

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

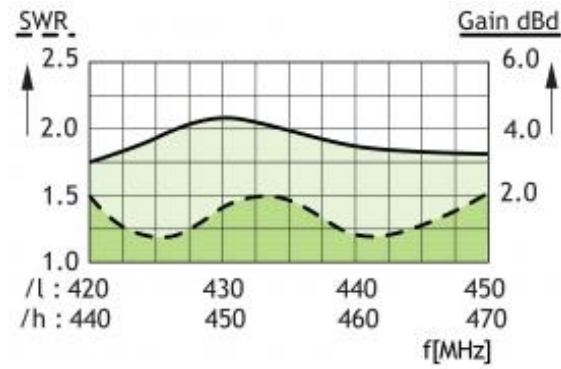
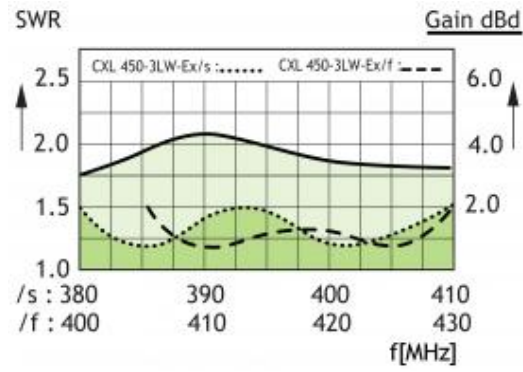
| Model | Product No. | Frequency |
|---------------------|-------------|---------------|
| CXL 450-3LW-SS-Ex/s | 115000013 | 380 - 410 MHz |
| CXL 450-3LW-SS-Ex/f | 115000014 | 406 - 430 MHz |
| CXL 450-3LW-SS-Ex/l | 115000015 | 420 - 450 MHz |
| CXL 450-3LW-SS-Ex/h | 115000016 | 440 - 470 MHz |
| Accessories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

CALCULATION OF MAX. ANTENNA INPUT POWER IN DIFFERENT ATEX GROUPS

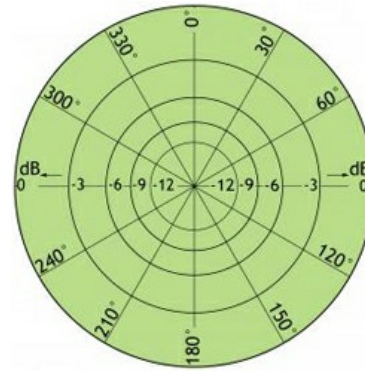
| ATEX GROUP | MAX. EIRP POWER | ANTENNA GAIN | MAX INPUT POWER |
|------------|------------------|------------------|------------------|
| IIA | 37.7 dBm (6.0 W) | 3 dBd / 5.15 dBi | 32.6 dBm (1.8 W) |
| IIB | 35.4 dBm (3.5 W) | 3 dBd / 5.15 dBi | 30.3 dBm (1.0 W) |
| IIC | 33.0 dBm (2.0 W) | 3 dBd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

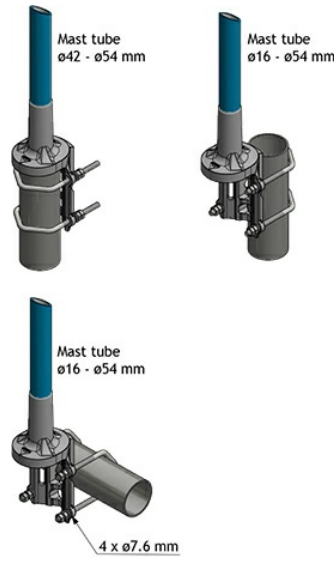
TYPICAL GAIN AND VSWR CURVES



TYPICAL RADIATION PATTERN (H-PLANE)



MOUNTING DETAILS



TYPICAL RADIATION PATTERN (E-PLANE)

