

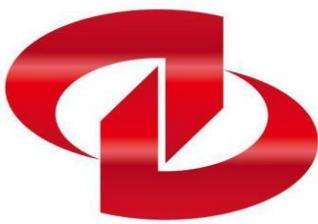
Technical Specification for RG316D Dual-Core Overall Shielded Coaxial Cable

1. Product Overview

The RG316D Dual-Core Overall Shielded Coaxial Cable is a high-performance radio frequency (RF) transmission cable featuring a dual-core structure and integrated overall shielding. It is designed to facilitate reliable multi-channel signal transmission in environments requiring stable impedance, strong anti-interference capabilities, and resistance to harsh conditions. The cable is suitable for a range of applications including aerospace electronics, defense systems, industrial instrumentation, RF modules, and other high-frequency signal transmission scenarios.

2. Basic Information

| Item | Specification |
|------------------------------|--|
| Model | RG316D |
| Brand | hellosignal |
| Product Code | 7101227 |
| Category | Coaxial Cable |
| Characteristic Impedance | $50 \pm 3 \Omega$ |
| Certifications | UL, ETL, CE, CPR, RoHS |
| Available Lengths | 100m, 305m, 500m, 1000m, 500ft, 1000ft |
| Packaging Options | Roll, wooden spool, carton, pallet |
| Minimum Order Quantity (MOQ) | 10KM |
| Delivery Time | Normally 25 working days |



| | |
|-----------------|---------------------------------|
| Port of Loading | NINGBO, SHANGHAI |
| Payment Terms | T/T, L/C at sight, D/P at sight |

3. Cable Construction

| Component | Material / Specification | Diameter |
|-----------------|---|----------------|
| Inner Conductor | Silver-Plated Copper (SC), 7 × 0.175 mm | — |
| Dielectric | PTFE (Natural) | 1.52 ± 0.05 mm |
| Shielding 1 | Silver-Plated Copper Braid, 80 × 0.10 mm, ≥95% coverage | 1.95 ± 0.10 mm |
| Shielding 2 | Silver-Plated Copper Braid, 80 × 0.10 mm, ≥95% coverage | 2.35 ± 0.10 mm |
| Inner Jacket | FEP (Blue / Green) | 2.90 ± 0.10 mm |
| Filling | PE (Natural) | 6.40 ± 0.20 mm |
| Overall Shield | Tinned Copper Braid, 120 × 0.13 mm, >85% coverage | 6.95 ± 0.20 mm |
| Wrapping | PTFE Foil | 7.10 ± 0.20 mm |
| Outer Sheath | TPU, Sky Blue (RAL5015) | 9.20 ± 0.30 mm |
| Marking | ZION / RG316D*2C+FB / RoHS / Meter Marking | — |

4. Electrical Characteristics (20 °C)

| Parameter | Specification |
|--------------------------|---------------|
| Characteristic Impedance | 50 ± 3 Ω |



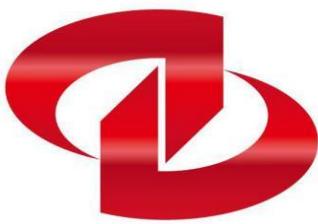
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|------------------------------------|---------------------------------------|
| Capacitance | $100 \pm 5 \text{ pF/m}$ |
| Velocity of Propagation | $69 \pm 1 \%$ |
| Insulation Resistance | $>1000 \text{ M}\Omega\cdot\text{km}$ |
| Operating Voltage | 60 V |
| VSWR (Voltage Standing Wave Ratio) | ≤ 1.3 |

5. Attenuation Performance

| Frequency (GHz) | Attenuation (dB / 100 m) |
|-----------------|--------------------------|
| 0.4 | 54.9 |
| 1.0 | 93.8 |
| 1.5 | 121.7 |
| 2.0 | 145.6 |
| 3.0 | 174.7 |
| 5.0 | 258.9 |
| 6.0 | 289.5 |

6. Physical & Mechanical Characteristics

| Item | Specification |
|--------------------------------|-------------------|
| Operating Temperature Range | -40 °C to +180 °C |
| Installation Temperature Range | -20 °C to +60 °C |



| | |
|-----------------------------------|--------------|
| Minimum Bending Radius (Single) | 46.0 mm |
| Minimum Bending Radius (Repeated) | 92.0 mm |
| Storage Temperature | Below 30 °C |
| Storage Humidity | 20% – 65% RH |
| Recommended Storage Period | ≤ 2 months |
| Insulation Shrinkage | ≤ 0.5 mm |
| Sheath Shrinkage | ≤ 0.6 mm |

7. Standards & Compliance

- Oil Resistance: Complies with IEC 60811-404
- Flame Retardancy: Complies with IEC 60332-1-2
- UV Resistance: Complies with UL 1581-1200
- Environmental Compliance: RoHS II, REACH

8. Key Features

- Dual RG316D coaxial cores enable multi-channel RF transmission within a compact cable structure.
- Silver-plated copper conductors ensure low resistance, excellent skin-effect performance, and high-frequency stability.
- PTFE dielectric and wrapping provide outstanding thermal resistance (up to +180 °C) and low dielectric loss.
- Triple-level shielding design (individual silver-plated copper braid for each core, additional silver-plated copper braid layer, and overall tinned copper braid) offers strong EMI (Electromagnetic Interference) suppression.
- TPU outer sheath delivers oil, UV, and abrasion resistance, enhancing mechanical and environmental durability.
- Maintains stable RF performance with consistent characteristic impedance, low VSWR, and predictable attenuation.