

Dual-band Panel

790–960

1710–2180

Dual Polarization

X

X

Half-power Beam Width

65°

65°

Adjust. Electr. Downtilt

4°–12°

4°–14°

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

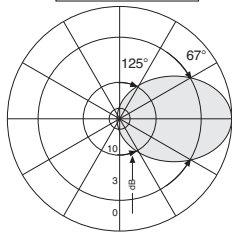
KATHREIN

Antennen · Electronic

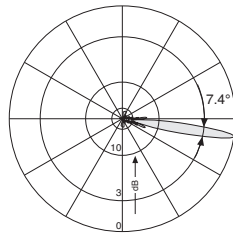
XXPol Panel 790–960/1710–2180 65°/65° 17.5/18.5dBi 4°–12°/4°–14°T

| Type No. | 80010486v01 | | | | | |
|--------------------------------------|--------------------------------------|------------------------|------------------------|--------------------------------------|------------------------|------------------------|
| | 790–960 | | | 1710–2180 | | |
| Frequency range | 790 – 862 MHz | 824 – 894 MHz | 880 – 960 MHz | 1710 – 1880 MHz | 1850 – 1990 MHz | 1920 – 2180 MHz |
| Polarization | +45°, –45° | +45°, –45° | +45°, –45° | +45°, –45° | +45°, –45° | +45°, –45° |
| Average gain (dBi) | 16.8 ... 16.7 ... 16.6 | 17.0 ... 16.8 ... 16.8 | 17.2 ... 17.0 ... 16.8 | 17.8 ... 18.1 ... 17.5 | 18.3 ... 18.3 ... 17.8 | 18.7 ... 18.7 ... 18.0 |
| Tilt | 4° ... 8° ... 12° | 4° ... 8° ... 12° | 4° ... 8° ... 12° | 4° ... 9° ... 14° | 4° ... 9° ... 14° | 4° ... 9° ... 14° |
| Horizontal Pattern: | | | | | | |
| Half-power beam width | 68° | 67° | 66° | 66° | 64° | 61° |
| Front-to-back ratio (180°±30°) | > 25 dB | > 25 dB | > 25 dB | > 25 dB | > 25 dB | > 25 dB |
| Cross polar ratio | Typically: | Typically: | Typically: | Typically: | Typically: | Typically: |
| Maindirection | 0° | 0° | 0° | 0° | 0° | 0° |
| Sector | ±60° | ±60° | ±60° | ±60° | ±60° | ±60° |
| | 23 dB | 24 dB | 25 dB | 18 dB | 18 dB | 20 dB |
| | > 10 dB | > 10 dB | > 10 dB | > 10 dB | > 10 dB | > 10 dB |
| Vertical Pattern: | | | | | | |
| Half-power beam width | 7.5° | 7.4° | 7.2° | 5° | 4.8° | 4.6° |
| Electrical tilt | 4°–12°, continuously adjustable | | | 4°–14°, continuously adjustable | | |
| Sidelobe supression | 4° ... 8° ... 12° T | 4° ... 8° ... 12° T | 4° ... 8° ... 12° T | 4° ... 9° ... 14° T | 4° ... 9° ... 14° T | 4° ... 9° ... 14° T |
| – for first sidelobe above main beam | 18 ... 17 ... 16 dB | 19 ... 18 ... 18 dB | 19 ... 18 ... 18 dB | 20 ... 18 ... 16 dB | 19 ... 19 ... 16 dB | 18 ... 18 ... 18 dB |
| – within 0°–20° sector above horizon | 15 ... 15 ... 14 dB | 16 ... 15 ... 14 dB | 16 ... 15 ... 14 dB | 17 ... 17 ... 15 dB | 17 ... 17 ... 15 dB | 17 ... 17 ... 15 dB |
| Impedance | 50 Ω | | | | | |
| VSWR | < 1.5 | | | | | |
| Isolation: Intrasystem | > 30 dB | | | | | |
| Isolation: Intersystem | > 45 dB (790–960 // 1710–2180 MHz) | | | | | |
| Intermodulation IM3 | < –153 dBc (2 x 43 dBm carrier) | | | | | |
| Max. power per input | 400 W (at 50 °C ambient temperature) | | | 250 W (at 50 °C ambient temperature) | | |
| Total power | 800 W (at 50 °C ambient temperature) | | | 500 W (at 50 °C ambient temperature) | | |

790–960 +45°/–45° Polarization

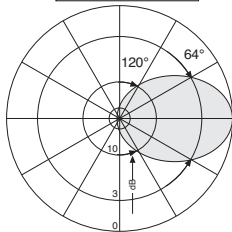


Horizontal Pattern

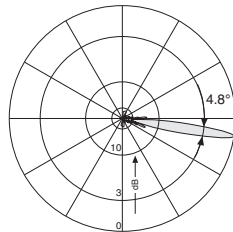


Vertical Pattern
4°–12° electrical downtilt

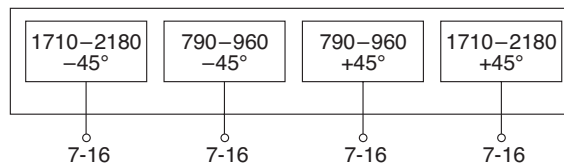
1710–2180 +45°/–45° Polarization



Horizontal Pattern



Vertical Pattern
4°–14° electrical downtilt



Mechanical specifications

| | |
|-------------------------------|--|
| Input | 4 x 7-16 female (long neck) |
| Connector position | Bottom |
| Adjustment mechanism | 2x, Position bottom continuously adjustable |
| Wind load | Frontal: 920 N (at 150 km/h) Lateral: 460 N (at 150 km/h) Rearside: 1150 N (at 150 km/h) |
| Max. wind velocity | 200 km/h |
| Height/width/depth | 2516 / 262 / 139 mm |
| Category of mounting hardware | H (Heavy) |
| Weight | 28 kg / 30 kg (clamps incl.) |
| Packing size | 2826 x 282 x 172 mm |
| Scope of supply | Panel and 2 units of clamps for 42 – 115 mm diameter |



936.3950/b Subject to alteration.

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) |
| 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) |
| 85010008 | 1 downtilt kit | Downtilt angle: 0° – 8° | 6.5 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. 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 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:

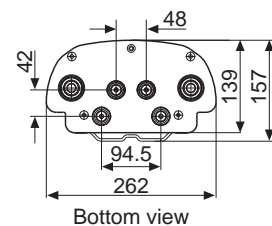
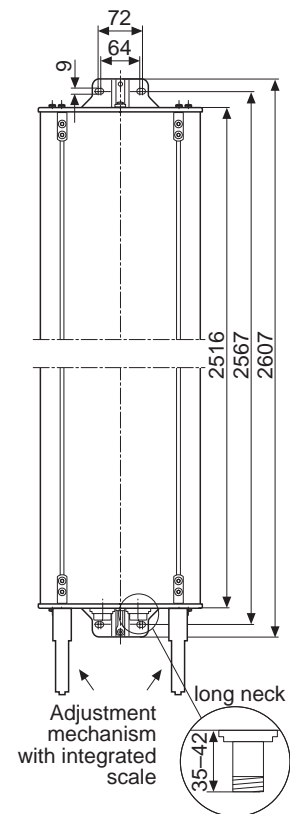
Kathrein cellular antennas are designed to operate under the environmental conditions as described in ETS 300 019-1-4 class 4.1 E.

The antennas exceed this standard with regard to the following items:
– Low temperature: –55 °C
– High temperature (dry): +60 °C

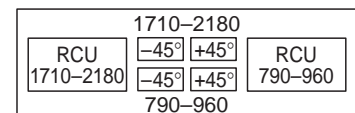
Ice protection: Due to the very sturdy antenna construction and the protection of the radiating system by the radome, the antenna remains operational even under icy conditions.

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



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.

