

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

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

14X26-SZLB-XXX-0LC



- Supports new 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.
- RoHS\* compliant

Date Modified: May 31, 2006

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## Physical

### Connector Contact Plating

Wiping Area: 30μ" [ 0.76μm ] 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 × 10<sup>8</sup>Ω at @100 Vdc

**Withstanding Voltage:** 350 Vrms for 1 minute

### Individually Shielded Twisted Pairs

Characteristic Impedance: 100 ± 10<sup>Ω</sup>

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

\*RoHS = Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment  
"RoHS compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based upon information provided by third party suppliers to 3M.

UL File No.: E86982

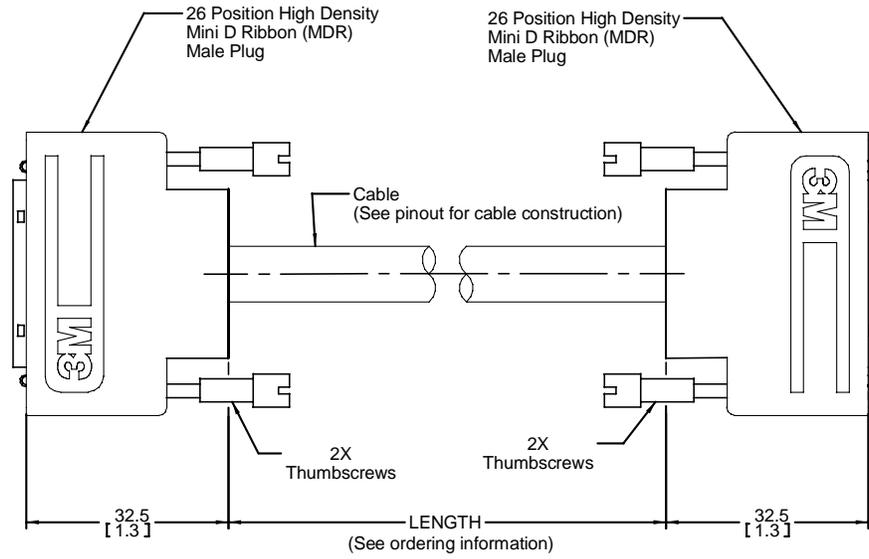
CameraLink is a trademark of the Automated Imaging Association.

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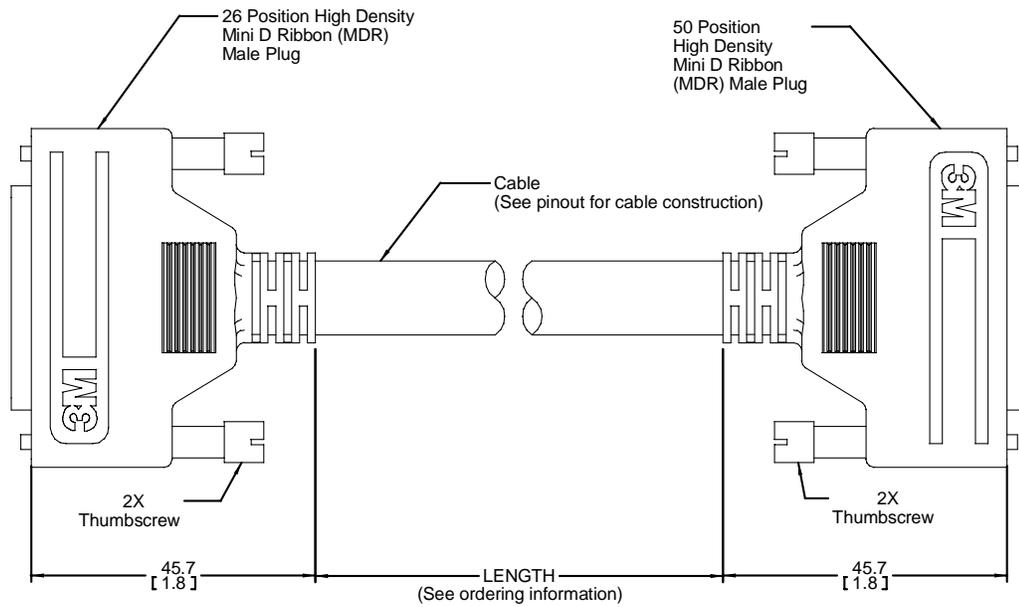
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## Discrete #4-40 Thumbscrew



## Overmolded #4-40 Thumbscrew



mm  
[Inch]

| Tolerance Unless Noted |     |      |
|------------------------|-----|------|
|                        | 0.0 | 0.00 |
| mm                     | ±.1 | ±.10 |

[ ] Dimensions for Reference only



### Assembly Length Tolerance

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

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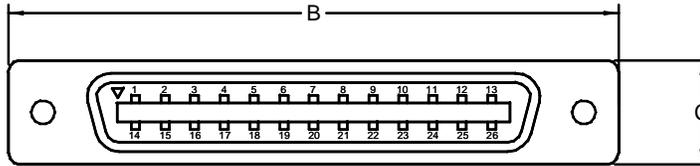
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mm  
[Inch]

| Tolerance Unless Noted |      |       |
|------------------------|------|-------|
|                        | 0.0  | 0.00  |
| mm                     | ± .1 | ± .10 |

[ ] Dimensions for Reference only



Generic End Detail  
MDR 26 Position Plug  
(Both Ends)



| Shell Option (see ordering information) | B                | C               |
|---|------------------|-----------------|
| Thumbscrew overmold shell               | 40.2<br>[ 1.58 ] | 14.0<br>[ .55 ] |
| Thumbscrew shell kit                    | 39.4<br>[ 1.55 ] | 12.8<br>[ .51 ] |

**Note:**

1. Use 3341-31 jacksocket for mounting receptacle to panel for T version cables.
2. Use 3341-32 jacksocket for mounting receptacle to panel for B version cables.

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

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

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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                       | Right Angle Frame Grabber | Channel Link Signal | Cable Name (Reference only) | Camera Connector  | Right Angle Frame Grabber | 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 both Camera Link configurations

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