



470-690 MHz Multipolarity Antenna System
Wide Beam ($\geq 95^\circ$, 3 dB), 17.5 dBi Gain
F type female connector, Pole Mount

Technical Data Sheet

TFM21BAS

Features

- Active antenna system with capacity to receive both Vertical and Horizontal polarization simultaneously. Designed specifically for Digital TV receivers
- 470 to 690 MHz Frequency Range, covers full CCIR DVB-T spectrum with lower than 3 dB ripple. Includes bandpass and notch filters for the 5G 700 MHz band. Each antenna filter is individually tested, ensuring compliance with its features
- Impedance 75 Ω
- Very low noise amplifier, ultra-stable, $NF \leq 0.4$ dB
- All electronics are powered through coaxial feeder from in-house DC injector and AC 230VAC adaptor (both included). Thus, two types of power supply can be used: 110...250 VAC and 8...16 VDC (direct connect to injector) provides easy and reliable continuous service
- Low power drain, lower to 30 mA (DC powered)
- Small size, low weight and rugged construction makes ideal solution to windy areas
- Very low visual pollution impact. Ideally suited to sites where discretion is required
- Easy installation, no test instruments required
- Bird repellent by mechanical construction

Applications

- Aerial for TV individually sets
- Community head antenna in buildings to feed a distribution amplifier
- Ideal where dual polarization by multiple TV Stations. Only one system is needed to receive both Vertical and Horizontal polarization simultaneously
- Provides a smart solution to minimize Visual Pollution
- Its small size (one quarter of an antenna of similar or lower gain) provides a smart solution to minimize visual pollution, especially in protected areas

Description

The antenna system TFM21BAS is the result of many years of investigation, related to a find receive, small antenna capable of well suited TV signals. The idea to development of this one starts with collaboration with Heritage and Visual Pollution experts and Electrical and Telecommunications Engineering, focused the need of a new antenna type, with small size but same or better characteristics of much bigger size systems. The dual polarization receiving capacity (ideally circular polarization) overrides need to install dual antenna and mixers systems. This means a large costs savings without decreasing performance with a singular product to Digital TV (DVB-T) market.

All active electronics are enclosed on plastic box located in the antenna body, and the sealing with polyester block provides a perfect protection for rain and humidity. TFM21MMT is designed to provide long-time, trouble-free life of operation.

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Electrical Specifications

- Impedance: 75Ω Unbalanced (coaxial feeder)
- Gain: +17.5 dBi
- Vertical beam width (-3 dB): 98°
- Horizontal beam width (-3 dB): 95°
- Front-to-Back ratio: 15 dB (H Plane)
- Power Supply (External Unit) 8V...16V DC, powered through coaxial feeder
- AC Adaptor: 110...250 VAC connected to DC injector (both adaptor and injector included)
- Power consumption (12 VDC powered): $\leq 0.4W$

Mechanical and Environmental Specifications (Antenna)

- Weight: 0.7 kg (1 ½ lb)
- Wind load (approx): 150 km/h (95 MPH)
- Temperature Operating Range: -20 to +80 °C
- Size (max): Large, Width, Deep: 26 cm x 26 cm x 18 cm (10" x 10" x 7")
- Max diameter of support pole: 45 mm (1 ¾ inch)

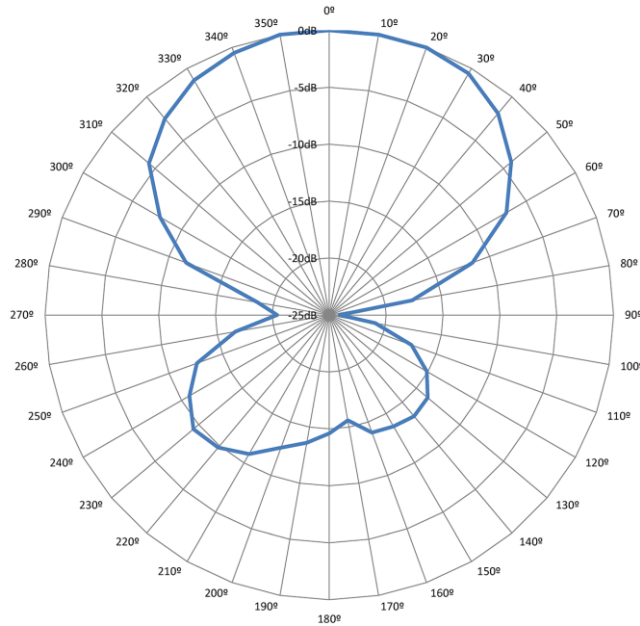
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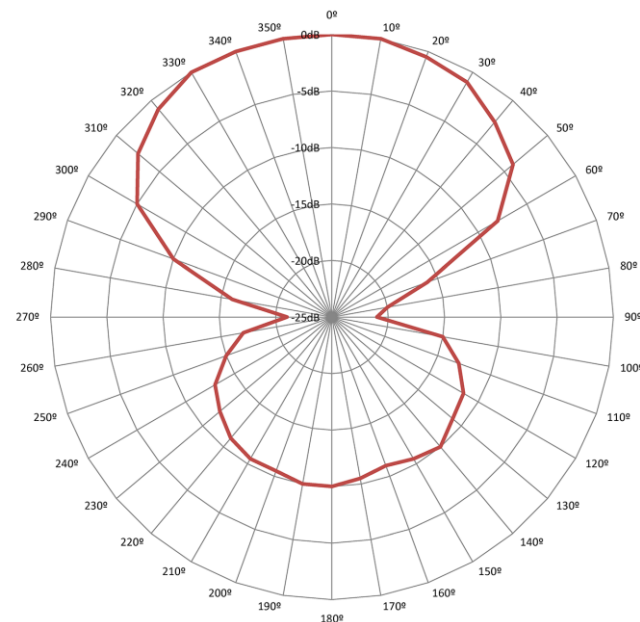
TFM21BAS

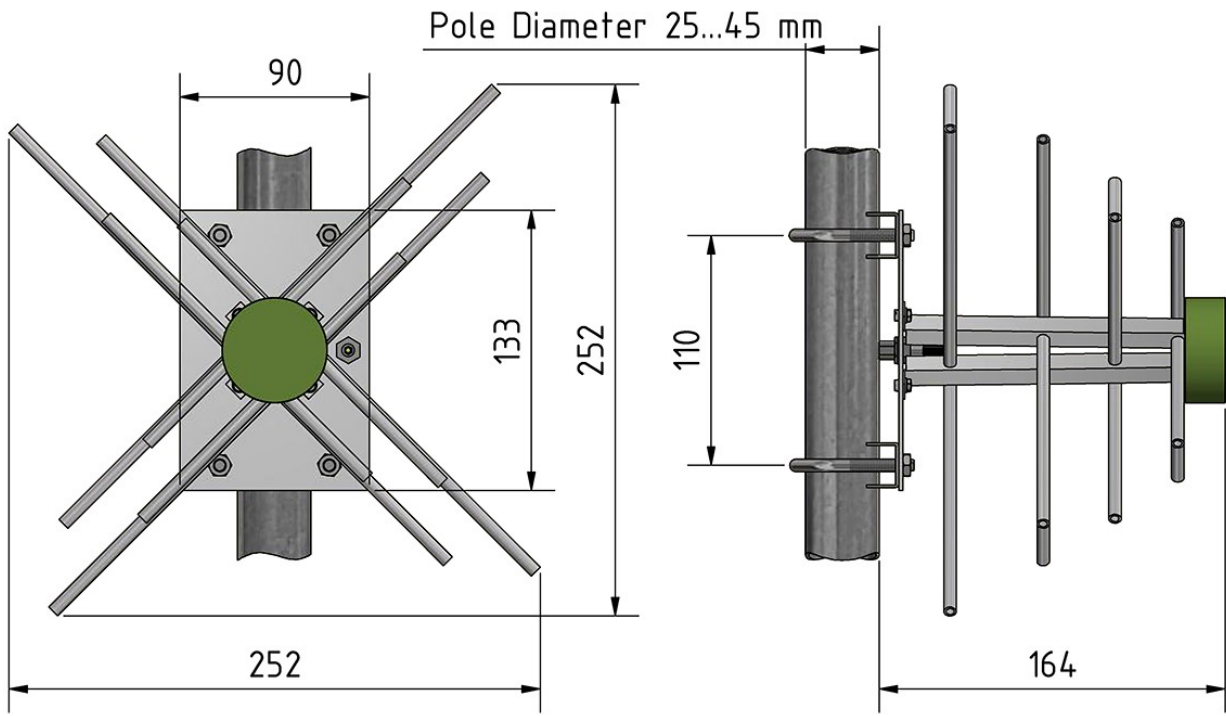
Technical Data Sheet

Radiation Pattern (H Plane)



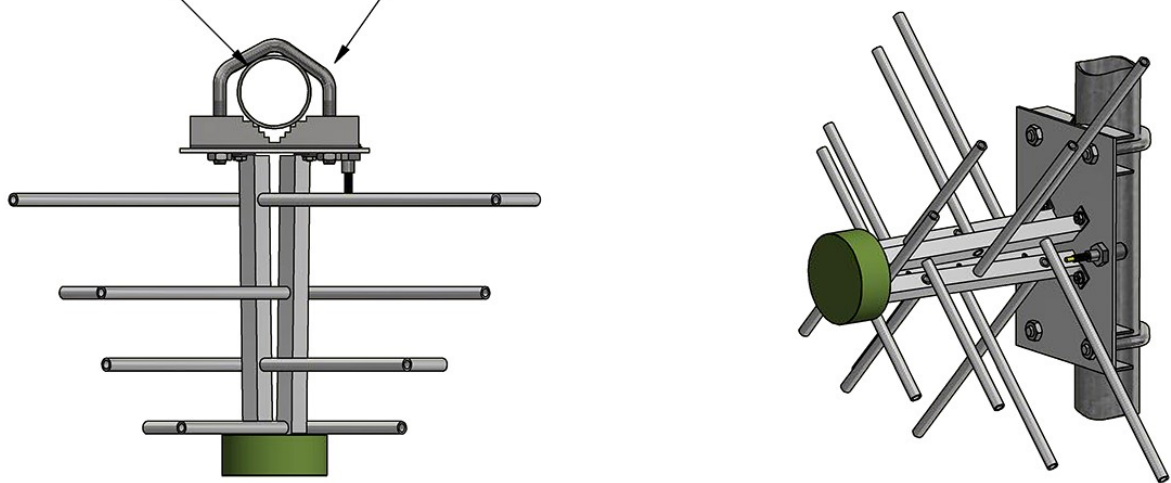
Radiation Pattern (H Plane)

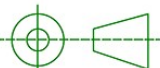
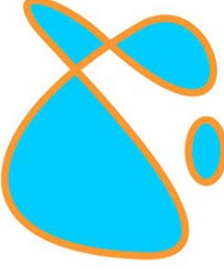




Ø 25...45 mm

Maximum Diameter of pole mount 45 mm
 Alternate mount directly to wall can be made
 with 6 mm Ø screws. In this case, disassembly of
 F type connector to mount plate and insulation
 is needed.



		CAD DRAWINGS TFM21BAS			Dual Polarization DVB-T Active Antenna Pole Mount Dimensions are in millimeters if no other units are specified and must be considered for reference only. All rights reserved property of Sistelmicro Ingenieria.	
SIZE:	A4	DSGN:	SvrMgr	24/11/2021		
SCALE:	N/A	CHECK:	W.M. MARTIN	24/01/2022		
REV:	1	APPR:	W.M. MARTIN	06/02/2022		
FILENAME:	Complete Basic v5 DataSheet.dwg					
CUSTOMER:						

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