

Instruction Manual

Thank you for your selection of Ono Sokki's linear gauge sensor. To ensure that you get the most out of your new instrument, we strongly recommend that you read and follow the instructions in this manual.

Before this unit was shipped from the factory, it was subjected to a series of severe inspections to verify that it operates properly.

When unpacking the unit, verify that no physical damage has occurred during transit and, after reading this manual thoroughly, check the operation of the unit. Should damage have occurred or the unit not operate in accordance with specifications, contact your nearest representative.

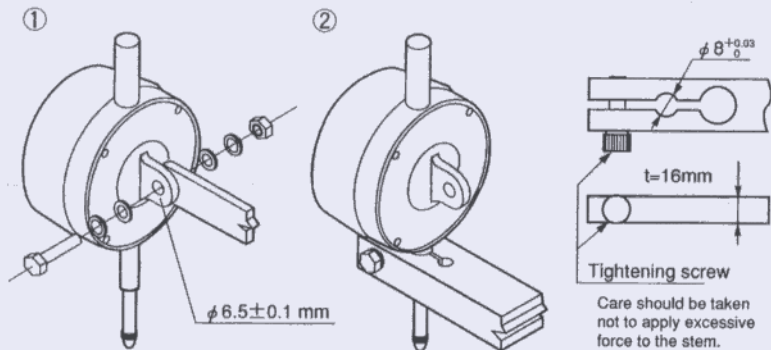
■ Operating Precaution

- If you disassemble the sensor, failure may result. If you open the cover, dust such as chips and cutting oil might intrude to cause a failure. Therefore, never open the cover.
- Oil and dust are detrimental to the spindle. Do not oil it or touch it. Spindle fails to operate smoothly if oil or stains are allowed to adhere. To remove a stain on the spindle, wipe it off with a piece of soft cloth slightly dampened with alcohol. Do not use benzine, thinner or gasoline.
- The interface between the spindle and the bearing is machined with such precision that no lateral force [maximum allowable lateral pressure : 0.98 N (100 gf)] or torsional force should be applied to the spindle. Nor should the stem be squeezed more than necessary.
- To replace the contact tip, wind a rubber band round the spindle, as shown in the drawing and turn the contact tip while holding the spindle firmly. Take sufficient care not to allow torsional force to be applied to the spindle.
- The maximum response speed of the spindle is 1 m/s (at 20°C). If it is moved at a speed greater than the allowed limit, a condition causing possible measurement error. When the spindle is to be applied to the measuring object, bring the spindle within 1 mm above the surface to be contacted before putting down the spindle.
- Since the sensor is made of high precision components, do not disassemble it or handle it roughly.
- Care should be taken not to store the sensor in a high humidity place for a long period.



■ Mounting Method

There are two methods of holding the sensor. When mounting to a fixture, always be sure that the mounting is made so that the direction of spindle movement and the longitudinal direction of the object being measured agree and that the spindle makes contact at the proper position.



① Fixing method using a lug

Pass a bolt through the 6.5 ± 0.1 mm dia. Hole of the lug on the back cover and fasten it tightly to the holding hole.

If it is insufficiently tight, the sensor might be tilted towards the bottom about the ears. Therefore, it is recommended to use a flat washer and a spindle washer on each side.

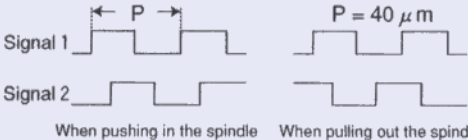
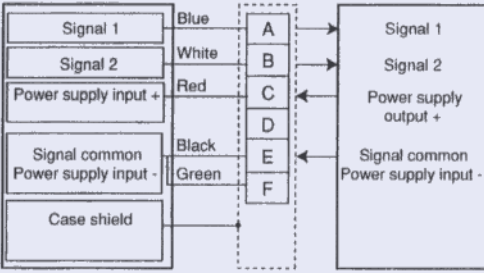
The lug can be turned by 90° in angle by removing the back cover machine screw.

② Fixing method with grasping stem

The stem has a diameter of $8 \begin{smallmatrix} +0.03 \\ 0 \end{smallmatrix}$ mm.

Use the optional gauge stand (ST series). When making another stand, consult the drawing above.

Specifications

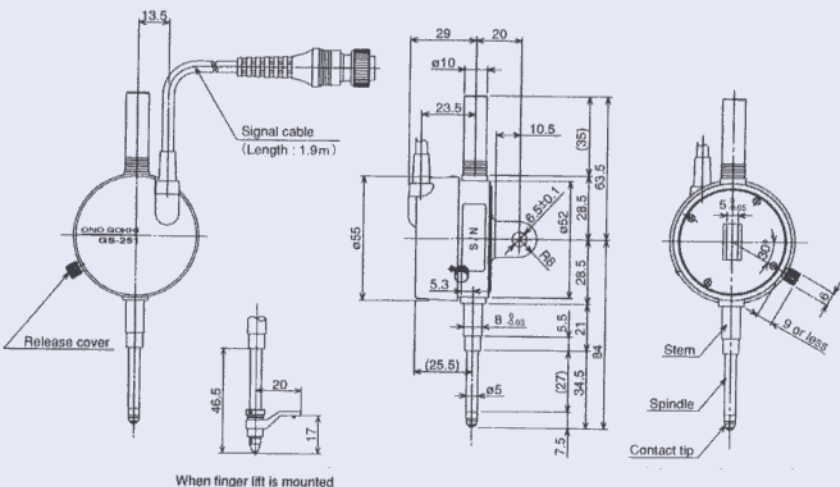
Measuring range	25 mm
Resolution	10 μ m
Measuring accuracy	5 μ m (20°C)
Maximum response speed	1 m/s
Measuring force	2.55 N (260 gf) max. When the spring is off : 0.49 N (50 gf) max. Downward only (release unusable)
Power supply voltage	4.5 to 6 VDC
Current consumption	Approx. 30 mA (at 5 VDC)
Output signal	2-phase rectangular wave signal Phase difference 90° \pm 20° (at 5 VDC) Hi : 4.5 V to 6 V (when not loaded) Lo : 0.4 V max.  When pushing in the spindle When pulling out the spindle
Terminal connector	R03-PB6M 
*Note that signal common and case shield are not short-circuited in the sensor.	
Cable length	1.9 m Extendable to 30 m (response speed : 0.5 m/s)
Operating temperature range	+ 5°C to + 40°C
Storage temperature range	- 10°C to + 55°C
Weight	Approx. 330 g (including cable)

Options

- Finger lift (AA-969)
- Lift lever (AA-971)
- Mechanical release (AA-813)
- Air release (AA-816)
- Dustproof rubber cover (AA-843)
- Back cover without lug (AA-968)
- Extension spindle (AA-844 / 845)
- Contact tips
- Contact-tip adapter for dustproof rubber cover (AA-829)
- Gauge stands (ST-011 / 022 / 044B / 005)

When ST-044B is used, stand bush (AA-891) is required

Outside Drawing



Omission of Test Qualification Issuance

Since this product has been tested through a series of strict inspections and a complete program of quality control, issuance of the test qualification has been omitted.

Warranty

1. This product is covered by a warranty for a period of one year from the date of purchase.
2. This warranty covers free-of-charge repair for defects judged to be the responsibility of the manufacturer, i.e., defects occurred while the product is used under normal operating conditions according to descriptions in this manual and notices on the unit label.
3. For free-of-charge repair, contact either your sales representative or our sales office nearby.
4. The following failures will be handled on a fee basis even during the warranty period.
 - (a) Failures occurring through misuse, mis-operation, or modification
 - (b) Failures occurring through mishandling (dropping) or transportation
 - (c) Failures occurring through natural calamities (fires, earthquakes, flooding, and lightning), environmental disruption, or abnormal voltage.

* For repairs after the warranty period expired, contact your sales representative or our sales office nearby.