Handy Data Logger
SME-100A/101A

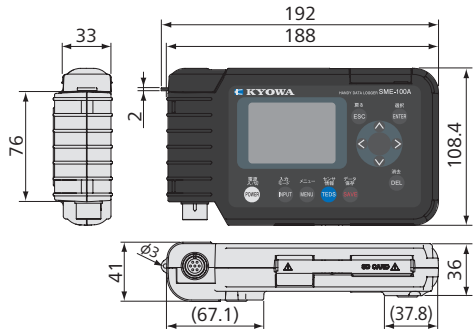
TEDS

Compact & lightweight
Palm size, therefore easily to carry

- Built-in bridge circuit for direct connection of a strain gage
- Wide measuring range: ±300 k μm/m
- Data saved in SD card is read and controlled by a PC
- Driven by AA batteries (Easy to get)
- TEDS compatible (Not only reading, but also writing possible)

Combination with NTB series, total 33 channels measurement is possible.
The strap is useful for field inspection and for confirming proper sensor installation.
The SD card (Option) simplifies data transmission to PC.
Using the attached input cable, a strain gage is easily connected.

Dimensions



Specifications

Channels	1 (In independent use of the logger)
	Max. 33 channels with NTBs connected
Sampling Frequencies	(In independent use, or NTB-dependent when connected to NTBs)
	Approx. 0.5 s: 0 to ± 30 k µm/m
	Approx. 1 s: ± 30 k µm/m or more
	Temperature measurement with civil engineering transducers with a thermal sensor
Measuring Modes	RELATIVE mode
	(The zero value is subtracted from measurements)
	∗"Zero" denotes the initial unbalance during strain measurement, and is acquired at any time.
Arithmetic Operations	Calculation using a coefficient
Measuring Targets	Strain gages, strain-gage transducers, civil engineering transducers with a thermal sensor

Bridge system	Applicable gage resistance
Quarter bridge	120, 240, 350 Ω
Half/full bridge	120 to 1000 Ω

Bridge Excitation	Constant-voltage bridge excitation: Approx. 2 VDC
	Constant-current bridge excitation: Approx. 5.6 mA (Bridge resistance 350 Ω)
Measuring Range	At strain measurement
	0 to ± 300 k µm/m (Constant-voltage bridge excitation)
	0 to ± 20 k µm/m (Constant-current bridge excitation)
	When measuring temperature using engineering transducers with a thermal sensor -30.0°C to 70.0°C
Resolution	At strain measurement
	0 to ± 30 k µm/m: 1 µm/m
	± 30 k to ± 300 k µm/m: 10 µm/m
	When measuring temperature using engineering transducers with a thermal sensor 0.1°C
Accuracy	(NDIS one-touch connector, 4-gage connection)
	At strain measurement
	0 to ± 30 k µm/m: ± (0.05% of reading + 2) µm/m
	± 30 k to ± 300 k µm/m: ± (0.1% of reading + 20) µm/m
	When measuring temperature using engineering transducers with a thermal sensor ± 0.5°C
Check Functions	Insulation resistance measurement: 2 to 100 M Ω
	Resistance measurement: 0 to 20 kΩ
Interval Measurement	1 minute to 99 hours 59 minutes in 1-minute steps
	Starting time: year/month/day/hour/minute
Storage	SD card (Optional)
SD Cards	256 MB, 512 MB, 1 GB, 2 GB (FAT16)
	(SDXC not supported)
Display	Monochrome LCD, 128 × 64 dots
TEDS	Reads information from TEDS-installed sensors
	Channel name writing
	(Kyowa ID only within 10 characters)
Operating Temperature	-10 to 50°C
Operating Humidity	20 to 85% RH (Non-condensing)
Power Supply	AA battery × 2 Consecutive operation time:
	Approx. 10 hours (With alkaline batteries, NTB not connected)
	Nickel hydride batteries is also used.
	An AC adapter (Optional, SW-0522E) is provided for SME-101A
Auto Power Off	Power is automatically turned off if no key operation is detected for 5 minutes. In interval measuring mode with an interval of 3 minutes or longer, power is automatically turned off during standby period and turned on again 1 minute before the next measurement is started (ON/OFF of Auto Power Off is specified)
Dimensions	108.4×188× 41 mm (Excluding protrusions)
Weight	Approx. 450 g (Excluding batteries)

Standard Accessories
Input cable U-119 (60 cm)
Communication cable N-102 (1 m)
AA alkali battery × 2
Shoulder belt
Hand strap
Instruction manual (CD-R)

Optional Accessories
AC adapter SW-0522E, for SME-101A

SME-100A/101A Recommended products for combination


Network Terminal Boxes NTB-100/200Series
→ 3-37


SME thermocouple adapter SMET-1A
→ 3-44

SME-30A/31A

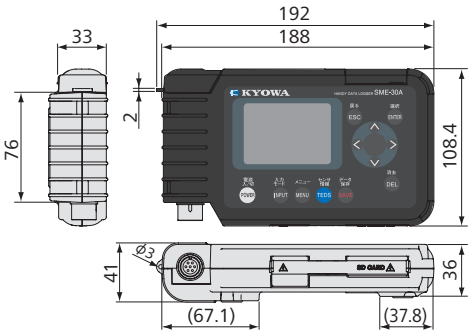
Handy Data Logger

Compact & lightweight
Palm size, therefore easily to carry

- Built-in bridge circuit for direct connection of a strain gage
- Wide measuring range: ±300 k μm/m
- Data saved in SD card is read and controlled by a PC
- Driven by AA batteries (Easy to get)
- TEDS compatible (Not only reading, but also writing possible)

No time to wait for measuring after power on
The strap is useful for field inspection and for confirming proper sensor installation.
The SD card (Option) simplifies data transmission to PC.
Using the attached input cable, a strain gage is easily connected.
The other models SME-100A/101A (See page 3-42) measures up to 33 channels when combination with NTB series.

Dimensions



Specifications

Channels	1
Sampling Period	Approx. 0.5 s: 0 to ± 30 k μm/m
	Approx. 1 s: ± 30 k μm/m or more
	: Civil engineering transducers with a thermal sensor
Measuring Functions	RELATIVE measurement (Relative value measurement):
	Each value is obtained by subtracting the ZERO value.
	∗ZERO value is equivalent to the initial unbalance value.
	Capable of obtaining the ZERO value at arbitrary timing
Arithmetic Operations	Calculation using coefficients
Measuring Targets	Strain gages, strain-gage transducers, civil engineering transducers with a thermal sensor

Bridge systems	Applicable gage resistance
Quarter bridge	120, 240, and 350 Ω
Half/full bridge	120 to 1000 Ω

Bridge Excitation	Constant-voltage bridge excitation: Approx. 2 VDC
	Constant-current bridge excitation: Approx. 5.6 mA (Bridge resistance 350 Ω)
Measuring Range	At strain measurement
	0 to ± 300 k μm/m (Constant--voltage bridge excitation)
	0 to ± 20 k μm/m (Constant--current bridge excitation)
	When measuring temperature with engineering transducers with a thermal sensor -30.0°C to 70.0°C
Resolution	At strain measurement
	0 to ± 30 k μm/m: 1 μm/m
	± 30 k to ± 300 k μm/m: 10 μm/m
	When measuring temperature with engineering transducer with temperature measuring function 0.1°C
Accuracy	At full bridge strain measurement
	0 to ± 30 k μm/m: ± (0.05% of reading + 2) μm/m
	± 30 k to ± 300 k μm/m: ± (0.1% of reading + 20) μm/m
	When measuring temperature with civil engineering transducers with a thermal sensor ± 0.5°C
Check Functions	Insulation resistance measurement: 2 M to 100 M Ω
	Resistance measurement: 0 to 20 KΩ
Interval Measurement:	1 minute to 99 hours 59 minutes in 1-minute steps
	Starting time: year/month/day/hour/minute
Storage	SD card (Option)
Applicable Cards	256 MB, 512 MB, 1 GB, 2 GB (FAT16) (SDHC and SDXC not supported)
Display	Monochrome LCD, 128 × 64 dots
TEDS	Reads information from TEDS-installed sensors
	Channel name writing (Kyowa ID only in up to 10 characters)
Operating Temperature	-10 to 50°C
Operating Humidity	20 to 85% RH (Non-condensing)
Power Supply	2 AA alkaline batteries
Consecutive Operation Time	Approx. 10 h (With alkaline batteries)
	∗ Nickel metal hydride batteries is also used.
	∗ An AC adapter (Optional, SW-0522E) is provided for SME-31A.
Auto Power Off	Power is automatically turned off if no key operation is detected for 5 minutes. In interval measuring mode with an interval of 3 minutes or longer, power is automatically turned off during standby period and turned on again 1 minute before the next measurement is started (ON/OFF of Auto Power Off is specified).
Dimensions	188 W × 41 H × 108.4 D mm (Excluding protrusions)
Weight	Approx. 450 g (Excluding batteries)

Standard Accessories
Input cable U-119 (60 cm)
AA alkali battery × 2
Shoulder belt
Hand strap
Instruction manual (CD-R)

SME-30A/31A Recommended products for combination


SME thermocouple adapter SMET-1A
→ 3-44

●SME thermocouple adapter SMET-1A

Installing the SMET-1A on the handy data logger SME series enables "thermocouple" measurements.

Specifications

Measuring Targets Thermocouples (K, T)
Channels 1
Sampling Frequencies Approx. 0.5 s
Input Terminal block
Applicable wires Solid wire: UL AWG14 to 28
Twisted wire: UL AWG20 to 24
Applicable Models
Handy data logger SME-30A/31A
Handy data logger SME-100A/101A
Check Functions Burn out check (Operation on SME possible)
Operating Temperature -10 to 50°C
Operating Humidity 20 to 85% RH (Non-condensing)
Dimensions 42 W × 33 H ×29.5 D mm (Excluding protrusions)
Weight Approx. 35 g
Measuring range, accuracy, resolution

Types	Measuring range	Accuracy			Resolution
		Temperature range	With external standard junction compensation	Ambient temperature with internal standard junction compensation (25 ± 10)℃	
K	-200.0 to 1230.0°C	-200.0 to -100.0°C or less	±(0.2%+0.6 of specified value)°C	±(0.2%+2.6 of specified value)°C	0.1°C
		-100.0 to -1230.0°C or less	±(0.1%+0.4 of specified value)°C	±(0.1%+1.4 of specified value)°C	
T	-200.0 to 400.0°C	-200.0 to -100.0°C or less	±(0.2%+0.6 of specified value)°C	±(0.2%+2.6 of specified value)°C	
		-100.0 to -400.0°C	±(0.1%+0.4 of specified value)°C	±(0.1%+1.4 of specified value)°C	

Notes: 1. Accuracy does not include the accuracy of the sensor.
2. For the standard junction compensator, switching between internal and external is possible using the SME.
3. Thermocouple resistance is 1 kΩ or less.

Standard Accessories CD-ROM (Instruction manual)
Mounting screw×2