



DS03/DS05

Precision Level



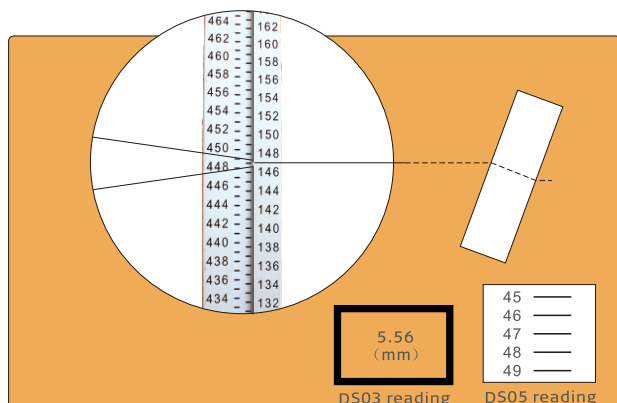
- Built-in parallel-plate micrometer
- High precise reading, 0.1mm is read directly, 0.01mm can be displayed on the screen(DS03)
- Standard deviation of 1km double run: DS03 $\leq \pm 0.3$ mm, DS05 $\leq \pm 0.5$ mm
- Water and dust protection: IP55
- Wide working temperature from -30℃ to +50℃
- Digital reading from DS03 provides higher precision

DS03/DS05 Precision Level

Applications

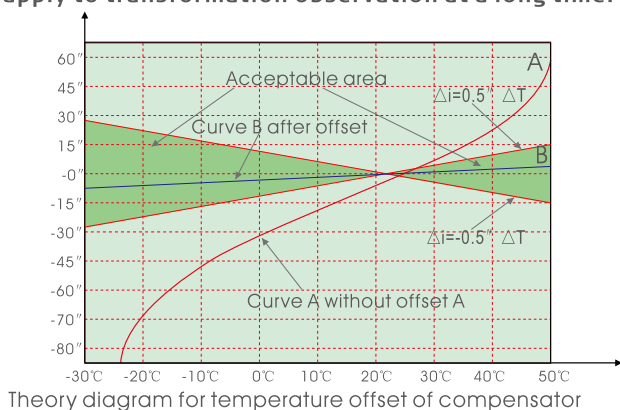
Designed for the highest accuracy in geodesy, engineering and industry. DS03 and DS05 Automatic Levels are adoptable for the first and second geodetic levelling of national networks; They can be used for engineering and deformation surveys, such as height control for engineering projects, deformation and subsidence measurements, checking bridges and structures, monitoring movements, etc. They are also used for general construction engineering and installation of large size machines.

Reading



Compensator

We know that compensator is made up of metal material and glass material. That temperature can affect these materials results in slight changes of compensator, then causes change of $\angle$ angle. The instrument without temperature offset is always not to reach the standard of nation (GB/T10156-1997), In the diagram, the green area which is between the red lines is an acceptable area when the compensator is changed along with the temperature's change (Company standard: $\pm 0.5''/\text{C}$). The red thick line A is a change curve for angle $\angle$ of level without temperature offset. Our DS03/05 levels add a device of temperature offset, and it can correct the change value of angle $\angle$ when changing the temperature. The green thick line B is a change curve for angle $\angle$ after offset, the instrument can be good work in the mal-conditions of large temperature change, especially apply to transformation observation at a long time.



Theory diagram for temperature offset of compensator

Technical data

	DS03	DS05
Telescope		
Image	Erect	
Clear objective aperture	50mm	45mm
Magnification	42×	38×
Field of view at 100m	2.3m	
Shortest focus distance	1.6m	
Multiplication factor	100	
Additive constant	0	
Accuracy		
Standard deviation of 1km double run	$\pm 0.3\text{mm}^*$	$\pm 0.5\text{mm}^*$
Automatic compensator		
Working range	15'	
Setting accuracy	$\pm 0.2''$	$\pm 0.3''$
Setting time	$\leq 2\text{s}$	
Others		
Sensitivity of circular level per 2mm run	5' / 2mm	10' / 2mm
Operating Temp	$-30^\circ\text{C} \sim +50^\circ\text{C}$	
Net Weight	4kg	3kg
Water and dust proof	IP55 (IEC60529)	
Parallel plate micrometer		
Range	10mm	
Interval	0.1mm	
Reading	0.01mm	
Power		
Battery	1900mAh Li-ion Rechargeable	/
Continuous operation time	>10 hours	/
Charging time	3 hours	/

* Depending on staff and levelling technique.

Related products



Illustrations, descriptions and technical specifications are not binding and may change

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