

ATEX certified, 0 dBd, Omnidirectional Base Station for the 450 MHz Band in Hazardous areas

DESCRIPTION

- CXL 450-1LW-SS-Ex is a 0 dBd, vertically polarized, omnidirectional base station antenna which covers the 380 - 510 MHz band in three models.
- 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, broadbanded $\frac{1}{2}$ λ -dipole radiating element is made of brass tube and sealed in a high-quality cylindrical glass fibre tube with low wind-load.
- The accompanying U-bolts and fittings are made of stainless steel.
- The antenna element is sealed in a high-quality glass fibre tube.
- All metal parts in the antenna are DC-grounded. Consequently, the antenna shows a DC-short across the coaxial cable.



SPECIFICATIONS

Electrical	
Model	CXL 450-1LW-SS-Ex
Frequency	50 MHz wide frequency segments within 380 - 510 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 : 35.6 dBm (3.6 W) Group IIB : 33.3 dBm (2.1 W) Group IIC : 30.8 dBm (1.2 W)
Polarisation	Vertical
Pattern Type	Omnidirectional
3 dB Beamwidth, E-Plane	80 °
3 dB Beamwidth, H-Plane	Omnidirectional
Impedance	50 Ω
Gain	0 dBd (2.2 dBi)
VSWR	< 1.5:1
Bandwidth	50 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 316) U-bolt and fittings : Stainless steel (AISI 316)
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)
Diameter	25.5 mm / 1.00 in.
Height	Approx. 1050 mm / 41.34 in.
Weight	Approx. 1.45 kg / 3.20 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 450-1LW-SS-Ex/l	115000010	380 - 430 MHz
CXL 450-1LW-SS-Ex/h	115000011	420 - 470 MHz

Accessories

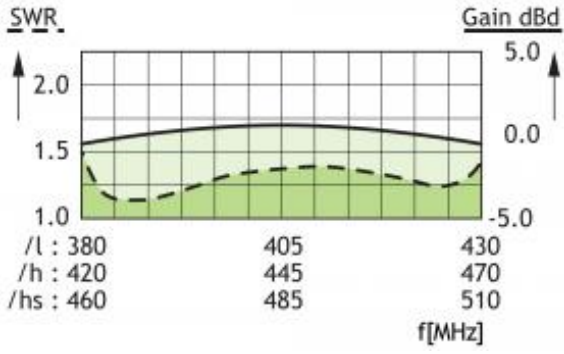
ATEX grounding Kit	115000100	
--------------------	-----------	--

CALCULATION OF MAX. ANTENNA INPUT POWER IN DIFFERENT ATEX GROUPS

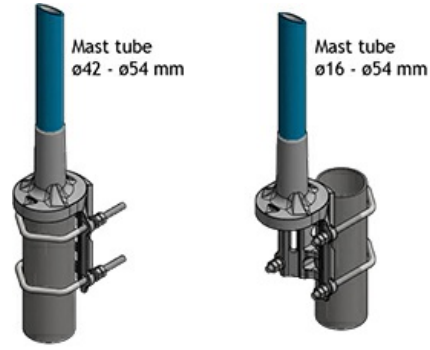
ATEX GROUP	MAX. EIRP POWER	ANTENNA GAIN	MAX INPUT POWER
IIA	37.7 dBm (6.0 W)	0 dBd / 2.15 dBi	35.6 dBm (3.6 W)
IIB	35.4 dBm (3.5 W)	0 dBd / 2.15 dBi	33.3 dBm (2.1 W)
IIC	33.0 dBm (2.0 W)	0 dBd / 2.15 dBi	30.8 dBm (1.2 W)

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

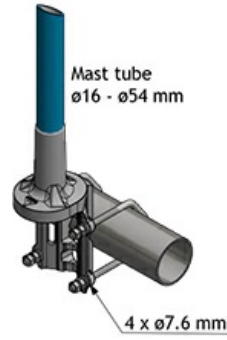
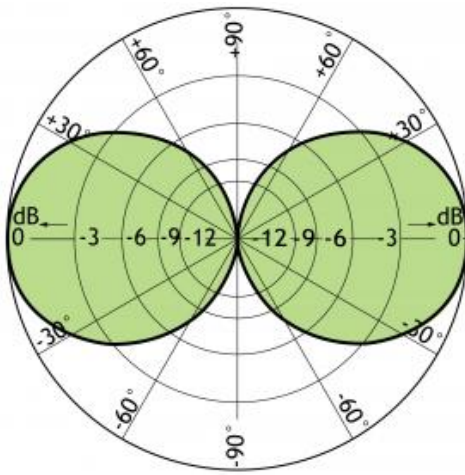
TYPICAL GAIN AND VSWR CURVE



MOUNTING DETAILS



TYPICAL RADIATION PATTERN (E-PLANE)



TYPICAL RADIATION PATTERN (H-PLANE)

