

Measuring the voltage, current, and temperature using GL7000

Electric drive vehicle (EV) is being developed as a vehicle that does not affect the environment. Research on the motor and its drive system is being executed for more higher efficiency. The drive voltage and current, and other parameters are measured to check its performance.

Model & its Configuration

GL7000 + GL7-M + GL7-HSV + GL7-HV + GL7-DISP

Outline of Measuring items & its Sensors

| | |
|-------------|--------------|
| Temperature | Thermocouple |
| Currents | Clamp sensor |
| Voltage | N/A |

Outline of the Measuring Conditions

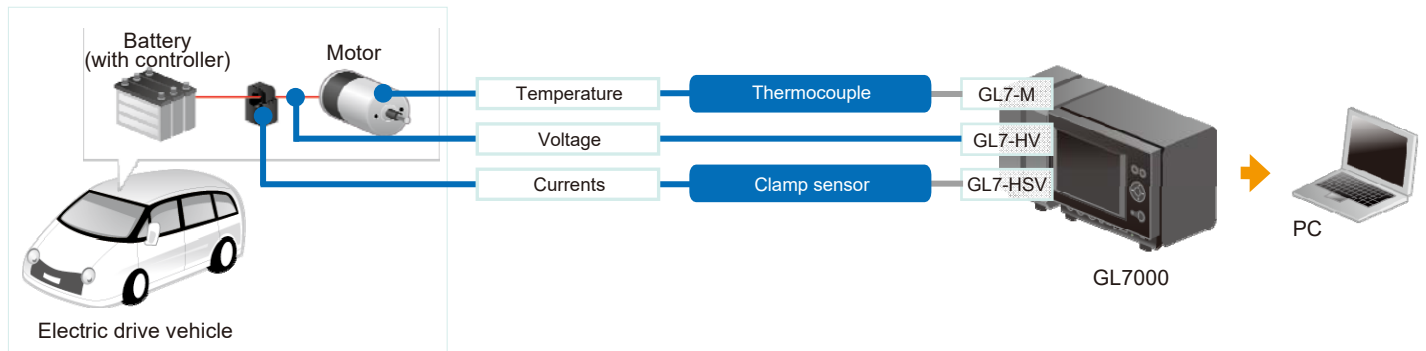
Sampling: 1 MS/s - 1 kS/s (1 μ s - 1 ms)

Channel: 6 channels

Measure time: 1 - 30 minutes

Advantages in using Graphtec Product

1. Long-term measurement in a high-speed sampling
2. Easy operation by touch panel
3. Wide range of input voltage; up to 1000V in GL7-HV



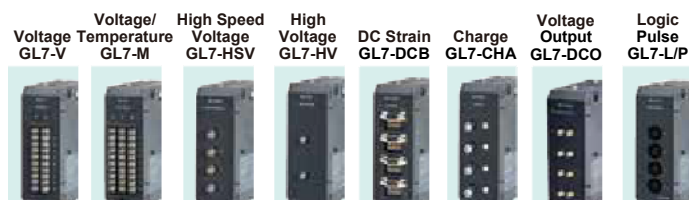
Modular Type Data Acquisition Unit DATA PLATFORM GL7000



- High Speed
- Multi-channels
- High Voltage
- Large Memory Capacity

* Display and modules are optional.

- Input modules can be expanded to accommodate wide variety of measurements (expand up to 10 modules)
- Attaching the high-definition display module with a touch panel capability allows both stand-alone operation and a system-embedded solution
- 2 interfaces to connect the GL7000 to PC (USB and Ethernet)
- 4 destinations to save the captured data (Built-in RAM, Built-in Flash memory, SD memory card, and SSD module)
- Software for high performance and easy operation (GL-Connection)



Module GL7-M



- Voltage/Temp.** 10ch/unit
- Max. 100S/s** (10ms)
- Sigma-Delta type A/D** Isolated
- Measurement of temperature and working voltage levels of test objects in an environmental testing are typical applications.

- 100 Samples/s (10 ms) High speed scan method
- 10 channels / unit
- Variety of input types (Voltage, Thermocouple, RTD)

Module GL7-HSV



- High speed** 4ch/unit
- Max. 1MS/s** (1 μ s)
- Simultaneous sampling** Isolated
- Measurement of parameters in the inverter system, vibration testing, impact test, drop test are typical applications.

- 1 M Samples/s (1 μ s) high speed simultaneous sampling
- 4 channels / unit
- Maximum input voltage 100 V

Module GL7-HV



- Voltage** 2ch/unit
- Max. 1MS/s** (1 μ s)
- Max. input voltage 1000V** Isolated
- High voltage measurement in power line sources, electric vehicle batteries are typical applications.

- High withstand voltage (Maximum input voltage: 1000 V)
- Maximum sampling speed 1 M Samples/s (1 μ s)
- Real-time RMS measurement