

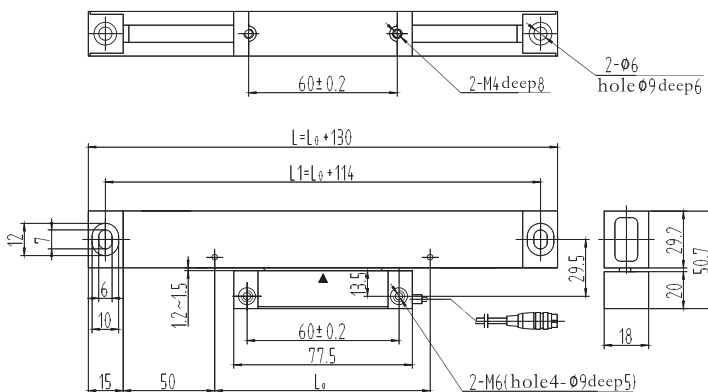
Specifications

- Measuring Lengths: 50mm to 500mm
- Grating pitch: 0.02mm(50LP/mm), 0.04mm(25LP/mm)
- Resolution: 0.0005mm, 0.001mm, 0.005mm, 0.01mm
- Accuracy: $\pm 0.003\text{mm}$, $\pm 0.005\text{mm}$, $\pm 0.01\text{mm}$, $\pm 0.015\text{mm}(20^\circ\text{C } 1000\text{mm})$
- Reference Mark: 1 ref.mark every 50mm or 100mm, Distance-coded
- Output Signals: □TTL, □HTL, EIA-422-A, $\sim 1\text{Vpp}$, $\sim 1\mu\text{App}$
- Max.Traversing Speed: 60m/min, 120m/min
- Operating temperature: 0°C to 50°C
- Storage temperature: -20°C to 70°C

Mounting Diagrams

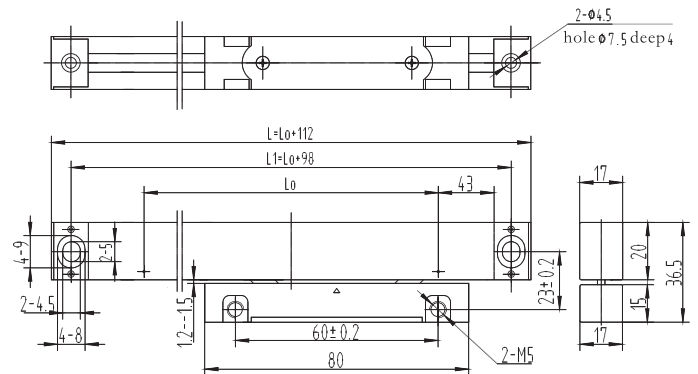
SGC 6 mounting diagram

Measuring length L_0 (mm)	50~500mm
Mounting length L_1 (mm)	$L_1=L_0+2$ (50+7) = L_0+144
Total length L (mm)	$L=L_0+2$ (50+15) = L_0+130



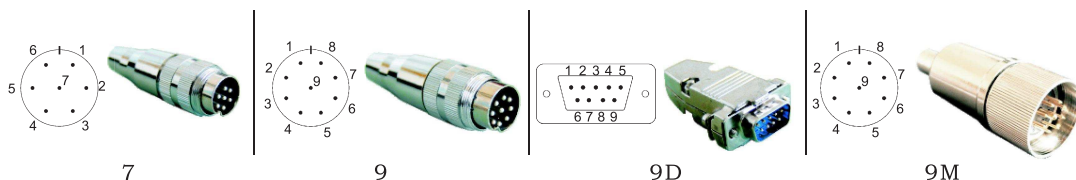
SGC 8 mounting diagram

Measuring length L_0 (mm)	50~400mm
Mounting length L_1 (mm)	$L_1=L_0+2$ (43+6) = L_0+98
Total length L (mm)	$L=L_0+2$ (43+13) = L_0+112



Electrical Connection

Model	Output Signals	No.	1	2	3	4	5	6	7	8	9
7	TTL, HTL	Signals	0V	/	A	B	Vcc/VDD	Z	Shield	/	/
		Color	Black		Blue	Green	Red	Yellow		/	/
9D	TTL, HTL	Signals	Vcc/VDD	0V	A	B	Z	/	Shield	Shield	/
		Color	Red	Black	Blue	Green	Yellow				
9, 9D	EIA-422-A	Signals	A	/B	Vcc	0V	/A	B	/Z	Z	Shield
		Color	White	Brown	Red	Black	Blue	Green	Yellow	Grey	
9D	TTL, connected with CDD Card	Signals	A	/	Vcc	0V	/	B	/	Z	Shield
		Color	Blue	/	Red	Black	/	Green	/	Yellow	
9, 9M, 9D	11uApp 1Vpp	Signals	0°	180°	Vcc	0V	90°	270°	Z	/Z	Shield
		Color	White	Brown	Red	Black	Blue	Green	Yellow	Grey	



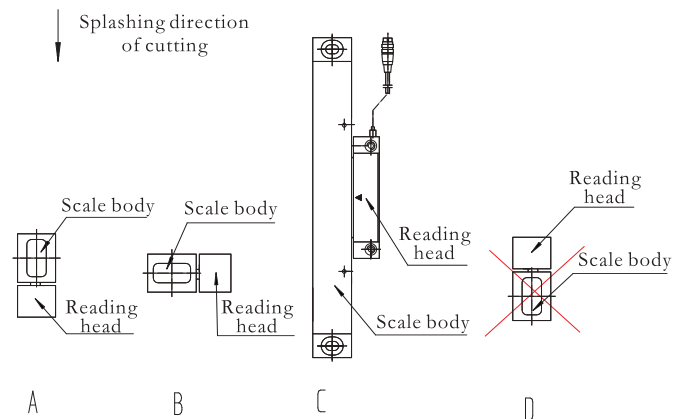
Mounting information

Mounting Guide

- (1) Close to the measuring part to reduce the error.
- (2) Avoid striking the scales.
- (3) Mount on the part with lesser vibration.
- (4) Far way from the heat.

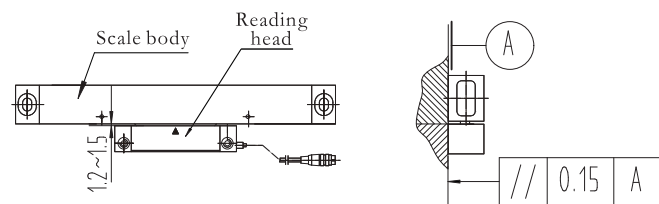
Mounting Mode

- (1) The scales must be mount in the position where the cuttings and coolant could be avoided. A, B, C shown on right are correct, and D should be forbidden.
- (2) It is recommended that the reading head should be mounted on the stable part of the machine tools. The installation will be easier.
- (3) If the output cable of the reading head is required to rotate by 180°, for SGC6 and SGC8, they can be mounted with both faces (rotate the scale body by 180°).



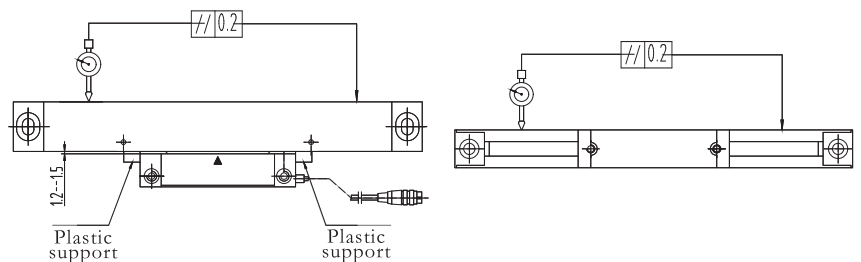
Mounting Base

The scale body and reading head are mounted on relative moving parts of the machine tools separately. Request for the scale mounting base is shown on right.



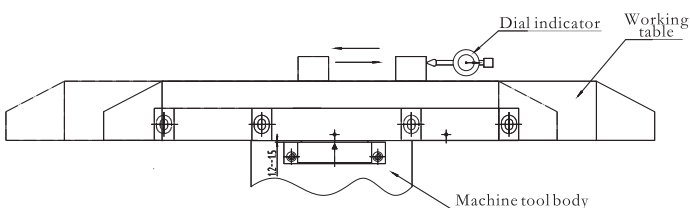
Mounting Accuracy

- (1) Between both orthogonal side faces of the scale body and the machine tool guide, the parallel error must be less than 0.2mm in whole range. Between both adjacent parallel faces of the scale body and the reading head, the gap is 1.2 to 1.5mm.
- (2) After installation, the plastic support of the reading head must be removed.



Check

Switch on the display unit and move the working table, see if the display unit runs normally. Then use a dial or other measuring tools, reset dial indicator and display unit to Zero (memory origin data) at the same time, move working table toward and backward over the full range for several times, then return to the initial position at last. The return to Zero error (or origin data error) must be less than $\pm 0.01\text{mm}$.



Maintenance

- The power must be turned off when the reading head input plug is connected or disconnected with the display unit.
- A protective cover should be used for the scale in order to make it work in the best condition. The cuttings and coolant should be cleaned timely to avoid any ewewinker into the scale body.
- Check periodically, see if the connecting screws of the scale are loose.

Troubleshooting

- The Display Unit does not work when power is turned on.

- (1) Check the cable and the plug to see if it is properly connected.
 - (2) Check the fuse to see if it is blown.
 - (3) Check the voltage supply.
- If there are no problems with the above, please check the circuits according to the Display Unit.

- Nixie light does not work normally.

- (1) Check the cable between the scale and the display unit to see if it is connected well.
- (2) Check the reading head, see if it is properly mounted in compliance with the installation.
- (3) Check the output signals of the scale, see if it works normally.

- Nixie light works intermittently.

- (1) Check the scale, see if it is mounted properly according to the installation, and see if the screws of the scale are loose.
- (2) Check the cable of the reading head, see if it is properly connected with the display unit.
- (3) See if the scale touch another parts while it is in motion.
- (4) See if the machine tool guide moving accuracy is too low to make the grating working gap change.

If the problem can't be solved by the actions above, please contact our company or the agent, don't open the scale yourself.