RMH-310A

Digital Strain Recorder

●Collected saving date by USB memory

Suitable for long-term measurement in the absence of personnel under the environment without external power supply

- ●Display is provided to enable confirmation of setting conditions and measured values.
- ●Data can easily be collected in USB memory.
- ●No control software required. Keys are provided for operation as an independent unit.
- ●Measurement with thermocouples possible (K, T)

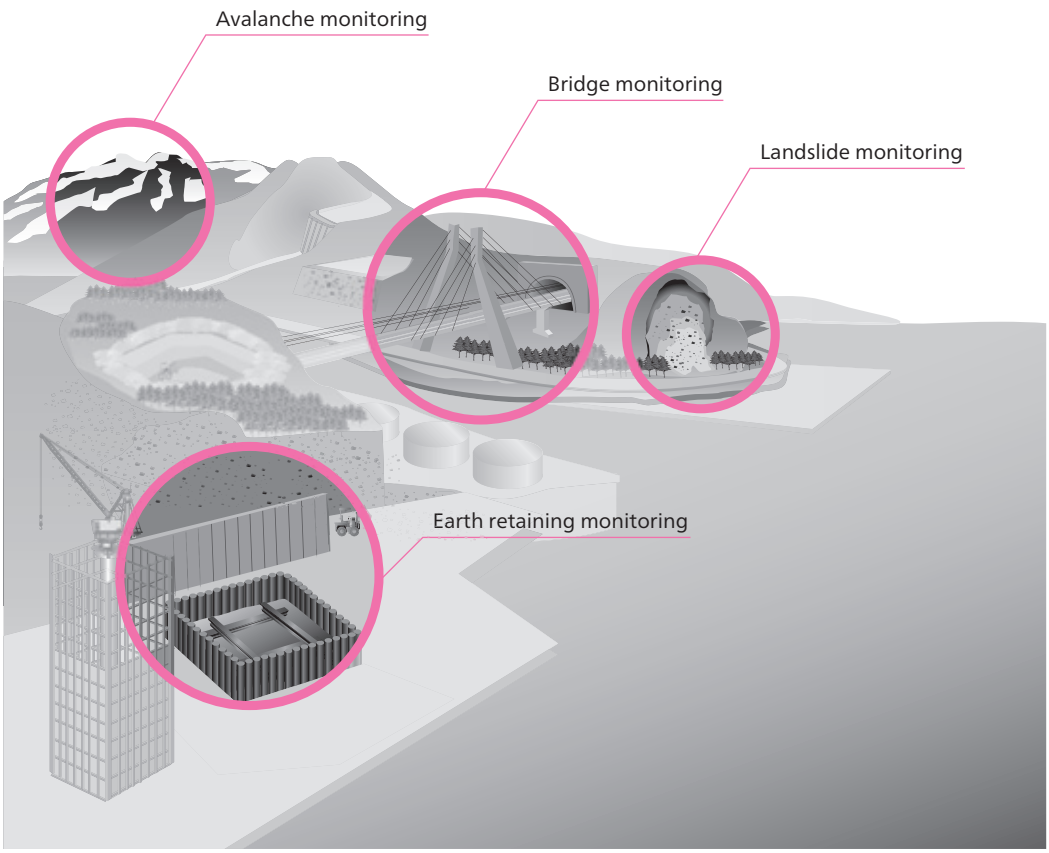
RMH-310A is a battery-operated digital strain recorder featuring low power consumption. Thus, it is suitable for unattended long-term measurement in remote places, mountainous regions and heavy snowfall districts where no power supply is available. This 10-channel recorder can connect to strain-gage civil engineering transducers, civil engineering transducers with temperature measuring function and thermocouples. The operating panel and display enable the user to set measuring conditions and perform measurement-related operation. On-site data collection can be performed with just bring a USB into the spot.

Specifications

Channels	10
Applicable Transducers	Strain-gage civil engineering transducers
	Civil engineering transducer with a thermal sensor
	strain-gage transducers
	Thermocouples (Types K and T)
Applicable Bridge Resistance	350 Ω (Full bridge system)
Cable Length	0.5 mm² 4-conductor shielded cable max 2.0 km
Gage Factor	2.00 fixed
Bridge Current	Approx. DC 2.19 mA (Constant current)
Measuring Range	Strain: ±20000 μm/m
	Temperature (Civil engineering transducer with a thermal sensor) -30.0 to 70.0°C
	Temperature (Thermocouple) K: -200 to 1200 °C
	T: -200 to 350°C
Resolution	Strain measurement: 1 μm/m
	Temperature (Civil engineering transducer with a thermal sensor) 0.1°C
	Temperature (Thermocouple) 0.1°C
Accuracy	Strain measurement ±0.1% FS
	Temperature (Civil engineering transducer with a thermal sensor) ±0.5°C
	Temperature (Thermocouple) (Reference value)
	±(0.1% of reading + 1.0)°C
	Internal point-of-contact compensator ±2.0°C
	(At the time of an input terminal temperature balance)
	Note: The accuracy of an internal reference point-of-contact compensator and accuracy of a thermocouple are not included in measurement accuracy.
Temperature Stability	Strain measurement Zero point Within ±1 μm/m per °C
	Sensitivity Within ±0.02%/°C
	Temperature (Civil engineering transducer with a thermal sensor)
	Zero point Within ±0.025%FS/°C
	Sensitivity Within ±0.04%/°C
	Temperature (Thermocouple)
	Zero point Within ±0.025%FS/°C
	Sensitivity Within ±0.04%/°C
Measuring Time	Within 40 s/10 channels
Temperature Measurement Current	0.24 mA DC (Constant current)
Data Storage	32000 times/channel
Clock	Year (2 digits of the Gregorian calendar), month, date, hour, and minute
Measuring Interval	1 to 59 minutes, 1 minute per step
	1 to 99 hours, 1 hour per step
Check Functions	Sensor check (Parallel resistance method and during strain measurement)
	Battery voltage
	Memory check
Display	LCD (16 digits×4 lines With no back light)
Display Functions	The contents of the data below are displayed on LCD.
	Measurement state, current time, data acquisition real-time monitor, measurement start, measurement stop, condition setting, self-check, date setting, backup data collection, and version display
Operation	Up/Down/Left/Right key, ON/OFF, SET, and ESC
Interface	USB 2.0 (Only saved in USB memory)
Power Supply	6 to 15 VDC, optional battery pack (RB-10A)
Current Consumption	100 mA or less (Operation),
	100 μA or less (Standby), (At 6 VDC)
Input Specifications	M3 bolt suitable to crimp
Number of Measurement Times	
	7000 times or more (When measuring at intervals of 10 minutes at 23ºC using the optional RB-10A battery pack [10 Ah])
Operating Temperature	
	–20 to 50ºC (Varies depending on the operating temperature when using USB memory)
Operating Humidity	10 to 95% RH
Operating Environment	Dust or the inductive noise of a bulk motor must not be present.
Dimensions	170 W X 230 H X 60 D mm (Excluding protrusions)
Weight	2 kg or less (Excluding the battery)
Others	Lightning surge protector provided (SD4-75)

Standard Accessories
Battery cable for battery pack other than RB-10A
USB memory for collection data
(Industrial temperature range extended model)
Auxiliary tool (Data conversion & measuring conditions software)
Instruction manual (Saved in the provided USB memory)
Menu sheet

Optional Accessories
Battery pack RB-5A (5Ah)
RB-10A (10Ah)



- Suitable for various fields measurement due to battery power supply.
- Using keys on mainframe both set measuring conditions and confirm measured data on LCD.
- Data can easily be collected in USB memory.
- Measurement with thermocouples possible (K, T)

Dimensions