

**Part Number: 9729NH**

RS232/422 Low Cap, #24-2pr, FPO, Indiv. Foil, LSZH Jkt, CMG, 100Ω



### Product Description

Computer EIA RS-232/422, Digital Audio Cable, 24 AWG stranded (7x32) tinned copper conductors, Datalene® insulation, 2 twisted pairs each individually Beldfoil® shielded (100% coverage), 24 AWG stranded tinned copper drain wire each pair, LSZH jacket.

### Technical Specifications

#### Product Overview

|                        |  |
|------------------------|--|
| Environmental Space:   | Indoor - Euroclass B2ca  |
| Suitable Applications: | Instrumentation and computer cable; For data transmission applications |

#### Physical Characteristics (Overall)

##### Conductor

| AWG | Stranding | Material           | Nominal Diameter | No. of Conductors | No. of Pairs |
|-----|-----------|--------------------|------------------|-------------------|--------------|
| 24  | 7x32      | TC - Tinned Copper | 0.024 mm         | 4                 | 2            |

|                        |        |
|------------------------|--------|
| Conductor Count:       | 4      |
| Total Number of Pairs: | 2      |
| Conductor Size:        | 24 AWG |

##### Insulation

| Material                  | Material Trade Name | Nominal Diameter | Diameter +/- Tolerance | Nominal Wall Thickness |
|---------------------------|---------------------|------------------|------------------------|------------------------|
| FPE - Foamed Polyethylene | Datalene®           | 1.55 mm          | 0.06 mm                | 0.019 in               |

##### Color Chart

| Number | Color       | Number | Color         |
|--------|-------------|--------|---------------|
| Pair 1 | Black & Red | Pair 2 | Black & White |

|                           |                |
|---------------------------|----------------|
| Color Chart1, Table Note: | Shielded pairs |
|---------------------------|----------------|

##### Color Chart 2

| Number | Color |
|--------|-------|
| Pair 1 | Red   |
| Pair 2 | Green |

##### Inner Shield Material

| Type | Material             | Material Trade Name | Coverage [%] | Thickness of Foil | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
|------|----------------------|---------------------|--------------|-------------------|--------------------|---------------|------------------------------|
| Tape | Aluminum / Polyester | Z-fold®             | 100 %        | 9 / 12 µm         | Tinned copper      | AWG24/7       | 7x32                         |

##### Outer Jacket Material

| Material                    | Color                  | Nominal Diameter | Min. Wall Thickness | Nominal Wall Thickness |
|-----------------------------|------------------------|------------------|---------------------|------------------------|
| LSZH / FRNC (UV stabilised) | Chrome (like RAL 7037) | 7.90 mm          | 0.9 mm              | 1.2 mm                 |

#### Construction and Dimensions

##### Stranding

| Twists        |
|---------------|
| 10.9 twist/ft |

## Cabling

| Description                   |
|-------------------------------|
| 2 pairs twisted to cable core |

## Electrical Characteristics

### Conductor DCR

| Individual Pair Nominal Shield DCR | Nominal Conductor DCR | Nominal Inner Shield DCR |
|------------------------------------|-----------------------|--------------------------|
| 15 Ohm/1000ft                      | 78.7 Ohm/km           | 59.1 Ohm/km              |

### Capacitance

| Nom. Capacitance Conductor to Conductor | Nom. Capacitance Conductor to Other Conductor to Shield |
|---|---|
| 41 pF/m                                 | 76.1 pF/m   |

### Inductance

| Nominal Inductance | Nominal Pair Inductance |
|--------------------|-------------------------|
| 0.23 $\mu$ H/ft    | 0.49 $\mu$ H/m          |

### Impedance

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

### High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 0.384 MHz       | 4.63 dB/100m        |
| 0.7056 MHz      | 5.35 dB/100m        |
| 0.768 MHz       | 5.91 dB/100m        |
| 1.024 MHz       | 6.5 dB/100m         |
| 1.4112 MHz      | 6.89 dB/100m        |
| 1.536 MHz       | 9.15 dB/100m        |
| 2.048 MHz       | 9.51 dB/100m        |
| 2.8224 MHz      | 13.16 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      |
| 3.072 MHz       |
| 4.096 MHz       |
| 5.6448 MHz      |
| 6.144 MHz       |
| 8.192 MHz       |
| 11.2896 MHz     |
| 12.288 MHz      |

24.576 MHz

#### Current

| Element   | Max. Recommended Current [A] |
|-----------|------------------------------|
| Conductor | 1 A                          |

#### Voltage

| UL Voltage Rating             | Voltage Rating [V] |
|-------------------------------|--------------------|
| 300 V RMS (UL AWM Style 2493) | 300 V              |

#### Temperature Range

|  |                |
|--|----------------|
| Installation Temp Range:                 | -15°C To +80°C |
| UL Temp Rating:                          | 80°C           |
| Storage Temp Range:                      | -45°C To +80°C |
| Operating Temp Range:                    | -20°C To +80°C |
| Operating Temp Range (Flexible Install): | -15°C To +80°C |
| Operating Temp Range (Fixed Install):    | -45°C To +80°C |

#### Mechanical Characteristics

|                                      |               |
|--------------------------------------|---------------|
| Oil Resistance:                      | IEC 60811-404 |
| Bulk Cable Weight:                   | 36 lbs/1000ft |
| Max Recommended Pulling Tension:     | 22 lbs        |
| Min Bend Radius During Installation: | 79 mm         |
| Min Bend Radius/Minor Axis:          | 3.25 in       |

#### Standards

|                          |               |
|--------------------------|---------------|
| NEC/(UL) Specification:  | CMG           |
| CEC/C(UL) Specification: | CMG           |
| CPR Euroclass:           | B2ca-s1,d1,a1 |
| CENELEC Compliance:      | EN 50290-2-27 |
| Other Specification:     | UL AWM 21088  |

#### Applicable Environmental and Other Programs

|                                       |                               |
|---------------------------------------|-------------------------------|
| EU Directive Compliance:              | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2012-05-08                    |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                           |
| MII Order #39 (China RoHS):           | Yes                           |

#### Suitability

|                                |     |
|--------------------------------|-----|
| Suitability - Indoor:          | Yes |
| Suitability - Non-Halogenated: | Yes |

#### Flammability, LSOH, Toxicity Testing

|  |                                  |
|--|----------------------------------|
| C(UL) Flammability:                                | FT4                              |
| UL Flammability:                                   | UL1685 FT4 Loading               |
| ISO/IEC Flammability:                              | IEC 60332-1-2 and IEC 60332-3-24 |
| Amount of Halogen acc. to IEC 60754-1 & EN50267-1: | Zero                             |
| UL voltage rating:                                 | 300 V RMS (UL AWM Style 2493)    |

#### Plenum/Non-Plenum

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

#### Part Number

#### Variants

| Item #        | Color  | Length  |
|---------------|--------|---------|
| 9729NH.001000 | Chrome | 1,000 m |
| 9729NH.00152  | Chrome | 152 m   |

|              |        |       |
|--------------|--------|-------|
| 9729NH.00305 | Chrome | 305 m |
| 9729NH.00500 | Chrome | 500 m |
| 9729NH.00153 | Chrome | 153 m |

## 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: 0.231 Revision Date: 05-07-2019 |
|----------------------|--|

© 2019 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.