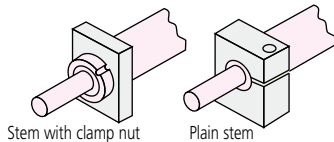


Linear Gages

Head

Plain Stem and Stem with Clamp Nut

The stem used to mount a linear gage head is classified as a "plain type" or "clamp nut type" as illustrated below. The clamp nut stem allows fast and secure clamping of the linear gage head. The plain stem has the advantage of wider application and slight positional adjustment in the axial direction on final installation, although it does require a split-fixture clamping arrangement or adhesive fixing. However, take care so as not to exert excessive force on the stem.



Measuring Force

This is the force exerted on a workpiece during measurement by the contact point of a linear gage head, at its stroke end, expressed in Newtons.

Comparative Measurement

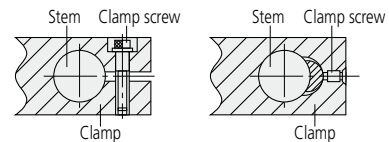
A measurement method where a workpiece dimension is found by measuring the difference in size between the workpiece and a master gage representing the nominal workpiece dimension.

Precautions in Mounting a Gage Head

- Insert the stem of the gage into the mounting clamp of a measuring unit or a stand and tighten the clamp screw.
- Notice that excessively tightening the stem can cause problems with spindle operation.
- Never use a mounting method in which the stem is clamped by direct contact with a screw.
- Never mount a linear gage by any part other than the stem.
- Mount the gage head so that it is in line with the intended direction of measurement. Mounting the head at an angle to this direction will cause an error in measurement.
- Exercise care so as not to exert a force on the gage through the cable.

Precautions in Mounting a Laser Hologage

To fix the Laser Hologage, insert the stem into the dedicated stand or fixture.



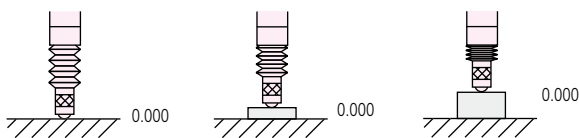
Recommended hole diameter on the fixing side: 15mm +0.034/-0.014

- Machine the clamping hole so that its axis is parallel with the measuring direction. Mounting the gage at an angle will cause a measuring error.
- When fixing the Laser Hologage, do not clamp the stem too tightly. Over-tightening the stem may impair the sliding ability of the spindle.
- If measurement is performed while moving the Laser Hologage, mount it so that the cable will not be strained and no undue force will be exerted on the gage head.

Display Unit

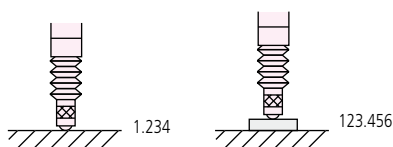
Zero-setting

A display value can be set to 0 (zero) at any position of the spindle.



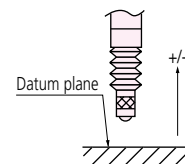
Presetting

Any numeric value can be set on the display unit for starting the count from this value.



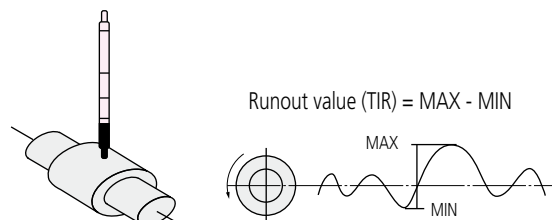
Direction changeover

The measuring direction of the gage spindle can be set to either plus (+) or minus (-) of count.



MAX, MIN, TIR Settings

The display unit can hold the maximum (MAX) and minimum (MIN) values, and MAX - MIN value during measurement.



■ Tolerance Setting

Tolerance limits can be set in various display units for automatically indicating if a measurement falls within those limits.

■ Digimatic Code

A communication protocol for connecting the output of measuring tools with various Mitutoyo data processing units. This allows output connection to a Digimatic Mini Processor DP-1VR for performing various statistical calculations and creating histograms, etc.

■ Open Collector Output

An external load, such as a relay or a logic circuit, can be driven from the collector output of an internal transistor which is itself controlled by a Tolerance Judgement result, etc.

■ BCD Output

A system for outputting data in binary-coded decimal notation.

■ RS-232C Output

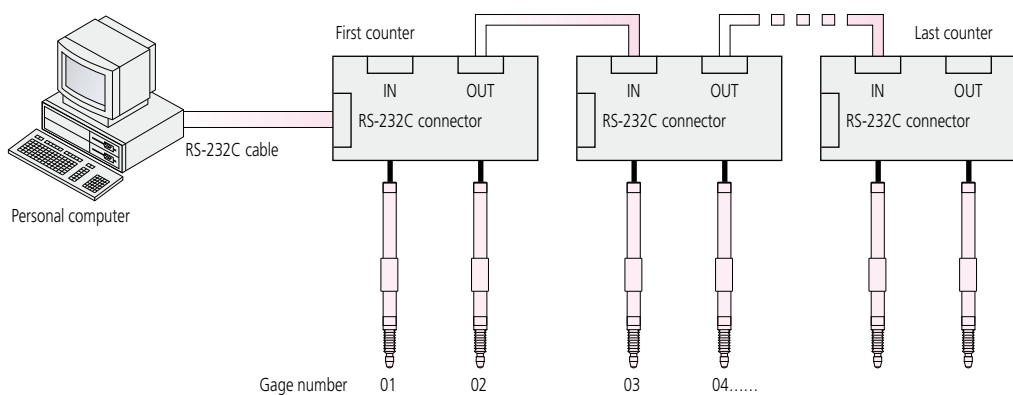
A serial communication interface in which data can be transmitted bi-directionally under the EIA Standards. For the transmission procedure, refer to the specifications of each measuring instrument.

RS Link Function

Multi-point measurement can be performed by connecting multiple EH or EV counters with RS-link cables.

■ RS Link for EH Counter

It is possible to connect a maximum of 10 counter units and handle up to 20 channels of multi-point measurement at a time. For this connection use a dedicated RS link cable No.02ADD950 (0.5m), No.936937 (1m) or No.965014 (2m). (The total length of RS link cables permitted for the entire system is up to 10m.)



■ RS Link for EV Counter

It is possible to connect a maximum of 10* counter units and handle up to 60 channels of multi-point measurement at a time. For this connection use a dedicated RS link cable No.02ADD950 (0.5m), No.936937 (1m) or No.965014 (2m). (The total length of RS link cables permitted for the entire system is up to 10m.)

* The maximum number of counter units that can be connected is limited to 6 (six) if an EH counter is included in the chain.

