



## UHF RADIO TRANSMITTER 3694 UHF RADIO RECEIVER 3696 UHF RADIO REPEATER 3711

*A short range real-time telemetering system for Aanderaa PDC-4 raw data signals from Automatic Weather Station 2700, Data Buoys and other monitoring stations.*

*Approved by the Norwegian Post and Tele-communication Authorities. Approval No. 99000011 and 99000012.*

Automatic weather stations and data buoys are normally placed far from inhabited areas. To convey data in real-time from these stations or buoys, UHF radio communication has been found to be a good and inexpensive solution. The Radio Transmitter 3694, Radio Receiver 3696, and Radio Repeater 3711 have been designed to take care of this data transmission.

The radio set is a low power, short range system, operating in the UHF band on frequencies between 400 and 500MHz, and requires line of sight between the transmitter and the receiver to function properly. A typical application for the radioset is transmitting a message from an AADI Automatic Weather Station every 10 minutes. This message consists of a number of 10-bit data words and lasts for about 4 seconds per word.

The Transmitter 3694 has a 2.5" OD aluminum housing with a half wave whip antenna on the top and a standard AADI sensor foot with a 6-pin receptacle at its lower end. The transmitter fits directly onto the AADI Sensor Cross

Arm used on AADI Automatic Weather Stations and Data Buoys. The Receiver 3696 and Repeater 3711 have a cone joint with an 18-pin receptacle which fits a vertical 2" aluminum mast section.

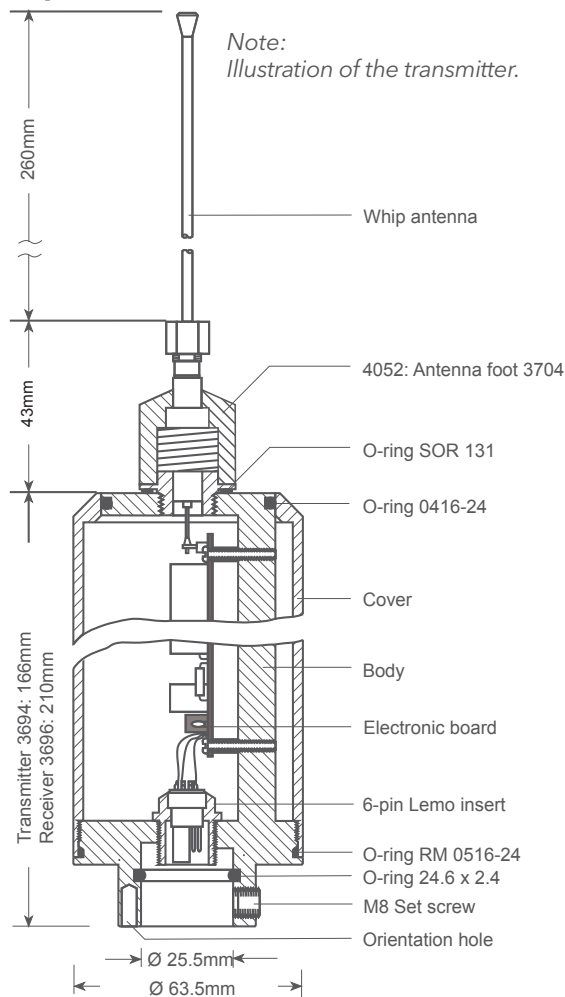
The antenna has a good low angle omnidirectional radiation pattern. The modulation type for the transmission is frequency modulation which allows the 10-bit PDC-4 Aanderaa code to modulate the transmitter directly.

The output from the receiver is PDC-4 signals, the same as the input to the transmitter. This code is accepted by the 3127 Deck Unit for transfer of data into a PC.

The range of the radio set varies with topography. On land and over uneven terrain a range of 50km is realistic provided line of sight. Over flat land and water the range is only 6-8km with a normal antenna height.

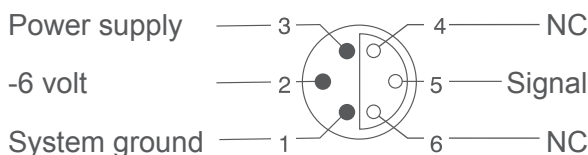
To get a better range or where line of sight is not possible, use Repeater 3711.

# Specifications UHF Radio



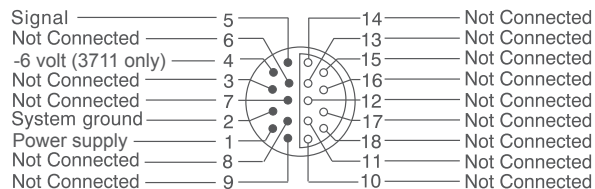
## Pin configuration UHF Transmitter 3694

Receptacle, external view; bushing = o ; Pin =



## Pin Config. UHF Receiver 3696 and Repeater 3711

Receptacle, exterior view; pin = ● ; bushing = ○



## UHF Radio Transmitter 3694 (see front picture)

RF module: Woods & Douglas, ST 500  
 Type of transmission: Frequency shift F1D  
 Frequency: 400 to 500MHz\*  
 channel spacing: 25KHz

Output power: 100mW max  
 Output impedance: 50Ω  
 Input impedance: 10kΩ  
 Current consumption: Transmitting 100mA max  
 Temperature stability: ±5ppm  
 Net weight: 550g

Connection 3694: Standard sensor foot with 6-pin receptacle mating  
 Sensor Cross Arms 3415, 3435, 3465 and 3485

For installation on a 2" cone joint with 18-pin plug use Adapter 3715

Norwegian Type Approval No. 99000011

## UHF Radio Receiver 3696

RF module: Woods & Douglas, SR 500  
 Double heterodyne receiver:

1st. I.F.45MHz  
 2nd I.F.455kHz  
 Type of reception: Frequency shift, F1D  
 Sensitivity: -117dBm at 12dB SINAD  
 Frequency: As transmitter\*  
 Output signal, PDC-4: 6V, 35mA at maximum load  
 Input impedance: 50Ω  
 Current consumption: 40mA  
 Net weight: 700g  
 Connection: 18-pin receptacle mating standard mast section with Radio Cable 2852

Dimension:

Accessories, optional:

H: 166mm, OD: 63mm  
 Brackets 3346 & tube with cone for fitting receiver to a vertical surface. Radio Cable 2852, 10m (shield)

## UHF Radio Repeater 3711

RF module: Woods & Douglas, SX 500  
 Otherwise specifications as for 3694 and 3696

## Common to all units

Material and finish: Aluminum 6061T, anodized 10-15μ

Operating temp.:

Power supply:

Antenna:

-30 to +50°C  
 -7 to -14Vdc  
 Half wave vertical whip type with connector type N

Approval:

ETS 300 220, ETS 300 683, CE

\* Note:

Concerning restrictions on use of this equipment, the responsibility for obtaining the applicable permission from the appropriate authorities remains solely with the user. Actual frequency will normally be specified by the same authority.

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