



# ADDITIONAL SENSORS AND ACCESSORIES FOR ME6000

**Powerful solutions for  
biosignal monitoring**



## Combining signals for more detailed measurements

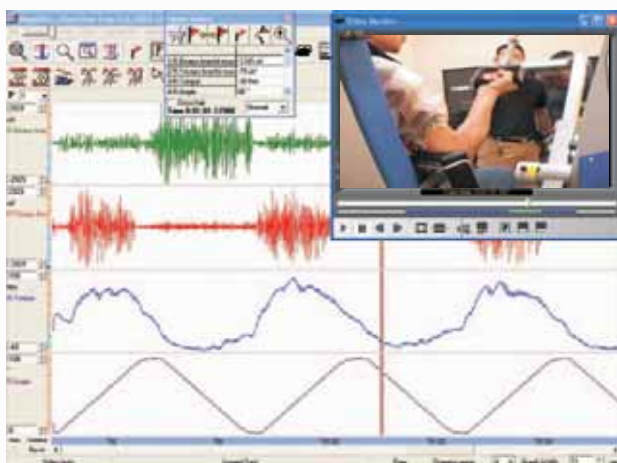
ME6000 and MegaWin offers powerful tools for EMG measurements. With combining other signals with EMG more detailed measurements and further analyzes are available.

This brochure describes only the most common additional sensors and accessories for ME6000. In research different kind of sensors are often needed and Mega also design custom made sensors for ME6000. Please contact [sales@biomation.com](mailto:sales@biomation.com) for more information.

### ME6000 and MegaWin:

More detailed information about ME6000 and MegaWin you can find from ME6000 and MegaWin brochures or from

[biomation.com/kin/me6000.htm](http://biomation.com/kin/me6000.htm)



### Multi-signals with digital video synchronization

Combining multi-signal measurement data with video opens new ways to analyze performance in sport medicine or in research.

Also synchronized video helps to estimate different work phases in occupational health.

# Ambulatory sensors

## Inclinometers

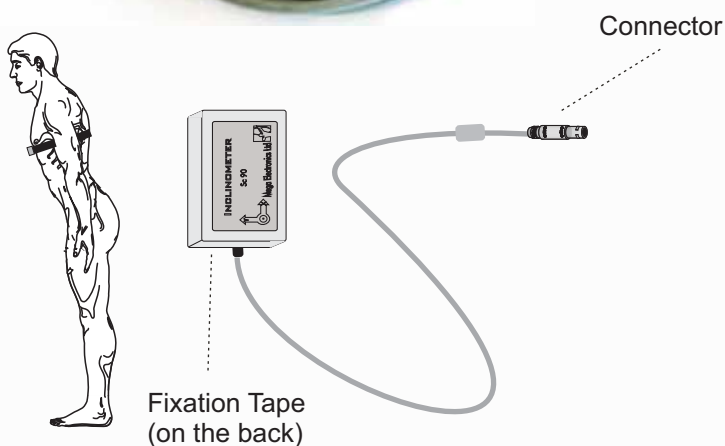


Inclinometers are intended to indicate the inclination angle in measurement where there is no fixed reference point.

Inclinometer for ME6000 system can be used for measuring within range of  $\pm 60^\circ$ . Sensor has two channels which enable measuring the parameters on both X-axis and Y-axis

### Sensor specifications:

Senaor: 2-axis  
Range:  $\pm 60^\circ$   
Cable length 1,30 m  
Weight: 45 g  
Dimensions: 31 x 18 x 45 mm



## Y-cable



Y-cables are used to channels to separate connections. Typically Y-cables are used with 16 channel systems to split one 4 channel connection to 2 x 2 channel connections.

There is also available 2 channel version to split connection to 2 x 1 channel.

### Specifications:

4 channel version  
- splits connection to 2 x 2 channels  
- used only with 16 channel systems

2 channel version  
- splits connection to 2 x 1 channel  
- used with 4 and 8 channel systems to connect

## Accelerometers

Accelerometers are designed for measuring acceleration changes in free movement.

Accelerometers for ME6000 system can be used for measuring up to 10 G. Sensors for two and three axes are available.



### Sensor specifications:

#### 2-axis

Sensor: 2-axis  
Range: 10 G  
Cable length 1,30 m  
Weight: 45 g  
Dimensions: 31 x 18 x 45 mm

#### 3-axis

Sensor: 3-axis  
Range: 10G  
Cable length 1,30 m  
Weight: 45 g  
Dimensions: 31 x 18 x 45 mm



Fixation Tape  
(on the back)

Connector

Also available are 2,7 G models for light activity and 50 G models for extreme activity.



## Gonio- and Torsiometers



For angle measurements Mega offers goniometers and torsionometers. Sensors are connected to ME6000 with a goniometer cable. For different joints are needed different kind of sensors and Mega can provide large range of different goniometers and torsionometers.

### Goniometers:

Two axis goniometers simultaneously measure angles in up to two planes of movement.

Typical measurements for goniometers are:

- abduction / adduction
- flexion / extension
- radial / ulnar deviation
- flexion / extension/lateral flexion

### Goniometer specifications:

Model	Typical joint:
F35	Finger (only single axis model)
SG65	Wrist
SG110	Ankle, Elbow, Neck
SG150	Knee, Hip
SG150B	Back

### Torsionometers

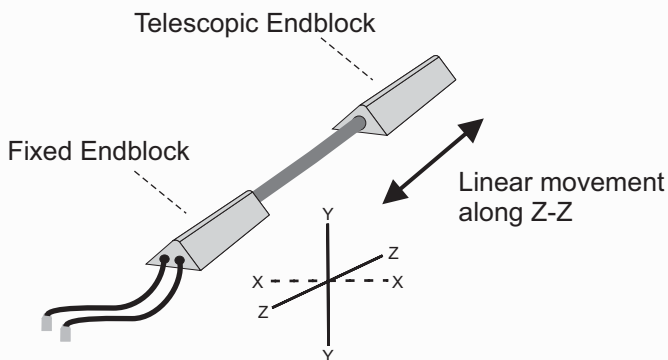
Single axis torsionometers are designed for measurement of rotations in one plane, e.g. forearm pronation/supination or neck axial rotation. If the torsionometer is bent in planes X-X or Y-Y the output remains constant. All torsionometers function in the same way, the difference being physical size

Typical measurements for torsionometers are:

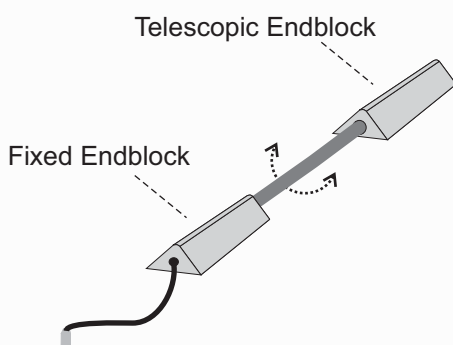
- axial rotation
- pronation/supination

### Torsionometer specifications:

Model	Typical joint:
Q110	Neck
Q150	Forearm

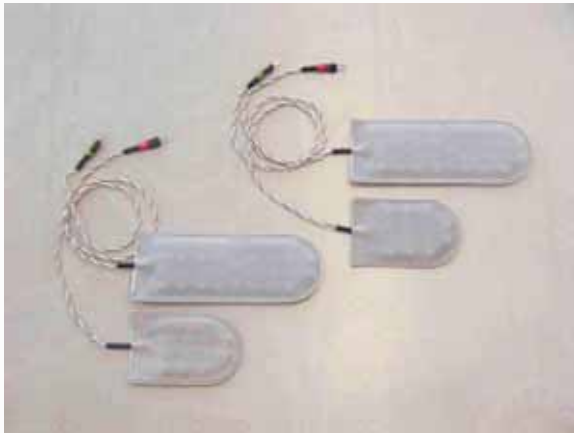


Goniometers



Torsionometers

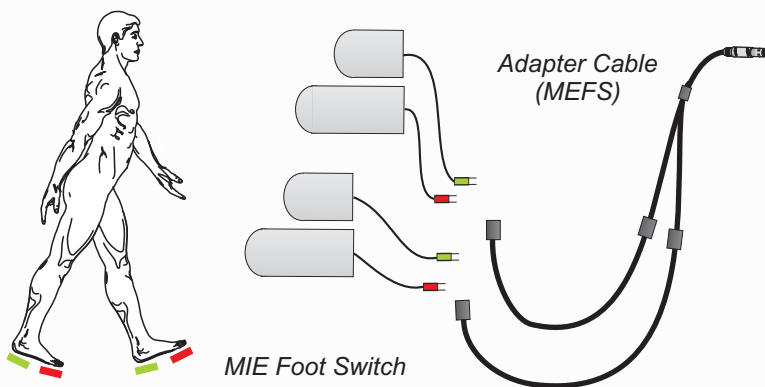
## Foot Switch set



The Foot Switch Set is designed to detect gait events in ambulatory subjects. The Foot Switch pads are to be placed underneath the feet, while maintaining a reliable connection to the Measurement Unit safely, away from any weight-bearing part of the limb.

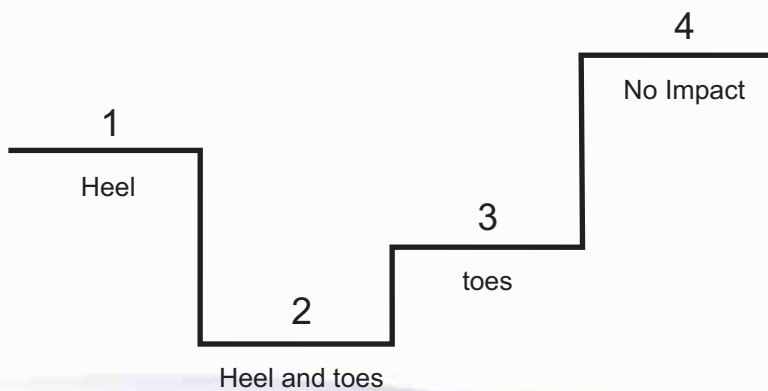
The Foot Switch Set is compounded of four pads - two for each foot. The short pads are to be placed underneath the heels (as shown in green in picture on left); and the long pads are to be placed underneath the toes (as shown in red in picture on left).

The Set operates on two channels (one for each foot), and has four impact positions for each foot: heel, heel and toe, toe and no impact.



### Sensor specifications:

Sensor: 2 channels, 4 sensors  
Range: on / off  
Cable length 1,30 m  
Weight: 88 g



## Load cell, Force and Pressure sensors



Load Cell, Force and pressure sensors are used for multiple measurements and Mega can provide several types of sensors.

Typical sensors are tailored depending on customers needs.

For more detailed information, please contact BIOMATION:

[sales@biomation.com](mailto:sales@biomation.com)  
1-888-667-2324  
613-256-5872

## Gyro sensor



Gyro sensor is one axis sensor for rotation monitoring.

### Sensor specifications:

Sensor: 1 axis  
Range: 150°/s  
Cable length 1,35 m  
Weight: 28 g  
Dimensions: 50 x 17 mm (sensor housing)

## Heart rate sensor

Heart rate sensor for ME6000 is Polar compatible sensor. Sensor kit includes receiver for ME6000 and Polar-transmitter belt.

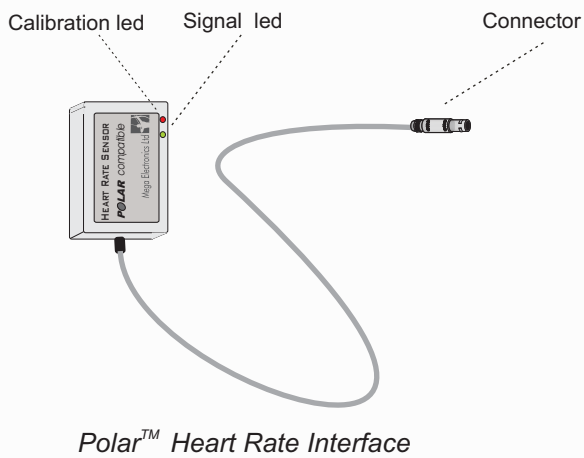
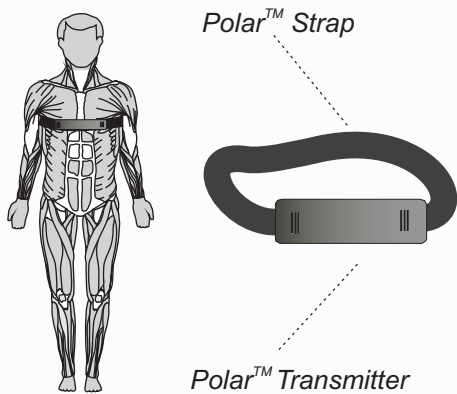
### Sensor specifications:

Receiver:

Sensor: 1 channel  
Cable length 1,30 m  
Weight: 45 g  
Dimensions: 31 x 18 x 45 mm

Transmitter:

Sensor: Polar HR transmitter





## Tidal volume sensor



Tidal volume sensor is always taylor made sensor to meet customers needs for respiration measurements.

For more detailed information, please contact BIOMATION ([sales@biomation.com](mailto:sales@biomation.com))

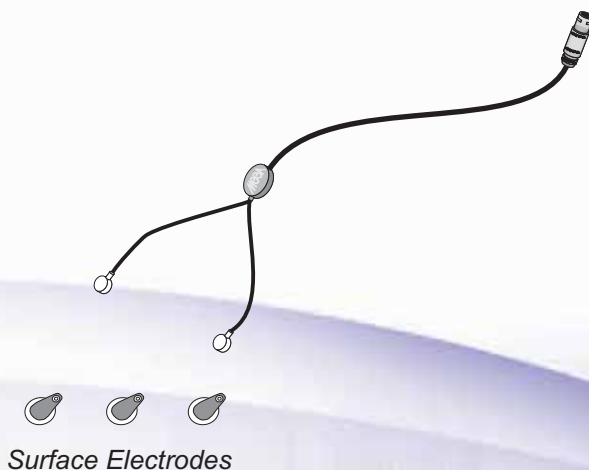
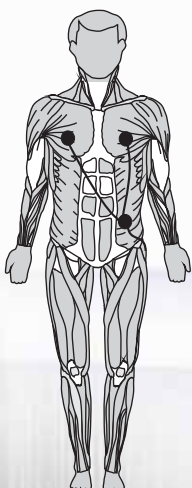
## ECG sensor



ECG Sensor for ME6000 is designed for measuring the heart ECG signal. The Sensor operates on one channel and is to be used with standard surface electrodes.

### Sensor specifications:

Sensor:	1 channel
Filtering band:	0,8 - 30 Hz
Cable length	1,54 m
Weight:	50 g
Dimensions for preamplifier:	27 mm (diameter) 6 mm (thickness)



Surface Electrodes

## Markers and Triggers

Marker and Trigger cables are used for event markers or for synchronization of different systems.

Here are some of the basic models. Mega also offers tailor made solutions to our customers.

Please contact [BIOMATION \(sales@biomation.com\)](mailto:sales@biomation.com)

### Specifications:

External marker button

Cable length 1,35 m

Weight: 38 g

Dimensions: 43 x 10 x 55 mm (marker enclosure)

Wireless RF Marker / Trigger

Frequency: 433 MHz

Range: 50 meters

Cable length: 0,30 m (from receiver to ME6000)

Weight: 74 g with batteries

Dimensions: 55 x 23 x 105 mm

Trigger cable:

Cable length: 3 m

Connector: BNC



*External marker button*



*Wireless RF Trigger / Marker*



*Trigger cable*

## Waterproof kit for ME6000



Waterproof kit is designed to protect ME6000 with pool measurements. Underwater measurement are used for example with rehabilitation of limbs or in sport research.

### Specifications:

Sensors: 4, 8 or 16 channels  
Cable length 1,54 m  
Max depth: 1 m (for bag)  
Weight: 460 g (4ch version)  
600 g (8ch version)  
900 g (16ch version)  
Dimensions: 150 x 40 x 330 mm

NOTE: Waterproof kits are always manufactured to customers needs separately.

For more detailed information, please contact [BIOMATION \(sales@biomation.com\)](mailto:sales@biomation.com)



## Stationary accessories

### Analog output adapters



Analog output adapters offers possibility to export signals from ME6000 system to other systems with patient isolation. Adapter makes possible to measure all data to ME6000 and at the same time export data e.g to motion analysis system like MAC, Simi, Coda, Vicon, etc.

Analog output adapter is connected to analog signal inputs of external systems.

#### Specifications:

Models: 4, 8 or 16 channels  
Cable length: 10 m (from ME6000 to analog output adapter)  
External 120 - 240 VAC power supply

### Isolation unit



ME4ISO isolation unit is used when you need to connect special sensors to ME6000. Force plates, isokinetic systems and other measurement sensors with analog signal output can be connected safely to ME6000 with Isolation unit.

ME4ISO offer four adjustable, isolated inputs for analog signals. Connection to ME6000 is made with one cable.

#### Specifications:

Inputs: 4 x BNC  
Range:  $\pm 2V$ ,  $\pm 5V$  and  $\pm 10V$   
Cable length: 3,0 m (from ME4ISO to ME6000)  
Weight: 1920 g (unit)  
Dimensions: 235x110x290 mm  
External 120 - 240 VAC power supply

### Distributor information

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