9 dBd HD omni antenna 380 - 430 MHz, low PIM

DESCRIPTION

- The 422x Series omni antenna is designed for demanding applications where a durable and high performance colinear is required.
- The centre fed dipole design and feed network gives a stable radiation pattern across a wide bandwidth, and allows tilted beam designs to be effectively employed without large pattern distortions.
- High quality materials and manufacturing techniques are employed to ensure that the antenna has excellent intermodulation performance & wide bandwidth characteristics for multi-channel trunked radio communication systems.
- The antenna has been designed to withstand lightning strike.
- Former Skymasts brand product.

SPECIFICATIONS

Electrical	
Model	422x.09-405-Txx
Frequency	380 - 430 MHz
Max. Input Power	300 W
Omni Deviation	< ± 1 dB
Polarisation	Vertical
Peak Instantaneous Power (PIP)	25 kW
3 dB Beamwidth, E-Plane	8° ±1°
3 dB Beamwidth, H-Plane	Omnidirectional
Impedance	50 Ω
Gain	8.7 dBd (10.9 dBi)
VSWR	< 1.5:1
Passive Intermodulation	-153 dBc (3rd Order, 2 x Tx @ 43 dBm) (PIM value not guaranteed for N connector version)
Lightning Protection	Lightning current handling capability : 200 kA According to EN 62305-1 (Test pulse 10/350 µs)
Antistatic Protection	All metal parts DC-grounded (Connector shows a DC-short)

Mechanical	
Connection(s)	7/16 DIN(f), N(f) or 4.3-10(f)
Materials	Antenna Base : Aluminium Shroud : GRP tube 53 mm dia.
Mounting Section	Al. tube 63.5 mm dia. x 350 mm long
Dimensions	5370 (l) x 53 (dia.) mm / 211.42 x 2.09 (dia.) in.
Wind Load	417 N (160 km/h)
Weight	Approx. 13 kg / 28.66 lb.
Mounting Bracket	2141.01.00.00 (up to 120 mm dia.) (Ordered Separately) ETC-250 (50 to 76 mm dia.) (Ordered Separately)

Environmental	
Operating temperature range	-40 °C to +70 °C
Survival Wind Speed	200 km/h
Ingress Protection	IP56

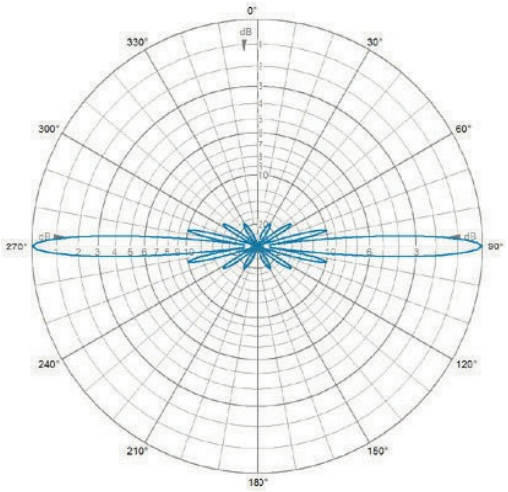
ORDERING

Model	Product No.	Description	Frequency
9 dBd HD omni antenna, low PIM	4220.09-405-T0	7/16 DIN(f) ; 0° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4220.09-405-T2	7/16 DIN(f) ; 2° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4220.09-405-T4	7/16 DIN(f) ; 4° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4220.09-405-T5	7/16 DIN(f) ; 5° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4220.09-405-T6	7/16 DIN(f) ; 6° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4220.09-405-T8	7/16 DIN(f) ; 8° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4220.09-405-T10	7/16 DIN(f) ; 10° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4221.09-405-T0	N(f) ; 0° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4221.09-405-T2	N(f) ; 2° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4221.09-405-T4	N(f) ; 4° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4221.09-405-T5	N(f) ; 5° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4221.09-405-T6	N(f) ; 6° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4221.09-405-T8	N(f) ; 8° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4221.09-405-T10	N(f) ; 10° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4223.09-405-T0	4.3-10(f) ; 0° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4223.09-405-T2	4.3-10(f) ; 2° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4223.09-405-T4	4.3-10(f) ; 4° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4223.09-405-T5	4.3-10(f) ; 5° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4223.09-405-T6	4.3-10(f) ; 6° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4223.09-405-T8	4.3-10(f) ; 8° Electrical Tilt	380 - 430 MHz
9 dBd HD omni antenna, low PIM	4223.09-405-T10	4.3-10(f) ;10° Electrical Tilt	380 - 430 MHz
Accessories			
Galvanised steel parallel bracket	2141.01.00.00	38 - 120 mm (PAIR)	
Extruded Parallel Tube Clamp	ETC-250	50 - 76 mm	
FB-HD/422x	100000918	Non-conductive clamp	
SMC2300/65-105	100000047	Slidable Side-Mounting Clamp	

INSTALLATION NOTE

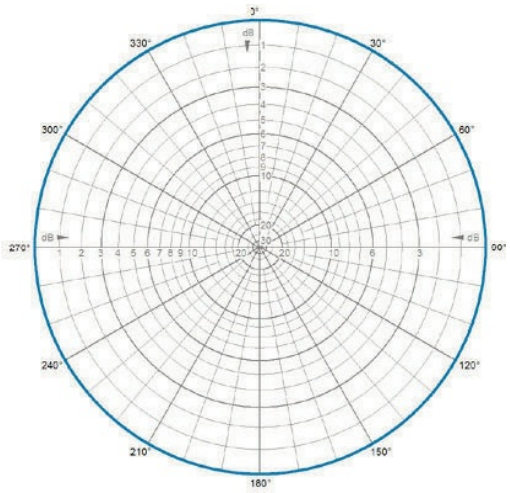
Please note that the survival wind speed stated in this specification is based on a static load test simulating a single gust of wind, according to EN 1991-1-4. Continuous flexure of the antenna, over long periods of time in extreme conditions, can cause a gradual deterioration in the structural integrity of the materials; this may result in a reduction of specifications or other failure of the antenna structure.

RADIATION PATTERN



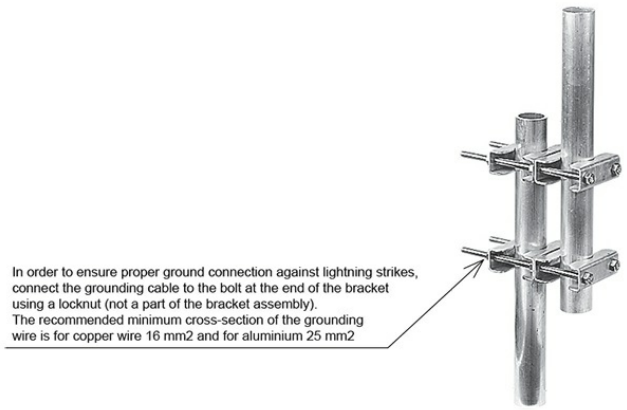
E-Plane | 405 MHz

RADIATION PATTERN



H-Plane | 405 MHz

MOUNTING DETAILS



Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.