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

790–960	1710–2690	1710–2690
X	X	X
65°	65°	65°
0°–10°	2°–12°	2°–12°

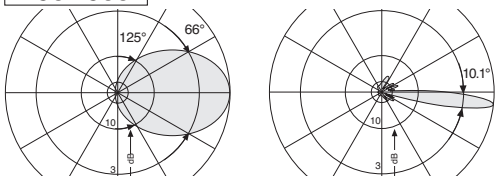
set by hand or by optional RCU (Remote Control Unit)

KATHREIN
Antennen · Electronic

XXXPol Panel 790–960/1710–2690/1710–2690 65°/65°/65° 16/16/16dBi 0°–10°/2°–12°/2°–12°T

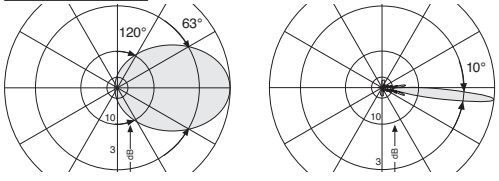
Type No.	80010691						
		790–960			1710–2690	1710–2690	
Frequency range	790 – 862 MHz	824 – 894 MHz	880 – 960 MHz	1710 – 1880 MHz	1850 – 1990 MHz	1920 – 2170 MHz	2490 – 2690 MHz
Polarization	+45°, –45°	+45°, –45°	+45°, –45°	+45°, –45°	+45°, –45°	+45°, –45°	+45°, –45°
Average gain: (dBi)	15.9 ... 16.0 ... 15.6	16.0 ... 16.2 ... 15.8	16.0 ... 16.3 ... 15.8				
1710–2690 MHz (Syst. bottom)				15.6 ... 15.4 ... 15.2	15.5 ... 15.7 ... 15.4	15.8 ... 15.7 ... 15.1	16.0 ... 16.1 ... 15.7
1710–2690 MHz (Syst. top)				15.2 ... 15.2 ... 14.8	15.4 ... 15.4 ... 14.9	15.7 ... 15.4 ... 14.9	15.6 ... 15.8 ... 15.3
Tilt	0° ... 5° ... 10°	0° ... 5° ... 10°	0° ... 5° ... 10°	2° ... 7° ... 12°	2° ... 7° ... 12°	2° ... 7° ... 12°	2° ... 7° ... 12°
Horizontal Pattern:							
Half-power beam width	67°	66°	65°	63°	64°	65°	62°
Front-to-back ratio, copolar (180°±30°)	> 27 dB	> 27 dB	> 27 dB	> 25 dB	> 27 dB	> 27 dB	> 27 dB
Cross polar ratio	Typically:	Typically:	Typically:	Typically:	Typically:	Typically:	Typically:
Maindirection 0°	24 dB	24 dB	22 dB	18 dB	21 dB	21 dB	22 dB
Sector ±60°	> 10 dB	> 10 dB	> 10 dB	> 8 dB	> 10 dB	> 10 dB	> 7 dB
Vertical Pattern:							
Half-power beam width	10.3°	10°	9.6°	11°	10°	9.3°	7.8°
Electrical tilt	0°–10°, continuously adjustable			2°–12°, continuously adjustable			
Min. sidelobe suppression	0° ... 5° ... 10° T	0° ... 5° ... 10° T	0° ... 5° ... 10° T	2° ... 7° ... 12° T	2° ... 7° ... 12° T	2° ... 7° ... 12° T	2° ... 7° ... 12° T
– for first sidelobe above main beam	18 ... 16 ... 15 dB	18 ... 18 ... 18 dB	18 ... 17 ... 17 dB	18 ... 18 ... 18 dB	17 ... 17 ... 17 dB	17 ... 17 ... 16 dB	18 ... 17 ... 18 dB
– 20° sector	18 ... 16 ... 15 dB	18 ... 18 ... 16 dB	18 ... 17 ... 15 dB	18 ... 15 ... 15 dB	17 ... 16 ... 16 dB	17 ... 16 ... 14 dB	16 ... 15 ... 15 dB
Impedance	50 Ω						
VSWR	< 1.5						< 1.5
Isolation: Intrasystem	> 30 dB			> 28 dB			> 28 dB
Isolation: Intersystem	> 30 dB (790–960 // 1710–2690 MHz) > 30 dB (1710–2690 // 1710–2690MHz)						
Intermodulation IM3	< –150 dBc (2 x 43 dBm carrier)						
Max. power per input Total power	500 W (at 50 °C ambient temperature) 1000 W (at 50 °C ambient temperature)			200 W (at 50 °C ambient temperature) 400 W (at 50 °C ambient temperature)			

790–960 +45°/–45° Polarization



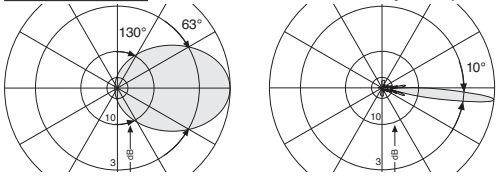
Horizontal Pattern — Vertical Pattern 0°–10° electrical downtilt

1710–2690 +45°/–45° Polarization, Syst. bottom

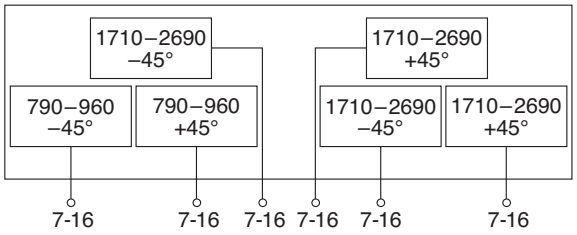


Horizontal Pattern — Vertical Pattern 2°–12° electrical downtilt

1710–2690 +45°/–45° Polarization, Syst. top



Horizontal Pattern — Vertical Pattern 2°–12° electrical downtilt



Mechanical specifications	
Input	6 x 7-16 female (long neck)
Connector position	Bottom
Adjustment mechanism	3x, Position bottom continuously adjustable
Wind load	Frontal: 1020 N (at 150 km/h) Lateral: 390 N (at 150 km/h) Rearside: 1050 N (at 150 km/h)
Max. wind velocity	200 km/h
Height/width/depth	1997 / 300 / 152 mm
Category of mounting hardware	M (Medium)
Weight	25 kg / 27 kg (clamps incl.)
Packing size	2316 x 322 x 190 mm
Scope of supply	Panel and 2 units of clamps for 42 – 115 mm diameter

Subject to alteration.

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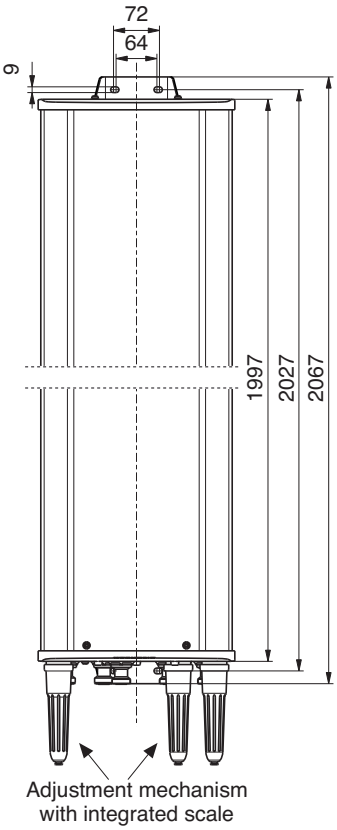
Accessories

Type No.	Description	Remarks	Weight approx.	Units per antenna
738546	**1 clamp**	**Mast: 42 – 115 mm diameter**	**1.1 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° – 10°	2.3 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: Aluminum.
Fiberglass housing: It covers totally the internal antenna components. The special design reduces the sealing areas to a minimum and guarantees the best weather protection. Fiberglass material guarantees optimum performance with regards to stability, stiffness, UV resistance and painting. The color of the radome is light grey.
All nuts and bolts: Stainless steel or hot-dip galvanized steel.

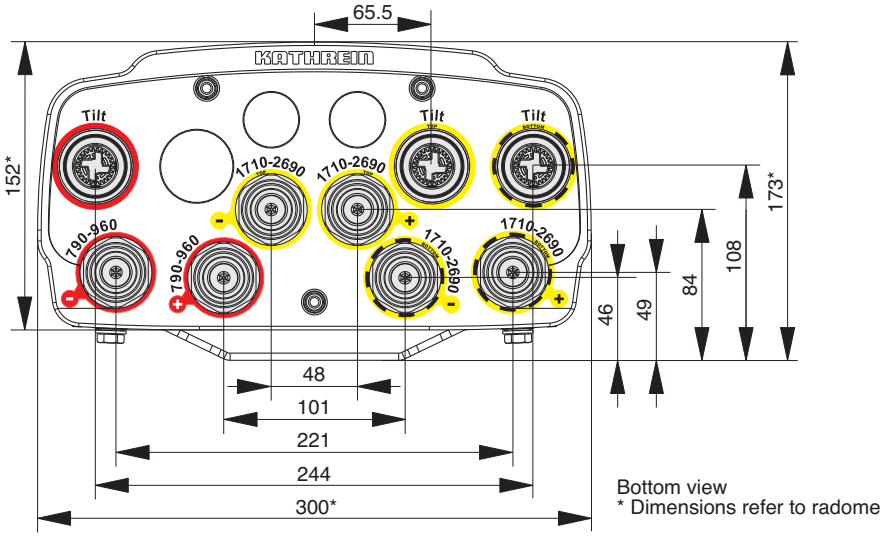
Grounding:
The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.

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 fulfil the stated specifications after completion of the environmental tests as defined in ETS 300 019-2-4. The homogenous design of Kathrein's antenna families uses identical modules and materials. Extensive tests have been performed on typical samples and modules.

Layout of interface:



Bottom view
* Dimensions refer to radome

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.

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