

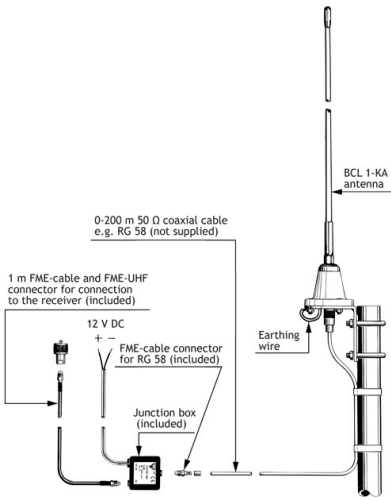
Active Receiving Antenna for 10 kHz - 110 MHz

DESCRIPTION

- This active receiving antenna consists of a high-capacitance antenna element combined with an amplifier which is built into the antenna mount.
- The amplifier provides excellent impedance matching between the high-impedance antenna element and the 50 Ω downlead cable over an extremely wide bandwidth.
- The sensitivity of the amplifier is optimized so that noise generated in the antenna and the receiver is always less than noise picked up by the antenna. The amplifier is protected against RF-overload and violent discharges and the large dynamic range ensures excellent cross and intermodulation properties.
- The earthing wire (see drawing) ensures a low loss connection to ground for RF-signals and thereby also prevents noise pick-up from noise fields running on the outside of the coaxial cable. As the earthing wire is AC-coupled, electrolytic corrosion is effectively prevented.
- The antenna is supplied with DC-power through the downlead 50 Ω coaxial cable by means of the included junction box which can be mounted in close vicinity to the receiving station. The junction box separates DC- and RF-signals and can advantageously be fed from the same DC-power supply as the receiver (if 12 V).
- The junction box is protected against accidental polarity reversal and it is filtered to avoid interference pick-up.
- The junction box is provided with FME-connectors for the antenna and the receiver ports. 1 m FME-cable and an FME-UHF connector is included for connecting the box to the receiver as well as an FME-crimp connector for the downlead cable (RG 58).
- The BCL 1-KA is designed to withstand the roughest of weather and climate conditions and it is perfectly suited also for marine purposes.
- The BCL 1-KA is supplied with the "SM-MA" mast mounting bracket.

ORDERING

Model	Product No.
BCL 1-KA	110000108



SPECIFICATIONS

Electrical	
Model	BCL 1-KA
Frequency	10 kHz - 110 MHz
Antenna Type	Broadband active receiving antenna
Polarisation	Vertical
Pattern Type	Omnidirectional
3 dB Beamwidth, H-Plane	Omnidirectional
Output 2. Order Intercept point (OIP2)	OIP2 > 40 dBm OIP3 > 27 dBm
Antenna Factor	Typ. 0.25 mV output in +50Ω by a field strength of 1mV/m
Impedance	50 Ω
1 dB Compression Point	Typ. occurring at a field strength of 1.5 V/m
1 dB Quieting	Typ. occurring at a field strength of 1 V/m from an interfering signal
VSWR	< 2.0:1
Power Supply	12 V DC (9 - 14 V)
Current Consumption	Approx. 60 mA
Cross Modulation	40 dB cross modulation attenuation typically occurring at field strength of 0.7 V/m from an interfering source
Max. Intensity Of Received Field	Distortion due to amplifier voltage limitation occurs at field intensities exceeding 1.5 V/m
Mechanical	
Aerial Protection	Spark gap
Antenna Connection	UHF (for PL 259)
Connection(s)	Antenna: FME-connector (M) RX: FME-connector (M)
Materials	Shroud: Glass fibre and chromed brass MA housing: Lexan and chromed brass
Cable	1 m FME-cable and FME-UHF included. FME-cable connector for RG 58 downlead cable included
Colour	Marine white
Wind Area	0.0259 sq. m / 0.28 sq. ft
Wind Load	28.8 N (160km/h)
Dia. At Top End	7 mm / 0.28 in.
Dia. At Bottom End	10 mm / 0.39 in.
Height	920 mm / 36.22 in.
Weight	0.6 kg / 1.32 lb
Mounting	On 30 - 44 mm dia. mast tube or on a flat surface
Environmental	
Operating Temperature Range	-30°C to +60°C

ADDITIONAL DATA

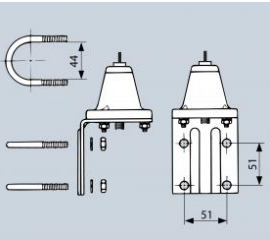
FME-SYSTEM ACCESSORIES

FME-CABLES	
TYPE	PRODUCT NO.
1 m FME(f)	130000437
2 m FME(f)	130000447
3 m FME(f)	130000457
4 m FME(f)	130000466
5 m FME(f)	130000474
6 m FME(f)	130000483
4 m FME-white(f)	110000064
6 m FME-white(f)	110000066
12 m FME-white(f)	110000068
18 m FME-white(f)	110000069

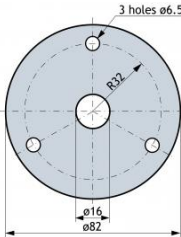
FME-CONNECTORS	
TYPE	PRODUCT NO.
FME(f)-FME(f)	130000583
FME(m)-P(m) (Prolongation)	130000565
FME(m)-N(m)	130000571
FME(m)-FSMA (Female-SMA)	130000578
FME(m)-BNC(m)	130000566
FME(m)-TNC(m)	130000569
FME(m)-UHF(m)	130000572
FME(m)-MUHF(m) (Mini-UHF)	130000573
FME(m)-EMUHF(m) (Elbow-MUHF)	130000582
FME(m)-EBNC(m) (Elbow-BNC)	130000580
FME(m)-ETNC(m) (Elbow-TNC)	130000581
FME(m)-SMA(m)	130000577

For further information about other types of FME-cables and FME-connectors, please compare the cable and connector data sheets under accessories in our catalogue.

INSTALLATION DETAILS - USING SM-MA MOUNTING BRACKET



MOUNTING ON FLAT SURFACES



APPLICATION INFORMATION

The BCL 1-KA active receiving antenna is especially suitable for receiving of broadcast radio stations in the long wave, medium wave, short wave and FM (88 -108 MHz) radio bands.

However, as the whole frequency range from 10 kHz to 110 MHz is covered, the BCL 1-KA is also suitable as general purpose receiving antenna throughout the whole range.

Several advantages can be gained by using an active antenna instead of an ordinary wire antenna, especially in the lower frequency ranges. Firstly, the small physical size makes the active antenna much easier to install. Secondly, a wire antenna requires a matching unit which typically has narrow bandwidth, making retuning necessary when changing listening frequency.

The active wideband antenna BCL 1-KA is optimized throughout the whole covered frequency range. Thus, no tuning is required, making change of listening frequency much easier.

Considering that the active antenna yields signal to noise ratios and signal strengths normally only obtainable with much longer wire antennas, the BCL 1-KA makes a good choice, especially also with respect to economy.