Part Number: 9842
RS-485, (2 pr) 24 AWG (7x32) TC, PE/PVC, Foil+TC Braid Shld, CM, 120Ω

Product Description
Two 24 AWG pairs stranded (7x32) tinned copper conductors, polyethylene insulation, twisted pairs, overall Beldfoil® (100% coverage) + tinned copper braid shield (90% coverage), 24 AWG stranded tinned copper drain wire, PVC jacket.

Technical Specifications

Product Overview

| Suitable Applications | RS-485, DMX-512 |

Physical Characteristics (Overall)

Conductor

<table>
<thead>
<tr>
<th>AWG</th>
<th>Stranding</th>
<th>Material</th>
<th>No. of Conductors</th>
<th>No. of Pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>7x32</td>
<td>TC - Tinned Copper</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

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

Insulation

<table>
<thead>
<tr>
<th>Material</th>
<th>Nominal Wall Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE - Polyethylene</td>
<td>0.022 in</td>
</tr>
</tbody>
</table>

Color Chart

<table>
<thead>
<tr>
<th>Number</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White/Blue &amp; Blue/White</td>
</tr>
<tr>
<td>2</td>
<td>White/Orange &amp; Orange/White</td>
</tr>
</tbody>
</table>

Outer Shield Material

<table>
<thead>
<tr>
<th>Type</th>
<th>Layer</th>
<th>Material</th>
<th>Material Trade Name</th>
<th>Coverage [%]</th>
<th>Drainwire Material</th>
<th>Drainwire AWG</th>
<th>Drainwire Construction n x D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape</td>
<td>1</td>
<td>Aluminum/Polyester</td>
<td>Beldfoil®</td>
<td>100 %</td>
<td>TC - Tinned Copper</td>
<td>24</td>
<td>7x32 mm</td>
</tr>
<tr>
<td>Braid</td>
<td>2</td>
<td>TC - Tinned Copper</td>
<td></td>
<td>90 %</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outer Jacket Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Nominal Diameter</th>
<th>Nominal Wall Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC - Polyvinyl Chloride</td>
<td>0.34 in</td>
<td>0.035 in</td>
</tr>
</tbody>
</table>

Electrical Characteristics

Conductor DCR

<table>
<thead>
<tr>
<th>Nominal Conductor DCR</th>
<th>Nominal Outer Shield DCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Ohms/1000ft</td>
<td>2.2 Ohms/1000ft</td>
</tr>
</tbody>
</table>

Capacitance

<table>
<thead>
<tr>
<th>Nom. Capacitance Conductor to Conductor</th>
<th>Nom. Capacitance Conductor to Other Conductor to Shield</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.8 pF/ft</td>
<td>23 pF/ft</td>
</tr>
</tbody>
</table>

Impedance
## Nominal Characteristic Impedance

120 Ohm

## High Frequency (Nominal/Typical)

<table>
<thead>
<tr>
<th>Frequency [MHz]</th>
<th>Nom. Insertion Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 MHz</td>
<td>0.6 dB/100m</td>
</tr>
</tbody>
</table>

## Delay

<table>
<thead>
<tr>
<th>Max. Delay Skew</th>
<th>Nominal Delay</th>
<th>Nominal Velocity of Propagation (VP) [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>66 ns/100m</td>
<td>1.54 ns/ft</td>
<td>66 %</td>
</tr>
</tbody>
</table>

## Current

<table>
<thead>
<tr>
<th>Max. Recommended Current [A]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per conductor @ 25°C: 2.1 A</td>
</tr>
</tbody>
</table>

## Voltage

<table>
<thead>
<tr>
<th>UL Voltage Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 V RMS</td>
</tr>
</tbody>
</table>

## Temperature Range

<table>
<thead>
<tr>
<th>UL Temp Rating:</th>
<th>80°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temp Range:</td>
<td>-30°C To +80°C</td>
</tr>
</tbody>
</table>

## Mechanical Characteristics

<table>
<thead>
<tr>
<th>Bulk Cable Weight:</th>
<th>49 lbs/1000ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Recommended Pulling Tension:</td>
<td>87 lbs</td>
</tr>
<tr>
<td>Min Bend Radius/Minor Axis:</td>
<td>3.5 in</td>
</tr>
</tbody>
</table>

## Standards

<table>
<thead>
<tr>
<th>NEC Articles:</th>
<th>800</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEC/(UL) Specification:</td>
<td>CM</td>
</tr>
<tr>
<td>CEC/C(UL) Specification:</td>
<td>CM</td>
</tr>
<tr>
<td>UL AWM Style:</td>
<td>2919 (30 V 80°C)</td>
</tr>
<tr>
<td>CPR Euroclass:</td>
<td>Eca</td>
</tr>
</tbody>
</table>

## Applicable Environmental and Other Programs

|EU Directive 2003/96/EC (BFR):  | Yes                     |
|EU Directive 2011/65/EC (ROHS II): | Yes                   |
|EU Directive 2012/19/EU (WEEE): | Yes                     |
|EU Directive 2015/863/EU:      | Yes                     |
|EU CE Mark:                    | Yes                     |
|EU RoHS Compliance Date (yyyy-mm-dd): | 2004-01-01   |
|CA Prop 65 (CJ for Wire & Cable): | Yes                   |
|MII Order #39 (China RoHS):    | Yes                     |

## Suitability

| Suitability - Indoor: | Yes |

## Flammability, LS0H, Toxicity Testing

<table>
<thead>
<tr>
<th>ISO/IEC Flammability:</th>
<th>IEC 60332-1-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL voltage rating:</td>
<td>300 V RMS</td>
</tr>
</tbody>
</table>

## Plenum/Non-Plenum

<table>
<thead>
<tr>
<th>Plenum (Y/N):</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plenum Number:</td>
<td>82842</td>
</tr>
</tbody>
</table>

## Part Number

<table>
<thead>
<tr>
<th>Variants</th>
</tr>
</thead>
</table>

<p>|</p>
<table>
<thead>
<tr>
<th>Item #</th>
<th>Color</th>
<th>UPC</th>
<th>Length</th>
<th>Footnote</th>
</tr>
</thead>
<tbody>
<tr>
<td>9842.001000</td>
<td>Chrome</td>
<td>1,000 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.00152</td>
<td>Chrome</td>
<td>152 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.001525</td>
<td>Chrome</td>
<td>1,525 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.0030</td>
<td>Chrome</td>
<td>30 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.00305</td>
<td>Chrome</td>
<td>305 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.00500</td>
<td>Chrome</td>
<td>500 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.009999</td>
<td>Chrome</td>
<td>151 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.060100</td>
<td>Chrome</td>
<td>612825259510 100 ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.0601000</td>
<td>Chrome</td>
<td>612825259527 1,000 ft</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>9842.06010000</td>
<td>Chrome</td>
<td>612825259534 10,000 ft</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>9842.060500</td>
<td>Chrome</td>
<td>612825259541 500 ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.0605000</td>
<td>Chrome</td>
<td>612825259558 5,000 ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.K0305</td>
<td>Chrome</td>
<td>305 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9842.K01525</td>
<td>Chrome</td>
<td>1,525 m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Footnote: C - CRATE REEL PUT-UP.

History

Update and Revision: Revision Number: 0.319 Revision Date: 07-11-2019

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