

1 Galvanic Skin Response Sensor Info sheet

One of the auxiliary inputs can be applied to measure the Galvanic Skin Response using a dedicated sensor.

Connector pinning is as shown in figure 1.

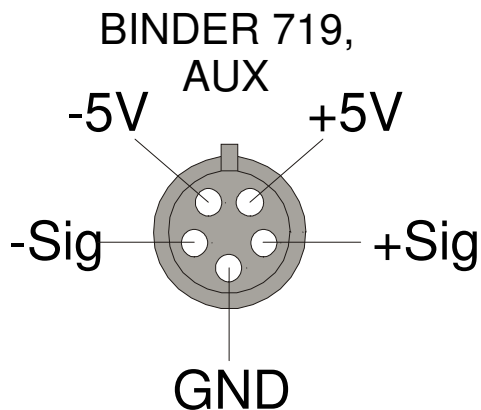


Figure 1: *Pinning of AUX connector.*

The skin resistance is measured by sending a small electrical current through the patient and measuring the voltage across the patient. This current must have a maximum of 10uA. We will be using the +5V and the GND for measuring so a minimum resistance value of 5Mohm is needed to limit the current.

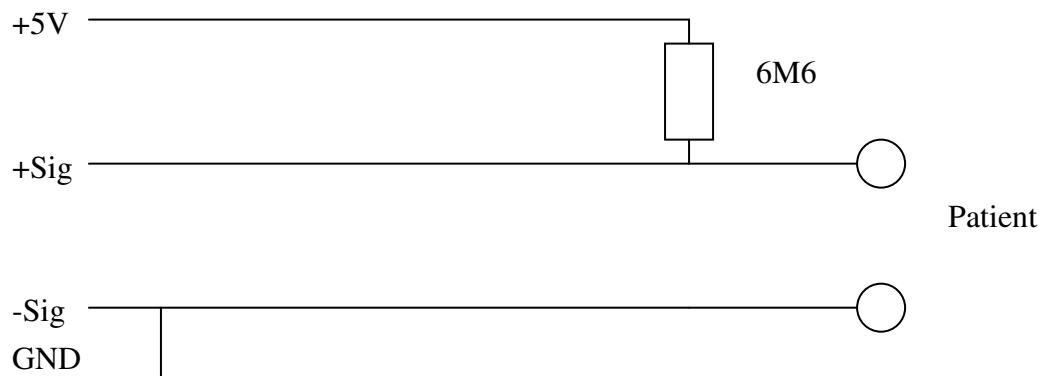


Figure 2: *Schematic sensor layout.*

Based on this design the measured voltage will determine the skin resistance. The formula for this is:

$$\text{Skin resistance} = R = \frac{(+Sig)}{5 - (+Sig)} 6M6$$

Usually, GSR is expressed as conductance in Siemens:

$$GSR = \frac{1}{R}$$