



RION

TENTATIVE



Sound Level Meter  
**NA-83**

CE



**Display example**



Normal measurement screen Lp

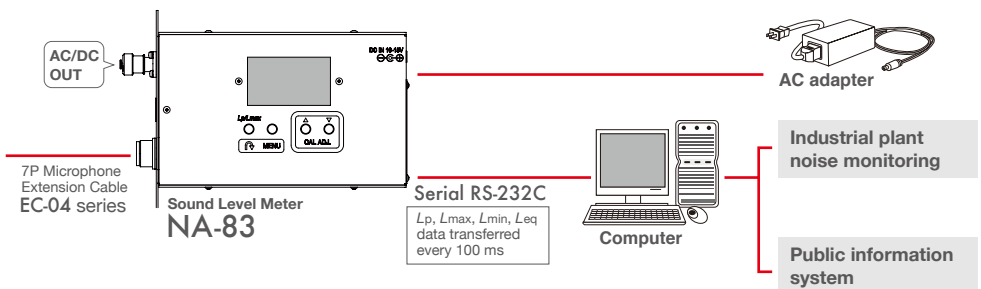


Calibration mode using built-in 1 kHz sound source



**Sound Level Meter  
NA-83**

**Sound level measurement system configuration (example)**



# Easily configure a measurement system suited to your needs, with support communication interface and special functions for long-term noise monitoring

- Compliant with IEC 61672-1 Class 1, CE mark, JIS C 1509-1 Class 1 (using microphone extension cable up to 30 m)
- Wide overall linear operation range enables 28 dB to 138 dB sound level measurement without range switching
- Supplied Outdoor Microphone MS-11 allows stable long-term measurement in outdoor installations (Microphone has built-in sound source for calibration and integrated heater for moisture prevention)



## Outdoor Microphone System

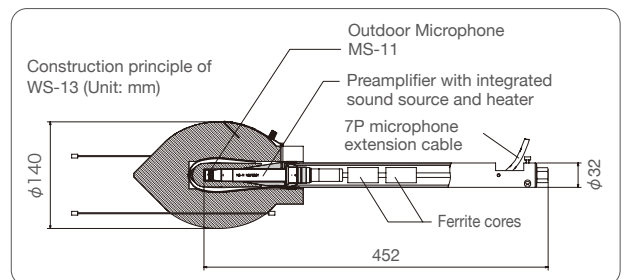
### All-Weather Windscreen WS-13

Protects the microphone from adverse influences by rain and wind. Integrated bird spike prevents bird-related problems.

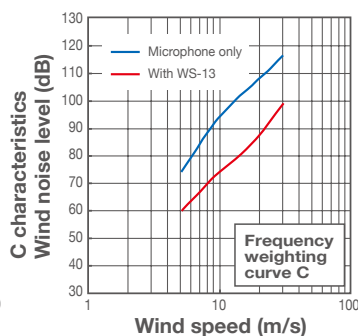
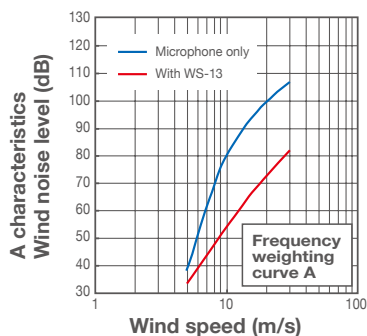


### Outdoor Microphone MS-11 Supplied

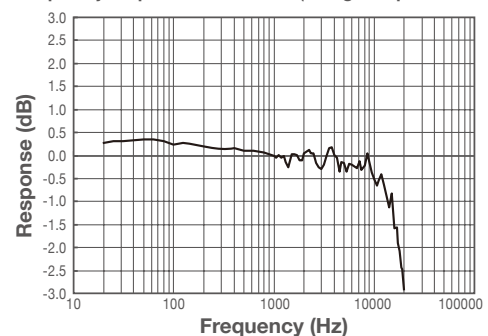
Integrated sound source for automatic calibration with built in heater. Suitable for long-term outdoor use.



Wind noise reduction effect of WS-13



Frequency response with WS-13 (using compensation feature)



## Precision Sound Level Meter NA-83

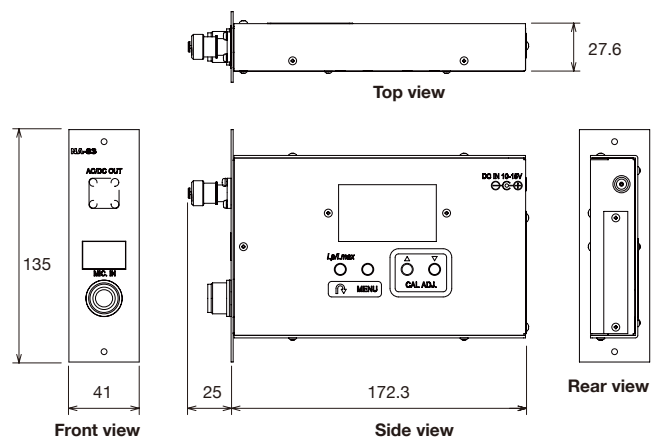
Standard compliance	IEC 61672-1:2002 Class 1, WEEE Directive CE mark (EMC Directive 2004/108/EC EN 61326:1997 + A1:1998 + A2:2001 + A3:2003)
Measurement functions	
Measurement items	
Display data	Time-weighted sound level $L_p$ Time-weighted maximum sound level $L_{max}$
Serial communication data	$L_p$ , $L_{max}$ , $L_{min}$ , $L_{eq}$ every 100 ms
Measurement level range	A characteristics: 28 dB to 138 dB C characteristics: 36 dB to 138 dB Z characteristics: 42 dB to 138 dB
Overall linear operation range (A characteristics, 1 kHz)	28 dB to 138 dB
Inherent noise level	A characteristics: 20 dB or less C characteristics: 28 dB or less Z characteristics: 34 dB or less
Measurement frequency range	20 Hz to 20 kHz
Frequency weighting characteristics	A, C, Z
Time weighting characteristics	F (Fast), S (Slow)
Linear operation range	110 dB
Bar graph indication range	30 dB to 130 dB
RMS detection circuit	Digital processing (sampling cycle 20.8 $\mu$ s)
Reference frequency	1 kHz
Microphone and preamplifier	
Type	Outdoor Microphone
Model	MS-11
Sensitivity level	-29 dB (re 1 V/Pa at 1 kHz, in standard environment)
Operation check function with built-in sound source of microphone	
Temperature characteristics of built-in sound source (referenced to 23 °C at atmospheric pressure 101.325 kPa, over -10 °C to +50 °C range)	
Frequency	1 kHz
Sound pressure level	114.0 dB $\pm$ 0.3 dB
Frequency response of built-in sound source (referenced to atmospheric pressure 101.325 kPa, over -10 °C to +50 °C range)	
Frequency	1 kHz (reference)
250 Hz	$\pm$ 0.5 dB
500 Hz	$\pm$ 0.5 dB
4 k Hz	$\pm$ 1.5 dB
Windscreen compensation function	Frequency response correction when All-Weather Windscreen WS-13 is mounted
Input/output connectors	
AC/DC output	AC or DC output, selectable by key operation or remote command
AC output connector	
Frequency weighting characteristics	C weighting
Output voltage	1 V rms (at 110 dB)
Maximum output voltage	10 V rms (at 130 dB)
Output impedance	50 $\Omega$
Load impedance	10 k $\Omega$ or higher
DC output connector	
Output voltage	5.5 V (at 130 dB), 0.5 V/10 dB
Output impedance	50 $\Omega$
Load impedance	10 k $\Omega$ or higher

Input/output connectors	
NA-83 control	
Transfer protocol	
Communication principle	Synchronous transfer
Data word length	8 bit
Stop bits	1bit
Parity check	None
Baud rate	19 200 bps
Flow control	valid
NA-83 data output	
Output data	$L_p$ , $L_{max}$ , $L_{min}$ , $L_{eq}$
Output cycle	100 ms
Power requirements	
Rated power supply voltage	12 V DC
Operation voltage range	10 to 15 V DC
AC adapter	RC45-12L
Current consumption	Approx. 200 mA (at 12 V DC)
Environmental conditions for operation	
Sound level meter unit	-10 °C to +50 °C, max. max. 90 % RH
Microphone MS-11 (powered)	-20 °C to +50 °C, max. 100 % RH (no condensation)
Microphone MS-11 (storage)	-10 °C to +50 °C, max. 90 % RH
Dimensions and weight	135 (H) $\times$ 172.3 (W) $\times$ 41 (D) mm, 520 g (including MS-11)
Supplied accessories	Outdoor Microphone MS-11 Ferrite core FCA8K (for microphone extension cable) Serial connector 8300-032-281 (KEL) Storage case Calibration chart

### ● Optional accessories

Type	Model
Sound Calibrator	NC-74
Pistonphone	NC-72A
All-Weather Windscreen	WS-13
7P Microphone Extension Cable	EC-04 (2 m and up to 30 m)
BNC-BNC cable	NC-39A (1.5 m)
Ferrite core (for BNC-BNC cable)	FCA8K (1)
Ferrite core (for AC adapter)	FCA8K (1 set of 6)
AC adapter	RC45-12L
All-Weather Windscreen Tripod	Various

### ● Dimensional drawing (Unit: mm)



\* Specifications subject to change without notice.

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