



# Amphenol

## RNJ LOW PROFILE

Harsh Environment Rack & Panel Cylindrical Connectors



# RNJ LOW PROFILE

## INTRODUCTION

### Realignment capability

Mechanical device ensures axial ( $\pm 1$ mm), angular ( $\pm 6^\circ$ ) and longitudinal (0.5 mm) realignments (See figure 1)

### Many insert patterns

All available Amphenol Mil-DTL-38999 III inserts

### Large contacts range

M39029 contacts compatible with Mil-DTL-38999 III  
22D, 20, 16, 12, 8, 4 (contact cavities for signal, coaxial, twinax, power contacts)

### EMI shielding

Grounding fingers ensure shielding before contact mating

### Low profile and high density

Til 128 size 22D contacts in a 25 shell size

### Shell sizes range

8 shell sizes from 11 to 25

### Temperature range

- 65°C to 175°C for olive drab cadmium & 200°C for electroless nickel

### High durability

500 cycles minimum

### High corrosion resistance

Olive drab cadmium (500 hours salt spray) or electroless nickel (48 hours salt spray)

### Low tooling investment

Numerous tools common with Mil-DTL-38999 series III connector ones

### Light weight

Aluminium alloy shells. For the plug : 20% weight saving versus standard RNJ version

### Environmental

Rear membrane protected by a cap on the plug, interfacial seal on male insert

### Sealing

Reinforced membrane on the floating plug ensures high pressure resistance (plug withstands 1000mBars on the rear face, 2000mBars on the front face)

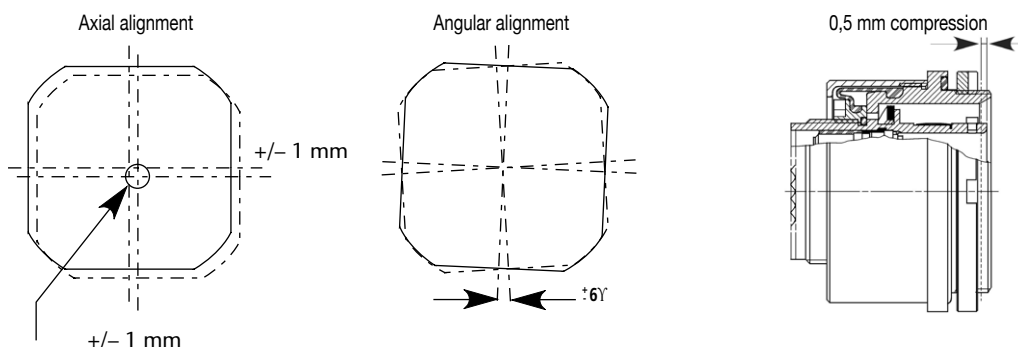
### Rear accessory possibility

Fully compatible with all M-85049 backshells for Mil-DTL-38999 series III

### Contacts protection

100% scoop proof design

## Figure 1 - Floating features



RNJ Low Profile rack and panel connectors are designed to connect electrical devices between a moving unit (rack) and a fixed unit (panel).

The locking of the mating pair is ensured by the mechanical device of the rack.

The RNJLP design allows a short distance between the two panels. This is a big benefit for the systems where space is an issue.

The RNJLP realignment capability (as shown in figure 1) allows to make up the tolerances of the system.

RNJLP are primarily designed for avionic/military and advanced industrial application.

### Applications :

- Commercial & military avionic packaging
- Ground / marine / defence applications
- Advanced industrial applications



## ENVIRONMENTAL CHARACTERISTICS

### Temperature range:

- - 65°C to +175°C (olive drab cadmium) / +200°C (Electroless Nickel)

### Air leakage:

- Receptacles RNJLP27/67: less than 16 cm<sup>3</sup> / h max @ 2 bars pressure
- Floating plugs RNJLP26 - 66:
  - Front Face: less than 16 cm<sup>3</sup> / h max @ 2 bars pressure
  - Rear Face: less than 16 cm<sup>3</sup> / h max @ 1 bar pressure

### Corrosion resistance:

- Olive drab cadmium 500 h salt spray
- Electroless nickel 48 h salt spray

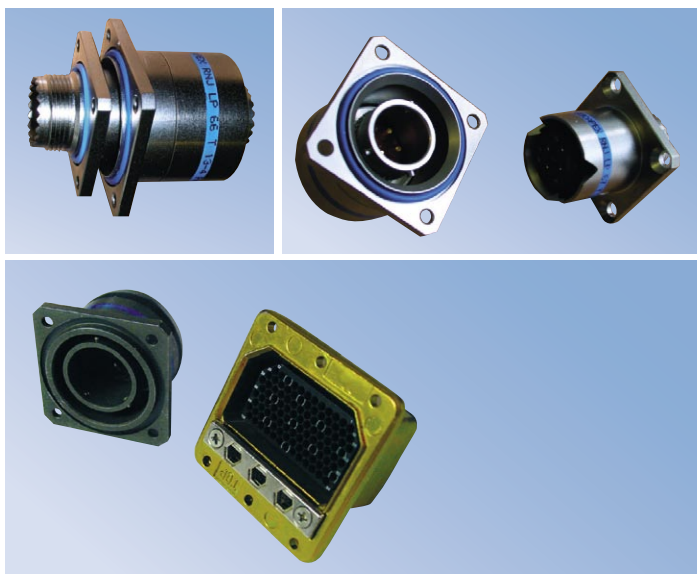
### Fluid resistance:

- MIL-L-7808 (lubricating oil)
- MIL-L-23699 (lubricating oil)
- MIL-H-5606 (hydraulic fluid)
- Hydraulic fluid (Chevron M2V)
- MIL A-8243 (defrosting fluid)
- MIL- C- 87936 type I
- MIL-T-5624 (JP5)
- MIL-C-47220 or Coolanol 25 or equivalent
- MIL-G-3056 type I (gasoline)
- Isopropyl alcohol per TT-I-735 grade A or B mixed with mineral spirit TT-T-291 type I or P-D-680 type I

## Two versions available

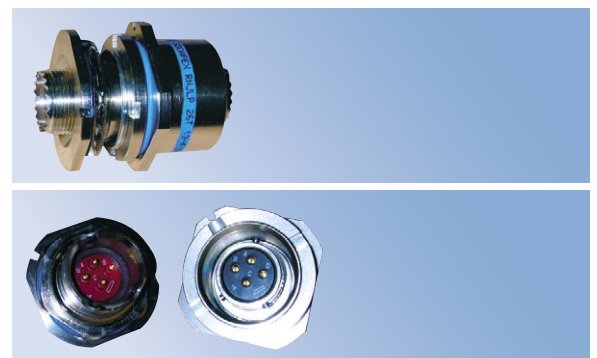
### RNJ Low Profile Square Flange version: RNJLP 66 / 67

- The distance between panels is the same as for the ARINC 404 connector (7,3mm). This allows the user the possibility of replacing an ARINC 404 connectors by an RNJ Low Profile (please consult us regarding dimension tolerances needed for the system).
- More possibilities in shell sizes (8) than with the ARINC 404 (1, 2, 3 or 4 bays only).
- This is front panel mounting for the receptacle and back panel mounting for the floating plug.
- Sealing is provided on the square flange (receptacle and floating plug) by an O-ring gasket (delivered with the connector) located in a groove.



### RNJ Low Profile Jam Nut version: RNJLP 26 / 27

- The distance between panels is 16mm versus 36mm for the standard RNJ
- Both receptacle and floating plug are back panel mounting
- Sealing is provided by the O-ring gaskets located in the groove of the front face of the flange (receptacle and floating plug)
- The castle nut of the floating plug is available with 4 holes for lock-wiring capability (optional)
- Each RNJLP26/27 connector is supplied with a stainless steel pin for insertion by force into the chassis



# RNJ LOW PROFILE

## MECHANICAL CHARACTERISTICS

|                         |     |    |     |     |     |     |
|-------------------------|-----|----|-----|-----|-----|-----|
| <b>Contact size</b>     | 22D | 20 | 16  | 12  | 8   | 4   |
| <b>Maximum load (N)</b> | 45  | 67 | 110 | 110 | 150 | 150 |

### Mating and unmating forces:

| Shell size | Maximum mated force |       | Maximum unmated force |      |
|------------|---------------------|-------|-----------------------|------|
|            | daN                 | Lbs   | daN                   | Lbs  |
| 11         | 20                  | 45    | 12                    | 27   |
| 13         | 30                  | 67.4  | 13                    | 29.2 |
| 15         | 35                  | 78.7  | 15                    | 33.7 |
| 17         | 50                  | 112.4 | 16                    | 36   |
| 19         | 55                  | 123.6 | 18                    | 40.5 |
| 21         | 65                  | 146.1 | 22                    | 49.5 |
| 23         | 80                  | 179.8 | 27                    | 60.7 |
| 25         | 102                 | 229.3 | 34                    | 76.4 |

Durability: 500 cycles

## ELECTRICAL CHARACTERISTICS

### Contact rating - nominal current per contact:

|                     |     |     |    |    |    |     |
|---------------------|-----|-----|----|----|----|-----|
| <b>Contact size</b> | 22D | 20  | 16 | 12 | 8* | 4*  |
| <b>Current (A)</b>  | 5   | 7.5 | 13 | 23 | 60 | 100 |

\* Please consult us for additional informations regarding power inserts

### Contact resistance:

|                        |     |     |    |     |     |      |
|------------------------|-----|-----|----|-----|-----|------|
| <b>Contact size</b>    | 22D | 20  | 16 | 12  | 8   | 4    |
| <b>Resistance (mΩ)</b> | 8   | 4.7 | 2  | 1.1 | 0.6 | 0.26 |

Insulation resistance: - at ambient > 10<sup>5</sup> Mohms  
- at maximum temperature > 10<sup>3</sup> Mohms

### Service rating:

| Service<br>(p. 4/5) | Dielectric withstanding voltage (Vrms) |         |              |         |              |         |              |         | Working voltage |      |
|---------------------|--|---------|--------------|---------|--------------|---------|--------------|---------|-----------------|------|
|                     | At sea level                           |         | 15000 meters |         | 21000 meters |         | 34000 meters |         |                 |      |
|                     | mated                                  | unmated | mated        | unmated | mated        | unmated | mated        | unmated | Vrms            | Vdc  |
| M                   | 1300                                   | 1300    | 800          | 550     | 800          | 350     | 800          | 200     | 400             | 550  |
| I                   | 1800                                   | 1800    | 1000         | 600     | 1000         | 400     | 1000         | 200     | 600             | 850  |
| II                  | 2300                                   | 2300    | 1000         | 800     | 1000         | 500     | 1000         | 200     | 900             | 1250 |

### Dimensions of acceptable contacts and cables:

| Contact size | Contact Diameter mm (in) | Crimp barrel                 |                 | Acceptable cables                                     |                 |                 |                  |                          |                 |                 |
|--------------|--------------------------|------------------------------|-----------------|---|-----------------|-----------------|------------------|--------------------------|-----------------|-----------------|
|              |                          | Diameter mm (in)             | Depth mm (in)   | Gauge AWG<br>Section mm <sup>2</sup> (sq in)          |                 |                 |                  | Outside diameter mm (in) |                 |                 |
|              |                          |                              |                 | 22  | 24              | 26              | 28               | min                      | average         | Max             |
| 22D          | 0.76<br>(0.030)          | 0.88±0.03<br>(0.035±0.001)   | 3.58<br>(0.141) | 0.38<br>(0.015)                                       | 0.22<br>(0.009) | 0.15<br>(0.006) | 0.095<br>(0.004) | 0.76<br>(0.03)           | 1.20<br>(0.047) | 1.37<br>(0.054) |
| 20           | 1<br>(0.039)             | 1.19±0.03<br>(0.039±0.001)   | 5.30<br>(0.209) | 0.60<br>(0.024)                                       | 0.38<br>(0.015) | 0.22<br>(0.009) |                  | 1.02<br>(0.04)           | 1.83<br>(0.072) | 2.11<br>(0.083) |
| 16           | 1.57<br>(0.062)          | 1.70±0.03<br>(0.067±0.001)   | 5.30<br>(0.209) | 1.6<br>(0.053)  | 1.8<br>(0.037)  | 2.0<br>(0.024)  |                  | 1.68<br>(0.066)          | 2.41<br>(0.095) | 2.77<br>(0.109) |
| 12           | 2.36<br>(0.093)          | 2.54±0.06<br>(0.100±0.002)   | 10<br>(0.394)   | 3.30<br>(0.13)  | 1.94<br>(0.076) |                 |                  | 2.46<br>(0.097)          | 3.20<br>(0.126) | 3.61<br>(0.142) |
| 8            | 3.60<br>(0.039)          | 4.6 +0.05<br>(0.181+0.002)-0 | 10<br>(0.394)   | 8<br>Min: 8.98 - Max: 10<br>(Min: 0.354 - Max: 0.394) |                 |                 |                  | 4.50<br>(0.177)          | —               | 5.8<br>(0.228)  |
| 4            | 5.75<br>(0.226)          | 7.4±0.05<br>(0.291±0.002)    | 12<br>(0.4724)  | 21.10<br>(0.831)                                      |                 |                 |                  | 7.73<br>(0.304)          | 8.08<br>(0.318) | 8.43<br>(0.332) |

# RNJ LOW PROFILE



## INSERT ARRANGEMENTS

| Contact size | 22D | 20 | 16 | 12 | 8 | 4 |
|--------------|-----|----|----|----|---|---|
| Caption      |     |    |    |    |   |   |

### Front view of male insert

Only the major keyway is illustrated.

- ❶ MIL-DTL-38999 Series III insert arrangement reference
- ❷ RNJLP insert arrangement

- ❸ Service class
- ❹ Number of contacts
- ❺ Contact sizes

### 11

|   |       |      |      |      |       |       |       |       |
|---|-------|------|------|------|-------|-------|-------|-------|
|   |       |      |      |      |       |       |       |       |
| ❶ |       | B2   |      | B5   |       | B-35  |       |       |
| ❷ | 11-01 | 11-2 | 11-4 | 11-5 | 11-12 | 11-35 | 11-98 | 11-99 |
| ❸ |       | I    | I    | I    |       | M     | I     | I     |
| ❹ | 1     | 2    | 4    | 5    | 1     | 13    | 6     | 7     |
| ❺ | 8     | 16   | 20   | 20   | 12    | 22D   | 20    | 20    |

Twinax<sup>A</sup>

### 13

|   |      |      |        |       |       |
|---|------|------|--------|-------|-------|
|   |      |      |        |       |       |
| ❶ | C 4  | C 8  |        | C 35  | C 98  |
| ❷ | 13-4 | 13-8 | 13-26  | 13-35 | 13-98 |
| ❸ | I    | I    | M      | M     | I     |
| ❹ | 4    | 8    | 6 2    | 22    | 10    |
| ❺ | 16   | 20   | 22D 12 | 22D   | 20    |

### 15

|   |      |       |       |       |       |       |
|---|------|-------|-------|-------|-------|-------|
|   |      |       |       |       |       |       |
| ❶ | D 05 | D 15  | D 18  | D 19  | D 35  | D 97  |
| ❷ | 15-5 | 15-15 | 15-18 | 15-19 | 15-35 | 15-97 |
| ❸ | M    | I     | I     | I     | M     | I     |
| ❹ | 5    | 14 1  | 18    | 19    | 37    | 8 4   |
| ❺ | 16   | 20 16 | 20    | 20    | 22D   | 20 16 |

### 17

|   |                           |      |      |        |       |       |       |       |       |
|---|---------------------------|------|------|--------|-------|-------|-------|-------|-------|
|   |                           |      |      |        |       |       |       |       |       |
| ❶ |                           | E 6  | E 8  |        |       | E 26  | E 35  |       | E 99  |
| ❷ | 17-2                      | 17-6 | 17-8 | 17-20  | 17-22 | 17-26 | 17-35 | 17-75 | 17-99 |
| ❸ | M                         | I    | II   | M      |       | I     | M     |       | I     |
| ❹ | 38 1                      | 6    | 8    | 16 4   | 2 2   | 26    | 55    | 2     | 21 2  |
| ❺ | 22D 8 Twinax <sup>o</sup> | 12   | 16   | 22D 12 | 12 8  | 20    | 22D   | 8     | 20 16 |

Coax Twinax<sup>A</sup> Twinax<sup>o</sup>

# RNJ LOW PROFILE

## INSERT ARRANGEMENTS

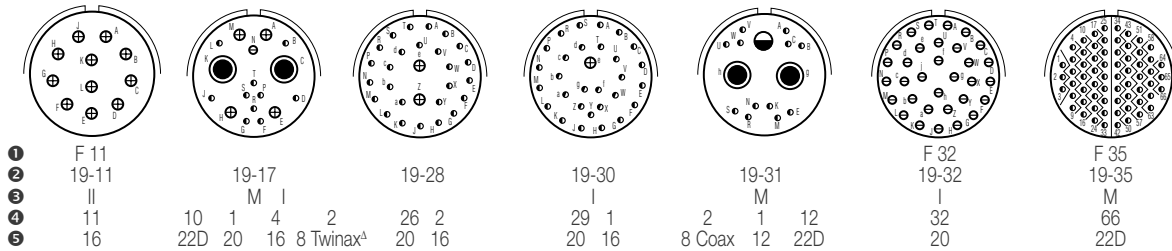
| Contact size | 22D | 20 | 16 | 12 | 8 | 4 |
|--------------|-----|----|----|----|---|---|
| Caption      |     |    |    |    |   |   |

Front view of male insert  
Only the major keyway is illustrated.

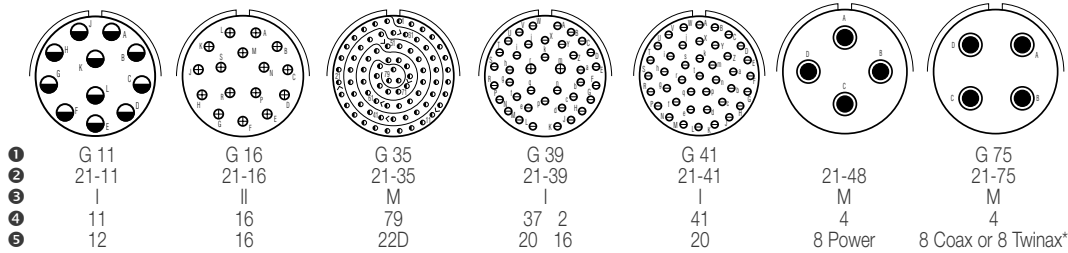
- ① MIL-DTL-38999 Series III insert arrangement reference
- ② RNJLP insert arrangement

- ③ Service class
- ④ Number of contacts
- ⑤ Contact sizes

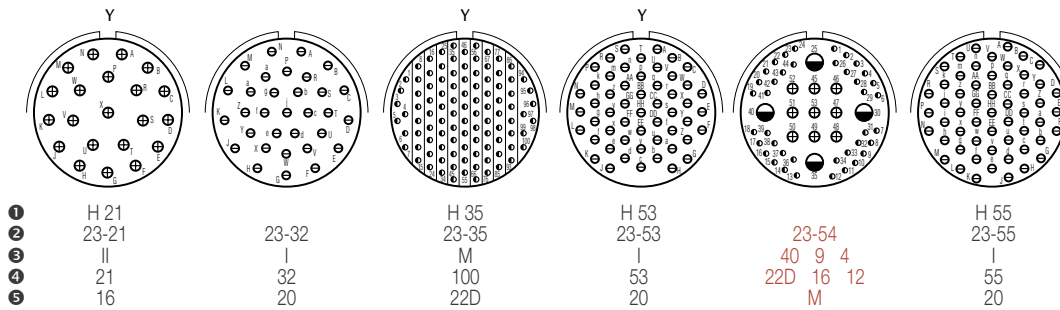
### 19



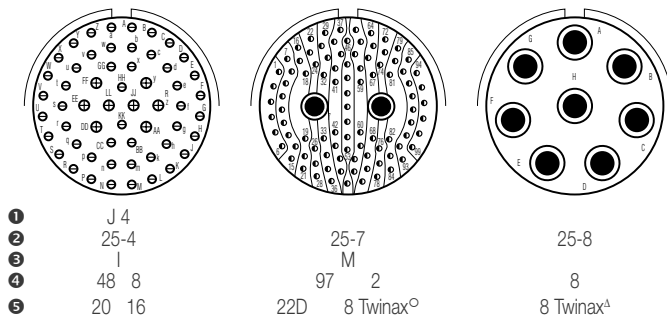
### 21



### 23



### 25



# RNJ LOW PROFILE



## INSERT ARRANGEMENTS

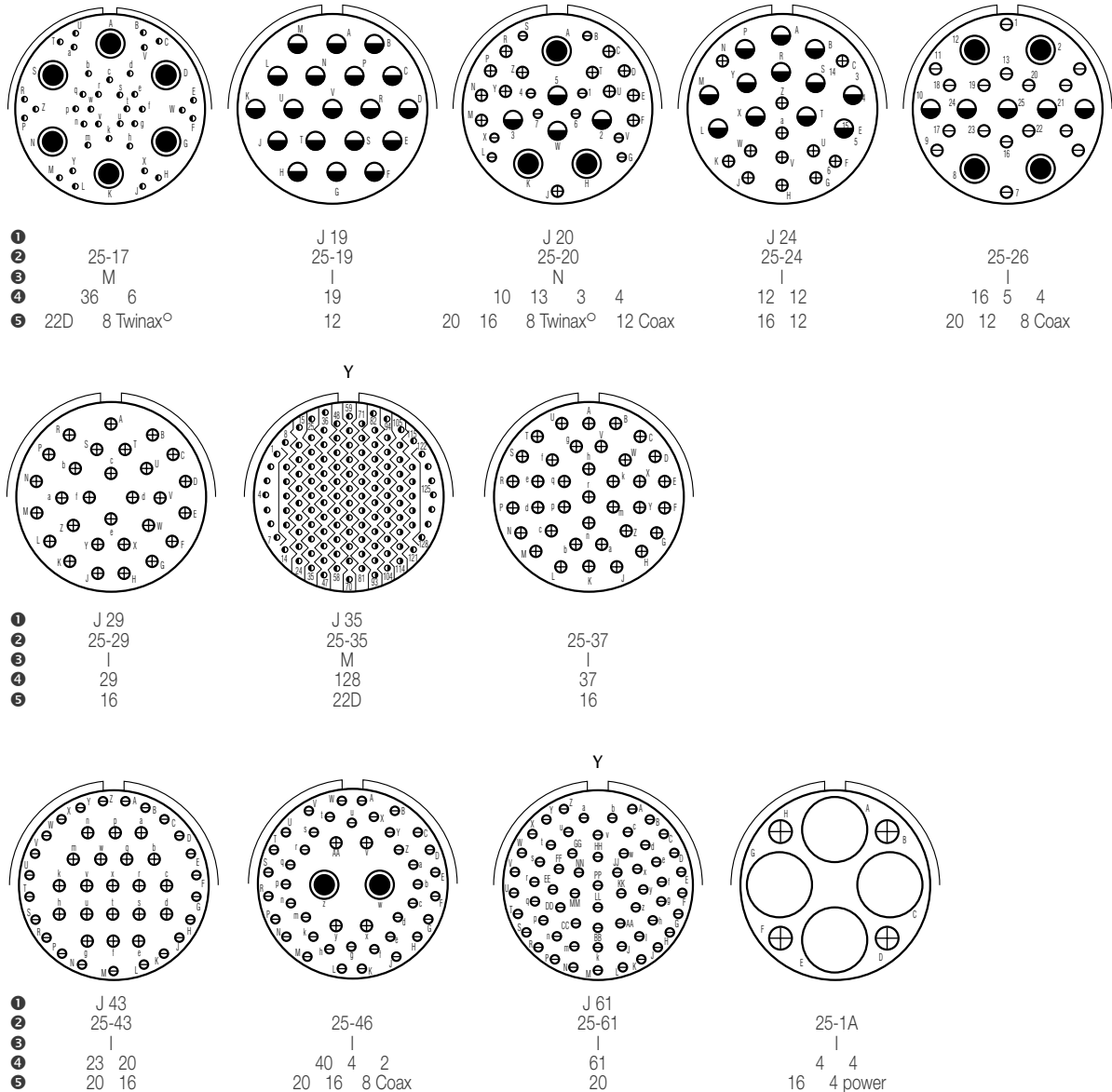
| Contact size | 22D | 20 | 16 | 12 | 8 | 4 |
|--------------|-----|----|----|----|---|---|
| Caption      |     |    |    |    |   |   |

Front view of male insert  
Only the major keyway is illustrated.

- ① MIL-DTL-38999 Series III insert arrangement reference
- ② RNJLP insert arrangement

- ③ Service class
- ④ Number of contacts
- ⑤ Contact sizes

25



- \* P/N delivered with size 8 coaxial contacts for RG 180 and RG 195 wire
- Y Available in hermetic version
- Δ Delivered with twinax contacts for double braid cable (PAN 6421, AECMA Pr EN 3375 - 004, Raychem 10613, EPD44692, EPD44693).
- Delivered with twinax contacts for simple braid cable (M17/1760002, AECMA Pr EN 3375 - 003, Raychem 10612, EPD44690, EPD44691).

Only most commonly used inserts arrangements are listed here. All other Amphenol inserts are available, please call us for details.

# RNJ LOW PROFILE

| Arrangements | Service Class | Total number of contacts | Number and size of contacts |    |    |    |         |         |        |                   |   | Grounded Insert availability** |   |
|--------------|---------------|--------------------------|-----------------------------|----|----|----|---------|---------|--------|-------------------|---|--------------------------------|---|
|              |               |                          | 22D                         | 20 | 16 | 12 | 12 coax | 8 power | 8 coax | 8 triax or twinax | 4 | P                              | S |
| 11-1         |               | 1                        |                             |    |    |    |         |         |        |                   | 1 |                                |   |
| 11-2**       |               | 2                        |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 11-2         | I             | 2                        |                             |    | 2  |    |         |         |        |                   |   |                                |   |
| 11-4         | I             | 4                        |                             | 4  |    |    |         |         |        |                   |   |                                |   |
| 11-5         | I             | 5                        |                             | 5  |    |    |         |         |        |                   |   |                                |   |
| 11-12        | II            | 1                        |                             |    |    | 1  |         |         |        |                   |   |                                |   |
| 11-35        | M             | 13                       | 13                          |    |    |    |         |         |        |                   |   |                                |   |
| 11-98        | I             | 6                        |                             | 6  |    |    |         |         |        |                   |   |                                |   |
| 11-99        | I             | 7                        |                             | 7  |    |    |         |         |        |                   |   |                                |   |
| 13-4**       |               | 4                        |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 13-4         | I             | 4                        |                             |    | 4  |    |         |         |        |                   |   |                                |   |
| 13-8         | I             | 8                        |                             | 8  |    |    |         |         |        |                   |   |                                |   |
| 13-26        | M             | 8                        | 6                           |    |    |    | 2       |         |        |                   |   |                                |   |
| 13-35        | M             | 22                       | 22                          |    |    |    |         |         |        |                   |   |                                |   |
| 13-98        | I             | 10                       |                             | 10 |    |    |         |         |        |                   |   |                                |   |
| 15-5**       |               | 5                        |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 15-5         | II            | 5                        |                             |    | 5  |    |         |         |        |                   |   |                                |   |
| 15-15        | I             | 15                       |                             | 14 | 1  |    |         |         |        |                   |   |                                |   |
| 15-18        | I             | 18                       |                             | 18 |    |    |         |         |        |                   |   |                                |   |
| 15-19        | I             | 19                       |                             | 19 |    |    |         |         |        |                   |   |                                |   |
| 15-35        | M             | 37                       | 37                          |    |    |    |         |         |        |                   |   |                                |   |
| 15-97        | I             | 12                       |                             | 8  | 4  |    |         |         |        |                   |   |                                |   |
| 17-2         | M             | 39                       | 38                          |    |    |    |         |         |        | 1                 |   |                                |   |
| 17-6**       |               | 6                        |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 17-6         | I             | 6                        |                             |    |    | 6  |         |         |        |                   |   |                                |   |
| 17-8**       |               | 8                        |                             |    |    |    |         |         |        |                   |   | X                              | X |
| 17-8         | II            | 8                        |                             |    | 8  |    |         |         |        |                   |   |                                |   |
| 17-22**      |               | 4                        |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 17-26        | I             | 26                       |                             | 26 |    |    |         |         |        |                   |   |                                |   |
| 17-35        | M             | 55                       | 55                          |    |    |    |         |         |        |                   |   |                                |   |
| 17-75        | I             | 2                        |                             |    |    |    |         |         |        | 2                 |   |                                |   |
| 17-99        | I             | 23                       |                             | 21 | 2  |    |         |         |        |                   |   |                                |   |
| 19-11        | II            | 11                       |                             |    | 11 |    |         |         |        |                   |   |                                |   |
| 19-17        | M             | 17                       | 10                          | 1  | 4  |    |         |         |        | 2                 |   |                                |   |
| 19-28        | I             | 28                       |                             | 26 | 2  |    |         |         |        |                   |   |                                |   |
| 19-30        | I             | 30                       |                             | 29 | 1  |    |         |         |        |                   |   |                                |   |
| 19-31        | M             | 15                       | 12                          |    |    | 1  |         |         |        |                   |   |                                |   |
| 19-32        | I             | 32                       |                             | 32 |    |    |         |         |        |                   |   |                                |   |
| 19-35        | M             | 66                       | 66                          |    |    |    |         |         |        |                   |   |                                |   |
| 21-11        | I             | 11                       |                             |    |    | 11 |         |         |        |                   |   |                                |   |
| 21-16**      |               | 16                       |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 21-16        | II            | 16                       |                             |    | 16 |    |         |         |        |                   |   |                                |   |
| 21-35        | M             | 79                       | 79                          |    |    |    |         |         |        |                   |   |                                |   |
| 21-39        | I             | 39                       |                             | 37 | 2  |    |         |         |        |                   |   |                                |   |
| 21-41        | I             | 41                       |                             | 41 |    |    |         |         |        |                   |   |                                |   |
| 21-48        | M             | 4                        |                             |    |    |    |         | 4       |        |                   |   |                                |   |
| 21-75        | M             | 4                        |                             |    |    |    |         |         | 4      |                   |   |                                |   |
| 21-75**      |               | 4                        |                             |    |    |    |         |         |        |                   |   | X                              |   |

Legend: \*\* Grounded version (metallic insert for use with coaxial or twinax contacts, for receptacle only), supplied without contact.

# RNJ LOW PROFILE



| Arrangements | Service Class | Total number of contacts | Number and size of contacts |    |    |    |         |         |        |                   |   | Grounded Insert availability** |   |
|--------------|---------------|--------------------------|-----------------------------|----|----|----|---------|---------|--------|-------------------|---|--------------------------------|---|
|              |               |                          | 22D                         | 20 | 16 | 12 | 12 coax | 8 power | 8 coax | 8 triax or twinax | 4 | P                              | S |
| 23-21        | II            | 21                       |                             |    | 21 |    |         |         |        |                   |   |                                |   |
| 23-21**      | II            | 21                       |                             |    |    |    |         |         |        |                   |   |                                | X |
| 23-32        | I             | 32                       |                             | 32 |    |    |         |         |        |                   |   |                                |   |
| 23-35        | M             | 100                      | 100                         |    |    |    |         |         |        |                   |   |                                |   |
| 23-53        | I             | 53                       |                             | 53 |    |    |         |         |        |                   |   |                                |   |
| 23-54        | M             | 53                       | 40                          |    | 9  | 4  |         |         |        |                   |   |                                |   |
| 23-55        | I             | 55                       |                             | 55 |    |    |         |         |        |                   |   |                                |   |
| 25-4         | I             | 56                       |                             | 48 | 8  |    |         |         |        |                   |   |                                |   |
| 25-7         | M             | 99                       | 97                          |    |    |    |         |         |        | 2                 |   |                                |   |
| 25-8         | M             | 8                        |                             |    |    |    |         |         |        | 8                 |   |                                |   |
| 25-8**       | M             | 8                        |                             |    |    |    |         |         |        |                   |   |                                | X |
| 25-17        | M             | 42                       | 36                          |    |    |    |         |         |        | 6                 |   |                                |   |
| 25-19        | I             | 19                       |                             |    |    | 19 |         |         |        |                   |   |                                |   |
| 25-19**      | I             | 19                       |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 25-20        | N             | 30                       |                             | 10 | 13 |    | 4*      |         |        | 3                 |   |                                |   |
| 25-24        | I             | 24                       |                             |    | 12 | 12 |         |         |        |                   |   |                                |   |
| 25-26        | I             | 25                       |                             | 16 |    | 5  |         |         | 4      |                   |   |                                |   |
| 25-29**      | I             | 29                       |                             |    |    |    |         |         |        |                   |   | X                              |   |
| 25-29        | I             | 29                       |                             |    | 29 |    |         |         |        |                   |   |                                |   |
| 25-35        | M             | 128                      | 128                         |    |    |    |         |         |        |                   |   |                                |   |
| 25-37        | I             | 37                       |                             |    | 37 |    |         |         |        |                   |   |                                |   |
| 25-41        | I             | 41                       | 22                          | 3  | 11 |    | 2*      |         |        | 3                 |   |                                |   |
| 25-43        | I             | 43                       |                             | 23 | 20 |    |         |         |        |                   |   |                                |   |
| 25-46        | I             | 46                       |                             | 40 | 4  |    |         |         | 2      |                   |   |                                |   |
| 25-61        | I             | 61                       |                             | 61 |    |    |         |         |        |                   |   |                                |   |
| 25-1A        | I             | 8                        |                             |    | 4  |    |         |         |        |                   | 4 |                                |   |

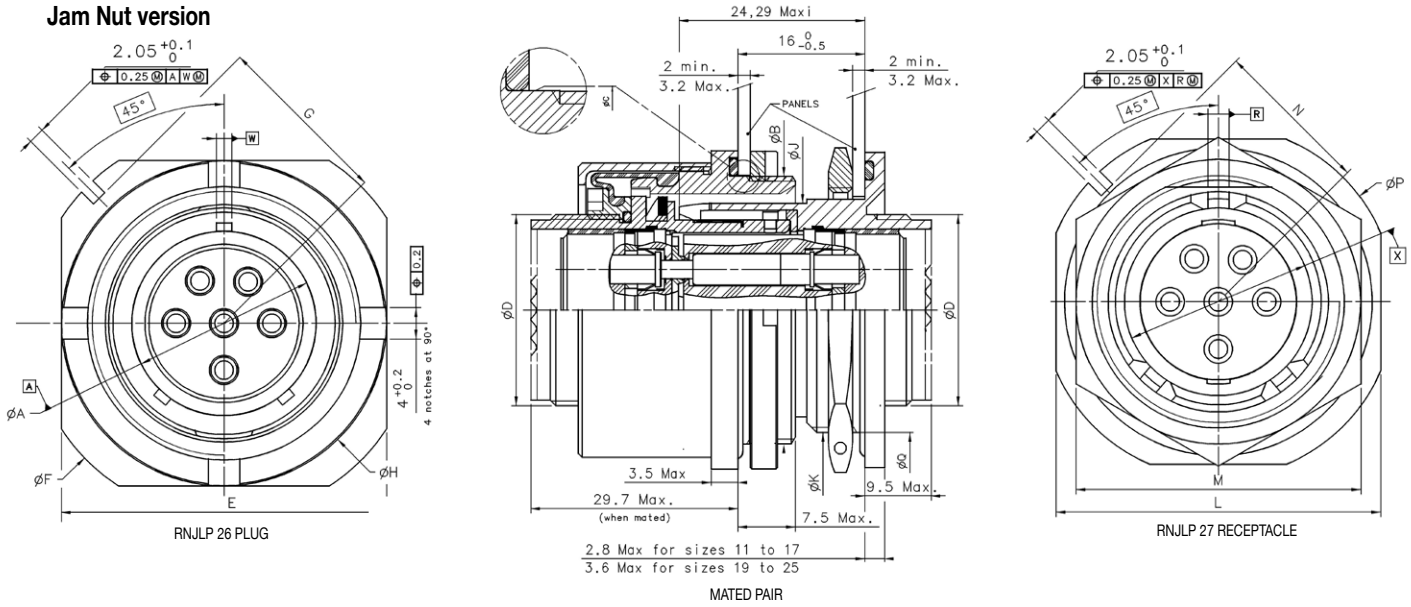
**Legend:** \*\* Grounded version (metallic insert for use with coaxial or twinax contacts, for receptacle only), supplied without contact.

Only most commonly used inserts arrangements are listed here. All other Amphenol inserts are available, please call us for details.

# RNJ LOW PROFILE

## RNJ LOW PROFILE PLUG & RECEPTACLE

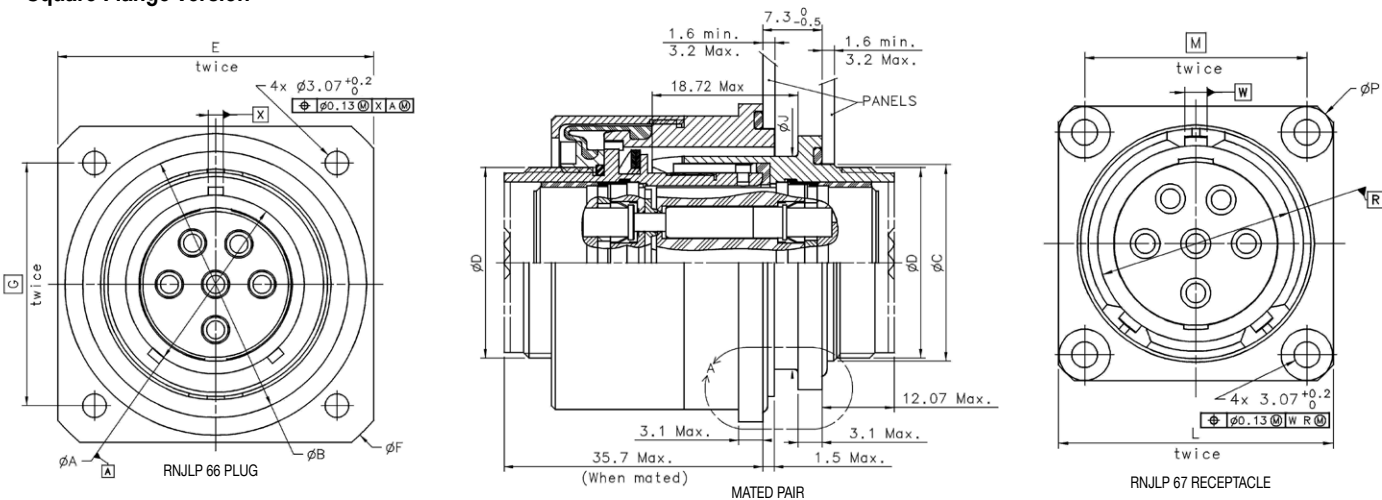
### Jam Nut version



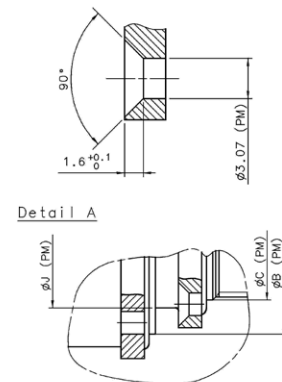
| Size | $\phi A_{-0.13}^0$ | Thread $\phi B$ | $\phi C_{-0.05}^0$ | Thread $\phi D$ | $E_{-0.25}^0$ | $\phi F_{-0.4}^0$ | $G_{-0.25}^0$ | $\phi H_{Max.}$ | $\phi J_{Max.}$ | Thread $\phi K$ | $L_{-0.4}^0$ | $M_{Max.}$ | $N_{-0.2}^0$ | $\phi P_{-0.4}^0$ | $\phi Q_{-0.05}^0$ |
|------|--------------------|-----------------|--------------------|-----------------|---------------|-------------------|---------------|-----------------|-----------------|-----------------|--------------|------------|--------------|-------------------|--------------------|
| 11   | 14.38              | M25x1-6g R0.100 | 25.53              | M15x1-6g R0.100 | 32.16         | 38.50             | 16.92         | 32.10           | 18.68           | M20x1-6g R0.100 | 32.16        | 25.84      | 15.33        | 35.34             | 20.83              |
| 13   | 17.23              | M28x1-6g R0.100 | 28.75              | M18x1-6g R0.100 | 35.34         | 41.68             | 18.51         | 35.10           | 21.88           | M25x1-6g R0.100 | 35.34        | 30.62      | 16.92        | 38.51             | 25.53              |
| 15   | 20.40              | M32x1-6g R0.100 | 31.93              | M22x1-6g R0.100 | 38.51         | 44.85             | 20.10         | 39.10           | 25.08           | M28x1-6g R0.100 | 38.51        | 33.76      | 18.51        | 41.69             | 28.75              |
| 17   | 23.58              | M35x1-6g R0.100 | 35.10              | M25x1-6g R0.100 | 41.69         | 49.63             | 22.67         | 42.10           | 28.18           | M32x1-6g R0.100 | 41.69        | 36.97      | 20.10        | 44.86             | 31.93              |
| 19   | 26.24              | M38x1-6g R0.100 | 38.23              | M28x1-6g R0.100 | 46.43         | 52.78             | 24.26         | 45.70           | 31.18           | M35x1-6g R0.100 | 46.43        | 40.11      | 22.67        | 49.64             | 35.10              |
| 21   | 29.42              | M41x1-6g R0.100 | 41.45              | M31x1-6g R0.100 | 49.64         | 55.99             | 25.84         | 48.70           | 34.38           | M38x1-6g R0.100 | 49.64        | 43.32      | 24.26        | 52.78             | 38.23              |
| 23   | 32.59              | M44x1-6g R0.100 | 44.63              | M34x1-6g R0.100 | 52.78         | 59.13             | 27.43         | 51.70           | 37.58           | M41x1-6g R0.100 | 52.78        | 46.46      | 25.84        | 55.99             | 41.45              |
| 25   | 35.77              | M48x1-6g R0.100 | 48.03              | M37x1-6g R0.100 | 55.93         | 59.53             | 27.58         | 55.70           | 40.78           | M44x1-6g R0.100 | 55.99        | 51.24      | 27.43        | 59.13             | 44.63              |

Fixing nuts with 4 slots for Jam Nut plug are available with 4 holes for lockwiring capability (optional).

### Square Flange version



| Size | $\phi A_{-0.13}^0$ | $\phi B_{-0.05}^0$ | $\phi C_{-0.05}^0$ | Thread $\phi D$ | $E_{-0.25}^0$ | $\phi F_{-0.4}^0$ | G    | $\phi J_{Max.}$ | $L_{-0.3}^0$ | M     | $\phi P_{-0.4}^0$ |
|------|--------------------|--------------------|--------------------|-----------------|---------------|-------------------|------|-----------------|--------------|-------|-------------------|
| 11   | 14.38              | 25.53              | 16.73              | M15x1-6g R0.100 | 33.60         | 45                | 25.5 | 18.68           | 28.3         | 20.62 | 37.03             |
| 13   | 17.23              | 28.75              | 19.93              | M18x1-6g R0.100 | 36.30         | 48                | 28   | 21.88           | 30.7         | 23.01 | 40.33             |
| 15   | 20.40              | 31.93              | 22.83              | M22x1-6g R0.100 | 39.50         | 52                | 30   | 25.08           | 32.3         | 24.61 | 42.63             |
| 17   | 23.58              | 35.10              | 25.83              | M25x1-6g R0.100 | 41.69         | 55                | 32   | 28.18           | 34.7         | 26.97 | 45.93             |
| 19   | 26.24              | 38.23              | 29.03              | M28x1-6g R0.100 | 46.43         | 58                | 35   | 31.18           | 37.1         | 29.36 | 49.33             |
| 21   | 29.42              | 41.45              | 32.23              | M31x1-6g R0.100 | 49.64         | 60                | 37   | 34.38           | 39.7         | 31.75 | 52.73             |
| 23   | 32.59              | 44.63              | 34.03              | M34x1-6g R0.100 | 53.00         | 63                | 39.5 | 37.58           | 42.9         | 34.93 | 57.23             |
| 25   | 35.77              | 48.03              | 37.23              | M37x1-6g R0.100 | 54.50         | 65                | 41.5 | 40.78           | 46           | 38.10 | 60.03             |



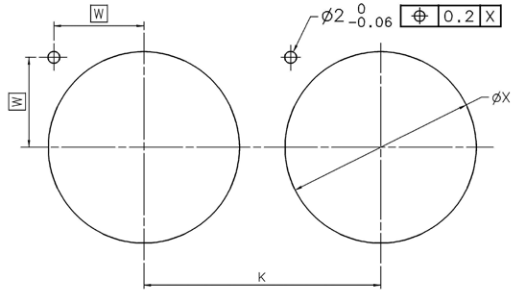
# RNJ LOW PROFILE

## PANEL DRILLING & RECOMMENDED TORQUE VALUES

### Jam Nut version (RNJ LP 26 and 27)

| PLUG SIZE | K (min) | W     | $\phi X \text{ } ^{+0.1}$ |
|-----------|---------|-------|---------------------------|
| 11        | 32.57   | 12.81 | 25.58                     |
| 13        | 36      | 13.94 | 28.80                     |
| 15        | 39.6    | 15.06 | 31.98                     |
| 17        | 43.3    | 16.88 | 35.15                     |
| 19        | 47      | 18    | 38.28                     |
| 21        | 50.6    | 19.12 | 41.50                     |
| 23        | 54.2    | 20.24 | 44.68                     |
| 25        | 59.7    | 20.30 | 48.08                     |

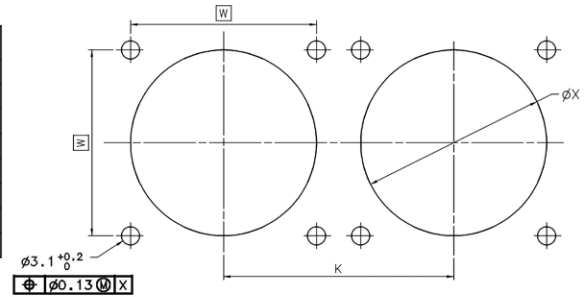
| RECEPTACLE SIZE | K (min) | W     | $\phi X \text{ } ^{+0.1}$ |
|-----------------|---------|-------|---------------------------|
| 11              | 32.57   | 11.69 | 20.86                     |
| 13              | 36      | 12.81 | 25.58                     |
| 15              | 39.6    | 13.94 | 28.80                     |
| 17              | 43.3    | 15.06 | 31.98                     |
| 19              | 47      | 16.88 | 35.15                     |
| 21              | 50.6    | 18    | 38.28                     |
| 23              | 54.2    | 19.12 | 41.50                     |
| 25              | 59.7    | 20.24 | 44.68                     |



### Square Flange version (RNJ LP 66 and 67)

| PLUG SIZE | K (min) | W    | $\phi X \text{ } ^{+0.1}$ |
|-----------|---------|------|---------------------------|
| 11        | 36      | 25.5 | 25.58                     |
| 13        | 39.6    | 28   | 28.80                     |
| 15        | 43.3    | 30   | 31.98                     |
| 17        | 47      | 32   | 35.15                     |
| 19        | 50.6    | 35   | 38.28                     |
| 21        | 54.2    | 37   | 41.50                     |
| 23        | 59.7    | 39.5 | 44.68                     |
| 25        | 59.7    | 41.5 | 48.08                     |

| RECEPTACLE SIZE | K (min) | W     | $\phi X \text{ } ^{+0.1}$ |
|-----------------|---------|-------|---------------------------|
| 11              | 36      | 20.62 | 16.78                     |
| 13              | 39.6    | 23.01 | 19.98                     |
| 15              | 43.3    | 24.61 | 22.88                     |
| 17              | 47      | 26.97 | 25.88                     |
| 19              | 50.6    | 29.36 | 29.08                     |
| 21              | 54.2    | 31.75 | 32.28                     |
| 23              | 59.7    | 34.93 | 34.08                     |
| 25              | 59.7    | 38.1  | 37.28                     |

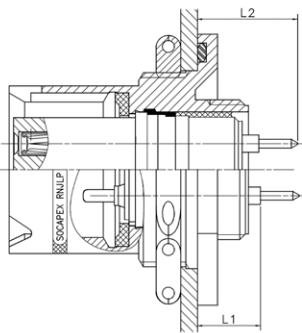


### Rear accessories torque values

The following values must be observed. Before applying this coupling torque, locking glue has to be applied on the rear thread of the connector.

| Shell size           | 11             | 13              | 15              | 17              | 19              | 21              | 23              | 25              |
|----------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Coupling torque (Nm) | $8 \pm 0.4$    | $11 \pm 0.5$    | $11 \pm 0.5$    | $14 \pm 0.7$    | $14 \pm 0.7$    | $17 \pm 0.8$    | $17 \pm 0.8$    | $20 \pm 1$      |
| (lb.inch)            | $0.9 \pm 0.05$ | $1.24 \pm 0.06$ | $1.24 \pm 0.06$ | $1.58 \pm 0.08$ | $1.58 \pm 0.08$ | $1.92 \pm 0.09$ | $1.92 \pm 0.09$ | $2.28 \pm 0.11$ |

### Power contacts with PCB tails



| P | L1 | min | RNJ LP 27 CI | RNJ LP 27 LI |
|---|----|-----|--------------|--------------|
|   |    |     | mm (in)      | mm (in)      |
| S | L1 | min | 7.89 (.311)  | 7.89 (.311)  |
|   |    | max | 8.57 (.337)  | 8.57 (.337)  |
|   | L2 | min | 12.79 (.504) | 16.29 (.641) |
|   |    | max | 13.67 (.538) | 17.17 (.676) |

### Remark:

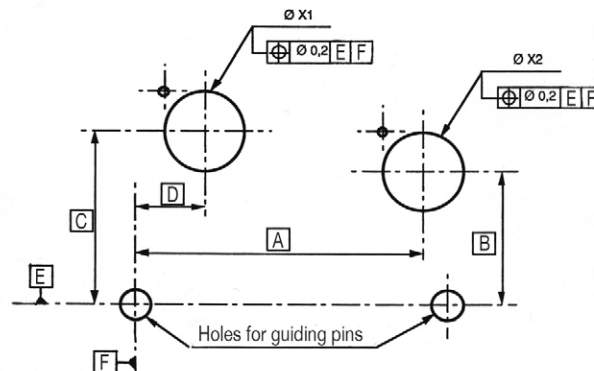
the design of the RNJLP27 shell is modified when delivered with PCB contacts (shorter design without serrations)  
Other dimensions available upon request: coax, twinax...  
For other shell configurations (RNJ LP 67/46/86) equipped with PCB contacts (specific applications), please consult us.

### Stand-Off for PCB



**New:**  
RNJ LP 27 receptacles for PCB applications are available with stand-off with holes for M3 screws for fixation on the board.

### Example of panel drilling



### Note:

All the dimensions are referenced from the guiding pin (E, F). The reference axis E goes through the 2 guiding pins centers.



## HOW TO ORDER

|  |               |           |          |           |           |          |          |            |           |          |
|--|---------------|-----------|----------|-----------|-----------|----------|----------|------------|-----------|----------|
| <b>Series</b>  | <b>RNJ LP</b> | <b>26</b> | <b>T</b> | <b>11</b> | <b>35</b> | <b>P</b> | <b>N</b> | <b>014</b> | <b>LC</b> | <b>-</b> |
| <b>Shell type</b>  |               |           |          |           |           |          |          |            |           |          |
| 26 - Jam nut plug  |               |           |          |           |           |          |          |            |           |          |
| 27 - Jam nut receptacle  |               |           |          |           |           |          |          |            |           |          |
| 66 - Square flange plug  |               |           |          |           |           |          |          |            |           |          |
| 67 - Square flange receptacle  |               |           |          |           |           |          |          |            |           |          |
| 46 - Jam Nut plug without rear accessory possibility<br>To be used with PCB TAIL contacts              |               |           |          |           |           |          |          |            |           |          |
| 86 - Square Flange plug without rear accessory possibility<br>To be used with PCB TAIL contacts only * |               |           |          |           |           |          |          |            |           |          |
| <b>Service class and contact type</b>  |               |           |          |           |           |          |          |            |           |          |
| T - Environmental, crimp contacts #22D/20/16/12/4  |               |           |          |           |           |          |          |            |           |          |
| CI - Environmental, PCB contacts, standard tails (RNJLP27 only)  |               |           |          |           |           |          |          |            |           |          |
| LI - Environmental, PCB contacts, long tails (RNJLP27 only)  |               |           |          |           |           |          |          |            |           |          |
| K - Stainless steel version (316 L), crimp contacts  |               |           |          |           |           |          |          |            |           |          |
| KCI - Stainless steel version (316 L), PCB contacts, standard tails                                    |               |           |          |           |           |          |          |            |           |          |
| KLI - Stainless steel version (316 L), PCB contacts, long tails  |               |           |          |           |           |          |          |            |           |          |
| <b>Shell size</b>  |               |           |          |           |           |          |          |            |           |          |
| 11/13/15/17/19/21/23/25  |               |           |          |           |           |          |          |            |           |          |
| <b>Inserts arrangements</b>  |               |           |          |           |           |          |          |            |           |          |
| See pages 5 to 9   |               |           |          |           |           |          |          |            |           |          |
| <b>Contact type</b>  |               |           |          |           |           |          |          |            |           |          |
| P - Pin contact  |               |           |          |           |           |          |          |            |           |          |
| S - Socket contact   |               |           |          |           |           |          |          |            |           |          |
| <b>Polarization</b>  |               |           |          |           |           |          |          |            |           |          |
| N - Normal position only   |               |           |          |           |           |          |          |            |           |          |
| <b>Shell finish</b>  |               |           |          |           |           |          |          |            |           |          |
| 014 - Olive drab cadmium   |               |           |          |           |           |          |          |            |           |          |
| 023 - Electroless nickel   |               |           |          |           |           |          |          |            |           |          |
| Blank for stainless style version «K»  |               |           |          |           |           |          |          |            |           |          |
| <b>Contact</b>   |               |           |          |           |           |          |          |            |           |          |
| Blank - Connector supplied with contacts   |               |           |          |           |           |          |          |            |           |          |
| LC - Connector supplied without contact («LC» not marked on the connector)                             |               |           |          |           |           |          |          |            |           |          |
| <b>Deviation</b>   |               |           |          |           |           |          |          |            |           |          |
| F404 - Contacts with tin plated PC tails (CI or LI version only)                                       |               |           |          |           |           |          |          |            |           |          |

For other deviations (FXXX), please consult us.  
\* Consult us for characteristic dimensions.

### Specific requirements:

- 1) For grounded insert part-numbering, please consult us.
- 2) For grounded insert or non-grounded insert compatible with quadax or differential twinax contacts (polarized size 8 cavities), please consult us.
- 3) For inserts to be fitted with RJ45 connectors (RJ Stop Patented), please consult us.

- 4) For jam nut versions (RNJ LP 26 and 27) to be mated with square flange versions (RNJ LP 66 and 67), please consult us for compatibility.
- 5) Differential pressure application: in addition to hermetic receptacle (Pin only) versions with inserts (Pin or socket) compounded with either epoxy resin or RTV160/RTV142 are available upon request. Please call for details.
- 6) A complete RNJ LP Installation User Guide Line is available upon request. (Location of the guiding pin of the system compared to the connectors...)

### Box for spanner (for RNJ LP 26 plug installation)



|                      |                      |
|----------------------|----------------------|
| For # 11: RNJ8982A11 | For # 19: RNJ8982E19 |
| For # 13: RNJ8982B13 | For # 21: RNJ8982F21 |
| For # 15: RNJ8982C15 | For # 23: RNJ8982G23 |
| For # 17: RNJ8982D17 | For # 25: RNJ8982H25 |

**Amphenol**  
Socapex

The information given in this document are as a guideline only.  
We reserve the right to modify our products in any way we deem necessary.  
Any duplication is prohibited, unless approved in writing.  
Realisation : wagen:studios - Steven Kilgallon

For more information, please visit our website:  
[www.amphenol-socapex.com](http://www.amphenol-socapex.com)

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Circular MIL Spec Connector](#) category:*

*Click to view products by [Amphenol](#) manufacturer:*

Other Similar products are found below :

[89075GULPR](#) [0025-262-542](#) [0025-263-3014](#) [0025-264-3014](#) [0031-065-002](#) [0031-071-002](#) [0134-201-1007](#) [0134-202-0800](#) [0134-202-1200](#)  
[0134-202-2407](#) [0134-207-1206](#) [0134-207-1800](#) [0134-207-2207](#) [0134-213-0806](#) [0134-213-1007](#) [0134-213-1009](#) [0134-213-1200](#) [0134-213-1208](#) [0134-213-1800](#) [0134-213-2209](#) [0025-258-000](#) [0025-259-542](#) [0031-066-002](#) [0031-069-002](#) [0031-070-002](#) [0031-072-002](#) [015-9516-002](#)  
[020313-0043](#) [020340-0009](#) [020418-0036](#) [020419-0080](#) [020419-0120](#) [020420-0108](#) [0104-201-2402](#) [0104-202-2402](#) [0114-201-1278](#) [024251-0015](#) [602GB06EG1832SN](#) [602GB06EG24-61SN](#) [0134-201-1207](#) [0134-201-1410](#) [0134-201-1806](#) [0134-201-2006](#) [0134-201-2007](#) [0134-201-2010](#) [0134-201-2200](#) [0134-202-1400](#) [0134-207-0809](#) [0134-207-1208](#) [0134-207-2009](#)