

ATEX certified, 3 dBd, Omnidirectional Base Station Antenna for the 380 - 470 MHz Band in Hazardous areas

DESCRIPTION

- CXL 450-3LW-SS-Ex is a 3 dBd, vertically polarized, omnidirectional base station antenna which covers the 380 - 470 MHz band in four models with up to 10 MHz overlap.
- The antenna is specified as an ATEX antenna for use in zone 2 in potentially explosive areas.
- Before installing the antenna, please read the ATEX Product Manual carefully.
- The antenna is suitable for use in gas groups IIA, IIB and IIC in zone 2.
- It's only necessary to install an ATEX grounding Kit on the LW-SS-Ex bracket, when the point of installation has a different electrical potential than the system.
- The carefully designed colinear antenna radiating parts elements is made of brass tube and sealed in a high-quality conical glass fibre tube with low wind-load.
- The accompanying U-bolts and fittings are made of stainless steel.
- All metal parts in the antenna are DC-grounded. Consequently, the antenna shows a DC-short across the coaxial cable.



SPECIFICATIONS

Electrical	
Model	CXL 450-3LW-SS-Ex
Frequency	30 MHz wide frequency segments within 380 - 470 MHz. See ordering designations
Antenna Type	Coaxial dipole, broad-banded
Special spec. info	Max. RF Input Power due to max. EIRP in ATEX Environment *: Group IIA : 32.6 dBm (1.8 W) Group IIB : 30.3 dBm (1.0 W) Group IIC : 27.8 dBm (0.6 W)
Polarisation	Vertical
Pattern Type	Omnidirectional
3 dB Beamwidth, E-Plane	30 °
3 dB Beamwidth, H-Plane	Omnidirectional
Impedance	50 Ω
Gain	3 dBd (5.2 dBi)
VSWR	< 1.5:1
Bandwidth	30 MHz
Antistatic Protection	All metal parts DC-grounded (Connector shows a DC-short)
HCM Code(s)	HCM000ND00, 040DE00

Mechanical	
Connector Torque	N(f) : 0.7 - 1.1 Nm
Materials	Radome : Polyurethane-coated glass fibre Mounting bracket : Stainless acid-proof steel (AiSi 316L) U-bolt and fittings : Stainless steel (AiSi 316L)
Installation Torque	3 Nm
Colour	Blue (RAL 5015)
Wind Area	0.029 sq. m / 0.31 sq. ft
Wind Load	33.6 N (160 km/h)
Dia. At Top End	17 mm / 0.67 in.
Dia. At Bottom End	23 mm / 0.91 in.
Height	Approx. 1515 mm / 59.65 in.
Weight	Approx. 1.55 kg / 3.42 lb.
Mounting	On 16 to 54 mm / 0.63 to 2.13 in. dia. mast tube
ATEX Marking	II 3G Ex nA IIC T6

Environmental	
Operating temperature range	-30 °C to +60 °C
Survival Wind Speed	200 km/h
Ingress Protection	IP66

ORDERING

Model	Product No.	Frequency
CXL 450-3LW-SS-Ex/s	115000013	380 - 410 MHz
CXL 450-3LW-SS-Ex/f	115000014	406 - 430 MHz
CXL 450-3LW-SS-Ex/l	115000015	420 - 450 MHz
CXL 450-3LW-SS-Ex/h	115000016	440 - 470 MHz

Accessories

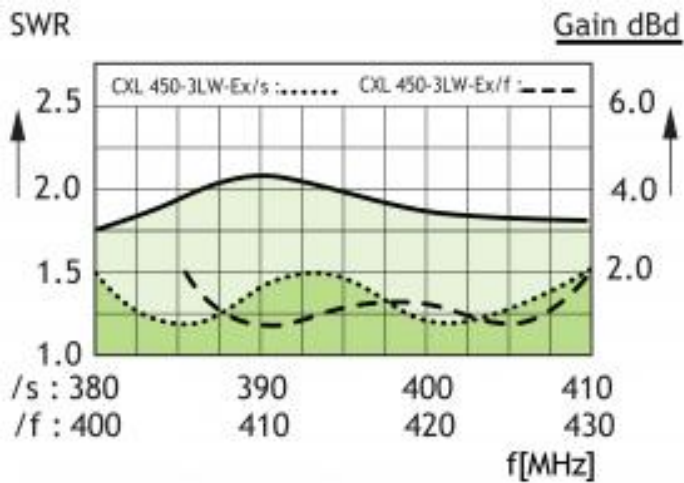
ATEX grounding Kit	115000100
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CALCULATION OF MAX. ANTENNA INPUT POWER IN DIFFERENT ATEX GROUPS

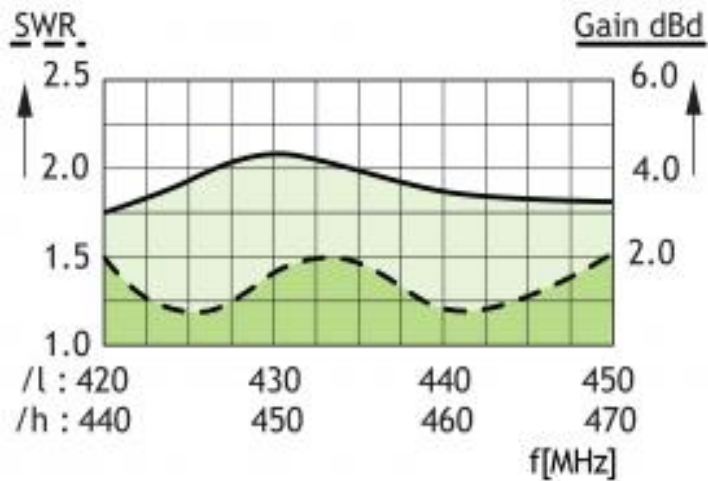
ATEX GROUP	MAX. EIRP POWER	ANTENNA GAIN	MAX INPUT POWER
IIA	37.7 dBm (6.0 W)	3 dBd / 5.15 dBi	32.6 dBm (1.8 W)
IIB	35.4 dBm (3.5 W)	3 dBd / 5.15 dBi	30.3 dBm (1.0 W)
IIC	33.0 dBm (2.0 W)	3 dBd / 5.15 dBi	27.8 dBm (0.6 W)

*See the ATEX Product Manual (safety and mounting instructions) and related EU DECLARATION OF CONFORMITY ATEX Directive 2014/34/EU.

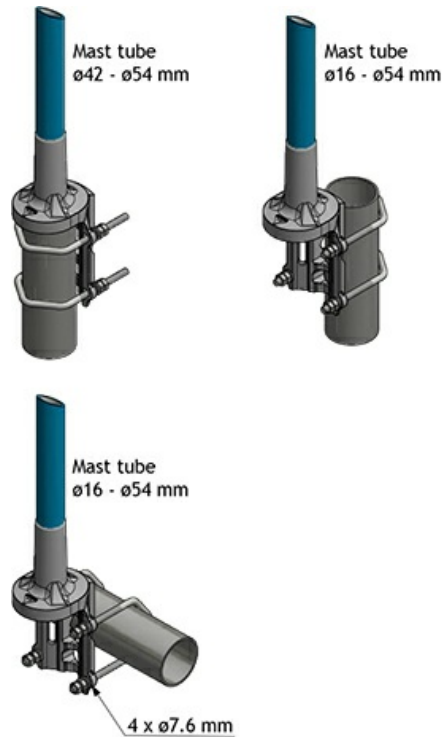
TYPICAL GAIN AND VSWR CURVES



TYPICAL RADIATION PATTERN (H-PLANE)



MOUNTING DETAILS



TYPICAL RADIATION PATTERN (E-PLANE)

