



# SN 855 Series

## Applications

Nuclear hardened miniature connectors with 4 contacts designed for use in :

- equipment for armored military vehicles
- weapons systems
- civil and military aircraft.

## Standards

Aerospatiale  
N° 462062/89



## Characteristics

### Mechanical

- Mechanical endurance :  
≥ 200 mating/unmating operations
- Retention of contacts in insert : ≥ 45 N

### Electrical

- Dielectric withstanding
  - voltage 1200 V rms
  - hermetic 500 V rms
- Max current rating per contact
  - standard : 5 A
  - hermetic : 3 A
- Insulation resistance
  - under 500 V dc ≥ 5000 MΩ
  - hermetic ≥ 1000 MΩ

- Contact resistance : ≤ 12 mΩ
- Shell to shell continuity under Max. coupling torque 0.8 Nm. for coupling nut and 0.5 Nm. for backshell ≤ 1 mΩ
- Transfer impedance : for a 10 dB/m power launched through a 50 Ω resistor level measured across 50 Ω in the 1 kHz - 100 MHz bandwidth to be ≤ - 85 dB/m

### Mass

- Connectors + contacts without backshell female plug or male receptacle ≤ 6 g
- Backshell type 040D ≤ 3 g

## Description

Plugs, receptacles, cable connecting receptacles and backshells are made of copper alloy and nickel plated. Stainless steel backshells are suitable for electron beam welding.

A screw-coupling system locks plug and receptacle together.

Metal-to-metal bottoming provides enhanced electrical continuity between plug and receptacle.

Crimp type gold-plated contacts are rear removable. The insulators are molded in thermoset material.

The interfacial seals and o-rings are silicone rubber.

Steel hermetic receptacles are equipped with male, solder, gold-plated, steel contacts.

Panel sealing interface is achieved by a conductive seal.

Plugs, receptacles and cable connecting receptacles must be fitted with backshells.

## Environmental

- Operating temperature range : - 55°C to + 200°C
- Splash-proof
- Hermetic leakage : ≤ 7,77.10<sup>-7</sup> atm.cm<sup>3</sup>/s
- Salt spray : 48 hours
- Vibration : 5 g - 10 to 2000 Hz
- Mechanical shock : 50 g duration 11 ms

## Ordering information

basic series		SN 855	0	0	4	P	010D	W	L
<b>version</b>	0 - standard 1 - low profile	2 - hermetic							
<b>shell type</b>	0 - square flange receptacle (for standard version only) 1 - cable connecting receptacle 5 - solder fixing hermetic receptacle	6 - plug 7 - jam-nut receptacle 8 - square flange hermetic receptacle 9 - Jam-nut hermetic receptacle							
<b>number contacts</b>	4 - 7								
<b>contact type</b>	P - male S - female								
<b>backfittings</b>	000 - Without backshell 001 - Backnut for standard version Backshell for external magnaforming (for standard version) 010D - Straight outlet 010C - Angled outlet Backshell for electron beam welding (for standard version) 020D - Straight outlet 020C - Angled outlet 030D - Backshell with electrical continuity (for low profile version) 040D - Backshell for shielded cables (for low profile version) Backshell for shielded cables (for standard version) 050D - Straight outlet 050C - Angled outlet Unsealed backshell with electrical continuity (for low profile version) 060D - Straight outlet Backshell for shield termination (for low profile version) 080D - Straight outlet Backshell for shield termination (for standard version) 081D - Straight outlet Cable clamp backshell (for standard version) 090D - Straight outlet Backshell for internal magnaforming (for standard version) 011D - Straight outlet								
<b>orientations</b>	N - normal (not included in part number) W - 45°								
<b>suffix</b>	L - connector supplied without contacts								



# SN 855 Series

## Contacts

### basic series

### SN 855 100

- type of contact**
- 100 - male standard contact
  - 101 - female standard contact
  - 102 - alumel male contact
  - 103 - alumel female contact
  - 104 - chromel male contact
  - 105 - chromel female contact

## Characteristics

- Contact size : AWG 22
- Admissible wire range : AWG 28 to AWG 22 (0.095 mm<sup>2</sup> to 0.40 mm<sup>2</sup> sections)
- Diameter across insulation : 0.76 to 1.37 mm
- Colour code for alumel contact : black
- Colour code for chromel contact : yellow

## Dimensions - mated and unmated connectors with backshells

Standard square flange receptacle	A	D	Plug type : 06 backshell standard version		A Max		B Max		C Max		
			A	D	A	D	A	D			
					Type : 001	29.70 1.169	36.00 1.417	28.70 1.130	35.00 1.378	25.30 .996	31.60 1.244
					Type : 010 D	41.60 1.638	48.00 1.890	40.70 1.602	47.00 1.850	37.20 1.465	43.60 1.717
Standard jam-nut receptacle	B				Type : 011 D	44.40 1.748	51.00 2.008	43.50 1.713	50.00 1.969	40.00 1.575	46.60 1.835
					Type : 020D	39.40 1.551	47.50 1.870	38.50 1.516	45.00 1.772	35.00 1.378	41.50 1.634
					Type : 050D	33.40 1.315	40.00 1.575	32.50 1.280	39.00 1.535	29.00 1.142	35.60 1.402
Solder fixing hermetic receptacle	C				Type : 010C	39.60 1.559	46.00 1.811	39.00 1.535	45.50 1.791	35.20 1.386	42.00 1.654
					Type : 090D	36.70 1.445	43.10 1.697	35.80 1.409	42.10 1.657	32.30 1.272	38.70 1.524
					Type : 081D	40.50 1.594	46.90 1.846	39.60 1.559	45.90 1.807	36.10 1.421	42.50 1.673
Hermetic square flange receptacle	A				Plug type : 16 backshell low profile version						
					Type : 030D	30.00 1.181	36.00 1.417	29.00 1.142	35.00 1.378	25.50 1.004	31.60 1.244
					Type : 060D	31.00 1.220	37.50 1.476	30.20 1.189	36.50 1.437	27.00 1.063	33.00 1.299
Hermetic jam-nut receptacle	B				Type : 040D	33.50 1.319	39.50 1.555	32.50 1.280	38.50 1.516	29.00 1.142	35.00 1.378
					Type : 080D	35.60 1.402	41.60 1.638	34.60 1.362	40.60 1.598	31.20 1.228	37.20 1.465

A : mated

D : unmated

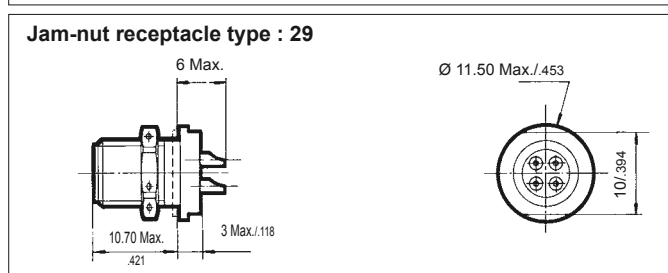
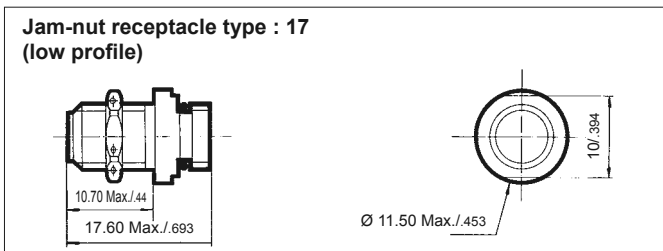
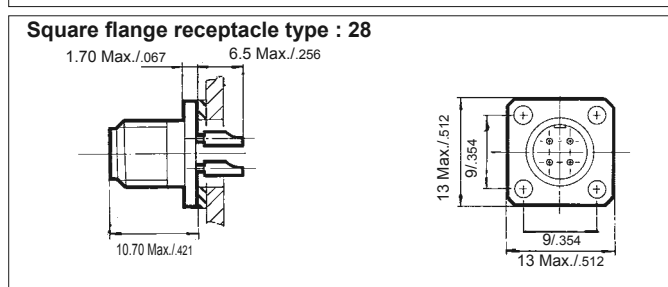
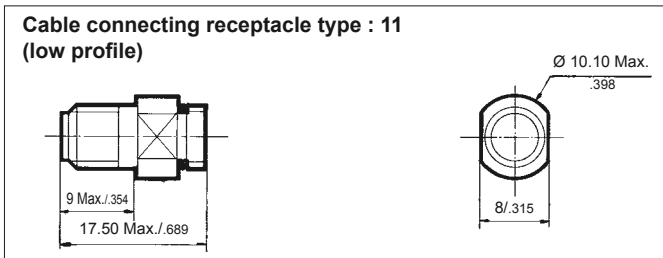
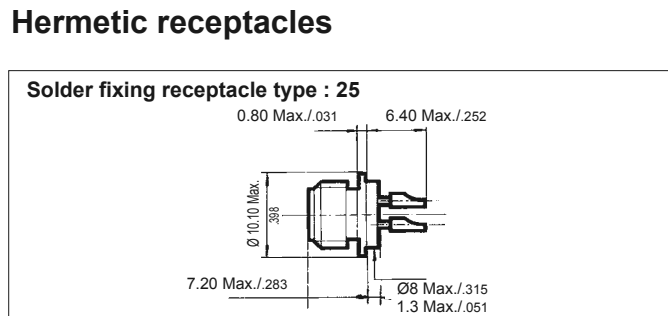
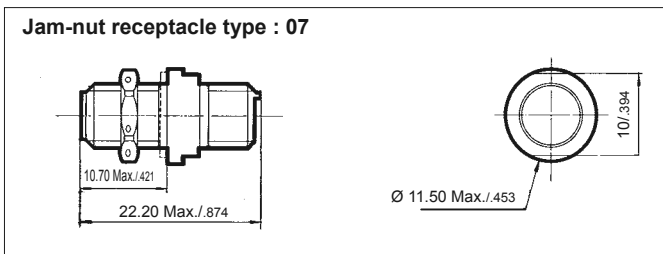
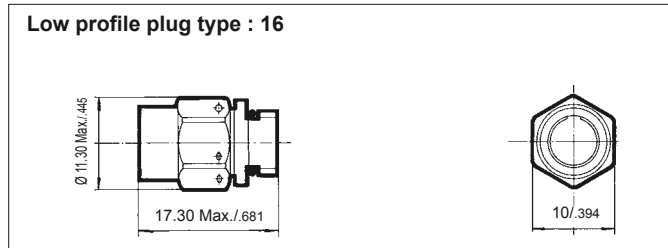
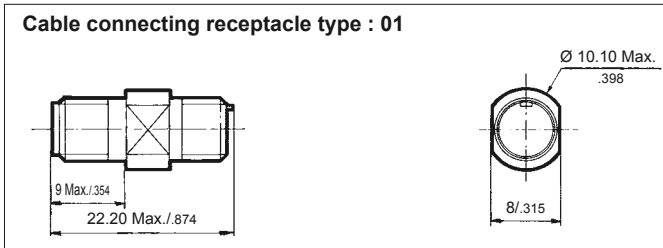
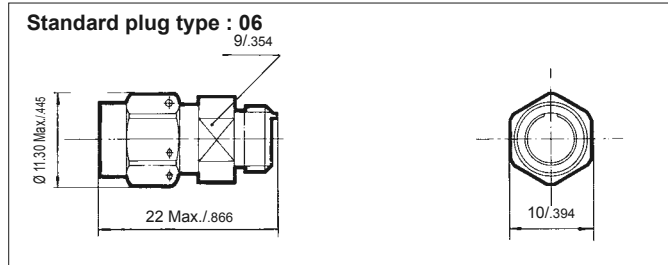
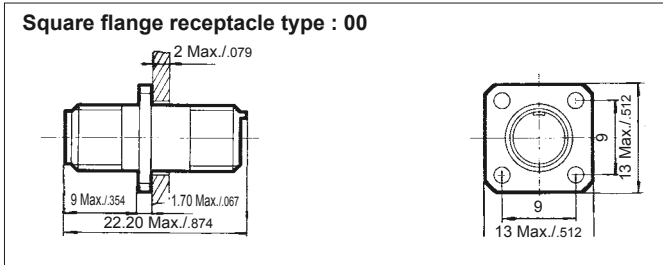


# SN 855 Series

## Dimensions

Connectors with 4 contacts (for connectors with 7 contacts, please consult us)

Receptacles and cable connecting receptacles Plugs



## Tooling

### Crimping tools :

- Crimping pliers : M 22520/2.01 or Souriau 8476.01
- Locator for male contact : M 22520/2.09 or FCI Souriau 8476.09
- Locator for female contact : M 22520/2.06 or FCI Souriau 8476.06
- Conductor stripping length : 4 mm

### Contact insertion/extraction tools :

- Disposable plastic tools : for insertion and extraction : 8599.0022
- Angled metal tools :
  - for insertion : 8599 M22C
  - for extraction : 8599 E22C

Note : Coupling torques : to obtain hardening performances mentioned, the following torques must be applied :  
 - to the coupling nut : 0.8 Nm  
 - to the panel nut : 1.8 Nm  
 - to the backshell : 0.5 Nm