Qubit GSR Sensor
(Order Code Q-S222)

The Q-S222 Qubit GSR (Galvanic Skin Response) Sensor measures the psycho-galvanic reflex. This reflex generates a change in skin conductivity during periods of stress, excitement, or shock.

> **Note:** This product is designed for educational use and research in an academic setting only. This product is not designed nor recommended for medical use in a clinical setting. It should not be used for clinical monitoring, life support, patient diagnosis, or clinical testing of any kind.

What's Included
- Qubit GSR Sensor
- Power supply
- One package of 100 disposable electrodes

Note: The full user manual can be found on the included thumb drive and at **www.vernier.com/files/manuals/q-s222.qubit-manual.pdf**

Compatible Software and Interfaces
See **www.vernier.com/manuals/q-s222** for a list of interfaces and software compatible with the Qubit GSR Sensor.

Using the Product
This sensor will not be automatically identified by Logger *Pro* or LabQuest 2 App. Use the following instructions for best results.

Electrode Placement
1. Make sure the subject's hands are clean and dry. If necessary, have them wash their hands with soap and water. Do not use alcohol wipes or alcohol-based cleansers, as this will dry the skin and alter skin conductance.
2. Press the electrode tabs on the index and middle fingers as shown in Figure 1.
3. Connect the sensor clips to the electrode tabs as shown in Figure 1. The color of the leads is not important. Have the subject sit in a relaxed position in a chair with their forearms resting on their legs or on the arms of the chair.
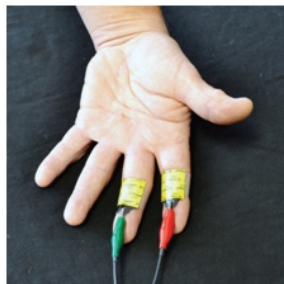

Figure 1

Collecting Data with a Computer
1. Connect the power supply to the sensor.
2. Connect the sensor to the Vernier data-collection interface.
   a. Connect the 40 µS cable to CH 1 of the interface.
   b. Connect the 5 µS cable to CH 2.
3. Set up the data-collection program.
   a. Connect the interface to the computer and start Logger *Pro*.
   b. Open the file, "Q-S222 GSR Setup" from the Qubit folder within the Probes & Sensors folder. **Note:** If you cannot locate this file in Logger *Pro*, it can be downloaded at **www.vernier.com/q-s222**
4. Place the electrodes on the subject and attach the sensor leads as described above.
5. Turn the dial on the front of the sensor clockwise until it stops.
6. Have the subject sit and relax for 1–3 minutes.
7. Adjust the dial on the front of the sensor until the reading on GSR(5) meter is between 2–3 µS.

You are now ready to begin data collection.

Collecting Data with LabQuest 2 App
1. Connect the power supply to the sensor.
2. Connect the sensor to LabQuest 2.
   a. Connect the 40 µS cable to CH 1.
   b. Connect the 5 µS cable to CH 2.
3. Choose New from the File menu.
4. Place the electrodes on the subject and attach the sensor leads as described above.
5. Set up LabQuest 2 for data collection.
   a. On the Meter screen, tap Sensors and then select Sensor Setup.
   b. Tap CH 1, scroll down the list of sensors, and tap Qubit.
   c. Select q-S222 GSR (40µS) and tap OK.
   d. Repeat Steps a–b for CH 2.
   e. Select q-S222 GSR (5µS) and tap OK.
   f. Tap OK again to return to the Meter screen.
6. Turn the dial on the front of the sensor clockwise until it stops.
7. Have the subject sit and relax for 1–3 minutes.
8. Adjust the dial on the front of the sensor until the reading on CH 2 is between 2–3 µS.

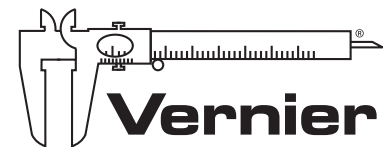You are now ready to begin data collection.

Repair Information
If you are having trouble with your Qubit GSR Sensor, contact Vernier Technical Support at support@vernier.com or call 888-837-6437. Support specialists will work with you to determine if the unit needs to be sent in for repair. At that time, a Return Merchandise Authorization (RMA) number will be issued and instructions will be communicated on how to return the unit for repair.

Accessories/Replacements

Item	Order Code
EKG Electrodes	ELEC

Warranty

Vernier warrants this product to be free from defects in materials and workmanship for a period of five years from the date of shipment to the customer. This warranty does not cover damage to the product caused by abuse or improper use. This warranty covers educational institutions only. Consumable items, such as electrodes, are excluded from the warranty.

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