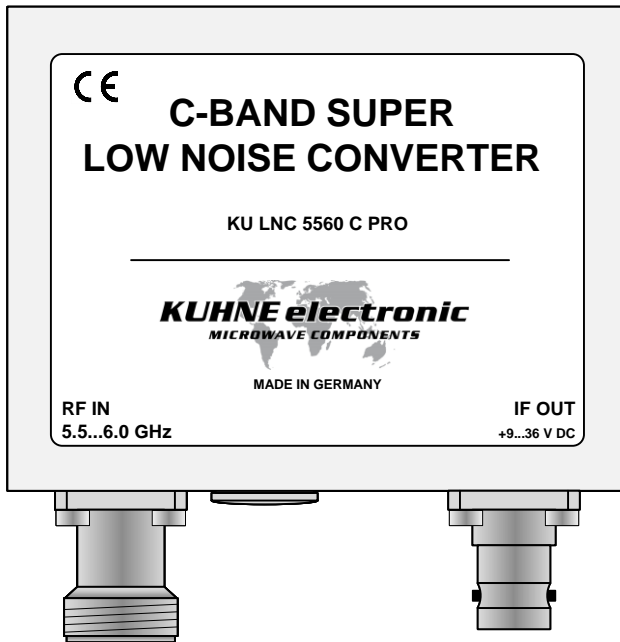


KU LNC 5560 C PRO



Manual

Specification

Frequency range (RF) RF input power	5500 ... 6000 MHz max. 1 mW (0 dBm)
Output frequency (IF) Output IP3 Gain (switchable) Noise figure @ 18 °C	300 ... 800 MHz (local oscillator 5200 MHz) 400 ... 900 MHz (local oscillator 5100 MHz) typ. +25 dBm (high gain), typ. +8 dBm (low gain) typ. 35 dB (high gain), typ. 17 dB (low gain) (LO frequency 5200 MHz) typ. 1.5 dB, max. 2.0 dB (LO frequency 5200 MHz, IF amplifier enabled)
LO frequency (switchable) LO accuracy @ 18 °C LO frequency stability (0 ... 40 °C) Phase noise @ 5200 MHz @ 1 kHz @ 10 kHz @ 100 kHz	5100 MHz, 5150 MHz, 6300 MHz, 5200 MHz (switchable) +/- 2 ppm +/- 3 ppm typ. -87 dBc/Hz typ. -91 dBc/Hz typ. -96 dBc/Hz
Operating case temperature range	-20 ... +55 °C
Supply voltage Current consumption Power consumption	+9 ... 36 V DC typ. 180 mA @ 12V (IF amplifier enabled) typ. 2.2 W
Input connector / impedance Output connector / impedance	N-female, 50 ohms BNC-female, 75 ohms
Dimensions (mm) Case Weight	82 x 64 x 22 milled aluminium, IP41 (page 6: „mounting instructions“) typ. 230 g

Features

- Low noise figure
- Large bandwidth
- Low phase noise oscillator
- High frequency stability of the oscillator
- High linearity
- Antenna port protected against static discharge
- Small and light-weight to allow easy pole mounting
- Tri-colour LED indicates unit status and gain mode setting
- Overvoltage protection and reverse polarity protection
- Remote power supply via output connector

Applications

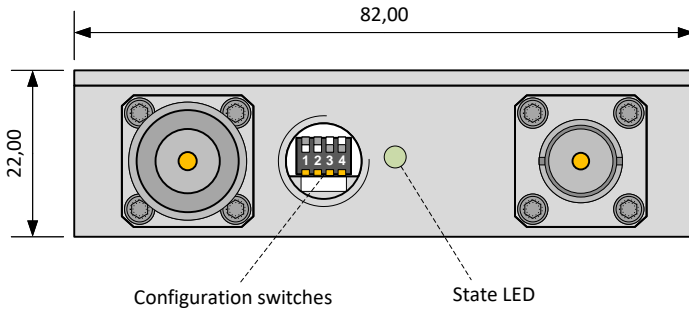
- Multichannel Multipoint Distribution Services (MMDS)
- Digital broadcast systems (DVB-T, DVB-S)
- Analog and digital transmission systems

Sig _____

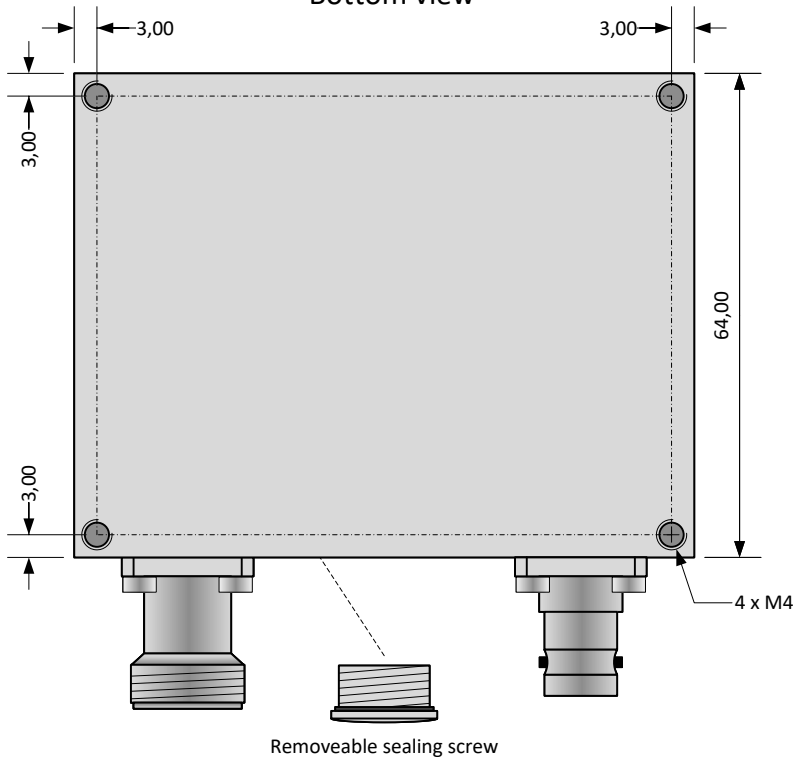
Products are only to be sold to competent companies or to radio amateurs with a licence.
For operating high frequency modules legal instructions must be followed.

QS _____

Front view

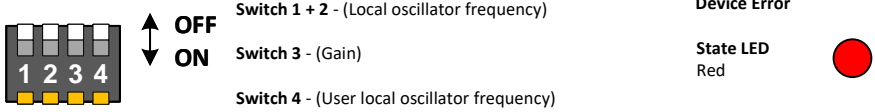


Bottom view

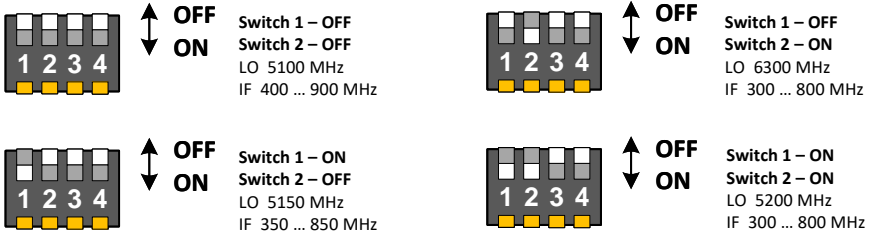


Configuration Switches / State LED

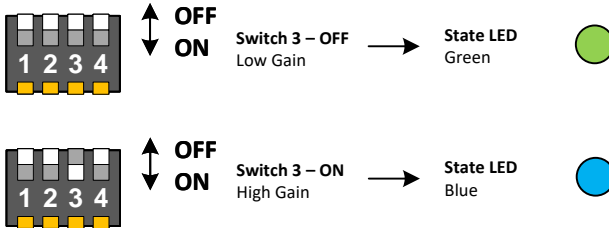
Overview



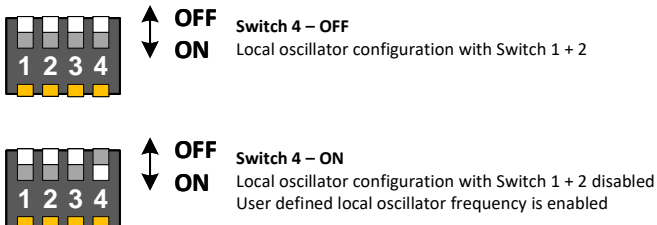
Switch 1 + 2: Preset LO



Switch 3: (Low-/High-) Gain switch



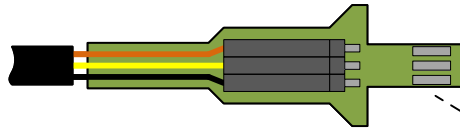
Switch 4: User defined local oscillator frequency



In the case that **Switch 4** is in position **ON** the user defined local oscillator frequency is activated. This user defined local oscillator frequency can be selected in the range from 5000 ... 5200 MHz and from 6300 ... 6400 MHz. The frequency step size of the oscillator frequency is 5 MHz. The user defined oscillator frequency can be programmed with a special programming cable.

For example the oscillator frequency can be chosen to 5185 MHz .

Optional Connector PCB



USB – serial interface cable
FTDI TTL-232R-3V3

connector PCB
Kuhne electronic GmbH

spring contacts

Configure the user defined local oscillator frequency

- connect the USB – serial interface cable with your PC
- start a terminal program on your PC (for example „hterm“)
- choose the COM port of the USB – serial interface cable

```
BAUDRATE 9600  
DATABITS 8  
STOPBITS 1  
NO FLOW CONTROL
```

- insert the connector PCB with connected USB – serial interface cable into the configuration slot the spring contact must show to the top cover of the down converter

- power up the down converter

- send „s“ with the terminal program to the converter to get the state of the converter

```
Kuhne electronic GmbH - KU LNC 5560 C PRO
```

```
PLL locked  
GAIN high  
Selected LO frequency: 5100 MHz  
User defined LO frequency: 5185 MHz  
User defined LO frequency enabled
```

- send „5185LO“ with the terminal program to the converter to get set the user defined oscillator frequency to 5185 MHz

```
New LO frequency 5185 MHz accepted
```

- power down the down converter

- remove the connector PCB

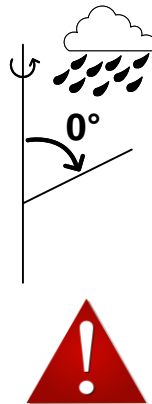
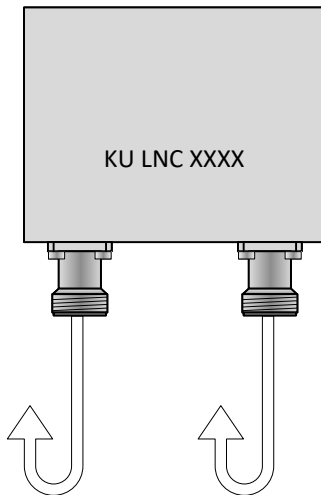
Mounting instructions

The KU LNC 5560 C PRO is marked with protection class **IP41** according to **DIN EN 60529**.

This provides information on the resistance of the unit against unwanted penetration of foreign bodies or moisture into the interior of the unit according to the following provision:

- Protected against granular solid foreign bodies (diameter ≥ 1 mm).
- Protected from vertically falling dripping water

The LNC modules have been designed with maximum protection against moisture. Nevertheless, water may enter the unit due to the design of the RF connectors, which is why some special features should be taken into account during installation.

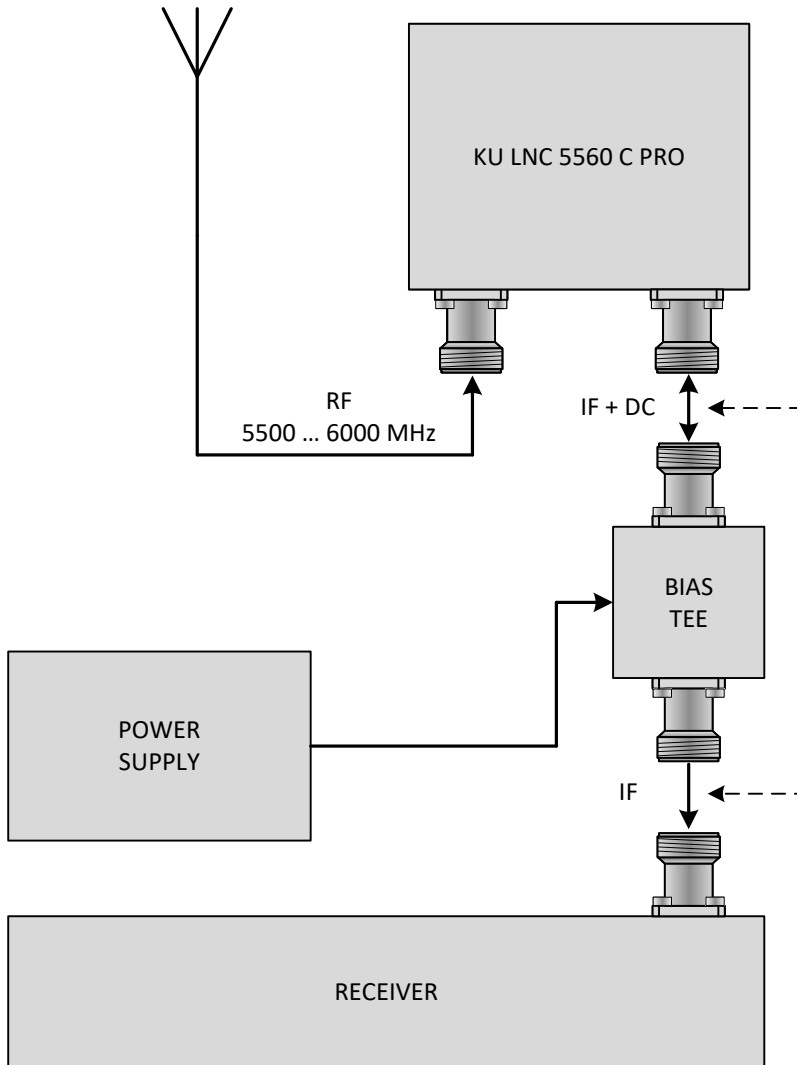


Mounting with the RF connectors vertically downwards

If possible, do not use cable connections with angled elbow connectors, but lead plugs out with a straight cable and a loop pointing downwards.

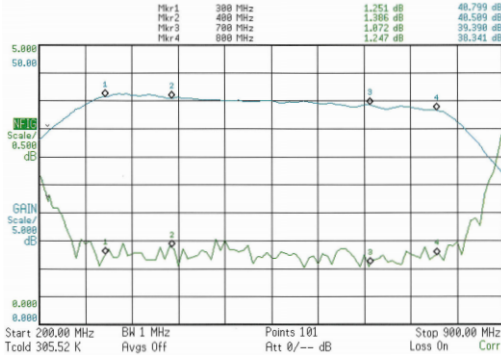
In the event of improper installation or handling that does not comply with our recommendations, Kuhne electronic reserves the right to exclude the warranty claim.

Application diagram

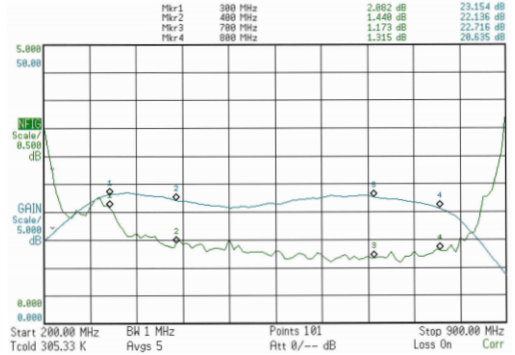


Typical performance

Typical gain and noise figure (5200 MHz LO frequency, IF amplifier on)



Typical gain and noise figure (5200 MHz LO frequency, IF amplifier off)



Typical phase noise at 5200 MHz local oscillator frequency

