

4-Port Antenna	R1	B1
Frequency Range	790-960	1710-2180
Dual Polarization	X	X
HPBW	90°	90°
Adjust. Electr. DT	0°-10°	0°-6°

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



4-Port Antenna 790-960/1710-2180 90°/90° 15/18dBi 0°-10°/0°-6°T

Type No.		80010122v01		
Lowband		R1, connector 1-2		
		790-960		
Frequency range	MHz	790 – 862	824 – 896	880 – 960
Polarization	°	+45, –45	+45, –45	+45, –45
Average gain	dBi	14.8 ... 14.8 ... 14.8	14.8 ... 15.0 ... 14.8	14.9 ... 15.1 ... 14.9
Tilt	°	0 ... 5 ... 10	0 ... 5 ... 10	0 ... 5 ... 10
Horizontal Pattern:				
Half-power beam width	°	88	87	88
Front-to-back ratio (180°±30°)	dB	> 23	> 23	> 23
Cross polar ratio		Typically:	Typically:	Typically:
Maindirection	0°	18	18	20
Sector	±60°	> 10	> 10	> 13
	±60°	avg. 16	avg. 16	avg. 19
Vertical Pattern:				
Half-power beam width	°	11.0	10.9	10.5
Electrical tilt	°	0 – 10, continuously adjustable		
Min. sidelobe supression for first sidelobe above main beam	°T dB	0 ... 5 ... 10 18 ... 16 ... 14	0 ... 5 ... 10 16 ... 16 ... 15	0 ... 5 ... 10 16 ... 16 ... 15
Impedance	Ω	50		
VSWR		< 1.5		
Isolation: Intrasystem	dB	> 30		
Isolation: Intersystem	dB	> 42 (790-960 // 1710-2180 MHz)		
Intermodulation IM3	dBc	< -150 (2 x 43 dBm carrier)		
Max. power per input	W	500 (at 50 °C ambient temperature)		
Total power		1000 (at 50 °C ambient temperature)		



Highband		B1, connector 3-4		
		1710-2180		
Frequency range	MHz	1710 – 1880	1850 – 1990	1920 – 2180
Polarization	°	+45, -45	+45, -45	+45, -45
Average gain	dBi	17.7 ... 17.8 ... 17.7	17.7 ... 18.0 ... 17.6	17.6 ... 17.8 ... 17.4
Tilt	°	0 ... 3 ... 6	0 ... 3 ... 6	0 ... 3 ... 6
Horizontal Pattern:				
Half-power beam width	°	82	85	90
Front-to-back ratio (180°±30°)	dB	> 23	> 23	> 23
Cross polar ratio		Typically:	Typically:	Typically:
Maindirection	0°	17	16	15
Sector	±60°	> 10	> 12	> 10
	±60°	avg. 17	avg. 19	avg. 19
Vertical Pattern:				
Half-power beam width	°	5.5	5.2	5.0
Electrical tilt	°	0-6, continuously adjustable		
Min. sidelobe supression for first sidelobe above main beam	°T dB	0 ... 3 ... 6 18 ... 18 ... 16	0 ... 3 ... 6 18 ... 18 ... 16	0 ... 3 ... 6 18 ... 16 ... 16
Impedance	Ω	50		
VSWR		< 1.5		
Isolation: Intrasystem	dB	> 30		
Isolation: Intersystem	dB	> 42 (790-960 // 1710-2180 MHz)		
Intermodulation IM3	dBc	< -150 (2 x 43 dBm carrier)		
Max. power per input	W	250 (at 50 °C ambient temperature)		
Total power		500 (at 50 °C ambient temperature)		



Correlation Table

Frequency range	Array	Connector
790- 960 MHz	R1	1-2
1710-2180 MHz	B1	3-4

Mechanical specifications		
Input	4 x 7-16 female (long neck)	
Connector position	Bottom	
Adjustment mechanism	2x, Position bottom continuously adjustable	
Wind load (at Rated Wind Speed: 150 km/h)	N lbf	Frontal: 475 107 Maximal: 520 117
Max. wind velocity	km/h mph	200 124
Height / width / depth	mm inches	1917 / 262 / 149 75.5 / 10.3 / 5.9
Category of mounting hardware	M (Medium)	
Weight	kg lb	27 / 29 (clamps incl.) 59.5 / 63.9 (clamps incl.)
Packing size	mm inches	2249 x 304 x 204 88.5 x 12.0 x 8.0
Scope of Supply	Panel and 2 units of clamps for 42-115 mm 1.7-4.5 inches diameter	

936.4842/a Subject to alteration.

Accessories

General Information

Accessories (order separately if required)

Type No.	Description	Remarks mm inches	Weight approx. kg lb	Units per antenna
731651	1 clamp	Mast diameter: 28 – 60 1.1 – 2.4	0.8 1.8	2
85010002	1 clamp	Mast diameter: 110 – 220 4.3 – 8.7	2.7 6.0	2
85010003	1 clamp	Mast diameter: 210 – 380 8.3 – 15.0	4.8 10.6	2
737978	1 downtilt kit	Downtilt angle: 0° – 11°	2.3 5.1	1

Accessories (included in the scope of supply)

738546	1 clamp	Mast diameter: 42 – 115 1.7 – 4.5	1.1 2.4	2
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For downtilt mounting use the clamps for an appropriate mast diameter together with the downtilt kit.
Wall mounting: No additional mounting kit needed.

Material:

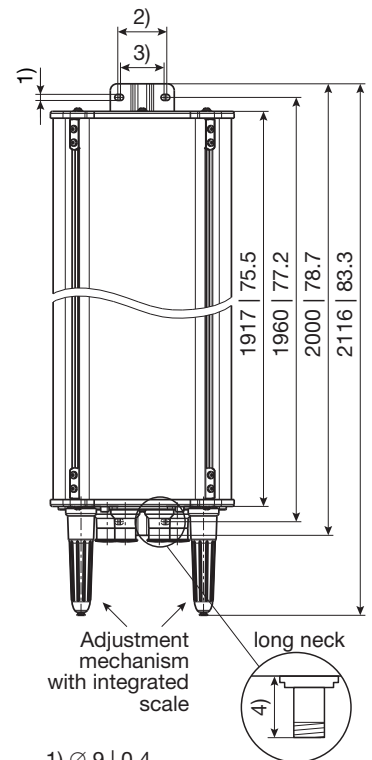
Reflector screen: Weather-proof aluminum.

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:

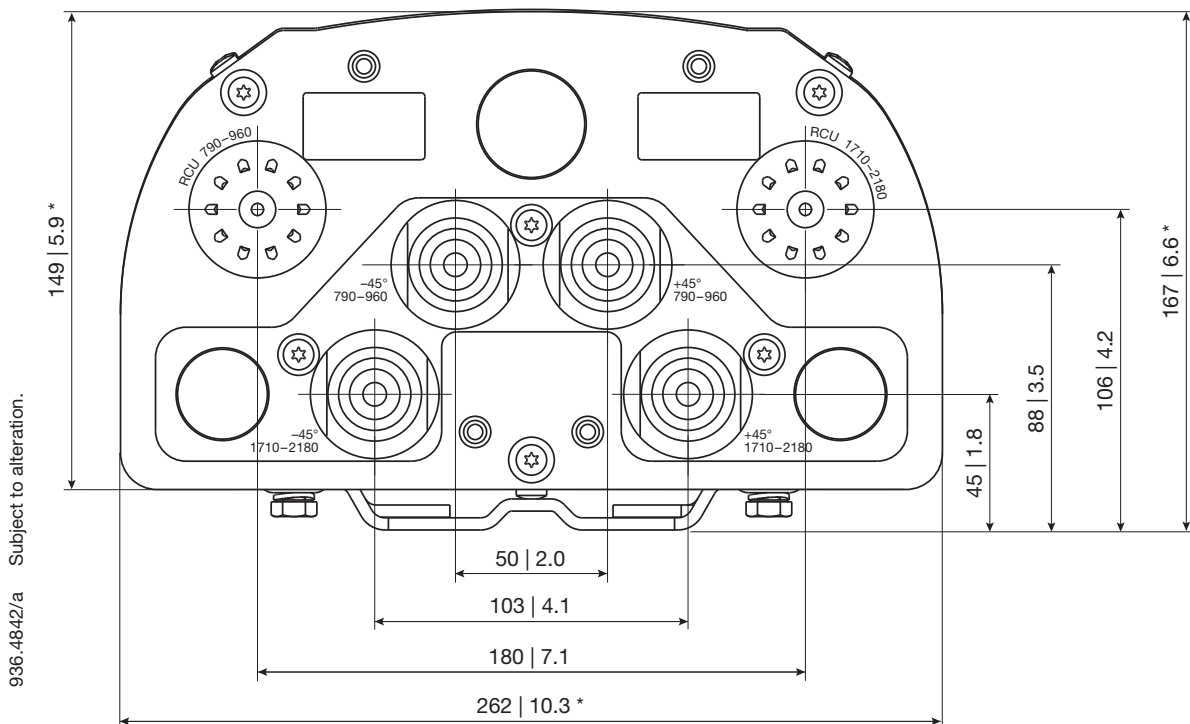
The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.



- 1) \varnothing 9 | 0.4
- 2) 72 | 2.8
- 3) 64 | 2.5
- 4) 35-42 | 1.4-1.7

All dimensions in mm | inches

Layout of interface:



Bottom view
* Dimensions refer to radome
All dimensions in mm | inches

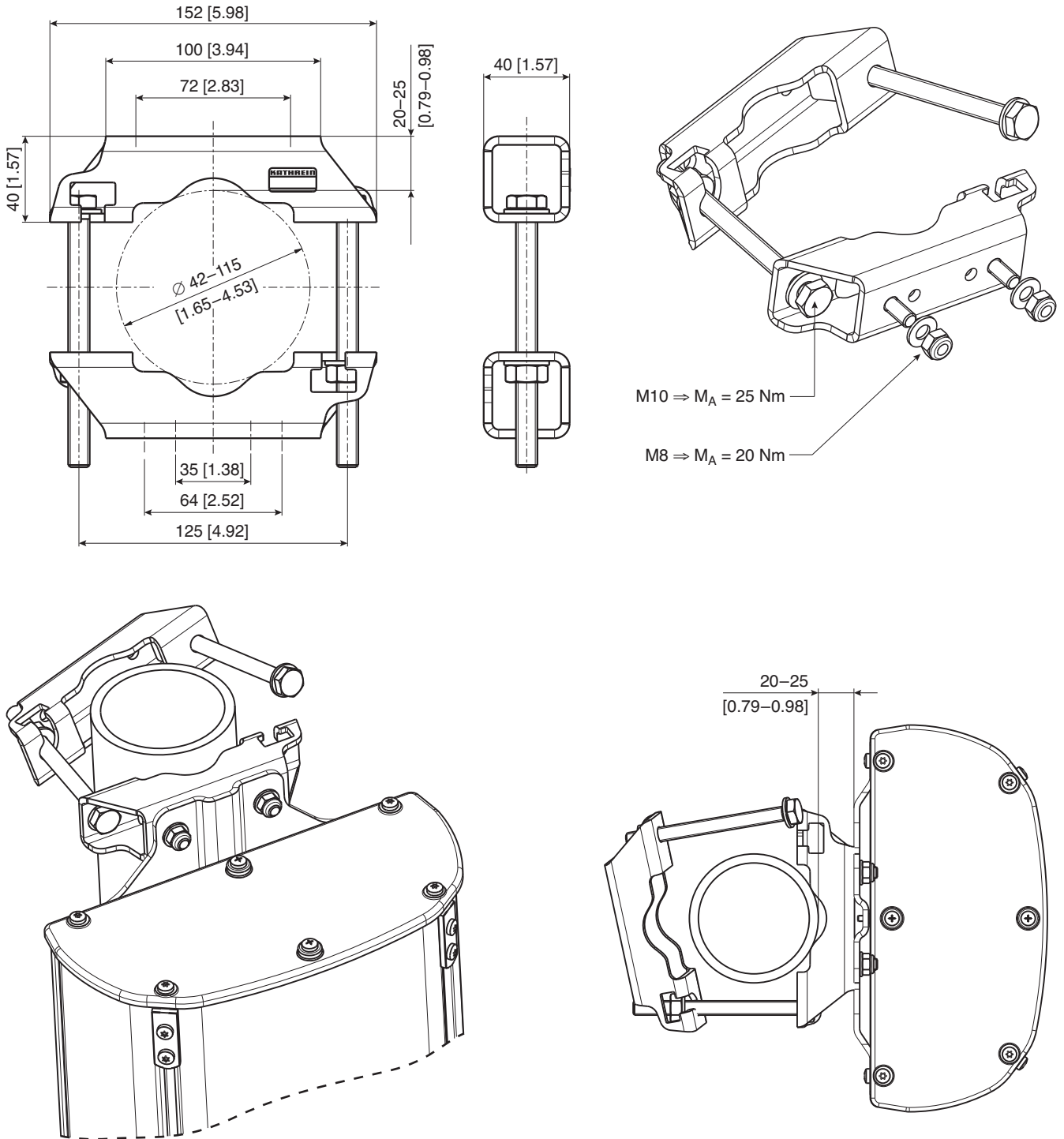
All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com

Mounting Hardware

Clamp Included in the Scope of Supply

KATHREIN

Suitable for mast diameter	(mm) [inches]	42 – 115 [1.65 – 4.53]
Antenna – mast distance	(mm) [inches]	20 – 25 [0.79 – 0.98]
Material of clamp and screws		Hot-dip galvanized steel / stainless steel
Weight	(kg) [lb]	1.1 [2.43]



936.3920/c Subject to alteration.

**Please note: Kathrein does not recommend to use counter nuts.
The additional nuts supplied are only meant as spares.**

All dimensions in mm and [inches]

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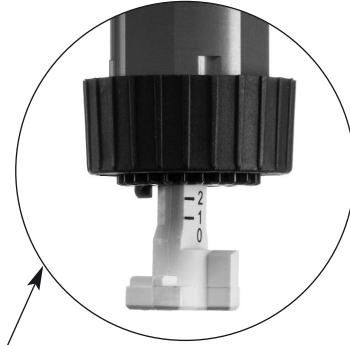
Description of the adjustment mechanism (protective cap removed):



- ① Adjustment wheel with twist-lock function.
- ② Downtilt spindle with integrated scale.



- ① Thread for fixing the protective cap or the RCU (Remote Control Unit).
- ② Gearwheel for RCU power drive.

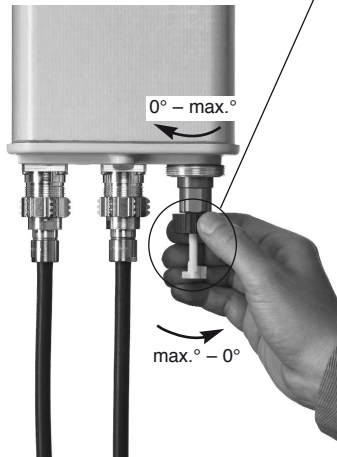


To set the downtilt angle exactly, you must look horizontally at the scale. The lower edge of the gear-wheel must be used for alignment.

Manual adjustment procedure:



Remove the protective cap.



Set downtilt angle by rotating the adjustment wheel.



Screw on the protective cap again.

Optional: RCU (Remote Control Unit) for remote-controlled downtilt adjustment:



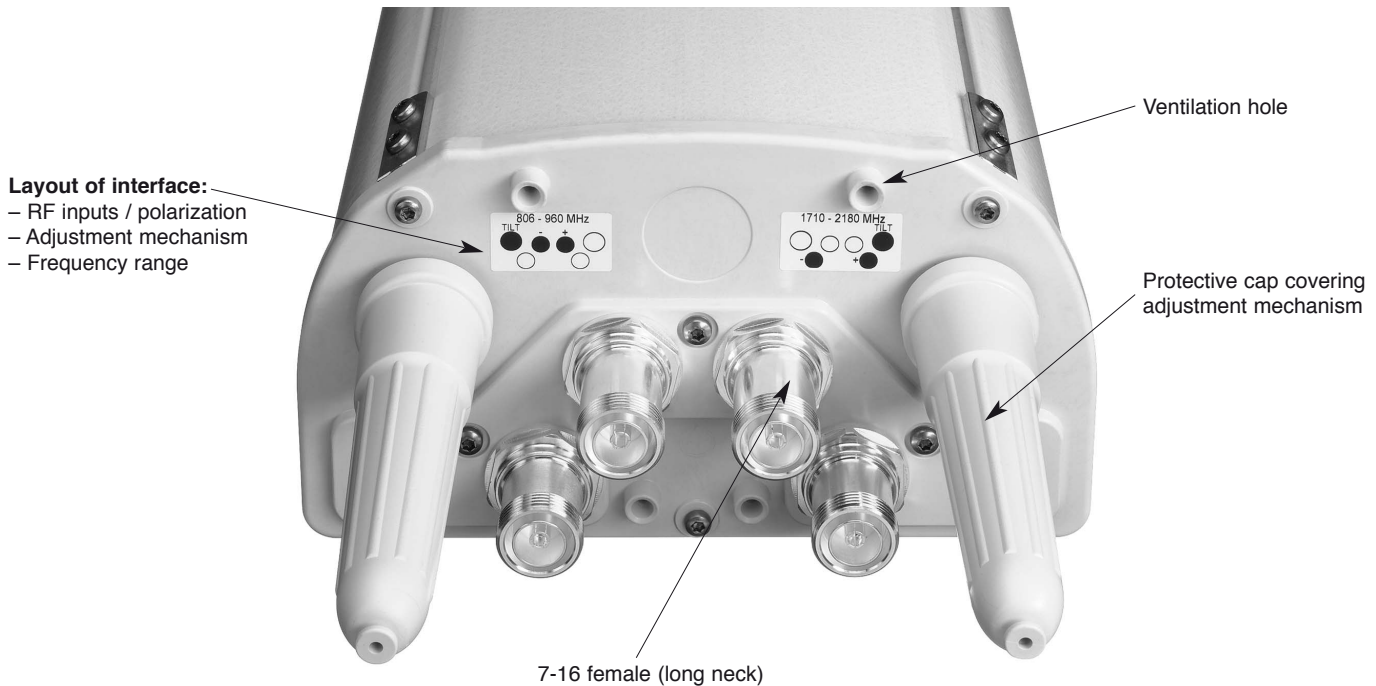
936.4142 Subject to alteration.

For a description of RCU installation please refer to the respective data sheet.

General Instructions for Feederline Installation on XXPoI Panels with four Connectors

Please note: In order not to damage the interfaces, please make sure that only the right tools are used. Tighten the feederline connector interfaces solely by using a common torque-wrench with a suitable wrench width.

Description of bottom end caps:



Attachment of the feederline connector and RCU (optional):

In order to protect the adjustment mechanism the protective caps have to be attached during feederline installation!



Start with the rearside located interfaces. Place the connector carefully and fix the nut using a torque-wrench (according to the manufacturers guidelines).



After feederline installation the optional remote control units (RCU) can be mounted.



For a full description of RCU installation please refer to the respective data sheet.