

# Triple-multiband Panel Dual Polarization Half-power Beam Width Adjust. Electr. Downtilt

**806–960**
**1710–2180**
**1710–2180**
**X**
**X**
**X**
**65°**
**65°**
**65°**
**0°–14°**
**0°–14°**
**0°–14°**
**KATHREIN**

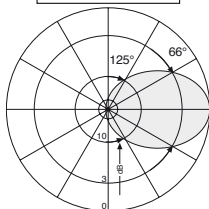
Antennen · Electronic

set by hand or by optional RCU (Remote Control Unit)

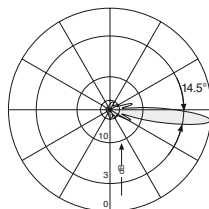
**XXXPol Panel 806–960/1710–2180/1710–2180 65°/65°/65° 15/15/15dBi 0°–14°/0°–14°/0°–14°T**

Type No.	80010290v01						
Frequency range	806 – 866 MHz		806–960 824–894 MHz	880–960 MHz	1710–1880 MHz	1710–2180 1710–2180 1850–1990 MHz	1920–2180 MHz
Polarization	+45°, –45°		+45°, –45°		+45°, –45°		+45°, –45°
Gain: (dBi)	14.4 ... 14.3 ... 14		14.6 ... 14.4 ... 14.2		14.5 ... 14.5 ... 14.2		14.8 ... 14.8 ... 14.5
1710–2180 MHz (Syst. bottom)			14.9 ... 14.7 ... 14.4		14 ... 14 ... 13.7		15.1 ... 14.8 ... 14.4
1710–2180 MHz (Syst. top)					14.4 ... 14.3 ... 13.9		14.9 ... 14.8 ... 14.2
Tilt	0° ... 7° ... 14°		0° ... 7° ... 14°		0° ... 7° ... 14°		0° ... 7° ... 14°
Horizontal Pattern:							
Half-power beam width	69°		68°		67°		67°
Front-to-back ratio (180°±30°)			> 25 dB				> 25 dB
Cross polar ratio			Typically:				Typically:
Main direction	0°		25 dB				20 dB
Sector	±60°		> 10 dB				> 10 dB
Vertical Pattern:							
Half-power beam width	14.7°		14.3°		13.9°		13.8°
Electrical tilt							13.2°
							12.6°
Sidelobe suppression	0° ... 7° ... 14°		0° ... 7° ... 14°		0° ... 7° ... 14°		0° ... 7° ... 14°
– for first sidelobe above main beam	18 ... 16 ... 16 dB		18 ... 16 ... 16 dB		18 ... 17 ... 16 dB		18 ... 16 ... 17 dB
Impedance	50 Ω						
VSWR	< 1.5						
Isolation: Intrasystem	> 30 dB						
Isolation: Intersystem	> 35 dB (806–960 // 1710–2180 MHz)						
	> 30 dB (1710–2180 // 1710–2180 MHz)						
Intermodulation IM3	< –150 dBc (2 x 43 dBm carrier)						
Max. power per input	400 W (at 50 °C ambient temperature)				250 W (at 50 °C ambient temperature)		

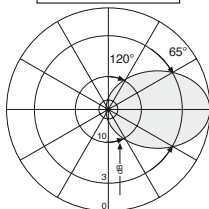
## **806–960** +45°/–45° Polarization



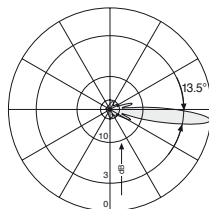
Horizontal Pattern


Vertical Pattern  
0°–14° electrical downtilt

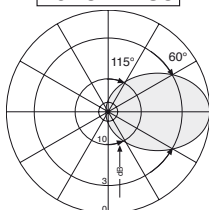
## **1710–1990** +45°/–45° Polarization



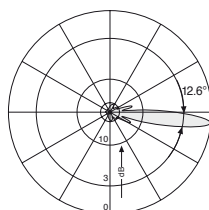
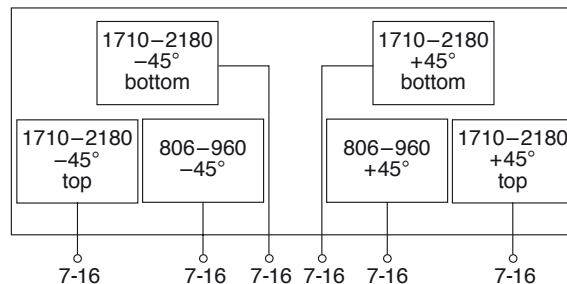
Horizontal Pattern


Vertical Pattern  
0°–14° electrical downtilt

## **1920–2180** +45°/–45° Polarization



Horizontal Pattern


Vertical Pattern  
0°–14° electrical downtilt


## **Mechanical specifications**

Input	6 x 7-16 female
Connector position	Bottom
Adjustment mechanism	3x, Position bottom continuously adjustable
Wind load	Frontal: 480 N (at 150 km/h) Lateral: 300 N (at 150 km/h) Rearside: 700 N (at 150 km/h)
Max. wind velocity	200 km/h
Height/width/depth	1540 / 262 / 149 mm
Category of mounting hardware	M (Medium)
Weight	21 kg / 23 kg (clamps incl.)
Packing size	1866 x 282 x 182 mm
Scope of supply	Panel and 2 units of clamps for 50 – 115 mm diameter


Subject to alteration.  
936.3930/a

### Accessories

Type No.	Description	Remarks	Weight approx.	Units per antenna
738546	1 clamp	Mast: 50 – 115 mm diameter	1.0 kg	2 (included in the scope of supply)
731651	1 clamp	Mast: 28 – 60 mm diameter	0.8 kg	2 (order separately if required)
85010002	1 clamp	Mast: 110 – 220 mm diameter	2.7 kg	2 (order separately if required)
85010003	1 clamp	Mast: 210 – 380 mm diameter	4.8 kg	2 (order separately if required)
737978	1 downtilt kit	Downtilt angle: 0° – 13°	2.8 kg	1 (order separately if required)

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:** Weather-proof aluminum.

**Fiberglass housing:** It covers totally the internal antenna components. Fiberglass material guarantees optimum performance with regards to stability, stiffness, UV resistance and painting. The colour of the radome is light grey.

**All screws and nuts:** Stainless steel or hot-dip galvanized 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.

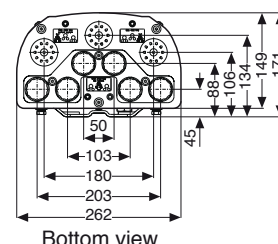
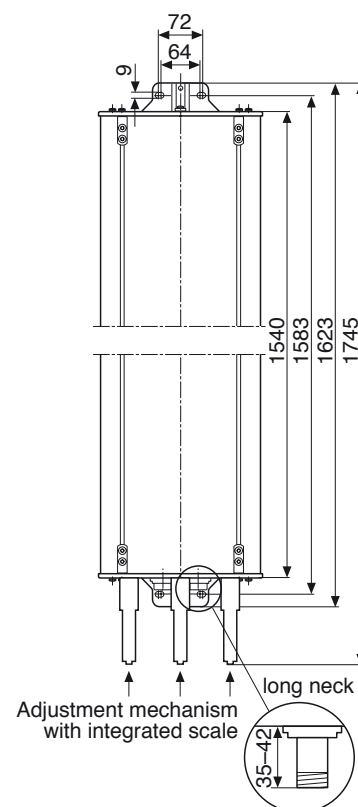
The antennas exceed this standard with regard to the following items:

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

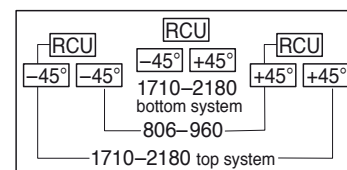
**Ice protection:** Due to the very sturdy antenna construction and the protection of the radiating system by the radome, the antenna remains operational even under icy conditions.

#### 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



Layout of interface

#### 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. Wind loads are calculated according to DIN 1055-4. 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 have now become invalid.**

