

# Quick reference guide

Radio receiver in the 4 m band



# 1. Safety precautions



## Attention!

- **Do not operate the unit in rooms with explosive atmosphere, damp environments or rooms with aggressive air or increased electromagnetic requirements.**
- **Mind the instructions for putting the device into operation.**
- **Fuse the unit at the voltage supply input UB\_IN of the user interface by means of a fuse (min. 250 mA, max. 1 A).**
- **In case there is danger of touching conductive parts due to improper use of the unit, the power supply has to be disconnected immediately.**
- **Do not open the unit, only permit repairs by the manufacturer.**



## ESD protection measures

Comply with the ESD protection measures according to DIN EN 61340-5-1/2 when opening the unit (potential equalization between body and ground of the unit via high value resistance (approx. 1 MOhm) e. g. over a usual wrist band).

**Read the user manual carefully to be able to use the wealth of features of your new WZ LSA 4-3.**

**You can also find further information on our website <http://www.fmncom.com>.**

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Notwithstanding the above declaration, the manufacturer accepts no liability for errors in these instructions or their consequences.

## 2. General instructions

- **The compliance with the operating instructions and the instructions for putting the device into operation is also part of the intended use. Every other use is considered as not to be intended. The manufacturer assumes no liability for damages resulting from such use.**
- **All connection cables have to be equipped with an earth-connected shielding.  
The antenna connection cable has to be equipped with a wave impedance of 50 Ohm.**
- **The manufacturer recommends to mount devices in PCB version into a metal housing.**
- **Corresponding mechanisms are to be used for the detection of single bit errors during a data transmission (e. g. protocol with creation of a check sum).**

### 3. General product description

#### 3.1 Designation of the functional elements

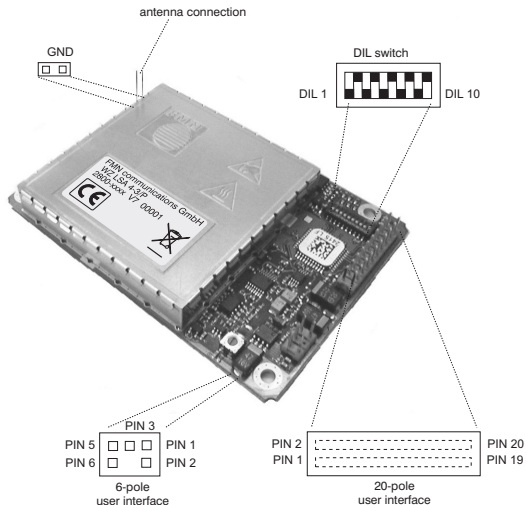


Fig. 3-1: Designation of the functional elements (PCB version)

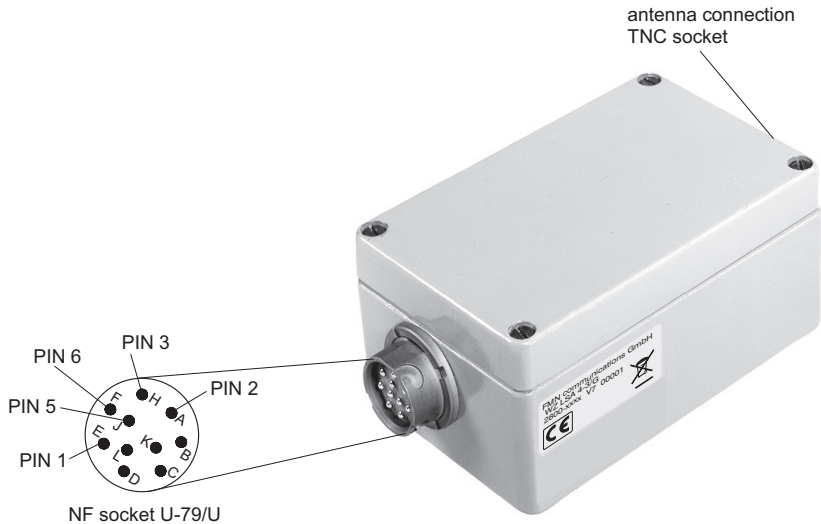


Fig. 3-2: Designation of the 6-pole user interface (IP65 housing)

## 3.2 Interfaces at the unit

### 3.2.1 PIN configuration of the 6-pole user interface (IP65 housing)

PIN	Assignment	Function
1	<b>UB_IN</b>	Input (9 ... 15 V)
2	<b>GND</b>	Ground
3	<b>NF_OUT</b>	Output, analogue
4	not used	
5	<b>RSSI</b>	Output, analogue
6	<b>GND</b>	Ground

Table 3-1

### 3.2.2 PIN configuration of the 20-pole user interface (PCB version)

PIN	Assignment	Function
1	UB_IN	Input (9 ... 15 V)
2	GND	Ground
3	RSSI	Output, analogue
4	RX_BB	Output, analogue
5	AF_INT	Output, analogue
6	reserved	
7	DIL7	Input, digital
8	DIL8	Input, digital
9	RS232_OUT	Output, active HIGH
10	RS232_IN	Input, active HIGH
11	DIL9	Input, digital
12	DIL1	Input, digital

<b>PIN</b>	<b>Assignment</b>	<b>Function</b>
13	<b>DIL2</b>	Input, digital
14	<b>DIL3</b>	Input, digital
15	<b>DIL4</b>	Input, digital
16	<b>DIL5</b>	Input, digital
17	<b>DIL6</b>	Input, digital
18	<b>VDD</b>	Output
19	<b>ERROR</b>	Output, digital
20	<b>GND</b>	Ground

## 4. Putting the unit into operation

### 4.1 Initial state of the unit after starting

see user manual WZ LSA 4-3

### 4.2 Memory selection at the user interface

see attached configuration list

## 5. Settings at the unit

Command syntax	Range of values	Description	Chapter in user manual
<b>V</b>		Displaying the version number	<b>6.1.1</b>
<b>N</b>	ASCII 16-digit	Displaying the serial number of the unit	<b>6.1.2</b>
<b>EX</b>	X = 0 ... 1	Echo of the commands (X = 0 -> no echo, X = 1 -> echo)	<b>6.1.3</b>
<b>?EX</b>	X = 0 ... 1	Output mode (X = 0 -> normal, X = 1 -> extended) (service command)	<b>6.1.4</b>
<b>?SM</b>	0 ... 511	Outputting current memory number (service command)	<b>6.1.5,</b> <b>6.1.6</b>
<b>SMX</b>	X = 0 ... 511	Software selection: selecting the memory and the appropriate RX channel	<b>6.1.6</b>
<b>SM</b>		Hardware selection: selection of the memories depends on the current hardware setting	<b>6.1.7</b>
<b>A0</b>	0 ... 1023	Output of the analogue measuring signal RSSI (input level)	<b>6.1.8</b>

Command syntax	Range of values	Description	Chapter in user manual
<b>XX</b>	X = 0 ... 1	Xon / Xoff protocol: X = 0 -> deactivate, X = 1 -> activate	<b>6.1.9</b>
<b>F</b>		Reset to factory setting	<b>6.1.10</b>

Table 5-1: Short overview command syntax

## 6. Troubleshooting

### 6.1 Outputs in normal output mode

The WZ LSA is connected with the terminal program by means of a serial interface.

Output	Description
OK	Command is valid and was executed correctly
ERROR	Command is valid, but could not be executed correctly
CMD-ERROR	Command is invalid

Table 6-1: Output mode normal (“?E0“)

## 6.2 Outputs in extended output mode

The WZ LSA is connected with the terminal program by means of a serial interface.

	Input	Output
Activating the extended output mode	?E1 <sub>+ENTER</sub>	

Output	Range of values	Description
OK		Command is valid and was executed correctly
CMD-ERROR		Command is invalid
RX OK		Programming RX channel successful
ERROR XX	XX = 00 ... FF	Command is invalid, but could not be executed correctly
RX ERROR XX	XX = 00 ... FF	Error at RX programming

Table 6-2: Output mode extended (“?E1”)

## 9. Conformity

Herewith, the FMN communications GmbH declares that the unit WZ LSA 4-3 complies with the essential requirements and the other relevant provisions of the directive 1999/5/EG (R&TTE directive).

The unit WZ LSA 4-3 can be operated in the countries of the European Union (EU). Outside of the EU, the national regulations of the respective country apply.

The complete declaration of conformity can be downloaded in the Internet under <http://www.fmncom.com>.





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