

#### **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:

Standard Insulator: PBT, or ABS, rated UL94V-0 Optional Hi-Temp Insulator: Nvlon 6T rated UL94V-0

Insulator Colors: Black or medium grav

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 m $\Omega$  max. initial Insulation resistance: 500 M $\Omega$  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 +70°C

Soldering process temperature: Standard insulator: 235°C Hi-Temp insulator: 260C

#### **PACKAGING:**

Anti-ESD plastic trays

#### **SAFETY AGENCY APPROVALS:**

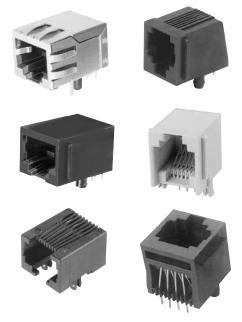
UL Recognized E224049



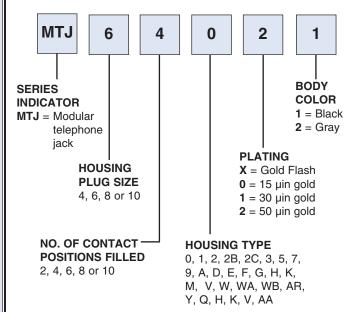


**71** @ FC





#### ORDERING INFORMATION



#### **OPTIONS:**

Add designator(s) to end of part number

**S** = Face shielded jack (Body type 0 only)

FSX = Full metal shield (Use FSA, FSB, FSD, FSE)

**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 up to 260C (Add this option for thru-hole products only. All SMT products are manufactured with Hi-Temp insulators)

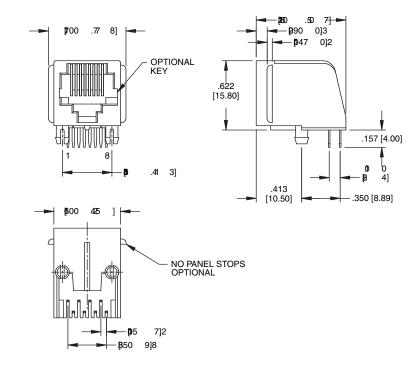
**PG** = Panel ground tabs

## **MODULAR TELEPHONE JACKS**

.622" HEIGHT, SIDE ENTRY - TYPE 1

MTJ SERIES

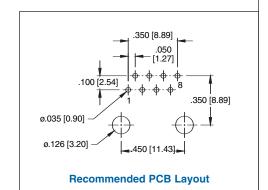
TYPE 1 6P6C .50 7] 6P4C **\$**20 .75 5] **- [**90 0]3 . - **D**47 0]2 **8**2 **₿**5 5 [700 MTJ-661X1 400 .10 6] 413 5 [0]8 **0**¶5 [520 .23 Ordering Information pg. 9 .250 [6.35] **ET**AN PSO .050 [1.27] .100 [2.54] .350 [8.89] 7]2 ø.035 [0.90] 5]3 ø.126 [3.20] .400 [10.16] **Recommended PCB Layout** TYPE 1 8P8C





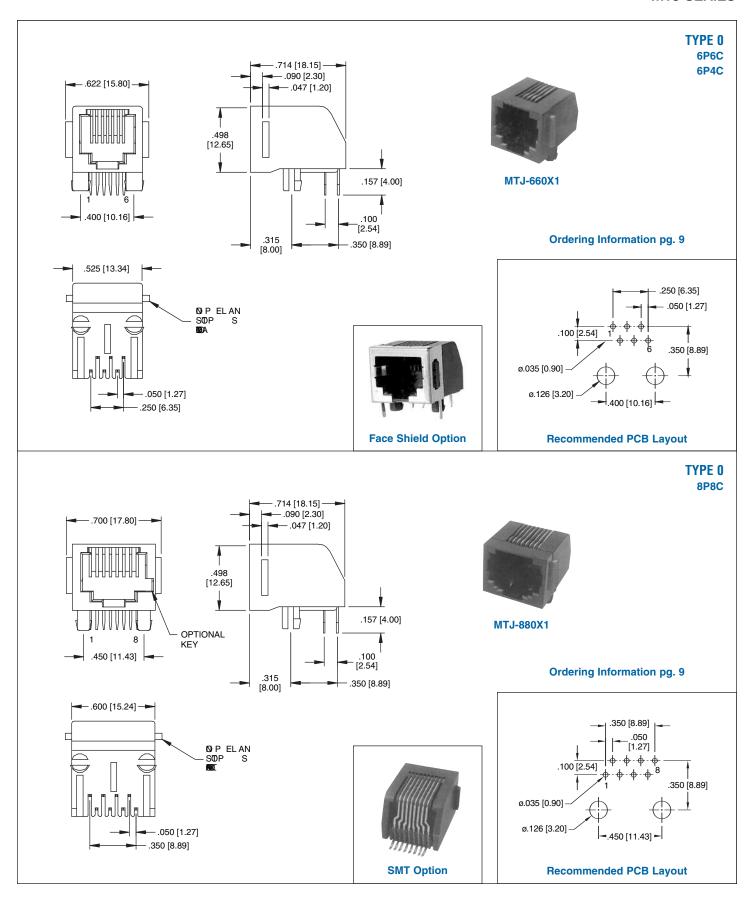
MTJ-881X1

#### Ordering Information pg. 9



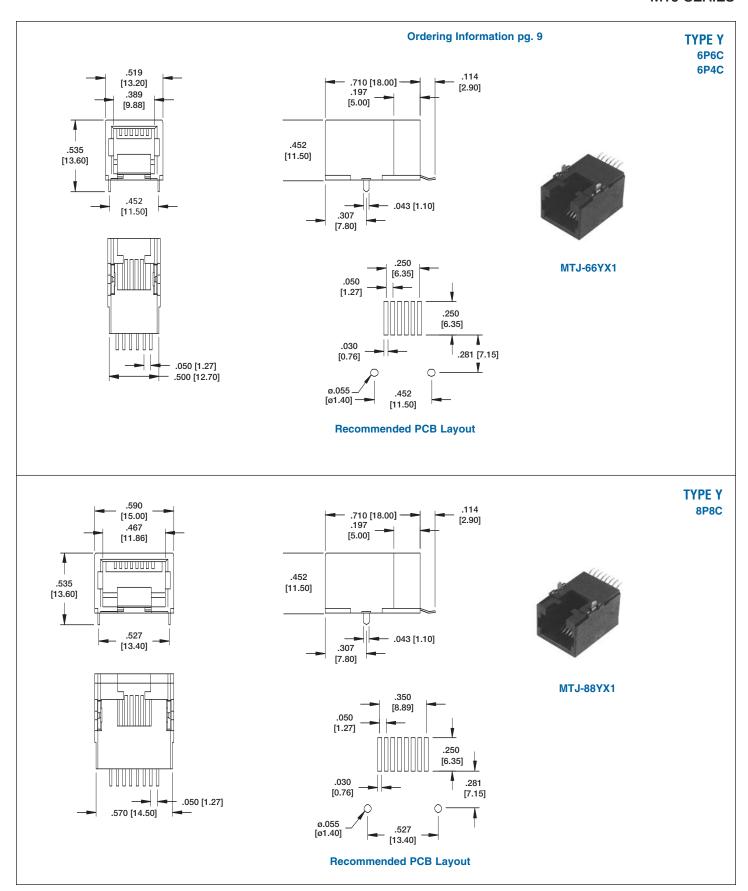


.498" HEIGHT, SIDE ENTRY - TYPE 0
MTJ SERIES





INTERNAL SHIELD LOW PROFILE SMT- TYPE Y
MTJ SERIES

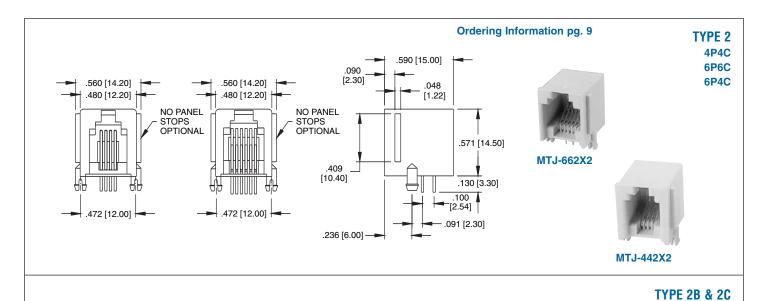


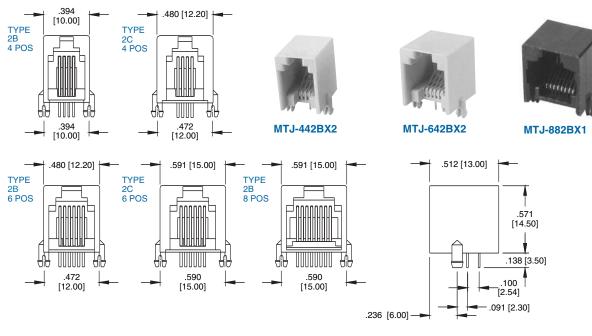


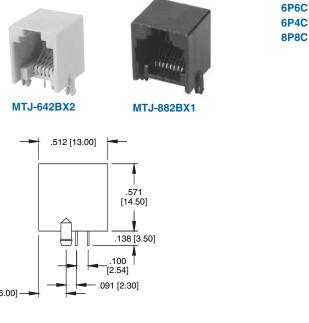
.571" HEIGHT, SIDE ENTRY - TYPE 2

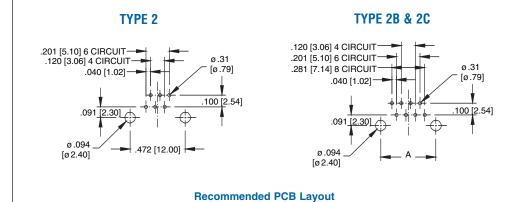
**MTJ SERIES** 

**4P4C** 







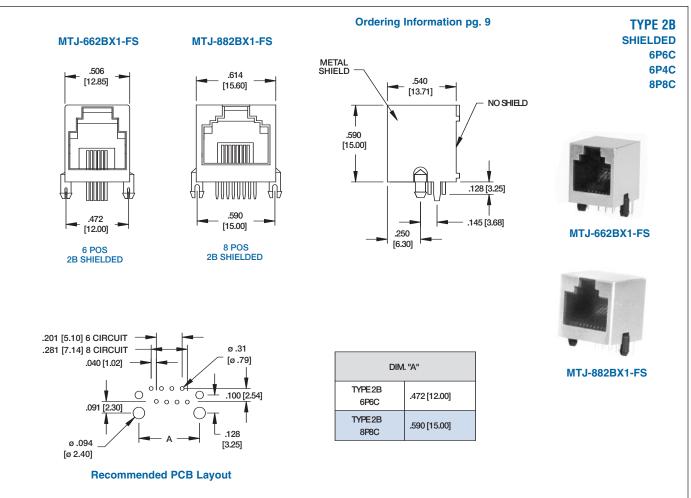


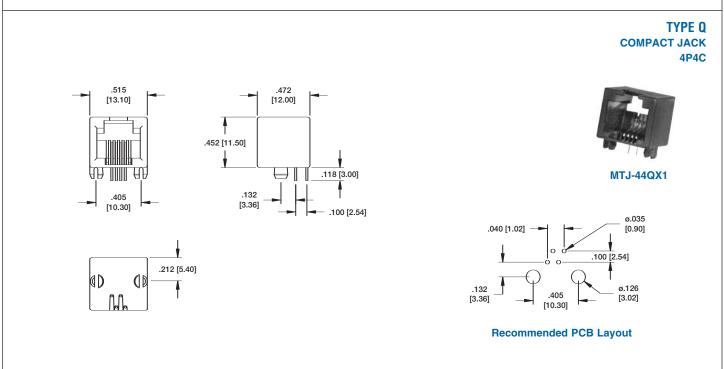
DIM	1. "A"
TYPE 2B 4P4C	.394 [10.00]
TYPE 2C 4P4C	.472 [12.00]
TYPE 2B 6P6C	.472 [12.00]
TYPE 2C 6P6C	.591 [15.00]
TYPE 2B 8P8C	.590 [15.00]



COMPACT TYPE Q & SHIELDED TYPE 2B

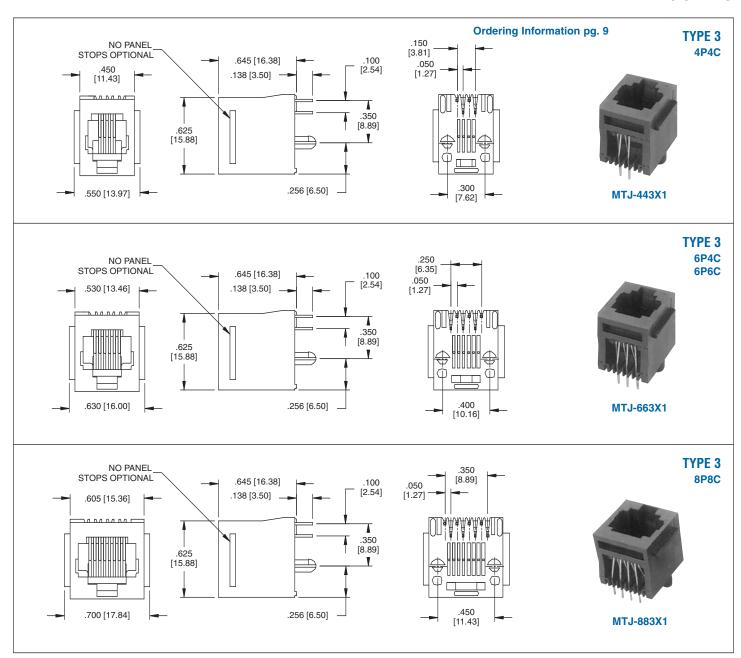
**MTJ SERIES** 

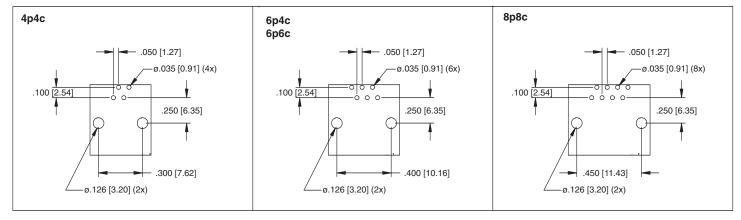






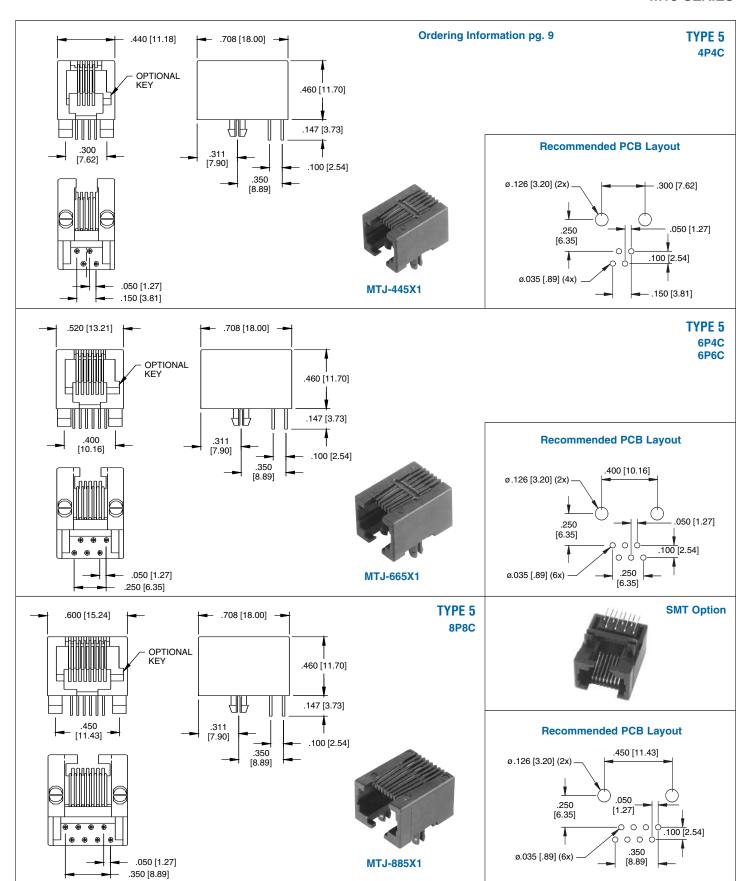
.645" HEIGHT, TOP ENTRY, OPEN BODY - TYPE 3
MTJ SERIES





## **MODULAR TELEPHONE JACKS**

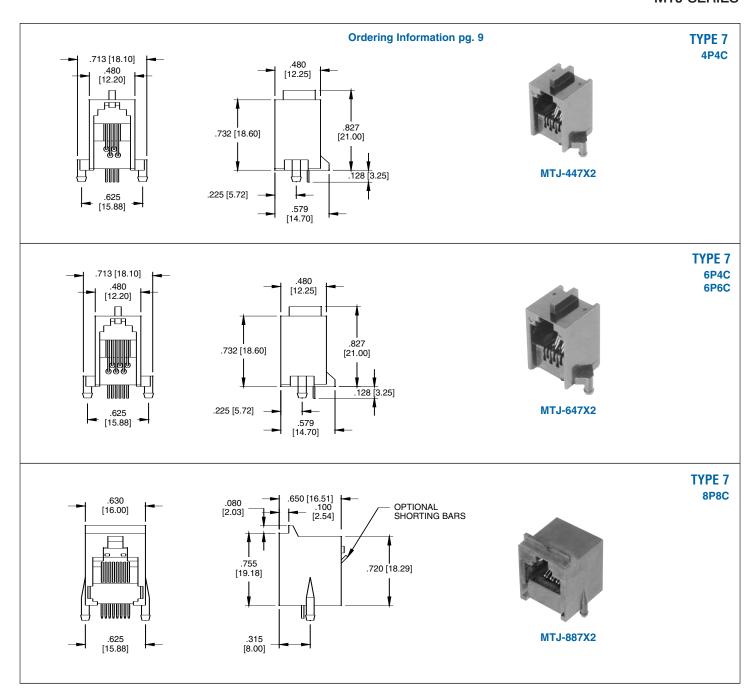
.460" HEIGHT, SIDE ENTRY - TYPE 5
MTJ SERIES

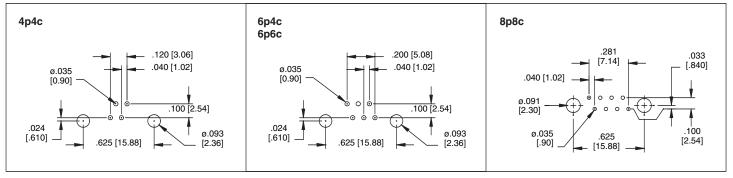


## **MODULAR TELEPHONE JACKS**

THRU HOLE SIDE ENTRY - TYPE 7

MTJ SERIES

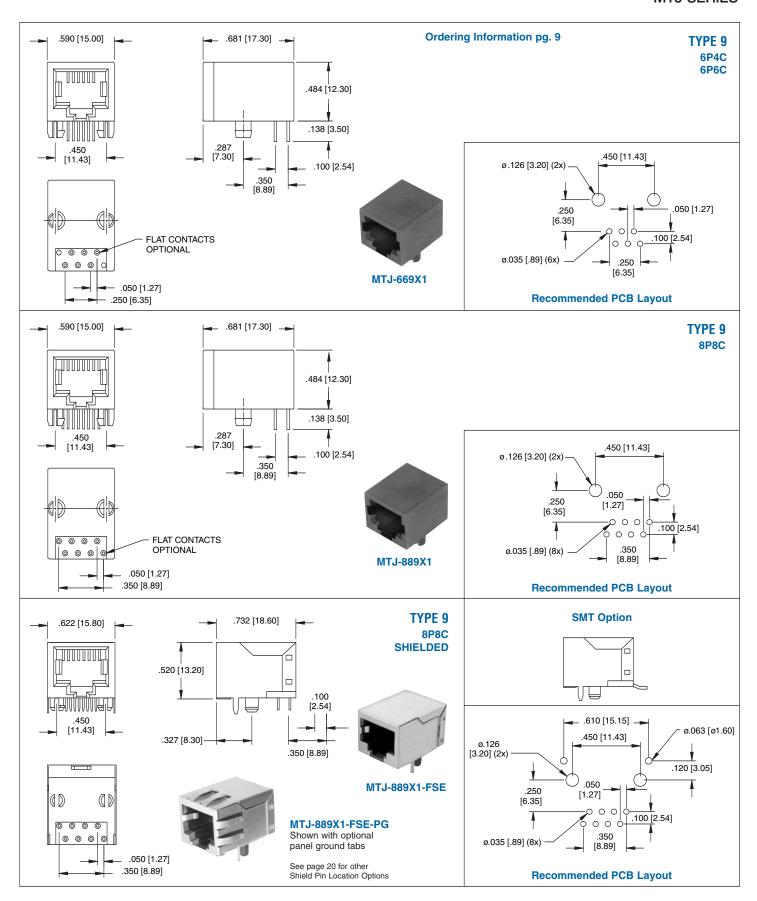




## **MODULAR TELEPHONE JACKS**

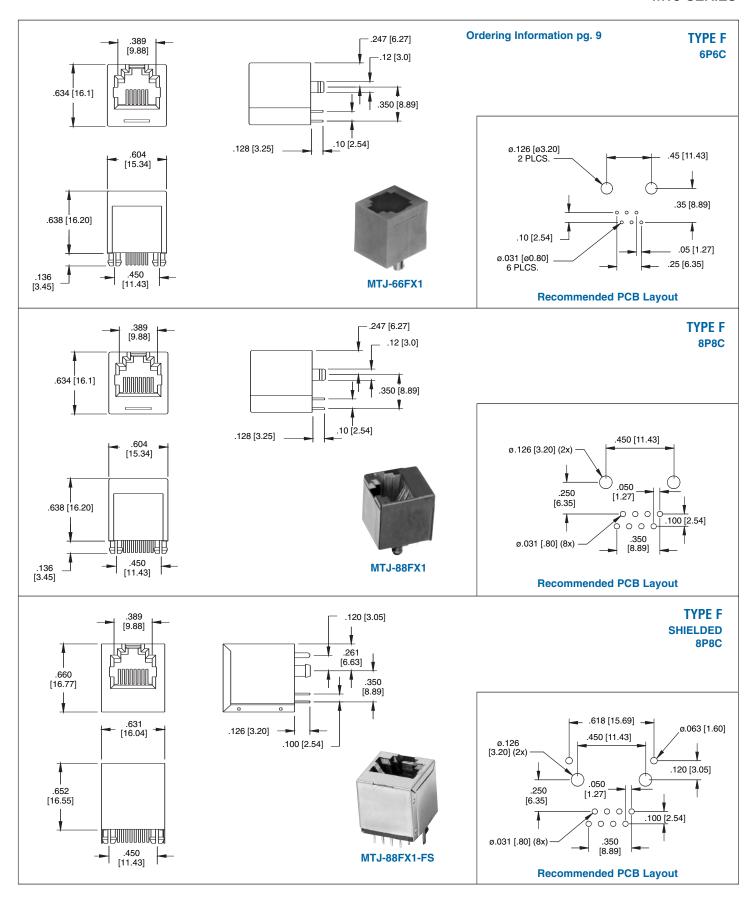
.484" HEIGHT, SIDE ENTRY - TYPE 9

**MTJ SERIES** 



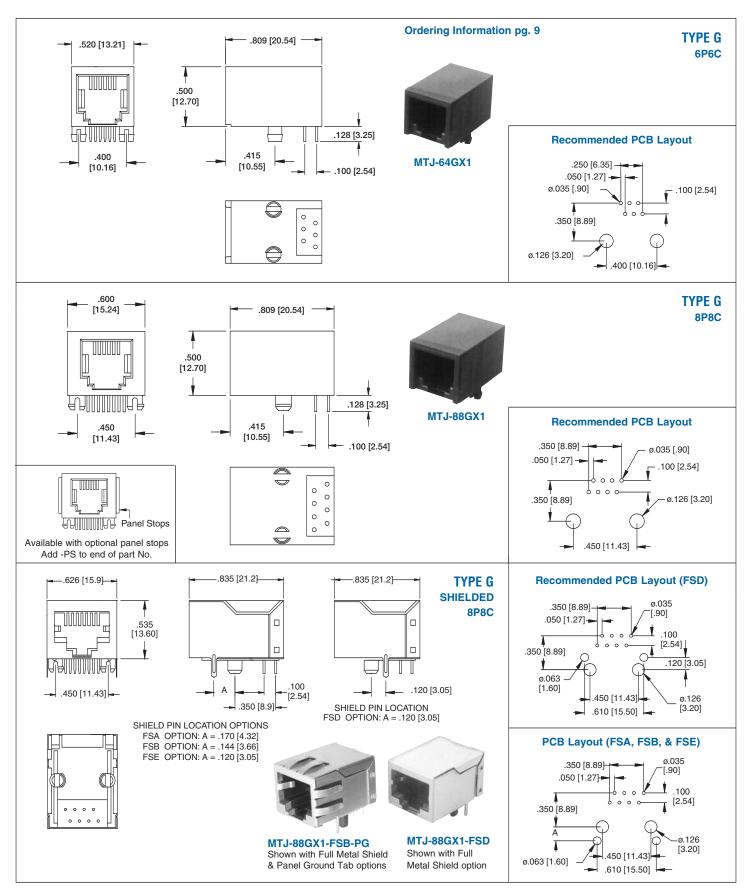
## **MODULAR TELEPHONE JACKS**

TOP ENTRY, ENCLOSED BODY - TYPE F
MTJ SERIES



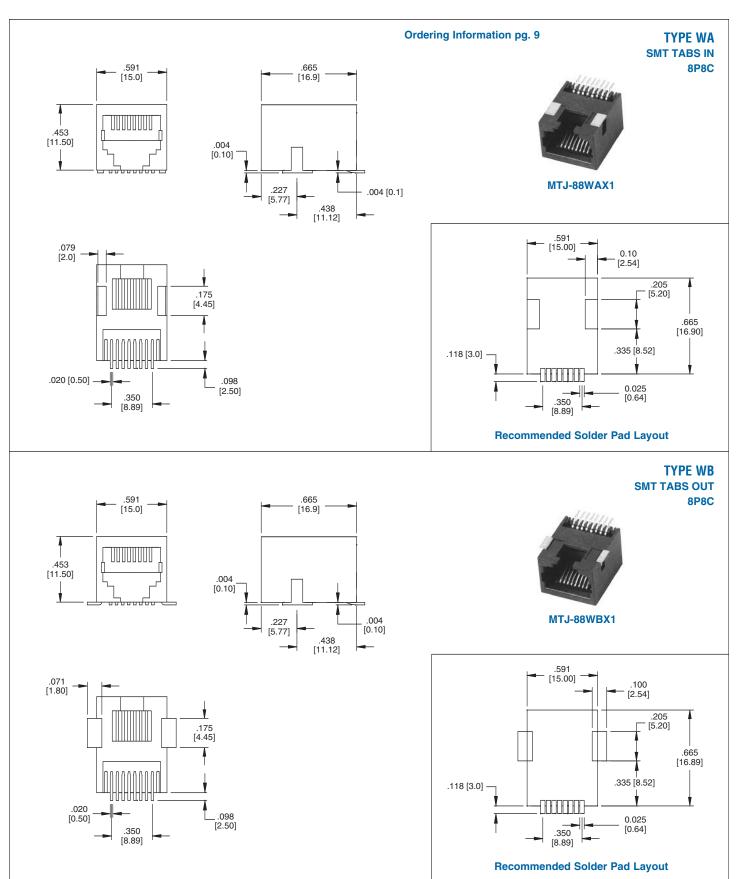
## **MODULAR TELEPHONE JACKS**

.500" HEIGHT, SIDE ENTRY - TYPE G



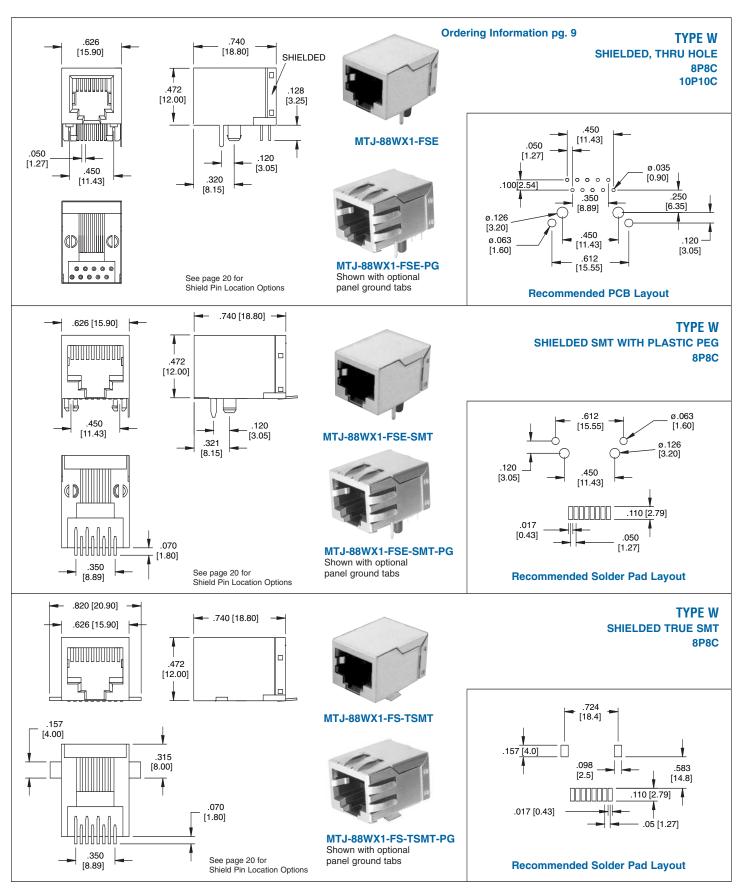


SMT, .453" HEIGHT, SIDE ENTRY - TYPE W
MTJ SERIES



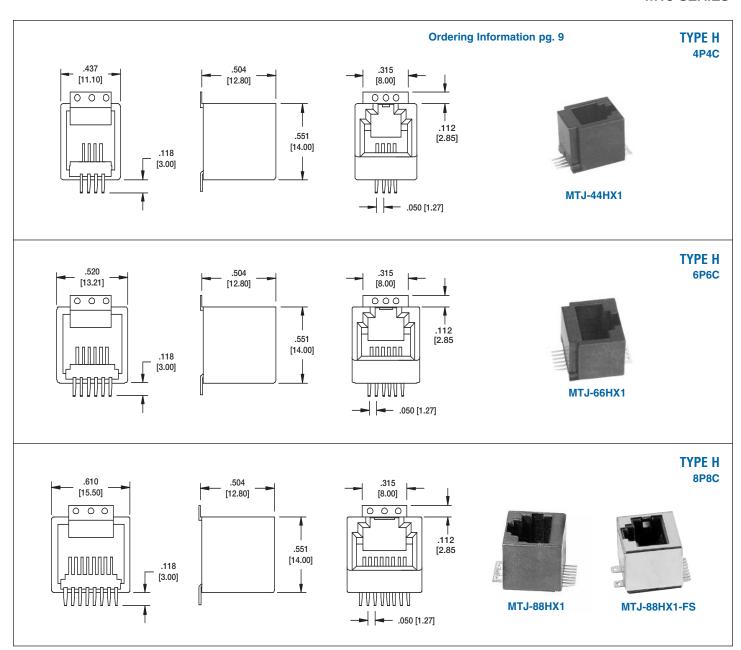
## **MODULAR TELEPHONE JACKS**

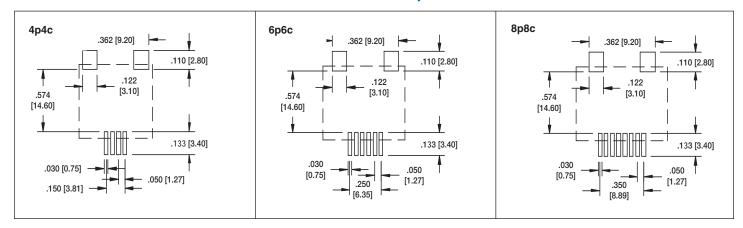
.472" HEIGHT, THRU HOLE & SMT - TYPE W



## **MODULAR TELEPHONE JACKS**

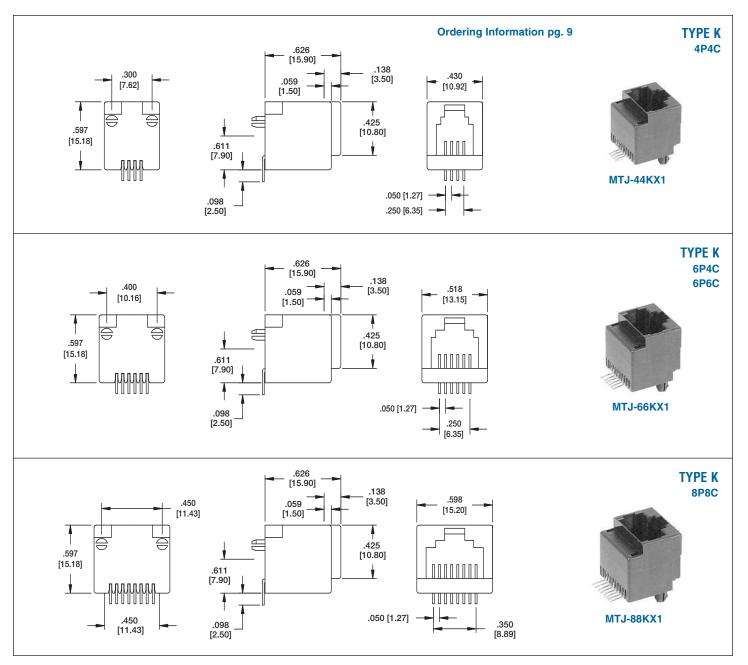
.504" HEIGHT, SMT, TOP ENTRY-TYPE H

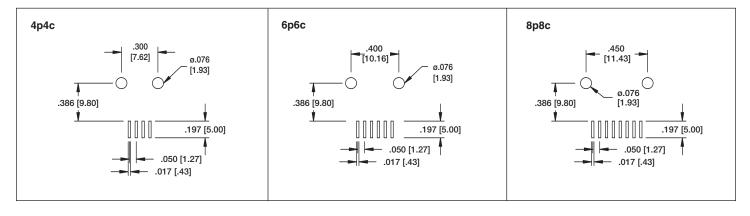




## **MODULAR TELEPHONE JACKS**

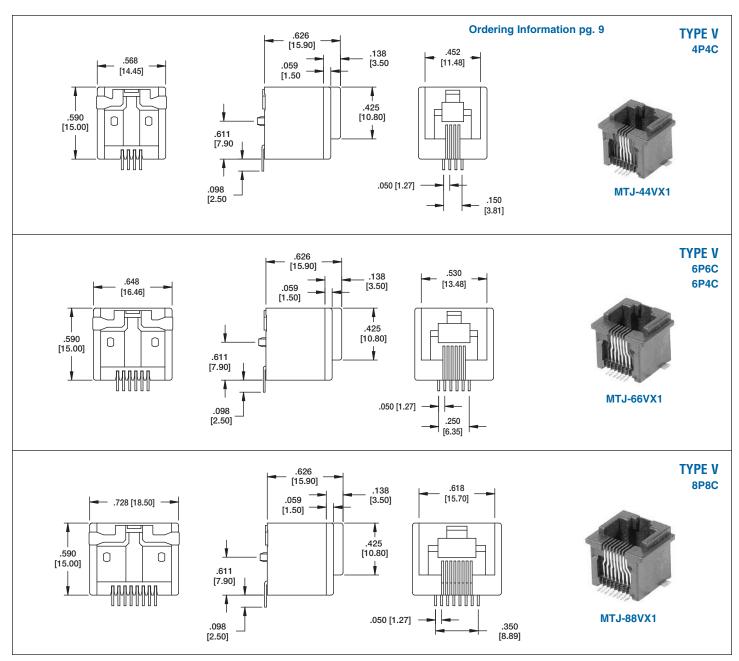
.626" HEIGHT, SMT, TOP ENTRY-TYPE K

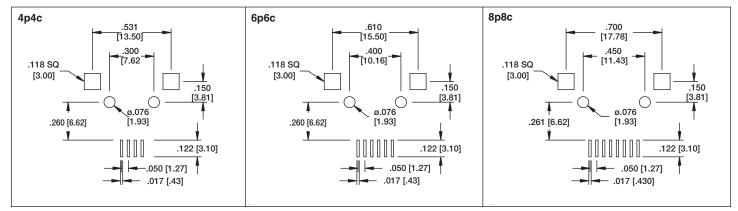




## **MODULAR TELEPHONE JACKS**

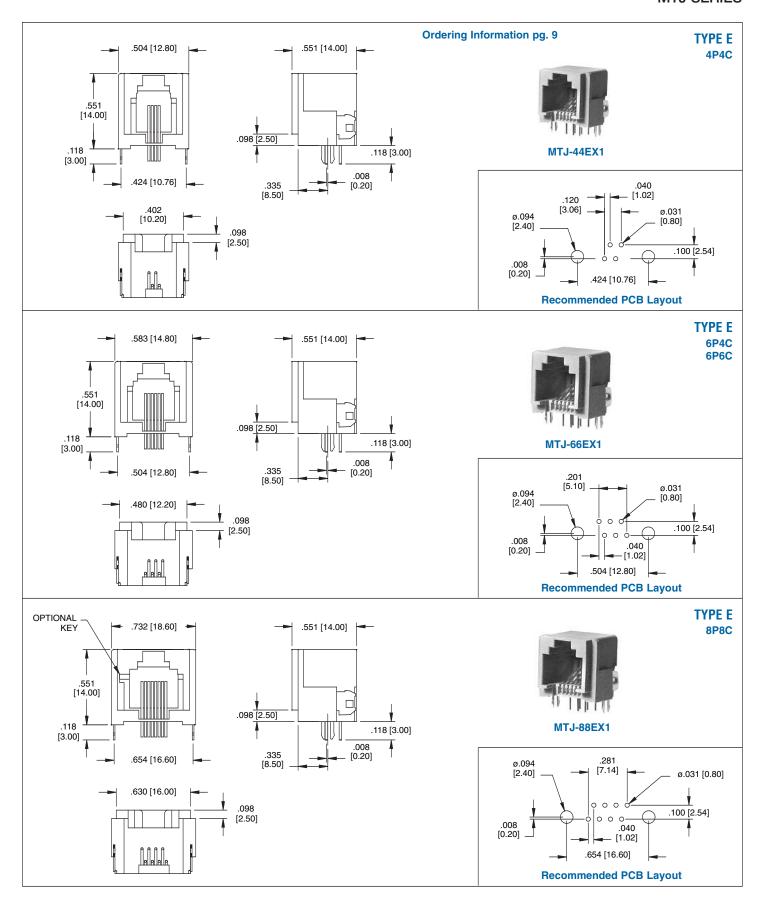
.626" HEIGHT, SMT, TOP ENTRY-TYPE V





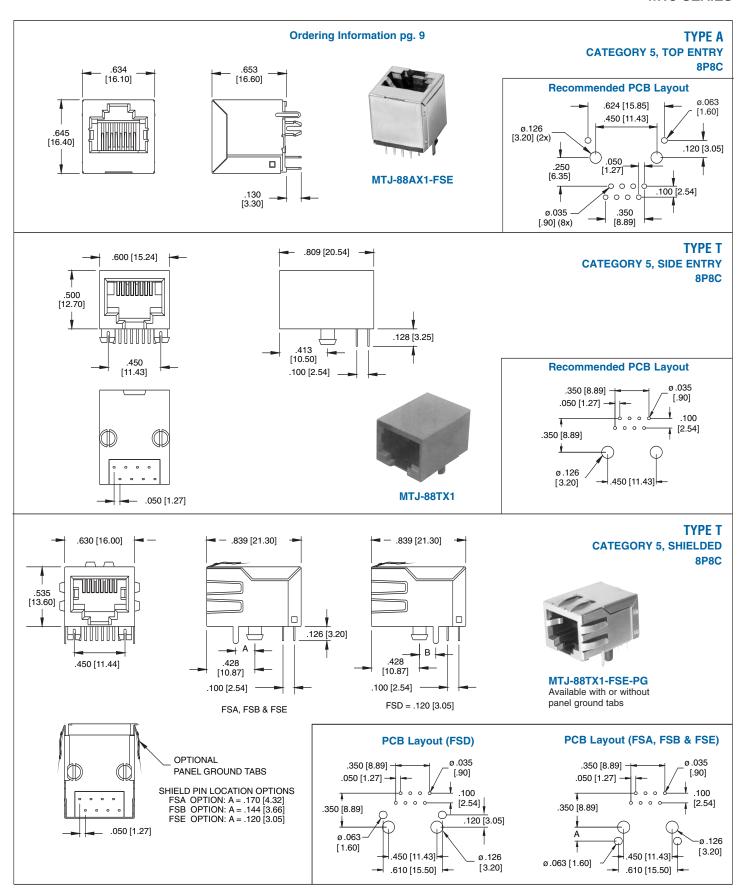
## **MODULAR TELEPHONE JACKS**

.551" HEIGHT, SIDE ENTRY - TYPE E





CATEGORY 5, 5e, SIDE & TOP ENTRY MTJ SERIES





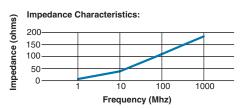
### Adam Technologies, Inc.

## **MODULAR TELEPHONE JACKS**

FERRITE FILTERED AND SHIELDED JACKS
MTJ SERIES

#### FILTERED MODULAR JACKS

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



Ordering Information pg. 9





MTJ-88MX1 Non-Shielded

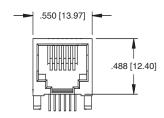


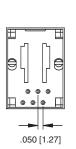
MTJ-88MX1-FSE Metal Shielded



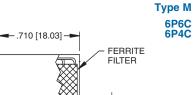
MTJ-88MX1-FSE-PG
Metal Shielded with
panel ground tabs

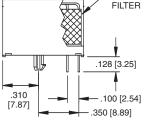
#### **EMI FERRITE FILTERED JACK**



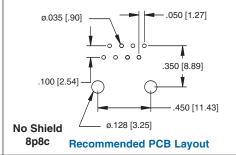


- .050 [1.27]

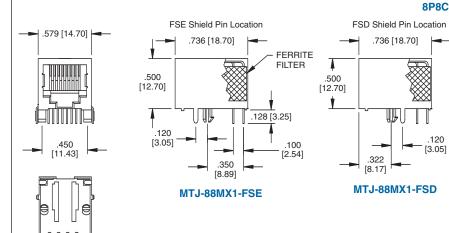


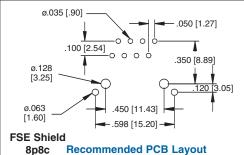


0.035 [.90]
.100 [2.54]
.100 [2.54]
.350 [8.89]
.450 [11.43]
6p4c
6p6c
Recommended PCB Layout



#### **EMI FERRITE FILTERED & SHIELDED JACK**





0.035 [.90]
0.050 [1.27]
0.050 [1.27]
0.063
0.063
0.128
0.128
0.128
0.128
0.598 [15.20]
0.598 [15.20]
0.598 [15.20]
0.598 [15.20]

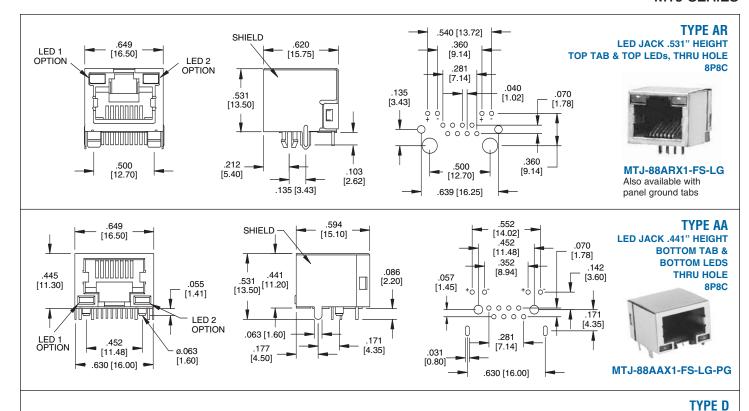
Type M

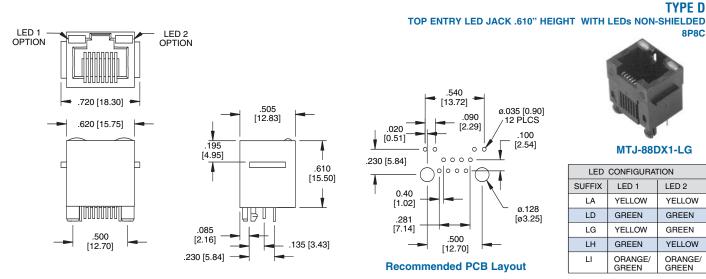
## ADAM TECH TELEPHONE JACKS WITH LEDS

Adam Technologies, Inc.

LED JACKS, TYPE AA, AR & D

**MTJ SERIES** 

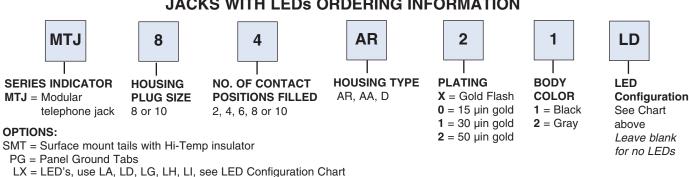






LED	LED CONFIGURATION			
SUFFIX	LED 1	LED 2		
LA	YELLOW YELLOW			
LD	GREEN GREEN			
LG	YELLOW	GREEN		
LH	GREEN	YELLOW		
LI	ORANGE/ GREEN	ORANGE/ GREEN		

#### JACKS WITH LEDS ORDERING INFORMATION

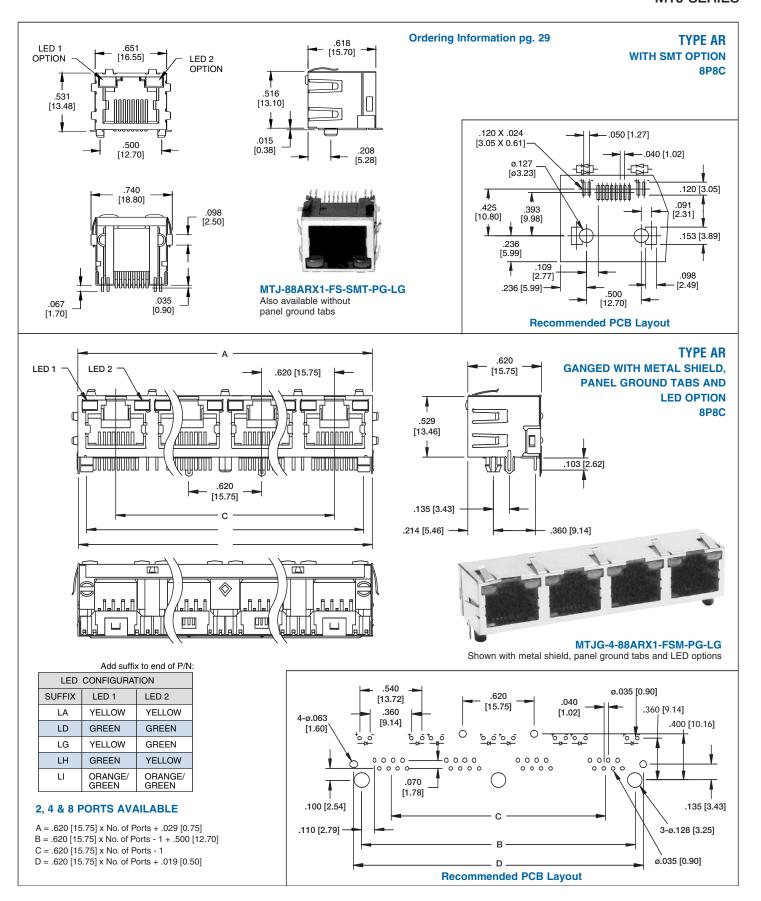


## **ADAM TECH**

## **MODULAR JACKS WITH LEDS**

SINGLE & GANGED LED JACKS
MTJ SERIES

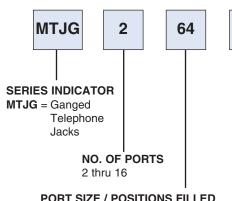
## Adam Technologies, Inc.





**GANGED & STACKED JACKS** MTJG SERIES - ORDERING INFORMATION

#### ORDERING INFORMATION **GANG JACK WITHOUT LEDs**



PORT SIZE / POSITIONS FILLED

64 = 6 position, 4 contacts (6P4C) 66 = 6 position, 6 contacts (6P6C) 88 = 8 position, 8 contacts (8P8C) 2 2 1

#### HOUSING COLOR

1 = Black

2 = Medium Gray (Housing Type 7 only)



MTJG-12-88JX1-FSG-PG

#### **CONTACT PLATING**

X = Gold flash

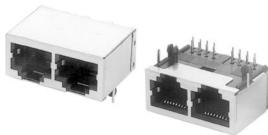
 $0 = 15 \mu in. gold$ 

 $1 = 30 \mu in. gold$ 

 $2 = 50 \mu in. gold$ 

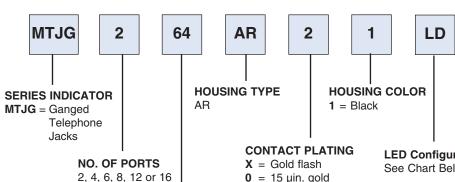


2, 2B, 2C, 5, 7H, 7V, AR, C, G, J, N



MTJG-2-88GX1-FSG

### ORDERING INFORMATION **GANG JACK WITH LEDs**



 $0 = 15 \mu in. gold$ 

 $1 = 30 \mu in. gold$ 

 $2 = 50 \mu in. gold$ 



**LED Configuration** 

See Chart Below

Add suffix to end of P/N:

LED CONFIGURATION			
SUFFIX	LED 1	LED 2	
LA	YELLOW	YELLOW	
LD	GREEN	GREEN	
LG	YELLOW	GREEN	
LH	GREEN	YELLOW	
LI	ORANGE/ GREEN	ORANGE/ GREEN	



MTJG-4-88GX1-FSB

MTJG-3-667HX2

#### **OPTIONS:**

Add as suffix to basic part no.

**PORT SIZE / POSITIONS FILLED** 

62 = 6 position, 2 contacts (6P2C) 64 = 6 position, 4 contacts (6P4C) 66 = 6 position, 6 contacts (6P6C) 88 = 8 position, 8 contacts (8P8C)

FSX = Full metal shield

PG = Panel ground tabs

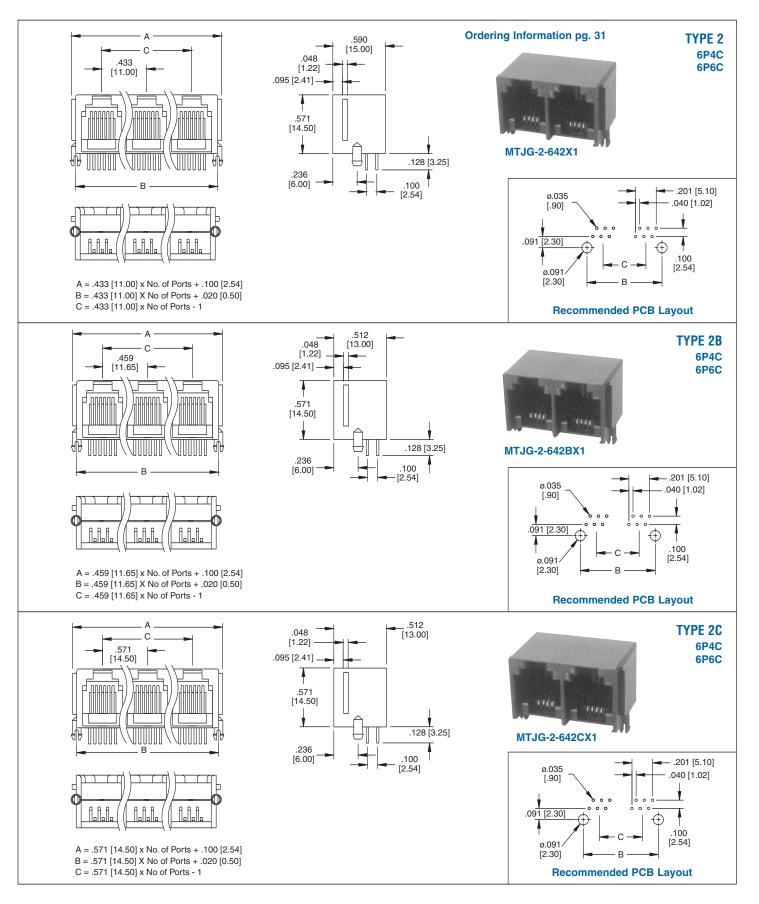
SMT = Surface mount tails with Hi-Temp insulator for hi-temp soldering processes up to 260°C





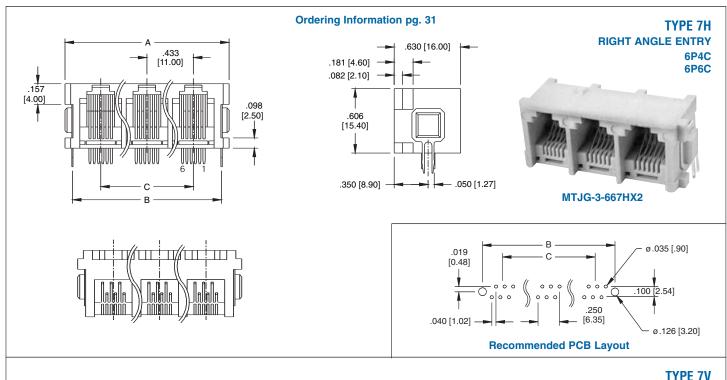
## **MODULAR TELEPHONE JACKS**

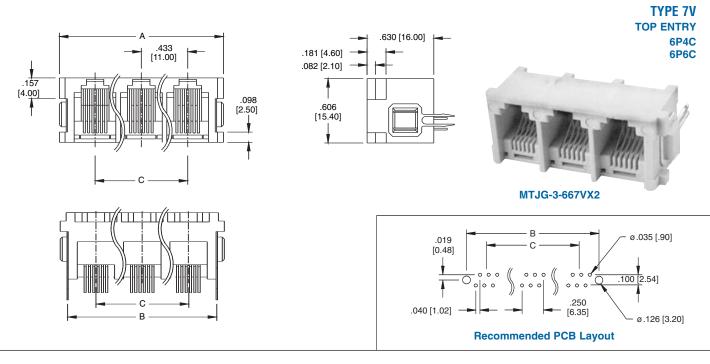
GANGED JACKS, SIDE ENTRY-TYPE 2, 2B & 2C
MTJG SERIES





GANGED JACK, TOP & SIDE ENTRY-TYPE 7
MTJG SERIES

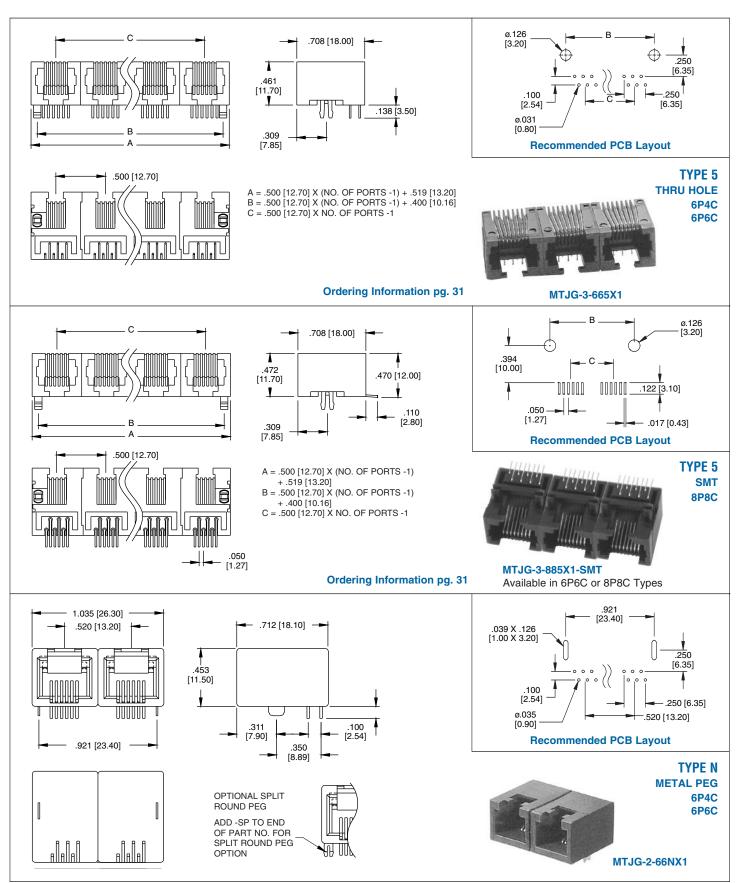




	No of Ports							
DIMENSION	2	3	4	5	6	7	8	
А	1.110	1.543	1.976	2.409	2.843	3.275	3.710	
	[28.20]	[39.20]	[50.20]	[61.20]	[72.20]	[83.20]	[94.20]	
В	.992	1.425	1.858	2.291	2.724	3.157	3.590	
	[25.20]	[36.20]	[47.20]	[58.20]	[69.20]	[80.20]	[91.20]	
С	.433	.886	1.299	1.732	2.165	2.598	3.030	
	[11.00]	[22.00]	[33.00]	[44.00]	[55.00]	[66.00]	[77.00]	

## **MODULAR TELEPHONE JACKS**

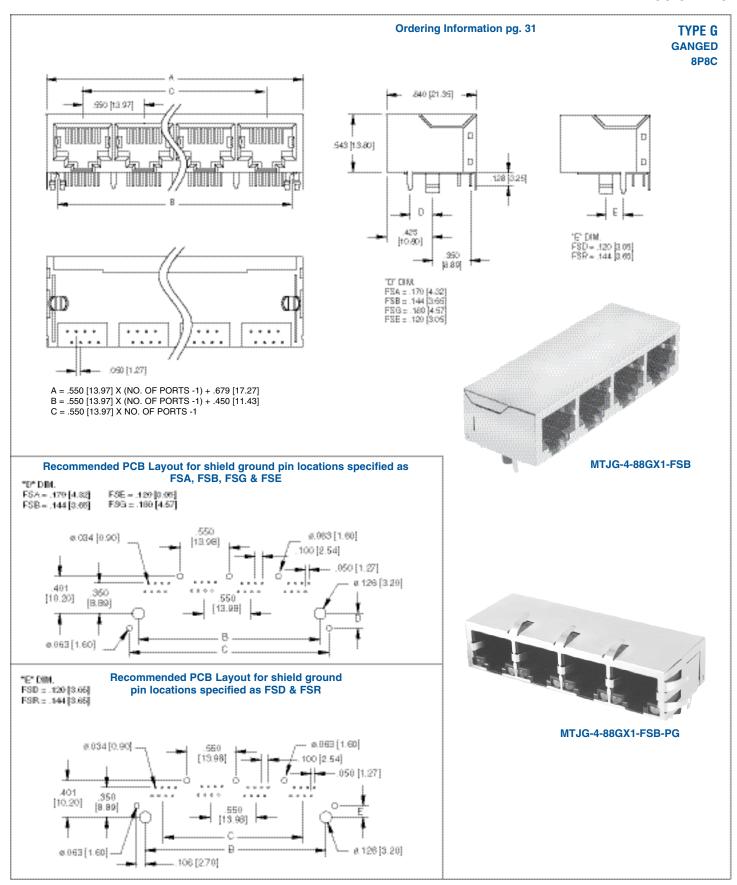
GANGED JACKS, THRU HOLE & SMT-TYPE 5, N
MTJG SERIES





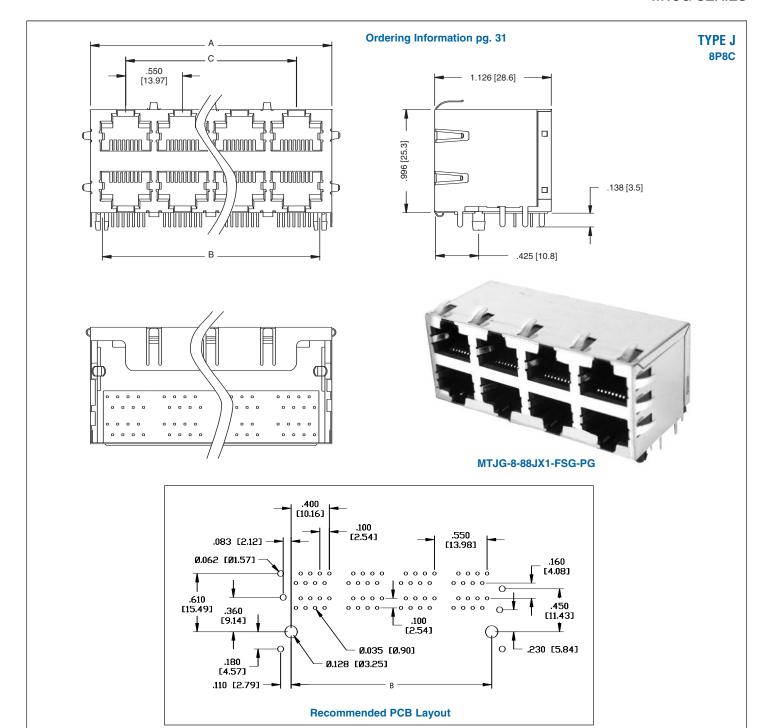
### GANGED JACK, SIDE ENTRY-TYPE G

MTJG SERIES





GANGED & STACKED SIDE ENTRY JACK
MTJG SERIES



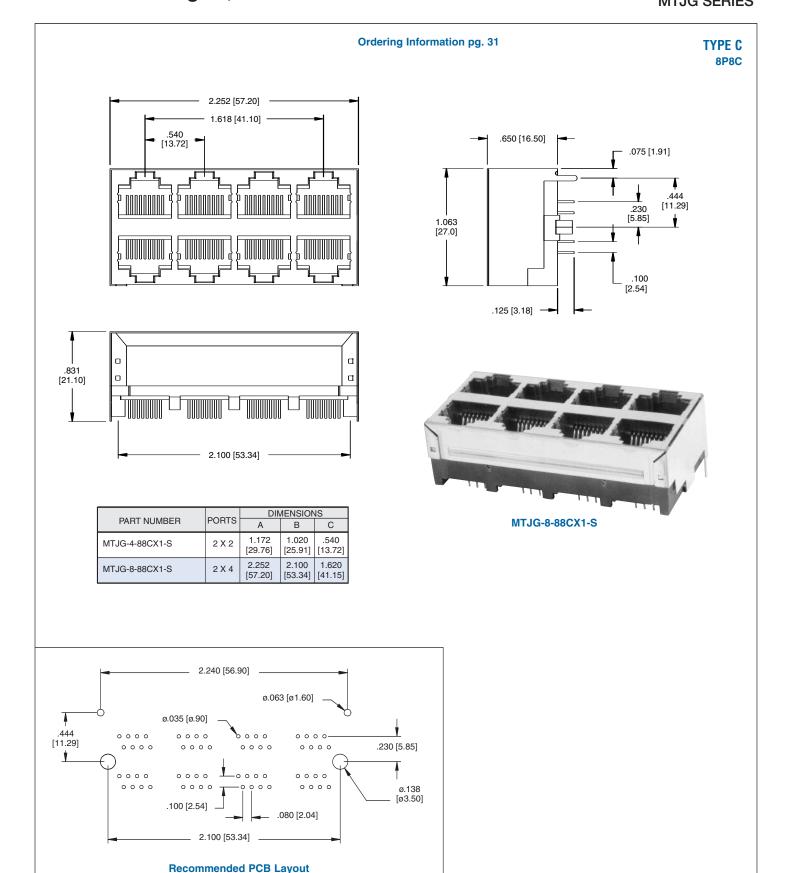
		DIN	MENSION	ENSIONS		
PART NUMBER	PORTS	Α	В	С		
MTJG-2-88JX1-FSG-PG	2 X 1	.679 [17.25]	.450 [11.43]	_		
MTJG-4-88JX1-FSG-PG	2 X 2	1.230 [31.25]	1.00 [25.40]	.550 [13.97]		
MTJG-6-88JX1-FSG-PG	2 X 3	1.780 [45.21]	1.549 [39.34]	1.100 [27.94]		

		DIMENSIONS			
PART NUMBER	PORTS	Α	В	C	
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]	
MTJG-16-88JX1-FSG-PG	2 X 8	4.537 [115.25]	4.30 [109.22]	3.850 [97.79]	



STACKED TOP ENTRY JACK-TYPE C

MTJG SERIES





### **MAGNETICS TELEPHONE JACK**

### INTEGRATED MAGNETICS & LEDs 10/100 BASE T & 1000 BASE T

MTJ SERIES

#### **INTRODUCTION:**

Adam Tech MTJ series RJ-45 connectors with integrated magnetics are designed to support Base 10, 100 and 1000-T applications such as hubs, routers, ADSL modems, and ATM transmission equipment. The integrated magnetics allows the design engineer to save PC board real-estate and lower the total part count per system. This series meets all applicable specifications for CAT 5, 5e, 6 and IEEE 802.3. The USB model meets all applicable USB 2.0 specifications. All configurations are available with optional LED's.

#### **FEATURES:**

Single, stacked and ganged configurations available All products have a full metal shield to guard against electromagnetic interference. Hi-Temp option availableAll products are fully lead free and RoHS compliant

#### **MATING PLUGS:**

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

#### **SPECIFICATIONS:**

#### **MATERIAL:**

Insulator: PBT, glass filled, rated UL94V-0

Insulator Color: Black

Contacts: Phosphor Bronze or Brass Shield: Copper Alloy, Nickel or Tin plated

#### **Contact Plating:**

Gold over Nickel underplate on contact area, Tin over Copper underplate on solder tails.

#### **ELECTRICAL:**

Operating Voltage: 150V AC Current Rating: 1.5 Amps Max. Contact Resistance: 20 m $\Omega$  Max. Insulation Resistance: 500 M $\Omega$  Min.

Dielectric Withstanding Voltage: 1500V AC for 1 Minute

DC resistance: 1.2 Ohms Max.

Interwinding capacitance: 35pF @ 1MHz Insertion loss: 100KHz to 80MHz = -1.1dB Min. Return loss: 1MHz to 30MHz = -18dB Min.

30MHZ to 80MHz = -12dB Min.

Rise time: 30nS Max.

Cross talk: 1MHz to 100MHz = 40dB TYP.

Common to Common mode Attenuation: 35dB TYP.

#### **MECHANICAL:**

Insertion force: 8 Contacts: 22.5N

10 Contacts: 24.5N

#### **TEMPERATURE RATING:**

Operation Temperature: -40°C ~ +70°C

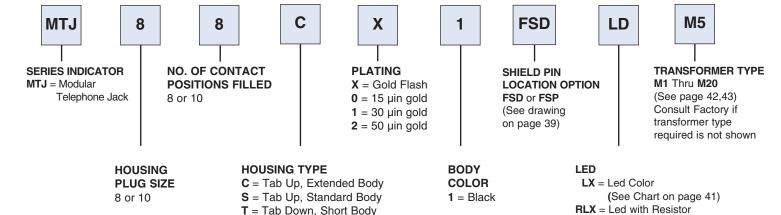
#### **PACKAGING:**

Anti-ESD plastic trays or tubes

#### **SAFETY AGENCY APPROVALS:**

UL Recognized E224049

#### MAGNETICS TELEPHONE JACK ORDERING INFORMATION



#### **OPTIONS:**

Add designator(s) to end of part number **HT** = Hi-Temp insulator for Hi-Temp

soldering processes up to 260°C

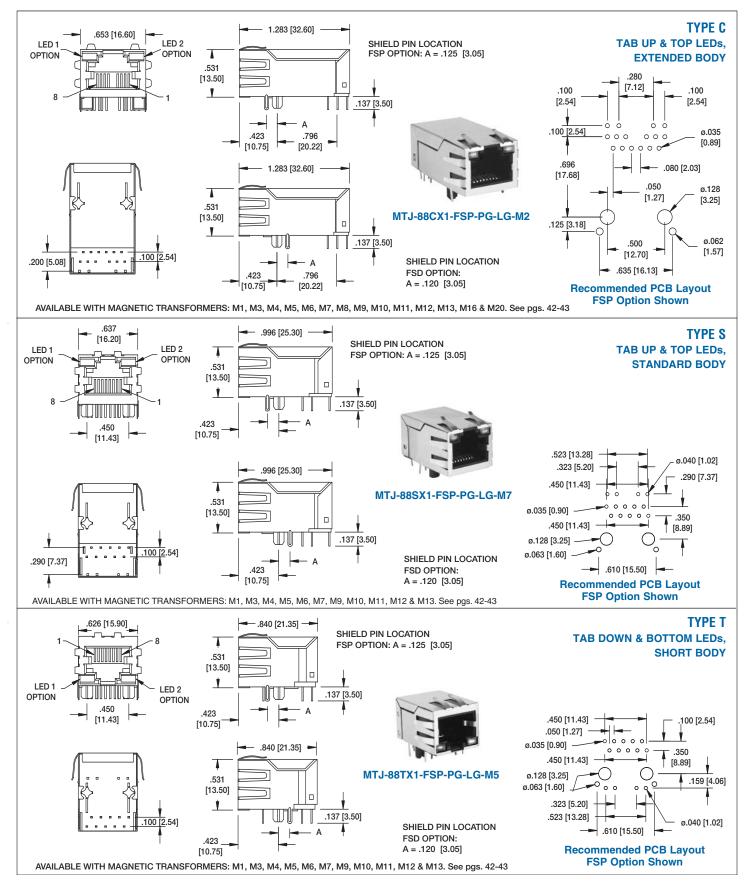




## **MAGNETICS TELEPHONE JACK**

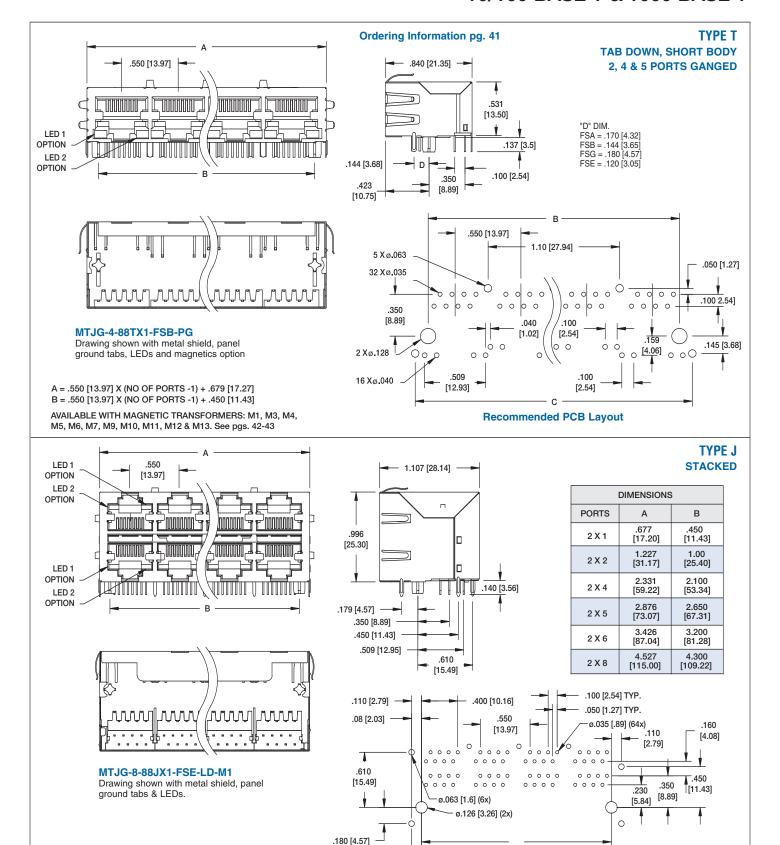
**INTEGRATED MAGNETICS & LEDs** 10/100 BASE T & 1000 BASE T

Adam Technologies, Inc.



### **MODULAR TELEPHONE JACK**

WITH INTEGRATED MAGNETICS & LEDS 10/100 BASE T & 1000 BASE T



AVAILABLE WITH MAGNETIC TRANSFORMERS: M1, M3, M4, M5, M6, M7, M9, M10, M11, M12 & M13. See pgs. 42-43

.110 [2.79]