

# Remote Control Unit (RCU)

**KATHREIN**  
Antennen · Electronic

Remote Control Unit (RCU) for Kathrein base station antennas with adjustable electrical downtilt and appropriate mechanical interface.



Type No.	<b>860 10003</b>
Connector	1 x 8 pin connector according IEC 60130-9, male
Power supply	10 ... 30 V
Hardware interface	RS485
Logical interface	HEX coded commands based on HDLC protocol, conform to AISG
Adjustment time (full range)	typically 30 sec., depending on antenna type
Adjustment cycles	> 50000
Temperature range	-40 °C ... +60 °C
Material of housing	Aluminum
Weight	approx. 1.1 kg
Packing size	297 x 217 x 135 mm
Dimensions	85 x 130 x 150 mm (without connectors)

Scope of supply: RCU with suitable attachment interface for the antenna.

Features: The RCU can be easily attached without dismantling of the antenna.  
The RCU is suitable for operation under outdoor conditions.



RCU in combination with antenna 742 212



Two RCUs in combination with antenna 742 234

## 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, which includes the static mechanical load imposed on an antenna by wind at maximum velocity.

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/RCU 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.**

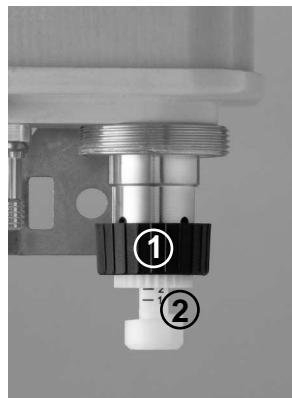
**Any previous datasheet issues have now become invalid.**

Subject to alteration.

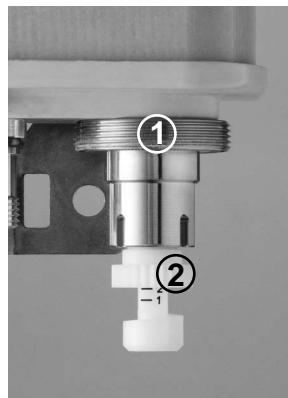
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## Description of the interface (protective cap removed):



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



- ① Thread for fixing of 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 gearwheel must be used for alignment purposes.

## Attachment of the RCU (Remote Control Unit) for remote-controlled downtilt adjustment:



Remove the protective cap completely from the antenna.



Completely remove the black adjustment wheel by simply pulling it downwards.



Push the attachment nut of the RCU down towards the housing.



Tighten the RCU attachment nut using a torque-wrench; wrench width = 41 mm, min. torque = 15 Nm, max. torque = 18 Nm.

**Check the proper functioning of the phase-shifter over the entire adjustment range, by twisting the adjustment wheel in such a way that the spindle moves completely in and out.**

**Reset the downtilt to the previous value.**

Place the RCU carefully over the adjustment spindle, observing the correct alignment of the RCU with regards to the antenna, i.e. the flat surfaces of the attachment fixture on the antenna side and those inside the RCU housing must lie flat against each other.

Push-up the RCU carefully to the stop at the antenna.

**Please note!**  
**Do not twist the RCU in any way during attaching to the antenna, as this could damage the adjustment spindle.**

**Please note!**  
**In cases where a mechanical downtilt unit is installed, this must not be set for a downtilt of more than 14 degrees.**