3M™ Mini D Ribbon (MDR) Cable Assembly
.050” Right-Angle High-Flex Digital Camera Cable – 26 position 14H26-SZ3X-XXX-04C

- Flexible cable enables moving head applications.
- For machine vision camera to frame grabber communications in applications where full CameraLink™ configuration is not necessary
- Mates to popular 3M MDR 26 position receptacle
- 3 shielded quads with drains and 5 unshielded twisted pairs
- Entire cable bundle shielded with foil and braid for additional signal protection
- Rugged MDR ribbon type contact for reliable, repeatable connectivity
- Rugged thumbscrew retention
- EMI shielded junction shell
- See Regulatory Information Appendix (RIA) for chemical compliance information

Physical

Connector Contact Plating:
Wiping Area: 30 µ” [0.76 µ m] Min. Gold (RIA E1 & C1 apply)

Overmolded Shell:
Color: Black
Material: Polyvinyl Chloride (PVC)

Shell:
Color: Black
Material: Polyester Elastomer

Cable:
Color: Black
Jacket Material: Polyvinyl Chloride (PVC)
Flammability: AWM VW-1
Flex Cycles: > 2 x 10^6 cycles (100 mm bend radius, 100 mm stroke, 30 strokes/minute)

Electrical

Voltage Rating: 30V
Current Rating: 1 A
Insulation Resistance: > 1 x 10^9 Ω at 100 VDC
Withstanding Voltage: 350V RMS for 1 minute
Shielded Twisted Pairs:
Characteristic Impedance: 100 ± 10 Ω
Conductor Size: 28 AWG Stranded
Skew (within pair): 50 ps/meter maximum
Skew (Channel skew per chipset): 100 ps/meter maximum

Environmental

Temperature Rating: -20 °C to +75 °C
UL File No.: E86982

3M is a trademark of 3M Company.
For technical, sales or ordering information call
800-225-5373
**3M™ Mini D Ribbon (MDR) Cable Assembly**

.050” Right-Angle High-Flex Digital Camera Cable – 26 position  
14H26-SZ3X-XXX-04C

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**CN-1**  
CAMERA

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**CN-2**  
FRAME GRABBER

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**Ordering Information**

**14H26-SZ3X-XXX-04C**

<table>
<thead>
<tr>
<th>Cable Length</th>
<th>050 = 50 cm</th>
<th>100 = 100 cm</th>
<th>150 = 150 cm</th>
<th>200 = 200 cm</th>
<th>250 = 250 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>300 = 300 cm</td>
<td>350 = 350 cm</td>
<td>400 = 400 cm</td>
<td>450 = 450 cm</td>
<td>500 = 500 cm</td>
</tr>
<tr>
<td><strong>inch</strong></td>
<td>1200 = 1200 cm</td>
<td>1400 = 1400 cm</td>
<td>1600 = 1600 cm</td>
<td>1800 = 1800 cm</td>
<td>2000 = 2000 cm</td>
</tr>
</tbody>
</table>

For lengths greater than 1000 cm refer to Table 2

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Use 3M™ Jacksocket 3341-31 for mounting receptacle to panel.

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Electronic Solutions Division  
Interconnect Solutions  
http://www.3M.com/interconnects/  

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## Table 1
### Wiring Chart

<table>
<thead>
<tr>
<th>Connector Position</th>
<th>Cable</th>
<th>Connector Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>X0 X1 GND</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>X0-</td>
<td>25</td>
</tr>
<tr>
<td>15</td>
<td>X0+</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>X1-</td>
<td>24</td>
</tr>
<tr>
<td>16</td>
<td>X1+</td>
<td>11</td>
</tr>
<tr>
<td>1</td>
<td>X2 XC GND</td>
<td>26</td>
</tr>
<tr>
<td>4</td>
<td>X2-</td>
<td>23</td>
</tr>
<tr>
<td>17</td>
<td>X2+</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Xclk-</td>
<td>22</td>
</tr>
<tr>
<td>18</td>
<td>Xclk+</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>X3-</td>
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<tr>
<td>19</td>
<td>X3+</td>
<td>8</td>
</tr>
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<td>7</td>
<td>SerTC+</td>
<td>20</td>
</tr>
<tr>
<td>20</td>
<td>SerTC-</td>
<td>7</td>
</tr>
<tr>
<td>13</td>
<td>X3 SerTC GND</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>SerTFG-</td>
<td>19</td>
</tr>
<tr>
<td>21</td>
<td>SerTFG+</td>
<td>6</td>
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<td>9</td>
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<td>18</td>
</tr>
<tr>
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<tr>
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## Table 2
### Length Codes

<table>
<thead>
<tr>
<th>First 2 Digits</th>
<th>Alpha Code</th>
<th>First 2 Digits</th>
<th>Alpha Code</th>
<th>First 2 Digits</th>
<th>Alpha Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>A</td>
<td>17</td>
<td>H</td>
<td>24</td>
<td>R</td>
</tr>
<tr>
<td>11</td>
<td>B</td>
<td>18</td>
<td>J</td>
<td>25</td>
<td>S</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>19</td>
<td>K</td>
<td>26</td>
<td>T</td>
</tr>
<tr>
<td>13</td>
<td>D</td>
<td>20</td>
<td>L</td>
<td>27</td>
<td>V</td>
</tr>
<tr>
<td>14</td>
<td>E</td>
<td>21</td>
<td>M</td>
<td>28</td>
<td>W</td>
</tr>
<tr>
<td>15</td>
<td>F</td>
<td>22</td>
<td>N</td>
<td>29</td>
<td>Y</td>
</tr>
<tr>
<td>16</td>
<td>G</td>
<td>23</td>
<td>P</td>
<td>30</td>
<td>Z</td>
</tr>
</tbody>
</table>

For lengths in excess of 1000 cm substitute the corresponding alpha code for the first 2 digits. Example: the code for 1160 cm is B60.
Regulatory Information Appendix
3M Electronic Solutions Division/Interconnect

EUROPE

Appendix E1: European Union RoHS


This product is RoHS Compliant 2005/95/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E2: European Union RoHS


This product contains lead in the compliant pin area in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/747/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E3: European Union RoHS


This product contains lead in the solder tail area in excess of the maximum concentration value allowed.

Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E4: European Union RoHS


This product contains decaBDE in the insulating material in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/717/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.
Appendix E5: European Union RoHS


This product contains lead in excess of the maximum concentration value allowed but is compliant by exemption under Item 6 of the Annex to the Directive.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

CHINA
Appendix C1: China RoHS

Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, 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: (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 best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix C2: China RoHS

Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part does contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (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 best knowledge and belief based upon information provided by third party suppliers to 3M.

The numerical reference in the symbol above should not be construed as a representation regarding the product’s life or an extension of a product warranty. The product warranty is stated below. In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the product Warranty stated below.

<table>
<thead>
<tr>
<th>产品中有毒有害物质或元素的名称及含量</th>
<th>Name and Content of Hazardous Substances or Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>部件名称 (Part or Component Name)</td>
<td>有毒有害物质或元素 (Hazardous Substances or Elements)</td>
</tr>
<tr>
<td></td>
<td>铅 (Pb)</td>
</tr>
<tr>
<td>端子镀层 (contact plating)</td>
<td>×</td>
</tr>
</tbody>
</table>

〇：表示该有毒有害物质在该部件的所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。（Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.）

×：表示该有毒有害物质至少在该部件的某均质材料中的含量超过 SJ/T11363-2006 标准规定的限量要求。（Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.）
Appendix C3: China RoHS

Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part does contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (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 best knowledge and belief based upon information provided by third party suppliers to 3M.

The numerical reference in the symbol above should not be construed as a representation regarding the product’s life or an extension of a product warranty. The product warranty is stated below. In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the product Warranty stated below.

<table>
<thead>
<tr>
<th>部件名称</th>
<th>有毒有害物质或元素 (Hazardous Substances or Elements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>合金 (Metal alloy)</td>
<td>铅 (Pb) 环 (Hg) 铬 (Cr) 六价铬 (Cr VI) 多溴联苯 (PBDE) 多溴联苯醚 (PBDE)</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.)

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超 SJ/T11363-2006 标准规定的限量要求。(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.)

Important Notice

All statements, technical information, and recommendations related to 3M’s products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M’s current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of one (1) year from the time of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M’s option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.