

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

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

14X50-SZWB-XXX-0NC



- Supports LVDS Channel Link™ signaling
- 20 shielded pairs (100 ohm) +4 drains for high bandwidth applications
- High density 50 position MDR with rugged ribbon type contact
- 3 Unshielded Twisted 28 AWG Pairs
- EMI shielded junction shell in either plastic or over-molded construction
- Rugged thumbscrew retention
- RoHS\* compliant

Date Modified: May 12, 2006

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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 Vdc

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

### Individually Shielded Twisted Pairs

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

**Conductor Size:** 28 AWG Stranded

**Propogation Velocity:** 1.25 ns/ft [4.1 ns/m ]

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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

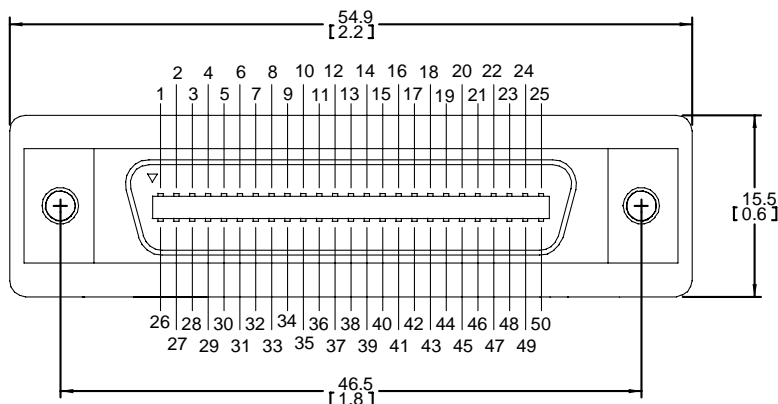
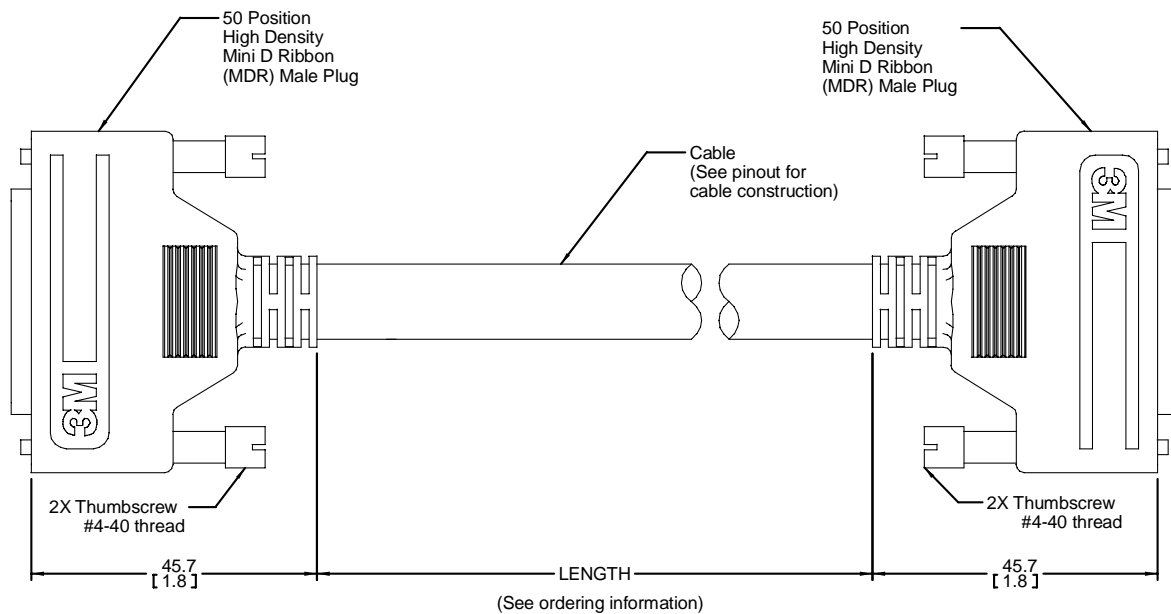
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## Over-Molded #4-40 Thumbscrew



mm  
[Inch]

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

[ ] Dimensions for Reference only

**Generic End Detail**  
**MDR 50 Position Plug**  
( Both Ends )

### Assembly Length Tolerance

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

## Ordering Information

**14X50-SZWB-XXX-0NC**

Backshell Options:  
T = Over-molded 4-40 thumbscrew  
B = Discrete 4-40 thumbscrew shell kit

Length:  
100 = 1.0 meters  
200 = 2.0 meters  
500 = 5.0 meters

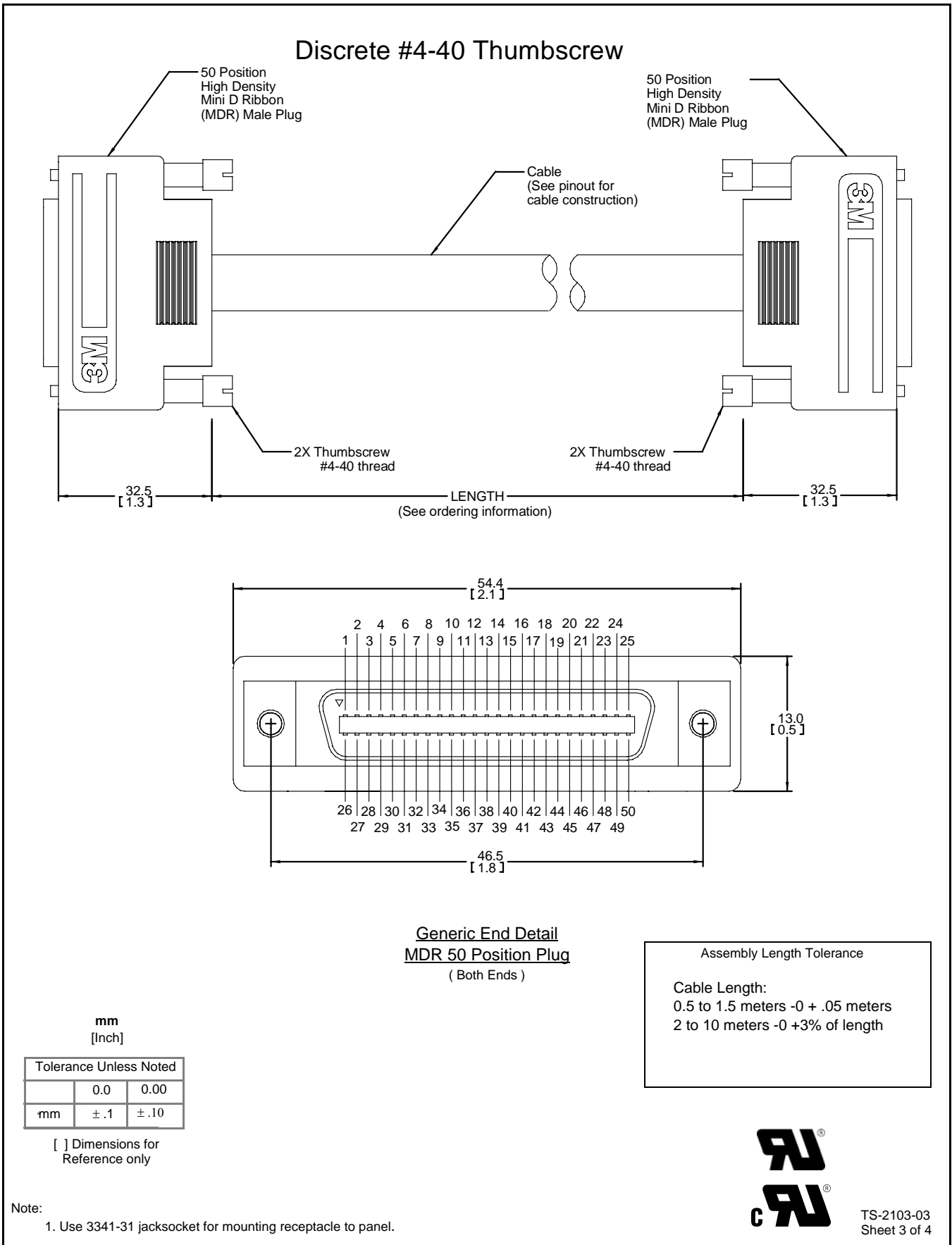


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MDR 50 Position Pinout (F50-13)											
P1						P2					
Pair	Signal	Position	Position	Signal	Pair	Pair	Signal	Position	Position	Signal	Pair
1	A0M	1	38	DDC Gnd	TP2	1	A0M	1	38	DDC Gnd	TP2
1	A0P	26	14	DDC SCL	TP2	1	A0P	26	14	DDC SCL	TP2
2	A1M	2	39	DDC SDA	TP3	2	A1M	2	39	DDC SDA	TP3
2	A1P	27	15	A8M	11	2	A1P	27	15	A8M	11
3	A2M	3	40	A8P	11	3	A2M	3	40	A8P	11
3	A2P	28	16	A9M	12	3	A2P	28	16	A9M	12
4	CLK1M	4	41	A9P	12	4	CLK1M	4	41	A9P	12
4	CLK1P	29	17	A10M	13	4	CLK1P	29	17	A10M	13
5	A3M	5	42	A10P	13	5	A3M	5	42	A10P	13
5	A3P	30	18	CLK3M	14	5	A3P	30	18	CLK3M	14
N/A	Shield 1	6	43	CLK3P	14	N/A	Shield 1	6	43	CLK3P	14
N/A	Shield 1	31	19	A11M	15	N/A	Shield 1	31	19	A11M	15
6	A4M	7	44	A11P	15	6	A4M	7	44	A11P	15
6	A4P	32	20	Shield 4	N/A	6	A4P	32	20	Shield 4	N/A
7	A5M	8	45	Shield 3	N/A	7	A5M	8	45	Shield 3	N/A
7	A5P	33	21	A12M	16	7	A5P	33	21	A12M	16
8	A6M	9	46	A12P	16	8	A6M	9	46	A12P	16
8	A6P	34	22	A13M	17	8	A6P	34	22	A13M	17
9	A7M	10	47	A13P	17	9	A7M	10	47	A13P	17
9	A7P	35	23	A14M	18	9	A7P	35	23	A14M	18
10	CLK2M	11	48	A14P	18	10	CLK2M	11	48	A14P	18
10	CLK2P	36	24	A15M	19	10	CLK2P	36	24	A15M	19
TP1	twpr-	12	49	A15P	19	TP1	twpr-	12	49	A15P	19
TP1	twpr+	37	25	CLK4M	20	TP1	twpr+	37	25	CLK4M	20
TP3	DDC+5V	13	50	CLK4P	20	TP3	DDC+5V	13	50	CLK4P	20

**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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