft | 612825257622  |

|           |                                                                                                                                 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------|
| Footnote: | C - CRATE REEL PUT-UP.                                                                                                          |
| Footnote: | Y - FINAL PUT-UP LENGTH MAY VAR -10% TO +20% FROM LENGTH SHOWN. MAY CONTAIN 2 PIECES. MINIMUM LENGTH OF ANY ONE PIECE IS 1500'. |

Product Notes

|        |                                                                                                                                                                                                          |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes: | 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. |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.321 Revision Date: 04-28-2020 |
|----------------------|--------------------------------------------------|

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