

Mitutoyo

Mitutoyo Quality

Linear Displacement Sensors LINEAR GAGE

Sensor Systems



- ABSOLUTE electrostatic capacitance type encoder makes it possible to maintain the reference point even when the power is switched off.
- Excellent protection against dust and splashing water (IP66) on the factory floor.

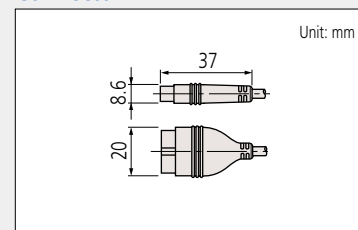


SPECIFICATIONS

Order No.		575-303
Measuring range		12.7 mm
Resolution		10 µm
Measuring accuracy (20 °C)		15 µm
Measuring force	Contact point downwards	2.0 N or less
	Contact point horizontal	1.8 N or less
	Contact point upwards	1.6 N or less
Position detection method		ABSOLUTE electrostatic capacitance type linear encoder
Response speed		Unlimited (not applicable to scanning measurement)
Output		Digimatic output
Mass		Approx. 190 g
Protection Level		Equivalent to IP66 (only gage head)
Contact point		ø3 mm carbide-tipped (fixing screw: M2.5 (P=0.45) x5), standard contact point: 901312
Stem		ø8 mm
Bearing		Plain type
Output cable length		2 m (directly extended from the main unit)
Operating temperature (humidity) ranges		0 to 40 °C (RH 20 to 80%, non-condensing)
Storage temperature (humidity) ranges		-10 to 60 °C (RH 20 to 80%, non-condensing)

Order No.		575-313
Measuring range		0.5 in
Resolution		0.0005 in
Measuring accuracy (20 °C)		0.0008 in
Measuring force	Contact point downwards	2 N or less
	Contact point horizontal	1.8 N or less
	Contact point upwards	1.6 N or less
Position detection method		ABSOLUTE electrostatic capacitance type linear encoder
Response speed		Unlimited (not applicable to scanning measurement)
Output		Digimatic code
Mass		Approx. 190 g
Protection Level		Equivalent to IP66 (only gage head)
Contact point		ø3 mm carbide tipped (fixing screw: 4-48 UNF), standard contact point: 21BZB005
Stem		ø9.52=3/8 in DIA
Bearing		Plain type
Output cable length		2 m (directly extended from the main unit)
Operating temperature (humidity) ranges		0 to 40 °C (RH 20 to 80%, non-condensing)
Storage temperature(humidity) ranges		-10 to 60 °C (RH 20 to 80%, non-condensing)

Connector



Optional Accessories

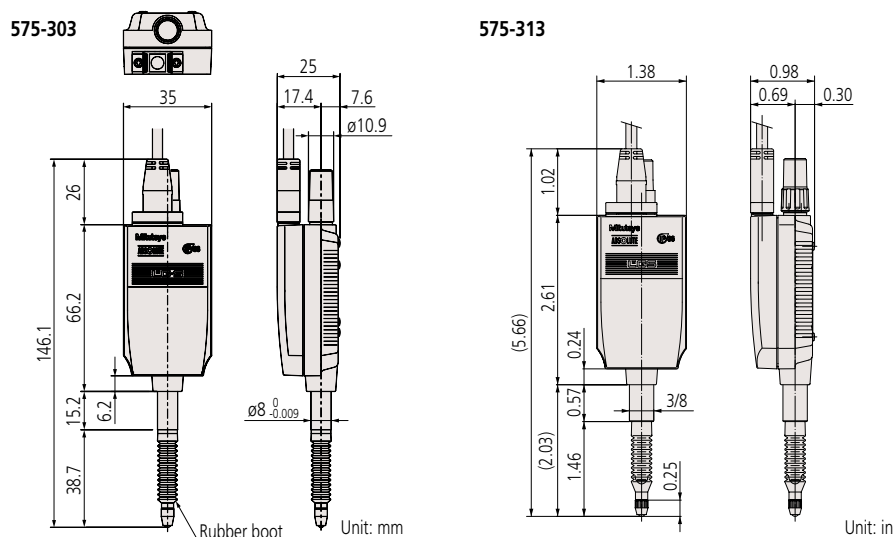
- Rubber boot (spare): **238774**
- Air lifter (metric): **903594**
- Air lifter (inch): **903598**
- SPC cable extension adapter: **02ADF640**
- Extension cable for Digimatic gages (0.5 m): **02ADD950**
- Extension cable for Digimatic gages (1 m): **936937**
- Extension cable for Digimatic gages (2 m): **965014**

Note: When connecting an extension cable, an SPC cable extension adapter is required.

Custom order example

- Measuring force change
- Cable length change
- Connector change

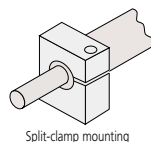
DIMENSIONS



Gage Head Mounting Fixtures

Plain Stem

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.

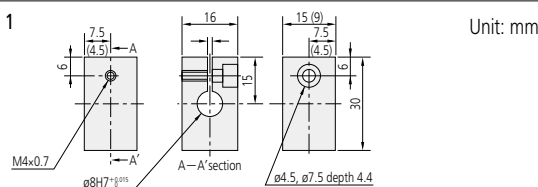


Split-clamp mounting

Example of plain-stem mounting

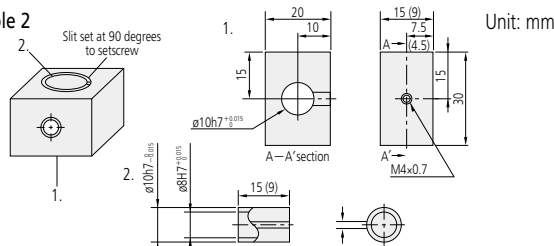
- The recommended clamping torque is 0.4 to 0.5 Nm. (Example1)
Overly tightening the stem will prevent smooth movement of the spindle.

Example 1



Unit: mm

Example 2



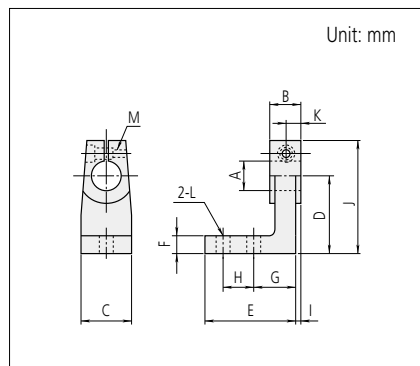
Unit: mm

Split-clamp mounting fixtures

- To mount a gage head with an 8 mm diameter stem, use a 9.5 mm diameter stem bushing.

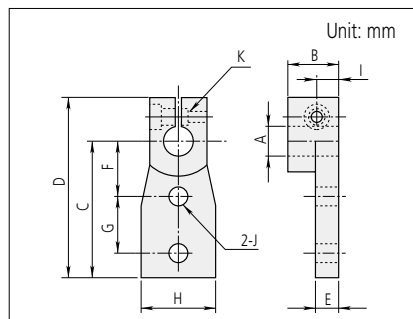
546288  ø9.5×15

546343  ø9.5×8.5



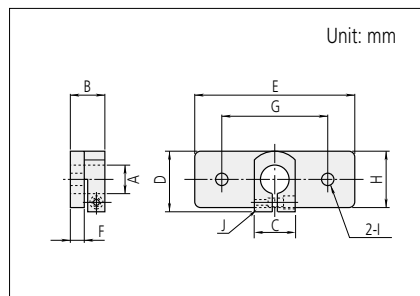
Unit: mm

	A-2	B-2
Order No.	303560	303569
A	ø9.5	ø9.5
B	9	14.5
C	15	20
D	20	30
E	23	35
F	5	7
G	11	16
H	8	12
I	1.5	3.25
J	32.5	42.5
K	4.5	7.25
L	ø3.4	ø4.5
M	M3×0.5	M3×0.5



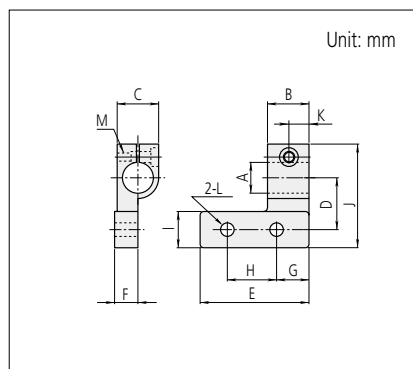
Unit: mm

	A-6	B-6
Order No.	303564	303573
A	ø9.5	ø9.5
B	9	14.5
C	30	40
D	42.5	52.5
E	4	6
F	15	18
G	10	15
H	15	20
I	4.5	7.25
J	ø3.4	ø4.5
K	M3×0.5	M3×0.5



Unit: mm

	A-4	B-4
Order No.	303562	303571
A	ø9.5	ø9.5
B	9	14.5
C	15	15
D	20	22.5
E	40	60
F	3	5
G	30	40
H	15	20
I	ø3.4	ø4.5
J	M3×0.5	M3×0.5



Unit: mm

	A-8	B-8
Order No.	303566	303575
A	ø9.5	ø9.5
B	9	14.5
C	15	15
D	15	20
E	25	40
F	8.5	8.5
G	7.5	10
H	10	20
I	10	15
J	32.5	40
K	4.5	7.25
L	ø3.4	ø4.5
M	M3×0.5	M3×0.5

Optional Accessories

Spare rubber boot

Protects the spindle bearing of a gage head from dust.



SPECIFICATIONS

Order No.	Compatible Gage head
21HAA331	LG100/LG200 (for 10 mm range model)
21HZA176	LG100 (for 25 mm range model)
21HZA184	LG100 (for 50 mm range model)
238774	LGS-1012P

Extension signal cable for LG100/LG200

A signal cable from the head to the receiver circuitry can be extended.
Maximum number of connectable cables is limited to 3, and the maximum total extension length is limited to 20 m.
Custom order: Flexible cable type
Custom order: Customizable cable length



SPECIFICATIONS

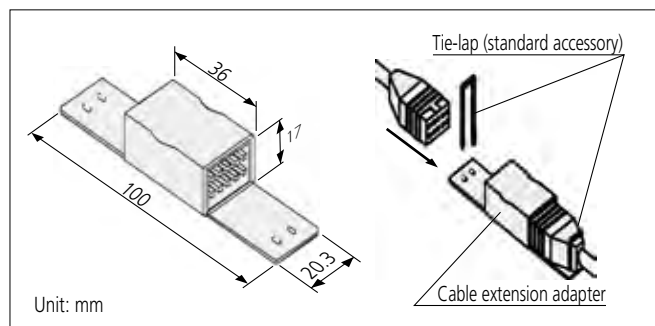
Order No.	Cable length
21HZA197	5 m
21HZA198	10 m
21HZA199	20 m

Digimatic cable extension adapter

02ADF640 Mass: 15 g

This adapter can be used when the **LGS-1012P** gage head is to be connected to a display unit where the provided cable length is not sufficient for this connection.

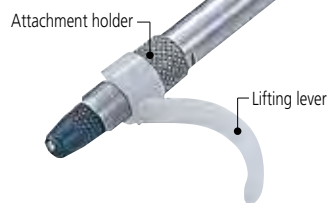
- Available for **LGS-1012P**.
- Available for **EC-101D**, **EH-102D**
- Do not join more than one piece of this product together for use.



Lifting lever and attachment holder

This holder is attached between the spindle and the contact point for fixing the lifting lever.

Example of attaching the lifting lever



SPECIFICATIONS

Order No.	
02ADG181	Attachment holder
137693	Lifting lever

Extension cable for Digimatic gages

Order No.	Cable length
02ADD950	0.5 m
936937	1 m
965014	2 m

