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TRIVAL ANTENE

# AD-18/D3

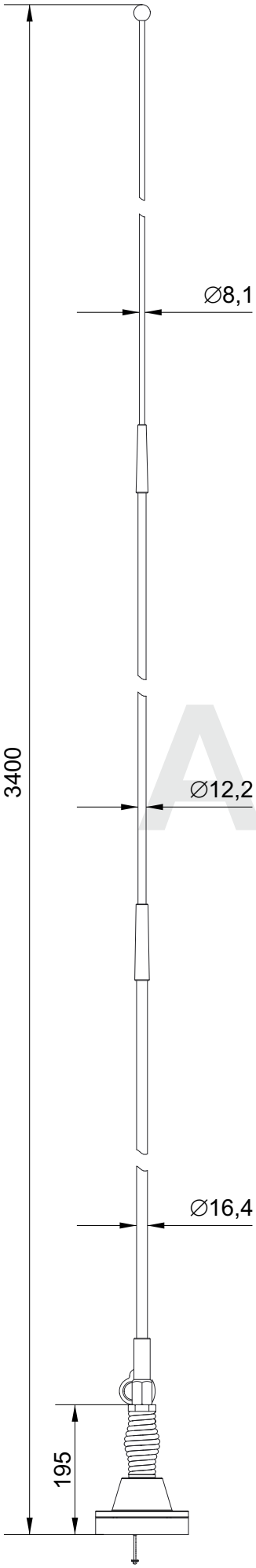
The antenna AD-18/D3 is a wideband mobile VHF antenna for a frequency range from 20 to 88 MHz, mainly intended for use in heavy-duty mobile applications. The antenna is composed of four main parts: antenna base, lower, middle and upper radiating element. The antenna base is made of aluminum and durable plastic materials. Inside the base are the matching circuitry and (optional) GPS antenna. Stainless steel spring absorbs the shocks and the vibrations, in addition, protects the antenna against impacts. Both radiating elements are made of composite materials enable outstanding strength and roughness even in the hardest conditions of use. The antenna base has four mounting holes equally spaced on a 4.5" (114.3 mm) circle which complies with NATO standard. The antenna radiator is painted with military green (RAL-6014) two-component UV resistant paint.

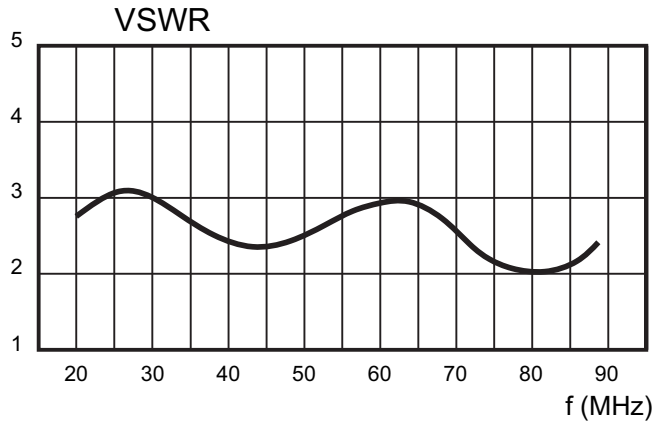
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|---|---|
| **ELECTRICAL SPECS.:** | |
| Frequency range | 20 - 88 MHz |
| Impedance | 50 ohms |
| VSWR | < 3.5 |
| Gain | See diagram |
| Polarization | Linear Vertical |
| Radiation Pattern | Omnidirectional |
| Maximum power | 100 W CW |
| Connector | N female |
| **ELECTRICAL SPECS - GPS:** | |
| Frequency range | L1: 1575.42 +/- 10 MHz or L1/L2 1575.42 / 1227.60 MHz |
| Impedance | 50 ohms |
| VSWR | < 2 |
| Polarization | RHC |
| LNA Gain / Voltage / Current | 18 dB (+/- 2 dB) / 5 V / 19 mA<br>16 dB (+/- 2 dB) / 3.5 V / 13 mA<br>10 dB (+/- 2 dB) / 2 V / 7 mA |
| Noise fig. | <1.5 dB |
| Connector | SMA female |
| **MECHANICAL SPECS:** | |
| Design | Monopole 20 - 88 MHz |
| Height | 3400 mm |
| Weight | 3,1 kg |
| Max. high voltage rating | 16 kV |
| Wind rating | 45 m/s (160 km/h) |
| Color | MIL Green |
| **ENVIRONMENTAL SPECS:** | |
| High Temperature - Storage | MIL-STD-810G; Method 501.5; Proc. I; +75 °C for 96h |
| High Temperature - Operating | MIL-STD-810G; Method 501.5; Proc. II; +65 °C for 16h |
| Low Temperature - Storage | MIL-STD-810G; Method 502.5; Proc. I; -55 °C for 96h |
| Low temperature - Operating | MIL-STD-810G; Method 502.5; Proc. II; -40 °C for 16h |
| Humidity | MIL-STD-810G; Method 507.5; 10 cycles of 24 h; 95% |
| Solar radiation | MIL-STD-810G; Method 505.5; Proc. I; 3 cycles |
| Rain | MIL-STD-810G; Method 506.5; Proc. III |
| Icing/Freezing Rain | MIL-STD-810G; Method 521.5 |
| Sand and Dust | MIL-STD-810G; Method 510.5; Proc. I and II |
| Vibration | MIL-STD 810G, Method 514.6; Proc. I |
| Shock-Transit Drop | MIL-STD-810G, Method 516.6, Procedure IV |
| Contamination by Fluids | MIL-STD-810G, Method 504.1, Procedure II (Fuels, Hydraulic Oils and Lubricating Oils acc. to the Table 504.1-I.) |
| Oak-beam test | 20 hits on 100 mm oak beam at speed 25 km/h |
| EMP Protection | MIL-STD 461E RS105 |

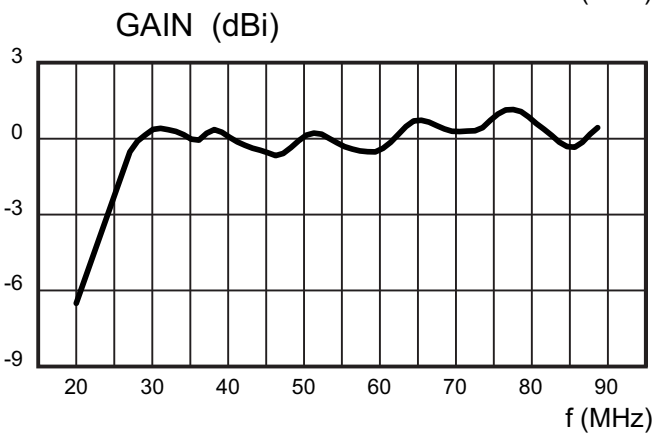


**VERSIONS:**
AD-18/D3-N: VHF antenna with N female connector
AD-18/D3-G-N: combined VHF (N female) and GPS L1 (SMA female) antenna
AD-18/D3-BNC: VHF antenna with BNC female connector
AD-18/D3-G-BNC: combined VHF (BNC female) and GPS L1 (SMA female) antenna

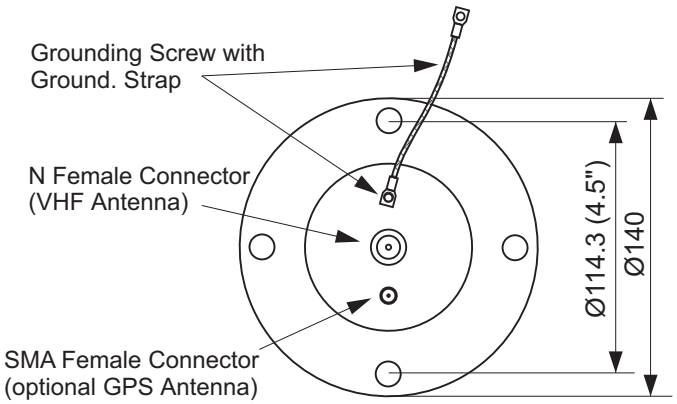
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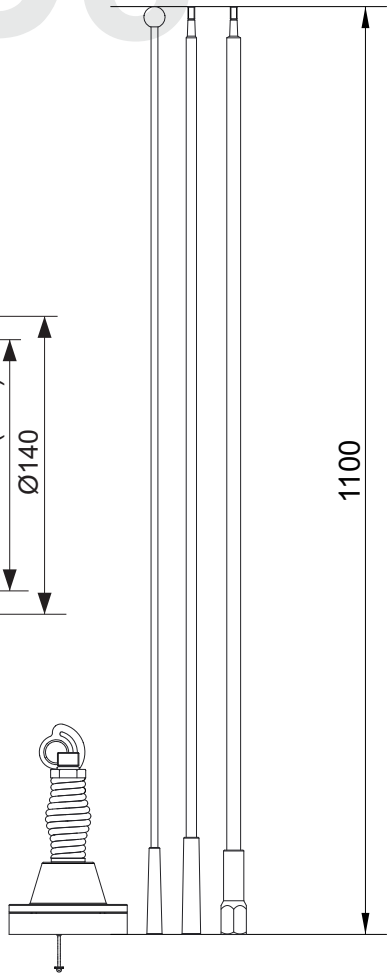




AD-18/D3




ANTENNA BASE -
BOTTOM VIEW




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