

### NOTES TO USERS

Read all instructions carefully before starting Use.  
Save this MANUAL for future reference.

#### General Precautions

When using Sony Magnescale products, observe the following general precautions along with those given specifically in this manual to ensure proper use of the products.

- Before and during operations, be sure to check that our products function properly.
- Provide adequate safety measures to prevent damages in case our products should develop malfunction.
- Use outside indicated specifications or purposes and modification of our products will void any warranty of the functions and performance as specified of our products.
- When using our products in combination with other equipment, the functions and performance as noted in this manual may not be attained, depending upon operating environmental conditions. Make full study of the compatibility in advance.

### Handling Instructions

- Insert the head amplifier into the display unit and secure it with screws. Be sure to turn off the power switch before connecting the head amplifier with or disconnecting it from the display unit/detector.
- Locate the gauging probe at least 10cm/4" away from a strong magnetic source.
- Do not pull the cable when mounting or demounting the gauging probe, or the cable may be disconnected.
- Do not place the probe where it is exposed to splash of water or oil.
- In operating the probe DG-810, 810L, 2810, 2810L with a vacuum pump, use such an air-pass system as shown in Fig.1. The optimum vacuum rate is 300~500mmHg. Further, put such an orifice as shown in Fig.2 on a tube from the air lifter connector to control the air suction and discharge speed. The measuring feeler is lifted at the air discharge to the vacuum pump.

### Mounting Instruction

- Be sure to chuck the probe stem for mounting.
  - When mounting the gauging probe, secure it in such a way that mounting screws do not contact it directly.
  - The probe employs ball bearings in it. When mounting the probe, therefore, be sure not to fasten the stem too tight lest the balls should grip the measuring rod and prevent smooth motion.
  - **When mounting the probe on a machine by using a holder, prepare the holder with dimensions and material shown in Fig.4, and fix the probe by fastening a screw with a specified torque of 0.6 N.m (5.1 l b-in).** Use the fitting to be attached to the gauging probe as shown in Fig.3. Especially, the length of the M4 screw section to be inserted into the gauging probe should be 4.5mm/0.18" or less. If the screw is too long, the gauging probe may be damaged.
- Note: The measuring accuracy depends on the mounting parallelism. Design and machine the gauge holder to hold the mounting parallelism of the gauge to the measuring surface to within 0.3mm/100mm (0.012"/0.4").
- Fastening torque of the measuring feeler: 0.05 to 0.06 N-m/0.425 to 0.51 l b-in.

### Names of parts

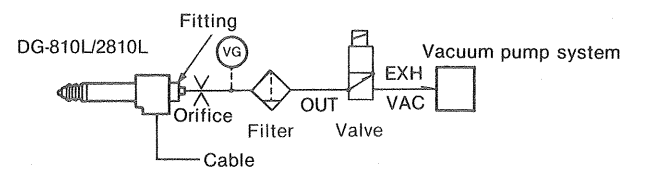
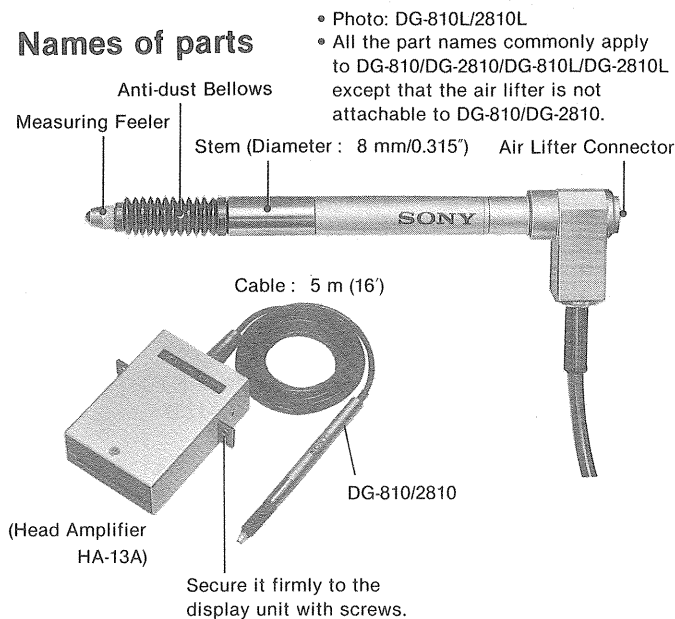


Fig.1 Air-pass system

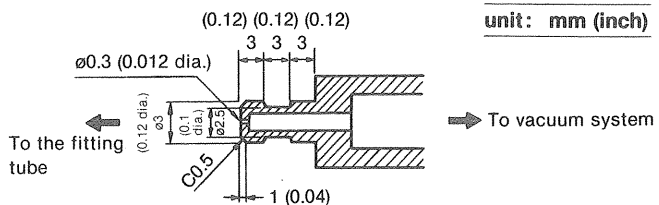


Fig.2 Dimensions of Orifice

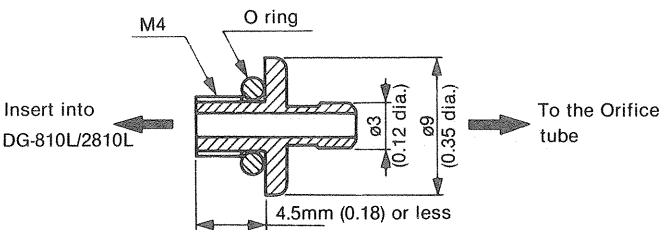


Fig.3 Dimensions of Fitting

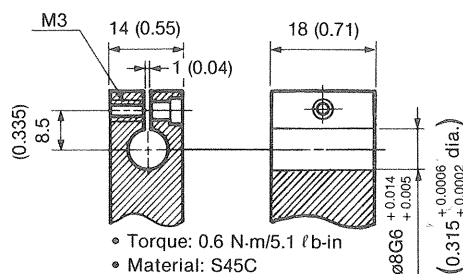


Fig.4 Dimensions and Tolerance of Probe Holder (Example)

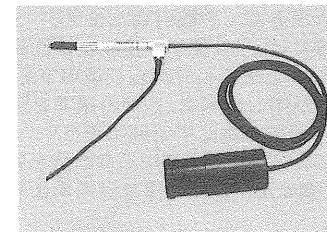
### Specifications \* Length in ( ) for DG-810L/DG-2810L

- Measuring range : From 0 to 10 mm/0.39"
- Measuring accuracy : 0.002 mm/0.00008"
- Measuring pressure :
  - Downward : 0.6±0.3N/0.132±0.066l b
  - Horizontal : 0.5±0.3N/0.110±0.066l b
  - Upward : 0.4±0.3N/0.088±0.066l b
- Usage temperature : 0°C~50°C
- Outside temperature : -20°C~60°C
- Protection against dust : By bellows
- Cable length : 5 m/16'
- Stem diameter & length : ø8<sup>0</sup><sub>-0.009</sub> mm × 113 mm (111 mm) : 0.315" dia. <sup>0</sup><sub>-0.0004</sub> × 4.45" (4.37")
- Weight : Approx. 0.4 kg/14.1 oz
- Weight (less cable) : Approx. 0.04 kg/1.4 oz
- Measuring feeler : Carbide ball (DZ-123) : Secured by M2.5 mm screw.

Note) Accuracy and measuring forces given above are those obtained at 20°C

### Optional Accessories

- **Air Lifter DZ-801**  
The air lifter is available for manual operation of the measuring rod.  
Use it in combination with DG-810L/DG-2810L

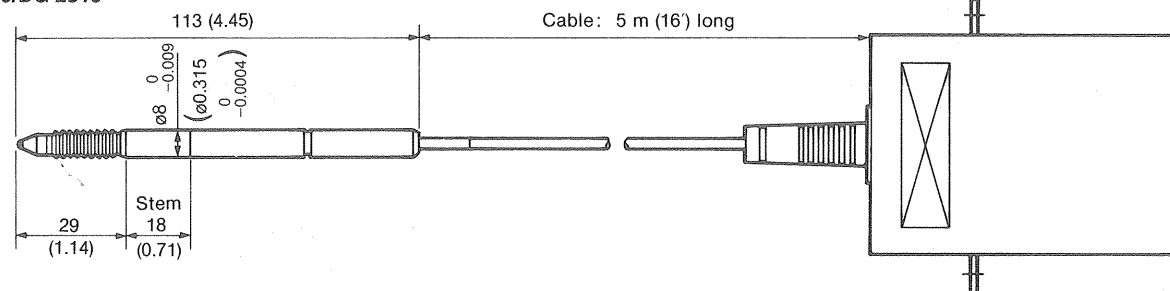


- **Mounting Bush DZ-811** is optionally available to mount the probe on Probe Stand DZ-501.

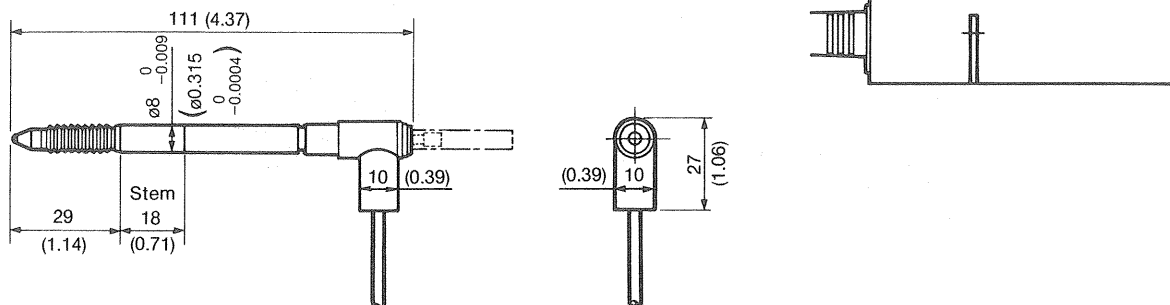
### Outside Dimensions

unit: mm (inch)

#### DG-810/DG-2810



#### DG-810L/DG-2810L



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