T-ZACCS 3

NEW

Pocket Data Logger
for Strain Measurement

MM-014

Pocket Data Logger
for DC Voltage Measurement

MM-01V

Pocket Data Logger
for Thermocouple Temperature
Measurement

MM-01T

Tokyo Measuring Instruments Lab.

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

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

Features

MM-014 **MM-01V** **MM-01T**

- 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)
- Data are securely held by recording them into the built-in data memory
- Measured data are recorded into internal memory for up to 10000 times

MM-014

- Owing to our unique measurement method, power line noise is eliminated and stable measurement is realized
- Batch setting of coefficient, unit, decimal point and sensor type using “Sensor ID”
- Accepts TEDS (Transducer Electronic Data Sheet) sensor
- GL input function is employed for easy water level measurement

Easy operation and small size held in both hands

Easy and smooth data acquisition using SD card

External Dimensions

Dimensions (common to all models / excluding protrusions)

Terminal block

MM-014

MM-01V

MM-01T

Specifications

MM-014

Strain measurement			
Number of measuring point	1 point		
Bridge excitation	DC1V		
Applicable transducer	Strain gauge type transducer (full bridge)		
Applicable gauge resistance	120～1,000Ω		
Measuring range	±30,000×10^{-6} strain		
Resolution	1×10^{-6} strain		
Initial value memory range	±16,000×10^{-6} strain		
accuracy	±(0.05% r d g+2digit)		
Temperature coefficient of accuracy	±0.002% r d g/℃		
Secular change of accuracy	±0.05% r d g/year		
Input	Terminal block / Connector (EPRC07)		
Function			
Measurement mode	Initial, Direct, Measure		
Program setting	Coefficient	±(0.00001～999999)	
	Unit	41 kinds including με,℃, kgf, mm, ibs, N, Pa	
	Decimal point	Display after decimal point 0-5 digit Possible to set arbitrarily	
	Offset	Possible to write arbitrarily	
Simple measure	Coefficient	+1.00000	
	Unit	με	
	decimal point	decimal point 0 digit	
GL input function	function of water level measurement (GL:Ground Line - Offset of water surface depth)		
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)		
Others			
Standard accessories	Operation manual----------1 copy NDIS conversion cable (CR-8140) ----------1 pc. Terminal block for full bridge ----------1 pc. Exclusive USB AC adaptor (CR-1970) ----------1 pc.		

MM-01V

DC voltage measurement		
Number of measuring point	1 point	
Measuring range	±30.000V	
Resolution	0.001V	
Initial value memory range	±16.000V	
accuracy	±(0.08% r d g+3digit)	
Temperature coefficient of accuracy	±0.002% r d g/℃	
Secular change of accuracy	±0.05% r d g/year	
Input	Terminal block	
Function		
Measurement mode	Initial, Direct, Measure	
Program setting	Coefficient	±(0.00001～999999)
	Unit	40 kinds including με,℃, kgf, mm
	Decimal point	Display after decimal point 0-5 digit Possible to set arbitrarily
	Offset	Possible to write arbitrarily
Simple measure	Coefficient	+0.001
	Unit	V
	decimal point	decimal point 3 digit
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)	
Others		
Standard accessories	Operation manual----------1 copy Exclusive USB AC adaptor (CR-1970) ----------1 pc.	

MM-01T

Thermocouple temperature measurement (JIS C1602 - 1995)			
Number of measuring point	1 point		
Applicable thermocouple	T,K,J		
Measuring range	T : -130～+400℃ K : -140～+1,370℃ J : -180～+1,200℃		
Accuracy at (23℃±5℃) (External RJC)		Measuring range	Accuracy
	T	-130～+400℃	±(0.11% r d g+0.2℃)
	K	-140～+1,370℃	±(0.11% r d g+0.2℃)
	J	-180～+1,200℃	±(0.13% r d g+0.2℃)
Accuracy at (23℃±5℃) (Internal RJC)		Measuring range	Accuracy
	T	-130～+400℃	±(0.11% r d g+0.9℃)
	K	-140～+1,370℃	±(0.11% r d g+0.9℃)
	J	-180～+1,200℃	±(0.13% r d g+1.1℃)
Resolution	0.1℃		
Temperature coefficient of accuracy	±0.002% r d g/℃		
Secular change of accuracy	±0.05% r d g/year		
Input	Terminal block		

Function	
Sensor mode	T,K,J
Reference junction compensation	Internal RJC, External RJC
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)
Others	
Standard accessories	Operation manual----------1 copy Exclusive USB AC adaptor (CR-1970) ----------1 pc.

MM-014 **MM-01V** **MM-01T**

Interval timer		
Function	Measurement at set intervals	
Time interval	1, 2, 5, 10, 15, 20, 30 minutes, 1, 2, 3, 4, 6, 12, 24 hours (The starting time of measurement can be specified)	
Sleep function	Automatically turns power on and off from the end of scanning to the start of scanning	
Clock		
Setup	Year, month, day, hour, minute, second	
Accuracy	Daily rate ±1 second (23±5℃)	
Display/operation		
Display	2.7 inch TFT color liquid crystal display	
Resolution	400×240 dot	
Point defect	10 dot or less (excluding aging deterioration)	
Operation	Function key 1/2/3, UP/DOWN key, ENTRY key, POWER key	
Record		
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	1900mAh	
Continuous operating time	Approx. 8 hours Condition Temperature: 23°C±5°C Measurement: Monitoring MM-014 (350Ω bridge), MM-01V (+10V input)	
Charging time	Approx. 3 hours (at standby status)	
External power supply		
Power supply	Exclusive USB AC adaptor (Type C) AC 100 ~ 240 V 50/60 Hz	
Connection terminal	USB Type-C	
Consumption current	1.5A MAX@DC5V	
Environment		
Operating environment	-10～+50℃ 85%RH or less (no condensation)	
Charging environment	0～+40℃ 85%RHRH or less (no condensation)	
Others		
External dimensions	136 (W) ×32 (H) ×71 (D) mm (excluding protrusions)	
Weight	Approx. 300g	
Option		
SD card (512 MB) RS-232C cable (CR-5532) External printer (Applicable Type: DPU-S245) Printer cable (CR-4511) Cable for remote sensing for MM (CR-8141) *Cable for connecting the MM-014 to a remotely sensed transducer		

The contents of this catalog are subject to change without prior notice.
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Approval Certificate **ISO9001**
Design and manufacture of strain gauges, strain measuring equipment and transducers

Tokyo Measuring Instruments Lab.

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