

SC39

Quick Release Connectors Derived from MIL-DTL-38999 Series III



Main Features:

CONTACTS

- More than 30 contacts arrangements
- Size 8, 12, 16, 20, 22D, 23 contacts
- Signal, power, twinax, coaxial, quadrax contacts

CONTACTS PROTECTION

- 100% scoop-proof shell
- Interfacial seal ensures sealing around each contact and prevents electrolytic erosion

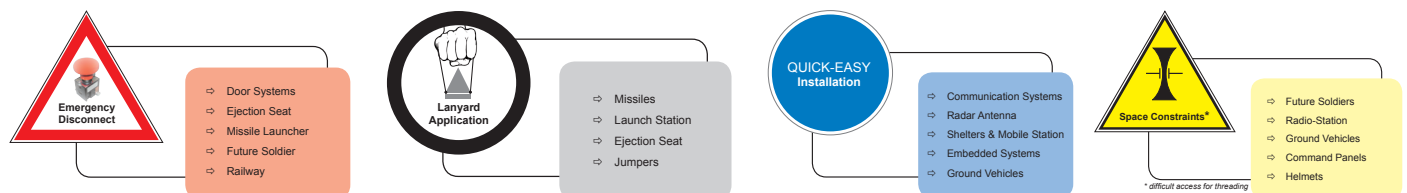
EMI/RFI PROTECTION

- Grounding spring on the shell

Product Range

# VERSIONS	# SHELL TYPE	SHELL MATERIAL	FINISH
<ul style="list-style-type: none"> • Uncoupling forces : <ul style="list-style-type: none"> • Standard • Low force • Integrated backshells 	<ul style="list-style-type: none"> • Lanyard • Stand Off • Low Profile • Integrated backshells 	<ul style="list-style-type: none"> • Aluminium • Marine Bronze • Stainless Steel 	<ul style="list-style-type: none"> • Oliv Drab Cadmium plating • Nickel plating • Passivation (for steel version) • ROHS plating available on request

Applications



Markets



Military Aerospace



C4ISR



Missile

Benefits

Technically :

• Lighter	Weight saving
• Smaller	Space saving
• Stronger	Shock resistance
	Vibration resistance
	EMI/RFI protection

Mounting :

- **Push to lock**
- **Pull directly lanyard/harness to disconnect**
- **Coupling spring force retention**

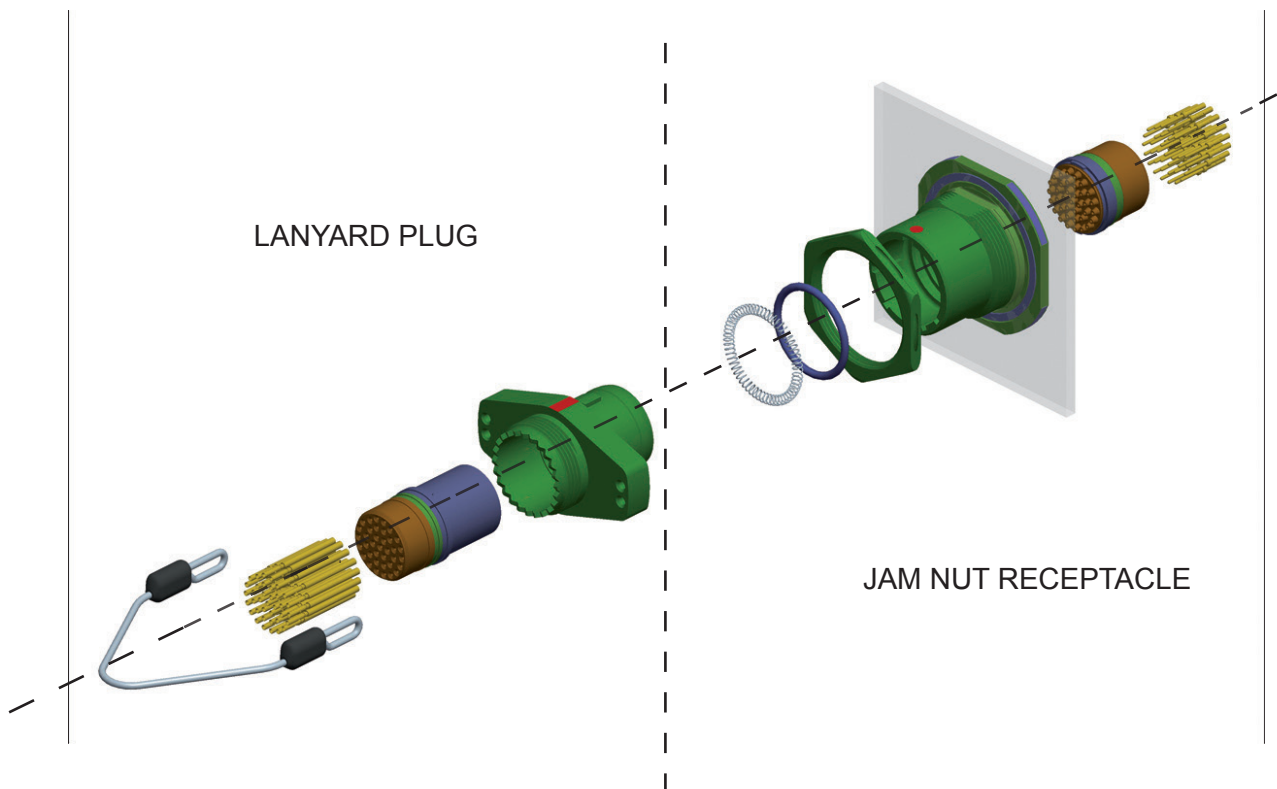
NO THREADING

Standard version: from 5 to 10 kilos *

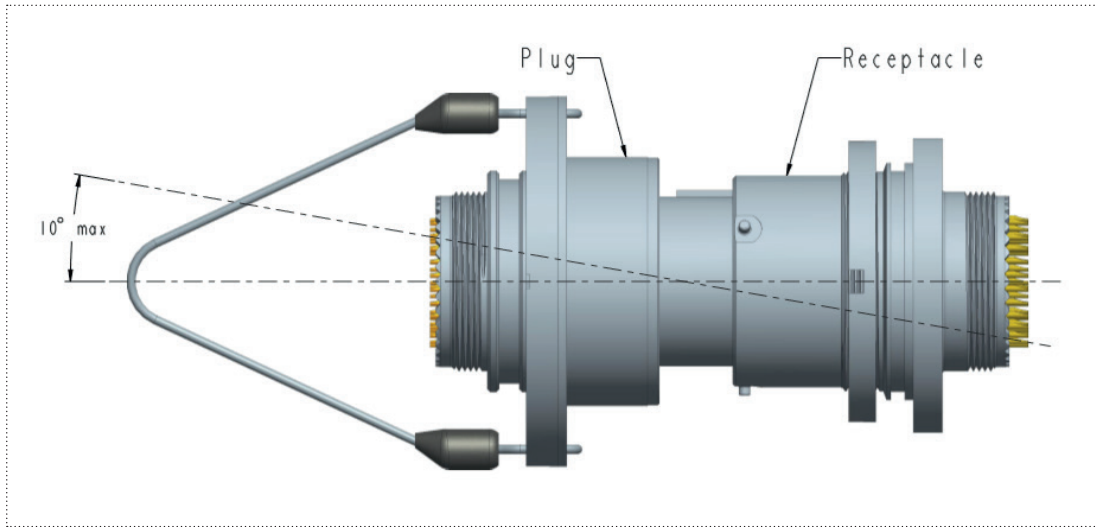
Low force version: less than 5 kilos *

* without contacts retention force

SC39 Mated Pair



SC39 Misalignment



SC39 Misalignment

- Durability $\geq 1500^*$ cycles
- Leakage attenuation:

Frequency (MHz)	Leakage attenuation minimum (dB)	
	38999 Requirements	SC39
100	90	100
200	88	95
300	88	94
400	87	94
800	85	84
1000	85	74

* Depends on the contact durability



SC39 Low Force

- Easier uncoupling (cf. table below «std vs low force»)
- Does not apply to the plug
- Available in all 38999 arrangements
- 10° Max misalignment between plug and receptacle

Contact size	SC39 STD		SC39 LOW FORCE	
	Sliding force (kg)	Removal force (kg)	Sliding force (kg)	Removal force (kg)
#9	1.2	5	2.2	4.1
#11	7.7	7.6	2.2	4.1
#13	2.05	8.8	2.6	4.7
#15	2.45	9.1	2.3	4.1
#17	2.35	10.25	2.1	3.5
#19	2.35	10.25	2.4	4.3
#21	1.9	7.4	2.4	4.4
#23	1.9	8.2	2.6	4.9
#25	1.9	9.68	2.0	4.0

- Above forces exclude contact insertion/extraction forces
- Forces can be customized at your request

Contact us for further information

Inserts Arrangements

Front face of male insert. (Only the major keyway is illustrated)

09						
	09-05	09-09*1	09-35	09-94	09-98	
	11					
		11-01	11-02	11-04	11-05	11-12
11-19*1		11-35	11-98	11-99		
13						
	13-04	13-08	13-26	13-32*1	13-35	13-98
	15					
		15-04	15-05	15-15	15-18	15-19
		15-25	15-35	15-55*1	15-97	
17						
	17-02	17-06	17-08	17-20	17-22	17-26
	17-35	17-52	17-73*1	17-75	17-99	

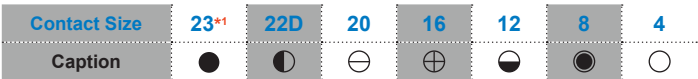
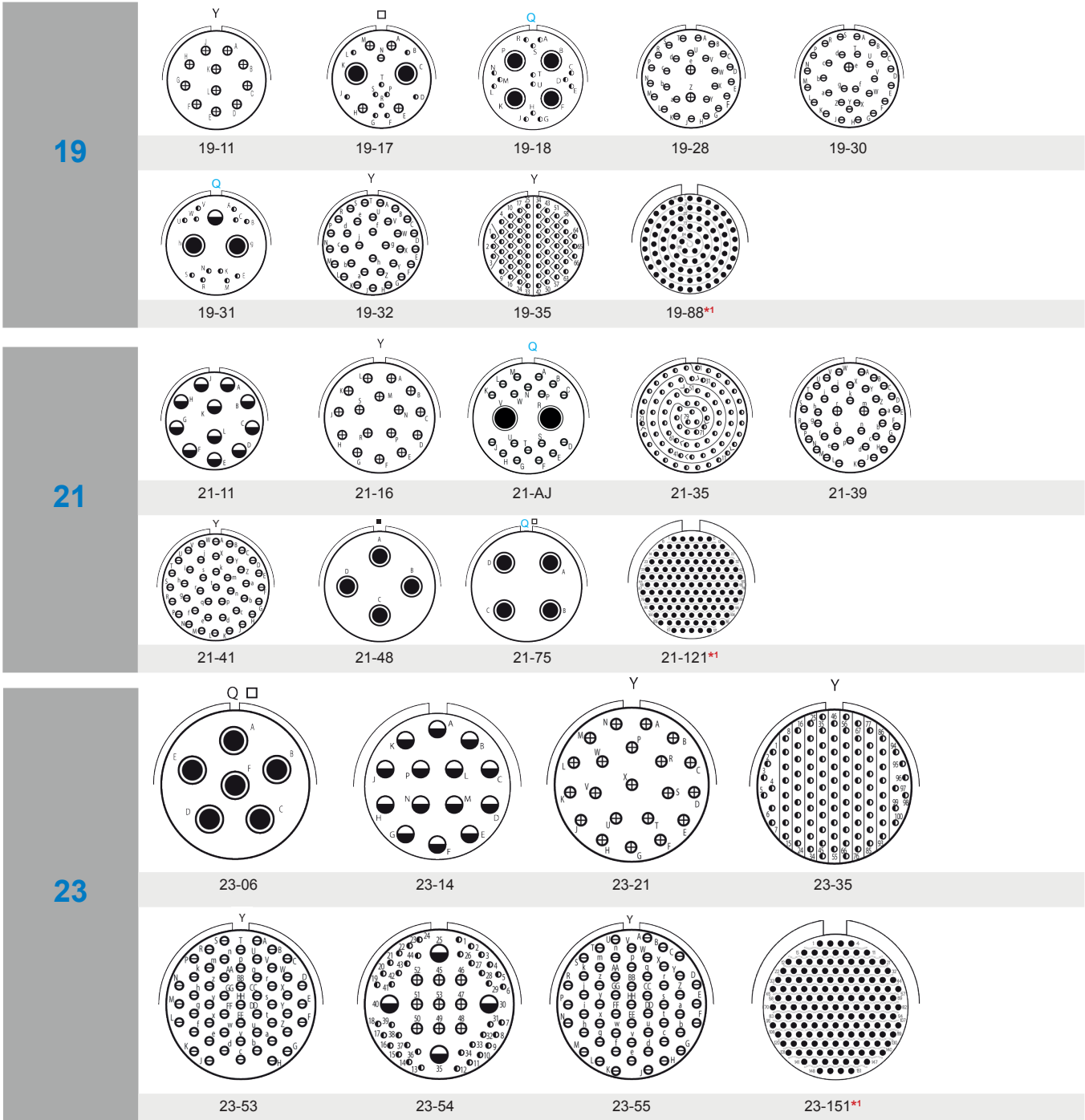
Contact Size	23*1	22D	20	16	12	8
Caption						

*1 High-Density arrangements

- Insert with size 8 cavities compatible with Quadrax contacts or differential twinax contacts if mentioned in the part number (see ordering information).
- Delivered with twinax contacts for simple braid cable (M17/1760002, AECMA Pr EN 3375 - 003, Raychem 10612, EPD44690, EPD44691).
- Delivered with twinax contacts for double braid cable (PAN 6421, AECMA Pr EN 3375 - 004, Raychem 10613, EPD44692, EPD44693).
- For information, regarding the design of the grommet for size 8 contact (tower grommet, 3 webs,...) and the corresponding piggy back grommet, please consult us.
- Tower grommet design for size 8 cavities, compatible with standard 900470, 900473... piggy back grommets.

Inserts Arrangements

Front face of male insert. (Only the major keyway is illustrated)

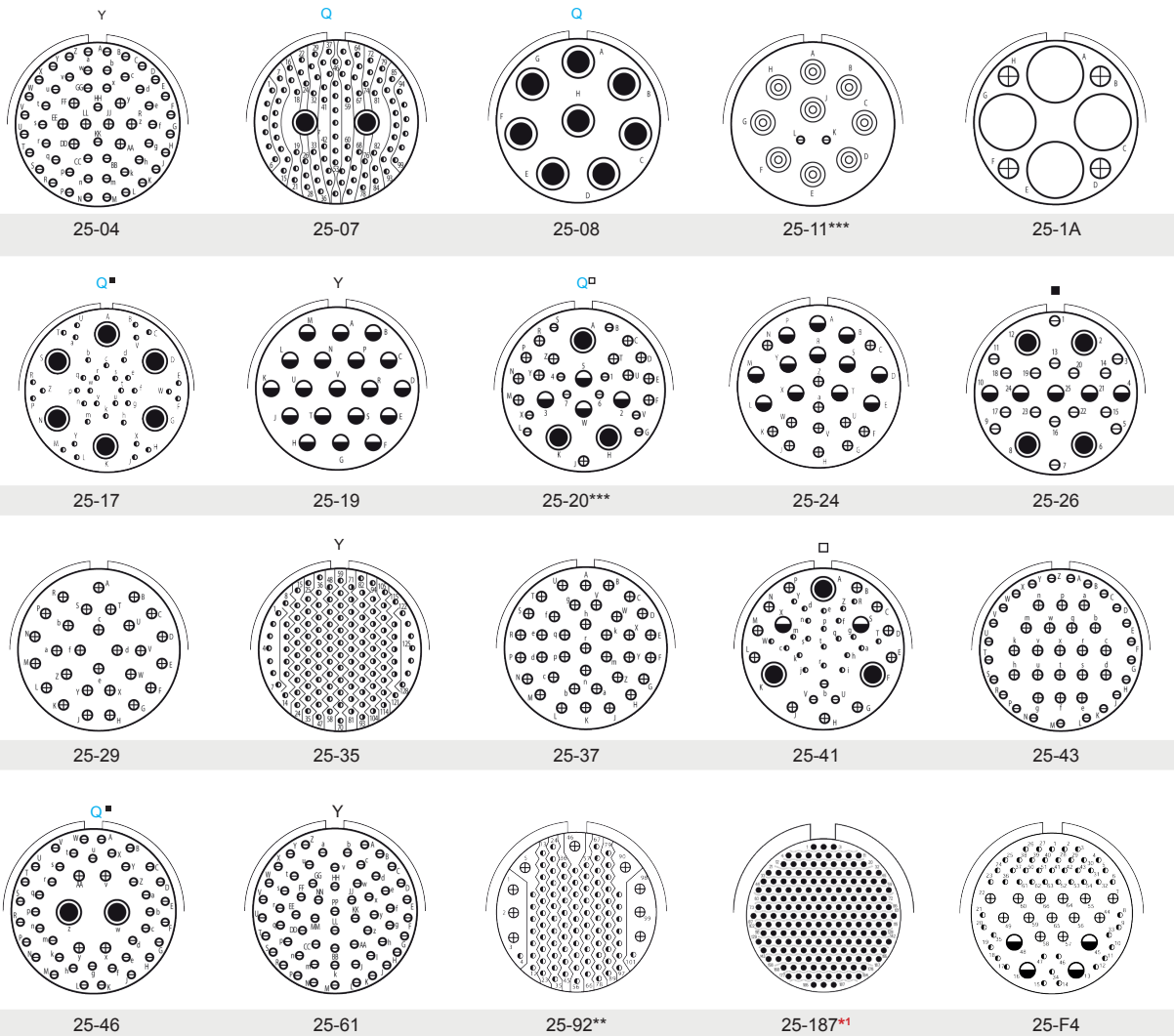


*1 High-Density arrangements

Inserts Arrangements

Front face of male insert. (Only the major keyway is illustrated)

25



Contact Size	23*1	22D	20	16	12	8	4
Caption	●	◐	◑	⊕	◒	◓	○

*1 High-Density arrangements

- * Military P/N delivered with 8 twinax and proprietary P/N delivered with size 8 coaxial contacts for RG 180 and RG 195 wire.
- ** Not available in composite version.
- *** For MIL STD 1760 application.
- Y Available in hermetic version.
- Q Insert with size 8 cavities compatible with Quadrax contacts or differential twinax contacts if mentioned in the part-number (see ordering information).
- ◻ Delivered with twinax contacts for simple braid cable (M17/1760002, AECMA Pr EN 3375 - 003, Raychem 10612, EPD44690, EPD44691).
- For information regarding the design of the grommet for size 8 contact (tower grommet, 3 webs, ...) and the corresponding piggy back grommet, please consult us.
- ◻ Tower grommet design for size 8 cavities, compatible with standard 900470, 900473... piggy back grommets.
- Δ Delivered with twinax contacts for double braid cable (PAN 6421, AECMA Pr EN 3375 - 004, Raychem 10613, EPD44692, EPD44693).

How to order

Series	SC39	PS00	L	RF	15	35	P	A	-	-
Shell type										
Square flange receptacle	175°C (O.D. Cadmium): P00	200°C (Electroless Nickel): PS00***								
Low Profile Square F. receptacle	175°C (O.D.C.): LP00	200°C (E.N.): LPS00***								
Jam nut receptacle	175°C (O.D.C.): 07	200°C (E.N.): S07***								
Low Profile Jam nut recept.	175°C (O.D.C.): LP07	200°C (E.N.): LPS07***								
In-line receptacle	175°C (O.D.C.): 01	200°C (E.N.): S01***								
Lanyard in-line receptacle	175°C (O.D.C.): RL01	200°C (E.N.): RLS01***								
Straight plug	175°C (O.D.C.): 06	200°C (E.N.): S06***								
Low Profile Straight plug	175°C (O.D.C.): LP06	200°C (E.N.): LPS06***								
Lanyard plug	175°C (O.D.C.): RL06	200°C (E.N.): RLS06***								
Low Force (for receptacles only)										
Shell material, finish and contact type										
<u>Aluminium</u>										
RW	Olive drab cadmium plated 175°C, crimp contacts									
WCI	Olive drab cadmium plated 175°C, standard PCB contacts (length 5mm)									
WLI	Olive drab cadmium plated 175°C, PCB contacts long tail*									
RF	Electroless nickel plated 200°C***, crimp contacts									
FCI	Electroless nickel plated 200°C***, PCB contacts									
RQW or RQF	For insert compatible with quadrax or dif. Twinax**									
<u>Stainless steel</u>										
RK	Passivated 200°C***, crimp contacts									
KCI	Passivated 200°C***, standard PCB contacts (length 5mm)									
KLI	Passivated 200°C***, PCB contacts long tail*									
RQK or RQS	For insert compatible with quadrax or dif. Twinax**									
<u>Bronze</u>										
RB	200°C***, crimp contacts									
BCI	200°C***, standard PCB contacts (length 5mm)									
BLI	200°C***, PCB contacts long tail*									
RQB	For insert compatible with quadrax or dif. Twinax**									
Shell size										
09/11/13/15/17/19/21/23/25										
Contact arrangement***										
All arrangements available in 38999										
Contact type										
P	Pin (500 cycles)									
S	Socket (500 cycles)									
Polarization										
Blank for normal only for the integrated backshell version.										
Blank for normal or A, B only for low profile version.										
Blank for normal or A, B, C, D, E. for all the other versions.										
See coding system on page 11.										
Contacts										
Blank	Connector delivered with contacts									
LC	Connector delivered without contact									
Deviation										
F404 / F404LF / F404LFC	Tinned PCB contacts (lead tinned / silver tinned / silver-copper tinned)									
F459 / F459LF / F459LFC	Stand-off receptacle - only for shell types P00 and 07 (lead tinned / silver tinned / silver-copper tinned)									
F472	Integrated backshells - only for shell type 01 and 06 (O.D.C. / Nickel)									
For any other deviation (Fxxx), please consult us.										

NOTA:

* For receptacles delivered with PCB contacts, please consult us.

** For Quadrax or dif. Twinax compatible inserts, please omit the "S" corresponding to 200°C compatibility when applicable, in the P/N (example: SC3907RQF1752PLC).

***For high-density contact arrangement, please omit the "S" corresponding to 200°C compatibility in the P/N. High-density inserts are +175°C maxi compatible. Ex: SC39 P 00 RF 09 09 S

For other arrangement, shell, coding or deviation, please consult us.