

Polarization

H V X

- Optionally for circular, horizontal, vertical or slant polarization.
- Especially suitable for square masts.

Order No.	601768 K5332187	601979 K5332188
Input	4 x 7-16 female	4 x 7/8" EIA flange
Max. power	2.5 kW per input	4 kW per input
Frequency range	87.5 – 108 MHz	
VSWR	< 1.25 (linear polarization) < 1.1 (circular polarization)	
Gain (at mid-band)	7.5 dBd (linear polarization) 4.5 dBd (circular polarization)	
Impedance	50 Ω	
Polarization	Horizontal, vertical, circular	
Weight	89 kg	
Wind load (at 160 km/h)	Frontal: 1600 N Lateral: 1130 N	
Max. wind velocity	225 km/h	

4 dipoles are arranged symmetrically in front of a reflector screen. With suitable feeding the antenna radiates circularly polarized. An isolation of 40 – 50 dB between horizontal and vertical pairs of dipoles is achieved through the special design. This design permits the transmission of 2 programs – horizontally and vertically polarized – independently from each other.

Material: Hot-dip galvanized steel.
Weather protection: fiberglass cover.

Mounting: The antenna must be mounted so that the bent radiators are horizontally polarized. Mounting dimensions and mounting hardware on request.

Grounding: Via mounting parts.

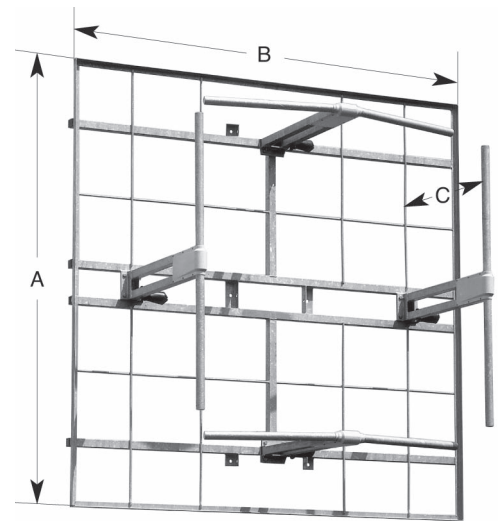
Scope of supply: Antenna without mounting clamps.

Special features: The antenna is shipped dismounted.

Ice protection: Even under severe icy conditions the antenna is still functional due to its heavy-duty construction and the fiberglass covers for the feeding points.

Combinations: The antenna is especially suitable as a component in arrays to achieve various radiation patterns. Particularly for square masts.

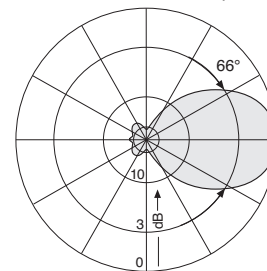
Polarization: Suitable feeding of the horizontal and vertical dipole pairs optionally result in left or right hand circular or elliptical or slant polarization or simultaneous horizontal and vertical polarization.



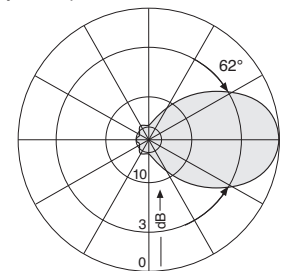
A = B: 2200 mm
C: 830 mm

Radiation Patterns (at mid-band)

Horizontal Polarization (bent dipoles)

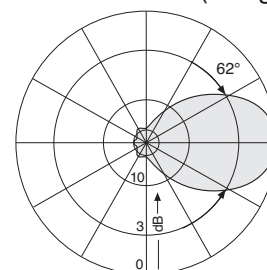


in E-plane
Horizontal Radiation Pattern

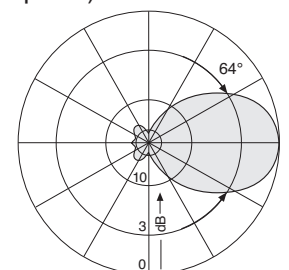


in H-plane
Vertical Radiation Pattern

Vertical Polarization (straight dipoles)



in H-plane
Horizontal Radiation Pattern



in E-plane
Vertical Radiation Pattern

936.4414 Subject to alteration.

Please note:

As a result of more stringent legal regulations and judgements regarding product liability, we are obliged to point out certain risks that may arise when products are used under extraordinary operating conditions.

The mechanical design is based on the environmental conditions as stipulated in ETS 300 019-1-4 and thereby respects the static mechanical load imposed on an antenna by wind at maximum velocity.

Extraordinary operating conditions, such as heavy icing or exceptional dynamic stress (e.g. strain caused by oscillating support structures), may result in the breakage of an antenna or even cause it to fall to the ground.

Cylindrical bodies can show crosswind response, which can cause the supporting structure to oscillate and to be damaged. Prismatic bodies, even with non-circular cross-section can show crosswind response, which can cause the supporting structure to oscillate (see EN 1991-1-4 or EN 1993-3-1).

These facts must be considered during the site planning process.

The maximum wind velocities listed should be understood in the sense of working values according to DIN and EN standards. These values include a safety factor (1.5) below the ultimate limit state (elastic limit or permanent deformation). For these wind velocities we guarantee the mechanical safety and the electrical integrity of our antennas.

The installation team must be properly qualified and also be familiar with the relevant national safety regulations. The details given in our data sheets have to be followed carefully when installing the antennas and accessories. The limits for the coupling torque of RF-connectors, recommended by the connector manufacturers must be obeyed.

Any previous datasheet issues have now become invalid.

Our quality assurance system and our environmental management system apply to the entire company and are certified by TÜV according to EN ISO 9001 and EN ISO 14001.

