

VHF Antenna

Antenna type 16-21 is a lightweight, low profile VHF antenna designed to operate with radio transmitters, receivers and transceivers operating in the frequency range 118 MHz to 137 MHz. The antenna is intended for use in general subsonic airborne applications.

Construction is of a one-piece glass fibre moulding of raked aerodynamic form with a stainless steel leading edge. The carbon composite top-loading tube enables the antenna to withstand greater vibration loads.

The vertical fan element is fed via a tuned circuit to enhance gain at 30 MHz, and a frequency dependent resistive pad network provides acceptable match at lower VHF frequencies.

Alternative types of RF connector (TNC or BNC) are available.



MECHANICAL

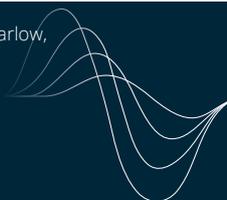
Dimensions (LxWxH)	258.01 x 415.29 x 52.07 mm (maximum)
Weight	0.49 kg (maximum)
Mounting	6 holes fixed location

ENVIRONMENTAL

Temperature and Altitude	RTCA DO-160D, Section 4, Category C2 Operational: -55°C to +70°C Short Time: -55°C to +70°C Ground Survival: -55°C to +85°C Altitude: 10668 m
Temperature Variation	RTCA DO-160D, Section 5, Category A
Humidity	RTCA DO-160D, Section 6, Category C
Shock	RTCA DO-160D, Section 7, Category B 18 Shocks, 6 g, 11 ms 6 Shocks, 20 g, 11 ms 20 g, 3 s in 6 directions
Vibration	RTCA DO-160D, Section 8, Category S Curves L and M combined
Explosion Proofness	Explosion Proofness
Waterproofness	RTCA DO-160D, Section 10, Category R
Fluids Susceptibility	RTCA DO-160D, Section 11, Category F
Sand and Dust	RTCA DO-160D, Section 12, Category X
Fungus	RTCA DO-160D, Section 13, Category F
Salt Spray	RTCA DO-160D, Section 14, Category X
Magnetic Effect	RTCA DO-160D, Section 15, Zone Z

ELECTRICAL

Frequency	118 MHz - 137 MHz
Gain	-1 dBi (minimum) 118 MHz - 136 MHz -2 dBi (minimum) 136 MHz - 137 MHz
Polarisation	Predominantly vertical when mounted vertically
VSWR	≤ 2.5:1 118 MHz - 136 MHz ≤ 3.0:1 136 MHz - 137 MHz
Impedance	50 ohm (nominal)
Radiation	Omnidirectional in azimuth (nominal) Elevation as 1/4 monopole (nominal)
Connector	BNC or TNC Male



16-21

CHELTON

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