

# Long stroke type Linear Gauge Sensor

**GS-5050/5100** (10 $\mu$ m resolution)

**GS-5051/5101** (1 $\mu$ m resolution)

Long stroke type



The GS-5050 and GS-5100 series are long stroke type linear gauge sensors designed to be shock/vibration resistant structures. They are suitable for measuring displacement of large structure, such as load-strength of construction or automobile outer frame. Since the resolution of either 1  $\mu$ m or 10  $\mu$ m can be selected in accordance with the measurement application, the GS-5050 and GS-5100 series are available for wide range of applications in production line. All models are compatible with our the DG-4000 series of digital gauge counters which have comparator, offset, peak hold, multiplying, and other functions depending on the model.

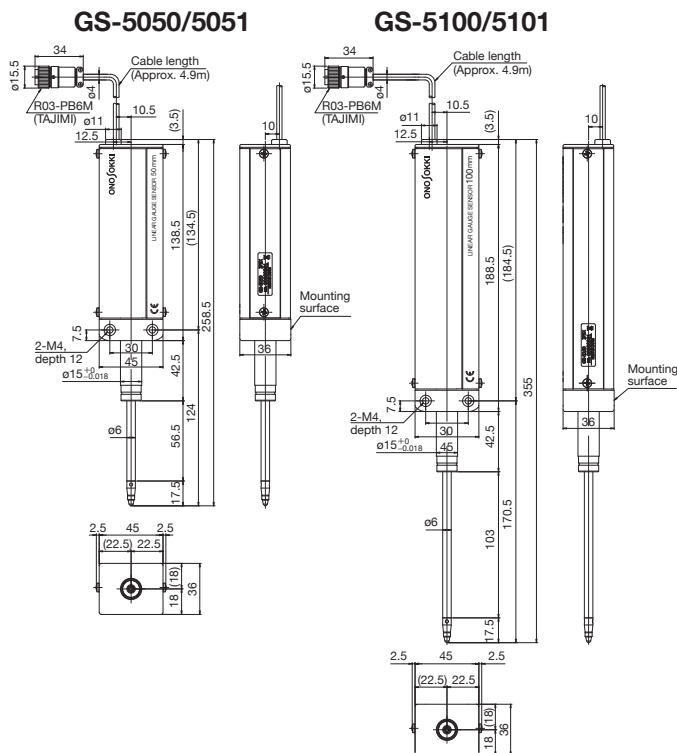
**ONOSOKKI**

# Long stroke and shock/vibration resistant structure greatly contribute to measuring displacement of a large structure!

## Features

- High cost performance
- More than 15 million sliding times
- Protection class IP 5X
- Ball bearing is used
- The pitch of mounting hole and the distance from tip of spindle\* after installation are same as those of the GS-5011. \*Only for the GS-5050/5051
- New model of measurement range at 100mm and resolution at 1µm is added to line up.

## Outer Dimensions



## Specification

Item	Model name			
	GS-5050	GS-5100	GS-5051	GS-5101
Measurement range	50mm	100mm	50mm	100mm
Resolution	10µm		1µm	
Accuracy (at +20°C)	10µm	12µm	4µm	5µm
Maximum spindle velocity*1	1(4)m/s		0.3(1.2)m/s	
Measurement force (downward)*2	3N or less	5.5N less	3N or less	5.5N or less
Number of sliding times (proven in our endurance test)	15 million times			
Protection class (excluding connector section)	IP5X			
Stem diameter	Ø15 <sup>+0</sup> <sub>-0.009</sub> mm			
Power requirement	4.5 to 5.5VDC			
Power consumption (when 5VDC)	120mA or less			
Signal output (when 5VDC)	Two-phase square wave, phase difference: 90° ±20° Output voltage Hi=4.5V or more, Lo=0.4V or less			
Output impedance	Approx. 22Ω			
Vibration resistance (when the power is off)*3	147 m/s <sup>2</sup> in each of the three axial directions (75 minutes per each), 10 cycles of 10Hz to 150Hz sweeping			
Shock resistance (when the power is off)*3	1470 m/s <sup>2</sup> in each of direction for each of three axes, three times for each of ±X,Y and Z directions, sine half-wave, pulse duration 6ms			
Operating temperature range	0 to +40°C			
Storage temperature range	-10 to +55°C (with no condensation)			
Cable length	Approx. 4.9m			
Weight (including cable, connector)	Approx. 570g	Approx. 655g	Approx. 570g	Approx. 655g
Accessories	Instruction manual, spanner			
Options (sold separately)	AA-969:Finger lifter ST-0230:Gauge stand AA-844 (30m)/AA-845 (50mm) :Extension spindle		AA-8560:Mounting fixture AA-8801 (5m)/AA-8802 (10m)/ AA-8803 (20m)/AA-8804 (30m) :Extension cable	

\*1. When used with Ono Sokki's Gauge Counter. The value within parentheses ( ) is the maximum spindle velocity used with the DG-4140/DG-4190/DG-5100.

\*2. An attachment may not return completely if it is facing upwards.

\*3. Shock/vibration resistance values described in above are not guaranteed during measurement operation.

• Disconnected or modified signal cable is not applicable to CE marking.

• We also offer several other accessories not listed in this catalogue. For details, please contact your nearest distributor or send an e-mail to us; overseas @onosokki.co.jp

## Compatible digital counters

### DG-4140

Comparator output  
(BCD, Color backlight)



### DG-4190

Comparator output  
(Analog, Color backlight)



### DG-4120

BCD output



### DG-4240

Comparator output  
(Upper & Lower)



### DG-4280

Comparator output  
(4-preset)



### DG-2310

2ch with multi function



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\* Outer appearance and specifications are subject to change without prior notice.  
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