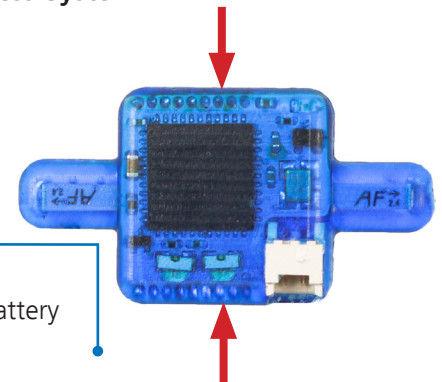


## W16-HS Headstage

### 16-Channel Wireless Headstage for Use with the Wireless-System



W16-HS top side:  
Connector for the battery

**Important:** Please handle the headstage with great care!  
Do not touch the antennae, but the body of the headstage.

#### Applications

The W16 headstage is the ideal solution for spikes, LFP, EEG, ECG, EMG, and ECoG. Additional inputs to the interface board allow the synchronization of the data with external devices.

#### Technical Specifications

Number of recording channels	16
Weight (without battery)	+/- 3.6 g
Dimensions (W x D x H)	16 x 16 x 6.5 mm
Distance for wireless link	5 m and more under normal conditions
<b>Amplifier</b>	
Gain	101
Bandwidth	1 Hz to 5 kHz (0.1 Hz on request)
Input impedance	1 GΩ    10 pF
Resolution	16 bit
Input voltage range	+/- 12.4 mV
Input noise	< 1.9 μV <sub>RMS</sub>
<b>Sampling rate</b>	
16 channels simultaneously	10 kHz
8 channels simultaneously	20 kHz
4 channels simultaneously	20 kHz
2 channels simultaneously	20 kHz
<b>Software</b>	
Operating system	Windows ® 10, 8.1, 7 (64 bit)
Data acquisition and analysis software	Multi Channel Suite Version 1.5.1 and higher MC_Rack Version 4.6.2 and higher

#### Advantages

- Small-sized headstage with integrated A/D converter.
- The Wireless-System converts the recorded signals into digital data already on the headstage.
- The signal-to-noise ratio is excellent and most important, independent from the distance between sender and receiver.
- The signal amplitude is independent of the distance, too, and the data arrives safely and completely at the receiver for further analysis.

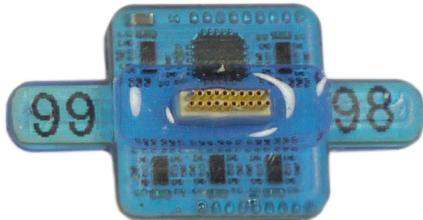
## W16-HS Headstage

Layout



### Wireless-B-100mAh

Standard battery for the W16-HS. Please connect the battery via cable to the headstage. The recording time with a 100 mAh battery at maximal sampling rate on all sixteen channels is 1.7 hours.



### W16-HS bottom side:

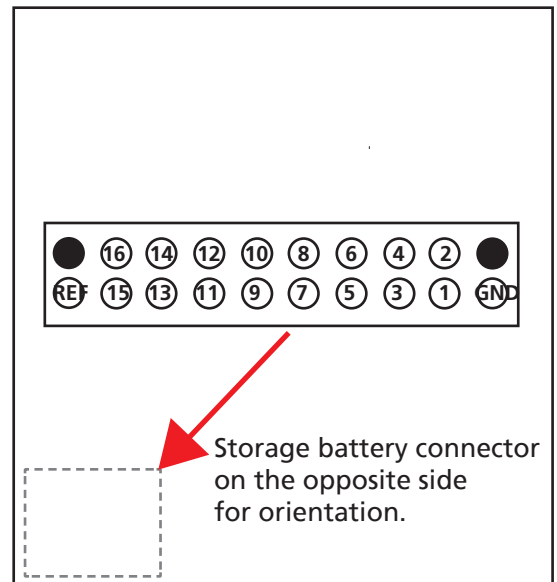
Connector for the electrode probe or for the MEW-Signal generator.

### Connector for W16 Headstage with Omnetics Connector

The Omnetics connector A79039-001 (NSD-18-DD-GS) mates with standard pin connector such as:  
 Through-Hole:  
 A79038-001 (NPD-18-DD-GS)  
 Horizontal Surface Mount:  
 A79040-001 (NPD-18-AA-GS)  
 Vertical Surface Mount:  
 A79042-001 (NPD-18-VV-GS)  
 Cable (18.0" 34 AWG lead-wire):  
 A79044-001 (NPD-18-WD-18.0-C-GS)

### W16 Headstage with Omnetics Connector

Diagram of the bottom side with pin layout. Please orientate the headstage as shown in the diagram.



Pin Layout of the Omnetics Connector A79039-001 (NSD-18-DD-GS)

GND (Ground)	Guide Post
Channel 1	Channel 2
Channel 3	Channel 4
Channel 5	Channel 6
Channel 7	Channel 8
Channel 9	Channel 10
Channel 11	Channel 12
Channel 13	Channel 14
Channel 15	Channel 16
REF (Reference)	Guide Post