

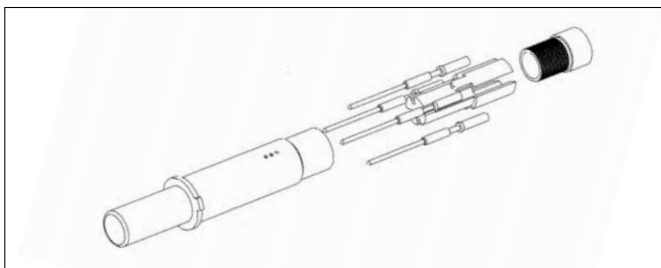
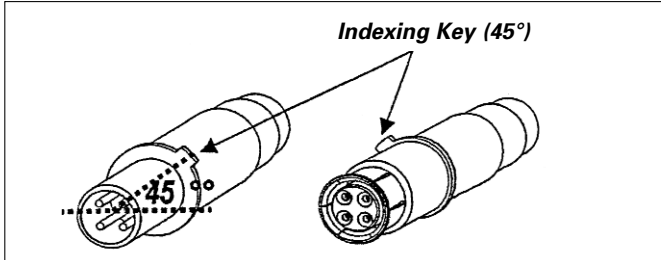
Quadrax Contact

1 - DESCRIPTION

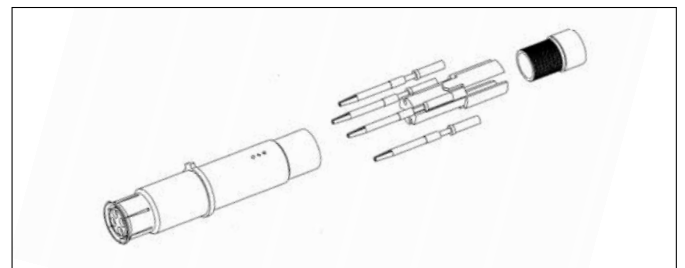
- Four # 24 pin contacts with 360° shielding
- Compact design allows mounting into # 8 cavity dimensions
- Replaces the use of 2 twinax contacts with 30% shorter cabling time and better performance
- Front and rear removable versions available
- Crimp and PC tail versions available

Key features

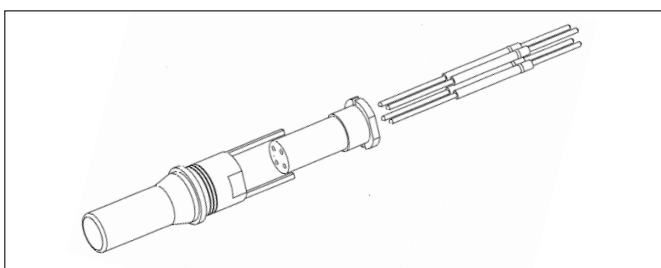
- Crimped signal contacts, crimped # 8 body
- Standard # 8 cavity insertion and removal tools
- Ground connection of the cable braid to the shell possible through the external shell of the # 8 contacts
- Compatible with star quad cable and twinax cable
- Characteristic impedance of 100 Ω or 150 Ω
- Operating 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 g²/Hz, as per MIL-STD 1344 A, Method 2005.1, level E, test V, in ARINC 600 connector
 - Random, 3 x hours – 0.2 g²/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

Copper Technology

QUADRAX # 8 - PIN FOR ARINC 600 CONNECTOR

Male Contact	Rear release	To crimp	P/N: ETH1-1100A
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QUADRAX # 8 - SOCKET FOR ARINC 600 CONNECTOR

Female Contact	Rear release	To crimp	P/N: ETH1-1101A
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QUADRAX # 8 - PIN FOR ARINC 600 CONNECTOR PCB MOUNT

Male Contact	Front release	PC Tail contact L = 6.35 mm	P/N: ETH1-1110A
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Quadrax Contact

B/ For MIL-DTL-38999 Connectors

QUADRAX # 8 – PIN FOR 38999 CONNECTOR

Male Contact	Rear release	To crimp	P/N: ETH1-1115A
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QUADRAX # 8 – SOCKET FOR 38999 CONNECTOR

Female Contact	Rear release	To crimp	P/N: ETH1-1116A
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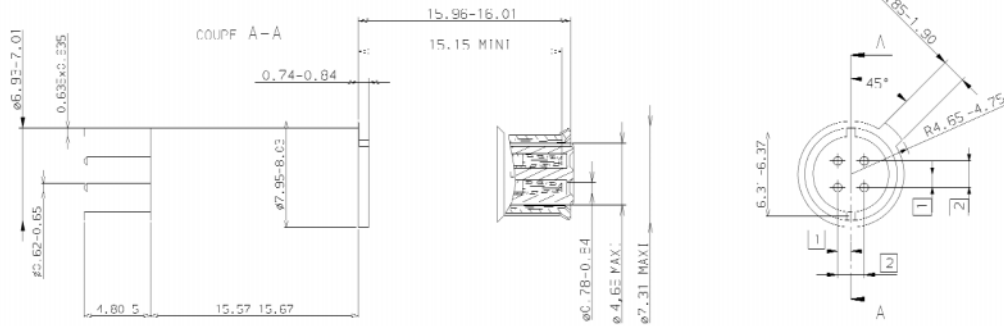
QUADRAX # 8 – PIN FOR 38999 CONNECTOR FOR PCB MOUNT

Male Contact	Rear release	PC Tail contact	P/N: ETH1-1117A
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Quadrax Contact

QUADRAX # 8 - SOCKET FOR 38999 CONNECTOR FOR PCB MOUNT



Female Contact	Rear release	PC Tail Contact	P/N: ETH1-1114A
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Copper Technology

4 - TOOLING DATA

A/ Crimping tools



Ref: M22520/2-01 and K709

B/ Insertion and extraction tool

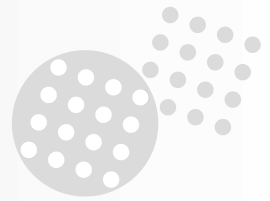


Ref: 8660-19/7



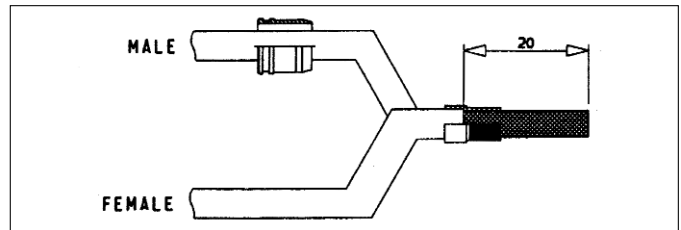
Ref: M22520/5-01 and M22520/5-45

Quadrax Contact

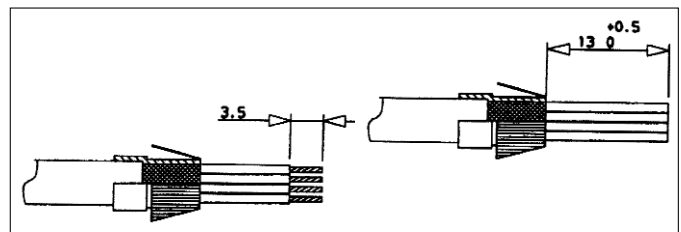


5 - WIRING INSTRUCTION

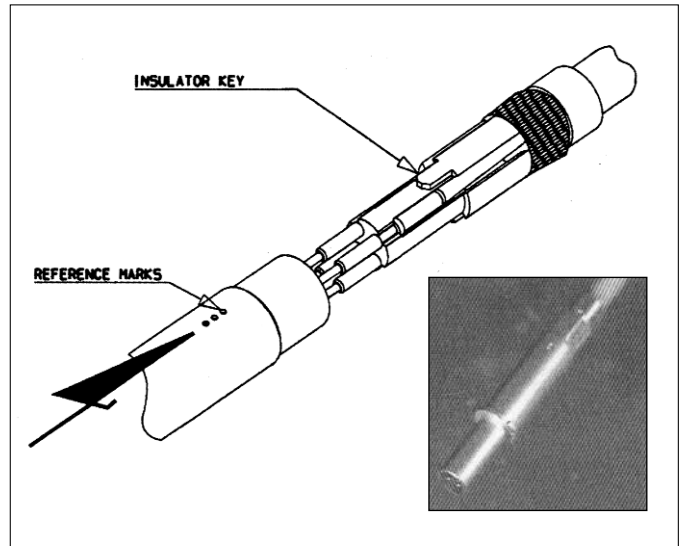
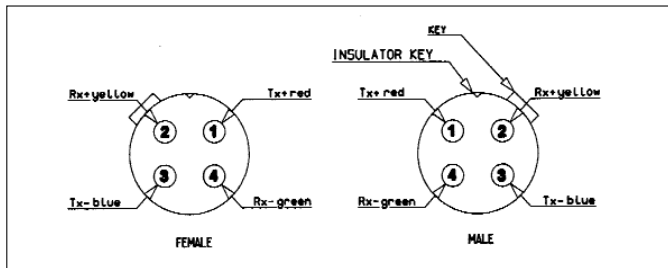
- Fit the supply guide on the cable for the male contact.
- Strip braid back 20 mm.
- Install the ferrule



- 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

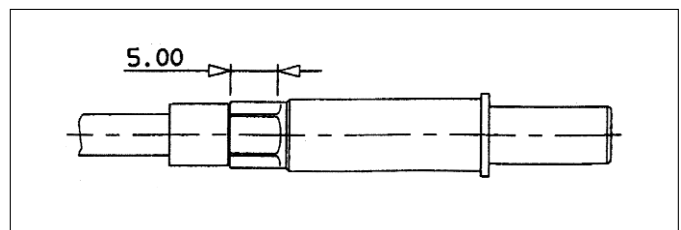


- Put the wired contacts in the insulator (see the front face view for positioning)



- 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 Ω	F4703-38	Star quad	2
Nexans	100 Ω	ET2PC236	Star quad	2

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