Gasoline Engine Tachometers
SE-2500
(For gasoline engine measurement applications)

HT-6100
External sensor input type
(For gasoline/diesel engines and general rotating objects)

Old Model
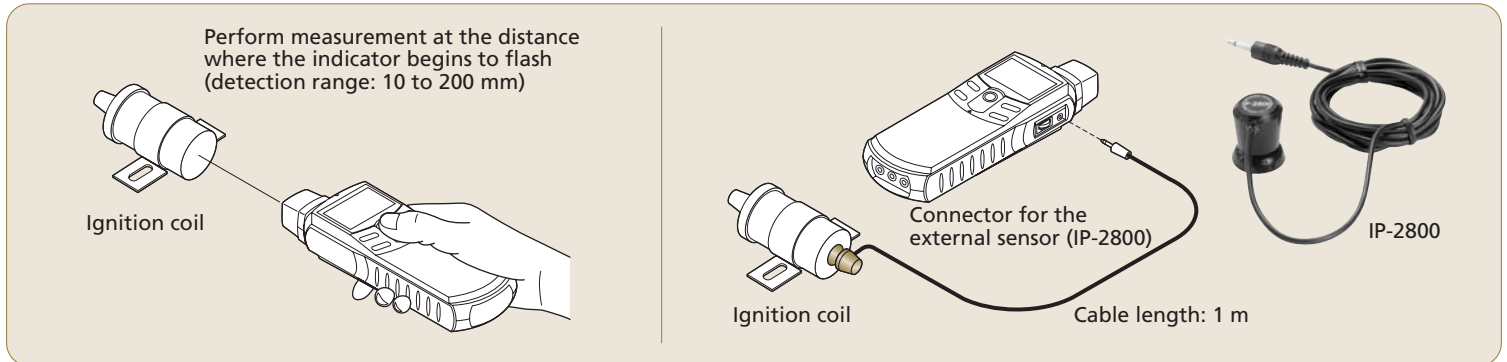## (Reference only)

SE-2500

HT-6100

ONO SOKKI

SE-2500

Gasoline Engine Tachometer
For gasoline engine measurement applications

1 **Built-in memory function**
20 data (MAX) can be saved to memory.

2 **Three outputs—analog, 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 **Capable of performing measurement at a distance of 1 m when the external sensor (IP-2800) is used.**

5 **Can be mounted on a tripod**
The tachometer can be fixed to a tripod for continuous measurement.

6 **Measurement can be performed in 1 r/min or 0.01 r/s units.**

Detector section

Connector for the external sensor

Sensitivity adjustment dial

Screw for tripod attachment

Battery compartment (four AAA alkaline batteries)

SE-2500

Connector for the AC adapter
Connector for analog/monitor output
Connector for pulse output

Measurement method

Perform measurement at the distance where the indicator begins to flash (detection range: 10 to 200 mm)

Ignition coil

Connector for the external sensor (IP-2800)

Ignition coil

Cable length: 1 m

IP-2800

Specifications

Applicable engines	Gasoline engines, 2-cycle (1, 2, 3, 4 cylinders); 4-cycle (1, 2, 3, 4, 5, 6, 7, 8, 10, 12 cylinders)		
Detection method	Electromagnetic induction		
Detection distance	10 to 200 mm		
Object of measurement	Ignition coil		
Calculation method	Cycle calculation method		
Measurement time	Within 1 s + the time required for one cycle		
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 ranges	2-cycle	4-cycle	Number of rotations (r/min)
	—	I cylinder	120 to 20000
	I cylinder	2 cylinders	120 to 20000
	—	3 cylinders	120 to 20000
	2 cylinders	4 cylinders	120 to 20000
	—	5 cylinders	120 to 20000
	3 cylinders	6 cylinders	120 to 15000
	4 cylinders	8 cylinders	120 to 12000
	—	10 cylinders	120 to 10000
	—	12 cylinders	120 to 8000
	(r/s is the numerical value obtained when the r/min measurement value is divided by 60)		
Measurement accuracy	Displayed value* x (±0.02%) ±1 count * The displayed value is the count value excluding figures after the decimal point.		
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.	
	Sensitivity adjustment function	A rotary dial at the right-hand side of the device is used to adjust the sensitivity.	

Output section	Analog output	Description of output function	Output with respect to the displayed rotation values
		Output voltage	0 to 1 V/0 to FS (FS is freely selectable)
		Conversion method	10-bit D/A conversion
		Linearity	±1%/FS
		Output update time	Within 50 ms + the time required for 1 cycle
		Temperature stability	±0.05%/FS/°C (span & zero)
		Setting error	±0.5%/FS
		Load resistance	At least 100 kΩ
	Monitor output	Description of output function	Analog output for monitoring purposes after waveform reshaping of the sensor signal
		Load resistance	At least 100 kΩ
	Pulse output	Output voltage	Hi level: At least +4.5 V Lo level: Up to +0.5 V
		Output logic	Positive logic
		Load resistance	At least 100 kΩ
General specifications	Power source	Four AAA alkaline batteries or exclusive AC adapter (PB-7080, Option)	
	Battery life	At least 32 hours (when the backlight is OFF) At least 8 hours (when the backlight is ON)	
	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	
	Storage temperature range	-10 to 50°C	
	Outer dimensions	198.5 (W) x 47.5 (H) x 66 (D) mm	
	Weight (including batteries)	Approx. 300 g	
	Accessories	Ignition detector (IP-2800)　1 AAA alkaline batteries　4 Carrying case　1	

HT-6100
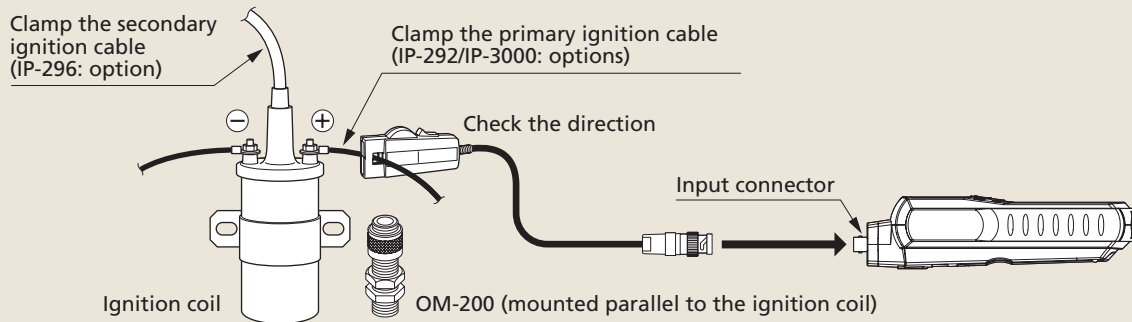
Handheld Digital Tachometer

For the measurement of gasoline and diesel engines
and of various rotating objects (external sensor input type)

1 Can be used with various sensors
The HT-6100 can be used with the optional IP-292, IP-296, IP-3000 and
OM-200 detectors, as well as with TTL signal output detectors.

2 Three outputs—analog, 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 Built-in peak hold function
The maximum and minimum values can be displayed during measurement.

4 Large LCD with backlight
(Character height: 10.2 mm)

5 Built-in memory function
20 data (MAX) can be saved to memory.

6 Can be mounted on a tripod
The tachometer can be fixed to a tripod
for continuous measurement.

Input connector

Trigger adjustment dial

Screw for tripod attachment

Battery compartment
(four AAA alkaline batteries)

HT-6100

Connector for the AC adapter
Connector for analog/monitor output
Connector for pulse output

Measurement method

Clamp the secondary
ignition cable
(IP-296: option)

Clamp the primary ignition cable
(IP-292/IP-3000: options)

Check the direction

Input connector

Ignition coil

OM-200 (mounted parallel to the ignition coil)

Specifications

Applicable engines	Gasoline and diesel engines; general rotating objects
Compatible detectors	IP-292, IP-296, IP-3000, OM-200, TTL signal output detectors
Object of measurement	Ignition coil, primary/secondary ignition cables, ECU rotation pulses (5-V)
Calculation method	Cycle calculation method
Measurement time	Within 1 s + the time required for one cycle
Display	5-digit LCD, with backlight (character height: 10.2 mm)
Display update time	1 ±0.2 s
Measurement units	r/min (when the IP-292, IP-296, IP-3000, or OM-200 detector has been selected) r/min, r/s, m/min, ms, COUNT (when a TTL signal output detector has been selected)

Measurement ranges		IP-292, IP-296, IP-3000, OM-200	TTL signal output detector
	r/min	120 to 20000	100 to 99999
	r/s	—	1.66 to 999.99
	m/min	—	0.3 to 9999.9
	COUNT	—	0 to 99999
	ms	—	0.6 to 300.0
	*The number of pulses per rotation (0.5 to 200.0 P/R) is freely selectable.		

Measurement accuracy	Displayed value* x (±0.02%) ±1 count * The displayed value is the count value excluding figures after the decimal point. The measurement accuracy of the line speed depends on the rotational (r/min) accuracy.

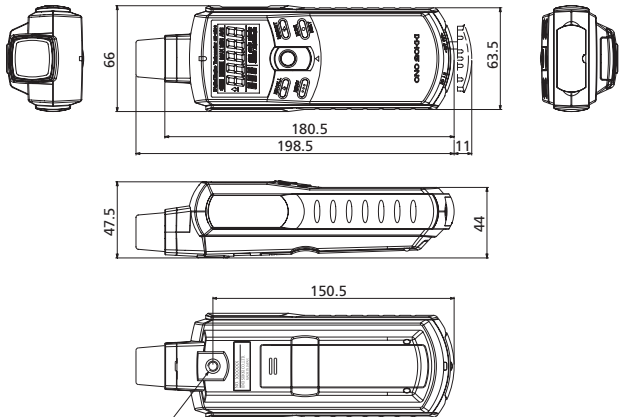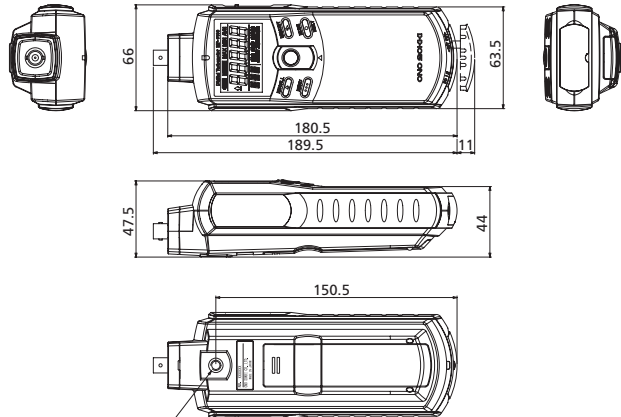| Measurement functions	Peak hold function	Maximum value (MAX), minimum value (MIN)
	Memory function	20 data (MAX)
	Over-range function	The over-range alarm (ERROR mark) is displayed when the measured value exceeds the display range.
	Rotation upper limit alarm function	The upper limit alarm (↑ mark) is displayed when the number of rotations exceeds the preset upper limit value.
	Line speed calculation function	Calculates the line speed from the preset diameter value (mm) and the measured number of rotations
	Accumulating function	Provides a cumulative count of the input signal pulses
	Cycle measurement function	Measures the input pulse cycle (however, when the cycle is less than 1 s, measures the mean value of the input pulses)
	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	Output with respect to the displayed rotation values
		Output voltage	0 to 1 V/0 to FS (FS is freely selectable)
		Conversion method	10-bit D/A conversion
		Linearity	±1%/FS
		Output update time	Within 50 ms + the time required for 1 cycle
		Temperature stability	±0.05%/FS/°C (span & zero)
		Setting error	±0.5%/FS
		Load resistance	At least 100 kΩ
	Monitor output	Description of output function	Analog output for monitoring purposes after waveform reshaping of the sensor signal
		Load resistance	At least 100 kΩ
	Pulse output	Output voltage	Hi level: At least +4.5 V Lo level: Up to +0.5 V
		Output logic	Positive logic
		Load resistance	At least 100 kΩ

General specifications	Power source	Four AAA alkaline batteries or exclusive AC adapter (PB-7080, Option)
	Battery life	At least 16 hours (when the backlight is OFF) At least 8 hours (when the backlight is ON)
	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
	Storage temperature range	-10 to 50°C
	Outer dimensions	189.5 (W) x 47.5 (H) x 66 (D) mm
	Weight (including batteries)	Approx. 280 g
	Accessories	AAA alkaline batteries 4 Carrying case 1

Options (sold separately)

For the SE-2500	Engine rotation detector **VP-201**	AC adapter **PB-7080**	Signal cable (For both analog and pulse output signals) **AX-501**
For the HT-6100	Ignition detector **IP-292** / Ignition detector **IP-296** / Ignition detector **IP-3000** / Electromagnetic detector **OM-200**	**For the SE-2500 and HT-6100** — Magnetic stand/Stand jig **HT-0522/0521A** (shown with tachometer mounted)	Tripod **LA-0203A**

External diagrams

(Unit: mm)

▼ SE-2500

66
63.5
180.5
198.5
11
47.5
44
150.5
Tripod attachment screw
1/4 Depth 6

▼ HT-6100

66
63.5
180.5
189.5
11
47.5
44
150.5
Tripod attachment screw
1/4 Depth 6

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