Dynamic Strain Measuring Instruments

Dynamic strain measuring instrument is applied for quickly changing phenomena, and thus different from static strain measurement, the measured results are not to be read on an indicator. Usually, therefore, a strain amplifier or a signal conditioner is used to amplify strain output, an A/D converter and a PC are used to record and analyze the data.

Dynamic strain measurement requires response, stability, SN ratio and high resistance against external noise. Kyowa's dynamic strain measuring instruments satisfy these requirements with advanced technologies including high performance ICs, high density circuits, CST (Capacitance self-tracking).

In addition, recent measurement has become complicated and diversified, dynamic strain measuring instruments has been requiring versatile functions. The multi signal conditioner MCF-A series meets these requirements, therefore this supports conditioner card usage with not only strain gages and Strain-gage transducers (Load cells, pressure transducers, displacement transducers, acceleration transducers, and torque transducers), but also thermocouples, and by combining cards with dedicated unit bases that match the measuring targets, it is possible to provide a range of types of measurement.

Depending on the bridge excitation, dynamic strain measuring instruments are classified into two types: AC and DC. Kyowa names the AC type a strain amplifier and the DC type a signal conditioner. AC type strain amplifiers are suitable for measuring small strain from strain gages, and DC type signal conditioners are for measuring large strain from transducers. DC type signal conditioners are further classified into constant-voltage and constant-current systems. The constant-current system is suitable for measurement with extension cables.

Dynamic Strain Amplifiers

Signal Conditioners

■ Dynamic Strain Amplifiers

■ Signal Conditioners
### Dynamic Strain Measuring Instruments

**Multi Signal Conditioner**

- **Strain Gages**
- **Bridge Box**
- **Strain-gage Transducers**
- **Temperature (Thermocouples)**

**Dynamic Strain Measuring Instruments**

- **Data Recorder**
- **A/D Converter**
- **PC**

**Multi Signal Conditioner**

- **MCF-8A/16A**
- **DPM-91A/92A**
- **CDV-90A**
- **CTA-90A**

**Signal Conditioner Card**

- **Strain Measuring Card**
- **Thermocouple Card**