

# 3M™ Pak 50 I/O Socket

.050" Straight and Right Angle, Cable Mount

P50 Series



- Supports 28 or 30 AWG discrete or laminated wire cables
- Fully EMI shielded
- 20 to 100 position
- Mates to P50 series panel mount plug

Date Modified: May 15, 2003

TS-1154-01  
Sheet 1 of 3

---

## Physical

### Insulation

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

### Contact

Material: Phosphor Bronze

### Plating

Underplating: Nickel  
Wiping Area: See Ordering Information  
Termination Area: Tin Alloy over Nickel  
Wire Accomodation: 28 or 30 AWG Stranded Cable

---

## 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

---

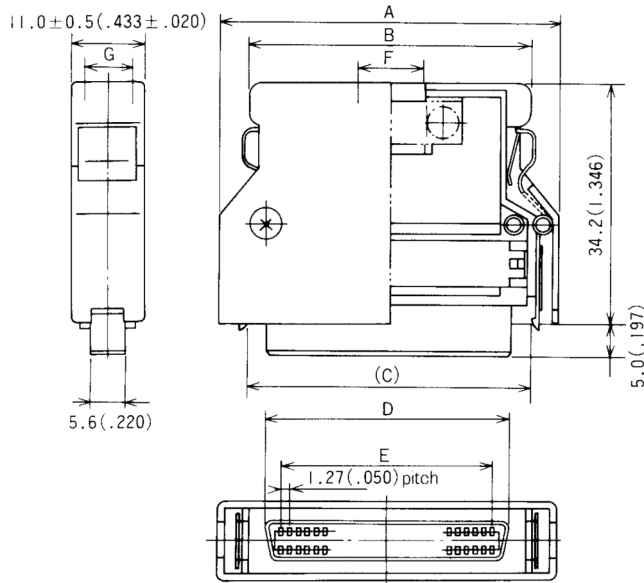
## Environmental

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

# 3M™ Pak 50 I/O Socket .050" Straight and Right Angle, Cable Mount

P50 Series

## Straight Cable Exit



Product Table / Dimensions for Straight Cable Exit

| Contact Quantity | A       | B       | C       | D       | E       | F       | G       |
|------------------|---------|---------|---------|---------|---------|---------|---------|
| 20               | 30.00   | 22.30   | 21.30   | 16.48   | 11.43   | 6.70    | 6.70    |
|                  | [1.181] | [0.878] | [0.839] | [0.649] | [0.450] | [0.264] | [0.264] |
| 28               | 35.08   | 27.38   | 26.40   | 21.56   | 16.51   | 7.50    | 7.50    |
|                  | [1.381] | [1.078] | [1.039] | [0.849] | [0.650] | [0.295] | [0.295] |
| 34               | 38.89   | 31.19   | 30.20   | 25.37   | 20.32   | 8.70    | 8.70    |
|                  | [1.531] | [1.228] | [1.189] | [0.999] | [0.800] | [0.343] | [0.343] |
| 50               | 49.05   | 41.35   | 40.40   | 35.53   | 30.48   | 10.00   | 8.50    |
|                  | [1.931] | [1.628] | [1.591] | [1.399] | [1.200] | [0.394] | [0.335] |
| 60               | 55.40   | 47.70   | 46.70   | 41.88   | 36.83   | 11.00   | 8.50    |
|                  | [2.181] | [1.878] | [1.839] | [1.649] | [1.450] | [0.433] | [0.335] |
| 68               | 60.48   | 52.78   | 51.80   | 46.96   | 41.91   | 12.00   | 8.50    |
|                  | [2.381] | [2.078] | [2.039] | [1.849] | [1.650] | [0.472] | [0.335] |
| 80               | 68.10   | 60.40   | 59.40   | 54.58   | 49.53   | 13.00   | 8.50    |
|                  | [2.681] | [2.378] | [2.339] | [2.149] | [1.950] | [0.512] | [0.335] |

## Ordering Information

### Connector Order Code

**P50 - XXX - XXX - XXXX**

Contact Quantity  
See Table

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

DDS = 28 AWG discrete wire  
MDS = 28 AWG laminated wire  
DDSC = 30 AWG discrete wire  
MDSD = 30 AWG laminated wire

### Backshell Order Code

**P50 - XXX - XXX - XXXX**

Contact Quantity  
See Table

STR = Straight Exit  
HOZ = Right Angle Exit  
Available only for 20 & 50 position

BSK = Straight Exit for 20-80 position  
BSK1 = 20 pos. Right Angle Backshell  
w/cable clamp for .193" diameter  
BSK3 = 20 pos. Right Angle Backshell  
W/cable clamp for .217-.228" diameter  
BSK2 = 50 pos. Right Angle Backshell  
W/cable clamp for .260" diameter  
BSK4 = 50 pos. Right Angle Backshell  
W/cable clamp for .283" diameter  
BSK5 = 50 pos. Right Angle Backshell  
W/cable clamp for .311" diameter  
BSK1 = 100 pos. Straight Exit Backshell  
Without Backpanel  
BSK2 = 100 pos. Straight Exit Backshell to  
Accommodate .039" Panel Thickness  
BSK3 = 100 pos. Straight Exit Backshell to  
Accommodate .063" Panel Thickness

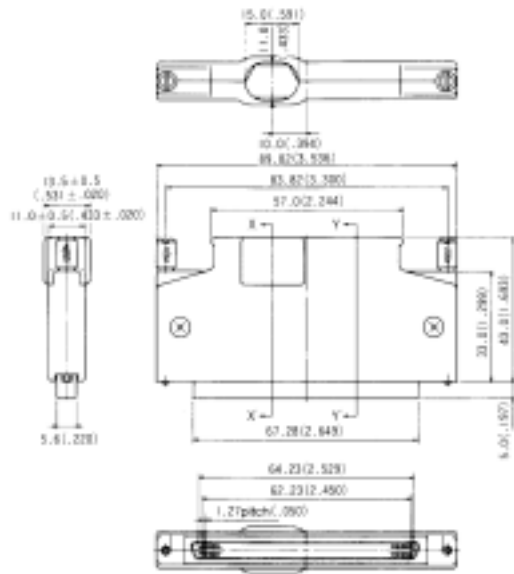
TS-1154-01  
Sheet 2 of 3

# 3M™ Pak 50 I/O Socket

## .050" Straight and Right Angle, Cable Mount

P50 Series

### Straight Cable Exit for 100 Pins



X-X Cross Section



Y-Y Cross Section

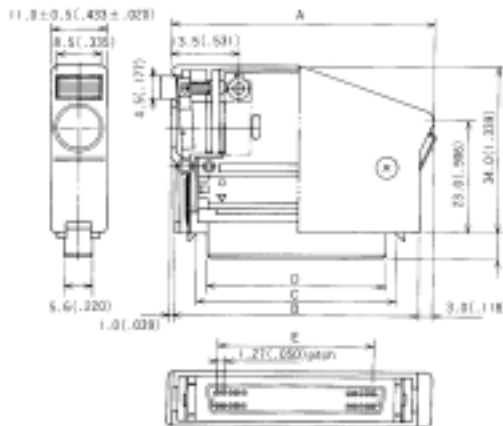


### Right Angle Cable Exit

Available only for 20 & 50 Contacts

Product Table / Dimensions for Right Angle Cable Exit

| Contact Quantity | A       | B       | C       | D       | E       |
|------------------|---------|---------|---------|---------|---------|
| 20               | 34.00   | 30.00   | 21.30   | 16.48   | 11.43   |
|                  | [1.339] | [1.181] | [0.839] | [0.649] | [0.450] |
| 50               | 53.05   | 49.00   | 40.35   | 35.53   | 30.48   |
|                  | [2.089] | [1.929] | [1.589] | [1.399] | [1.200] |



TS-1154-01  
Sheet 3 of 3

### **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](http://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