

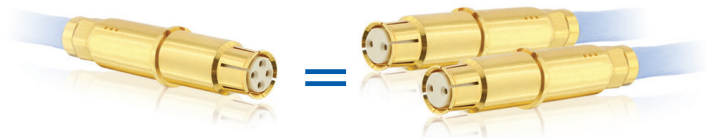
8D Series Twinax & Quadrax Contacts



Contacts for Full Duplex Ethernet Link

Twinax and Quadrax contacts with robust MIL-DTL-38999 compliant screw coupling system for networks and high vibration environments.

High speed ■ One quadrax contact = 2 twinax contacts.
Data rate up to 1 Gbit/sec.



A wide range available ■ Compatible with all SOURIAU standard 38999 shells, plating and inserts with #8 cavities. Same cavity for coax, concentric twinax (=triax), power, and ELIO® fiber optic contacts.

A flexible range ■ Quadrax contact available in 100 & 150 ohms (grounded or not).
Mix Twinax and Quadrax in the same layout.

Description

- Front and rear removable versions available
- Twinax: crimp version available
- Quadrax: crimp and PC tail versions available
- Standard #8 cavity insertion and removal tools
- Ground connection of the cable braid to the shell possible through the external shell of the #8 contact
- Compatible with star quad cable
- Characteristic impedance of 100 Ohms
- Mixed layouts not grounded

Technical features

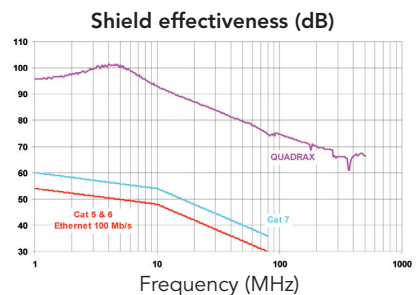
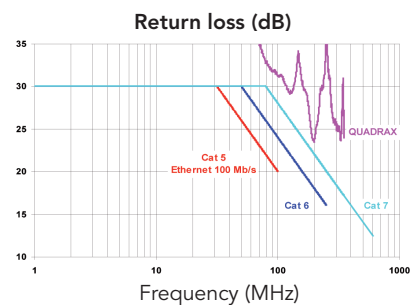
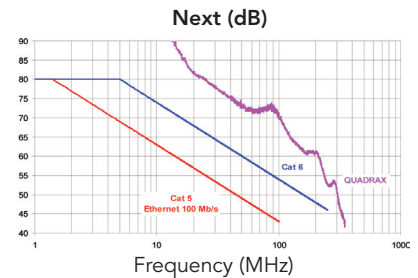
Mechanical

- **Operating temperature:**
-65°C up to 150°C
- **Inner contact:**
copper alloy
- **Contact body:**
copper alloy
- **Contact insulator:**
thermoplastic resin
- **Contact plating:**
gold over nickel
- **Shell plating:**
 - . Aluminum shell:
 - Cadmium olive drab (W)
 - Nickel (F)
 - Black zinc nickel (Z)
 - Green zinc cobalt (ZC)
 - . Composite shell:
 - Cadmium olive drab (J)
 - Nickel (M)
 - Without plating (X)
 - . Stainless steel shell:
 - Passivated (K)
 - Nickel (S)
 - . Titanium shell:
 - Without plating (TT)
 - Nickel (TF)
 - . Bronze shell:
 - Without plating






Electrical

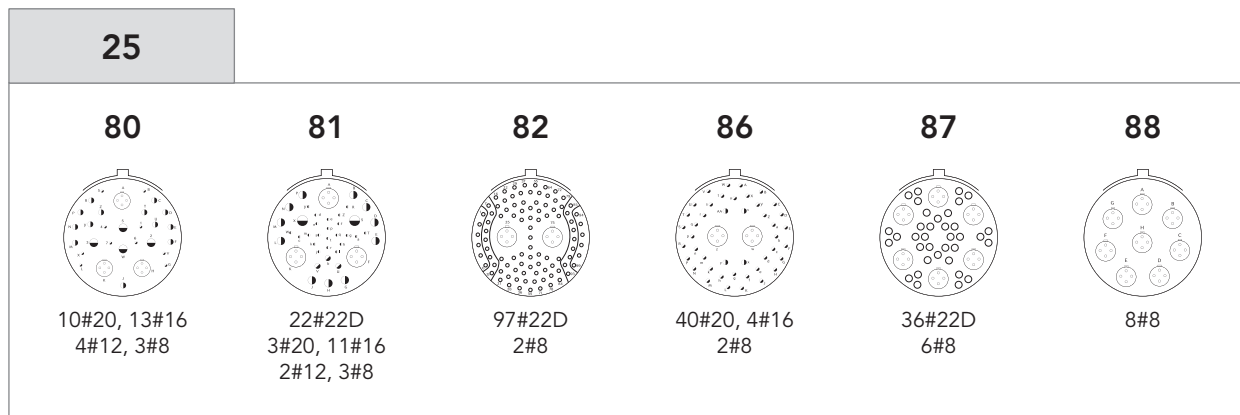
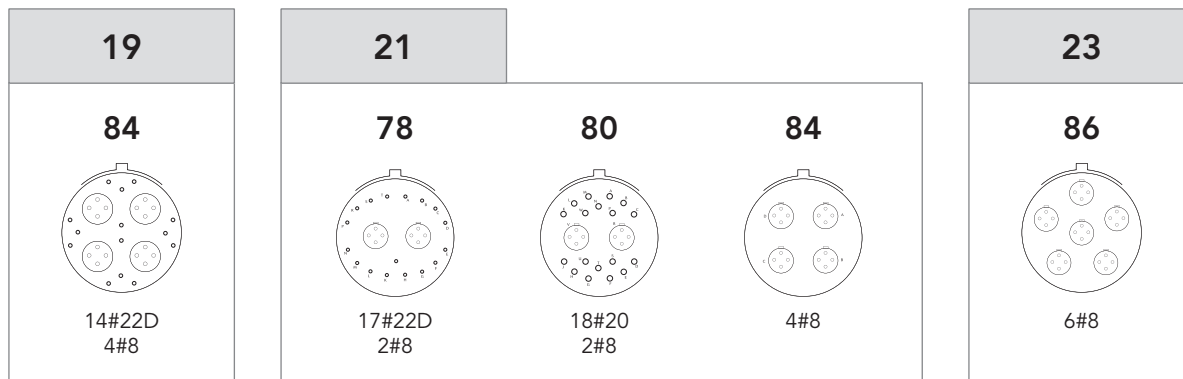
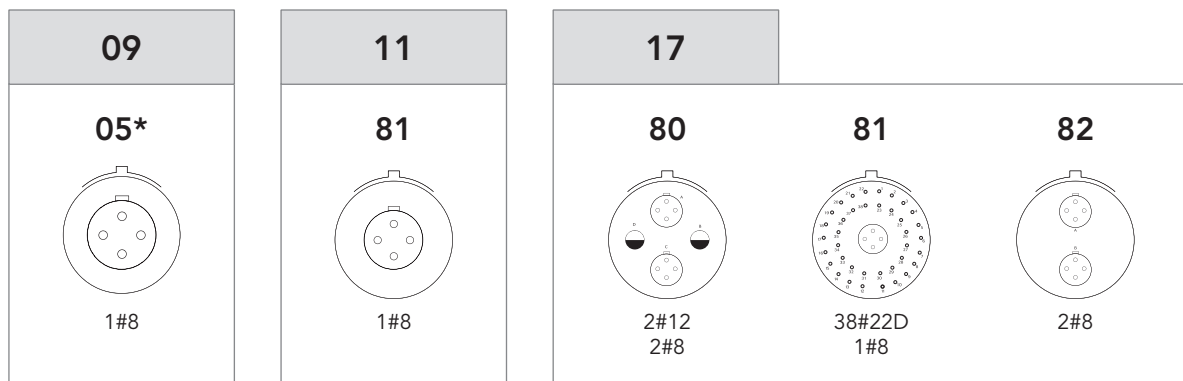
- **ISO/IEC 11801 category 6 compliant:**
 - . Next (cross talk): > 46 db at 250 MHz
 - . Return loss: > 16 db at 250 MHz
 - . Shield effectiveness: > 36 db at 80 MHz
- **Contact to shell continuity:**
< 10 mΩ
- **Contact resistance (low level):**
 - . Initial 15 mΩ
 - . After tests 30 mΩ
- **Dielectric withstanding voltage:**

Altitude	Service I
sea level	500 Vrms
21 000 m	125 Vrms
- **Insulation resistance:**
 - . At ambient temperature: > 5000 MΩ
 - . At high temperature: > 1000 MΩ
- **#24 contact cable size acceptance:**
AWG 22 to AWG 26



Contact layouts

-  Contact #22D
-  Contact #12
-  Contact #20
-  Contact #8, Twinax or Quadrax
-  Contact #16



* 09-05 layout with twinax or quadrax contact:
 - grounded version only
 - plug with female contact & receptacle with male contact only

Note: Mixed layouts not grounded.

Ordering information

Aluminum, Composite, Stainless steel & Titanium connector

Basic Series	8D	0	Q	11	W	81	P	N	284	L
Shell style:										
0: Square flange receptacle										
5: Plug										
7: Jam nut receptacle										
Type:										
C: Quadrax PC tail contacts*										
Q: Quadrax crimp contacts										
Shell size: 9 - 11 - 17 - 19 - 21 - 23 - 25 (see next page)										
Plating:										
Aluminum shell:					Composite shell:					
W: Olive green cadmium					J: Olive green cadmium					
F: Nickel					M: Nickel					
Z: Black zinc nickel					X: Without plating					
ZC: Green zinc cobalt					Titanium shell:					
Stainless steel shell:					TF: Nickel					
K: Passivated					TT: Without plating					
S: Nickel										
Contact layout: See previous page										
Contact type:										
P: Pin										
S: Socket										
Orientation: N, A, B, C, D & E										
Specification:										
284: Quadrax grounded PC tail contact (100Ω)*					550: Tin plated Quadrax not grounded PCB contact SnPb					
308: Quadrax not grounded PC tail contact (100Ω)					550S: Tin plated Quadrax not grounded PCB contact SAC305					
384: Quadrax grounded crimp contact (150Ω)*					550E: Tin plated Quadrax not grounded PCB contact Sn pur					
408: Quadrax not grounded crimp contact (150Ω)										
620: Quadrax grounded crimp contact (100Ω)*										
621: Quadrax not grounded crimp contact (100Ω)										
L: For P or S contact type only, connectors delivered without contacts, connectors marking P or S plus orientation										

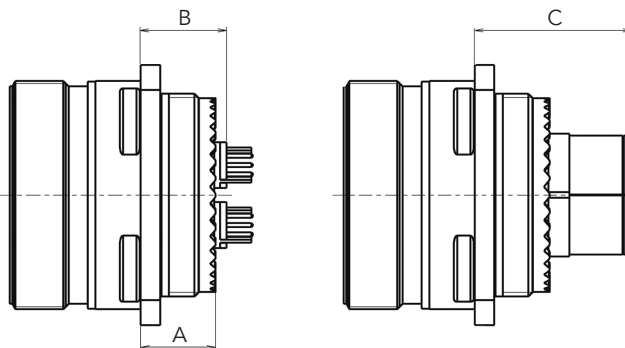
Bronze connector

Basic Series	JVS	C	00A	09	35	P	N	284	L
Type:									
C: Quadrax PC tail contacts*									
Q: Quadrax crimp contacts									
Shell style:									
00A: Square flange receptacle									
16A: Plug									
07A: Jam nut receptacle									
Shell size: 9 - 11 - 17 - 19 - 21 - 23 - 25 (see next page)									
Contact layout: See previous page									
Contact type:									
P: Pin									
S: Socket									
Orientation: N, A, B, C, D & E									
Specification:									
284: Quadrax grounded PC tail contact (100Ω)*					550: Tin plated Quadrax not grounded PCB contact SnPb				
308: Quadrax not grounded PC tail contact (100Ω)					550S: Tin plated Quadrax not grounded PCB contact SAC305				
384: Quadrax grounded crimp contact (150Ω)*					550E: Tin plated Quadrax not grounded PCB contact Sn pur				
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620: Quadrax grounded crimp contact (100Ω)*									
621: Quadrax not grounded crimp contact (100Ω)									
L: For P or S contact type only, connectors delivered without contacts, connectors marking P or S plus orientation									

* For PC tail contacts or grounded versions please consult us.

Dimensions

Square flange receptacle - Type 0

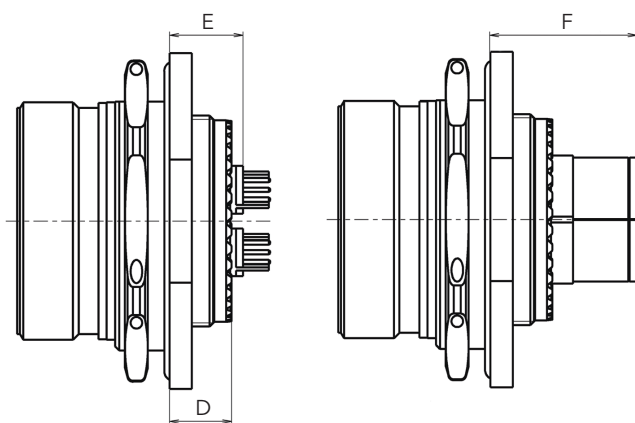


PC Tail contacts

Crimp contacts

Shell size	A Max			B Min			B Max			C Max
	Aluminum	Composite	Stainless steel, Titanium & Bronze	Aluminum	Composite	Stainless steel, Titanium & Bronze	Aluminum	Composite	Stainless steel, Titanium & Bronze	All materials
11 to 19	10.72	11.96	11.4	11.5	12.5	12	13.5	13.5	14	29
21 to 25	11.54	12.76	11.8	12	14.5	12.5	14	15.5	14.5	30

Jam nut receptacle - Type 7

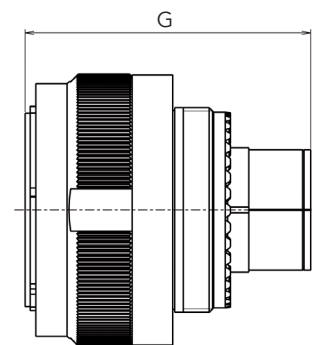


PC Tail contacts

Crimp contacts

Material	Aluminum, Stainless steel, Titanium & Bronze			
	D Max	E Min	E Max	F Max
Shell size 11 to 25	9.9	9.5	12	27

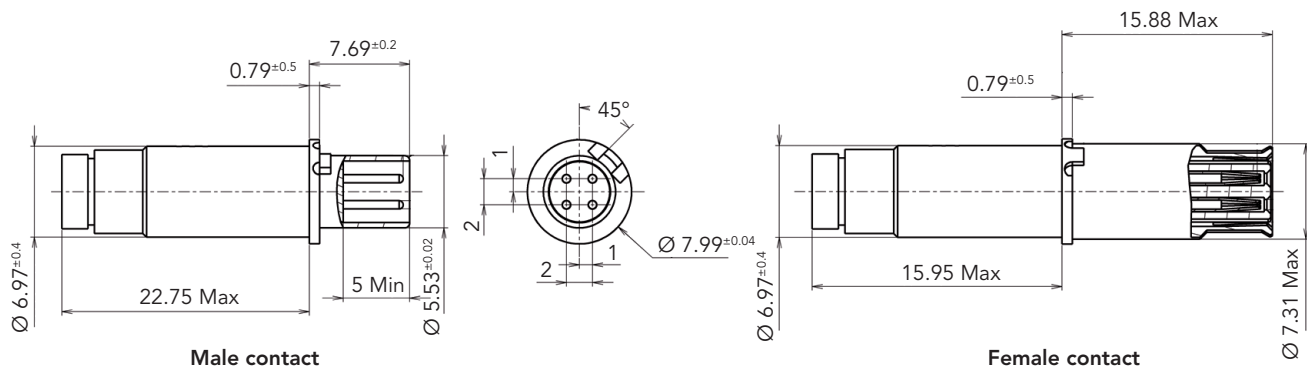
Plug - Type 5



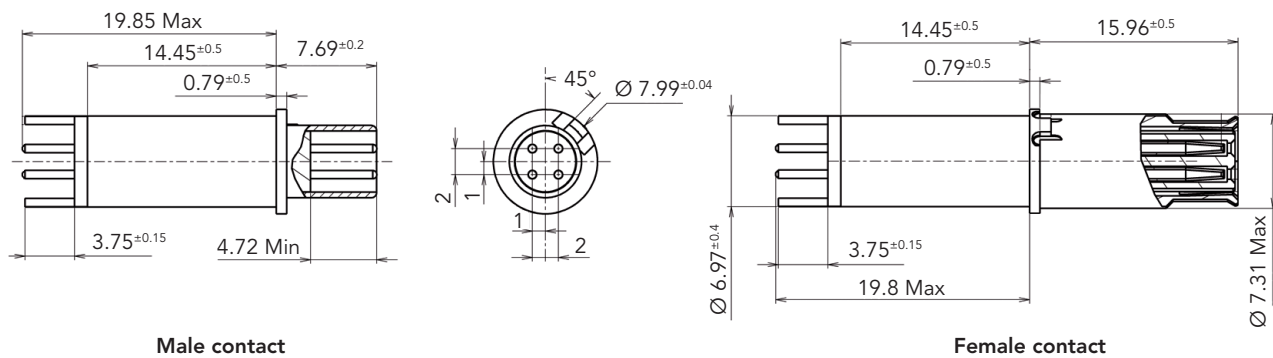
All materials	
Shell size 11 to 25	G Max
	48

Note: All dimensions are in millimeters (mm)

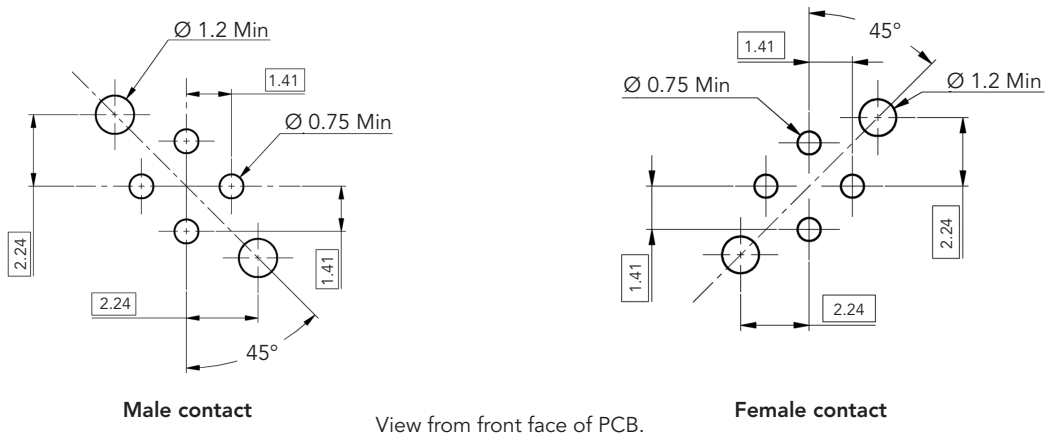
Quadrax crimp contact



Quadrax PCB contact

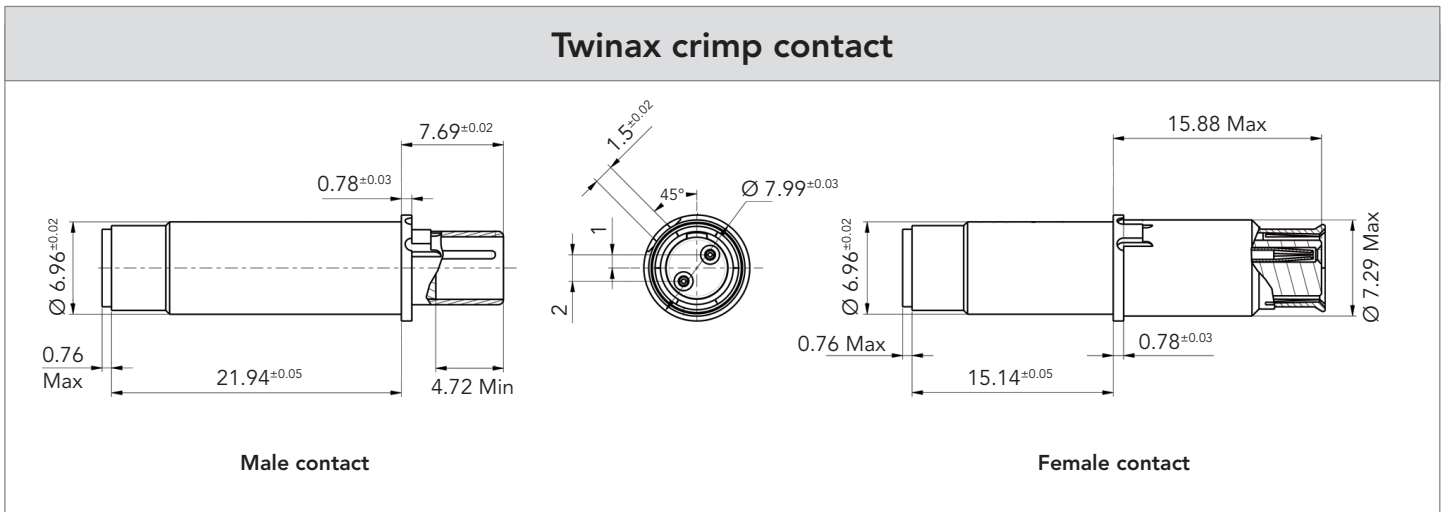


Drill dimensions for PCB mount



View from front face of PCB.

Note: All dimensions are in millimeters (mm)



Contact ordering information

In-line alignment key. All crimp contacts are sealed thru a sealing boot. Crimp contacts ordered separately are delivered with sealing boot.

Quadrax contacts

Contact type		SOURIAU part number	Cross Norm	Impedance	Release	T° Max
PC tail L= 4±0.1mm	Pin	ETH1-1237A	-	100Ω	Rear	125°C
		ETH1-1501A	-	150Ω	Rear	125°C
	Socket	ETH1-1238A	-	100Ω	Rear	125°C
		ETH1-1502A	-	150Ω	Rear	125°C
Crimp	Pin	ETH1-1345A	EN 3155-074	100Ω	Rear	150°C
		ETH1-1503A	-	150Ω	Rear	150°C
	Socket	ETH1-1346A	EN 3155-075	100Ω	Rear	150°C
		ETH1-1504A	-	150Ω	Rear	150°C

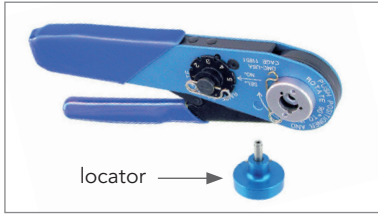
Twinax contacts

Contact type		SOURIAU part number	Cross Norm	Impedance	Release	T° Max
Crimp	Pin	ETH2-1110A	-	100Ω	Rear	150°C
	Socket	ETH2-1111A	-	100Ω	Rear	150°C

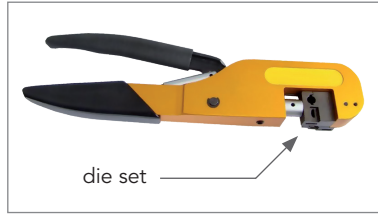
Note: All dimensions are in millimeters (mm)

Tooling

- Inner contacts: M22520/2-01 crimping tool and K709 locator



- Outer body: M22520/5-01 crimping tool and M22520/5-45 die set



- Insertion/extraction tool, standard size 8 cavity tools: 8660-197 (metallic) or M81969/14-06 (plastic)



Metallic tool



Plastic tool

Recommended cable

Impedance	Reference	Cable type	Number of pairs
100Ω	ABS 1503 KD24	Star quad	2

For further information contact us at technical.emear@souriau.com (Europe - Asia - Africa)
technical.americas@souriau.com (North America)
 or visit our web site www.souriau.com