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. 1400 mm / 55.12 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

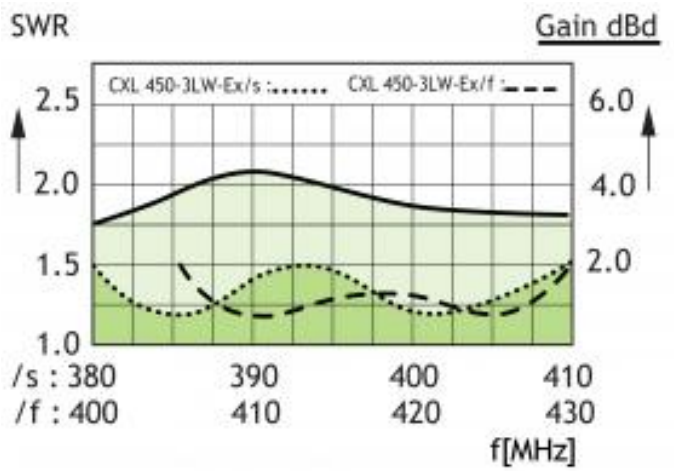
Model	Product No.	Frequency
CXL 450-3LW-SS-Ex/s	115000013	380 - 410 MHz
CXL 450-3LW-SS-Ex/f	115000014	406 - 430 MHz
CXL 450-3LW-SS-Ex/l	115000015	420 - 450 MHz
CXL 450-3LW-SS-Ex/h	115000016	440 - 470 MHz
Accessories		
ATEX grounding Kit	115000100	

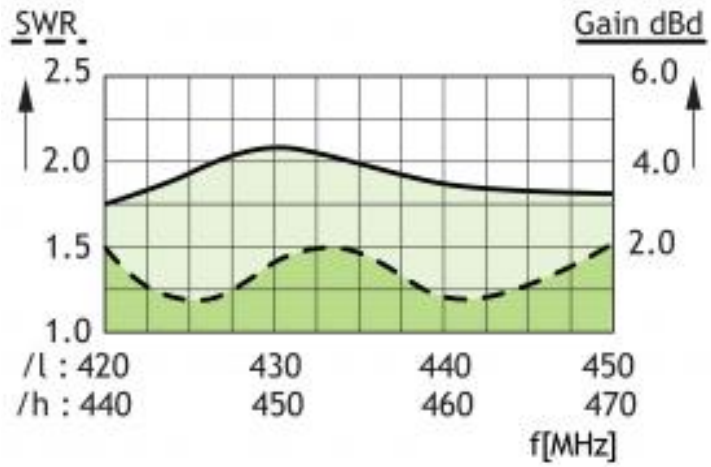
CALCULATION OF MAX. ANTENNA INPUT POWER IN DIFFERENT ATEX GROUPS

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)

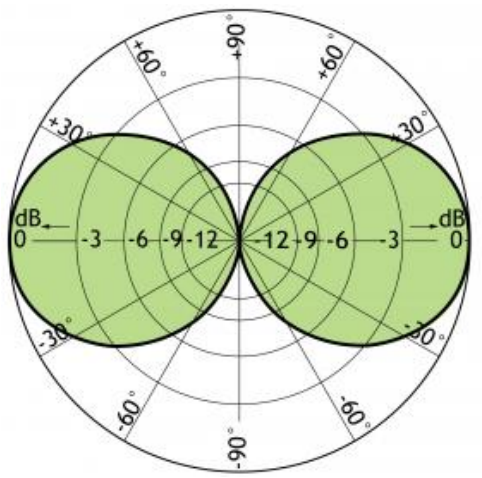
*See the ATEX Product Manual (safety and mounting instructions) and related EU DECLARATION OF CONFORMITY ATEX Directive 2014/34/EU.

TYPICAL GAIN AND VSWR CURVES

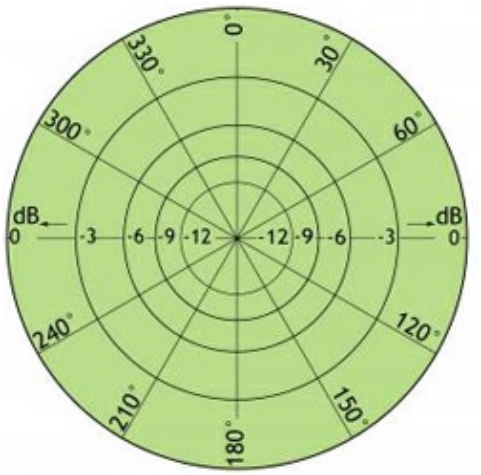




TYPICAL RADIATION PATTERN (E-PLANE)



TYPICAL RADIATION PATTERN (H-PLANE)



MOUNTING DETAILS