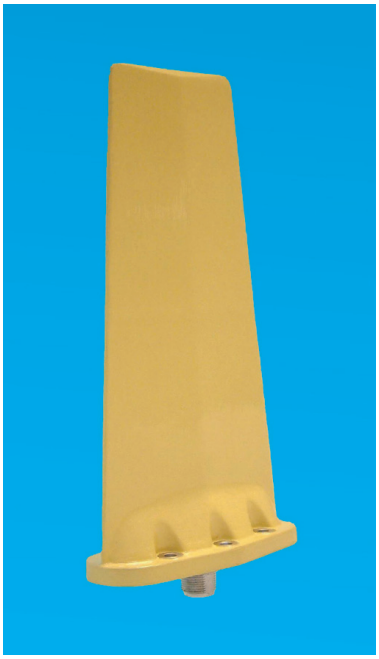
16-1

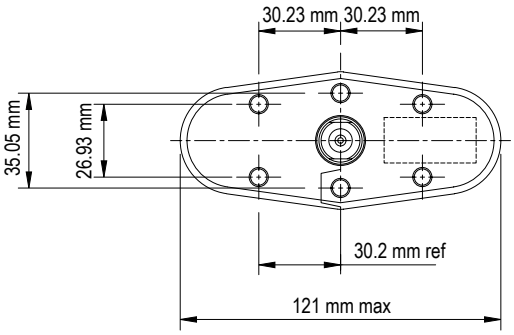
CHELTON

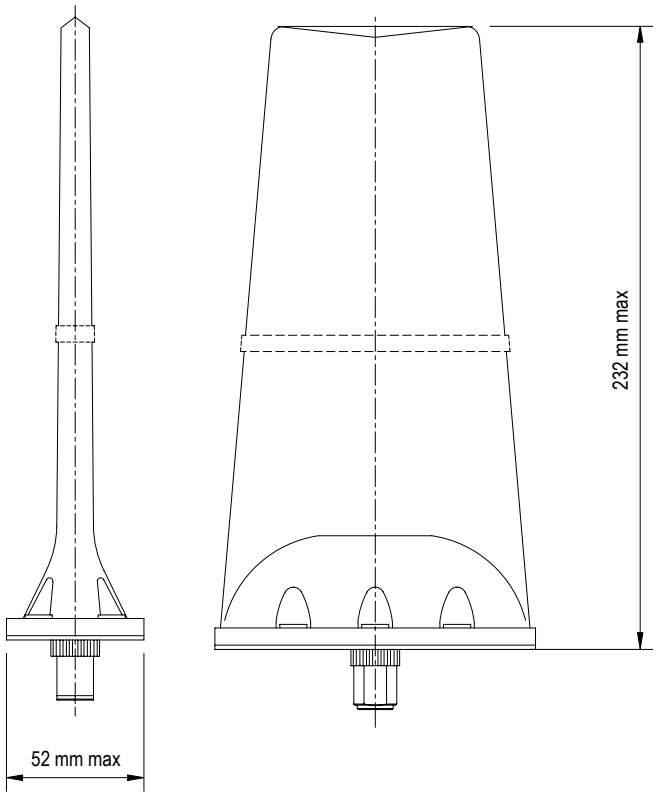
UHF Broadband Antenna

Type 16-1 is a lightweight, broadband UHF blade antenna for transmission and reception of communications/navigation signals over the frequency band 225 MHz to 400 MHz.

The antenna is a sleeved dipole using a solid, glass fibre blade, of diamond form cross-section, that is coated with a silver conductive layer to form the radiating elements. The antenna is protected externally by coats of polyurethane or epoxy paint.







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ELECTRICAL

Frequency	225 MHz - 400 MHz
Impedance	50 ohm nominal
VSWR	≤ 2.0:1
Power Rating	40 W cw
Radiation	Nominally omnidirectional in azimuth
Gain	4 dBi minimum
Gain Variation	±1.5 dB across the frequency band
Polarisation	Essentially vertical when mounted vertically
Connector	N Type Female

MECHANICAL

Dimensions (LxWxH)	232 x 121 x 52mm (maximum)
Weight	0.6 kg (maximum)
Side Load Strength	135 N.m base bending moment unfactored
Mounting Configuration	6 holes fixed location

ENVIRONMENTAL

Temperature	MIL-STD-810E, Method 502.3, Proc II	
	Survival Range:	-62°C to +90°C
	Normal Operational:	-40°C to +70°C
	Occasional Operational:	-62°C to +85°C
Altitude	Operational:	4572 m
	Storage:	15240 m
Vibration	BS 3G 100, Pt 2, Sect 3:3:1, Region A, Cat 5	
Acceleration	BS 3G 100, Pt 2, Sect 3:3:6	
	Normal Operation:	Class 1A (i) (17 g)
	Crash Condition:	Class 11 (25.5 g)
Humidity, Temperature and Pressure	BS 3G 100, Pt 2, Sect 3:3:2	
Tropical Exposure	BS 3G 100, Pt 2, Sect 3:3:7	
Mould Growth	BS 3G 100, Pt 2.1 J, 1985	
Mould Growth	BS 3G 100, Pt 2.1 J, 1985	
Salt Mist	BS 3G 100, Pt 2, Sect 3:3:8, Severity 2	
Fluid Contamination	BS 3G 100, Pt 2, Sect 3:3:12	
Dust and Sand	DEF STAN 07-55, Pt 2, Sect 4/1, Grade B	
Waterproof-ness	BS 3G 100, Pt 2, Sect 3:3:11, Grade A	
Magentic Influence	BS 3G 100, Pt 2, Sect 2	
Explosion-proofness	BS 3G 100, Pt 2, Sect 3:3:5	
Shock	BS 2011, Pt 2.1 Ea	

Note: Antenna also tested to EUROCAE ED-14 / RTCA DO-160C. Criteria available on request.

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