

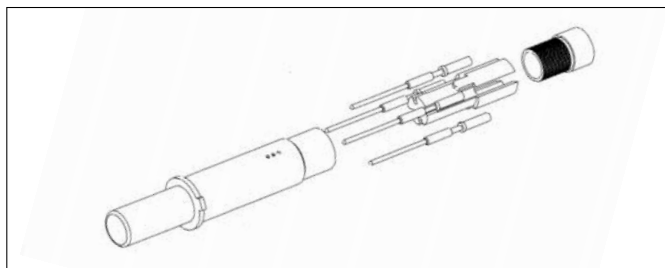
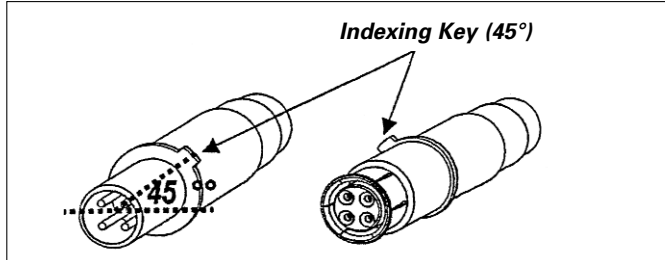
# Quadrax Contact

## 1 - DESCRIPTION

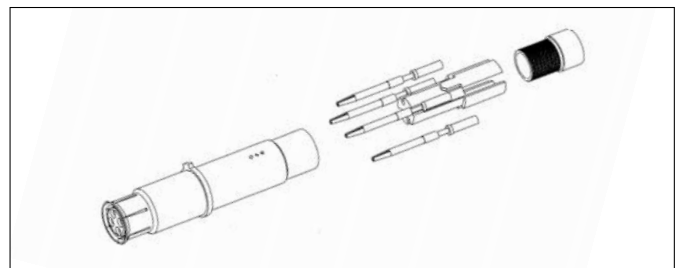
- Four # 24 pin contacts with 360° shielding
- Compact design allows mounting into # 8 cavity dimensions
- Replaces the use of 2 twinax contacts with 30% shorter cabling time and better performance
- Front and rear removable versions available
- Crimp and PC tail versions available

### Key features

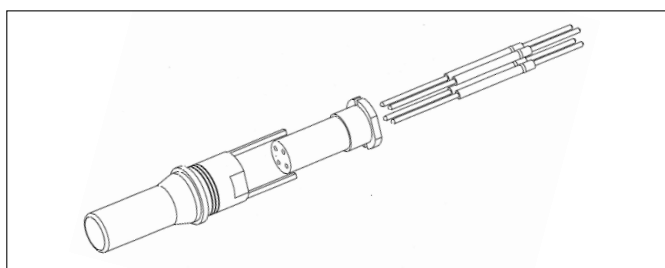
- Crimped signal contacts, crimped # 8 body
- Standard # 8 cavity insertion and removal tools
- Ground connection of the cable braid to the shell possible through the external shell of the # 8 contacts
- Compatible with star quad cable and twinax cable
- Characteristic impedance of 100  $\Omega$  or 150  $\Omega$
- Operating temperature: - 65°C/+200°C.



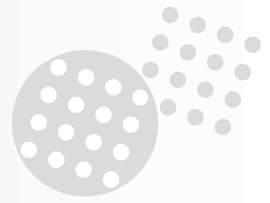
Pin to crimp



Socket to crimp



PC Tail Pin



# Quadrax Contact

## 2 - TECHNICAL CHARACTERISTICS

### Mechanical

- Endurance: minimum 500 mating / unmating operations in any connector
- Shocks: 300 g, 3 ms as per EN-2591-6404 method A and MIL-STD 1344 in 38999 connector
- Vibrations:
  - Random 100 to 1000 Hz, 3 x 8 hours  
0.2 g<sup>2</sup>/Hz, as per MIL-STD 1344 A, Method 2005.1, level E, test V, in ARINC 600 connector
  - Random, 3 x hours – 0.2 g<sup>2</sup>/Hz, as per EN-2591-6403 Method B, level J in 38999 connector
- Contact retention: minimum 155 N
- Contact insertion force: maximum 11 N

### Environmental

- Salt spray: 48 hours minimum, as per MIL-STD 1344 A, method 1003
- Temperature range: -65° C, +200° C
- Sealing in connector insert (for sealed Quadrax version):
  - Altitude immersion 2 kPa in accordance with EN 2591-6303 table 7 and MIL-STD 1344
  - IP 68

### Material

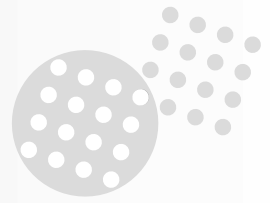
- Inner contact: copper alloy
- Body: copper alloy
- Insulator: thermoplastic
- Contact plating: gold over nickel plated

### Electrical performances

- Contact resistance (low level): initial 15 mΩ, after tests 30 mΩ
- Contact resistance at rated current:

|                 |                   | Max contact resistance (mΩ) |             |             |
|-----------------|-------------------|-----------------------------|-------------|-------------|
|                 |                   | 23° C                       |             | 200° C      |
| Contact         | Rated current (A) | Initial                     | After tests | After tests |
| Signal contacts | 1                 | 15                          | 30          | 45          |
| Outer body      | 12                | 3                           | 4           | 6           |

- Dielectric withstanding voltage:
  - Sea level = 500 Vrms between signal contacts and signal contact/body
  - 21000 m = 125 Vrms between signal contacts and signal contact/body
- Insulation resistance: at ambient temperature > 5000 MΩ, at high temperature > 1000 MΩ
- Characteristic impedance: 100 Ω @ 100 MHz
- Attenuation ≤ 0.3 dB @ 100 MHz typical per contact pair (cat 5E requirement = 0.3 dB @ 100 MHz)
- Crosstalk ≥ 40 dB @ 100 MHz typical (cat 5E requirement = 40 dB)

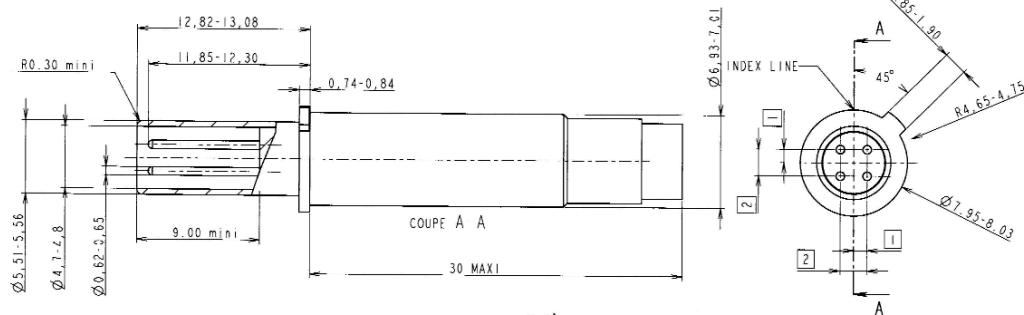


# Quadrax Contact

## 3 - DIMENSIONS AND PART NUMBERS

### A/ For Arinc 600 Connectors

#### QUADRAX # 8 - PIN FOR ARINC 600 CONNECTOR



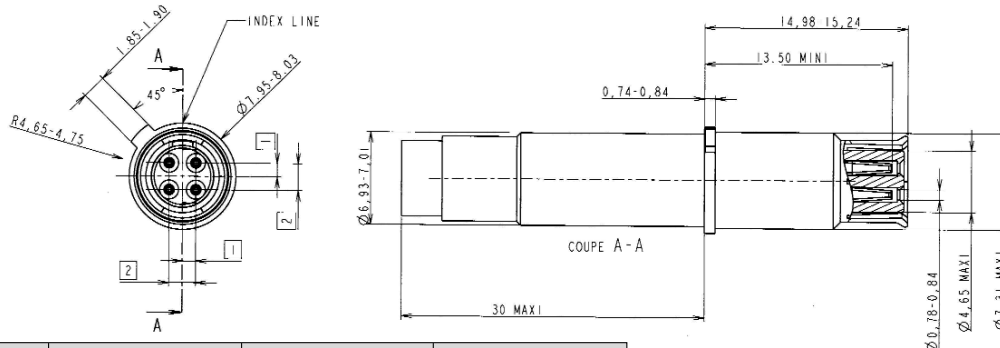
**Male  
Contact**

**Rear  
release**

**To crimp**

**P/N: ETH1-1100A**

#### QUADRAX # 8 - SOCKET FOR ARINC 600 CONNECTOR



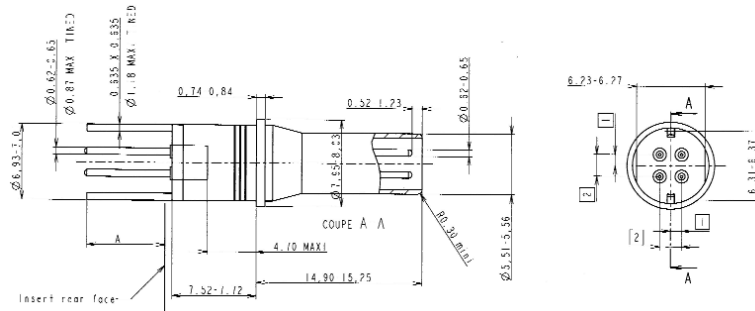
**Female  
Contact**

**Rear  
release**

**To crimp**

**P/N: ETH1-1101A**

#### QUADRAX # 8 - PIN FOR ARINC 600 CONNECTOR PCB MOUNT



**Male  
Contact**

**Front  
release**

**PC Tail contact  
L = 6.35 mm**

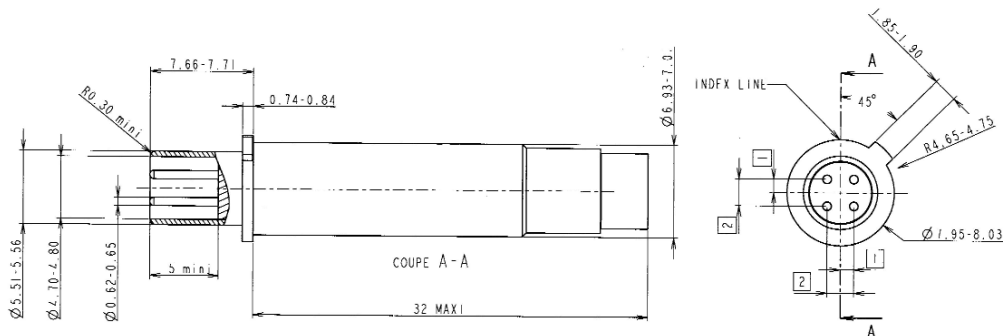
**P/N: ETH1-1110A**



# Quadrax Contact

## B/ For MIL-DTL-38999 Connectors

### QUADRAX # 8 – PIN FOR 38999 CONNECTOR



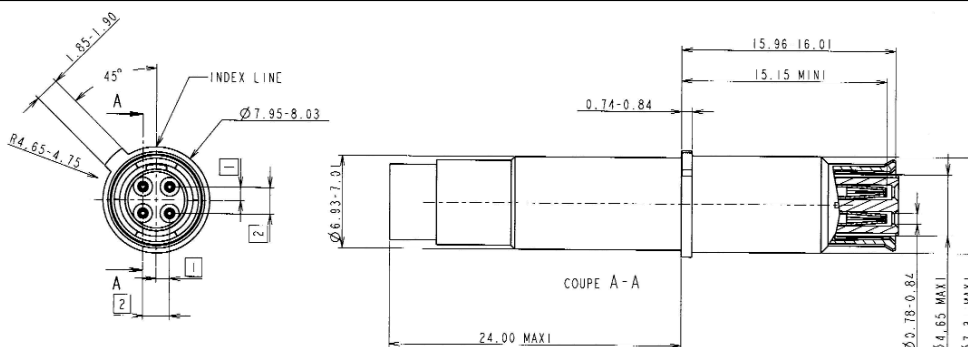
**Male  
Contact**

**Rear  
release**

**To crimp**

**P/N: ETH1-1115A**

### QUADRAX # 8 – SOCKET FOR 38999 CONNECTOR



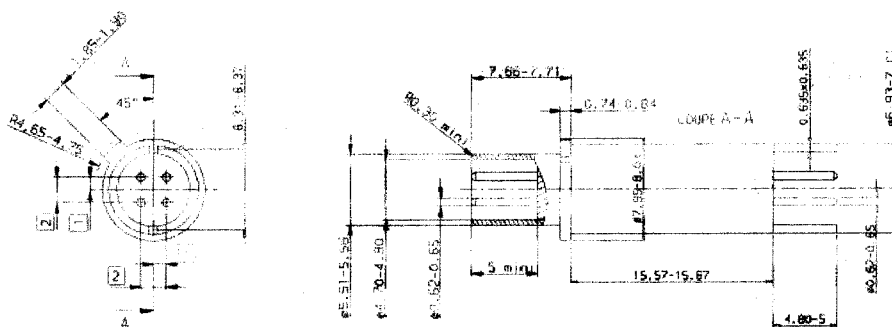
**Female  
Contact**

**Rear  
release**

**To crimp**

**P/N: ETH1-1116A**

### QUADRAX # 8 – PIN FOR 38999 CONNECTOR FOR PCB MOUNT



**Male  
Contact**

**Rear  
release**

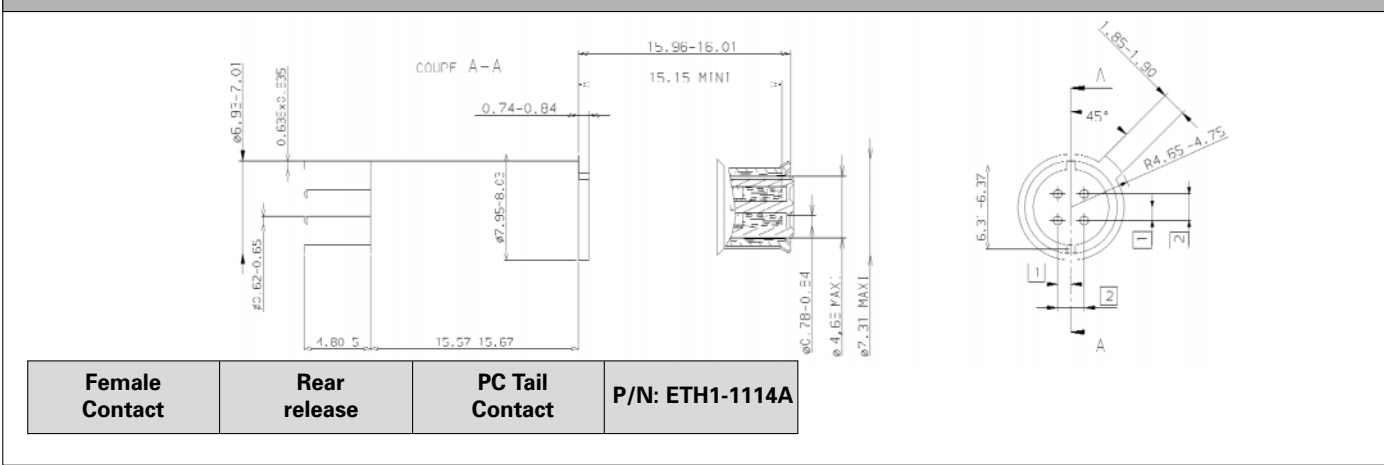
**PC Tail  
contact**

**P/N: ETH1-1117A**



# Quadrax Contact

## QUADRAX # 8 - SOCKET FOR 38999 CONNECTOR FOR PCB MOUNT



### 4 - TOOLING DATA

#### A/ Crimping tools



Ref: M22520/2-01 and K709

#### B/ Insertion and extraction tool

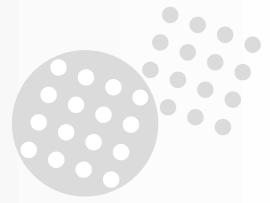


Ref: 8660-19/7



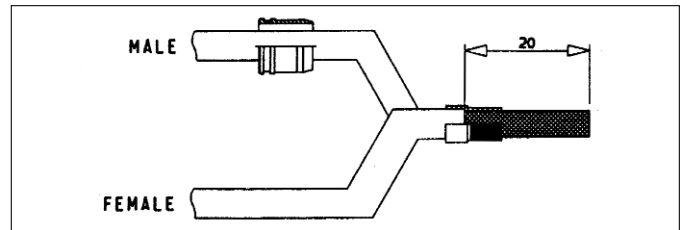
Ref: M22520/5-01 and M22520/5-45

# Quadrax Contact

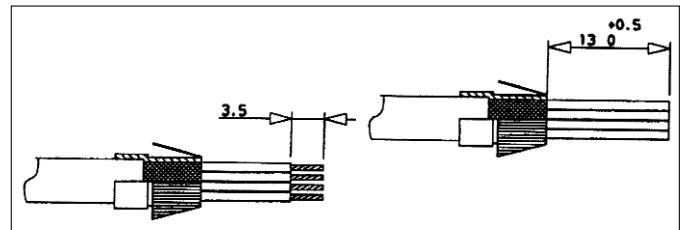


## 5 - WIRING INSTRUCTION

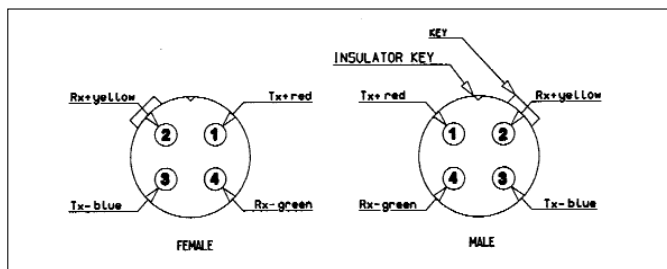
- Fit the supply guide on the cable for the male contact.
- Strip braid back 20 mm.
- Install the ferrule



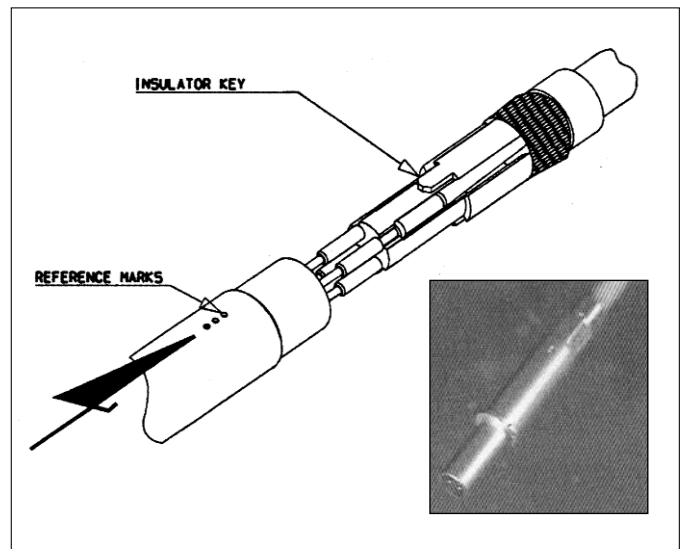
- Twist braid around the ferrule  
Trim the wires back 13 mm 0/+0,5  
TAKE CARE TO HAVE THE SAME LENGTH FOR THE 4 WIRES  
Cut the braid, leaving the rear part of the ferrule exposed
- Strip the wires back 3,5 mm  
Crimp the contacts using M22520/2-01 tool and K709 positioner, setting number 5



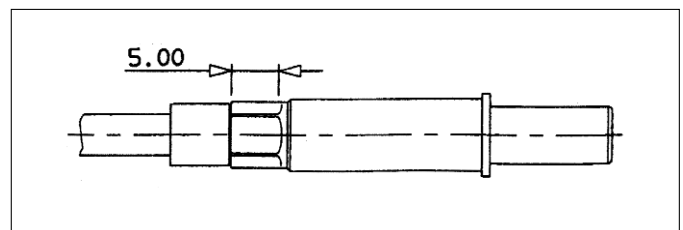
- Put the wired contacts in the insulator (see the front face view for positioning)



- Align the insulator key with the reference marks.  
Insert until the knurled part of the ferrule is inside the body



- Insure that all the pieces are held in place before and during crimping. Crimp braid and outer jacket using M22520/5-01 tool and M22520/5-45 die set rep B. Crimp length: 5 mm



## 6 - RECOMMENDED CABLES

| Supplier | Characteristic impedance | P/N      | Cable type | Number of pairs |
|----------|--------------------------|----------|------------|-----------------|
| Draka    | 100 $\Omega$             | F4703-38 | Star quad  | 2               |
| Nexans   | 100 $\Omega$             | ET2PC236 | Star quad  | 2               |

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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