TECHNICAL SPECIFICATION

3 POLES DC

PART NUMBER : AN2551

PRODUCT DESCRIPTION

AN2551 connector 3 poles – 28VDC external power female plug for aircraft and helicopters. According to ISO 461 and Mil-C-7974 standards 3 PINS NATO AN2551.
Made in Belgium

TECHNICAL PROPERTIES

- 3 PIN NATO connector AN2551 standard plug made of strong polycarbonate.
- Registered plug. Standard color red, available in different colors on request.
- Sleeves are silver plated. With solenoid pin.
- Corrosion proof construction. Polycarbonate plugs are stronger and resist to higher temperature, voltage and amperage. Mates with AN2552-3A external power receptacle.
- Performance and dimensions to ISO 461 (BS4G173:1985) and appropriate MOD (Air)
- Weight 0.7 kg
- Cable assemblies to customer requirements available.
- Made of polycarbonate, hardness 13800psi, max. recommended cable for '0' AWG (53 mm2) .
- Recommended Cable 25mm2 or 2 AWG.
- Glass transition temperature of about 147 °C (297 °F), Tensile strength 55–75 MPa
- Average change in Resistance after 100 dry cycles: < 2µΩ.
- Maximum 1600A based on the resistance this would give less than a .1V drop per contact.
- Abrasive resistance – ASTM D1044 10–15 mg/1000 cycles
- Dielectric constant 2.9 at 1 MHz

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3 POLES DC AN2551 PROPERTIES

Properties AN2551 polycarbonate P/N AN2551

- low weight and high impact resistance, polycarbonate selected by aircraftplugs.
- Physical Properties Density (ρ) 1.20–1.22 g/cm3
- Flammability V0-V2
- Water absorption – Equilibrium (ASTM) 0.16–0.35%
- Water absorption – over 24 hours 0.1%
- Radiation resistance Fair
- Ultraviolet (1-380nm) resistance Fair
- Mechanical Properties
- Tensile strength (σt) 55–75 MPa
- Elongation (ε) at break 80–150%
- Compressive strength (σc) >80 MPa
- Hardness – Rockwell M70
- Abrasive resistance – ASTM D1044 10–15 mg/1000 cycles
- Coefficient of friction (μ) 0.31
- Glass transition temperature (Tg) 147 °C (297 °F)
- Heat deflection temperature 0.45 MPa: 140 °C (284 °F)
- 1.8 MPa: 128–138 °C (262–280 °F)
- Upper working temperature 115–130 °C (239–266 °F)
- Lower working temperature −40 °C (−40 °F)
- Thermal conductivity (k) at 23 °C 0.19–0.22 W/(m·K)
- Specific heat capacity (c) 1.2–1.3 kJ/(kg·K)
- Electrical Properties
- Dielectric constant (εr) at 1 MHz 2.9
- Permittivity (ε) 2.568 × 10−11 F/m
- Permeability (μ) at 1 MHz 1.089(2) μN/A2
- Dissipation factor at 1 MHz 0.01
- Surface resistivity 1015 Ω/sq

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ASSEMBLY INSTRUCTIONS MANUAL

Assembly instructions manual AN2551 polycarbonate P/N AN2551

Content of packaging :

2 Covers (L + R polycarbonate).
2 Main terminals silver plated.
1 Silver plated interlock contact
6 Stainless steel screws.
1 Short interlock wire.

Instructions :

1. Strip 13 mm (½ inch) insulation from the top-end of each main wire.
2. Strip 13 mm (½ inch) insulation from the both-ends of the interlock wire.
3. Use a screw bench to hold the terminals, do not put any pressure on the slotted pins
4. Heat top-end of terminals with torch with a pointed flame.
5. Fill the top opening about ¾ full with tin solder.
6. Aircraftplugs solder is available and recommended.
7. Caution : Do not overheat , the solder flux will flame and it can damage the contact.
8. Remove heat; slowly insert each wire.
9. Allow solder to flow into the wires for secure electrical contact.
10. Connect the interlock wire with the positive main contact and interlock contact.
11. Solder positive wire and jumper into the positive main contact terminal.
12. Cool down all terminals.
13. Place all terminals and wires into the housing.
14. Screw the assembly together using the 6 stainless steel screws.(ISO Torque 1.8 Ft/Lbs)
15. Check the polarity.