

# 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

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## 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

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## Electrical

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

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## Environmental

**Temperature Rating:** -55°C to +85°C

# 3M™ Pak 50 I/O Plug

## .050" Straight and Right Angle, Boardmount

P50 Series

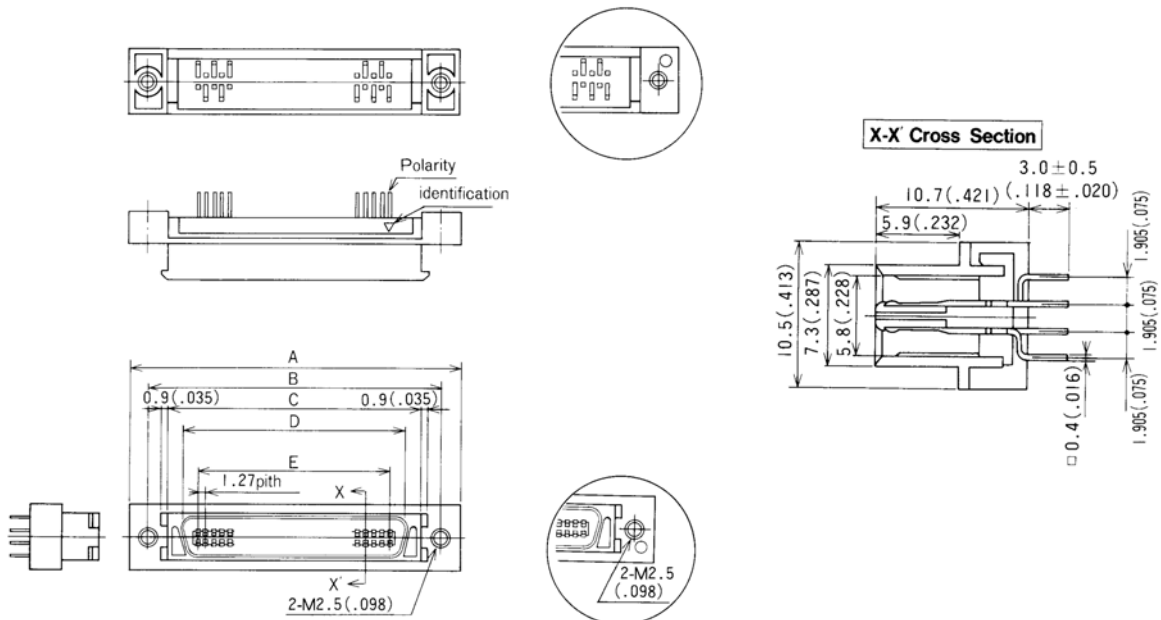
### Straight Plug

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

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### Straight Plug

#### Product Table / Dimensions

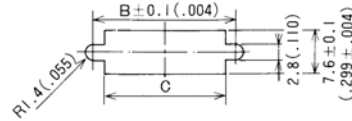
Contact Quantity	A	B	C
20	11.43	27.40	24.40
	[0.450]	[1.079]	[0.961]
28	16.51	32.48	29.48
	[0.650]	[1.279]	[1.161]
34	20.32	36.29	33.29
	[0.800]	[1.429]	[1.311]
50	30.48	46.45	43.45
	[1.200]	[1.829]	[1.711]
60	36.83	52.80	49.80
	[1.450]	[2.079]	[1.961]
68	41.91	57.88	54.88
	[1.650]	[2.279]	[2.161]
80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

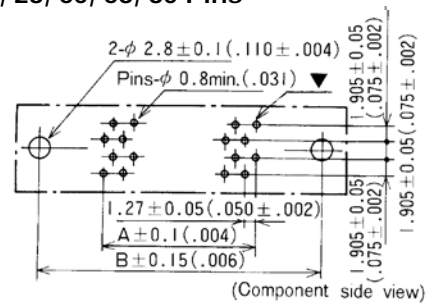
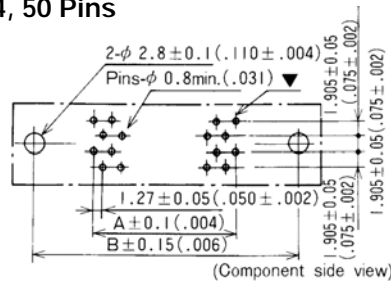


#### Printed Circuit Board Layout

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

**20, 28, 60, 68, 80 Pins**

**34, 50 Pins**



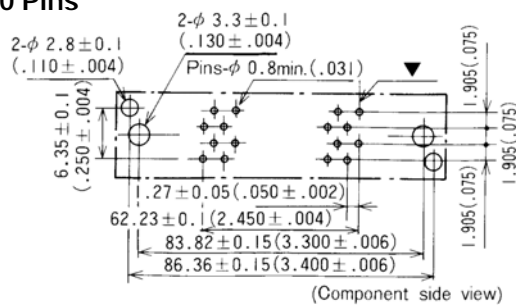
#### Printed Circuit Board Layout

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

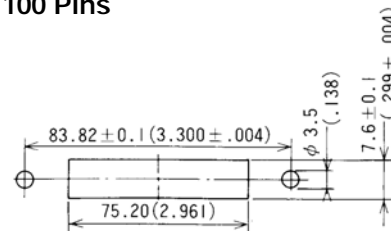
#### Panel Cutout Dimensions

Recommended Panel Thickness: 1.6 mm max. [0.063]

**100 Pins**



**100 Pins**



# 3M™ Pak 50 I/O Plug

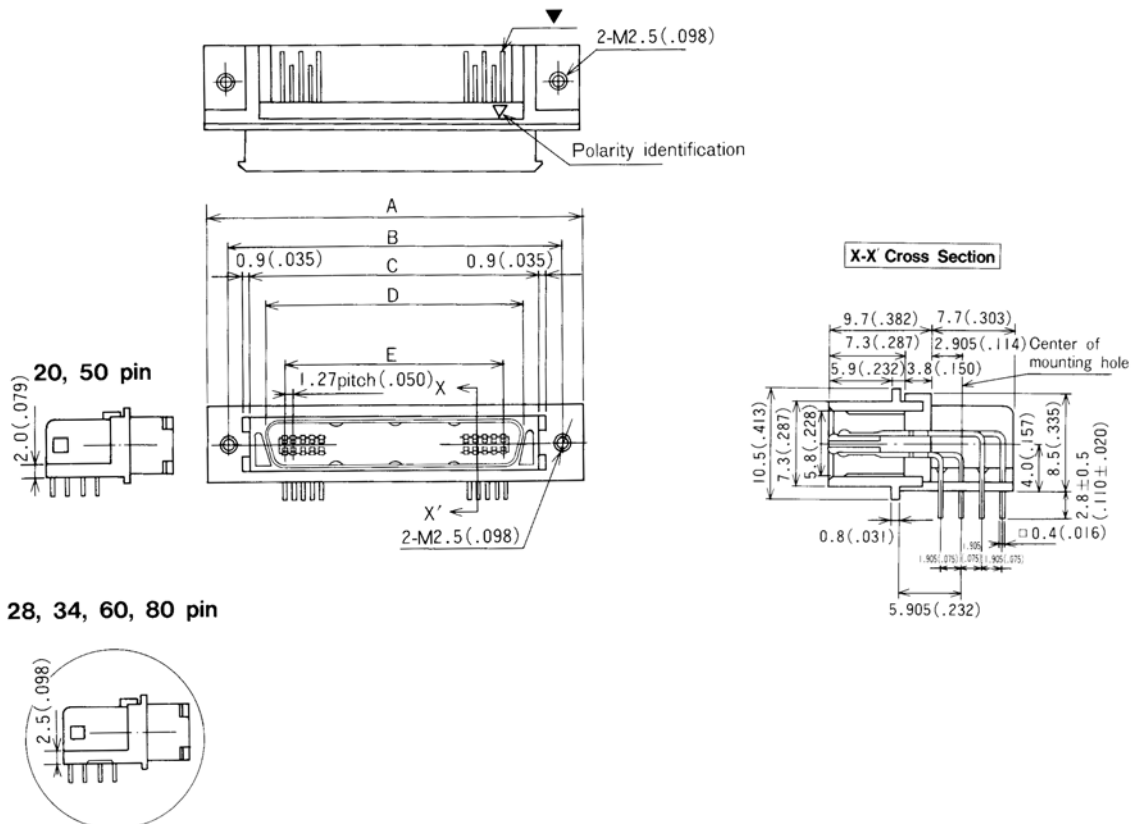
## .050" Straight and Right Angle, Boardmount

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]



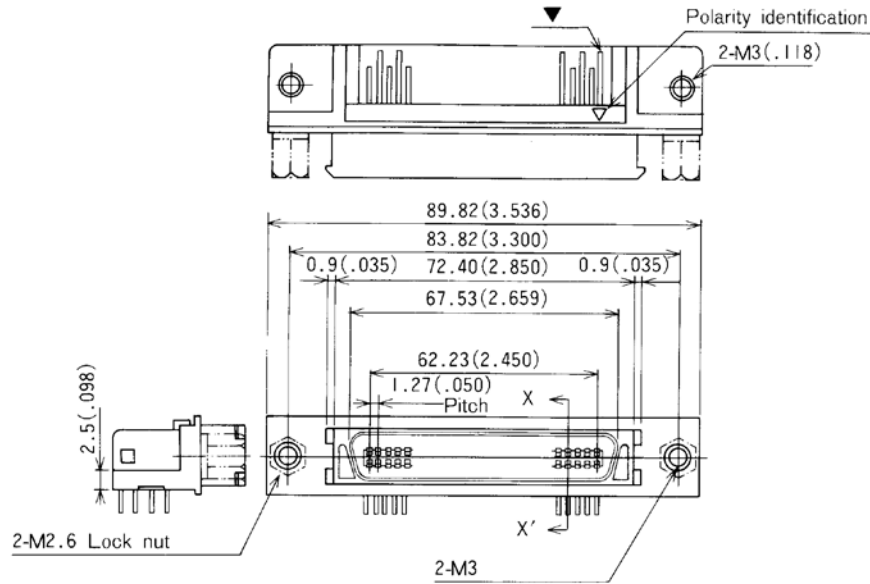
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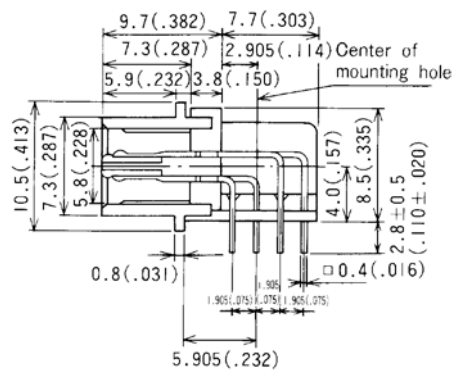
## .050" Straight and Right Angle, Boardmount

P50 Series

Right Angle Plug, 100 Pins



### X-X' Cross Section



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### Right Angle

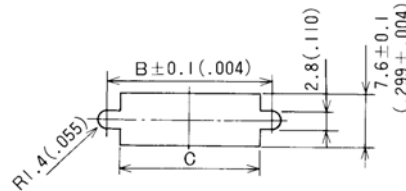
Product Table / Dimensions

Contact Quantity	A	B	C
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50	30.48	46.45	43.45
	[1.200]	[1.829]	[1.711]
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	[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]

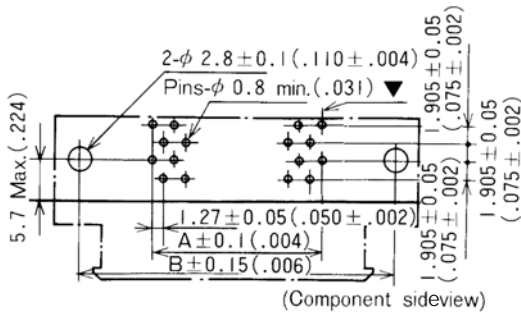
20, 28, 34, 50, 60, 68, 80 Pins



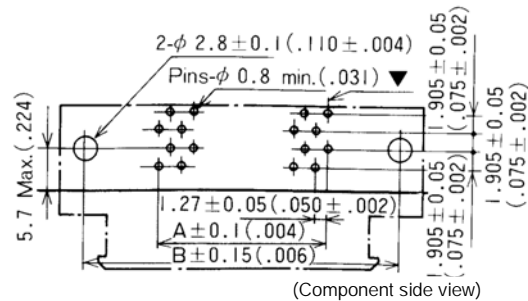
### Printed Circuit Board Layout

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

34, 50 Pins



20, 28, 60, 68, 80 Pins



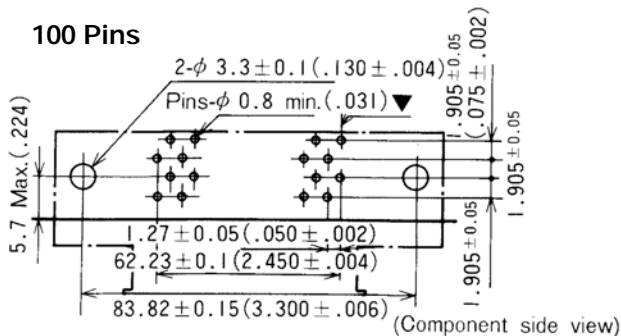
### Printed Circuit Board Layout

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

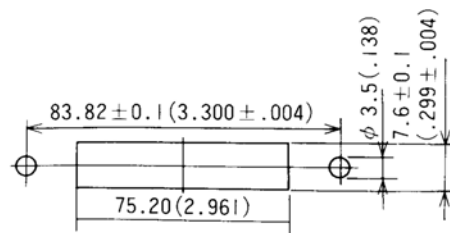
### Panel Cutout Dimensions

Recommended Panel Thickness: 1.6 mm max. [0.063]

100 Pins



100 Pins



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