

3M™ Pak 50 I/O Plug

.050" Straight and Right Angle, Boardmount

P50 Series



- EMI shielded
- 20 to 100 position
- Mates to P50 series cable mount socket

Date Modified: May 15, 2003

TS-1147-01
Sheet 1 of 7

Physical

Insulation
Material: Glass Filled Nylon
Flammability: UL 94V-0
Color: Black

Contact
Material: Phosphor Bronze

Plating
Underplating: Nickel
Wiping Area: See Ordering Information
Solder Tails: Tin Alloy over Nickel

Electrical

Current Rating: 0.5 A
Insulation Resistance: 10^3 M Ω min. at 500 V DC
Withstanding Voltage: 650 V AC for 1 minute

Environmental

Temperature Rating: -55°C to +85°C

3M™ Pak 50 I/O Plug

.050" Straight and Right Angle, Boardmount

P50 Series

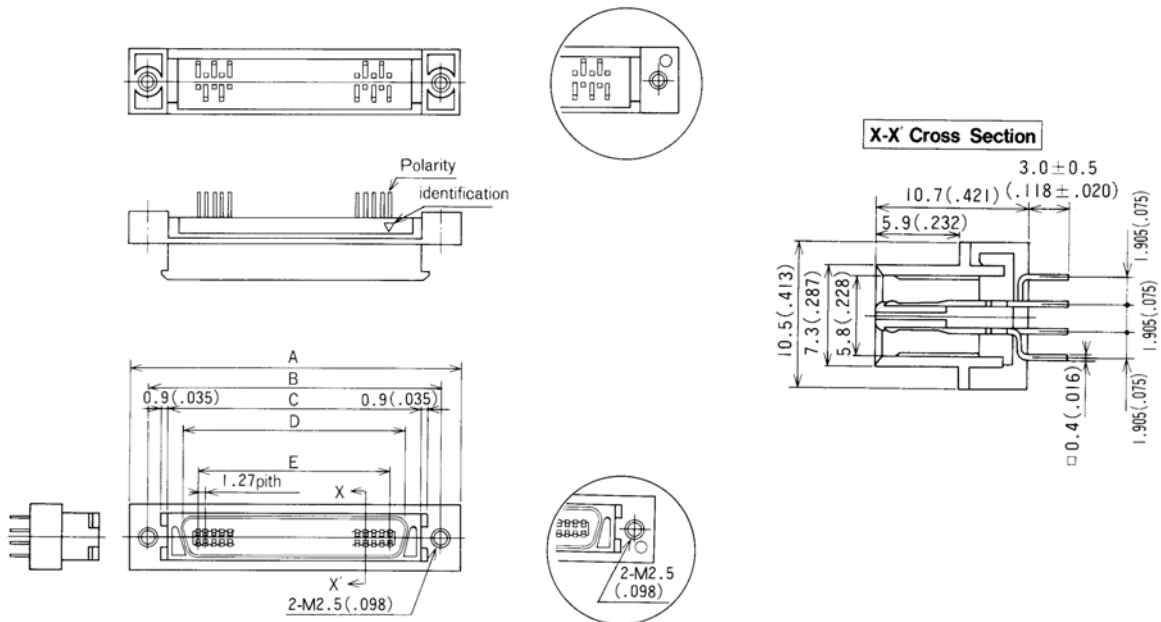
Straight Plug

Product Table / Dimensions

Contact Quantity	A	B	C	D	E
20	33.40	27.40	21.60	16.73	11.43
	[1.315]	[1.079]	[0.850]	[0.659]	[0.450]
28	38.48	32.48	26.68	21.81	16.51
	[1.515]	[1.279]	[1.050]	[0.859]	[0.650]
34	42.29	36.29	30.49	25.62	20.32
	[1.665]	[1.429]	[1.200]	[1.009]	[0.800]
50	52.45	46.45	40.65	35.78	30.48
	[2.065]	[1.829]	[1.600]	[1.409]	[1.200]
60	58.80	52.80	47.00	42.13	36.83
	[2.315]	[2.079]	[1.850]	[1.659]	[1.450]
68	63.88	57.88	52.08	47.21	41.91
	[2.515]	[2.279]	[2.050]	[1.859]	[1.650]
80	71.50	65.50	59.70	54.83	49.53
	[2.815]	[2.579]	[2.350]	[2.159]	[1.950]

20, 50 pins

28, 34, 60, 80 pins



Ordering Information

P50 - XXX - DDP - XXX - XXXX

Contact Quantity
See Table

S1 = Straight
SR1 = Right Angle

Plating Options:
TG = 10 μm [0.25 μm] min. Gold
TG30 = 30 μm [0.75 μm] min. Gold

TS-1147-01
Sheet 2 of 7

3M™ Pak 50 I/O Plug

.050" Straight and Right Angle, Boardmount

P50 Series

Straight Plug

Product Table / Dimensions

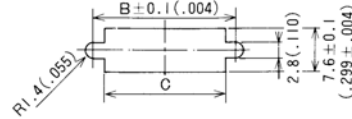
Contact Quantity	A	B	C
20	11.43	27.40	24.40
	[0.450]	[1.079]	[0.961]
28	16.51	32.48	29.48
	[0.650]	[1.279]	[1.161]
34	20.32	36.29	33.29
	[0.800]	[1.429]	[1.311]
50	30.48	46.45	43.45
	[1.200]	[1.829]	[1.711]
60	36.83	52.80	49.80
	[1.450]	[2.079]	[1.961]
68	41.91	57.88	54.88
	[1.650]	[2.279]	[2.161]
80	49.53	65.50	62.50
	[1.950]	[2.579]	[2.461]

Panel Cutout Dimensions

Recommended PCB Thickness: 1.6 ± 0.19 mm [0.063 ± .007]

20, 28, 34, 50, 60, 68, 80 pins

Recommended panel thickness: 2.0max (.079)

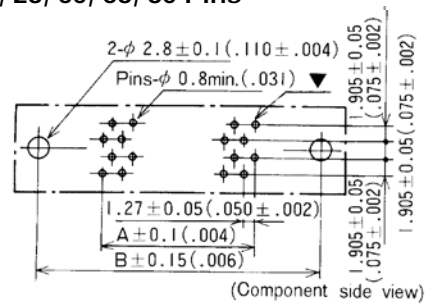
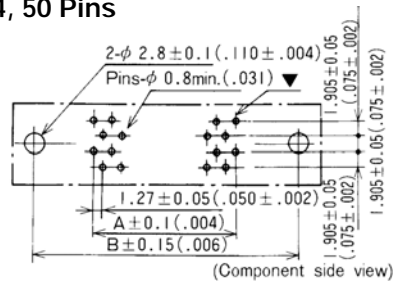


Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 ± 0.19 mm [0.063 ± .007]

20, 28, 60, 68, 80 Pins

34, 50 Pins



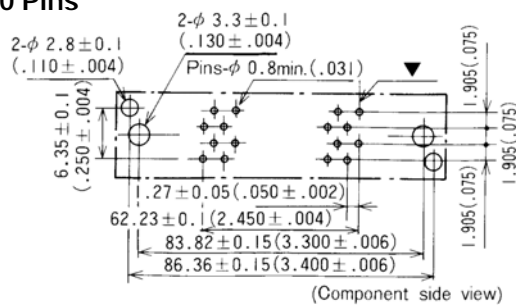
Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 ± 0.19 mm [0.063 ± .007]

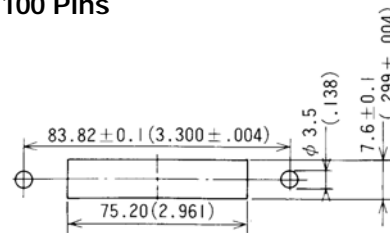
Panel Cutout Dimensions

Recommended Panel Thickness: 1.6 mm max. [0.063]

100 Pins



100 Pins



TS-1147-01
Sheet 4 of 7

3M™ Pak 50 I/O Plug

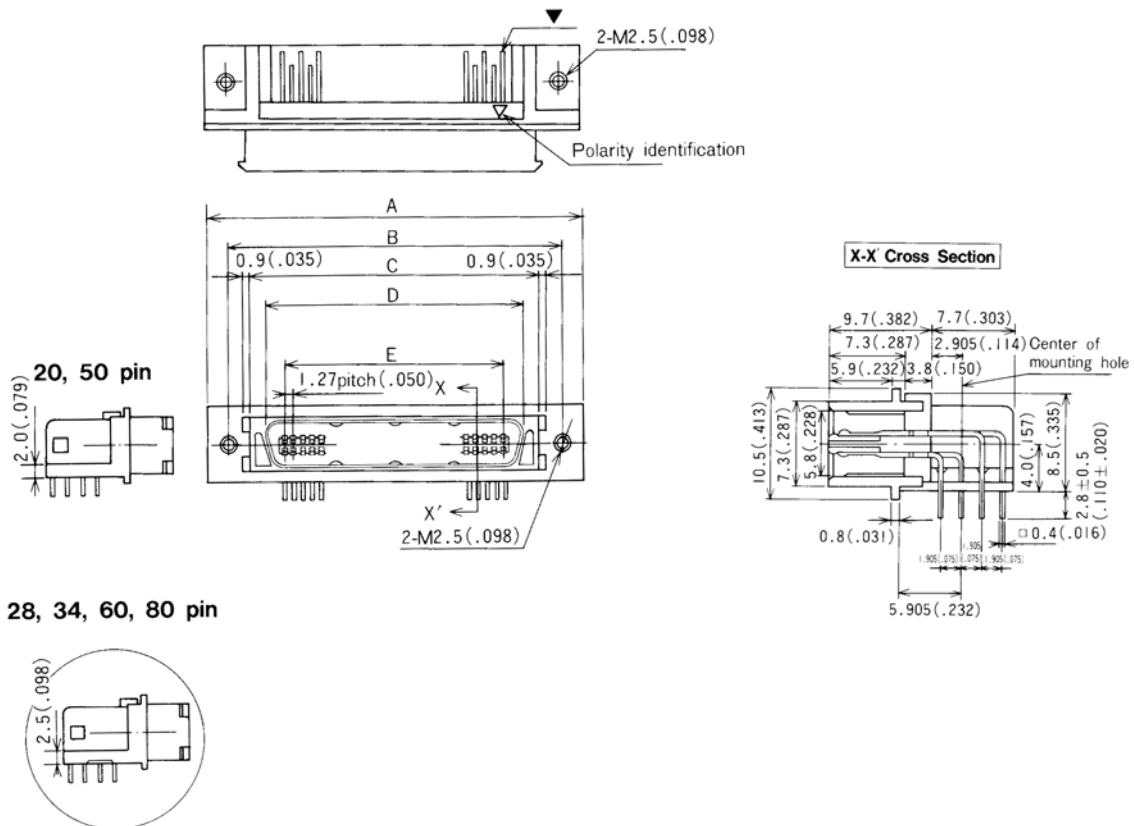
.050" Straight and Right Angle, Boardmount

P50 Series

Right Angle Plug

Product Table / Dimensions

Contact Quantity	A	B	C	D	E
20	33.40	27.40	21.60	16.73	11.43
	[1.315]	[1.079]	[0.850]	[0.659]	[0.450]
28	38.48	32.48	26.68	21.81	16.51
	[1.515]	[1.279]	[1.050]	[0.859]	[0.650]
34	42.29	36.29	30.49	25.62	20.32
	[1.665]	[1.429]	[1.200]	[1.009]	[0.800]
50	52.45	46.45	40.65	35.78	30.48
	[2.065]	[1.829]	[1.600]	[1.409]	[1.200]
60	58.80	52.80	47.00	42.13	36.83
	[2.315]	[2.079]	[1.850]	[1.659]	[1.450]
68	63.88	57.88	52.08	47.21	41.91
	[2.515]	[2.279]	[2.050]	[1.859]	[1.650]
80	71.50	65.50	59.70	54.83	49.53
	[2.815]	[2.579]	[2.350]	[2.159]	[1.950]



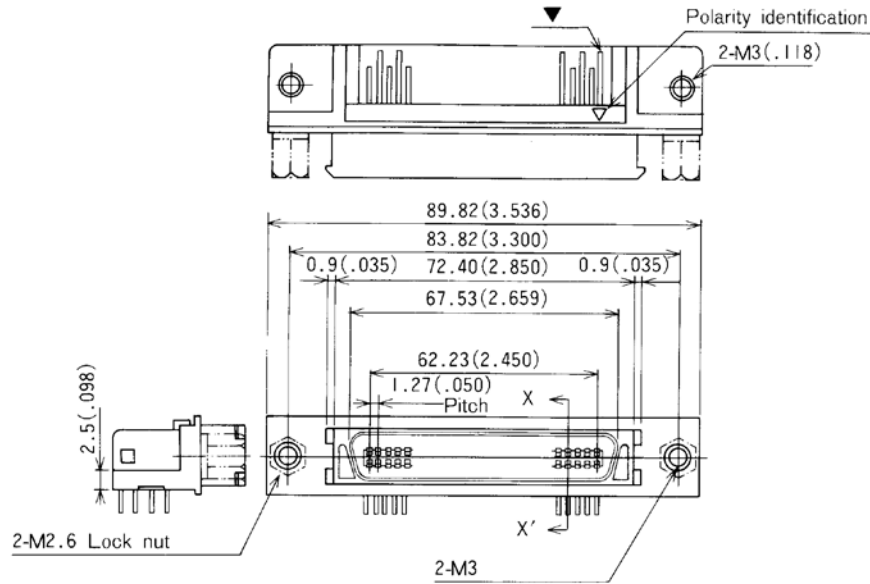
TS-1147-01
Sheet 5 of 7

3M™ Pak 50 I/O Plug

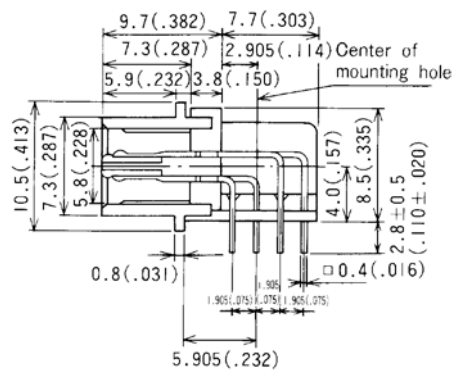
.050" Straight and Right Angle, Boardmount

P50 Series

Right Angle Plug, 100 Pins



X-X' Cross Section



TS-1147-01
Sheet 6 of 7

Right Angle

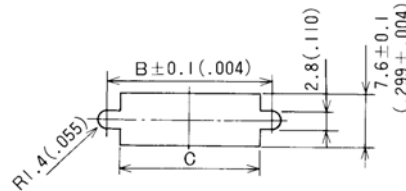
Product Table / Dimensions

Contact Quantity	A	B	C
20	11.43	27.40	24.40
	[0.450]	[1.079]	[0.961]
28	16.51	32.48	29.48
	[0.650]	[1.279]	[1.161]
34	20.32	36.29	33.29
	[0.800]	[1.429]	[1.311]
50	30.48	46.45	43.45
	[1.200]	[1.829]	[1.711]
60	36.83	52.80	49.80
	[1.450]	[2.079]	[1.961]
68	41.91	57.88	54.88
	[1.650]	[2.279]	[2.161]
80	49.53	65.50	62.50
	[1.950]	[2.579]	[2.461]

Panel Cutout Dimensions

Recommended Panel Thickness: 2.0 mm [0.079]

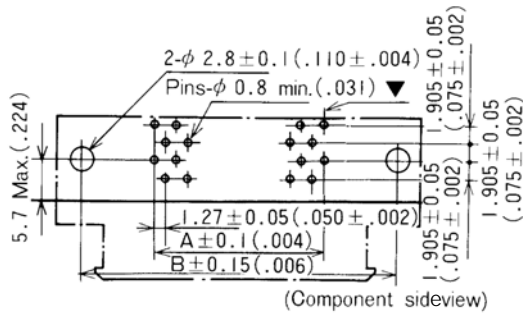
20, 28, 34, 50, 60, 68, 80 Pins



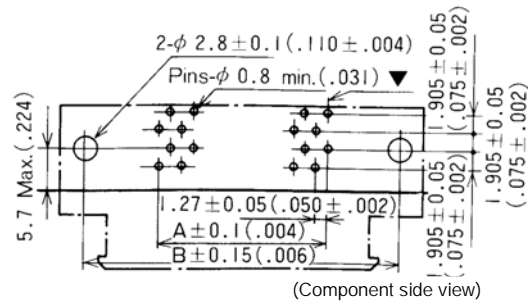
Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 ± 0.19 mm [0.063 ± .007]

34, 50 Pins



20, 28, 60, 68, 80 Pins



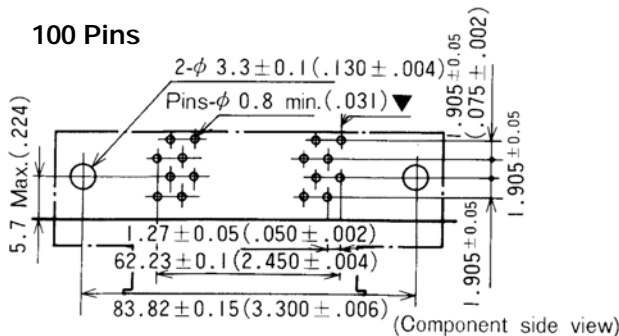
Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 ± 0.19 mm [0.063 ± .007]

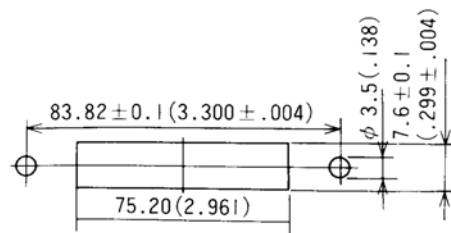
Panel Cutout Dimensions

Recommended Panel Thickness: 1.6 mm max. [0.063]

100 Pins



100 Pins



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.



Electronic and Interconnect Solutions Division

6801 River Place Blvd.
Austin, TX 78726-9000
www.3M.com/eisd

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of 1 year from the date 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 loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.**

© 3M 2003