

SB-Antenna

Shielded Antenna-Box

The SB-Antenna is used to create an electromagnet. field with a well defined field strength, free of any external interference. Once the SB-Antenna is connected to a time code generator of HKW's ZZG-family then inside the box will be generated an electromagn. field to simulate any of the existing time code transmitting-stations like DCF77, HBG, MSF, WWVB and JJY. It allows tests of the sensitivity and of other features typical for radio-controlled clocks and watches without the need of expensive, specially prepared shielded rooms.

Dimensions:

- over-all dimension (inlay closed): **Length=950 mm ; Width=605 mm ; Height=605 mm**
- over-all dimension (body): **Length=835 mm ; Width=605 mm ; Height=605 mm**
- dimension of measurement inlay: **Length=750 mm ; Width=260 mm ; Height=240 mm**
- weight (w/o packing material): appr. 72 kg
- weight (packed on 1- way palette): appr. 104 kg (1350mm x 755mm x 830mm)

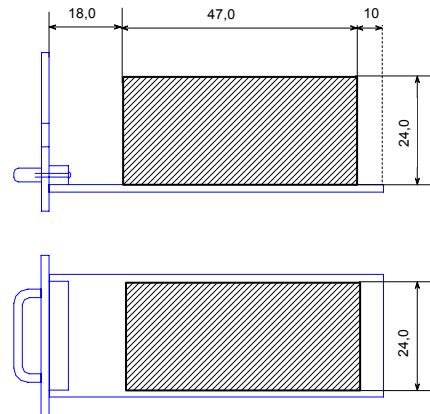


fig.1: dashed area indicates space of uniform field

Technical characteristics:

| Parameter | Test-condition | Symbol | Min. | Typ. | Max. | Unit |
|--|---|----------------|------|---------|------|-----------|
| Operating temperature Range | | T | 0 | | 50 | °C |
| Frequency range | | f | 40 | | 200 | kHz |
| Attenuation of shielding | $f_{min} < f < f_{max}$; T=25°C | D | | 60 | | dB |
| Accuracy of antenna factor | closed box; w/o any DUT | | -2 | | +2 | dB |
| Uniformity of created electromagn. field | closed box; w/o any DUT; specif. volume conf. fig.1 | ΔE | -0.5 | | +0.5 | dB |
| <u>signal-input</u> | | | | 1 x BNC | | |
| Input impedance | seen on input-BNC | R_i | | 250 | | Ohm |
| Input voltage | | $U_{max\ rms}$ | | | 10 | V_{rms} |
| <u>Measurement output</u> | | | | 3 x BNC | | |
| Colour | | | | grey | | |

Description:

- The shielded antenna box is prepared to be driven by a time code generator (ZZG3,4,5,..) with a 50Ω - generator impedance.
- Inside the shielded antenna box (position and volume of the box-inlay) is created an omogen field-strength. The resulting field strength is determined by relation: $E = K * 1/m * U_{rms}$, K = antenna factor
- The field strength can be adjusted by the connected ZZGx (normally from 1µV/m up to 10V/m).

Ordering Information:

Description:
SB-Antenna
Shielded Antenna-Box

part-number:
MAX 10010

Subject to change without notice