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# Pocket Data Logger for Strain Measurement MMA-014



#### Small and light-weight instrument for simple and accurate strain measurement

The MM-014 is a small and light-weight instrument that enables strain measurement by easy operation. Our unique measurement method is employed for highly accurate and stable measurement.

Owing to the adoption of reflective color LCD, excellent visibility and long-time operation with low power consumption are realized. Stable

#### Features

- Owing to our unique measurement method, power line noise is eliminated and stable measurement is realized
- Reflective color LCD that is clearly visible even outdoors under a bright sky (display in Japanese or English switchable)
- Long-time operation by battery (continuous operation for 8 hours)
- Automatic measurement function provided (measurement of 2800 times possible at intervals of 1 hour using sleep function)
- Batch setting of coefficient, unit, decimal point and sensor type using "Sensor ID"
- Accepts TEDS (Transducer Electronic Data Sheet) sensor
- Data are securely held by recording them into the built-in data memory
- Easy data acquisition using SD card

automatic measurement is possible for a long time by the built-in sleep function with high accuracy and low power consumption. Intuitive operation is performed using the function keys which are linked with icons in the screen. With the connection of a sensor, its measured value is confirmed in real time. The measured values are stored in a SD card for easy and smooth data acquisition.



Easy and smooth data acquisition using SD card

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#### **External dimensions**





### **Specifications**

Strain measurement				
Number of measuring point	1 point			
Bridge excitation	DC 1V			
Applicable transducer	Strain gauge type transducer (full bridge)			
Applicable gauge resistance	120 ~ 1000 Ω			
Measuring range	±30000×10 <sup>-6</sup> strain			
Resolution	1×10 <sup>-6</sup> strain			
Initial value memory range	±16000×10 <sup>-6</sup> strain			
Input	Terminal block / Connector (EPRC07)			
Function				
Measurement mode	Initial, Direct, Measure			
Program setting	Coefficient	±(0.0001 ~ 99999)		
	Unit	40 kinds including με, mm, N, Pa		
	Decimal point	Display after decimal point 0 ~ 5 digit Possible to set arbitrarily		
	Offset	Possible to write arbitrarily		
Sensor ID	Sensor ID	Function	Reading and setting sensor ID Writing to sensor ID	
	TEDS	Standard	Conforms to IEEE1451.4 Class 2 (Template No. 33)	
		Function	Reading and setting sensor information	
Auto power	Automatically turns off the power if neither key operation nor command through interface is accepted for the specified time (ON/OFF setting of auto power-OFF function possible)			
Interval timer				
Function	Measurement at set intervals			
Measurement interval	1, 2, 5, 10, 15, 20, 30 minute 1, 2, 3, 4, 6, 12, 24 hour (Possible to specify measurement start time)			
Sleep function	Automatically turns OFF the power from scanning end to scanning start			
Clock				
Setting	Year, Month, Day, Hour, Minute, Second			
Display / Operation				
Display	2.7 inch TFT color liquid crystal display			
Resolution	400 × 240 dot			

Point defect	10 dots or less (excluding aging degradation)			
Operation	Function key 1/2/3, UP/DOWN key, ENTRY key, POWER key			
Recording				
Internal memory	Function	Measured data recording Setting file recording/reading		
	Capacity	10000 data at maximum		
	Recording method	Interval timer, ENTRY key (manual)		
SD card	Function	Measured data recording Setting file recording/reading		
	Physical format	FAT16/32		
	Recording format	CSV format		
	Capacity	512 Mbyte (specified by our company)		
Interface				
RS-232C	Conforms to RS-232C (Various settings, measurement, data acquisition)			
Battery				
Built-in battery	Lithium-ion battery			
Battery capacity	1900 mAh			
Continuous operating time	Approx. 8 hours (Condition Temperature: 23°C±5°C Measurement: Monitoring (350Ω bridge))			
Charging time	Approx. 3 hours (at standby status)			
External power supp	ly			
Power supply	Exclusive USB AC adaptor AC 100 ~ 240 V 50/60 Hz			
Connecting terminal	USB Type-C			
Current consumption	1.5A Max. (DC 5V)			
Environment				
Operating environment	0 ~ +50°C 85%RH or less (No condensation)			
Charging environment	0 ~ +40°C 85%RH or less (No condensation)			
Others				
External dimensions	136(W) × 32(H) × 71(D) mm (except projecting parts)			
Weight	Approx. 300 g			
Standard accessories	Operation manua1 copy NDIS conversion cable (CR-8140)1 pc. Terminal block for full bridge1 pc. Exclusive USB AC adaptor (CR-1970)1 pc.			
Option				
SD card (512 MB) External printer (Applica	ble Type: DPU-S24	RS-232C cable (CR-5532) 5) Printer cable (CR-4511)		

Information in this document is subjected to change without notice. Information in this document is as of September, 2019.



ISO9001:2015 Certification Approval Certificate ISO9001 Design and manufacture of strain gauges, strain measuring equipment and transducers

## Tokyo Measuring Instruments Lab.

the 60th anniversary Changing our English designation from Tokyo Sokki Kenkyujo to Tokyo Measuring Instruments Laboratory and by renewing our corporate logo.

#### Tokyo Measuring Instruments Laboratory Co., Ltd.

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