

# Diesel Engine Tachometer GE-1400

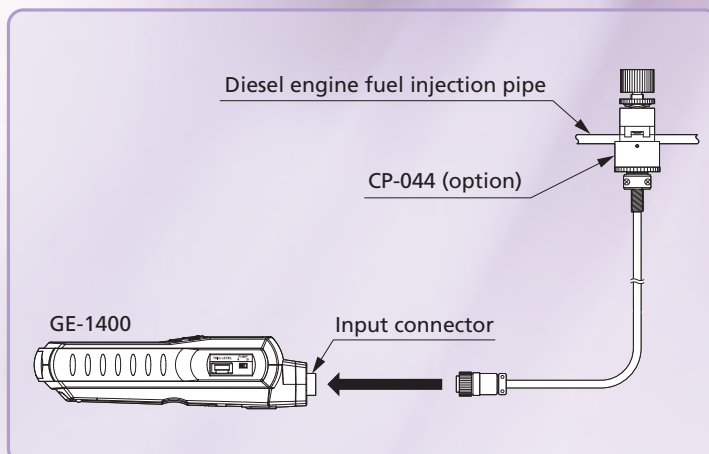
For diesel engine measurement applications

## Features

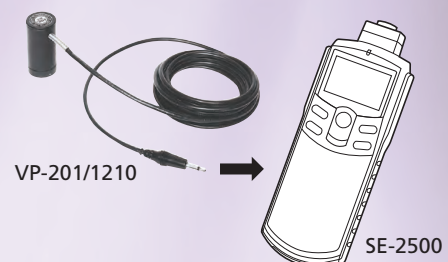
- 1 Measurement is made with an exclusive detector (sold separately)**  
Only by clamping the CP-044 detector to a fuel injection pipe.
- 2 Three outputs—analogue, monitor and pulse—provided as standard**  
Use the analog output function to record the number of rotations, the monitor output function to check the sensor's detection waveform, and the pulse output function to output rotation synchronization signals.
- 3 Large LCD with backlight**  
(Character height: 10.2 mm)
- 4 Built-in memory function**  
20 data (MAX.) can be saved to memory.
- 5 Trigger adjustment function provided**
- 6 Can be mounted on a tripod**  
The tachometer can be fixed to a tripod for continuous measurement.



## Measurement method



### An example of engine rotation measurement by vibrations (SE-2500)



\* Measurement of diesel engines can be performed with the combination of these two devices.

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## Specifications

Applicable engines		Four-cycle diesel engines	
Detection method		Detection of the pulsation generated by the injection pipe at the time of fuel injection	
Compatible detector		CP-044 (sold separately)	
Calculation method		Periodic operation method	
Measurement time		1s + the time required for 1 period or less	
Display		5-digit LCD, with backlight (character height: 10.2 mm)	
Display update time		1 ± 0.2 s	
Measurement units		r/min, r/s	
Measurement range		400 to 8000 r/min (When r/s is used as a unit, the measurement range will be obtained by dividing the r/min numerical value by 60.)	
Measurement accuracy		Displayed value x (±0.02 %) (Not including a quantization error)	
Measurement functions	Memory function	20 data (MAX.)	
	Over-range function	The over-range alarm (ERROR mark) is displayed when the measured value exceeds the display range.	
	Rotation upper limit alarm function	The upper limit alarm (↑ mark) is displayed when the number of rotations exceeds the preset upper limit value.	
	Trigger level adjustment function	A rotary dial at the right-hand side of the device is used to adjust the trigger level.	
Output section	Analog output	Description of output function	The output corresponds to the displayed number of rotations
		Output voltage	0 to 1 V/0 to FS (FS can be specified.)
		Conversion method	10-bit D/A conversion
		Linearity	±1%/FS
		Output update time	50ms + the time required for 1 period or less
	Monitor output	Temperature stability	±0.05%/FS/°C (span & zero)
		Setting error	±0.5%/FS
		Load resistance	At least 100 kΩ
		Description of output function	The external sensor signal which was reshaped to a waveform (analog output for monitoring purpose)
		Load resistance	At least 100 kΩ
General specifications	Power source	Four AAA batteries or exclusive AC adapter (PB-7090, sold separately)	
	Battery life	At least 16 hours (when the backlight is OFF) At least 8 hours (when the backlight is ON) * When alkaline batteries are used at 20°C	
General specifications	Low battery alarm indicator	A low battery alarm (LOW mark) is displayed when the battery voltage falls below 4.4 V.	
	Operating temperature range	0 to +40°C	
General specifications	Storage temperature range	-10 to +50°C	
	Outer dimensions	186.5 (W) x 47.5 (H) x 66 (D) mm	
General specifications	Weight (including batteries)	Approx. 280 g	
	Accessories	Signal cable (AX-501) 1 Type AAA batteries 4 Carrying case 1	

Note: Please refer to an instruction manual for the operating procedures.

CP-044 Specifications		*Option (sold separately)
Applicable engines	Diesel engines	
Detection method	A piezoelectric element is used to detect pulsation at the time of fuel injection	
Applicable pipe diameter	ø4 to 8 mm	
Piezoelectric element withstand compressive pressure	1,960 bar	
Measurement range	400 to 6000 r/min	
Operating temperature range	0 to +80°C	
Weight	Approx. 120 g	
Output cable length	Approx. 4.9 m	

## Options (sold separately)

**Diesel engine rotation detector CP-044**



(The CP-044 is required for the GE-1400.)

**AC adapter PB-7090**



**Signal cable AX-501**  
(For both analog and pulse output signals)



**Magnetic stand/Stand jig HT-0522/0521A**



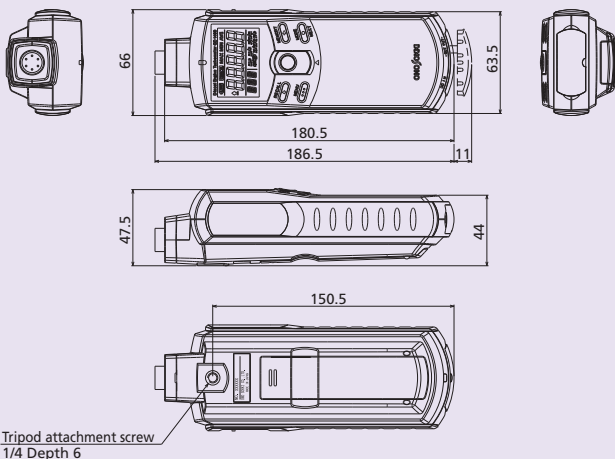
(Shown with tachometer mounted)

**Tripod LA-0203C**



## Outer dimensions

(Unit: mm)



**ONOSOKKI**

**WORLDWIDE ONO SOKKI CO., LTD.**

1-16-1 Hakusan, Midori-ku, Yokohama, 226-8507, Japan  
Phone : +81-45-935-3918 Fax : +81-45-930-1808  
E-mail : overseas@onosokki.co.jp

\*Outer appearance and specifications are subject to change without prior notice.  
**URL : <http://www.onosokki.co.jp/English/english.htm>**

**U.S.A.**  
Ono Sokki Technology Inc.  
2171 Executive Drive, Suite 400  
Addison, IL 60101 U.S.A.  
Phone : +1-630-627-9700  
Fax : +1-630-627-0004  
E-mail : info@onosokki.net  
<http://www.onosokki.net>

**THAILAND**  
Ono Sokki (Thailand) Co., Ltd.  
1/293-4 Moo.9 T.Bangphud A.Pakkred  
Nonthaburi 11120, Thailand  
Phone : +66-2-584-6735  
Fax : +66-2-584-6740  
E-mail : osth\_sales@onosokki.co.jp

**INDIA**  
Ono Sokki India Private Ltd.  
Unit No. 4B, Ground Floor, Tower-A, Spazedge,  
Sector47, Gurgaon-Sohna Expressway, Gurgaon,  
Haryana-122002, INDIA  
Phone : +91-124-421-1807  
Fax : +91-124-421-1809  
E-mail : osid@onosokki.co.in

**P.R.CHINA**  
Ono Sokki Shanghai Technology Co., Ltd.  
Room 506, No.47 Zhengyi Road, Yangpu  
District, Shanghai, 200433, P.R.C.  
Phone : +86-21-6503-2656  
Fax : +86-21-6506-0327  
E-mail : admin@shonosokki.com