

#### INTRODUCTION:

Adam Tech MTJ series Modular Telephone Jacks are a complete line of PCB and wire leaded jacks which are UL and CSA approved and meet all required FCC rules and regulations. Adam Tech offers a multitude of sizes (4p2c thru 10p10c) with styles including single, ganged and stacked versions with options of ferrite or magnetic filtering and or metal shielding. Jacks with integral LED's and combination hybrids such as MTJ/USB jacks are also available. These jacks are available in thru-hole or SMT mounting.

#### FEATURES:

- UL 1863 recognized
- FCC compliant to No. 47 CFR part 68
- Magnetic and Ferrite filtered types
- 4,6,8 and 10 positions available
- Single, stacked or ganged
- Hi-Temp and LED options
- Unshielded or Metal Shielded
- Thru-Hole or SMT mounting
- Cat. 5 & 5E ANSI/TIA/EIA 568.2

#### MATING PLUGS:

Adam Tech modular telephone plugs and all industry standard telephone plugs.

#### SPECIFICATIONS:

##### Material:

- Insulator: PBT, Nylon or ABS, rated UL94V-0
- Insulator Colors: black or medium gray
- Contacts: Phosphor Bronze
- Shield: Phosphor Bronze, tin plated

##### Contact Plating:

- Flat contacts: gold flash over nickel underplate on contact area, Tin over copper underplate on solder tails.
- Round contacts: gold flash over nickel underplate overall

##### Electrical:

- Operating voltage: 150V AC max.
- Current rating: 1.5 Amps max.
- Contact resistance: 20 mΩ max. initial
- Insulation resistance: 500 MΩ min.
- Dielectric withstanding voltage: 1000V AC for 1 minute

##### Mechanical:

- Insertion force: 4 contacts: 17.6N
- 6 contacts: 20.6N
- 8 contacts: 22.5N
- 10 contacts: 24.5N

Durability: 500 Cycles

##### Temperature Rating:

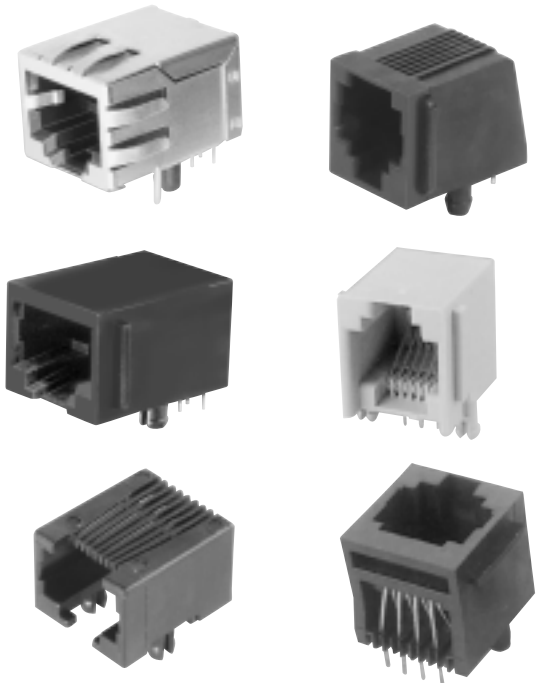
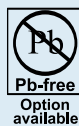
Operating temperature: -40°C to +125°C

##### PACKAGING:

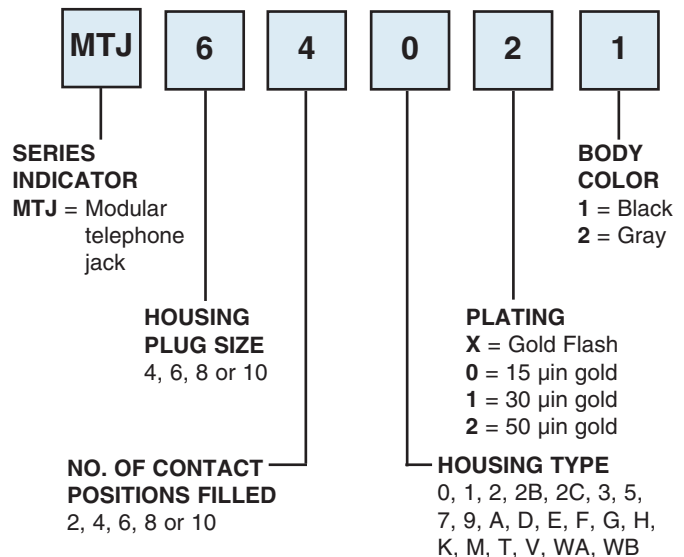
Anti-ESD plastic trays

##### SAFETY AGENCY APPROVALS:

UL Recognized E224049



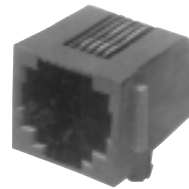
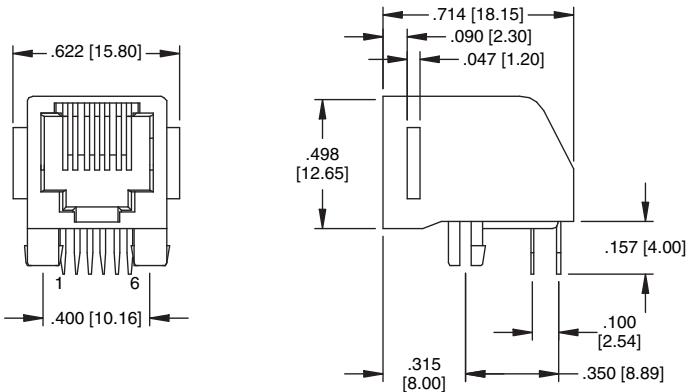
#### ORDERING INFORMATION



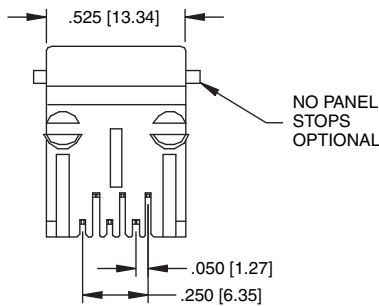
#### OPTIONS:

- Add designator(s) to end of part number
- S** = Face shielded jack (Body type 0 only)
- FS\*** = Five sided shield (Illustrations pages 16-32)  
Consult factory for custom shielding requirements
- SMT** = Surface mount tails, housings 0, 5, 9, G & W with Hi-Temp insulator
- N** = No panel stops
- K** = Keyed telephone jack
- HT** = Hi-Temp insulator for Hi-Temp soldering processes
- RC** = RoHS compliant lead-free product with Hi-Temp insulator
- PG** = Panel ground tabs

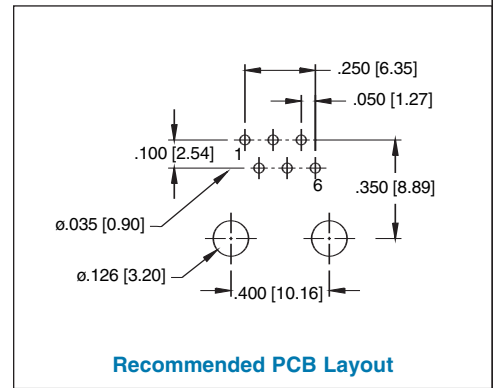
**TYPE 0**



**MTJ-660X1**

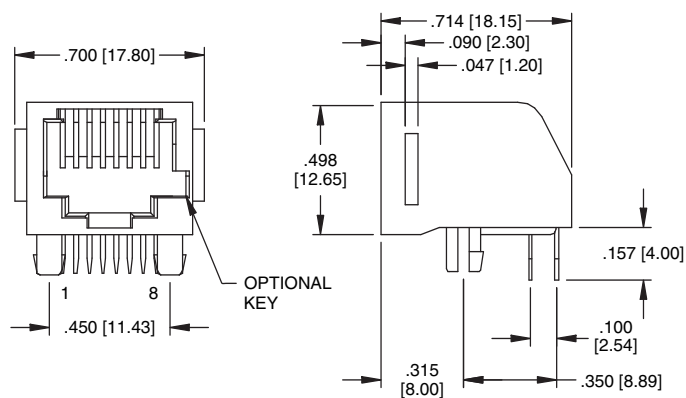


**Face Shield Option**

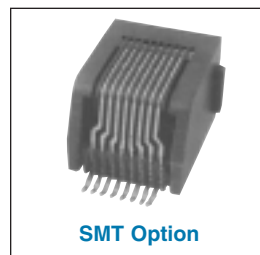
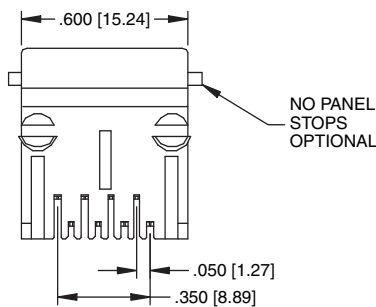


**Recommended PCB Layout**

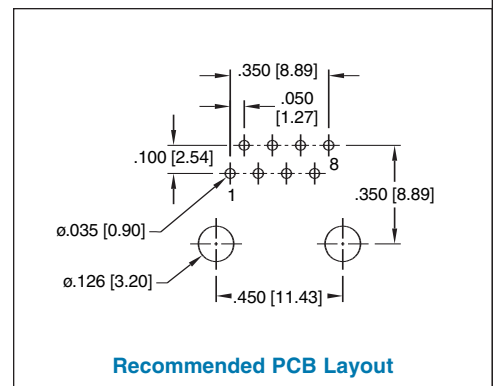
**TYPE 0**



**MTJ-880X1**



**SMT Option**



**Recommended PCB Layout**

Dimensions: .590 [15.00], .450 [11.43], .681 [17.30], .484 [12.30], .138 [3.50], .287 [7.30], .350 [8.89], .100 [2.54], .050 [1.27], .250 [6.35].

FLAT CONTACTS OPTIONAL

**TYPE 9**  
6p4c  
6p6c

**MTJ-669X1**

Dimensions:  $\phi .126$  [3.20] (2x), .450 [11.43], .250 [6.35], .050 [1.27], .100 [2.54],  $\phi .035$  [.89] (6x), .250 [6.35].

**Recommended PCB Layout**

Dimensions: .590 [15.00], .450 [11.43], .681 [17.30], .484 [12.30], .138 [3.50], .287 [7.30], .350 [8.89], .100 [2.54], .050 [1.27], .350 [8.89].

FLAT CONTACTS OPTIONAL

**TYPE 9**  
8p8c

**MTJ-889X1**

Dimensions:  $\phi .126$  [3.20] (2x), .450 [11.43], .250 [6.35], .050 [1.27], .100 [2.54],  $\phi .035$  [.89] (8x), .350 [8.89].

**Recommended PCB Layout**

Dimensions: .622 [15.8], .450 [11.43], .732 [18.6], .520 [13.20], .327 [8.3], .100 [2.54], .350 [8.9], .050 [1.27], .350 [8.89].

**TYPE 9**  
8p8c  
Shielded

**MTJ-889X1-FS**

**SMT Option**

Dimensions:  $\phi .126$  [3.20] (2x), .610 [15.15], .450 [11.43],  $\phi .063$  [ $\phi 1.60$ ], .120 [3.05], .250 [6.35], .050 [1.27], .100 [2.54],  $\phi .035$  [.89] (8x), .350 [8.89].

**Recommended PCB Layout**

**TYPE 7**  
**4p4c**

**MTJ-447X1**

**TYPE 7**  
**6p4c**  
**6p6c**

**MTJ-647X1**

OPTIONAL SHORTING BARS

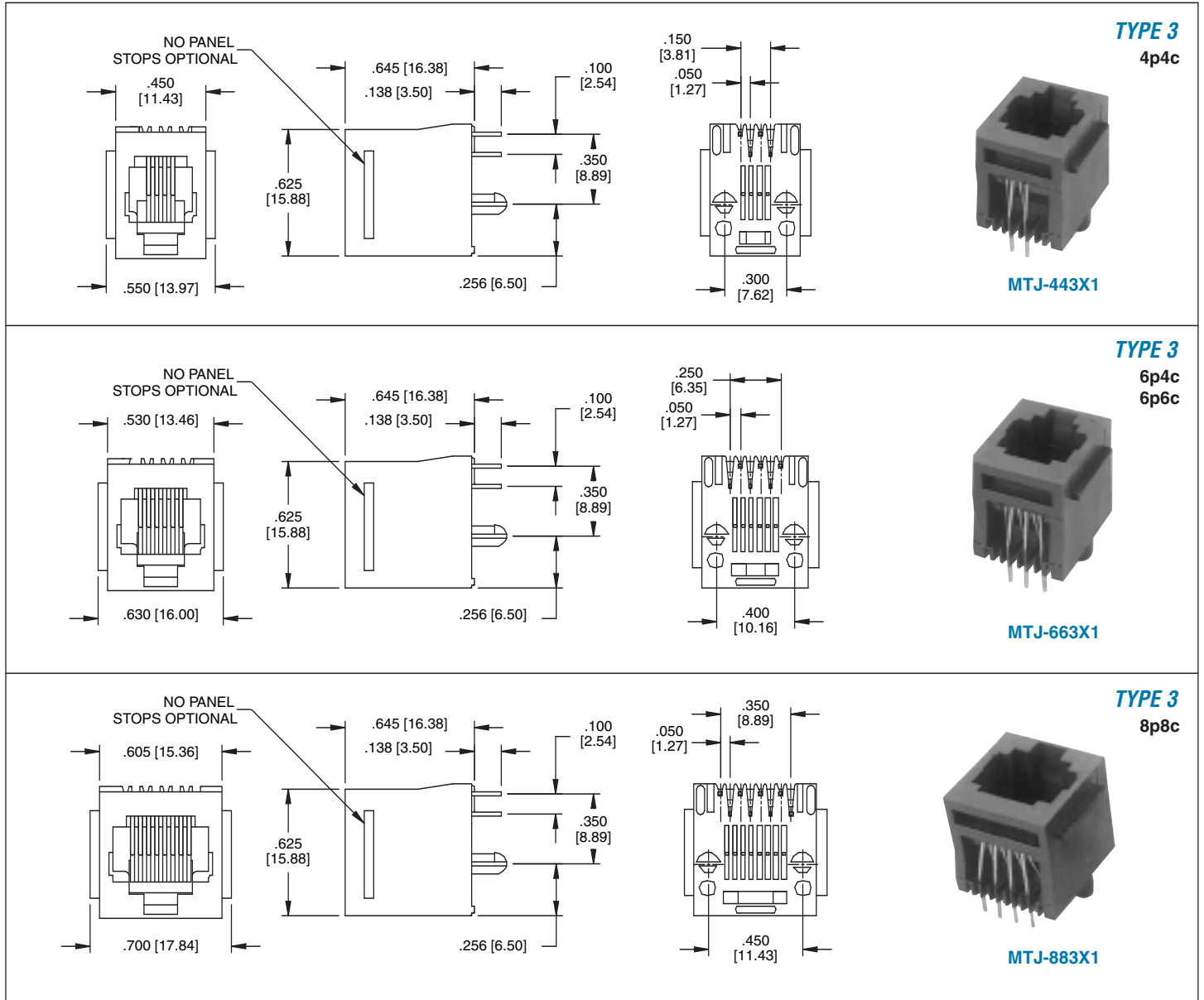
**TYPE 7**  
**8p8c**

**MTJ-887X1**

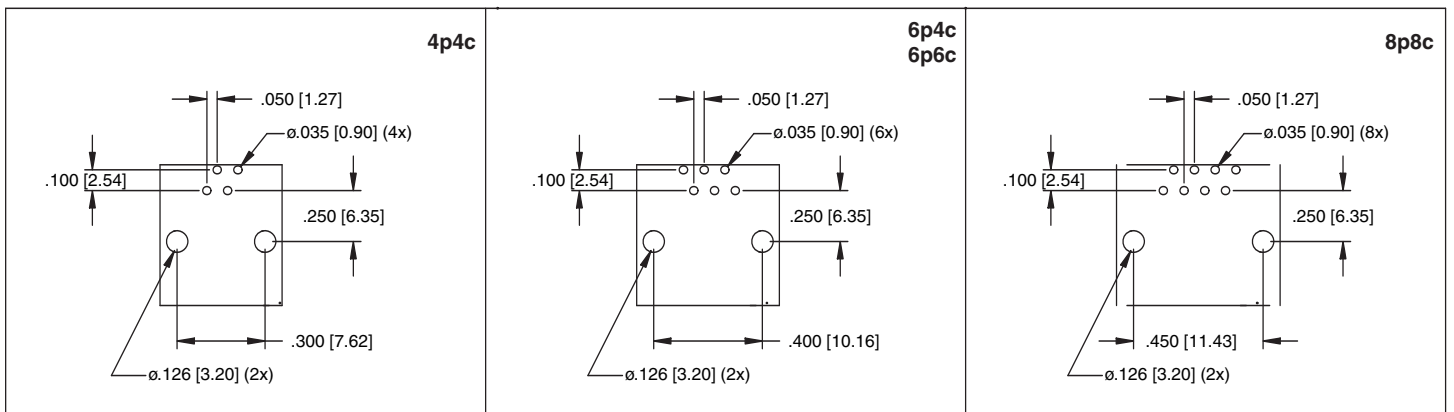
**Recommended PCB Layout**

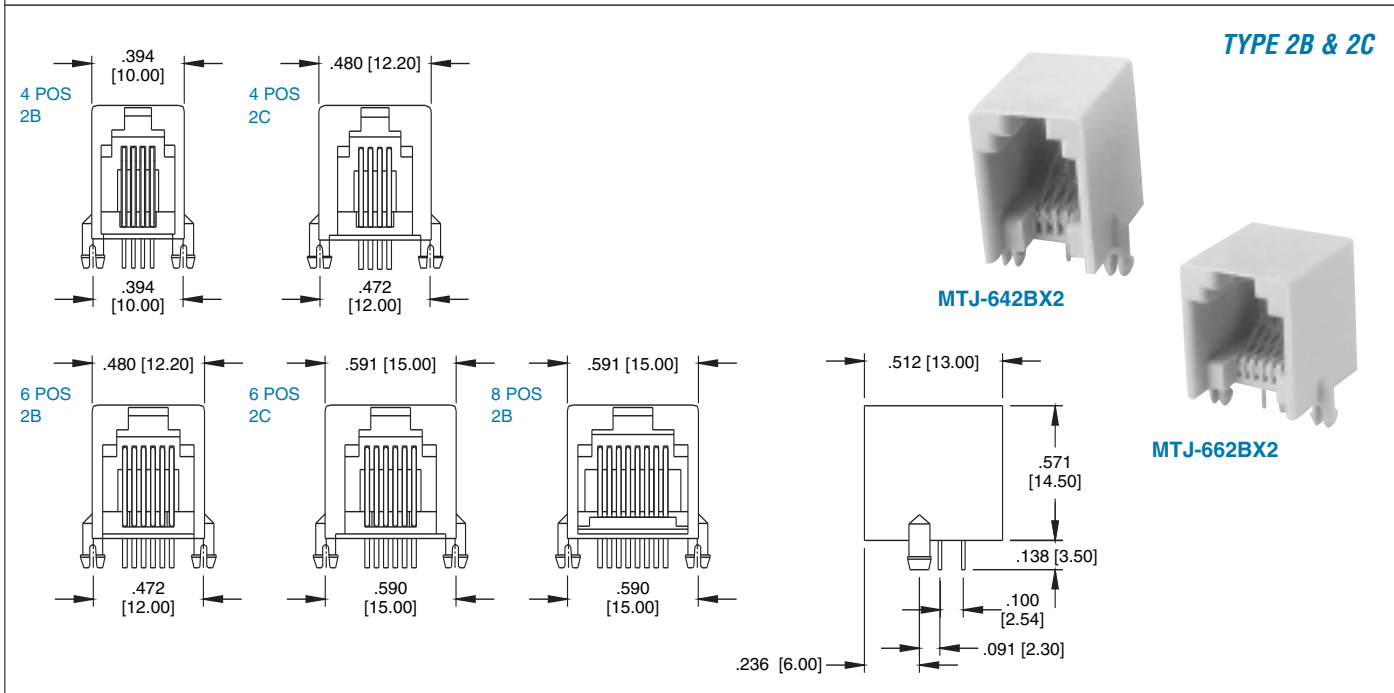
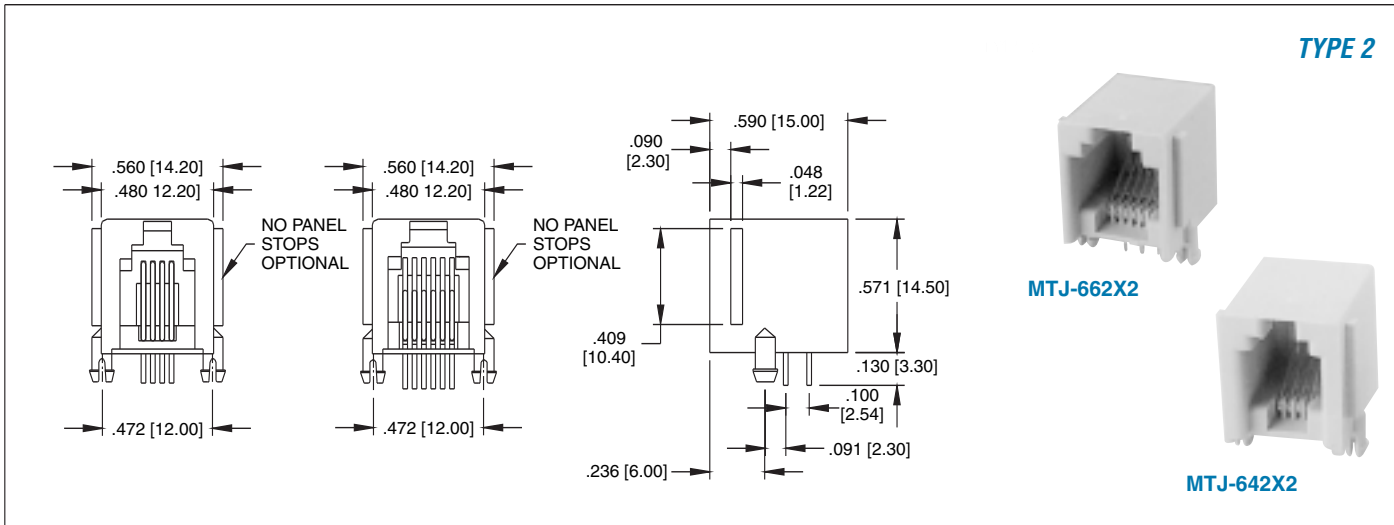
4p4c	6p4c 6p6c	8p8c

	<p><b>TYPE 5</b> 4p4c</p> <p><b>Recommended PCB Layout</b></p> <p><b>MTJ-445X1</b></p>
	<p><b>TYPE 5</b> 6p6c</p> <p><b>Recommended PCB Layout</b></p> <p><b>MTJ-665X1</b></p>
	<p><b>SMT Option</b></p> <p><b>TYPE 5</b> 8p8c</p> <p><b>Recommended PCB Layout</b></p> <p><b>MTJ-885X1</b></p>

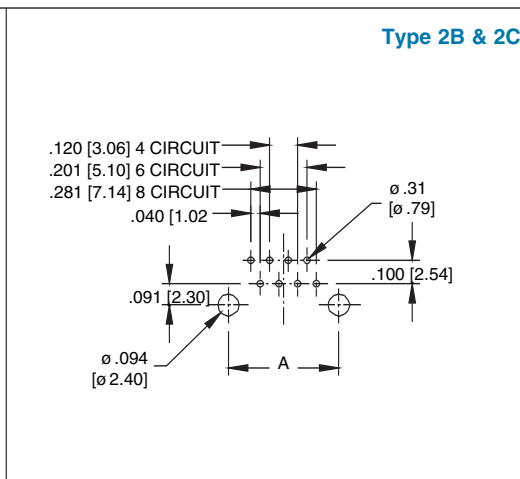
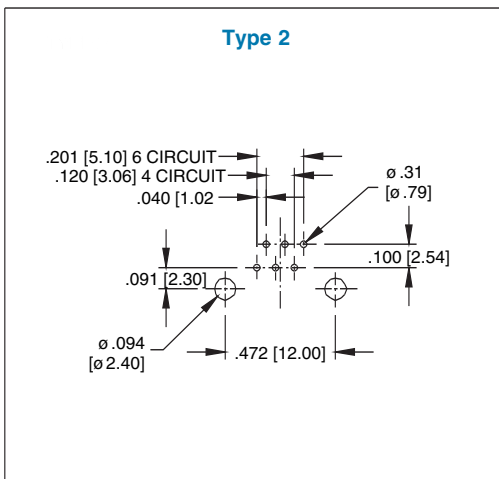


Recommended PCB Layout





**Recommended PCB Layout**



DIM. "A"	
TYPE 2B 4P4C	.394 [10.00]
TYPE 2C 4P4C	.472 [12.00]
TYPE 2B 6P6C	.472 [12.00]
TYPE 2C 6P6C	.591 [15.00]
TYPE 2B 8P8C	.590 [15.00]

		<p><b>TYPE F</b> 4p4c 6p6c</p> <p><b>Recommended PCB Layout</b></p>
		<p><b>TYPE F</b> 8p8c</p> <p><b>Recommended PCB Layout</b></p>
		<p><b>TYPE F</b> 8p8c Shielded</p> <p><b>Recommended PCB Layout</b></p>



**MTJ-64GX1**

**TYPE G**  
4p4c  
6p6c

**Recommended PCB Layout**

**MTJ-88GX1**

**TYPE G**  
8p8c

**Recommended PCB Layout**

**MTJ-88GX1-FSD**

**Recommended PCB Layout**

**SHIELD PIN LOCATION**  
 FSA OPTION: A = .170 [4.32]  
 FSB OPTION: A = .144 [3.66]  
 FSE OPTION: A = .120 [3.05]

**PCB Layout (FSA, FSB, & FSE)**

# ADAM TECH MODULAR TELEPHONE PLUGS

MTP SERIES

ADAM TECHNOLOGIES

## INTRODUCTION:

Adam Tech MTP series Modular Telephone Plugs are manufactured to terminate flat oval or round telephone cord to REA and Cat. 5 EIA/TIA specifications. Our double strain relief design, molded in polycarbonate, is manufactured with contacts pre-loaded in a variety of sizes and options including shielding and specific contacts for flat or round cable. Adam Tech is a major supplier of telephone line cords to the telecommunications industry.

## FEATURES:

- Preassembled Contacts
- REA Compliant Terminations
- Cat. 5 and 5E available
- Contacts for Flat or Round wire
- Short or Long body choices
- Shielded versions

## MATING TELEPHONE JACKS:

Adam Tech modular telephone jack series and all industry standard telephone Jacks.

## SPECIFICATIONS:

### Material:

Insulator: Polycarbonate, rated UL94V-0  
Insulator Color: Clear  
Contacts: Phosphor Bronze

### Contact Plating:

50 µin Gold (optional 15 or 30 µin) over nickel underplate.

### Electrical:

Operating voltage: 150V AC max.  
Current rating: 1.5 Amps max.  
Contact resistance: 20 mΩ max. initial  
Insulation resistance: 500 MΩ min.  
Dielectric withstanding voltage: 1000V AC for 1 minute

### Mechanical:

Cable to plug tensile strength: 7.71 Kgs (17 lbs) min.  
Durability: 250 Cycles min.  
Wire range: 26 to 28 Awg

### Temperature Rating:

Operating temperature: -40°C to +70°C

## PACKAGING:

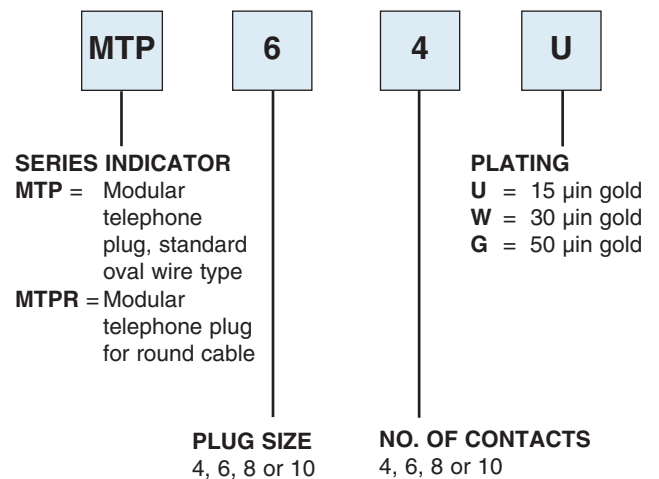
Anti-ESD plastic bags

## SAFETY AGENCY APPROVALS:

UL Recognized File No. E224053



## ORDERING INFORMATION

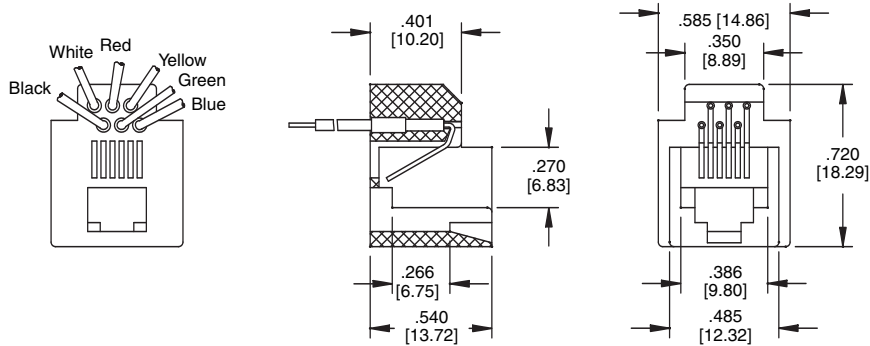


## OPTIONS:

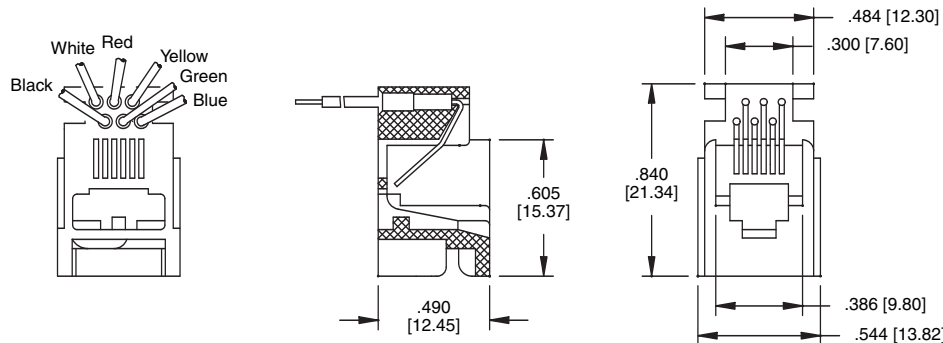
Add designator(s) to end of part number

- K** = Molded in key (Plug size 8 or 10 only)
- S** = Solid wire contacts
- EMI** = Metal shielded type (Plug size 8 or 10 only)
- OL** = Offset Latch (Plug size 6 only)

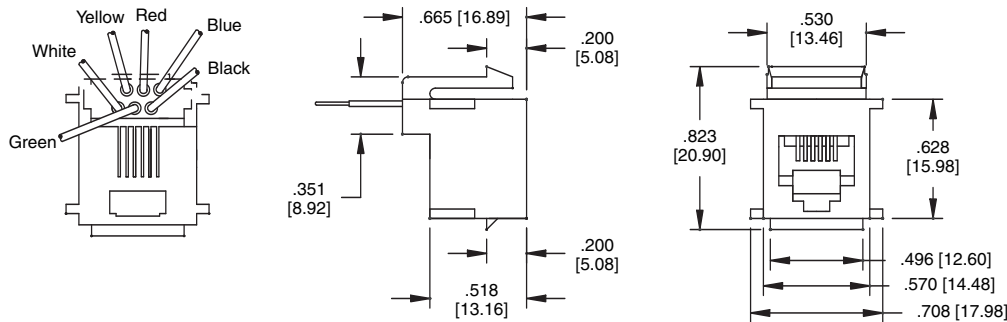
**MTJP-623K4**  
**MTJP-623K6**



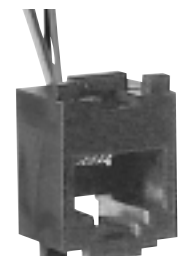
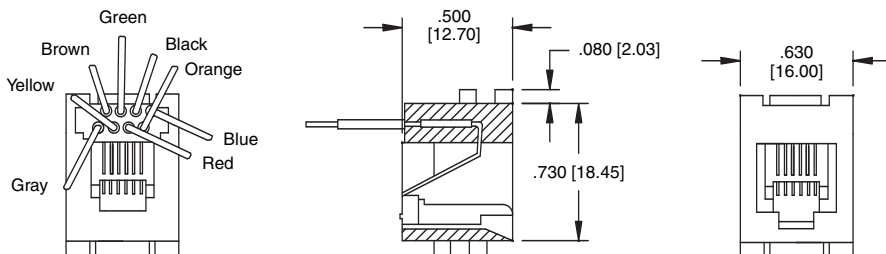
**MTJP-623P4**  
**MTJP-623P6**



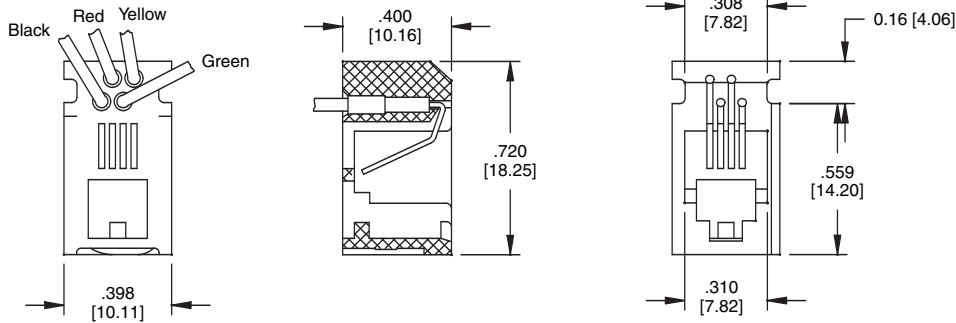
**MTJP-648K4**  
**MTJP-648K6**



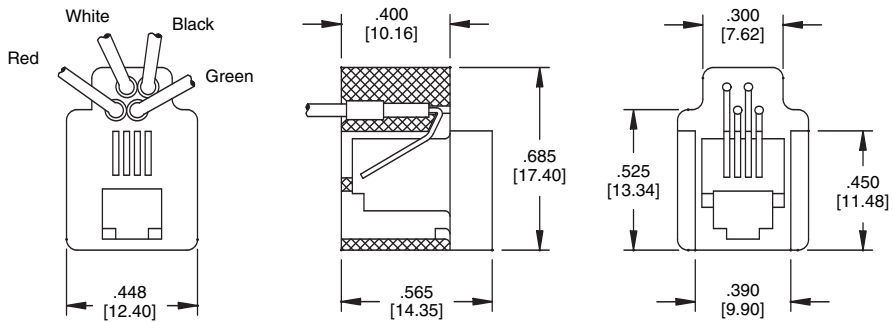
**MTJP-641**  
**MTJP-641 KEYED**



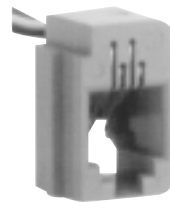
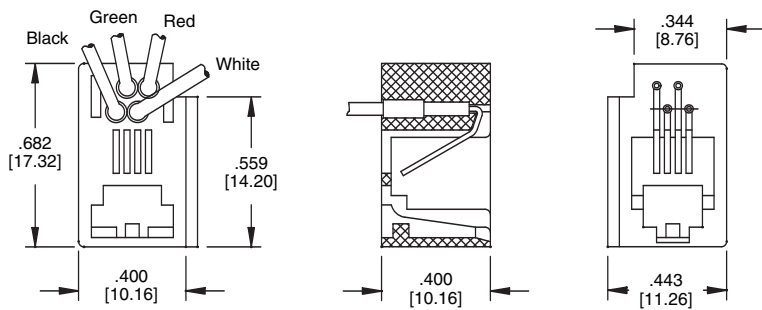
**MTJP-616L**



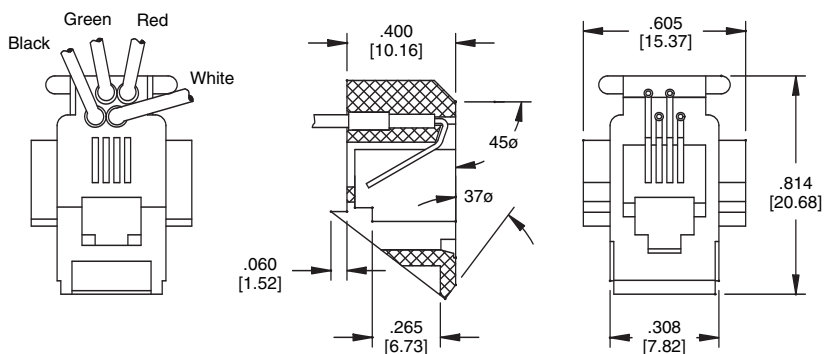
**MTJP-616M**



**MTJP-616E**



**MTJP-616W**



**INTRODUCTION:**

Adam Tech MTJP Series Wire Leaded Telephone Jacks are a full series of Handset and Panel Jacks conveniently prepared with wire leads ready for final assembly. This series has a multitude of housing shapes to fit many specific applications. They are offered in 4, 6 & 8 positions and with choice of Stripped and Tinned leads or leads with Spade Terminals and choice of contact plating. Adam Tech Jacks are UL and CSA approved and meet all required FCC rules and regulations.

**FEATURES:**

- UL & CSA approved
- FCC compliant to No. 47 CFR part 68
- Prepared for Final Assembly
- 4P, 6P and 8P versions
- Custom Jacks available

**MATING PLUGS:**

All telephone line cords manufactured with telephone plugs

**SPECIFICATIONS:**

**Material:**

Insulator: ABS, (Nylon 66 optional), rated UL94V-0  
 Insulator Colors: Medium gray or black  
 Contacts: Phosphor Bronze  
 Wires: 26 Awg, UL-1061, 80°C, VW-1, 300V.

**Contact Plating:**

Gold Flash over Nickel underplate on contact area.

**Electrical:**

Operating voltage: 150V AC max.  
 Current rating: 1.5 Amps max.  
 Contact resistance: 20 mΩ max. initial  
 Insulation resistance: 500 MΩ min.  
 Dielectric withstanding voltage: 500V AC for 1 minute

**Mechanical:**

Insertion force: 4 Contacts: 500g, 6 contacts 750g  
 8 contacts: 900g, 10 contacts: 1000g  
 Durability: 500 Cycles

**Temperature Rating:**

Operating temperature: -40°C to +125°C

**PACKAGING:**

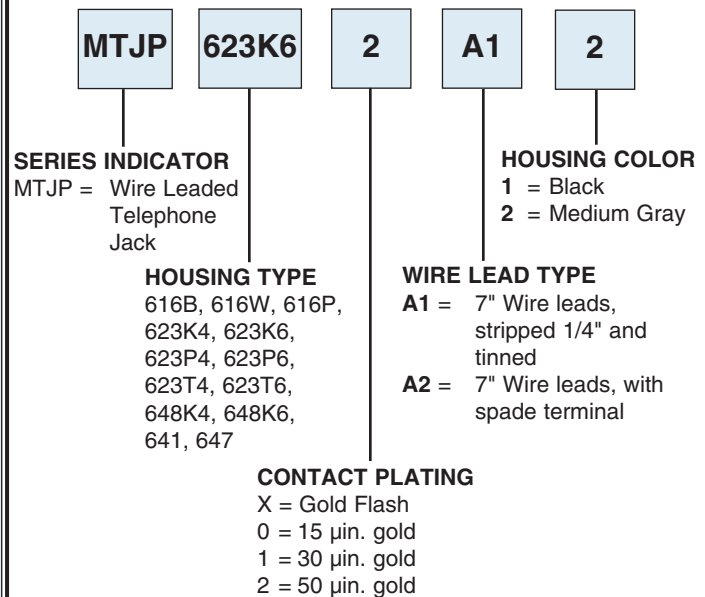
Anti-ESD plastic bags

**APPROVALS AND CERTIFICATIONS:**

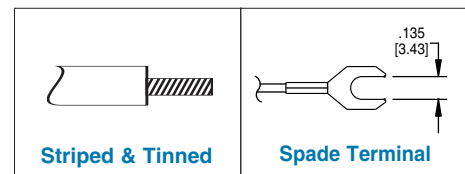
UL Recognized E224049



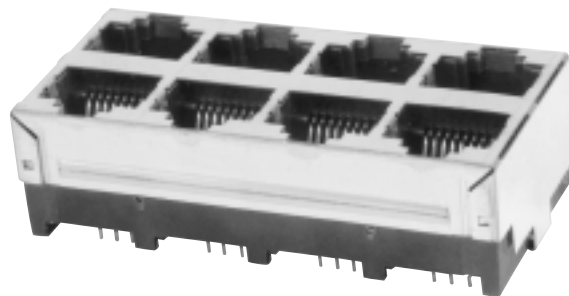
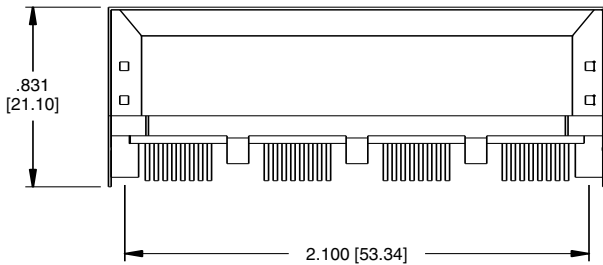
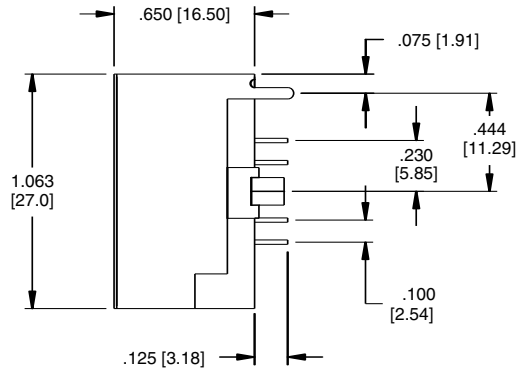
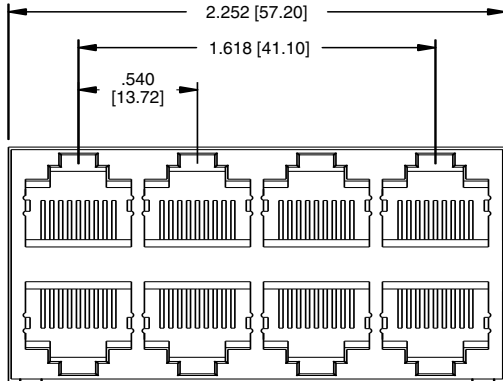
**ORDERING INFORMATION  
MTJP SERIES WIRE LEADED JACKS**



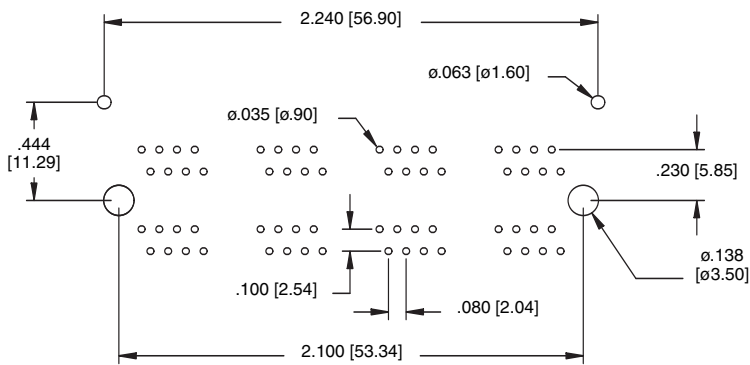
**Wire Lead Options**



**TYPE C**  
8p8c

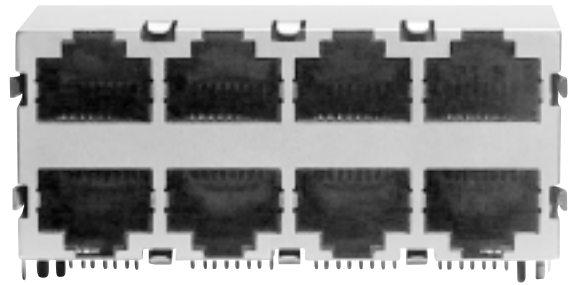
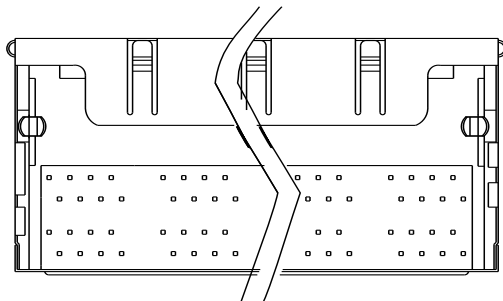
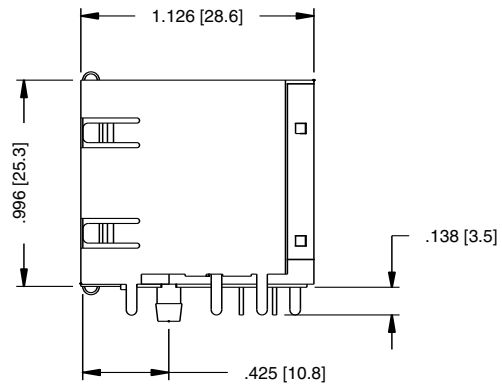
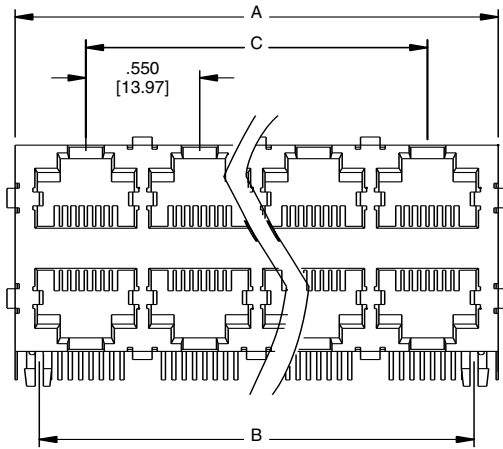


**MTJG-8-88CX1-S**

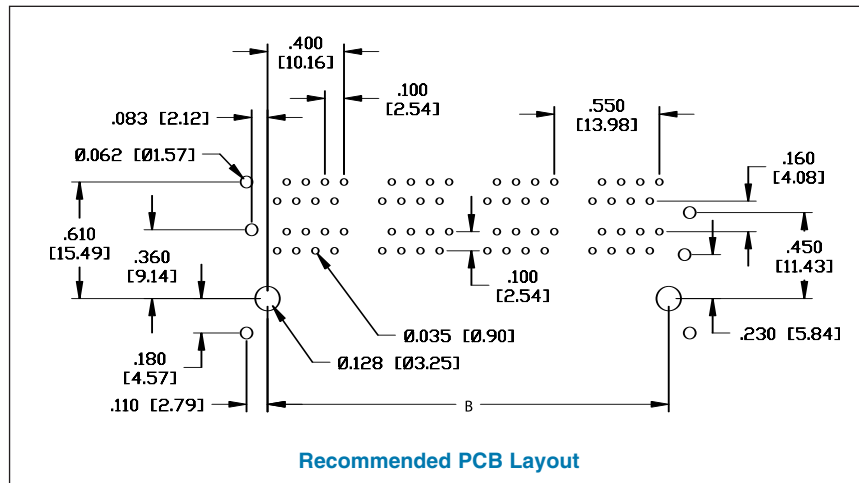


**Recommended PCB Layout**

**TYPE J**  
8p8c



**MTJG-8-88JX1-FSG-PG**

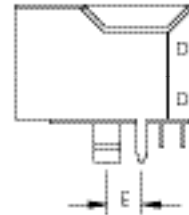
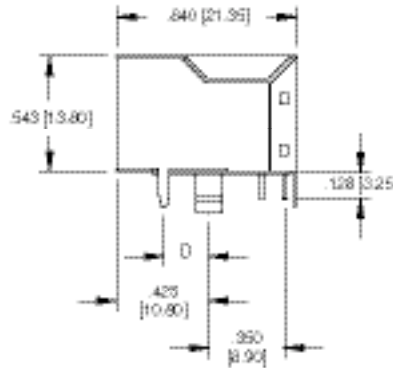
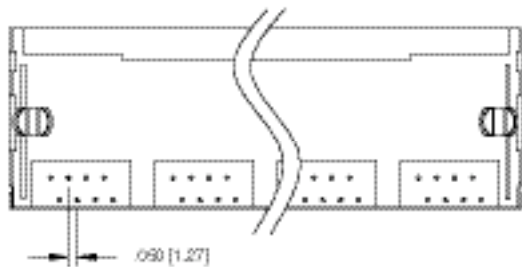
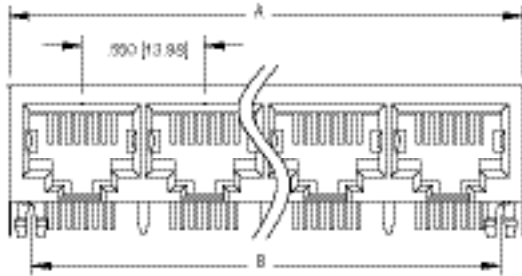


**Recommended PCB Layout**

PART NUMBER	PORTS	DIMENSIONS		
		A	B	C
MTJG-6-88JX1-FSG-PG	2 X 3	1.780 [45.21]	1.549 [39.34]	1.100 [27.94]
MTJG-8-88JX1-FSG-PG	2 X 4	2.33 [59.18]	2.100 [53.34]	1.650 [41.91]
MTJG-12-88JX1-FSG-PG	2 X 6	3.43 [87.10]	3.200 [81.28]	2.750 [69.85]

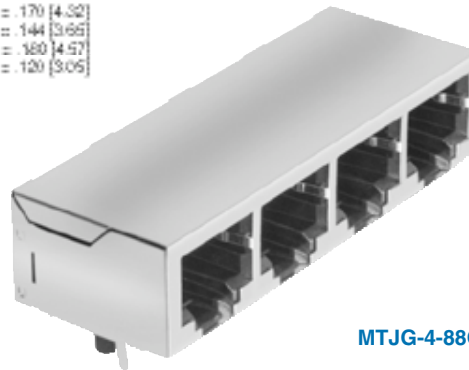
**TYPE G GANGED**

8p8c



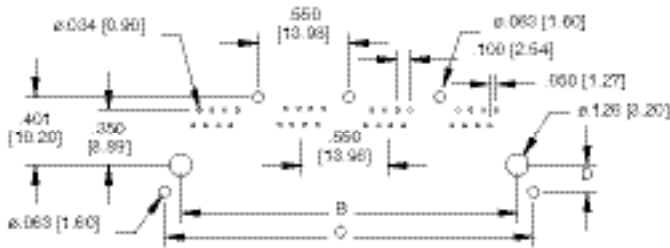
"D" DIM.  
FSA = .170 [4.32]  
FSB = .144 [3.65]  
FSG = .180 [4.57]  
FSE = .120 [3.05]

"E" DIM.  
FSD = .120 [3.05]  
FSR = .144 [3.65]



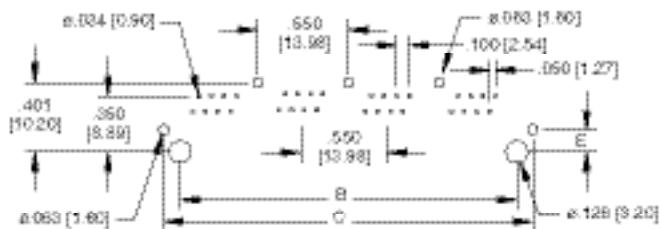
**MTJG-4-88GX1-FSB**

"D" DIM.  
FSA = .170 [4.32]  
FSB = .144 [3.65]



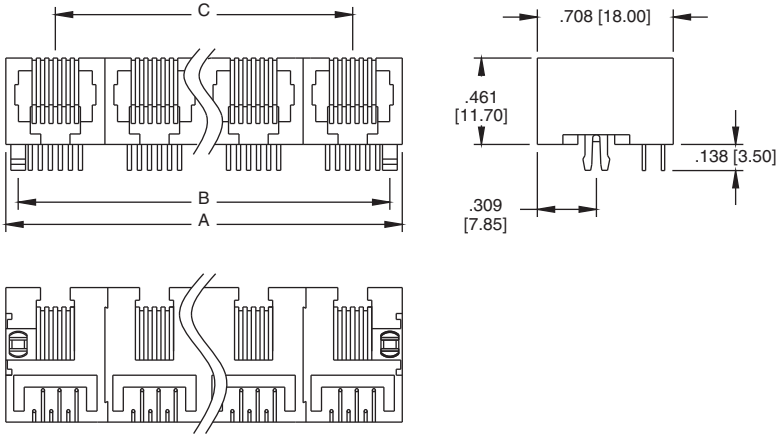
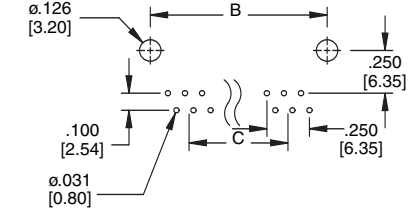
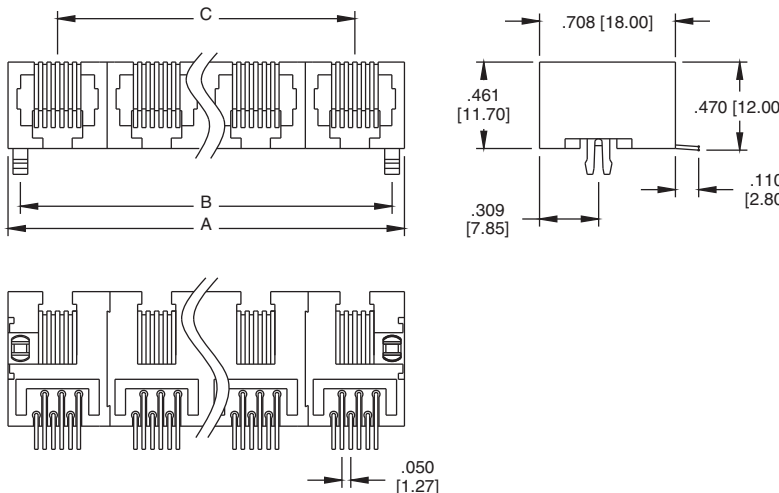
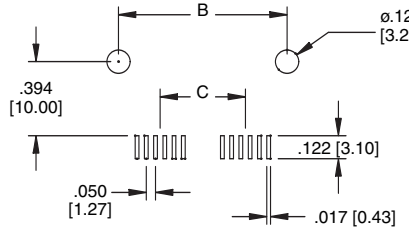
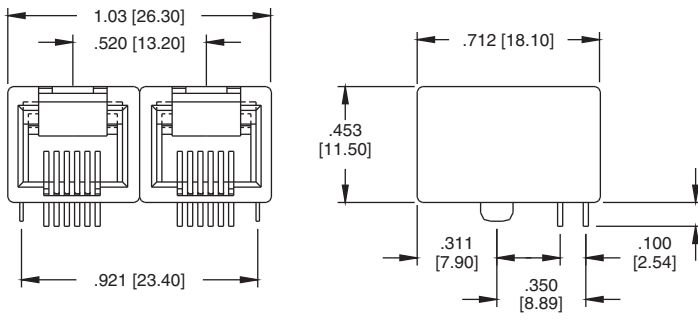
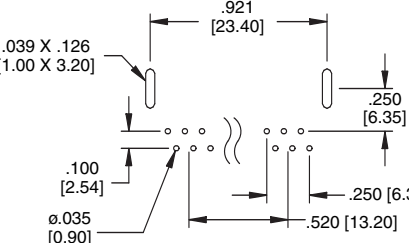
**Recommended PCB Layout FSA & FSB**

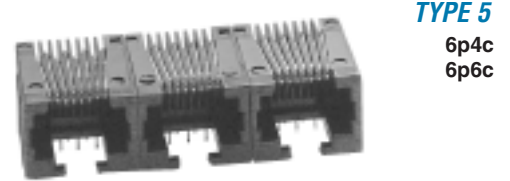
"E" DIM.  
FSD = .120 [3.05]  
FSR = .144 [3.65]



**Recommended PCB Layout FSD & FSR**

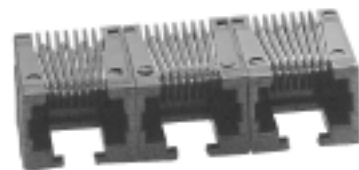


	 <p><b>Recommended PCB Layout</b></p>
	 <p><b>Recommended PCB Layout</b></p>
 <p>OPTIONAL SPLITROUND PEG ADD -SP TO END OF PART NO. FOR SPLITROUND PEG OPTION</p>	 <p><b>Recommended PCB Layout</b></p>



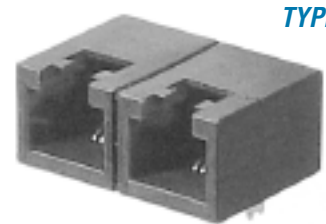
**TYPE 5**  
6p4c  
6p6c

**MTJG-3-665X1**

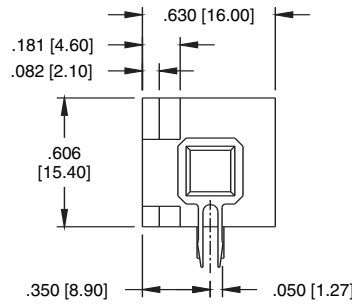
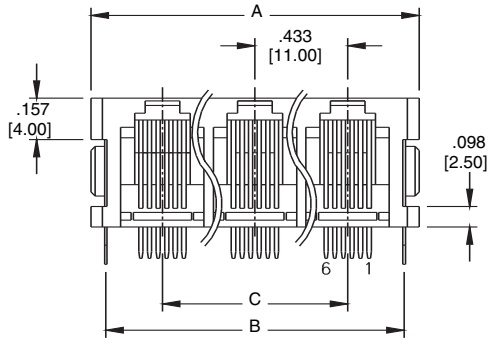


**TYPE 5 SMT**  
6p4c  
6p6c

**MTJG-3-665X1-SMT**

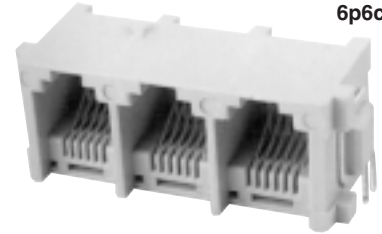


**TYPE N METAL PEG**  
6p4c  
6p6c

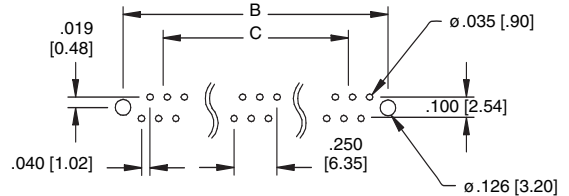
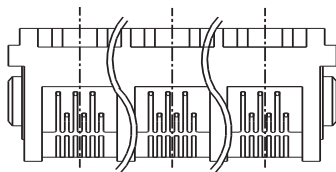


**TYPE 7H**  
**RIGHT ANGLE ENTRY**

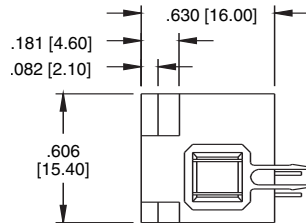
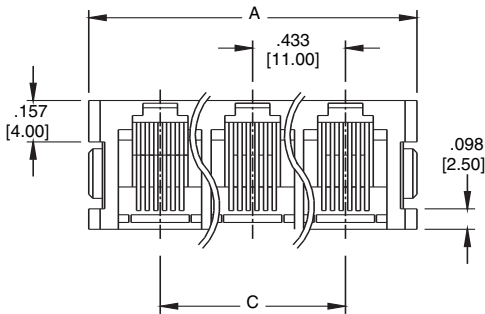
6p4c  
6p6c



**MTJG-3-667HX2**

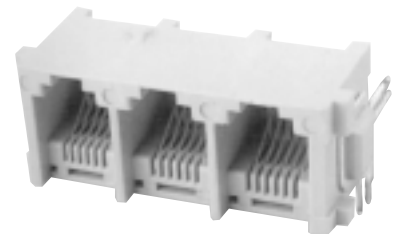


**Recommended PCB Layout**

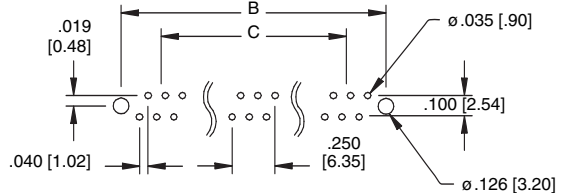
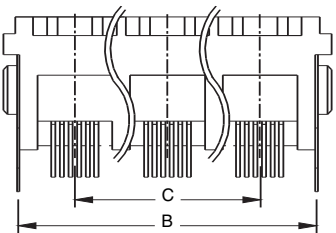


**TYPE 7V TOP ENTRY**

6p4c  
6p6c



**MTJG-3-667VX2**

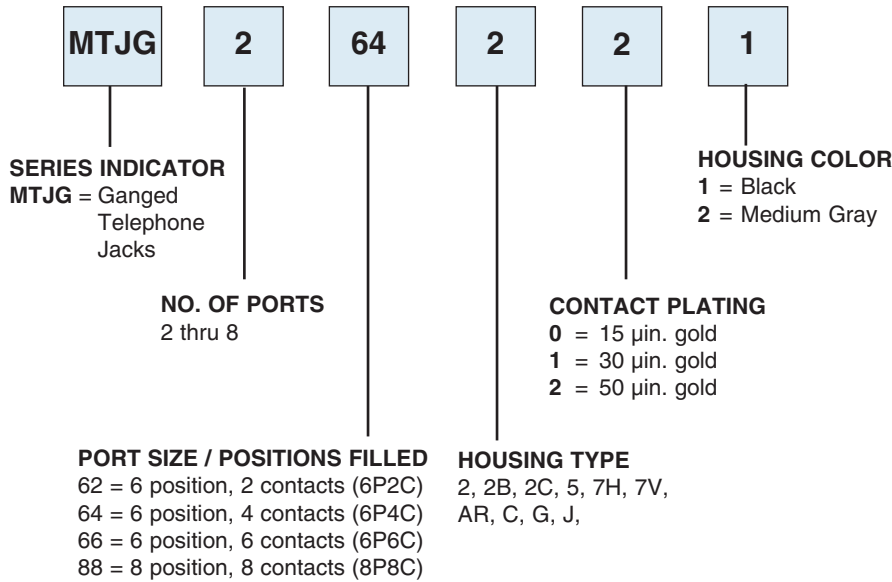


**Recommended PCB Layout**

DIMENSION	No of Ports							
	2	3	4	5	6	7	8	
<b>A</b>	1.110 [28.20]	1.543 [39.20]	1.976 [50.20]	2.410 [61.20]	2.842 [72.20]	3.275 [83.20]	3.710 [94.20]	
<b>B</b>	.992 [25.20]	1.425 [36.20]	1.860 [47.20]	2.290 [58.20]	2.724 [69.20]	3.157 [80.20]	3.590 [91.20]	
<b>C</b>	.433 [11.00]	.886 [22.00]	1.299 [33.00]	1.732 [44.00]	2.165 [55.00]	2.598 [66.00]	3.030 [77.00]	

<p> <math>A = .433 [11.00] \times \text{No. of Ports} + .100 [2.54]</math>  <math>B = .433 [11.00] \times \text{No of Ports} + .020 [0.50]</math>  <math>C = .433 [11.00] \times \text{No of Ports} - 1</math> </p>		<p><b>TYPE 2</b> 6p4c 6p6c</p> <p><b>MTJG-2-642X1</b></p> <p><b>Recommended PCB Layout</b></p>
<p> <math>A = .459 [11.65] \times \text{No. of Ports} + .100 [2.54]</math>  <math>B = .459 [11.65] \times \text{No of Ports} + .020 [0.50]</math>  <math>C = .459 [11.65] \times \text{No of Ports} - 1</math> </p>		<p><b>TYPE 2B</b> 6p4c 6p6c</p> <p><b>MTJG-2-642BX1</b></p> <p><b>Recommended PCB Layout</b></p>
<p> <math>A = .571 [14.50] \times \text{No. of Ports} + .100 [2.54]</math>  <math>B = .571 [14.50] \times \text{No of Ports} + .020 [0.50]</math>  <math>C = .571 [15.50] \times \text{No of Ports} - 1</math> </p>		<p><b>TYPE 2C</b> 6p4c 6p6c</p> <p><b>MTJG-2-642CX1</b></p> <p><b>Recommended PCB Layout</b></p>

## ORDERING INFORMATION MTJG SERIES GANG JACKS



### OPTIONS:

Add as suffix to basic part no.

-S, -FSA, -FSB, -FSD = Fully shielded jack  
(refer to specification page for illustration)

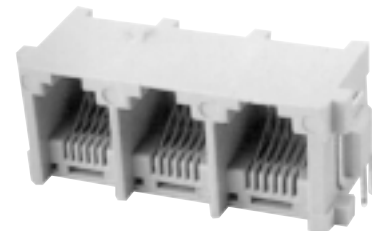
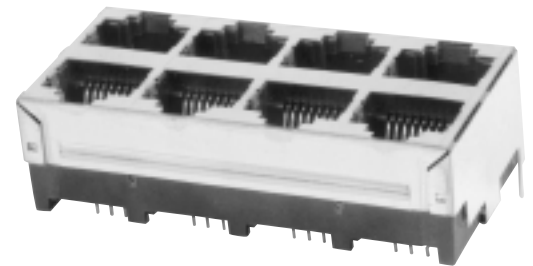
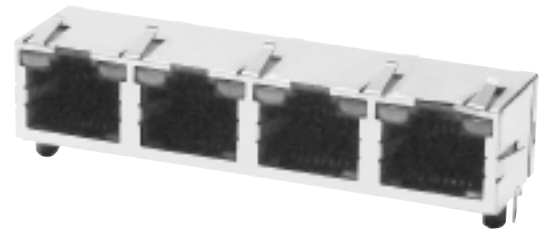
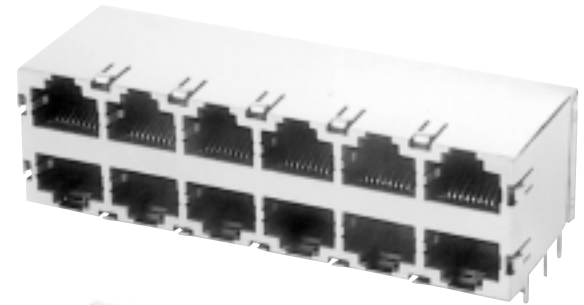
PG = Panel ground tabs

SMT = Surface mount tails with Hi-Temp insulator

LED CONFIGURATION		
SUFFIX	LED 1	LED 2
LA	YEL	YEL
LD	GRN	GRN
LG	YEL	GRN
LH	GRN	YEL
LI	ORG/GRN	ORG/GRN

Add suffix to end of P/N:

**HI-TEMP**  
INSULATOR  
AVAILABLE



**TYPE AR**  
**8P8C**

**MTJ-88ARX1-FS-SMT-LG**   **MTJ-88ARX1-FS-LG**

**Recommended PCB Layout**

**TYPE AR GANGED**  
**8P8C**

**MTJG-4-88ARX1-FS-PG-LG**

LED CONFIGURATION		
SUFFIX	LED 1	LED 2
LA	YEL	YEL
LD	GRN	GRN
LG	YEL	GRN
LH	GRN	YEL
LI	ORG/GRN	ORG/GRN

Add suffix to end of P/N:

**2, 4 & 8 PORTS AVAILABLE**

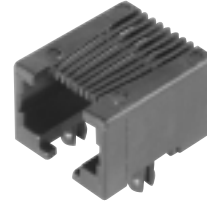
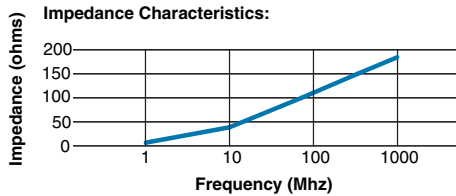
A = .620 [15.75] x No. of Ports + .029 [0.75]  
 B = .620 [15.75] X No of Ports - 1 + .500 [12.70]  
 C = .620 [15.75] x No of Ports - 1  
 D = .620 [15.75] x No. of Ports + .019 [0.50]

**Recommended PCB Layout**

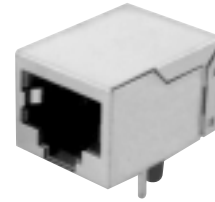
## FILTERED MODULAR JACKS

TYPE M

Inductive filtered modular jacks improve signal integrity and are available in a variety of styles including tin plated copper shielding with a choice of magnetic transformer or ferrite filter. Adam Tech offers drop in equivalents to all industry standard filtered jacks



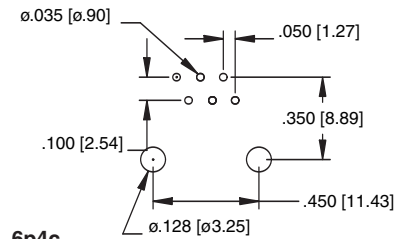
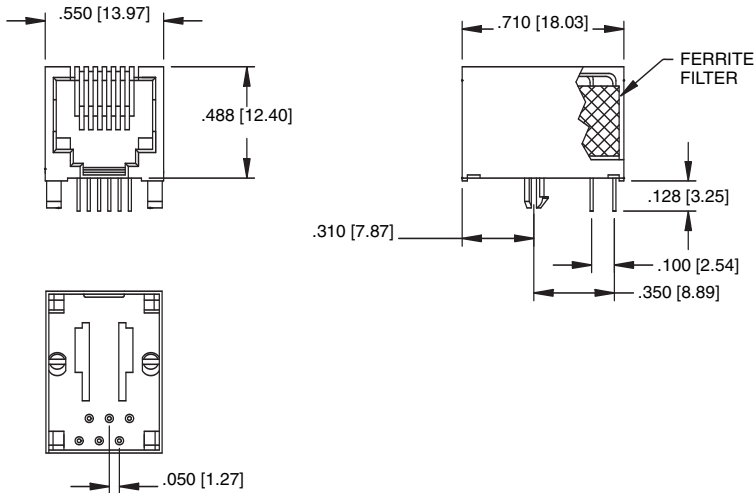
MTJ-88MX1



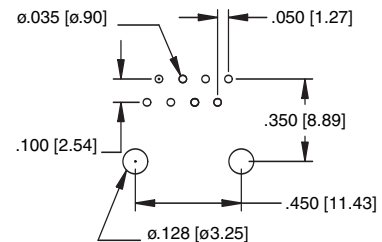
MTJ-88MX1-FSE

### EMI FERRITE FILTERED JACK

Type M  
6p6c  
6p4c



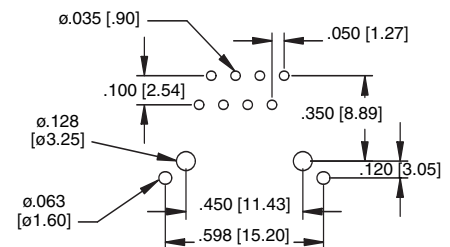
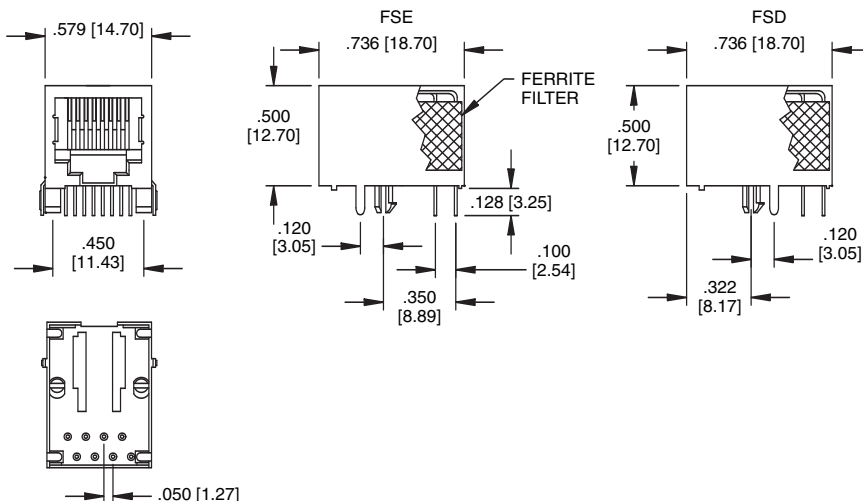
6p4c  
6p6c **Recommended PCB Layout**



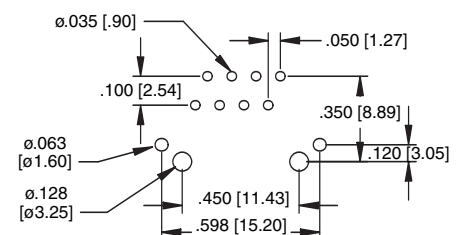
8p8c **Recommended PCB Layout**

### EMI FERRITE FILTERED & SHIELDED JACK

Type M  
8p8c



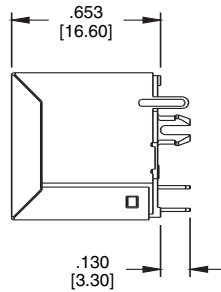
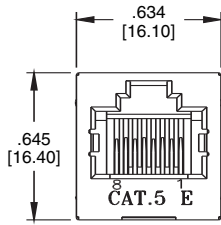
FSE  
8p8c **Recommended PCB Layout**



FSD  
8p8c **Recommended PCB Layout**

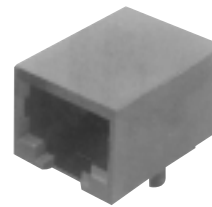
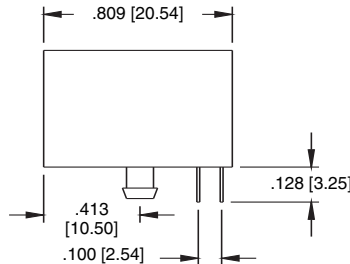
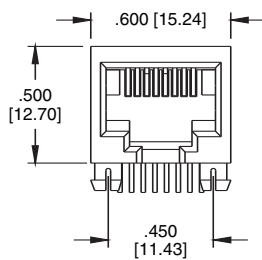
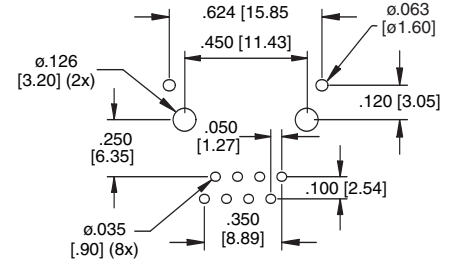
### TYPE A, CATEGORY 5, TOP ENTRY

8P8C



MTJ-88AX1-FSE

#### Recommended PCB Layout

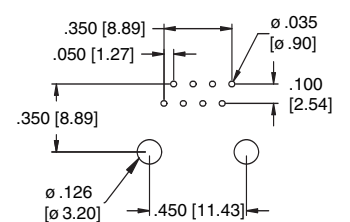


MTJ-88TX1

### TYPE T, CATEGORY 5, SIDE ENTRY

8P8C

#### Recommended PCB Layout

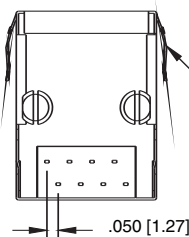
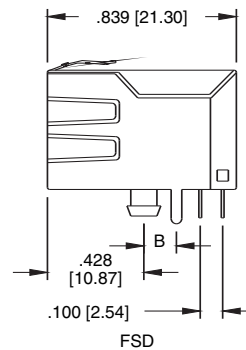
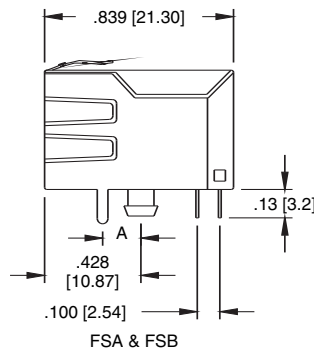
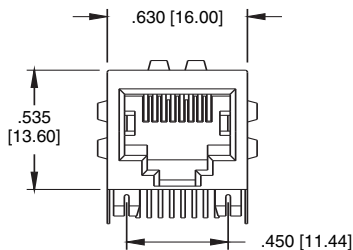


### TYPE T, CATEGORY 5 SHIELDED SIDE ENTRY

8P8C



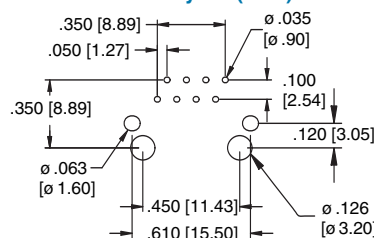
MTJ-88TX1-FSE-PG6



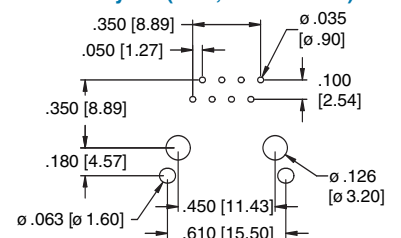
OPTIONAL  
PANEL GROUNDS

SHIELD PIN LOCATION  
FSA OPTION: A = .170 [4.32]  
FSB OPTION: A = .144 [3.66]  
FSE OPTION: A = .120 [3.05]

#### PCB Layout (FSD)



#### PCB Layout (FSA, FSB & FSE)





	<p><b>TYPE E</b> <b>4p4c</b></p> <p><b>MTJ-44EX1</b></p> <p><b>Recommended PCB Layout</b></p>
	<p><b>TYPE E</b> <b>6p4c</b> <b>6p6c</b></p> <p><b>MTJ-66EX1</b></p> <p><b>Recommended PCB Layout</b></p>
<p>OPTIONAL KEY</p>	<p><b>TYPE E</b> <b>8p8c</b></p> <p><b>MTJ-88EX1</b></p> <p><b>Recommended PCB Layout</b></p>



**TYPE H**  
8p8c

MTJ-88HX1 MTJ-88HX1-FS

**TYPE K**  
8p8c

MTJ-88KX1

**TYPE V**  
8p8c

MTJ-88VX1

Recommended PCB Layout

TYPE H	TYPE K	TYPE V

**TYPE W SHIELDED**  
8p8c  
10p10c

**MTJ-88WX1-FSB**

**Recommended PCB Layout**

**TYPE W SHIELDED SMT WITH PLASTIC PEG**  
8p8c

**MTJ-88WX1-FSE-SMT-P**

**Recommended Solder Pad Layout**

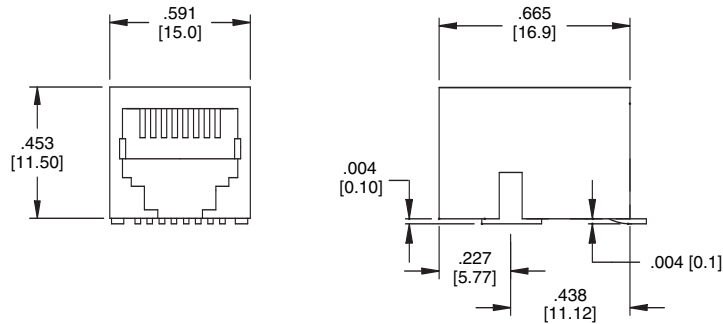
**TYPE W SHIELDED TRUE SMT**  
8p8c

**MTJ-88WX1-FS-SMT**

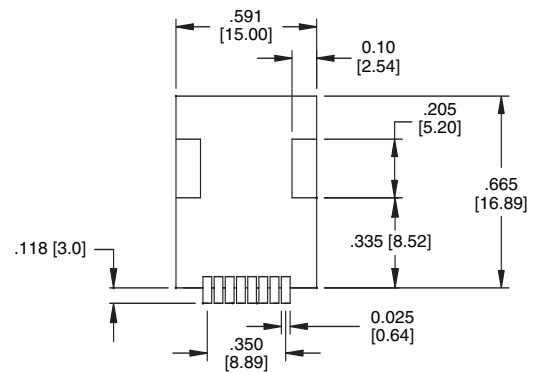
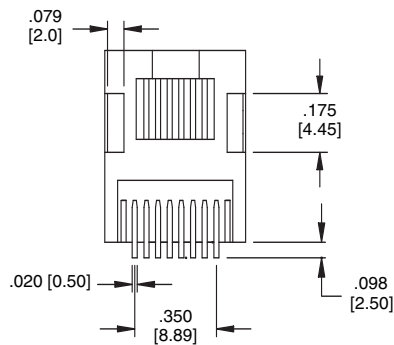
**Recommended Solder Pad Layout**

**TYPE WA TABS IN**

8p8c



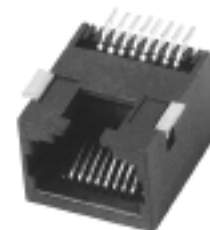
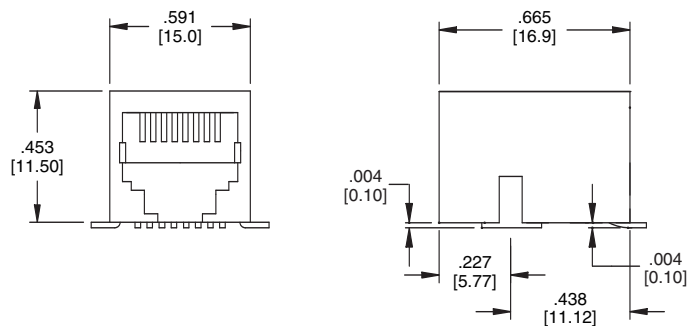
**MTJ-88WAX1**



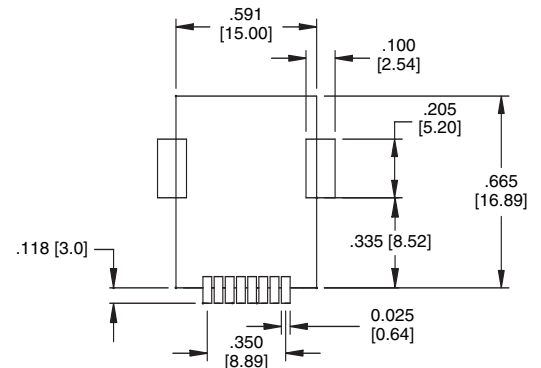
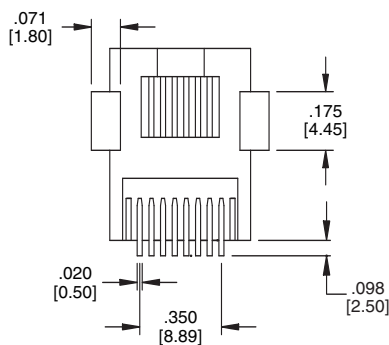
**Recommended Solder Pad Layout**

**TYPE WB TABS OUT**

8p8c



**MTJ-88WBX1**



**Recommended Solder Pad Layout**

#### Contact Options



Stranded Wire Contact



Solid Wire Contact

#### Cable Options



Flat Oval Cable



Round Cable



Flat Oval Cable Offset Latch

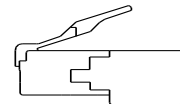


Round Cable Offset Latch

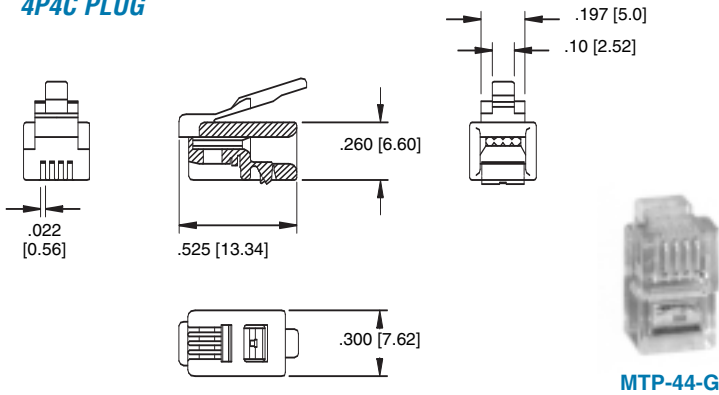
#### Plug with Metal EMI Shield Option



MTP-88-G-EMI

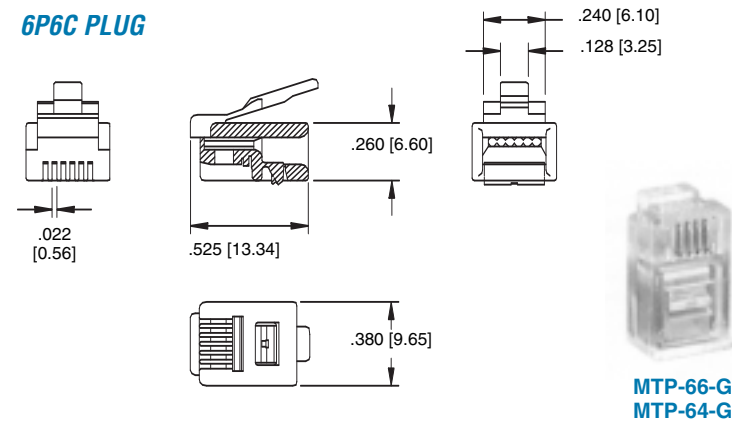


#### 4P4C PLUG



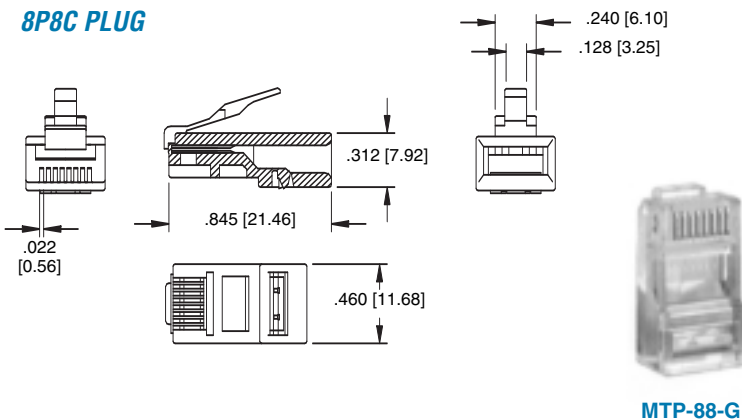
MTP-44-G

#### 6P6C PLUG



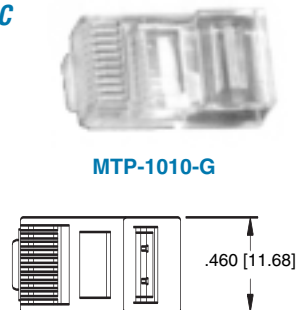
MTP-66-G  
MTP-64-G

#### 8P8C PLUG



MTP-88-G

#### 10P10C PLUG



MTP-1010-G