

# GS200

## DC Voltage/Current Source

# Precision starts at the source

The GS200 is a DC voltage and current source that offers high accuracy, high resolution and high stability with an extremely low noise floor. It enables engineers to develop the next generation of electronic components with the highest precision and confidence.



- Voltage source up to  $\pm 32$  V and current source up to  $\pm 200$  mA
- Output resolution : 5 1/2-digit,  $\pm 120000$ -count
- Programmable output: up to 10000 points
- Channel expansion through synchronous operation
- Voltage and current monitoring feature (optional)

The GS200's outstanding performance delivers extremely low noise DC signals used in a wide range of design processes:

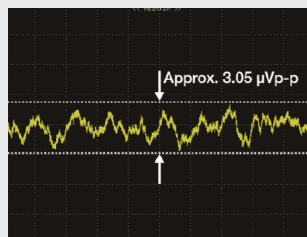
- Quantum computing
- Sensor development
- Rechargeable battery control devices
- Power semiconductor devices
- Small motors
- IoT and vehicle equipment
- Smart appliances
- Wearable equipment

### High accuracy and high-resolution output

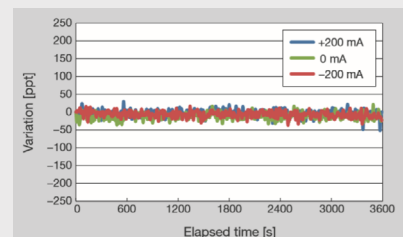
Each DC voltage/current source in the GS200 series uses two DACs to generate highly accurate voltage and current at a high resolution. It is highly stable whether it is used for a short or long period of time and features superb linearity over all the ranges. The GS200 features 5 1/2-digit,  $\pm 120000$ -count output resolution for both voltage and current sources.

### Extremely low noise

The GS200 is widely used in various state-of-the-art academic research and next-generation equipment development because it provides a very low noise and reliable power supply. At the 100 mV and 10 mV source ranges, the GS200 uses its highly accurate voltage divider to achieve extremely low noise levels, in the order of  $\mu\text{V}$ . The minimum output resolution of 100 nV and low noise output enable engineers to make extremely small changes to the signal level.



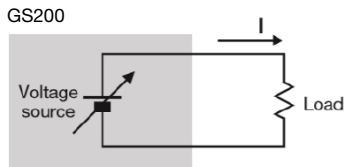
1<sup>st</sup> Example | 0 V output in 10 V output range (Observed using a 1000x amplifier and 10 kHz BW filter)



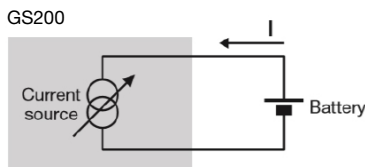
2<sup>nd</sup> Example | 1-hour stability in output 200 mA range

## Source and Sink Operations

The GS200 can perform four-quadrant operation by operating as a current source or a current sink in the range of  $\pm 30$  V and  $\pm 200$  mA. When the GS200 is sinking current, it can operate over the exact same range as when it is operating as a current source. This way you can use the GS200 not just as a highly accurate voltage source but also as a highly accurate constant-current electronic load.



Source operation (highly accurate power supply)



Sink operation (highly accurate load)

## Voltage and Current Monitoring (option)

The GS200 can function as a current monitor when it is generating voltage and as a voltage monitor when it is generating current. The measured values can be stored along with the source values in the internal memory. This monitoring feature can be used for example to check that current is flowing, measure current consumption, log fluctuations in the load current and to record I-V characteristics.

## Easy to use

The GS200 has soft key menus for easy operation. Changing the source value is straightforward, and an increment/decrement in resolution can set freely. Use any of the individual digits up/down keys to change a value. This feature is invaluable during threshold level detection of the DUT and during measurements of I-V characteristics. In addition, the GS200's high-resolution screen enables a large amount of information to be displayed. The GS200 also offers freely adjustable font sizes for improved readability and productivity.

## Easy Programming

When connected to a PC via USB the GS200 internal memory will be recognised as an external storage medium. This way it is possible to define up to 10000 steps of output values and set the output interval timing. Simply drag this programmable output data from the PC to the GS200 internal memory. This feature also enables engineers to use the GS200 as a basic I-V curve tracer or data logger.

## Channel Expansion through Synchronous Operation

By using multiple GS200s in synchronous operation, you can expand the number of channels that are available. By collecting and merging these files, you can view a list of the relationships between the voltages and currents of multiple channels.

## Why choose the GS200?

**Performance** – The GS200's outstanding performance delivers extremely low noise DC signals used in a wide range of design processes.

**Versatility** – The GS200 can act not only as a source but also as a constant - load. Its monitoring feature delivers data logging capability.

**Usability** – Individual up/down digit keys enable dynamic and fast change of output. The high-resolution display provides a comprehensive view.

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