



**TNC / TNC 18 GHz**

*R143 / R144*



## Contents

### TNC

|                       |              |
|-----------------------|--------------|
| Introduction.....     | 11-4         |
| Interface .....       | 11-4 to 11-5 |
| Characteristics ..... | 11-6 to 11-7 |

### TNC 50Ω

|                  |                |
|------------------|----------------|
| Plugs .....      | 11-8 to 11-9   |
| Jacks .....      | 11-9 to 11-11  |
| Receptacles..... | 11-11 to 11-12 |
| Caps .....       | 11-12          |
| Adapters .....   | 11-13          |

### TNC 18 GHz

|                       |                |
|-----------------------|----------------|
| Interface .....       | 11-5           |
| Characteristics ..... | 11-6 to 11-7   |
| Plugs .....           | 11-14          |
| Jacks .....           | 11-14 to 11-15 |
| Receptacles.....      | 11-15          |
| Adapters .....        | 11-16          |
| Caps .....            | 11-16          |

### TNC 75Ω

|                      |       |
|----------------------|-------|
| Plugs .....          | 11-17 |
| Jacks .....          | 11-17 |
| Panel drilling ..... | 11-18 |

# SECTION 11 TABLE OF CONTENTS

# TNC

## Introduction



|            |                                                    |
|------------|----------------------------------------------------|
| 50Ω        | DC - 11 GHz (standard)<br>DC - 18 GHz (TNC 18 GHz) |
| 75Ω        | DC - 1.5 GHz<br>DC - 1 GHz (recommended)           |
| 50 and 75Ω | DC - 1.5 GHz (commercial)                          |

### GENERAL

- Screw-on equivalent to BNC bayonet series
- Good RF performance
- Suitable for high power levels
- Long life and high strength
- 3 ranges:
  - Standard TNC series (50 and 75Ω fully intermateable)
  - Commercial TNC series (50 and 75Ω)
  - 18 GHz TNC series (50Ω)

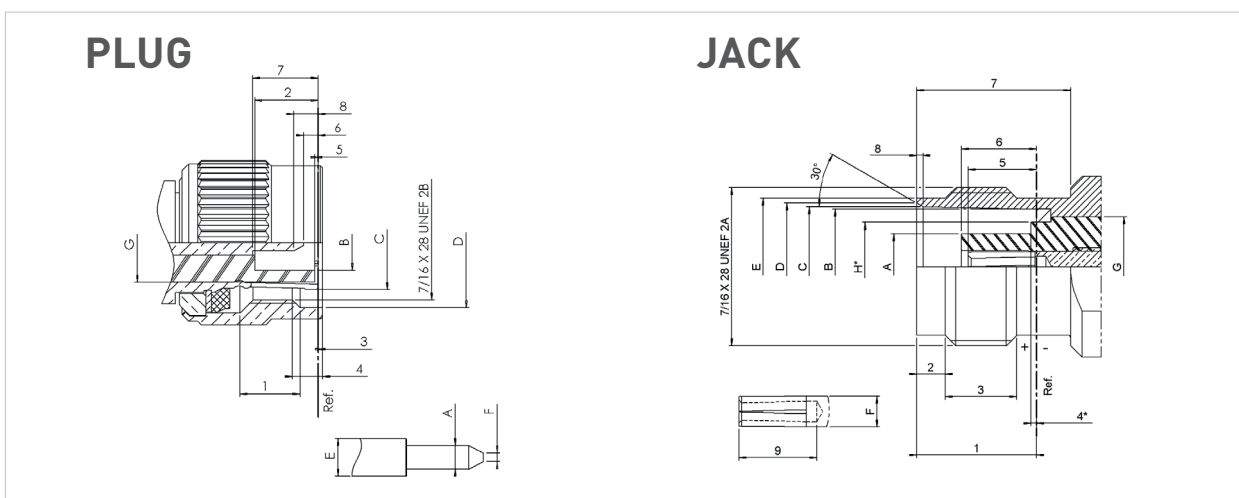
### APPLICABLE STANDARDS

- MIL-C-39012 / MIL STD 348A/313
- IEC 60169-17
- CECC 22200

### APPLICATIONS

- Avionics
- Aeronautics
- Countermeasures
- Telecommunications

## Interface TNC



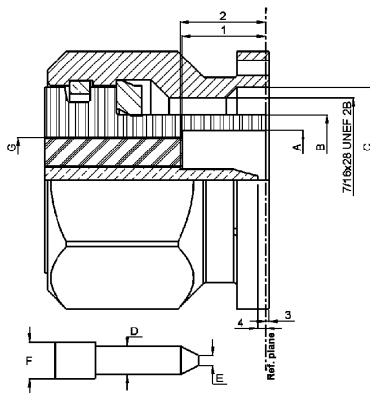
## Interface TNC

| Letter | mm    |      | inch  |       |
|--------|-------|------|-------|-------|
|        | min.  | max. | min.  | max.  |
| A      | 1.32  | 1.37 | 0.052 | 0.054 |
| B      | 4.83  | -    | 0.190 | -     |
| D      | 11.40 | -    | 0.449 | -     |
| E      | -     | 2.20 | -     | 0.087 |
| F      | 0.35  | 0.65 | 0.014 | 0.025 |
| G      | 7.00  | 7.05 | 0.275 | 0.277 |
| 1      | 4.9   | 5.70 | 0.193 | 0.224 |
| 2      | 5.28  | 5.79 | 0.208 | 0.228 |
| 3      | 0.15  | -    | 0.006 | -     |
| 4      | 1.8   | -    | 0.071 | -     |
| 5      | 0.15  | -    | 0.006 | -     |
| 6      | 0.08  | 1.02 | 0.003 | 0.040 |
| 7      | 5.33  | 5.84 | 0.210 | 0.230 |
| 8      | 0.70  | 1.98 | 0.027 | 0.078 |

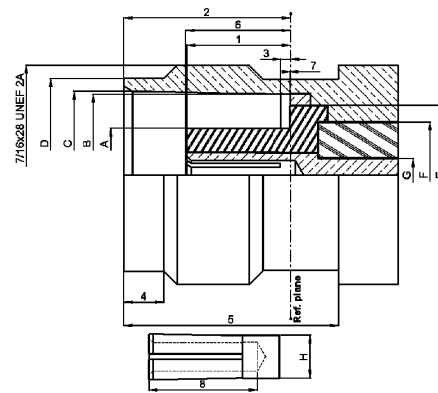
| Letter | mm   |      | inch  |       |
|--------|------|------|-------|-------|
|        | min. | max. | min.  | max.  |
| A      | -    | 4.72 | -     | 0.186 |
| B      | 8.10 | 8.10 | 0.319 | 0.321 |
| C      | 8.31 | 8.46 | 0.327 | 0.333 |
| D      | 8.79 | 9.04 | 0.346 | 0.356 |
| E      | 9.60 | 9.68 | 0.378 | 0.381 |
| F      | -    | 2.20 | -     | 0.087 |
| H      | -    | 5.90 | -     | 0.232 |
| 1      | 8.30 | 8.50 | 0.327 | 0.335 |
| 2      | 1.73 | 2.24 | 0.068 | 0.088 |
| 3      | 4.75 | -    | 0.187 | -     |
| 4      | -    | 0.15 | -     | 0.006 |
| 5      | 4.72 | 5.23 | 0.186 | 0.206 |
| 6      | 4.78 | 5.28 | 0.188 | 0.208 |
| 7      | 10.7 | -    | 0.421 | -     |
| 8      | 0.38 | 0.76 | 0.015 | 0.030 |
| 9      | 4.95 | -    | 0.195 | -     |

## Interface TNC 18 GHz

### PLUG



### JACK



| Letter | mm    |       | inch   |       |
|--------|-------|-------|--------|-------|
|        | min.  | max.  | min.   | max.  |
| A      | 6.18  | 6.22  | 0.243  | 0.245 |
| B      | 8.03  | 8.09  | 0.316  | 0.319 |
| C      | 11.40 | 11.60 | 0.449  | 0.457 |
| D      | 1.34  | 1.36  | 0.053  | 0.054 |
| E      | 0.35  | 0.65  | 0.014  | 0.026 |
| F      | 1.62  | 1.66  | 0.064  | 0.065 |
| G      | 5.28  | 5.32  | 0.208  | 0.210 |
| 1      | 5.28  | 5.38  | 0.208  | 0.212 |
| 2      | 5.35  | 5.50  | 0.211  | 0.217 |
| 3      | -0.30 | 0.55  | -0.012 | 0.022 |
| 4      | 0.35  | 0.90  | 0.014  | 0.065 |

| Letter | mm    |       | inch  |       |
|--------|-------|-------|-------|-------|
|        | min.  | max.  | min.  | max.  |
| A      | 4.68  | 4.72  | 0.184 | 0.186 |
| B      | 8.10  | 8.15  | 0.319 | 0.321 |
| C      | 8.32  | 8.46  | 0.328 | 0.333 |
| D      | 9.61  | 9.68  | 0.379 | 0.381 |
| E      | 6.93  | 6.98  | 0.273 | 0.275 |
| F      | 5.28  | 5.32  | 0.208 | 0.210 |
| G      | 1.62  | 1.66  | 0.064 | 0.065 |
| H      | 2.14  | 2.18  | 0.084 | 0.086 |
| 1      | 4.98  | 5.23  | 0.196 | 0.206 |
| 2      | 8.36  | 8.46  | 0.329 | 0.333 |
| 3      | 0.48  | 1.02  | 0.019 | 0.040 |
| 4      | 1.80  | 2.20  | 0.071 | 0.087 |
| 5      | 10.60 | 11.00 | 0.417 | 0.432 |
| 6      | 5.18  | 5.28  | 0.204 | 0.208 |
| 7      | -0.10 | 0.05  | 0.004 | 0.002 |
| 8      | 5.20  | 5.70  | 0.204 | 0.224 |

TNC/TNC 18 GHz

## Characteristics TNC

| Test/characteristics                                                | MIL-C-39012 A | Values/remarks                             |                                  |
|---------------------------------------------------------------------|---------------|--------------------------------------------|----------------------------------|
| ELECTRICAL CHARACTERISTICS                                          |               |                                            |                                  |
| Impedance                                                           |               | 50Ω                                        | 75Ω                              |
| Frequency range                                                     |               | DC - 11 GHz                                | DC - 1.5 GHz                     |
| V.S.W.R.                                                            | 3-14          | 1.30 max                                   |                                  |
| Insertion loss                                                      | 3-27          | 0.18 dB max at 9 GHz                       |                                  |
| RF leakage                                                          | 3-26          | -60 dB min from 2 to 3 GHz                 |                                  |
| Insulation resistance                                               | 3-11          | 5000 MΩ min                                |                                  |
| Contact resistance<br>• center contact (mΩ)<br>• outer contact (mΩ) | 3-16          | Initial<br>1.5<br>0.2                      | After proof<br>2<br>-            |
| Working voltage                                                     |               | At sea level: 500 V rms                    | at 70000 ft (21000 m): 125 V rms |
| Dielectric withstanding voltage                                     | 3-17          | At sea level: 1500 V rms                   | at 70000 ft (21000 m): 375 V rms |
| RF withstanding voltage                                             | 3-23          | At sea level: 1000 V rms (5 MHz sine wave) |                                  |

## MECHANICAL CHARACTERISTICS

|                                    |      |                                                                     |                                                          |
|------------------------------------|------|---------------------------------------------------------------------|----------------------------------------------------------|
| Durability                         | 3-15 | 500 matings                                                         |                                                          |
| Mating / unmating                  |      | axial force: not applicable<br>torque: 1.96 inch pounds [22.6 N.cm] |                                                          |
| Recommended mating torque          |      | 3.99 to 5.98 inch pounds [46 to 69 N.cm]                            |                                                          |
| Proof torque                       |      | 14.74 inch pounds [170 N.cm]                                        |                                                          |
| Coupling mechanism retention force | 3-25 | 100 Lbf [44.5 daN]                                                  |                                                          |
| Cabling retention force            | 3-24 | cable clamp:                                                        | 40.6 Lbf [181 N min] [all cables]                        |
|                                    |      | crimped:                                                            | 51 Lbf [227 N min] (cable dia. .189 [4.8] to .228 [5.8]) |
|                                    |      |                                                                     | 76.4 Lbf [340 N min] (cable dia. .250 [6.35] and above)  |
| Center contact retention           |      | Axial: 6.06 Lbf [27 N]                                              |                                                          |

## ENVIRONMENTAL CHARACTERISTICS

|                              |      |                                                                                               |  |
|------------------------------|------|-----------------------------------------------------------------------------------------------|--|
| Temperature range            |      | -65°C / + 165°C                                                                               |  |
| standard models              |      | -65°C / +100°C                                                                                |  |
| hermetic sealed models       |      | -65°C / +105°C                                                                                |  |
| models for semi-rigid cables |      |                                                                                               |  |
| Thermal shock                | 3-20 | MIL-STD-202, method 107, condition B                                                          |  |
| High temperature endurance   |      | MIL-STD-202, method 108                                                                       |  |
| Corrosion (salt spray)       | 3-13 | MIL-STD-202, method 101, condition B                                                          |  |
| Vibrations                   | 3-18 | MIL-STD-202, method 204, condition B                                                          |  |
| Shocks                       | 3-19 | MIL-STD-202, method 213, condition G                                                          |  |
| Moisture resistance          | 3-21 | MIL-STD-202, method 106                                                                       |  |
| Low pressure                 | 3-22 | Not applicable                                                                                |  |
| Hermetic seal                |      | Applied vacuum 10 <sup>-6</sup> mm of Hg (Torrs)<br>leakage rate < 10 <sup>-6</sup> atm/cm³/s |  |
| Leakage                      |      | Pressure 3.5 bars; duration 2 mn; temperature 15°C to 25°C                                    |  |

## MATERIALS AND PLATING

|                             |                                  |               |
|-----------------------------|----------------------------------|---------------|
| Body and center pin contact | Brass as per QQ-B-626            | Nickel plated |
| Center socket contact       | Beryllium copper as per QQ-C-530 | Gold plated   |
| Ferrules                    | Brass                            |               |
| Insulators                  | PTFE teflon                      |               |
| Gaskets                     | Silicone elastomer               |               |

All dimensions are given in mm

## Characteristics commercial TNC

| Test/characteristics                         | Values/remarks      |
|----------------------------------------------|---------------------|
| ELECTRICAL AND ENVIRONMENTAL CHARACTERISTICS |                     |
| Impedance                                    | 50Ω or 75Ω          |
| Frequency range                              | DC - 1.5 GHz        |
| Test voltage                                 | 1500 V rms          |
| Operating voltage                            | 500 V rms           |
| Insulation resistance                        | 5000 MΩ min (500 V) |
| Contact resistance                           | 10 mΩ max           |
| Temperature range                            | -35°C / +70°C       |

## PLATING

|                 |        |
|-----------------|--------|
| Body            | Nickel |
| Center contacts | Gold   |

## Characteristics

## TNC 18 GHz

| Test/characteristics | MIL-C-39012 A | Values/remarks |
|----------------------|---------------|----------------|
|----------------------|---------------|----------------|

## ELECTRICAL CHARACTERISTICS

|                                                                     |      |                                                                                                 |
|---------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------|
| Impedance                                                           |      | 50Ω                                                                                             |
| Frequency range                                                     |      | DC - 18 GHz                                                                                     |
| V.S.W.R.                                                            | 3-14 | Semi-rigid cable: 1.17 max<br>Flexible cable: 1.35 at 12.4 GHz      In series adapter: 1.35 max |
| Insertion loss                                                      | 3-27 | 0.18 dB max at 9 GHz                                                                            |
| RF leakage                                                          | 3-26 | -60 dB min from 2 to 3 GHz                                                                      |
| Insulation resistance                                               | 3-11 | 5000 MΩ min                                                                                     |
| Contact resistance<br>• center contact (mΩ)<br>• outer contact (mΩ) | 3-16 | Initial<br>1.5<br>0.2<br>After proof<br>2<br>-                                                  |
| Working voltage                                                     |      | At sea level: 500 V rms      at 70000 ft (21000 m): 125 V rms                                   |
| Dielectric withstanding voltage                                     | 3-17 | At sea level: 1500 V rms      at 70000 ft (21000 m): 375 V rms                                  |
| RF withstanding voltage                                             | 3-23 | At sea level: 1000 V rms [5 MHz sine wave]                                                      |

## MECHANICAL CHARACTERISTICS

|                                    |      |                                                                                                                     |
|------------------------------------|------|---------------------------------------------------------------------------------------------------------------------|
| Durability                         | 3-15 | 500 matings                                                                                                         |
| Mating / unmating                  |      | axial force: not applicable<br>torque: 1.96 inch pounds (22.6 N.cm)                                                 |
| Recommended mating torque          |      | 22.98 inch pounds (265 N.cm)                                                                                        |
| Proof torque                       |      | 29.40 inch pounds (339 N.cm)                                                                                        |
| Coupling mechanism retention force | 3-25 | 100 Lbf (44.5 daN)                                                                                                  |
| Cabling retention force            | 3-24 | 51 Lbf (227 N min) [cable dia. .189 (4.8) to .228 (5.8)]<br>76.4 Lbf (340 N min) [cable dia. .250 (6.35) and above] |
| Center contact retention           |      | Axial: 6.06 Lbf (27 N)                                                                                              |

## ENVIRONMENTAL CHARACTERISTICS

|                                                                                                |      |                                                                                                            |
|------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------------------|
| Temperature range<br>standard models<br>hermetic sealed models<br>models for semi-rigid cables |      | -65°C / + 165°C<br>-65°C / +100°C<br>-65°C / +105°C                                                        |
| Combined climate tests                                                                         |      |                                                                                                            |
| Thermal shock                                                                                  | 3-20 | MIL-STD-202, method 107, condition B                                                                       |
| High temperature endurance                                                                     |      | MIL-STD-202, method 108                                                                                    |
| Corrosion (salt spray)                                                                         | 3-13 | MIL-STD-202, method 101, condition B                                                                       |
| Vibrations                                                                                     | 3-18 | MIL-STD-202, method 204, condition B                                                                       |
| Shocks                                                                                         | 3-19 | MIL-STD-202, method 213, condition G                                                                       |
| Moisture resistance                                                                            | 3-21 | MIL-STD-202, method 106                                                                                    |
| Low pressure                                                                                   | 3-22 | Not applicable                                                                                             |
| Hermetic seal                                                                                  |      | Applied vacuum 10 <sup>-6</sup> mm of Hg (Torrs)<br>Leakage rate < 10 <sup>-6</sup> atm/cm <sup>3</sup> /s |
| Leakage                                                                                        |      | Pressure 3.5 bars; duration 2 mn; temperature 15°C to 25°C                                                 |

## MATERIALS

|                                         |  |                    |
|-----------------------------------------|--|--------------------|
| Body                                    |  | Stainless steel    |
| Center socket contact<br>male<br>female |  | Brass<br>Bronze    |
| Ferrules                                |  | Brass              |
| Insulators                              |  | PTFE teflon        |
| Gaskets                                 |  | Silicone elastomer |

## PLATING

|                 |  |             |
|-----------------|--|-------------|
| Body            |  | Passivated  |
| Center contacts |  | Gold plated |

Standard packaging = unit

All dimensions are given in mm (inch)

## Plugs

### STRAIGHT PLUGS CRIMP TYPE FOR FLEXIBLE CABLE

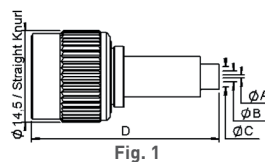


Fig. 1

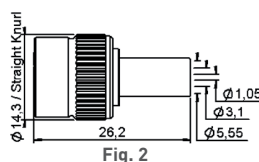


Fig. 2

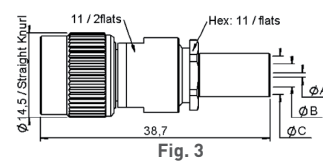


Fig. 3

| Cable group           | Cable group dia.    | Part number  | Fig          | Dimensions mm |       |       |       | Captive center contact | Packaging  | Note                           |
|-----------------------|---------------------|--------------|--------------|---------------|-------|-------|-------|------------------------|------------|--------------------------------|
|                       |                     |              |              | A             | B     | C     | D     |                        |            |                                |
| RG174/RG316/AEP-100FR | 2.6/50/S & LMR® 100 | R143 075 000 | 1            | 0.6           | 1.75  | 3.25  | 29.6  | yes                    | 100 pieces |                                |
| AEP-195FR             | LMR® 195            | R143 082 027 |              | 1.05          | 3.1   | 5.55  | 26.6  | yes                    | 100 pieces | Crimp type                     |
| AEP-200FR             | LMR® 200            | R143 082 200 |              | 1.27          | 3.1   | 5.55  | 26.6  | yes                    | 100 pieces | Crimp type                     |
| AEP-240FR             | LMR® 240            | R143 084 161 |              | 1.5           | 4.05  | 6.6   | 28.2  | yes                    | 100 pieces | Crimp type                     |
| AEP-400FR             | LMR® 400            | R143 089 117 |              | 2.85          | 7.8   | 11.05 | 27.85 | yes                    | 100 pieces | Crimp type                     |
| RG58/RG141            | 5/50/S              | R143 082 000 | 2            |               |       |       |       | yes                    | 100 pieces | Full crimp                     |
|                       |                     | R143 082 161 |              |               |       |       |       |                        |            | Commercial version, full crimp |
|                       |                     |              | R143 072 000 | 3             | 1.05  | 3.1   | 5.55  |                        | no         | Unit                           |
| RG142/RG223/RG400     | 5/50/D              | R143 073 000 | 1            | 1.05          | 3.075 | 5.5   |       | yes                    |            |                                |
|                       |                     | R143 083 000 |              |               | 3.1   | 5.5   | 26.6  |                        |            |                                |

### STRAIGHT PLUGS CLAMP TYPE FOR FLEXIBLE AND SEMI RIGID CABLE

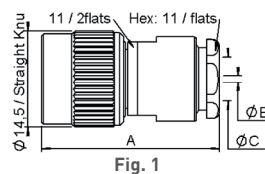


Fig. 1

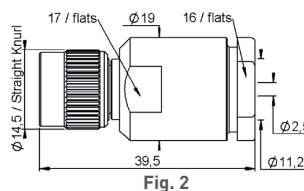


Fig. 2

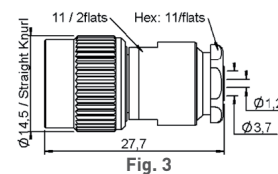


Fig. 3

| Cable group                      | Cable group dia. | Part number  | Fig | Dimensions mm |      |      | Captive center contact | Packaging  | Note                |
|----------------------------------|------------------|--------------|-----|---------------|------|------|------------------------|------------|---------------------|
|                                  |                  |              |     | A             | B    | C    |                        |            |                     |
| RG174/RG316/RD316<br>RG179/RD179 | 2.6/50+75        | R143 004 000 | 1   | 26.5          | 0.6  | 3.1  | yes                    | Unit       | Conical braid clamp |
| RG58/RG141/RG142<br>RG223/RG400  | 5/50/S+D         | R143 008 000 |     | 27.1          | 1.2  | 5.6  | no                     | 100 pieces |                     |
| RG59/RG62                        | 6/75+93          | R143 012 000 |     | 27            | 1.05 | 6.65 | yes                    | Unit       |                     |
| RG213/RG393/RG214                | 10+11/50         | R143 018 000 | 2   |               |      |      |                        |            |                     |
|                                  |                  | R143 018 500 |     |               |      |      |                        |            |                     |
| RG402                            | .141"            | R143 052 000 | 3   |               |      |      | no                     |            |                     |

## RIGHT ANGLE PLUGS CRIMP AND SOLDER TYPE

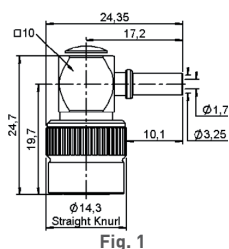
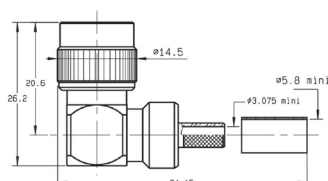


Fig. 1



**Fig. 2**

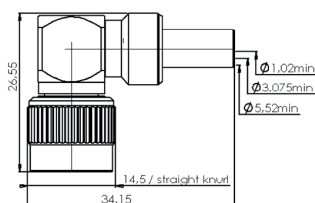


Fig. 3

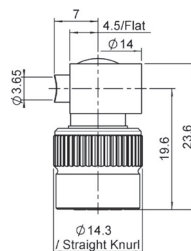
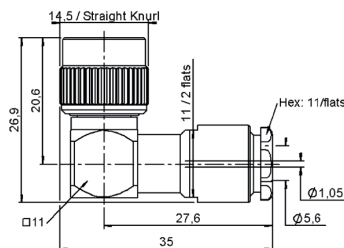


Fig. 4

## RIGHT ANGLE PLUG CLAMP TYPE FOR FLEXIBLE CABLE



## STRAIGHT JACKS CRIMP TYPE FOR FLEXIBLE CABLE

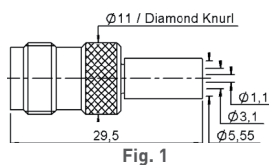
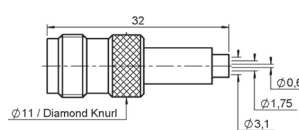


Fig. 1



**Fig. 2**

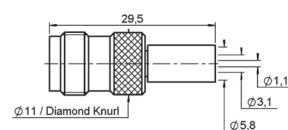
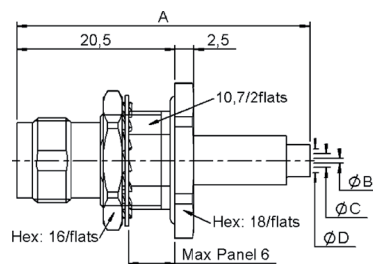


Fig. 3

11-9

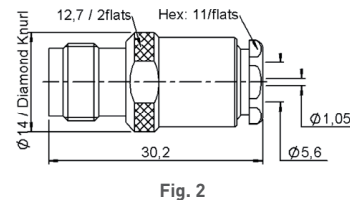
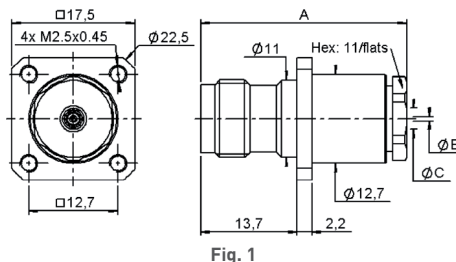
## Jacks

### STRAIGHT BULKHEAD JACKS CRIMP TYPE FOR FLEXIBLE CABLE



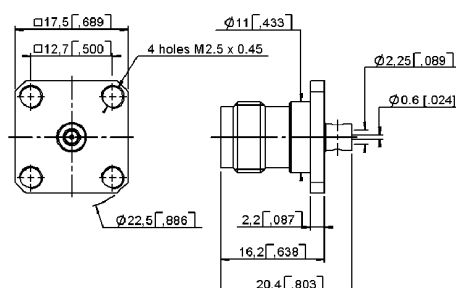
| Cable group | Cable group dia. | Part number  | Dimensions mm |      |      |      | Captive center contact | Panel drilling | Packaging  | Note                                         |
|-------------|------------------|--------------|---------------|------|------|------|------------------------|----------------|------------|----------------------------------------------|
|             |                  |              | A             | B    | C    | D    |                        |                |            |                                              |
| RG174/RG316 | 2.6/50/S         | R143 331 161 | 38            | 0.6  | 1.75 | 3.10 | yes                    | P09+P11        | 100 pieces | Commercial version, panel sealed             |
| RG58/RG141  | 5/50/S           | R143 332 161 | 35            | 1.05 | 3.10 | 5.55 |                        |                |            | Commercial version, panel sealed, full crimp |

### STRAIGHT JACKS CLAMP TYPE FOR FLEXIBLE CABLE



| Cable group                   | Cable group dia. | Part number  | Fig | Dimensions mm |      |     | Captive center contact | Panel drilling | Packaging | Note                                              |
|-------------------------------|------------------|--------------|-----|---------------|------|-----|------------------------|----------------|-----------|---------------------------------------------------|
|                               |                  |              |     | A             | B    | C   |                        |                |           |                                                   |
| RG174/RG316/RD316/RG179/RD179 | 2.6/50+75        | R143 254 000 | 1   | 29.8          | 0.6  | 3.1 | yes                    | P04            | Unit      | Square flange<br>Also for screws type 3-56 UNF 2A |
| RG58/RG141/RG142/RG223/RG400  | 5/50/S+D         | R143 258 000 |     | 30.2          | 1.05 | 5.6 | no                     |                |           |                                                   |
| RG58/RG141                    | 5/50/S           | R143 207 000 | 2   |               |      |     |                        |                |           |                                                   |

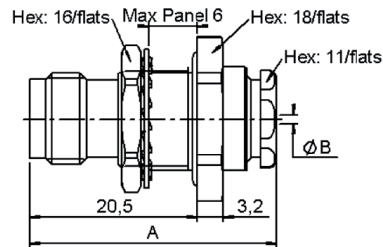
### SQUARE FLANGE STRAIGHT JACK SOLDER TYPE FOR SEMI-RIGID CABLE



| Cable group | Cable group dia. | Part number  | Captive center contact | Panel drilling | Packaging |
|-------------|------------------|--------------|------------------------|----------------|-----------|
| RG405       | .085"            | R143 257 440 | no                     | P01            | Unit      |

## Jacks and receptacles

### STRAIGHT BULKHEAD JACKS PANEL SEALED REAR MOUNT



| Cable group       | Cable group dia. | Part number  | Dimensions (mm) |     | Captive center contact | Panel drilling | Packaging  |
|-------------------|------------------|--------------|-----------------|-----|------------------------|----------------|------------|
|                   |                  |              | A               | B   |                        |                |            |
| RG178/RG196       | 2/50/S           | R143 323 000 | 29.9            | 2.2 | yes                    | P09            | Unit       |
| RG174/RG316/RD316 | 2.6/50           | R143 324 000 | 29.6            | 3.1 |                        |                | 100 pieces |
| RG58/RG141        | 5/50/S           | R143 325 000 | 30.17           | 5.6 |                        |                | Unit       |
| RG402             | .141"            | R143 337 000 | 30.8            | 3.7 | no                     |                | 100 pieces |

### SQUARE FLANGE STRAIGHT FEMALE RECEPTACLES

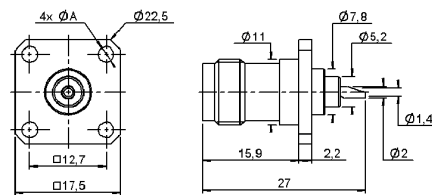


Fig. 1

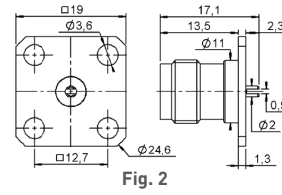


Fig. 2

| Part number  | Fig | Dimensions A (mm) | Captive center contact | Panel drilling | Packaging  | Note                                   |
|--------------|-----|-------------------|------------------------|----------------|------------|----------------------------------------|
| R143 404 000 | 1   | M2.5 x 0.45       | yes                    | P05            | Unit       | Solder pot<br>17.5 mm square flange    |
| R143 405 000 |     | 2.6               |                        |                | 100 pieces |                                        |
| R143 420 000 | 2   |                   | no                     | P02            |            | Slotted contact<br>19 mm square flange |

### BULKHEAD STRAIGHT FEMALE RECEPTACLES

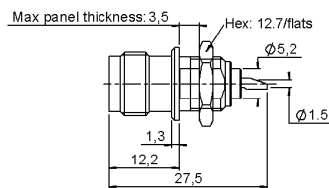


Fig. 1

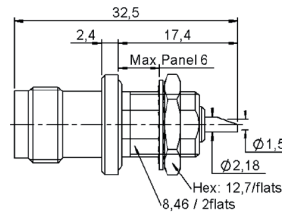


Fig. 2

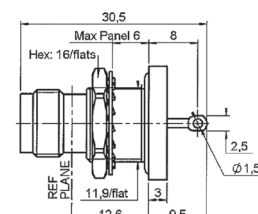
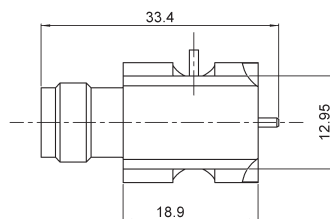


Fig. 3

| Part number  | Fig | Captive center contact | Panel drilling | Packaging | Note                                          |
|--------------|-----|------------------------|----------------|-----------|-----------------------------------------------|
| R143 557 000 | 1   | yes                    | P08            | Unit      | Front mount, solder pot contact               |
| R143 603 000 | 2   |                        | P10            |           | Panel sealed, front mount, solder pot contact |
| R143 626 000 | 3   |                        | P17            |           | Hermetic, panel sealed, rear mount            |

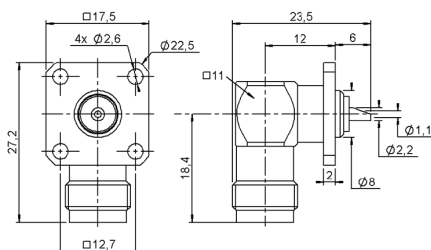
## Receptacles and caps

### RF POWER SWITCHING CONNECTORS



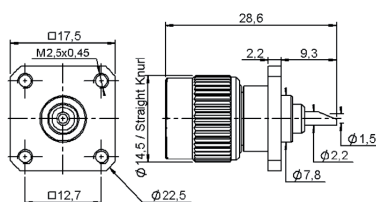
| Part number  | Type  |
|--------------|-------|
| R143 422 947 | Left  |
| R143 422 957 | Right |

### SQUARE FLANGE RIGHT ANGLE FEMALE RECEPTACLE



| Part number  | Captive center contact | Panel drilling | Packaging | Note               |
|--------------|------------------------|----------------|-----------|--------------------|
| R143 654 000 | yes                    | P06            | Unit      | Solder pot contact |

### SQUARE FLANGE STRAIGHT MALE RECEPTACLE



| Part number  | Captive center contact | Panel drilling | Packaging | Note               |
|--------------|------------------------|----------------|-----------|--------------------|
| R143 440 000 | yes                    | P03            | Unit      | Solder pot contact |

### PROTECTIVE CAPS

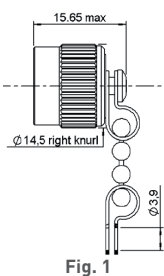


Fig. 1

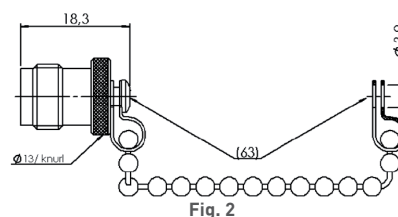
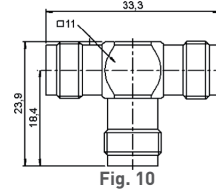
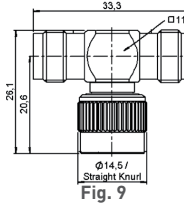
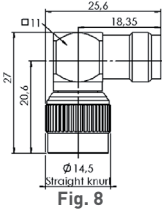
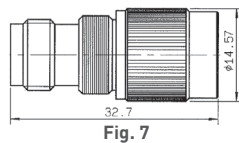
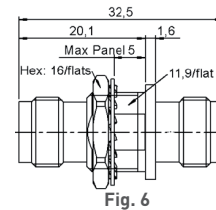
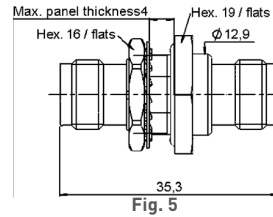
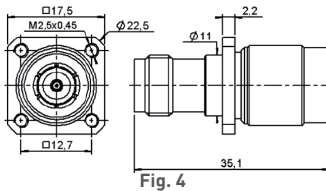
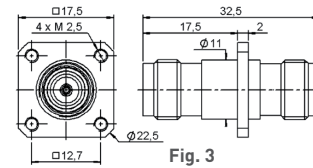
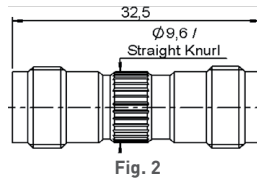
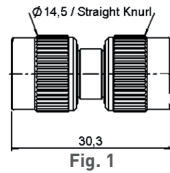


Fig. 2

| Part number  | Fig | Finish | Packaging  | Note              |
|--------------|-----|--------|------------|-------------------|
| R143 812 000 | 1   | Nickel | Unit       | Male with chain   |
| R143 835 000 | 2   |        | 100 pieces | Female with chain |

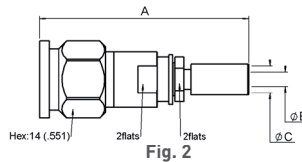
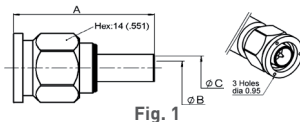
## Adapters

## IN SERIES ADAPTERS



| Part number  | Fig | Captive center contact | Panel drilling | Packaging  | Note                                          |
|--------------|-----|------------------------|----------------|------------|-----------------------------------------------|
| R143 703 000 | 1   | yes                    | P01            | Unit       | Male-male                                     |
| R143 704 000 | 2   |                        |                |            | Female-female                                 |
| R143 710 000 | 3   |                        |                |            | Square flange female-female                   |
| R143 713 000 | 4   |                        |                |            | Square flange slide on type male-female       |
| R143 753 000 | 5   |                        | P09            | 100 pieces | Bulkhead hermetic, panel sealed female-female |
| R143 720 000 | 6   |                        |                |            | Commercial version, bulkhead female-female    |
| R143 713 200 | 7   |                        |                |            | Female-male push-on                           |
| R143 770 000 | 8   |                        | Unit           | Unit       | Right angle male-female                       |
| R143 780 000 | 9   |                        |                |            | Female female male                            |
| R143 782 000 | 10  |                        |                |            | Female female female                          |

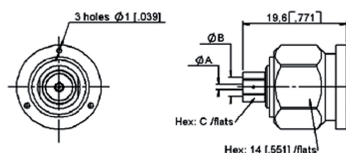
## STRAIGHT PLUGS CRIMP TYPE FOR FLEXIBLE CABLE



| Cable group       | Cable group dia. | Part number  | Fig | Dimensions mm (inch) |            |            | Note                  |
|-------------------|------------------|--------------|-----|----------------------|------------|------------|-----------------------|
|                   |                  |              |     | A                    | B          | C          |                       |
| RG142/RG223/RG400 | 5/50/D           | R143 082 700 | 1   | 30 [1.181]           | 3.2 [.126] | 5.5 [.218] | Incl. heatshrink tube |
|                   |                  | R143 097 700 | 2   | 43.5 [1.713]         | 3 [.118]   | 5.5 [.218] |                       |
|                   | 3.85/50/S        | R143 088 101 |     | 47 [1.85]            | 3 [.118]   | 4.2 [.165] |                       |
|                   | 4.13/50          | R143 093 700 |     | 43.5 [1.71]          | 2.7 [.106] | 4.5 [.177] |                       |
|                   | 8.07/50/S        | R143 092 790 |     | 49.7 [1.957]         | 6.3 [.248] | 8.4 [.331] |                       |
| RG214/RG225       | 11/50/D          | R143 089 700 | 1   | 35 [1.38]            | 7.5 [.295] | 11 [.433]  |                       |

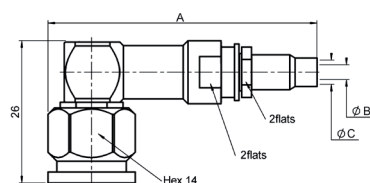
## Plugs and jacks

### STRAIGHT PLUGS SOLDER TYPE FOR SEMI-RIGID CABLE



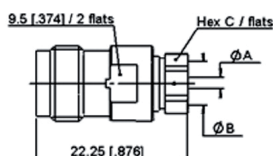
| Cable group | Cable group dia. | Part number  | Dimensions mm (inch) |             |          |
|-------------|------------------|--------------|----------------------|-------------|----------|
|             |                  |              | A                    | B           | C        |
| RG402       | .141"            | R143 051 700 | 1 [.039]             | 3.65 [.144] | 5 [.197] |
| RG401       | .250"            | R143 054 700 | 1.7 [.067]           | 6.45 [.254] | 8 [.315] |

### RIGHT ANGLE PLUGS CRIMP TYPE FOR FLEXIBLE CABLE



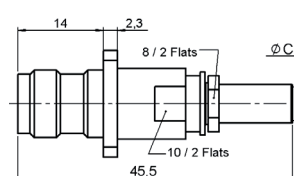
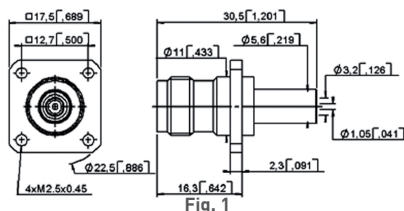
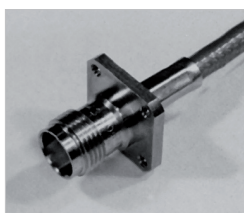
| Cable group | Cable group dia. | Part number  | Dimensions mm (inch) |            |            | Note                  |
|-------------|------------------|--------------|----------------------|------------|------------|-----------------------|
|             |                  |              | A                    | B          | C          |                       |
|             | 3.85/50/S        | R143 188 101 | 54.2 [2.13]          | 3 [.118]   | 4.2 [.165] | Incl. heatshrink tube |
|             | 4.13/50          | R143 191 700 | 50 [1.97]            | 2.7 [.106] | 4.5 [.177] |                       |

### STRAIGHT JACKS SOLDER TYPE FOR SEMI-RIGID CABLE



| Cable group | Cable group dia. | Part number  | Dimensions mm (inch) |             |          |
|-------------|------------------|--------------|----------------------|-------------|----------|
|             |                  |              | A                    | B           | C        |
| RG402       | .141"            | R143 227 700 | 1 [.039]             | 3.65 [.143] | 5 [.197] |

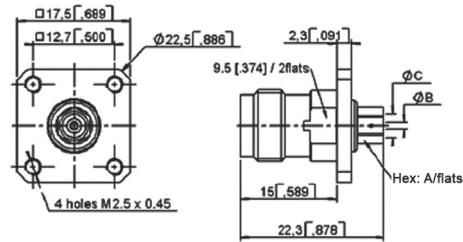
### STRAIGHT SQUARE FLANGE JACK CRIMP TYPE FOR FLEXIBLE CABLE



| Cable group       | Cable group dia. | Part number  | Fig | C         | Panel drilling | Note                 |
|-------------------|------------------|--------------|-----|-----------|----------------|----------------------|
|                   | 4.13/50          | R143 295 700 | 2   | 4.4(.173) | P01            | Ind. heatshrink tube |
| RG142/RG223/RG400 | 5/50/D           | R143 292 700 | 1   | 5.6(.219) |                |                      |
|                   |                  | R143 297 700 | 2   |           |                |                      |

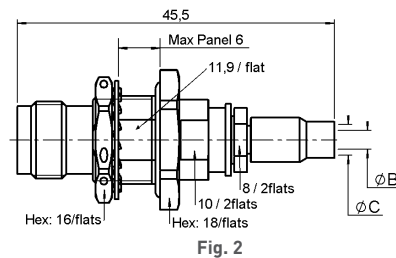
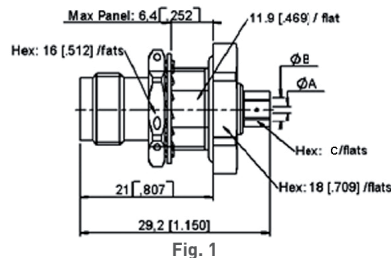
## Jacks and receptacles

### STRAIGHT SQUARE FLANGE JACKS SOLDER TYPE FOR SEMI-RIGID CABLE



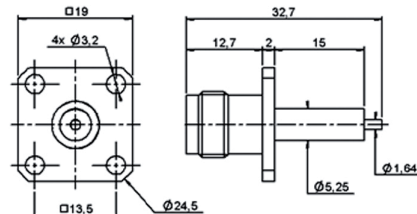
| Cable group | Cable group dia. | Part number  | Dimensions mm (inch) |            |             | Panel drilling |
|-------------|------------------|--------------|----------------------|------------|-------------|----------------|
|             |                  |              | A                    | B          | C           |                |
| RG405       | .085"            | R143 272 700 | 4 [.157]             | 0.6 [.024] | 2.25 [.089] | P12            |
| RG402       | .141"            | R143 273 700 | 5 [.197]             | 1 [.039]   | 3.65 [.144] |                |
| RG401       | .250"            | R143 274 700 | 8 [.315]             |            | 6.45 [.254] |                |

### STRAIGHT BULKHEAD JACK PANEL SEALED



| Cable group | Cable group dia. | Part number  | Fig | Dimensions mm (inch) |          | Panel drilling | Type   |
|-------------|------------------|--------------|-----|----------------------|----------|----------------|--------|
|             |                  |              |     | B                    | C        |                |        |
| RG402       | .141"            | R143 321 700 | 1   | 3.65 [.144]          | 5 [.197] | P09            | Solder |
| RG401       | .250"            | R143 322 700 |     | 6.45                 | 8        |                | Crimp  |
|             | 4.13/50          | R143 340 700 | 2   | 2.7                  | 4.5      |                |        |

### SQUARE FLANGE STRAIGHT FEMALE RECEPTACLE (extended dielectric)



| Part number  | Captive center contact | Panel drilling |
|--------------|------------------------|----------------|
| R143 412 700 | yes                    | P13            |

TNC 18 GHz

Adapters and caps

IN SERIES ADAPTERS

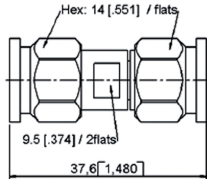


Fig. 1

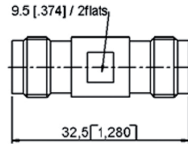


Fig. 2

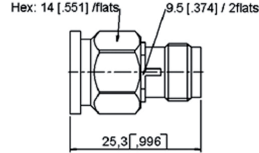


Fig. 3

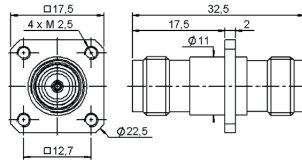


Fig. 4

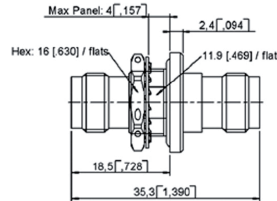
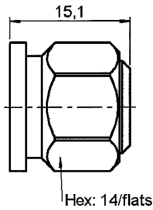
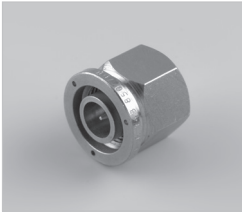


Fig. 5

| Part number  | Fig | Captive center contact | Panel drilling | Note                                  |
|--------------|-----|------------------------|----------------|---------------------------------------|
| R143 703 700 | 1   | yes                    |                | Male - male                           |
| R143 704 700 | 2   |                        |                | Female - female                       |
| R143 705 700 | 3   |                        |                | Male - female                         |
| R143 710 700 | 4   |                        | P16            | Square flange female - female         |
| R143 730 700 | 5   |                        | P09            | Bulkhead panel sealed female - female |

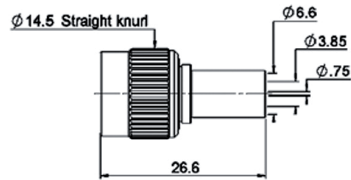
CAPS



| Part number  | Note               |
|--------------|--------------------|
| R143 850 700 | Male short circuit |

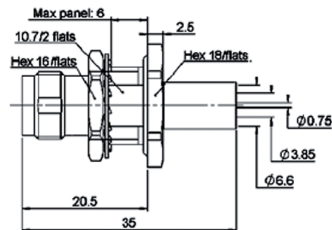
## Plugs and jacks

### STRAIGHT PLUGS CRIMP TYPE FOR FLEXIBLE CABLE



| Cable group | Cable group dia. | Part number  | Captive center contact | Note                            |
|-------------|------------------|--------------|------------------------|---------------------------------|
| RG59/RG62   | 6/75 + 93        | R144 085 000 | no                     | Full crimp                      |
|             |                  | R144 085 161 | yes                    | Commercial version - full crimp |

### STRAIGHT BULKHEAD JACKS CRIMP TYPE FOR FLEXIBLE CABLE

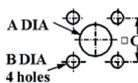


| Cable group | Cable group dia. | Part number  | Captive center contact | Panel drilling | Packaging  | Note                               |
|-------------|------------------|--------------|------------------------|----------------|------------|------------------------------------|
| RG59/RG62   | 6/75 + 93        | R144 334 161 | yes                    | P09 or P11     | 100 pieces | Commercial version<br>Panel sealed |

TNC 75Ω

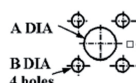
## Panel drilling

### P01



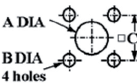
|   | MM    |       | INCH  |       |
|---|-------|-------|-------|-------|
|   | maxi  | mini  | maxi  | mini  |
| A | 11.3  | 11.2  | 0.445 | 0.441 |
| B | 2.7   | 2.6   | 0.106 | 0.102 |
| C | 12.75 | 12.65 | 0.502 | 0.498 |

### P02



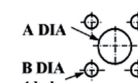
|   | MM    |       | INCH  |       |
|---|-------|-------|-------|-------|
|   | maxi  | mini  | maxi  | mini  |
| A | 11.3  | 11.2  | 0.445 | 0.441 |
| B | 3.7   | 3.6   | 0.146 | 0.142 |
| C | 12.75 | 12.65 | 0.502 | 0.498 |

### P03



|   | MM    |       | INCH  |       |
|---|-------|-------|-------|-------|
|   | maxi  | mini  | maxi  | mini  |
| A | 7.9   | 7.8   | 0.311 | 0.307 |
| B | 2.7   | 2.6   | 0.106 | 0.102 |
| C | 12.75 | 12.65 | 0.502 | 0.498 |

### P04



|              | MM    |       | INCH  |       |
|--------------|-------|-------|-------|-------|
|              | maxi  | mini  | maxi  | mini  |
| A (F. Mount) | 13    | 12.9  | 0.512 | 0.508 |
| A (R. Mount) | 11.3  | 11.2  | 0.445 | 0.441 |
| B            | 2.7   | 2.6   | 0.106 | 0.102 |
| C            | 12.75 | 12.65 | 0.502 | 0.498 |

### P05



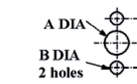
|           | MM    |       | INCH  |       |
|-----------|-------|-------|-------|-------|
|           | maxi  | mini  | maxi  | mini  |
| A F.mount | 8     | 7.9   | 0.315 | 0.311 |
| A R.mount | 11.3  | 11.2  | 0.445 | 0.441 |
| B         | 2.8   | 2.7   | 0.11  | 0.106 |
| C         | 12.75 | 12.65 | 0.502 | 0.498 |

### P06



|   | MM    |       | INCH  |       |
|---|-------|-------|-------|-------|
|   | maxi  | mini  | maxi  | mini  |
| A | 8.3   | 8.2   | 0.327 | 0.323 |
| B | 2.7   | 2.6   | 0.106 | 0.102 |
| C | 12.75 | 12.65 | 0.502 | 0.498 |

### P07



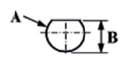
|              | MM   |      | INCH  |       |
|--------------|------|------|-------|-------|
|              | maxi | mini | maxi  | mini  |
| A (F. Mount) | 8.3  | 8.2  | 0.327 | 0.323 |
| A (R. Mount) | 11.4 | 11.2 | 0.449 | 0.441 |
| B            | 2.7  | 2.6  | 0.106 | 0.102 |
| C            | 18.1 | 17.9 | 0.713 | 0.705 |

### P08



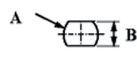
|   | MM   |      | INCH  |       |
|---|------|------|-------|-------|
|   | maxi | mini | maxi  | mini  |
| A | 9.8  | 9.7  | 0.386 | 0.382 |
| B | 8.93 | 8.81 | 0.352 | 0.347 |

### P09



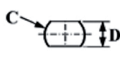
|   | MM   |      | INCH  |       |
|---|------|------|-------|-------|
|   | maxi | mini | maxi  | mini  |
| A | 12.8 | 12.7 | 0.504 | 0.5   |
| B | 12.1 | 12   | 0.476 | 0.472 |

### P10



|   | MM   |      | INCH  |       |
|---|------|------|-------|-------|
|   | maxi | mini | maxi  | mini  |
| A | 9.75 | 9.65 | 0.384 | 0.38  |
| B | 8.65 | 8.55 | 0.341 | 0.337 |

### P11



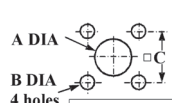
|   | MM   |      | INCH  |       |
|---|------|------|-------|-------|
|   | maxi | mini | maxi  | mini  |
| C | 12.8 | 12.7 | 0.504 | 0.5   |
| D | 10.9 | 10.8 | 0.429 | 0.425 |

### P12



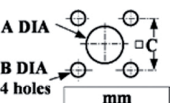
|           | mm    |       | inch |      |
|-----------|-------|-------|------|------|
|           | Maxi  | mini  | Maxi | mini |
| A F.mount | 9.1   | 9     | .358 | .354 |
| A R.mount | 11.3  | 11.2  | .445 | .441 |
| B         | 2.7   | 2.6   | .106 | .102 |
| C         | 12.75 | 12.65 | .502 | .498 |

### P13



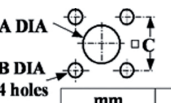
|   | mm    |       |
|---|-------|-------|
|   | Maxi  | mini  |
| A | 13.4  | 13.3  |
| B | 2.7   | 2.6   |
| C | 12.75 | 12.65 |

### P14



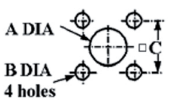
|   | mm    |       | inch |      |
|---|-------|-------|------|------|
|   | Maxi  | mini  | Maxi | mini |
| A | 5.5   | 5.4   | .217 | .213 |
| B | 3.3   | 3.2   | .130 | .126 |
| C | 13.55 | 13.45 | .533 | .530 |

### P15



|   | mm    |       | inch |      |
|---|-------|-------|------|------|
|   | Maxi  | mini  | Maxi | mini |
| A | 7.1   | 7     | .280 | .276 |
| B | 3.3   | 3.1   | .130 | .122 |
| C | 12.75 | 12.65 | .502 | .498 |

### P16



|   | MM    |       | INCH  |       |
|---|-------|-------|-------|-------|
|   | maxi  | mini  | maxi  | mini  |
| A | 11.3  | 11.2  | 0.445 | 0.441 |
| B | 3.3   | 3.2   | .130  | .126  |
| C | 12.75 | 12.65 | 0.502 | 0.498 |