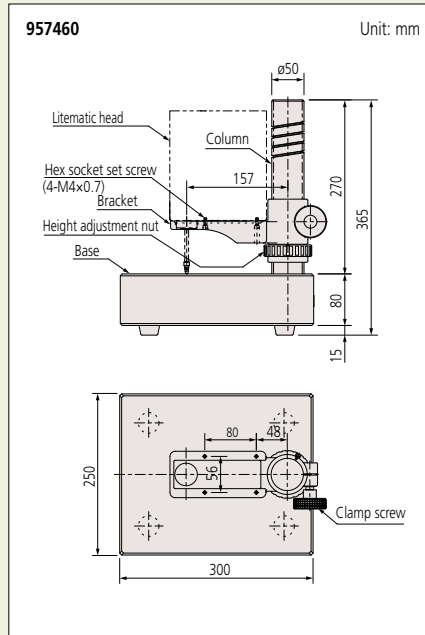


VL-50-B/50S-B Litematic SERIES 318 — High-accuracy/resolution Measuring Machine

Optional Stand for VL-50S-B



Optional Accessories

- Foot switch: **937179T**
- Dedicated stand: **957460***1
- SPC cable (1 m): **936937***2
- SPC cable (2 m): **965014***2
- VL weight part: **02AZE375***3
- Recommended contact points:
 - Shell type: **101118** (Approx. 0.02 N)*4
 - Carbide tipped spherical contact point, $\phi 7.5$: **120059** (Approx. 0.03 N)*4
 - Carbide tipped spherical contact point, $\phi 10.5$: **120060** (Approx. 0.06 N)*4
 - Carbide tipped needle contact point, $\phi 0.45$: **120066** (Approx. 0.01 N)*4

- *1 Only **VL-50S** is available.
- *2 Refer to page G-18 for details of the RS link.
- *3 Not applicable to **VL-50-100-B** and **VL-50S-100-B**
- *4 Values in parentheses indicate the measuring force of a 0.01 N model fitted with the respective optional points

- With a measuring force of only 0.01 N, the Litematic is ideal for measuring easily deformed workpieces or high-accuracy components.
- For workpieces for which 0.01 N is insufficient, either the 0.15 N or 1 N model is recommended.
- The motor-driven spindle moves up/down and stops when the contact point touches the workpiece. Then the maximum, minimum and runout values are measured under a constant force.

- High resolution of 0.01 μm , and wide measuring range of 50 mm.
- Measuring system **VL-50-B**, integrated display type, and **VL-50S-B**, a separate display type, are available.
- The measuring table supplied with **VL-50-B** is ceramic, which is corrosion free, for easier maintenance and storage.
- The spindle is made of low thermal expansion material.



SPECIFICATIONS

Shown with optional granite base, **957460**

Model	VL-50-B	VL-50-15-B	VL-50-100-B	VL-50S-B	VL-50S-15-B	VL-50S-100-B
Order No.	318-221-10A	318-222-10A	318-223-10A	318-226-10A	318-227-10A	318-228-10A
Measuring range	0 to 50 mm (0 to 2 in)					
Resolution	0.01/0.1/1.0 μm (0.000005 in/0.000005 in/0.00005 in)					
Display unit	8 digits/14 mm (0.6 in) character height (without signs)					
Scale type	Reflection type linear encoder					
Stroke	51.5 mm (2 in) (when using a standard contact point)					
Measuring accuracy (20 °C)*1	(0.5 + L/100) μm L=arbitrary measuring length (mm)					
Accuracy guaranteed temperature*2	20 \pm 1 °C					
Repeatability*1	$\sigma=0.05 \mu\text{m}$					
Measuring force*1	0.01 N	0.15 N*3	1 N*3	0.01 N	0.15 N*3	1 N*3
Feed speed	Approx. 2 mm/s (0.08 in/s) or 4 mm/s (0.16 in/s) (changeable by parameter)					
Fast feed	Approx. 8 mm/s (0.3 in/s)					
Contact point	$\phi 3$ mm carbide tipped (fixing screw: (M2.5x0.45), standard contact point: 901312)					
Measuring table	$\phi 100$ (ceramic, grooved, removable)					
Input	Foot switch input (when optional foot switch is used) External Control					
Output	Digimatic output/RS-232C output (changeable by parameter)					
Rating Power consumption	Max. 18W (12V, 1.5A)					
Standard Accessories	AC adapter: 357651 , Grounding wire: 09CAA985 , AC cable: 02ZAA010 Hex wrench (2 pcs. for fixing contact point and for removing fixing bracket)					

*1 Normal measurement using standard contact point.

*2 Under less temperature change, and hot or cold direct air flow should be avoided.

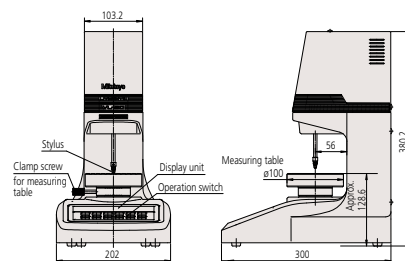
*3 0.15 N, 1 N types are factory-installed option.

Note: Motor life is approximately 100,000 operations, after which replacement is advisable.

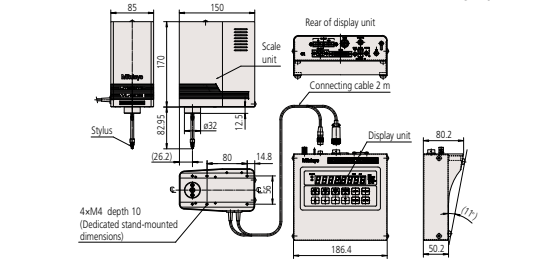
This maintenance factor is particularly important to bear in mind when the machine is used frequently, such as on a production line.

DIMENSIONS

318-221-10A



318-226-10A



Refer to the Litematic Brochure (E13006-US) for more details.