

2-Port Antenna R1

Frequency Range 790-960

Dual Polarization X

HPBW 30°

Adjust. Electr. DT 0.5°-10°

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



2-Port Antenna 790-960 30° 20.5dBi 0.5°-10°T

Type No.		80010456v02		
Lowband		R1		
		790-960		
Frequency range	MHz	790 – 862	824 – 894	880 – 960
Polarization	°	+45, –45	+45, –45	+45, –45
Gain at 0° T	dBi	2 x 20.0	2 x 20.2	2 x 20.5
Horizontal Pattern:				
Half-power beam width	°	33	32	30
Front-to-back ratio, copolar	dB	> 28	> 29	> 30
Cross polar ratio Maindirection	0° dB	Typically: 25	Typically: 23	Typically: 20
Tracking, Avg.	dB	2.5		
Squint	°	±2.0		
Vertical Pattern:				
Half-power beam width	°	9.1	8.8	8.5
Electrical tilt	°	0.5–10, continuously adjustable		
Sidelobe suppression for first sidelobe above main beam	°T dB	0.5 ... 5 ... 10 > 16 ... 13 ... 13	0.5 ... 5 ... 10 > 18 ... 18 ... 17	0.5 ... 5 ... 10 > 18 ... 16 ... 15
Impedance	Ω	50		
VSWR		< 1.5		
Isolation, between ports	dB	> 30		
Intermodulation IM3	dBc	< –150 (2 x 43 dBm carrier)		
Max. power per input	W	500 (at 50 °C ambient temperature)		



Mechanical specifications	
Input	2 x 7-16 female
Connector position	Rearside
Adjustment mechanism	1x, Position bottom continuously adjustable
Wind load (at Rated Wind Speed: 150 km/h)	N lbf Frontal: 1415 318 Maximal: 1555 350
Max. wind velocity	km/h mph 200 124
Height/width/depth	mm inches 2254 / 576 / 99 88.7 / 22.7 / 3.9
Category of mounting hardware	H (Heavy)
Weight	kg lb 22 / 24 (clamps incl.) 28.5 / 52.9 (clamps incl.)
Packing size	mm inches 2500 x 600 x 150 98.4 x 23.6 x 5.9
Scope of supply	Panel and 2 units of clamps for 42–115 mm 1.7–4.5 inches diameter

936.4853/a Subject to alteration.

Accessories

General Information

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Accessories (order separately if required)

Type No.	Description	Remarks mm inches	Weight approx. kg lb	Units per antenna
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
85010008	1 downtilt kit	Downtilt angle: 0° – 10°	4.3 9.5	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.

Material:

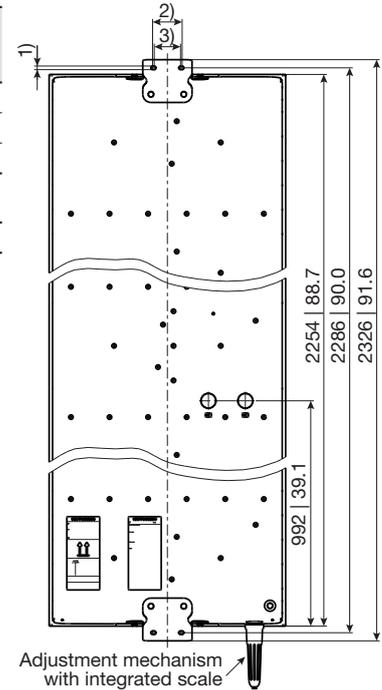
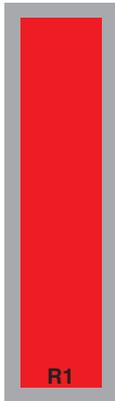
Reflector screen: Weather-proof aluminum.

Fiberglass radome: The grey fiberglass radomes of these antennas are very stable and extraordinarily stiff. They are resistant to ultraviolet radiation and can also be painted to match their surroundings.

All screws and nuts: Stainless steel.

Grounding:

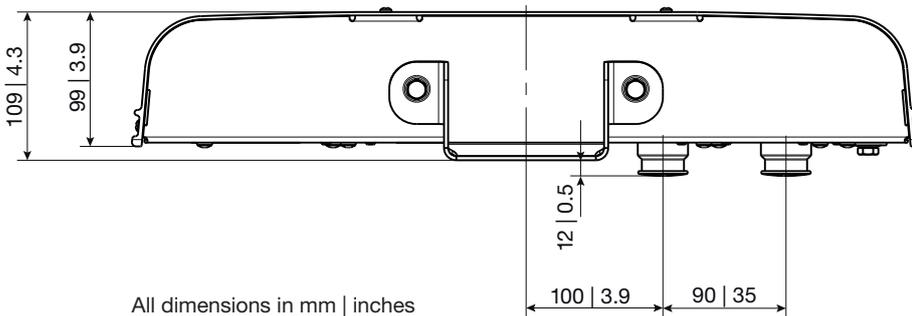
The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.



- 1) 9 | 0.4
- 2) 72 | 2.8
- 3) 64 | 2.5

All dimensions in mm | inches

Layout of interface:



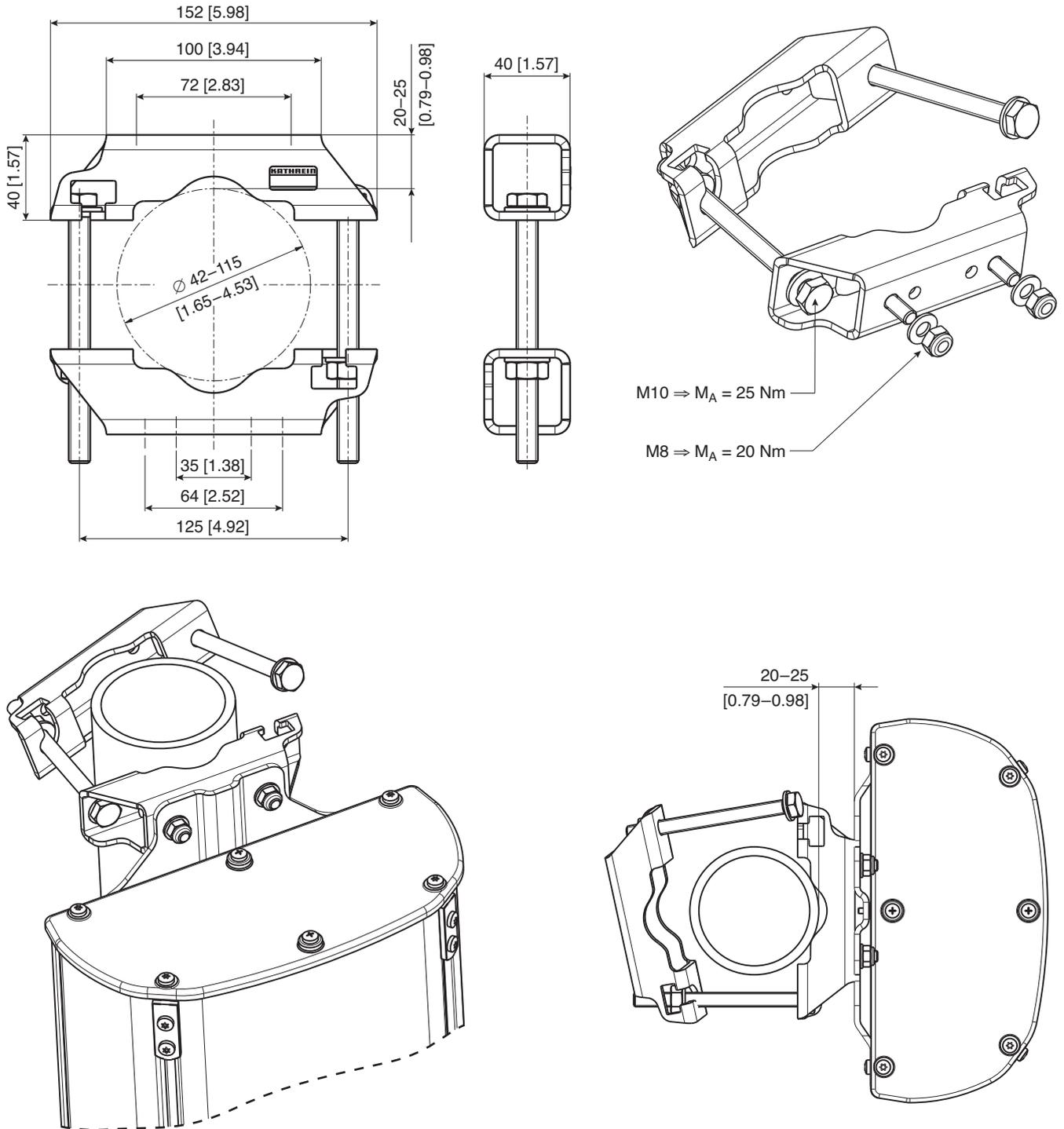
Any previous data sheet issues have now become invalid.

Mounting Hardware

Clamp Included in the Scope of Supply

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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]

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

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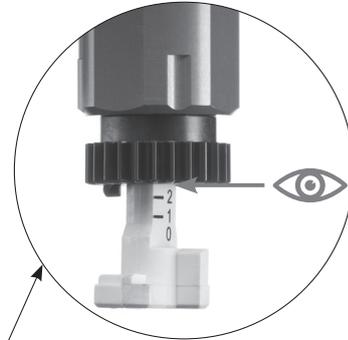
Description of the adjustment mechanism (protective cap removed):



- ① Twist protection.
- 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.

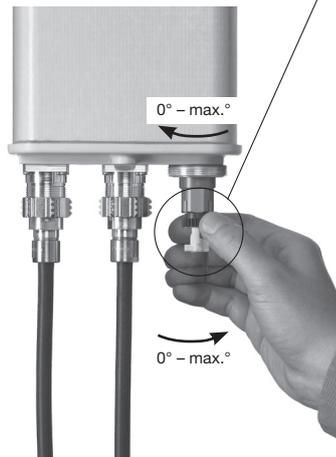


To set the downtilt angle exactly, you must look horizontally at the scale. The lower edge of the gear-wheel must be used for alignment.

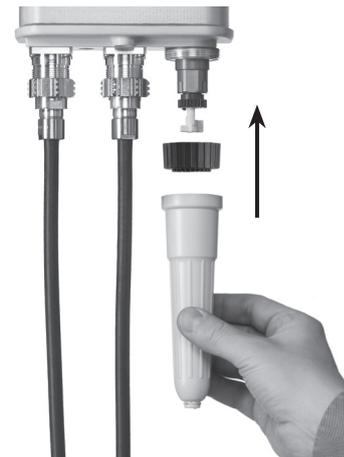
Manual adjustment procedure:



Remove the protective cap and the twist protection completely.



Set downtilt angle by rotating the gearwheel.



Screw on the twist protection and the protective cap again.

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



936.4037/a Subject to alteration.

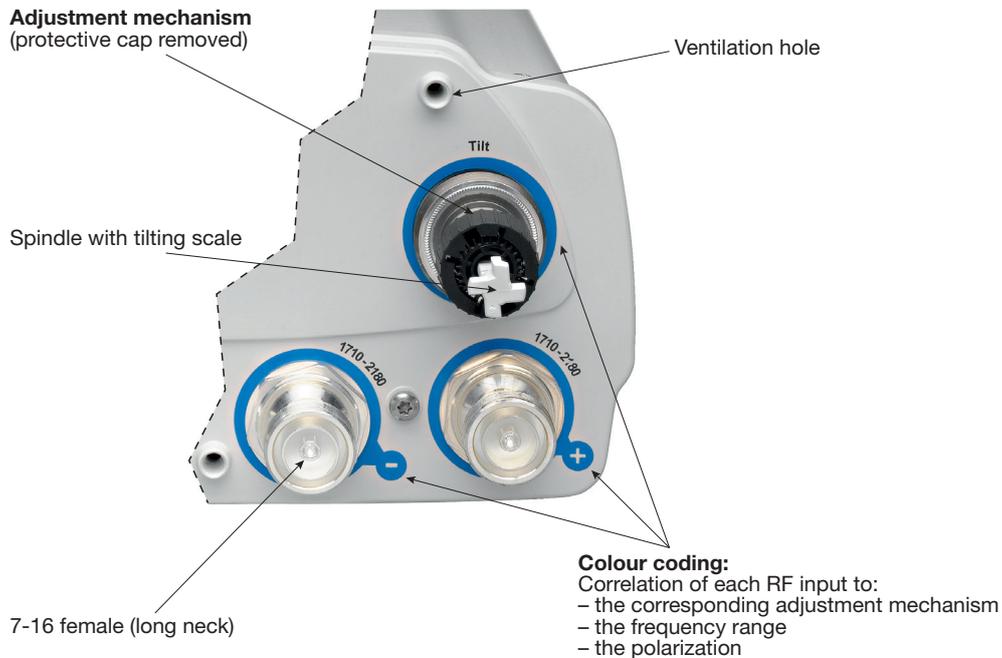
For a description of RCU installation please refer to the respective data sheet.

General Instructions for Feederline and RCU Installation for Antennas

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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 cap (exemplary picture):



Installation of the feederline connector and RCU (optional):

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



Carefully place the connector and fix the nut using a torque-wrench (according to the manufacturers guidelines).

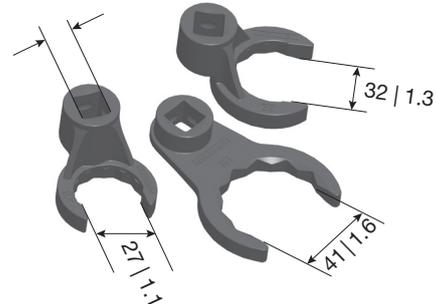


After feederline installation, the optional remote control units (RCUs) can be mounted.

Kathrein installation set: Type No. 85010077 Set has to be ordered separately!

Set consists of three spanners of divers width 27, 32 and 41 mm | 1.1, 1.3 and 1.6 inches

1/2" square actuation
according to
DIN 3120 Form C



All dimensions in mm | inches

These tools are suitable for 7-16 connectors with a wrench size of 27 or 32 mm | 1.1 or 1.3 inches, and the RCU attachment nut with a wrench size of 41 mm | 1.6 inches.

Tighten nuts within a torque range of 25 – 33 Nm depending on connector manufacturers' specifications, respectively the RCU nut with a torque range of 15 – 18 Nm.