

### 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 available All 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 mΩ Max.  
 Insulation Resistance: 500 MΩ 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

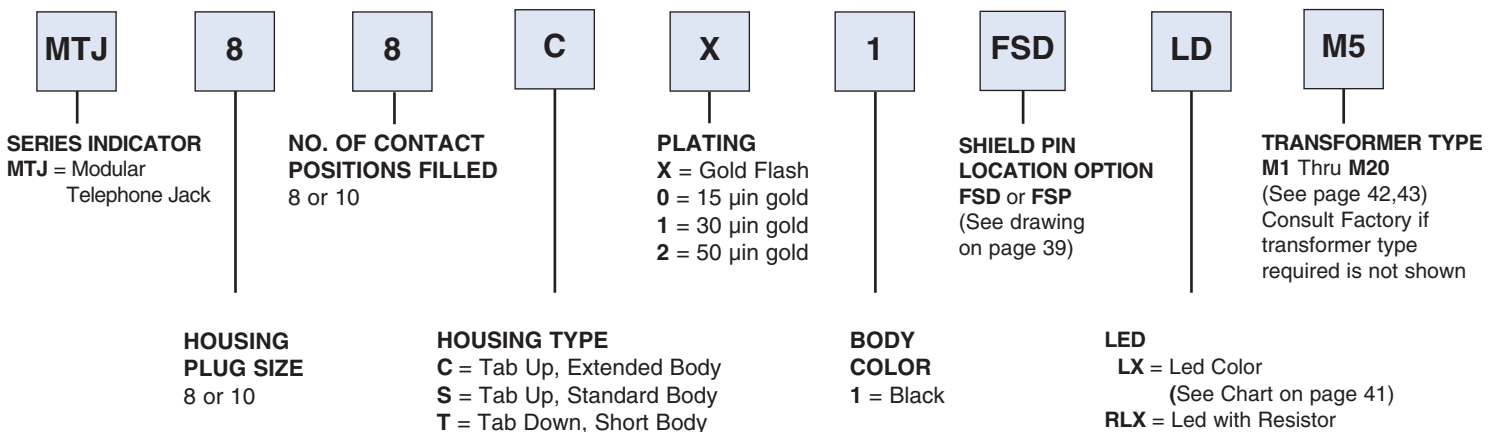
### PACKAGING:

Anti-ESD plastic trays or tubes

### SAFETY AGENCY APPROVALS:

UL Recognized E224049

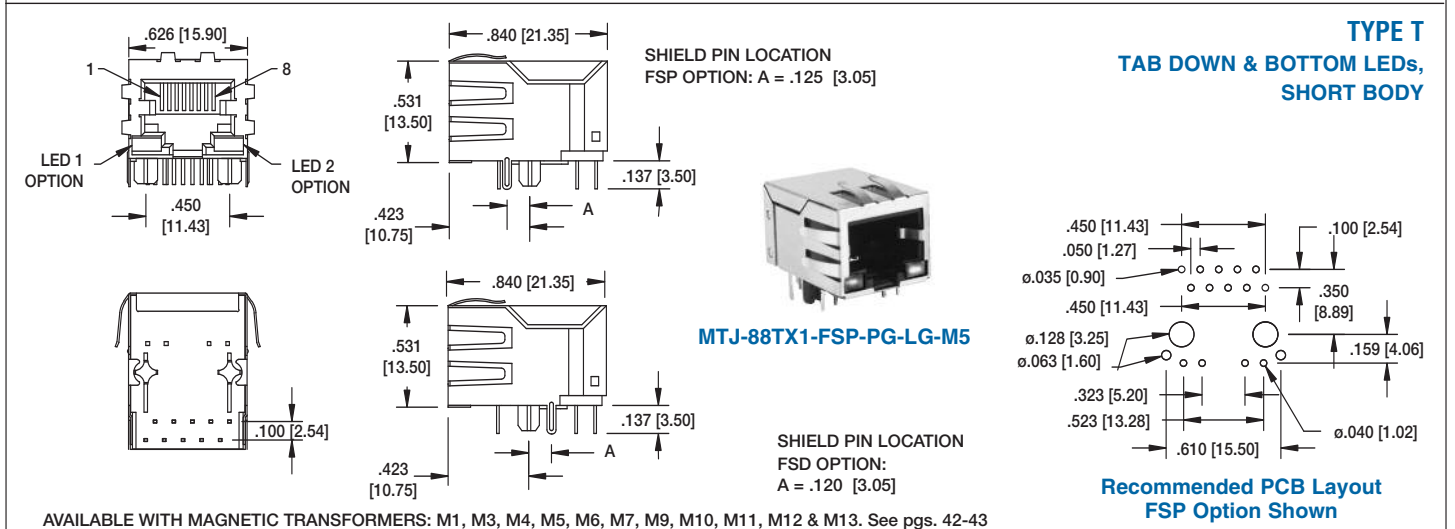
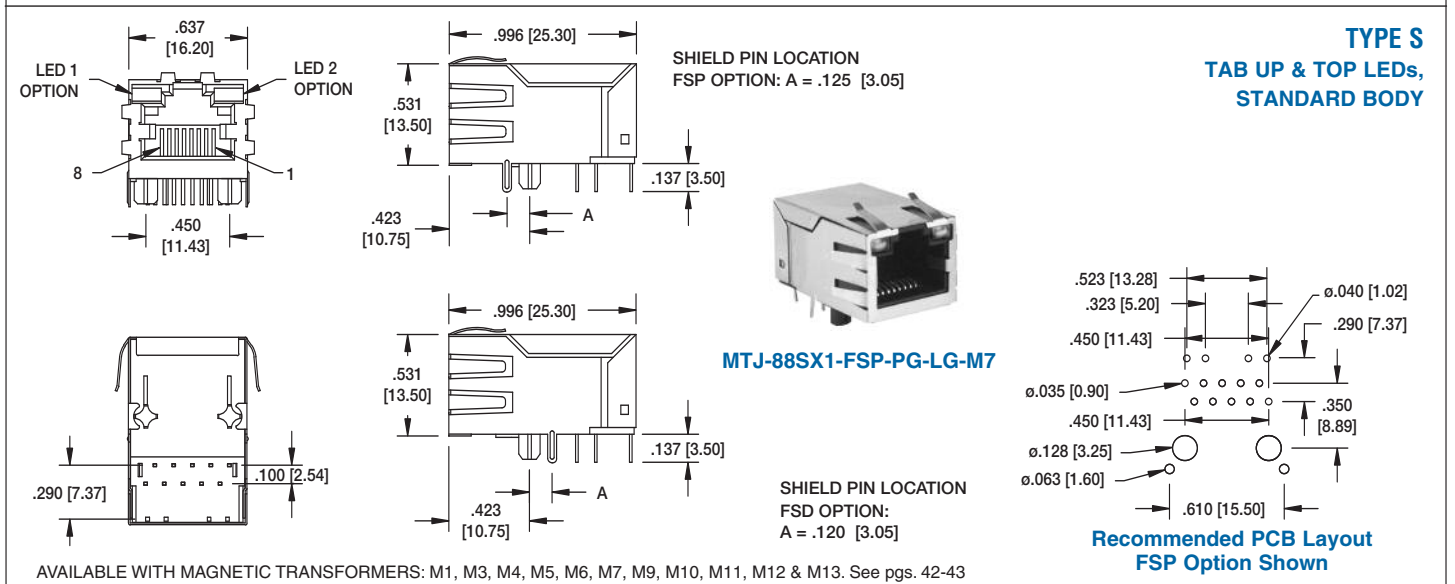
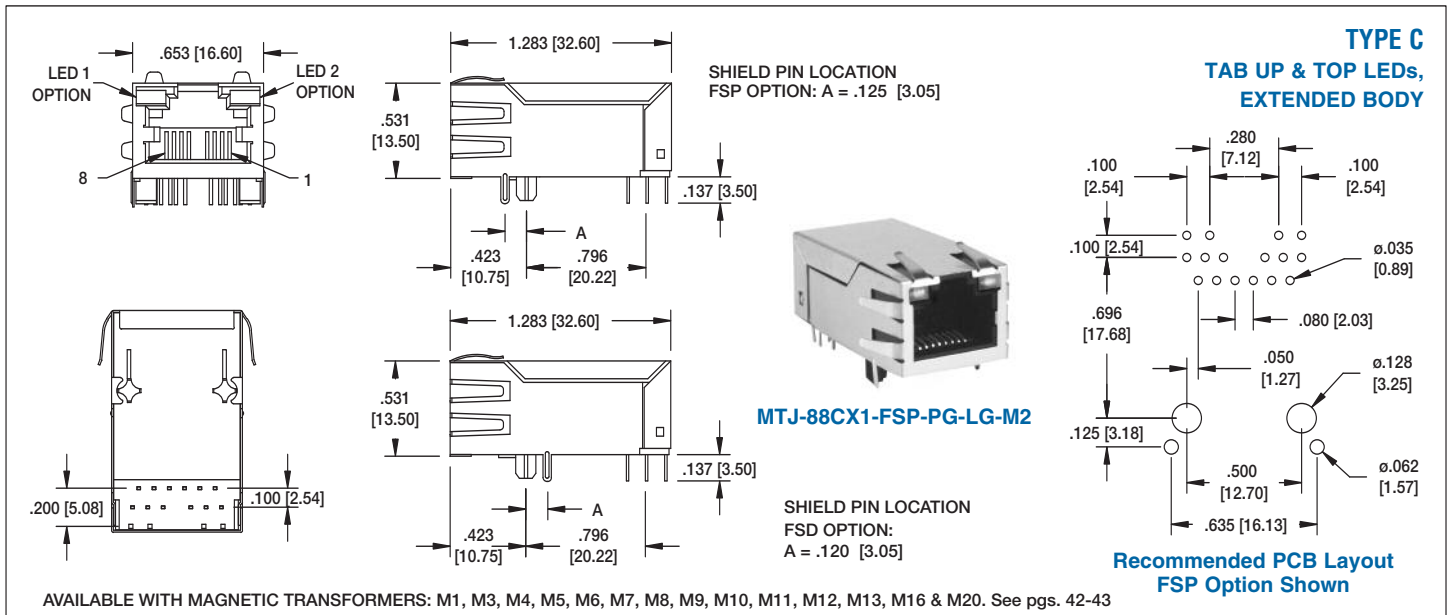
## MAGNETICS TELEPHONE JACK ORDERING INFORMATION

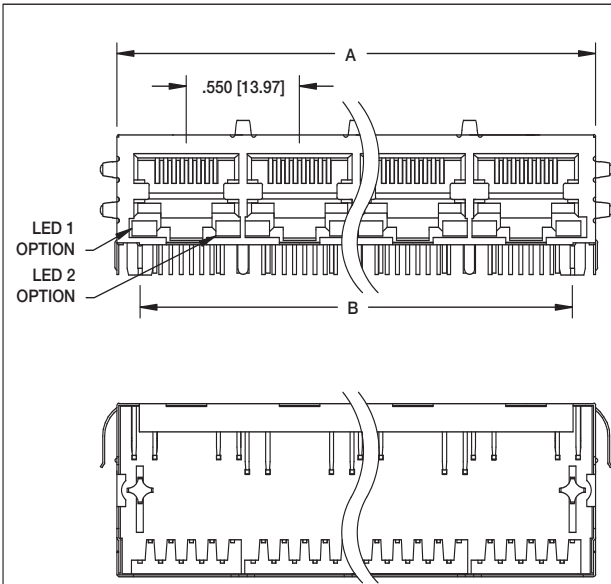


### OPTIONS:

Add designator(s) to end of part number  
 HT = Hi-Temp insulator for Hi-Temp soldering processes up to 260°C







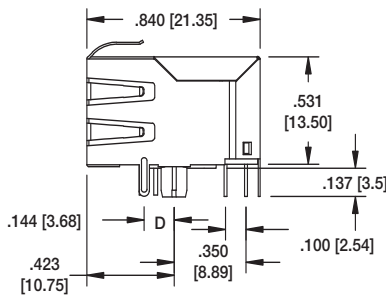
**MTJG-4-88TX1-FSB-PG**

Drawing shown with metal shield, panel ground tabs, LEDs and magnetics option

$A = .550 [13.97] \times (\text{NO OF PORTS} - 1) + .679 [17.27]$   
 $B = .550 [13.97] \times (\text{NO OF PORTS} - 1) + .450 [11.43]$

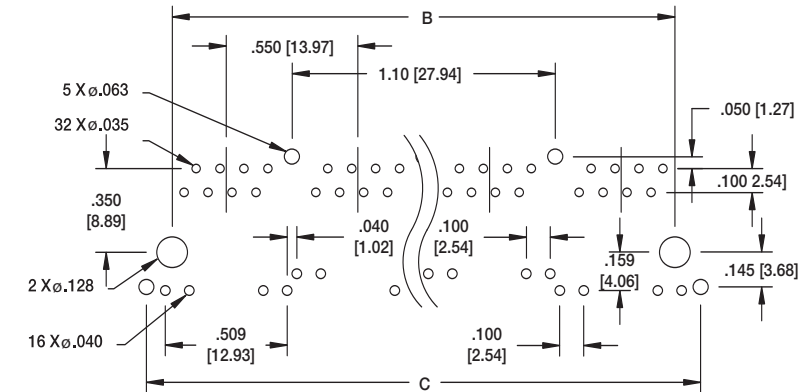
AVAILABLE WITH MAGNETIC TRANSFORMERS: M1, M3, M4, M5, M6, M7, M9, M10, M11, M12 & M13. See pgs. 42-43

**Ordering Information pg. 41**

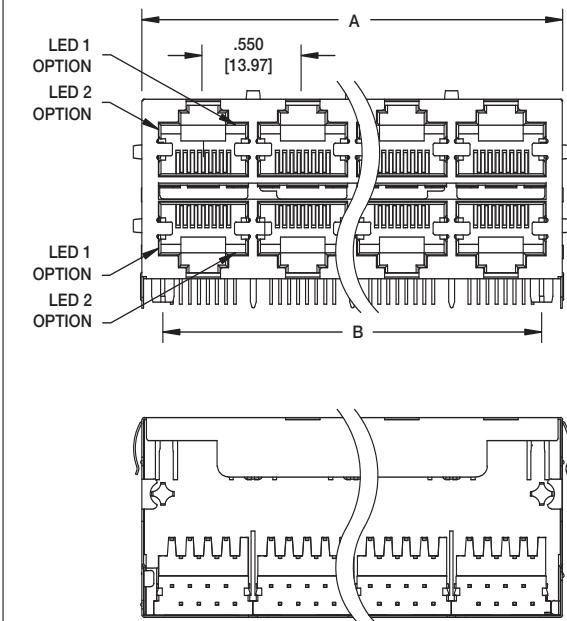


**TYPE T**  
**TAB DOWN, SHORT BODY**  
**2, 4 & 5 PORTS GANGED**

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



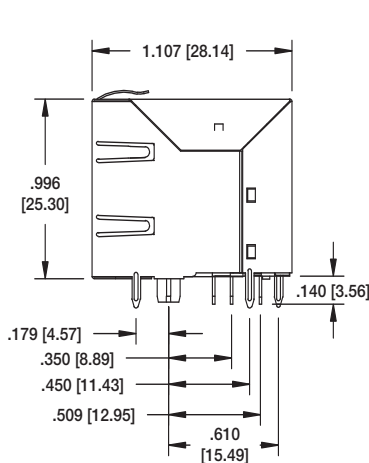
**Recommended PCB Layout**



**MTJG-8-88JX1-FSE-LD-M1**

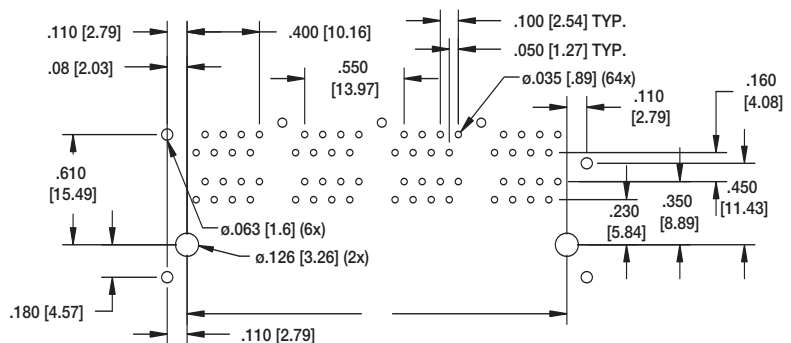
Drawing shown with metal shield, panel ground tabs & LEDs.

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



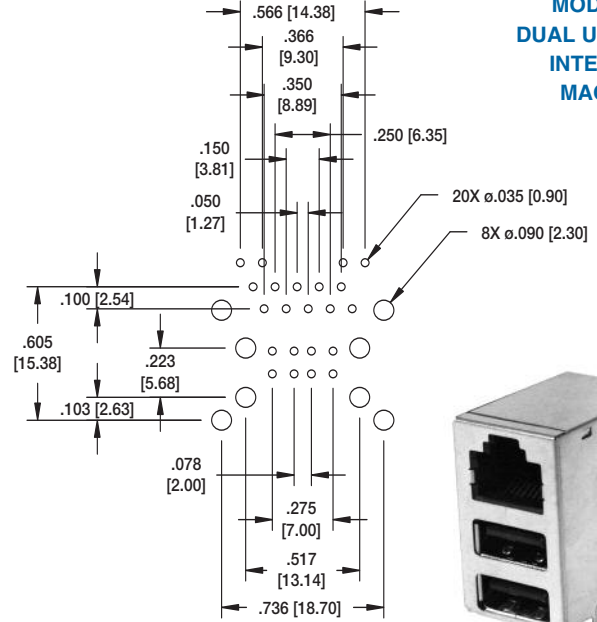
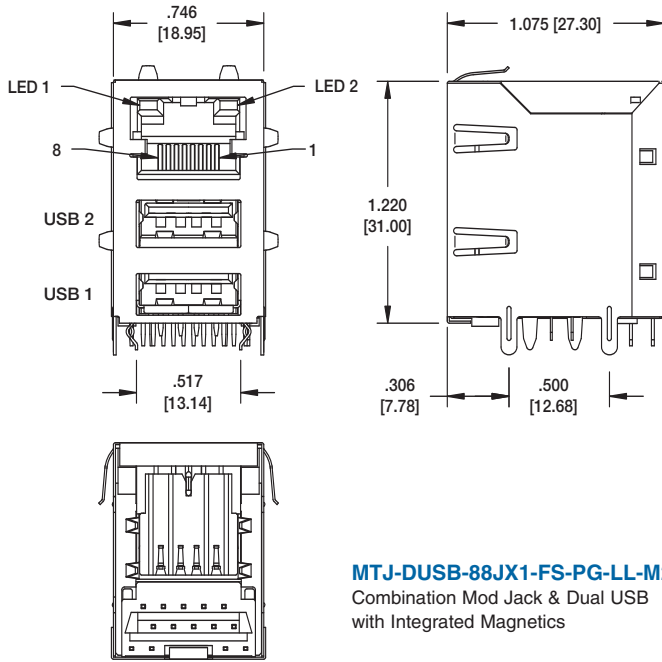
**TYPE J**  
**STACKED**

DIMENSIONS		
PORTS	A	B
2 X 1	.677 [17.20]	.450 [11.43]
2 X 2	1.227 [31.17]	1.00 [25.40]
2 X 4	2.331 [59.22]	2.100 [53.34]
2 X 5	2.876 [73.07]	2.650 [67.31]
2 X 6	3.426 [87.04]	3.200 [81.28]
2 X 8	4.527 [115.00]	4.300 [109.22]



**Recommended PCB Layout**

**COMBINATION  
MOD JACK &  
DUAL USB WITH  
INTEGRATED  
MAGNETICS**



LED CONFIGURATION (Add suffix to end of part no.)		
SUFFIX	LED 1	LED 2
LA	YELLOW	YELLOW
LD	GREEN	GREEN
LG	YELLOW	GREEN
LH	GREEN	YELLOW
LI	ORANGE/GREEN	ORANGE/GREEN
LP	YELLOW/GREEN	YELLOW/GREEN
LQ	YELLOW/GREEN	—
L11	RED	GREEN

OTHER LED COLOR  
COMBINATIONS AVAILABLE

LED SPECIFICATION			
STANDARD LED	WAVE LENGTH	FORWARD VOLT / CURRENT	TYP
GREEN	565 nm	5.5V / 20mA	5.0V
YELLOW	590 nm	5.5V / 20mA	5.0V
ORANGE	610 nm	5.5V / 20mA	5.0V
RED	637 nm	5.5V / 20mA	5.0V

AVAILABLE WITH MAGNETIC  
TRANSFORMERS M1, M3, M4,  
M5, M6, M7, M8, M9, M10, M11,  
M12, M13, M16 & M20  
See Pgs 42-43:

## ORDERING INFORMATION FOR GANG JACKS WITH MAGNETICS & LEDs

