Omnidirectional Antenna 174–240 MHz

Polarization V

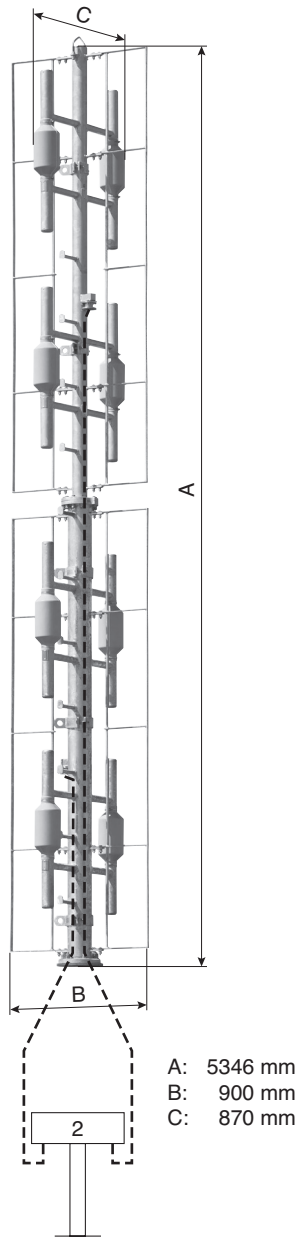
KATHREIN
Antennen · Electronic

Preliminary Issue

- Especially suitable for mounting at the top of masts.
- Consists of types 16911184 (lower half) and 75010365/368 (upper half), power splitter and cabling.

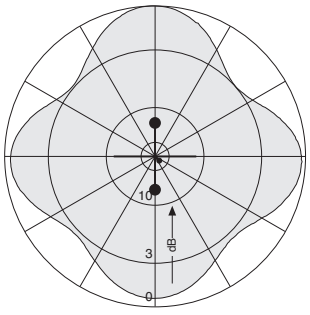
Order No.	75919999	75920058	75919936
Splitter input	1 5/8″ EIA flange	1 5/8″ EIA flange	3 1/8″ EIA flange
Max. power	4 kW	8 kW	16 kW
	(at 40 °C ambient temperature)		
Frequency range	174 – 240 MHz		
VSWR	< 1.2		
Gain (at mid-band)	7.5 dBd		
Impedance	50 Ω		
Polarization	Vertical		
Weight	230 kg		
Wind load	2300 N (at 160 km/h)		
Bending moment	5900 Nm (at 160 km/h)		
Max. wind velocity	225 km/h		

Material of radiators:	Hot-dip galvanized steel. Weather protection: Fiberglass.
Mounting:	Radiators: On top of a mast with suitable flange (see draft). Splitter: Directly below the radiators.
Grounding:	Via mounting parts.
Ice protection:	Even under icy conditions the antenna is still functional due to the fiberglass covers for the feeding points.
Note:	Systems with other downtilt and cable configuration are available on request. The system may also be operated with two main-feeders, in half antenna configuration.

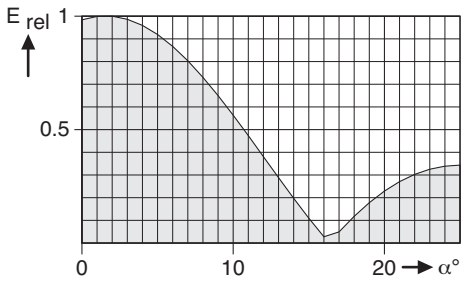


A: 5346 mm
B: 900 mm
C: 870 mm

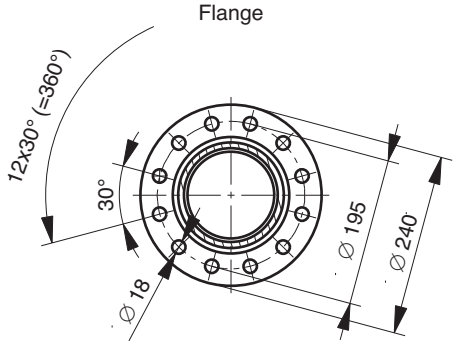
Radiation Patterns (at mid-band)



Horizontal Radiation Pattern



Typical Vertical Radiation Pattern
at mid-band
Electrical Downtilt: 1.5°



All dimensions in mm

936.A2973/c Subject to alteration.

KATHREIN-Werke KG · Anton-Kathrein-Straße 1-3 · P.O. Box 10 04 44 · 83004 ROSENHEIM · GERMANY · Phone +49 8031 184-0 · Fax +49 8031 184-495

The DAB antenna shows typical narrowband resonant frequencies with low damping for steel constructions.

An excitation of the bottom flange at its natural frequencies (1. natural frequency 4 Hz, 2. natural frequency 16 Hz) must be eliminated. If necessary, the antenna can be guyed.

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.

936.A2973/c Subject to alteration.

KATHREIN-Werke KG · Anton-Kathrein-Straße 1-3 · P.O. Box 10 04 44 · 83004 ROSENHEIM · GERMANY · Phone +49 8031 184-0 · Fax +49 8031 184-495