

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

BESCHREIBUNG

- 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  $\frac{1}{2}$   $\lambda$ -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.

SPEZIFIKATIONEN

| Elektrisch DE                   |                                                                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modell                          | CXL 450-1LW-SS-Ex                                                                                                                                       |
| Frequenz                        | 50 MHz wide frequency segments within 380 - 510 MHz. See BESTELLUNG designations                                                                        |
| Antennentyp                     | Coaxial dipole, broad-banded                                                                                                                            |
| Spezielle spez. Info            | Max. HF Eingangsleistung (EIRP) in ATEX Umgebung *:<br><br>Group IIA : 35.6 dBm (3.6 W)<br>Group IIB : 33.3 dBm (2.1 W)<br>Group IIC : 30.8 dBm (1.2 W) |
| Polarisation                    | Vertikal                                                                                                                                                |
| Muster-Art                      | Omnidirektional                                                                                                                                         |
| Öffnungswinkel 3 dB, vertikal   | 80 °                                                                                                                                                    |
| Öffnungswinkel 3 dB, horizontal | Omnidirektional                                                                                                                                         |
| Impedanz                        | 50 $\Omega$                                                                                                                                             |
| Gewinn                          | 0 dBd (2.2 dBi)                                                                                                                                         |
| VSWR                            | < 1.5:1                                                                                                                                                 |
| Bandbreite                      | 50 MHz                                                                                                                                                  |
| Antistatischer Schutz           | Alle Metallteile DC-geerdet (Stecker zeigt einen DC-Kurzschluss)                                                                                        |
| HCM-Code(s)                     | HCM000ND00, 040DE00                                                                                                                                     |

| Mechanisch DE       |                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Verbindungsmoment   | N(f) : 0.7 - 1.1 Nm                                                                                                                                       |
| Materialien         | Radome : Polyurethane-coated glass fibre<br>Mounting bracket : Stainless acid-proof steel (AiSi 316L)<br>U-bolt and fittings : Stainless steel (AiSi 316) |
| Installationsmoment | 3 Nm                                                                                                                                                      |
| Farbe               | Blau (RAL 5015)                                                                                                                                           |
| Windbereich         | 0.029 sq. m                                                                                                                                               |
| Windlast            | 33.6 N (160 km/h)                                                                                                                                         |
| Durchmesser         | 25.5 mm                                                                                                                                                   |
| Höhe                | ca. 1050 mm                                                                                                                                               |
| Gewicht             | ca. 1.45 kg                                                                                                                                               |
| Montage             | On 16 to 54 mm dia. mast tube                                                                                                                             |
| ATEX-Markierung     | II 3G Ex nA IIC T6                                                                                                                                        |



| Umwelt                    |                  |
|---------------------------|------------------|
| Betriebstemperaturbereich | -30 °C to +60 °C |
| Max. Windgeschwindigkeit  | 200 km/h         |
| IP Schutzklasse           | IP66             |

BESTELLUNG

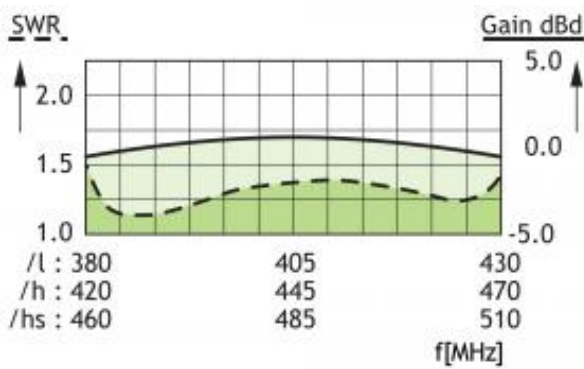
| Modell              | Produkt Nr | Frequenz      |
|---------------------|------------|---------------|
| CXL 450-1LW-SS-Ex/l | 115000010  | 380 - 430 MHz |
| CXL 450-1LW-SS-Ex/h | 115000011  | 420 - 470 MHz |
| Accessories         |            |               |
| ATEX grounding Kit  | 115000100  |               |

CALCULATION OF MAX. ANTENNA INPUT POWER IN DIFFERENT ATEX GROUPS

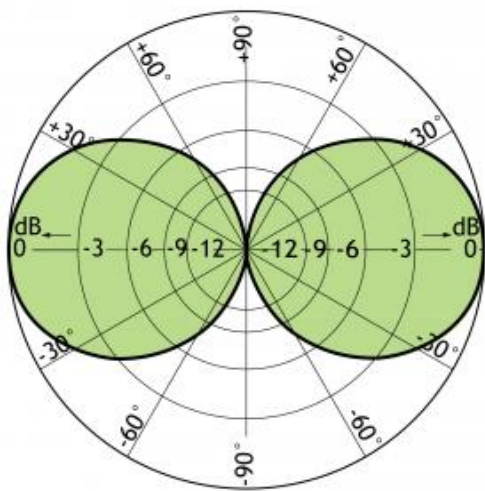
| ATEX GROUP | MAX. EIRP POWER  | ANTENNA GAIN     | MAX INPUT POWER  |
|------------|------------------|------------------|------------------|
| IIA        | 37.7 dBm (6.0 W) | 0 dBd / 2.15 dBi | 35.6 dBm (3.6 W) |
| IIB        | 35.4 dBm (3.5 W) | 0 dBd / 2.15 dBi | 33.3 dBm (2.1 W) |
| IIC       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



TYPICAL RADIATION PATTERN (E-PLANE)



TYPICAL RADIATION PATTERN (H-PLANE)



MOUNTING DETAILS

