

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

.050" High Speed Digital Data Transmission System, 50 Position

14150-EZBB-XXX-0LC



- Supports LVDS Channel Link™ signaling
- Ideal for high speed switch backplanes
- 20 shielded pairs (100 ohm) +6 grounds for high bandwidth applications
- High density 50 position MDR with rugged ribbon type contact
- Quick release latches
- RoHS\* compliant

Date Modified: January 25, 2007

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## Physical

### Connector Contact Plating

Wiping Area: 30μ" [ 0.76μm ] Min. Gold

### Shell

Color: Beige

Material: Acrylonitrile Butadiene Styrene (ABS)

### Cable

Color: Beige

Jacket Material: Polyvinyl Chloride (PVC)

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 Delay:** 1.25 ns/ft [ 4.1 ns/m ]

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## Environmental

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

\*\*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.

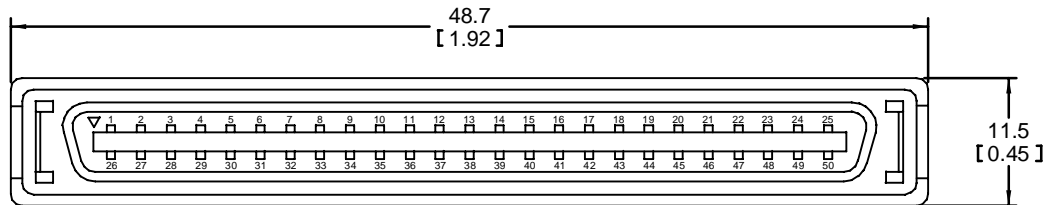
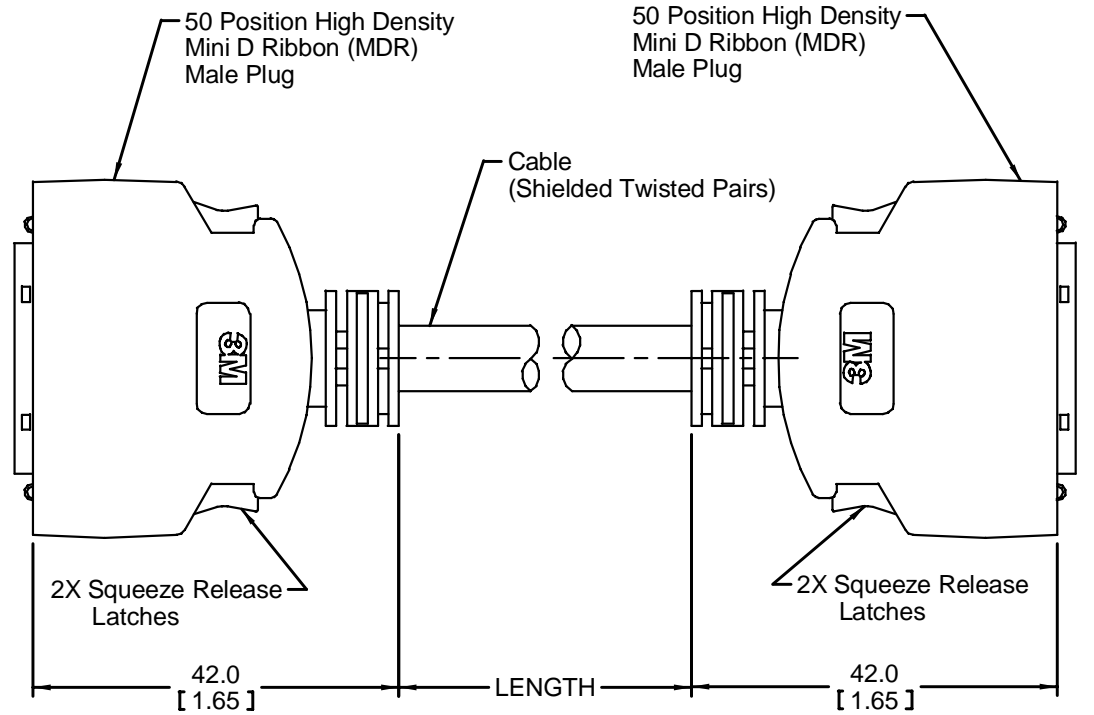
UL File No.: E86982

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MDR 50 Position Plug  
Both Ends

mm [inch]		
Tolerance Unless Noted		
	0.0	0.00
mm	±.1	±.01

[ ] 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

## Ordering Information

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Length:  
050 = 0.5 meter    400 = 4.0 meters  
100 = 1.0 meter    500 = 5.0 meters  
150 = 1.5 meters    600 = 6.0 meters  
200 = 2.0 meters    700 = 7.0 meters  
250 = 2.5 meters    800 = 8.0 meters  
300 = 3.0 meters    900 = 9.0 meters  
350 = 3.5 meters    A00 = 10.0 meters

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

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## MDR 50 Position, Pinout (C50-1)

P1						P2					
Pair	Signal	Position	Position	Signal	Pair	Pair	Signal	Position	Position	Signal	Pair
1	A0-	1	26	drain 1		20	B0-	1	26	drain 6	
1	A0+	2	27	A1-	2	20	B0+	2	27	B1-	19
3	A2-	3	28	A1+	2	18	B2-	3	28	B1+	19
3	A2+	4	29	AClk-	4	18	B2+	4	29	BClk-	17
	drain 2	5	30	AClk+	4		drain 5	5	30	BClk+	17
5	A3-	6	31	A4-	6	16	B3-	6	31	B4-	15
5	A3+	7	32	A4+	6	16	B3+	7	32	B4+	15
7	A5-	8	33	A6-	8	14	B5-	8	33	B6-	13
7	A5+	9	34	A6+	8	14	B5+	9	34	B6+	13
9	A7-	10	35	drain 3		12	B7-	10	35	drain 4	
9	A7+	11	36	N/C		12	B7+	11	36	N/C	
	N/C	12	37	ICMB+	10		N/C	12	37	ICMB+	10
11	Link A	13	38	ICMB-	10	11	Link B	13	38	ICMB-	10
11	Link B	14	39	N/C		11	Link A	14	39	N/C	
	N/C	15	40	B7+	12		N/C	15	40	A7+	9
	drain 4	16	41	B7-	12		drain 3	16	41	A7-	9
13	B6+	17	42	B5+	14	8	A6+	17	42	A5+	7
13	B6-	18	43	B5-	14	8	A6-	18	43	A5-	7
15	B4+	19	44	B3+	16	6	A4+	19	44	A3+	5
15	B4-	20	45	B3-	16	6	A4-	20	45	A3-	5
17	BClk+	21	46	drain 5		4	AClk+	21	46	drain 2	
17	BClk-	22	47	B2+	18	4	AClk-	22	47	A2+	3
19	B1+	23	48	B2-	18	2	A1+	23	48	A2-	3
19	B1-	24	49	B0+	20	2	A1-	24	49	A0+	1
	drain 6	25	50	B0-	20		drain 1	25	50	A0-	1

**Notes:**

1. All pairs are individually shielded with aluminum foil.
2. Pair shields are wrapped Aluminum out and in contact with six internal drains (logic ground).
3. Outer braid and foil (chassis ground) is isolated from inner drains (logic ground).



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