

# 3M™ Mini D Ribbon (MDR) Cable Assembly

.050" High Speed Digital Data Transmission System - 26 Position

14X26-SZLB-XXX-0LC



- Supports Industrial CameraLink™ in Automated Imaging Association for camera to frame grabber communications
- 11 shielded twin-ax pairs and four drain wires
- Entire cable bundle is shielded with foil and braid for additional signal protection
- Rugged MDR ribbon type contact
- Rugged thumbscrew retention
- EMI shielded junction shell in either plastic or overmolded construction
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3Mconnector.com](http://www.3Mconnector.com) for compliance information (RIA E1 & C1 apply)

Date Modified: May 18, 2011

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## Physical

### Connector Contact Plating

Wiping Area: 30  $\mu$ " [ 0.76  $\mu$ m ] Min. Gold

Shell Color: Beige

Shell Material: Overmold Option: Polyvinyl Chloride (PVC);  
Shell Kit Option: Polyester Elastomer

Cable Color: Beige

Cable Jacket Material: Polyvinyl Chloride (PVC)

Cable Flammability: AWM VW-1

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## Electrical

**Voltage Rating:** 30 V

**Current Rating:** 1 A

**Insulation Resistance:**  $> 1 \times 10^8 \Omega$  at @ 100 V<sub>DC</sub>

**Withstanding Voltage:** 350 V<sub>rms</sub> for 1 minute

### Individually Shielded Twisted Pairs

Characteristic Impedance: 100  $\pm$  10 $\Omega$

Conductor Size: 28 AWG Stranded

Propagation Velocity: 1.25 ns/ft [4.1 ns/m ]

Skew (within pair): 50 ps/meter maximum

Skew (channel skew per chipset): 50 ps/meter maximum

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## Environmental

**Temperature Rating:** -20°C to +75°C

UL File No.: E86982

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## Discrete #4 - 40 Thumbscrew Shell Kit



## Overmold #4 - 40 Thumbscrew Shell



mm  
[Inch]

| Tolerance Unless Noted |     |      |
|------------------------|-----|------|
|                        | 0.0 | 0.00 |
| mm                     | ±.1 | ±.01 |

[ ] Dimensions for Reference only



| Assembly Length Tolerance |                  |
|---------------------------|------------------|
| Cable Length              | Tolerance        |
| 0.5 to 1.5 meters         | -0 + .05 meters  |
| 2 to 10 meters            | -0 +3% of length |

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mm  
[Inch]

| Tolerance Unless Noted |     |      |
|------------------------|-----|------|
|                        | 0.0 | 0.00 |
| mm                     | ±.1 | ±.01 |

[ ] Dimensions for Reference only



Generic End Detail  
MDR 26 Position Plug  
(Both Ends)



| Shell Option<br>(see ordering information) | Dimensions       |                 |
|--|------------------|-----------------|
|  | B                | C               |
| T = Overmold #4-40<br>Thumbscrew Shell     | 40.2<br>[ 1.58 ] | 14.0<br>[ .55 ] |
| B = Discrete #4-40<br>Thumbscrew Shell Kit | 39.4<br>[ 1.55 ] | 12.8<br>[ .51 ] |

## Ordering Information

**14X26-SZLB-XXX-0LC**

Shell Retention Options:

B = Discrete #4-40 Thumbscrew shell kit

T = Overmold #4-40 Thumbscrew shell

Length:

|                  |                  |
|------------------|------------------|
| 050 = 0.5 meters | 450 = 4.5 meters |
| 100 = 1 meters   | 500 = 5 meters   |
| 150 = 1.5 meters | 600 = 6 meters   |
| 200 = 2 meters   | 700 = 7 meters   |
| 250 = 2.5 meters | 800 = 8 meters   |
| 300 = 3 meters   | 900 = 9 meters   |
| 350 = 3.5 meters | A00 = 10 meters  |
| 400 = 4 meters   |                  |

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| Cable Assembly and Camera Link Pinouts |                         |                     |                             |   |                         |                     |
|--|-------------------------|---------------------|-----------------------------|---|-------------------------|---------------------|
| Medium and Full Configurations         |                         |                     |                             | Base Configuration  |                         |                     |
| Two Channel Link Chips                 |                         |                     |                             | One Channel Link Chip + Camera Control + Serial Communication |                         |                     |
| Camera Connector                       | Frame Grabber Connector | Channel Link Signal | Cable Name (Reference only) | Camera Connector  | Frame Grabber Connector | Channel Link Signal |
| 1                                      | 1                       | inner shield        | inner shield                | 1   | 1                       | inner shield        |
| 14                                     | 14                      | inner shield        | inner shield                | 14  | 14                      | inner shield        |
| 2                                      | 25                      | Y0-                 | Pair 1-                     | 2   | 25                      | X0-                 |
| 15                                     | 12                      | Y0+                 | Pair 1+                     | 15  | 12                      | X0+                 |
| 3                                      | 24                      | Y1-                 | Pair 2-                     | 3   | 24                      | X1-                 |
| 16                                     | 11                      | Y1+                 | Pair 2+                     | 16  | 11                      | X1+                 |
| 4                                      | 23                      | Y2-                 | Pair 3-                     | 4   | 23                      | X2-                 |
| 17                                     | 10                      | Y2+                 | Pair 3+                     | 17  | 10                      | X2+                 |
| 5                                      | 22                      | Yclk-               | Pair 4-                     | 5   | 22                      | Xclk-               |
| 18                                     | 9                       | Yclk+               | Pair 4+                     | 18  | 9                       | Xclk+               |
| 6                                      | 21                      | Y3-                 | Pair 5-                     | 6   | 21                      | X3-                 |
| 19                                     | 8                       | Y3+                 | Pair 5+                     | 19  | 8                       | X3+                 |
| 7                                      | 20                      | 100 ohm             | Pair 6+                     | 7   | 20                      | SerTC+              |
| 20                                     | 7                       | terminated          | Pair 6-                     | 20  | 7                       | SerTC-              |
| 8                                      | 19                      | Z0-                 | Pair 7-                     | 8   | 19                      | SerTFG-             |
| 21                                     | 6                       | Z0+                 | Pair 7+                     | 21  | 6                       | SerTFG+             |
| 9                                      | 18                      | Z1-                 | Pair 8-                     | 9   | 18                      | CC1-                |
| 22                                     | 5                       | Z1+                 | Pair 8+                     | 22  | 5                       | CC1+                |
| 10                                     | 17                      | Z2-                 | Pair 9+                     | 10  | 17                      | CC2+                |
| 23                                     | 4                       | Z2+                 | Pair 9-                     | 23  | 4                       | CC2-                |
| 11                                     | 16                      | Zclk-               | Pair 10-                    | 11  | 16                      | CC3-                |
| 24                                     | 3                       | Zclk+               | Pair 10+                    | 24  | 3                       | CC3+                |
| 12                                     | 15                      | Z3-                 | Pair 11+                    | 12  | 15                      | CC4+                |
| 25                                     | 2                       | Z3+                 | Pair 11-                    | 25  | 2                       | CC4-                |
| 13                                     | 13                      | inner shield        | inner shield                | 13  | 13                      | inner shield        |
| 26                                     | 26                      | inner shield        | inner shield                | 26  | 26                      | inner shield        |

Notes:

1. All pairs are individually shielded with aluminum foil.
2. Pair shields are wrapped aluminum out and are in contact with four internal drains (logic ground).
3. Outer braid and foil (chassis ground) are isolated from inner drains (logic ground).
4. Cable assembly compatible with Camera Link Base, Medium and Full configurations.

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