

Multi-band F-Panel Dual Polarization Half-power Beam Width Fixed Electrical Downtilt

2200–2690

X

65°

2°

KATHREIN

Antennen · Electronic

Preliminary Issue

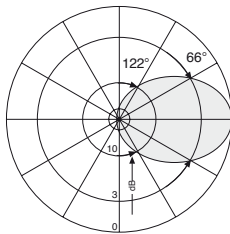
Product Proposal

XPol F-Panel 2200–2690 65° 18dBi 2°T

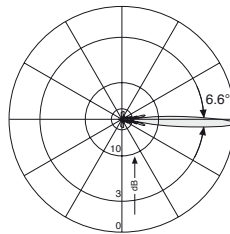
Type No.	800 10438		
Frequency range	2200–2690		
	2200 – 2300 MHz	2300 – 2500 MHz	2500 – 2690 MHz
Polarization	+45°, –45°	+45°, –45°	+45°, –45°
Gain	2 x 17.6 dBi	2 x 17.8 dBi	2 x 18 dBi
Horizontal Pattern:			
Half-power beam width	66°	65°	63°
Front-to-back ratio (180°±30°)	> 25 dB	> 25 dB	> 25 dB
Cross polar ratio	Typically: 20 dB	Typically: 20 dB	Typically: 20 dB
Sector	0° ±60°	> 10 dB	> 10 dB
Vertical Pattern:			
Half-power beam width	6.6°	6.2°	5.8°
Electrical tilt	2° fixed		
Sidelobe suppression for first sidelobe above main beam	> 15 dB	> 15 dB	> 15 dB
Impedance	50 Ω		
VSWR	< 1.5		
Isolation, between inputs	> 30 dB		
Intermodulation IM3	< –150 dBc (2 x 43 dBm carrier)		
Max. power per input	250 W (at 50 °C ambient temperature)		



2200 – 2300 MHz: +45°/–45° Polarization

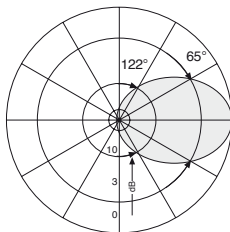


Horizontal Pattern

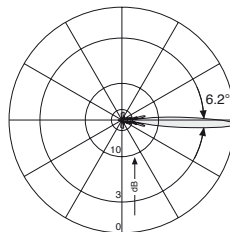


Vertical Pattern
2° electrical downtilt

2300 – 2500 MHz: +45°/–45° Polarization

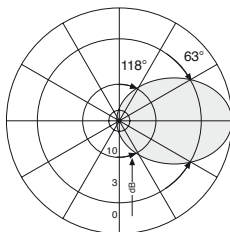


Horizontal Pattern

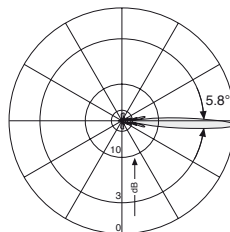


Vertical Pattern
2° electrical downtilt

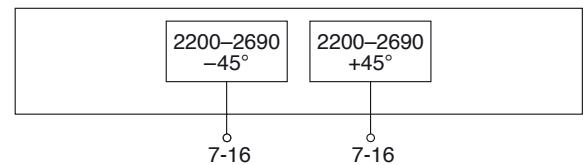
2500 – 2690 MHz: +45°/–45° Polarization



Horizontal Pattern



Vertical Pattern
2° electrical downtilt



Mechanical specifications

Input	2 x 7-16 female
Connector position	Bottom
Weight	6.6 kg
Wind load	Frontal: 130 N (at 150 km/h) Lateral: 110 N (at 150 km/h) Rearside: 310 N (at 150 km/h)
Max. wind velocity	200 km/h
Packing size	Approx. 1574 x 172 x 92 mm
Height/width/depth	Approx. 1302 / 155 / 69 mm

936.A2349/b Subject to alteration.

Accessories (order separately)

Type No.	Description	Remarks	Material	Weight approx.	Units per antenna
734 360	2 clamps	Mast: 34 – 60 mm dia.	Stainless steel	60 g	1
734 361	2 clamps	Mast: 60 – 80 mm dia.	Stainless steel	70 g	1
734 362	2 clamps	Mast: 80 – 100 mm dia.	Stainless steel	80 g	1
734 363	2 clamps	Mast: 100 – 120 mm dia.	Stainless steel	90 g	1
734 364	2 clamps	Mast: 120 – 140 mm dia.	Stainless steel	110 g	1
734 365	2 clamps	Mast: 45 – 125 mm dia.	Stainless steel	80 g	1
738 546	1 clamp	Mast: 50 – 115 mm dia.	Hot-dip galvanized steel	1.0 kg	2
850 10002	1 clamp	Mast: 110 – 220 mm dia.	Hot-dip galvanized steel	2.7 kg	2
850 10003	1 clamp	Mast: 210 – 380 mm dia.	Hot-dip galvanized steel	4.8 kg	2
732 317	1 downtilt kit	Downtilt angle: 0° – 10°	Stainless steel	1.0 kg	1

For downtilt mounting use the clamps for an appropriate mast diameter together with the downtilt kit.
Wall mounting: No additional mounting kit needed.

Material:

Reflector screen: Tin plated copper. **Radiator:** Tin plated zinc.

Flat fiberglass radome: The max. radome depth is only 69 mm. Fiberglass material guarantees optimum performance with regards to stability, stiffness, UV resistance and painting. The colour of the radome is grey.

All screws and nuts: Stainless steel.

Grounding:

The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.

Environmental conditions:

Kathrein cellular antennas are designed to operate under the environmental conditions as described in ETS 300 019-1-4 class 4.1 E.

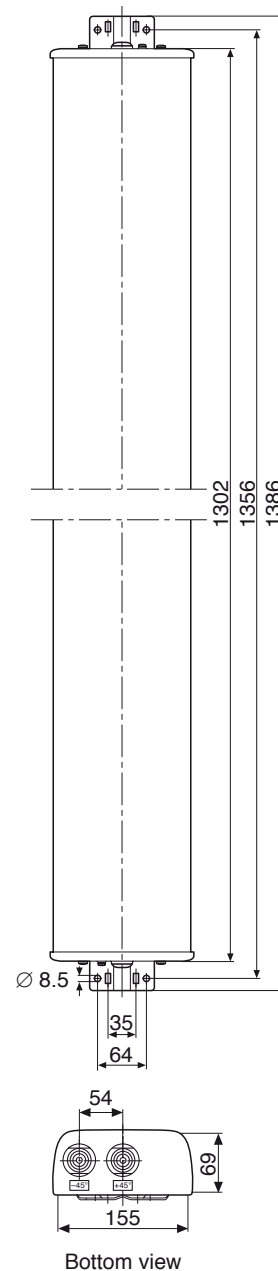
The antennas exceed this standard with regard to the following items:

- Low temperature: –55 °C
- High temperature (dry): +60 °C

Ice protection: Due to the very sturdy antenna construction and the protection of the radiating system by the radome, the antenna remains operational even under icy conditions.

Environmental tests:

Kathrein antennas have passed environmental tests as recommended in ETS 300 019-2-4. The homogenous design of Kathrein's antenna families use identical modules and materials. Extensive tests have been performed on typical samples and modules.



Bottom view

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, which includes 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. These facts must be considered during the site planning process.

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 are invalid.

