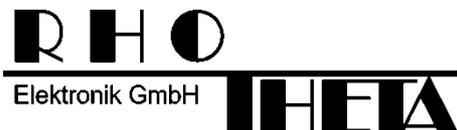


User Manual

AIS Suppression (Notch)



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Note

The manufacturer reserves the right to make modifications at any time and without previous information of the here described product.

Content

1 General Description..... 4

2 Installation..... 5

 2.1 System Integration.....5

 2.2 Installation Site Requirements.....6

3 Electrical Characteristics..... 7

4 Environmental and Mechanical Characteristics 7

5 Mechanical Drawing 8

6 Notes..... 9

1 General Description

The AIS Suppression Notch is a cavity filter, which sufficiently suppress AIS signals at 161,965 MHz to 162,035 MHz by a notch filter function with a very low insertion loss in its pass band.

The usage of the AIS suppression filter allows the installation of the direction finder antenna close to AIS transmitter stations and also allows the interference-free operation of the DF. It is recommended to install the AIS suppression filter if the distance between AIS transmitter with an EIRP of 10W and the Direction Finder is less than 200m (s. Chapter Installation).



2.2 Installation Site Requirements

The AIS filter allows the installation of the DF antenna close to the AIS transmitter station. However, the installation on site should comply with the following requirements in order to provide an interference-free operation of the DF system (s. Figure 2).

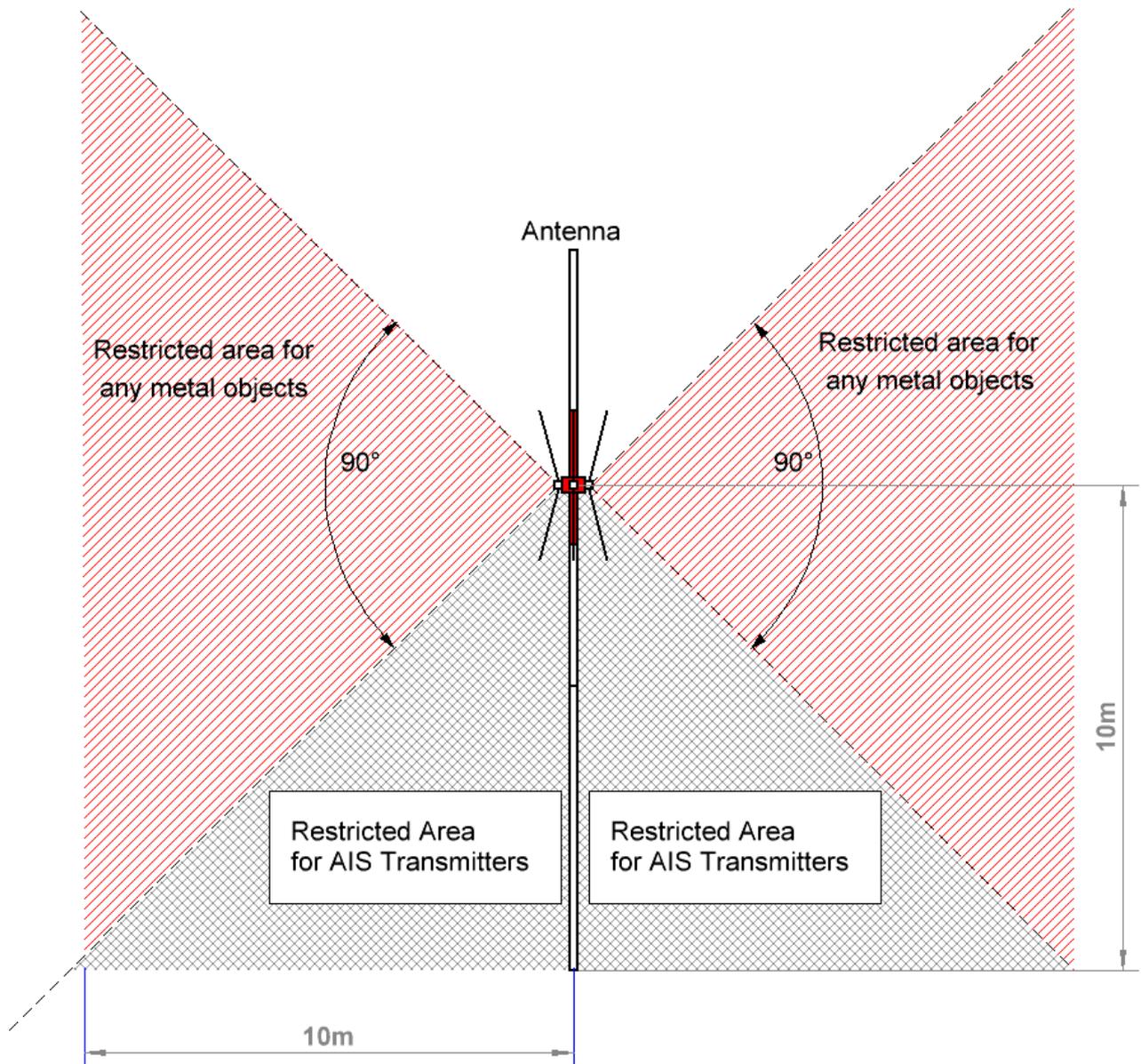


Figure 2 "Restricted Areas for AIS Transmitters"

The figure 2 applies to AIS-Transmitters with following characteristics:

- EIRP: $\leq 10W$
- Phase Noise: $\leq -145 \text{ dBc / Hz @ desired receiving frequency}$
- Spurious: $\leq -105 \text{ dBc @ desired receiving frequency}$

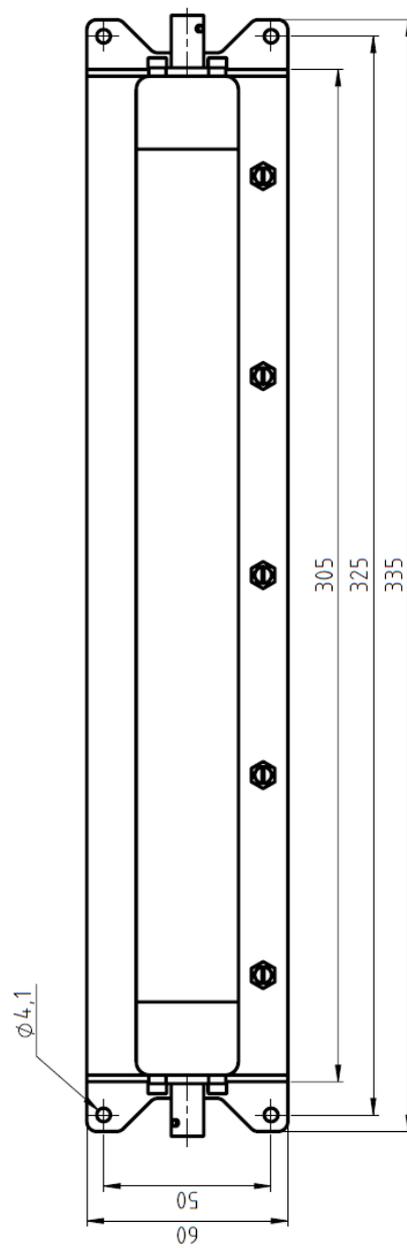
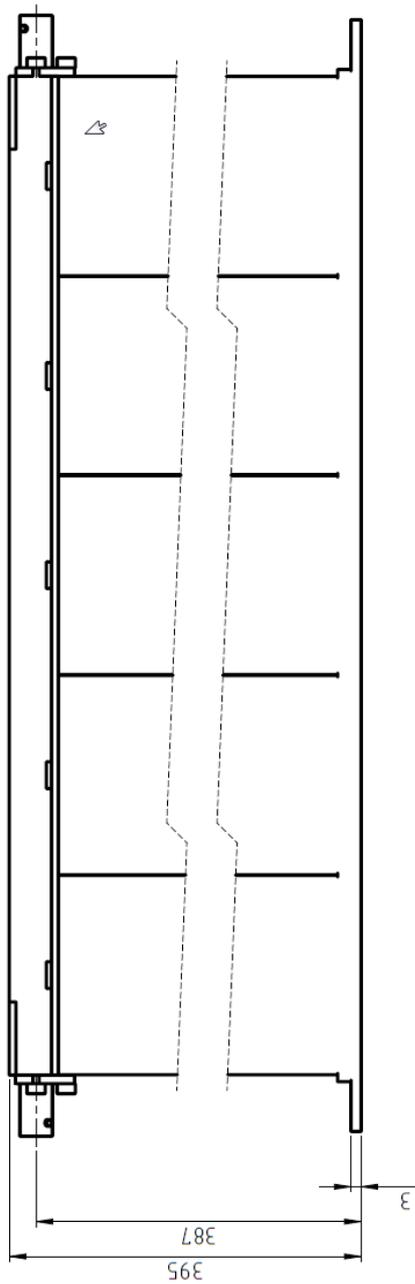
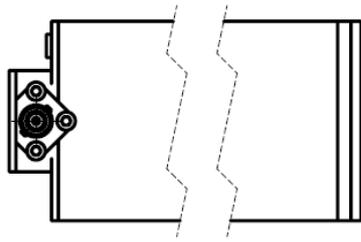
3 Electrical Characteristics

AIS Suppression (Notch)			
Parameter	Condition	Limit	Typical
Insertion Loss (Lower pass band)	DC ... 157.5 MHz	≤ 0.75 dB	≤ 0.5 dB
	157.500 MHz ... 161.600 MHz	$\leq 3,5$ dB	≤ 3.0 dB
Insertion Loss (Upper pass band)	162.500 MHz ... 166.600 MHz	$\leq 3,5$ dB	≤ 3.0 dB
	166.600 MHz ... 470.000 MHz	≤ 0.75 dB	≤ 0.5 dB
Attenuation (Stop band)	161.965 MHz ... 162.035 MHz	≥ 20 dB	≥ 30 dB
AIS Suppression	161.975 MHz (Channel 87B)	≥ 20 dB	≥ 30 dB
	162.025 MHz (Channel 88B)	≥ 20 dB	≥ 30 dB

4 Environmental and Mechanical Characteristics

Environmental and Mechanical Characteristics	
Parameter	Value
Temperature Range	-10°C ... +60°C
Connectors	BNC (female)
Dimensions	395 mm x 335 mm x 60 mm
Weight	7.7 kg

5 Mechanical Drawing



6 Notes