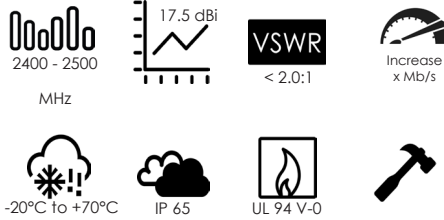


ANTENNAS | HELI-3IS

HELI-3IS

2400 - 2500 MHZ INTRINSICALLY SAFE HIGH GAIN TUNNEL ANTENNA



- Uni-directional
- Ruggedised
- Future proof

Product Overview

The tunnel antenna is the ideal antenna for 2.4-2.5 GHz wireless applications in tunnels. In tests, both the data rate and range achieved with this antenna was greater than obtained when using linearly polarized panel antennas of the same gain. The hardy construction of this antenna makes it ideal for the mining environment. A-HELI-0003 is a uni-directional antenna whilst the closely related A-HELI-0008 fires in both directions. An intrinsically safe version of this antenna is available with code A-HELI-0003-IS. This antenna gives you a low cost network infrastructure for current voice and data needs. Future proof since WiFi means low cost devices and well known access for man and machine.


Features

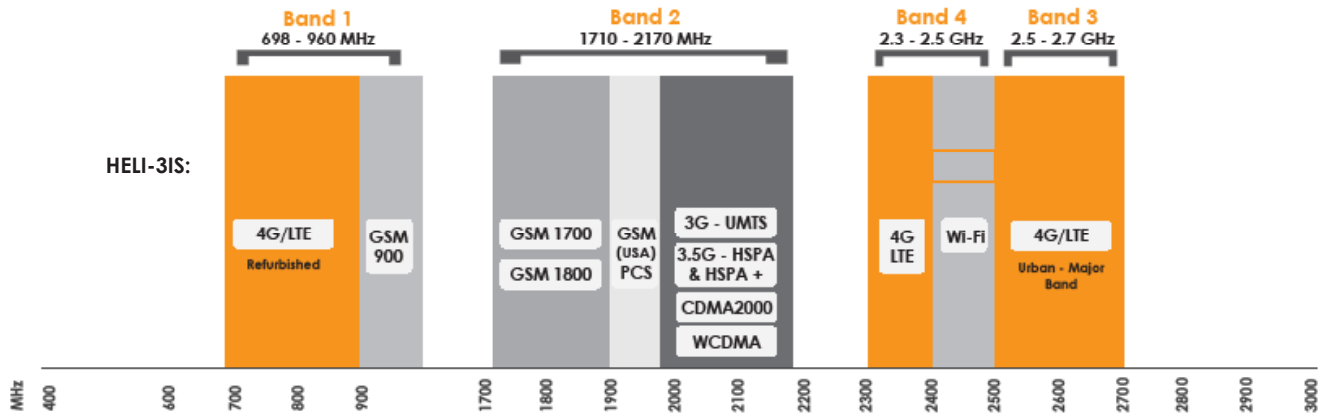
- High Gain
- Rugged Construction



Frequency bands

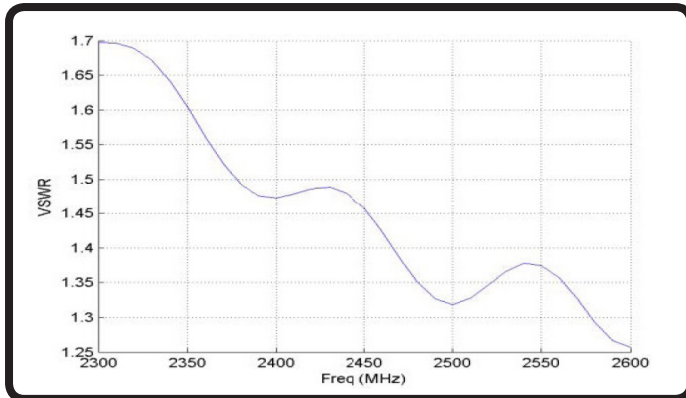
The HELI-3IS is a wide-band antenna that works from 2400 - 2500 MHz

 Indicates the bands on which this antenna works



Antenna Performance Plots

VSWR:

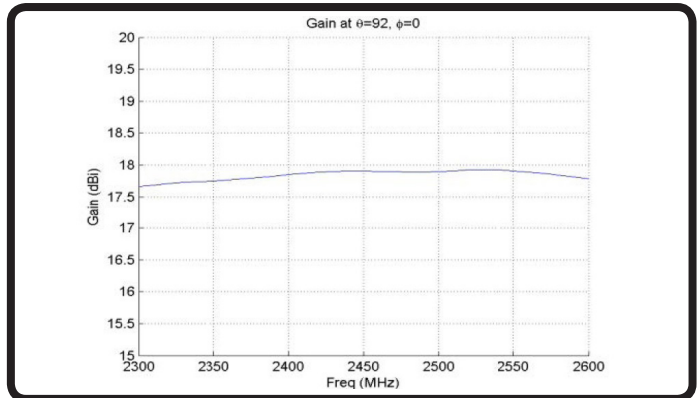


Voltage Standing Wave Ratio (VSWR)

VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 2.0:1.

The HELI-3IS delivers superior performance across all bands with a VSWR of < 2.0:1 or better.

Gain: (excluding cable loss)



Gain* in dBi

17.5 dBi is the peak gain across all bands from 2400 - 2500 MHz

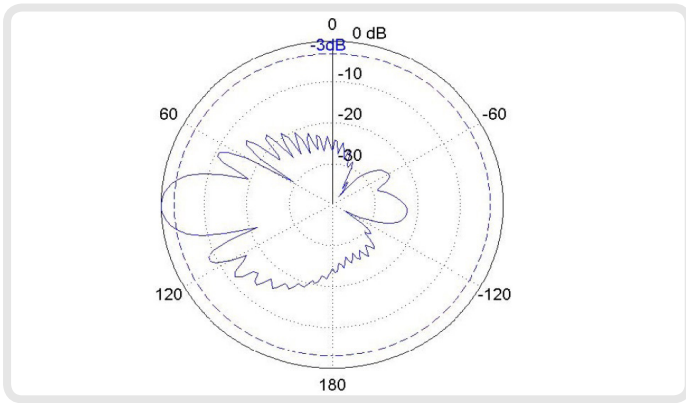
Gain @ 2400-2500 MHz:

17.5 dBi

*Antenna gain measured with polarisation aligned standard antenna

Radiation Patterns

H-Plane



Electrical Specifications

Frequency Bands:	2400 - 2500 MHz
Gain (Max):	17.5 dBi
VSWR:	<2.0:1
Feed Power Handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Right-hand Circular
DC Short:	Yes

Mechanical Specifications

Product Dimensions (L x W x D):	1050 mm x 150 mm x 120 mm
Packaged Dimensions:	1060 mm x 160 mm x 160 mm
Weight:	2.35 kg
Packaged Weight:	2.6 kg
Radome Material:	PVC
Radome Colour:	429C RAL 7038

Environmental Specifications

Temperature Range (Operating):	-20°C to +70°C
Environmental Conditions:	Outdoor/Indoor
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non condensing
Storage Temperature:	-20°C to +70°C

Product Box Contents

Antenna:	A-HELI-0003IS
Mounting Bracket:	Two eyebolts for ceiling mount

The connector is factory mounted to the antenna



Ordering Information

Commercial name:	HELI-3IS
Order Product Code:	A-HELI-0003IS
EAN number:	

Additional Accessories Available

Extension Cables:	None
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Certification Approvals and Standards

Flammability rating:	UL 94-V0 EN 13823
Water Ingress Protection Ratio/Standard:	IP 65 (NEMA 4X)
Impact resistance:	IK 08
Salt Spray:	MIL-STD 810F /ASTM B117
Product Safety:	Complies with UL, CE, EN, CSA and IEC standards

For more detailed information and availability in your region, visit our web site: www.poynting.tech



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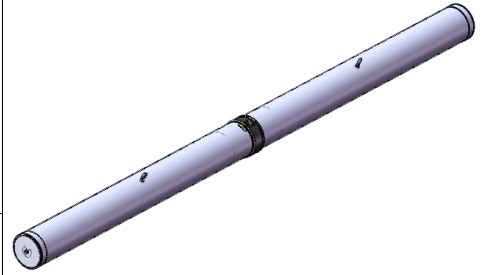
Phone: +49 89 208026538

E-mail: sales-europe@poynting.tech

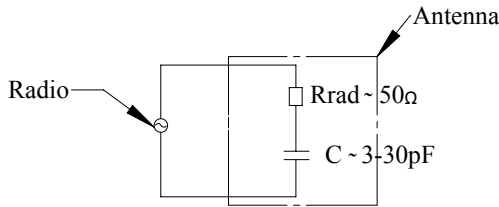
NOTES

- Capacitance as measured between the inner spiral and the base plate 3-30 pF
- Frequency 2.4-2.5 Ghz
- The A-HELI-0003 and A-HELI-A0008 are transducers that transforms the electrical currents and voltages received at its input terminals and radiates this energy in the form of an electromagnetic wave (and visa-versa)

A-HELI-0008-IS



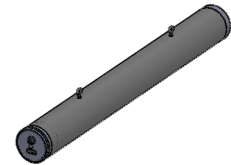
Equivalent Circuit



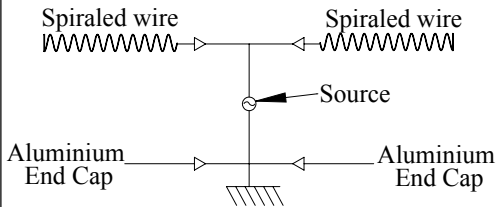
- Pmax = 87 mW
- Vmax = 2,95V
- Imax = 60mA

Surface resistivity:
1mΩ/□ to 15Ω/□

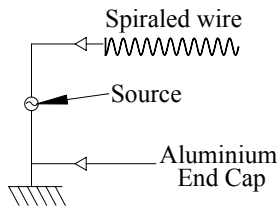
A-HELI-0003-IS



Electrical Schematic A-HELI-0008



Electrical Schematic A-HELI-0003



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Scale (UOS):
Not To Scale
Drawing Size:
A4
Third Angle
Projection

Version	Date	Description	ECP no

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Approved By	Signature	Date
Mark Haarhoff		

Title: Eiectrical Diagram, A-HELI-0003-IS & A-HELI-0008-IS	
Part no:	Version:
Author: Shane Mundy	5.0