

# 3M™ Shrunk Delta Ribbon (SDR) Cable Assembly

.80 mm High Speed Digital Data Transmission, 26 position

1SF26-L1XX-00C-XXX



- Supports AIA Industrial Camera Link® Standard for Mini C/L camera to frame grabber applications
- 11 shielded, twisted twinax pairs with four drain wires
- Double overall shield with inner foil and outer braid
- Rugged ribbon contact type
- Rugged thumbscrew retention
- EMI shielded overmolded junction shell
- Optional R/A overmolded backshells eliminate bend radius
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3M.com/Interconnect](http://www.3M.com/Interconnect) for compliance information (RIA E1 & C1 apply)

Date Modified: August 10, 2009

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## Physical

### Connector Contact Plating:

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

Underplating: 100  $\mu$ " [ 2.55  $\mu$ m ] Nickel

### Overmolded Shell:

Color: Black

Material: Polyvinyl Chloride (PVC)

### Cable:

Color: Beige

Jacket Material: Polyvinyl Chloride (PVC)

Flammability: AWM VW-1

Marking: 3M Logo

## Electrical

**Voltage Rating:** 30 V

**Current Rating:** 0.5 A

**Insulation Resistance:** 1 X 10<sup>8</sup>  $\Omega$  min at 100 V<sub>DC</sub>

**Withstanding Voltage:** 125 V<sub>AC</sub> RMS 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

## Environmental

**Temperature Rating:** 0°C to +70°C

UL File No.: E86982

Camera Link is a certification mark of Automated Imaging Association

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Figure 1  
Straight SDR to Straight SDR Cable Assembly  
Option 20



Figure 2  
Straight SDR to Straight SDR Cable Assembly

| mm<br>[inch]           |      |       |
|------------------------|------|-------|
| Tolerance Unless Noted |      |       |
|                        | .0   | .00   |
| mm                     | ± .1 | ± .01 |

[ ] Dimensions used for Reference Only

Note:

1. For length dimension, refer to the product ordering number.



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Figure 3  
R/A SDR to SDR Cable Assembly  
Options 36 & 37



Figure 4  
Overmolded R/A SDR Connector



Figure 5  
Overmolded R/A SDR Connector  
(36 option)



Figure 6  
Overmolded R/A SDR Connector  
(37 option)

| mm<br>[inch]           |      |       |
|------------------------|------|-------|
| Tolerance Unless Noted |      |       |
|                        | .0   | .00   |
| mm                     | ± .1 | ± .01 |

[ ] Dimensions used for Reference Only

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| CN-1<br>Conn.<br>Pos. | Base Configuration          |              |            |              |              | CN-2<br>Conn.<br>Pos. |
|-----------------------|-----------------------------|--------------|------------|--------------|--------------|-----------------------|
|                       | Full / Medium configuration |              |            |              |              |                       |
|                       | Cable                       |              |            |              |              |                       |
| 2                     | XO-                         | YO-          | TWINAX 1   | YO-          | XO-          | 25                    |
| 15                    | XO+                         | YO+          |            | YO+          | XO+          | 12                    |
| 3                     | X1-                         | Y1-          | TWINAX 2   | Y1-          | X1-          | 24                    |
| 16                    | X1+                         | Y1+          |            | Y1+          | X1+          | 11                    |
| 4                     | X2-                         | Y2-          | TWINAX 3   | Y2-          | X2-          | 23                    |
| 17                    | X2+                         | Y2+          |            | Y2+          | X2+          | 10                    |
| 5                     | XC-                         | Yclk-        | TWINAX 4   | Yclk-        | XC-          | 22                    |
| 18                    | XC+                         | Yclk+        |            | Yclk+        | XC+          | 9                     |
| 6                     | X3-                         | Y3-          | TWINAX 5   | Y3-          | X3-          | 21                    |
| 19                    | X3+                         | Y3+          |            | Y3+          | X3+          | 8                     |
| 7                     | Ser TC+                     | 100 ohm      | TWINAX 6   | 100 ohm      | Ser TC+      | 20                    |
| 20                    | Ser TC-                     | Terminated   |            | Terminated   | Ser TC-      | 7                     |
| 8                     | Ser TFG-                    | ZO-          | TWINAX 7   | ZO-          | Ser TFG-     | 19                    |
| 21                    | Ser TFG+                    | ZO+          |            | ZO+          | Ser TFG+     | 6                     |
| 9                     | CC1-                        | Z1-          | TWINAX 8   | Z1-          | CC1-         | 18                    |
| 22                    | CC1+                        | Z1+          |            | Z1+          | CC1+         | 5                     |
| 10                    | CC2+                        | Z2-          | TWINAX 9   | Z2-          | CC2+         | 17                    |
| 23                    | CC2-                        | Z2+          |            | Z2+          | CC2-         | 4                     |
| 11                    | CC3-                        | Zclk-        | TWINAX 10  | Zclk-        | CC3-         | 16                    |
| 24                    | CC3+                        | Zclk+        |            | Zclk+        | CC3+         | 3                     |
| 12                    | CC4+                        | Z3-          | TWINAX 11  | Z3-          | CC4+         | 15                    |
| 25                    | CC4-                        | Z3+          |            | Z3+          | CC4-         | 2                     |
| 1                     | INNER SHIELD                | INNER SHIELD | DRAIN WIRE | INNER SHIELD | INNER SHIELD | 1                     |
| 14                    | INNER SHIELD                | INNER SHIELD |            | INNER SHIELD | INNER SHIELD | 14                    |
| 13                    | INNER SHIELD                | INNER SHIELD |            | INNER SHIELD | INNER SHIELD | 13                    |
| 26                    | INNER SHIELD                | INNER SHIELD |            | INNER SHIELD | INNER SHIELD | 26                    |
| Shell                 | BRAID SHIELD                |              |            |              |              | Shell                 |

Table 1  
Cable Assembly Wiring Diagram

## Ordering Information

**1SF26-L1XX-00C-XXX** (RIA E1 & C1 apply)

20 = SDR straight to SDR straight backshell.

36 = The direction of the cable for the RA SDR connector dresses down with respect to a horizontal board mount connector. The topology for the 36 option is a straight overmolded SDR backshell to a R/A overmolded SDR backshell.

37 = The direction of the cable for the RA SDR connector dresses up with respect to a horizontal board mount connector. The topology for the 37 option is a straight overmolded SDR backshell to a R/A overmolded SDR backshell.

Length :  
100 = 1m  
200 = 2m  
500 = 5m  
A00 = 10m

Refer to length dimension in figures 1 & 3  
Reference notes 1 & 2 for cable length tolerance

### Notes:

- For a cable length of less than 2m, the length tolerance is +50mm / -0mm
- For a cable length of 2m or more, the length tolerance is +3% / -0% of cable length

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