## INTRODUCTION:

Adam Tech MTJ series Modular 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 versions
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 plugs and all industry standard telephone plugs.

## SPECIFICATIONS:

## Material:

Standard Insulator: PBT, or ABS, rated UL94V-0
Optional Hi-Temp Insulator: Nylon 6T rated UL94V-0
Insulator Colors: Black or medium gray
Contacts: Phosphor Bronze
Shield: Phosphor Bronze, Nickel plated

## Contact Plating:

Flat contacts: Gold over Nickel underplate on contact area, Tin over Copper underplate on solder tails.
Round contacts: Gold over Nickel underplate overall

## Electrical:

Operating voltage: 150V AC max.
Current rating: 1.5 Amps max.
Contact resistance: $20 \mathrm{~m} \Omega$ max. initial
Insulation resistance: $500 \mathrm{M} \Omega \mathrm{min}$.
Dielectric withstanding voltage: 1000V AC for 1 minute

## Mechanical:

Insertion force: 4 contacts: 17.6 N
6 contacts: 20.6 N
8 contacts: 22.5 N
10 contacts: 24.5 N
Durability: 500 Cycles

## Temperature Rating:

Operating temperature: $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$
Soldering process temperature:
Standard insulator: $235^{\circ} \mathrm{C}$
Hi-Temp insulator: 260C

## PACKAGING:

Anti-ESD plastic trays
SAFETY AGENCY APPROVALS:
UL Recognized \& CSA Certified, File no. E224049

HI-TEMP
 ${ }^{\text {c }}{ }^{2} \mathrm{~N}_{\mathrm{US}} \mathrm{FC}$


TYPE 0
6P6C


MTJ-660X1

Ordering Information pg. 9


Face Shield Option
TYPE 0 8P8C



MTJ-880X1

Ordering Information pg. 9


Recommended PCB Layout


MTJ-88YX1


Recommended PCB Layout



Recommended PCB Layout








Recommended PCB Layout


# MODULAR JACKS .626" HEIGHT, TOP ENTRY, SMT - TYPE K <br> MTJ SERIES 



Recommended PCB Layout
4p4c


Recommended PCB Layout







Ordering Information pg. 34
TYPE AR


MTJG-4-88ARX1-FSM-PG-LG
Shown with metal shield, panel ground tabs and LED options



## 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
TYPE M
EMI FERRITE FILTERED JACK


MTJ-88MX1
Non-Shielded


MTJ-88MX1-FSE Metal Shielded


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


EMI FERRITE FILTERED \& SHIELDED JACK



MTJ-88MX1-FSE

TYPE M
8P8C


MTJ-88MX1-FSD
 8p8c

Recommended PCB Layout


FSE Shield
8p8c Recommended PCB Layout


FSD Shield
8p8c
Recommended PCB Layout


CAT. 5E KEYSTONE JACK 8 POSITION 8 CONTACT



MTJK-88-05-C5E

CAT. 5E KEYSTONE JACK
8 POSITION 4 CONTACT


MTJK-84-01-C5E


## ORDERING INFORMATION

 GANGED JACKS WITH LEDs

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)

OPTIONS:
Add as suffix to basic part no.
FSX = Full metal shield
PG = Panel ground tabs
SMT = Surface mount tails with Hi-Temp insulation for hi-temp soldering processes up to $260^{\circ} \mathrm{C}$

CONTACT PLATING
X = Gold flash
$0=15 \mu \mathrm{in}$. gold
$1=30 \mu \mathrm{in}$. gold
$2=50 \mu \mathrm{in}$. 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/ <br> GREEN | ORANGE/ <br> GREEN |


 MTJG-4-88GX1-FSB


MTJG-3-667HX2


A = . 433 [11.00] x No. of Ports +.100 [2.54] $B=.433[11.00] \times$ No of Ports $+.020[0.50]$ C = . 433 [11.00] x No of Ports - 1

$A=.459[11.65] \times$ No. of Ports +.100 [2.54]
$B=.459[11.65] \times$ No of Ports + . 020 [0.50]
$\mathrm{C}=.459$ [11.65] x No of Ports - 1



$\mathrm{A}=.571$ [14.50] X No. of ports +.122 [3.10] $B=.571[14.50] \times$ No. of Ports +.019 [0.50] $\mathrm{C}=.571$ [14.50] X No. of Port -1


MTJG-2-642BX1


Recommended PCB Layout
TYPE 2B
6P4C
6P6C
-
TYPE 2 C 8P8C


Recommended PCB Layout

|  | Recommended PCB Layout |
| :---: | :---: |
| A $=.500[12.70] \times(N O . O F$ PORTS -1) +.519 [13.20] <br> $\mathrm{B}=.500$ [12.70] $\times$ (NO. OF PORTS -1) +.400 [10.16] <br> $\mathrm{C}=.500[12.70] \times$ NO. OF PORTS -1 <br> Ordering Information pg. 34 | TYPE 5 <br> THRU HOLE <br> 6P4C <br> 6P6C <br> MTJG-3-665X1 |
| $\mathrm{A}=.500[12.70] \times($ NO. OF PORTS -1) +.519 [13.20] <br> $B=.500[12.70] \times(N O$. OF PORTS -1$)+.400$ [10.16] $C=.500[12.70] \times$ NO. OF PORTS -1 | Recommended PCB Layout |
|  |  |
|  | TYPE N METAL PEG 6P4C 6P6C <br> JG-2-66nx1 |



## 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: $20 \mathrm{~m} \Omega$ Max.
Insulation Resistance: $500 \mathrm{M} \Omega \mathrm{Min}$.
Dielectric Withstanding Voltage: 1500V AC for 1 Minute
DC resistance: 1.2 Ohms Max.
Interwinding capacitance: 35pF @ 1MHz
Insertion loss: 100 KHz to $80 \mathrm{MHz}=-1.1 \mathrm{~dB}$ Min.
Return loss: 1 MHz to $30 \mathrm{MHz}=-18 \mathrm{~dB}$ Min.
30 MHZ to $80 \mathrm{MHz}=-12 \mathrm{~dB}$ Min.
Rise time: 30nS Max.
Cross talk: 1 MHz to $100 \mathrm{MHz}=40 \mathrm{~dB}$ TYP.
Common to Common mode Attenuation: 35dB TYP.

## MECHANICAL:

Insertion force: 8 Contacts: 22.5 N
10 Contacts: 24.5 N

## TEMPERATURE RATING:

Operation Temperature: $-40^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$

## PACKAGING:

Anti-ESD plastic trays or tubes
SAFETY AGENCY APPROVALS:
UL Recognized \& CSA Certified, File no. E224049

HI-TEMP ANSULASOR ${ }^{\mathbf{c}} \mathrm{Al}_{\mathrm{us}} \mathrm{FC}$

## 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 $260^{\circ} \mathrm{C}$
PG = Panel ground tabs



TYPE J


STACKED

| DIMENSIONS |  |  |
| :---: | :---: | :---: |
| PORTS | A | B |
| $2 \times 1$ | .677 <br> $[17.20]$ | 450 <br> $[11.43]$ |
| $2 \times 2$ | 1.227 <br> $[31.17]$ | 1.00 <br> $[25.40]$ |
| $2 \times 4$ | 2.331 <br> $[59.22]$ | 2.100 <br> $[53.34]$ |
| $2 \times 5$ | 2.876 <br> $[73.07]$ | 2.650 <br> $[67.31]$ |
| $2 \times 6$ | 3.426 <br> $[87.04]$ | 3.200 <br> $[81.28]$ |
| $2 \times 8$ | 4.527 <br> $[115.00]$ | 4.300 <br> $[109.22]$ |



Recommended PCB Layout

AVAILABLE WITH MAGNETIC TRANSFORMERS: M1, M3, M4 M5, M6, M7, M9, M10, M11, M12 \& M13. See pgs. 44-45


MTJG-8-88JX1-FSE-LD-M1
Drawing shown with metal shield, panel ground tabs \& LEDs.

ADVANCED INTERCONNECT PRODUCTS AND SYSTEMS




## INTRODUCTION:

Adam Tech MTJP Series Wire Leaded Handset and Panel Jacks are 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 with choice of Stripped and Tinned leads or leads with Spade Terminals, 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 industry standard 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, 80º , VW-1, 300V.

## Contact Plating:

Gold over Nickel underplate on contact area.

## Electrical:

Operating voltage: 150V AC max.
Current rating: 1.5 Amps max.
Contact resistance: $20 \mathrm{~m} \Omega$ max. initial
Insulation resistance: $500 \mathrm{M} \Omega \mathrm{min}$.
Dielectric withstanding voltage: 500V AC for 1 minute

## Mechanical:

Insertion force: 4 Contacts: 500g, 6 contacts 750 g
8 contacts: $900 \mathrm{~g}, 10$ contacts: 1000 g
Durability: 500 Cycles min.

## Temperature Rating:

Operating temperature: $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$
PACKAGING:
Anti-ESD plastic bags
APPROVALS AND CERTIFICATIONS:
UL Recognized \& CSA Certified, File no. E224049


ORDERING INFORMATION WIRE LEADED JACKS


MTJP = Wire Leaded Jack

HOUSING COLOR
1 = Black
2 = Medium Gray

HOUSING TYPE
616B, 616E, 616L, 616M, 616P, 616W, 623K4, 623K6, 623P4, 623P6, 623T4, 623T6, 648K4, 648K6, 641

WIRE LEAD TYPE
A1 = 7" Wire leads, stripped 1/4" and tinned
A2 = 7" Wire leads, with spade terminal

CONTACT PLATING
X = Gold Flash
$0=15 \mu \mathrm{in}$. gold
$1=30 \mu \mathrm{in}$. gold
$2=50 \mu \mathrm{in}$. gold

Wire Lead Options




## ORDERING INFORMATION



OPTIONS:
Add designator to end of part number S = Shielded



MTJC-88XIV



X = Gold Flash
$0=15 \mu$ in gold
$2=50 \mu \mathrm{in}$ gold


MTJC-88XB-S



INSULATOR COLOR

| $\mathbf{B}$ | $=$ Black | $\mathbf{Y}$ | $=$ Yellow |
| ---: | :--- | ---: | :--- |
| $\mathbf{W}$ | $=$ White |  | $\mathbf{R}$ |
| $=$ Red |  |  |  |
| IV | $=$ Ivory | $\mathbf{G}$ | $=$ Green |
| $\mathbf{G Y}$ | $=$ Gray |  | $\mathbf{B L}$ |$=$ Blue

MTJC-88-XBS METAL SHIELDED


RECOMMENDED PANEL CUT-OUT PANEL THICKNESS . 062 [1.57]

