

CXL 450-1LW-SS-EX

ATEX certified, 0 dBd, Omnidirectional Base Station and Marine Antenna for the 450 MHz Band in hazardous areas

- 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 ATEX antenna for use in zone 2 in potentially explosive areas.

DESCRIPTION

- Before installing the antenna, read the technical documentation carefully.
- The antenna is suitable for use in gas groups IIA, IIB and IIC in zone 2.
- A grounding-kit is supplied with the antenna. Only to be used to ensure equipotential bonding. See the ATEX Product Manual for further details.
- 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.
- All metal parts in the antenna are DC-grounded. Consequently, the antenna shows a DC-short across the coaxial cable.

ORDERING DESIGNATIONS

TYPE	FREQUENCY	PRODUCT NO.
CXL 450-1LW-SS-Ex/l	380 - 430 MHz	115000010
CXL 450-1LW-SS-Ex/h	420 - 470 MHz	115000011
CXL 450-1LW-SS-Ex/hs	460 - 510 MHz	115000012





CXL 450-1LW-SS-Ex

ATEX CERTIFIED, 0 DBD, OMNIDIRECTIONAL BASE STATION AND MARINE ANTENNA FOR THE 450 MHZ BAND IN HAZARDOUS AREAS

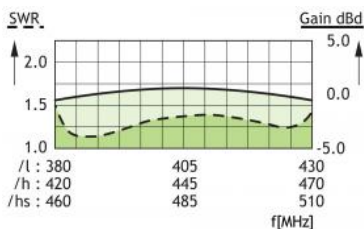
SPECIFICATIONS

ELECTRICAL	
MODEL	CXL 450-1LW-SS-Ex
ANTENNA TYPE	$\frac{1}{2} \lambda$ coaxial dipole, broad-banded
FREQUENCY	50 MHz wide frequency segments within 380 - 510 MHz. See ordering designations
IMPEDANCE	Nom. 50 Ω
RADIATION	Omnidirectional
POLARIZATION	Vertical
GAIN	2 dBi 0 dBd
BANDWIDTH	50 MHz
SWR	\square 1.5
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)
ANTISTATIC PROTECTION	All metal parts DC-grounded (Connector shows a DC-short)

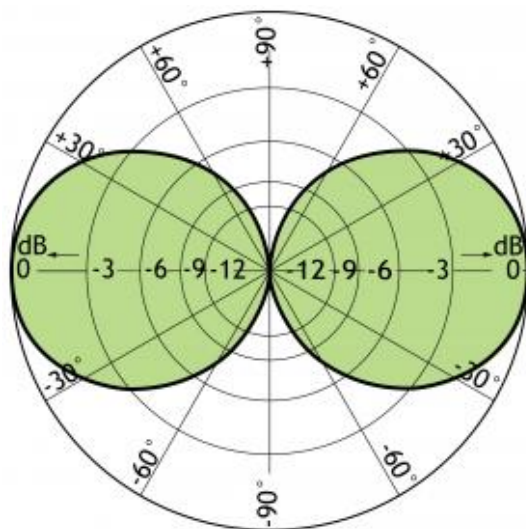
MECHANICAL	
TEMP. RANGE	-30°C \square 60°C
CONNECTOR TIGHTENING TORQUE	N-female 0.7 - 1.1 Nm
WIND SURFACE	0.029 m ² / 0.31 ft ²
WIND LOAD	33.6 N @ 160 km/h / 99.42 mph.
MAX. WIND SPEED	200 km/h / 124.27 mph.
INGRESS PROTECTION LEVEL	IP66
COLOUR	Blue
MATERIALS	Radome : Polyurethane-coated glass fibre Mounting bracket : Stainless acid-proof steel U-bolt and fittings : Stainless steel
TOTAL HEIGHT	Approx. 1050 mm / 41.34 in.
DIA. IN TOP END	25.5 mm / 1.00 in.
DIA. IN BOTTOM END	25.5 mm / 1.00 in.
WEIGHT	Approx. 1.45 kg / 3.20 lb.
MOUNTING TIGHTENING TORQUE	On 16 - 54 mm / 0.63 - 2.13 in. dia. mast tub 3 Nm
ATEX MARKING	II 3G Ex nA IIC T6

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

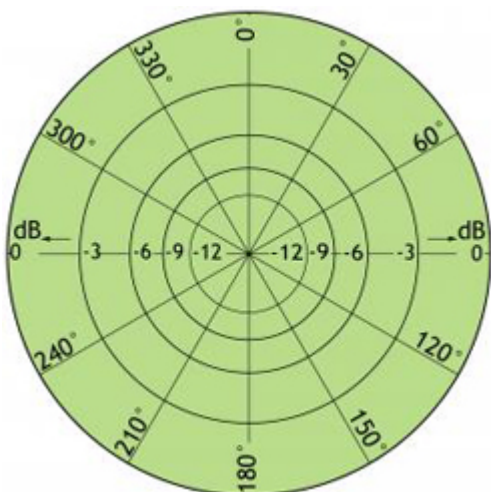
TYPICAL GAIN AND SWR CURVES



TYPICAL RADIATION PATTERN (E-PLANE)



TYPICAL RADIATION PATTERN (H-PLANE)

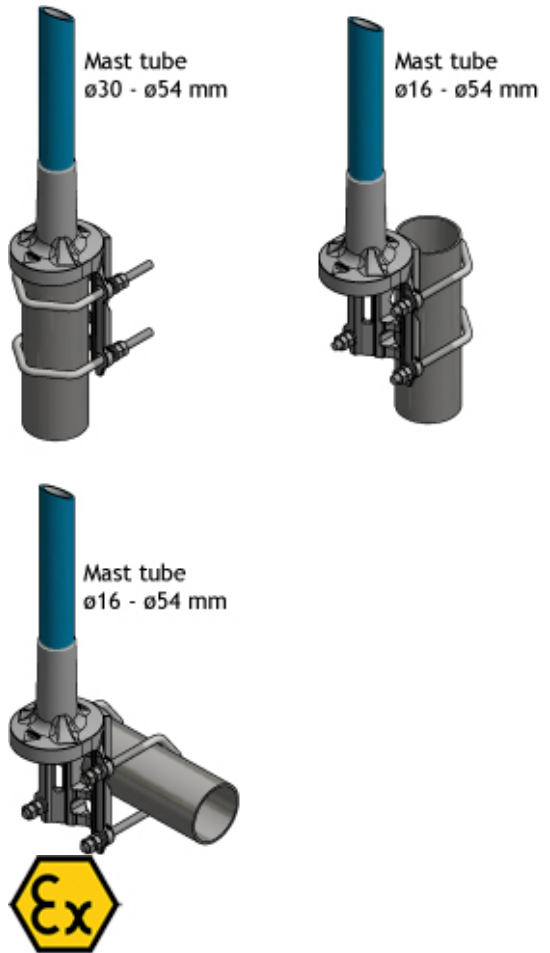


ALCULATION OF MAX. ANTENNA INPUT POWER IN DIFFERENT ATEX GROUPS

ATEX GROUP	MAX. EIRP POWER	ANTENNA GAIN	MAX INPUT POWER
II 3G Ex nA IIC T6	35.6 dBm	2 dBi	3.6 W
II 3G Ex nA IIB T6	33.3 dBm	2 dBi	2.1 W
II 3G Ex nA IIC T6	30.8 dBm	2 dBi	1.2 W

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)

MULTI-PURPOSE MOUNTING BRACKET



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