IP64

TSA BOMBAY TOOLS
SUPPLYING AGENCY

Dial Indicators

Comparison measuring instruments which ensure high quality, high accuracy and reliability.

SERIES 2 — Waterproof Type, 0.01 mm & 0.001 mm Graduation

- Waterproof type dial indicators having a bezel with an outside diameter of 57 mm.
- O-rings and rubber bellows are used to prevent water and oil penetration.
- All types come with limit markers and a bezel clamp as standard.
- The bezel clamp can be attached to either the right or left side. These parts can be easily installed and removed without tools.

- The stem and spindle are made of high-strength quench-hardened stainless steel suitable for heavy-duty use.
- A carbide contact point is used.
- Application of a hard coating on the surface of the crystal makes the gage highly scratch- and chemical-resistant.
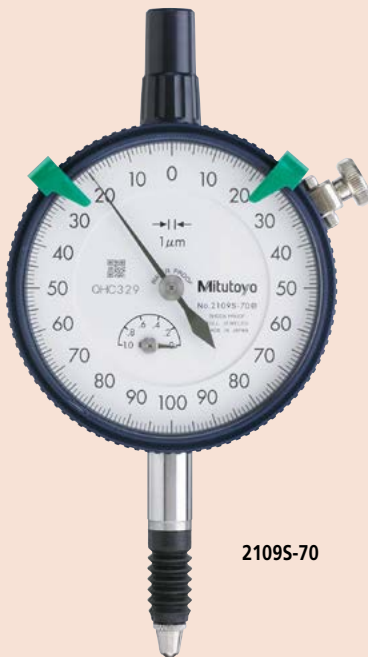
2046S-60

Continuous scale

Graduation: 0.01 mm, Measuring range: 10 mm	**2046S-60** Waterproof

Continuous scale

Graduation: 0.01 mm, Measuring range: 5 mm	**2044S-60** Waterproof

2109S-70

Balanced scale

Graduation: 0.001 mm, Measuring range: 1 mm	**2109S-70** Waterproof Shockproof Jeweled bearing

Continuous scale

Graduation: 0.001 mm, Measuring range: 1 mm	**2110S-70** Waterproof Double scale spacing Shockproof Jeweled bearing

F

Mitutoyo reserves the right to change any or all aspects of any product specification, including prices, designs and service content, without notice.

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Mitutoyo

Dial Indicators

Comparison measuring instruments which ensure high quality, high accuracy and reliability.

DIMENSIONS

ISO/JIS Type

Unit: mm

Order No.	A	B	C	D	E	F	G	H	I	Mass (g)	
										w/lug	Flat-back
2046S-60	48.8	70	57	17.7	20	12.3	29.2	52	7.6	146	137
2044S-60	48.8	70	57	17.7	20	12.3	29.2	52	7.6	147	138
2109S-70	48.8	65.3	57	17.7	20	12.3	24.5	52	7.6	149	140
2110S-70	48.8	67.5	57	17.7	20	12.3	26.7	52	7.6	150	141

Note 1: Refer to pages F-57 to F-60 for details of contact points.
Note 2: If the contact point of the waterproof model is replaced, the water resistance cannot be guaranteed.

FEATURES

Metric

Order No.							
w/lug	Flat-back						
2046S-60	2046SB-60	✔				✔	
2044S-60	2044SB-60	✔				✔	
2109S-70	2109SB-70			✔	✔	✔	✔
2110S-70	2110SB-70	✔		✔	✔	✔	✔

SPECIFICATIONS

Metric

ISO/JIS type

Order No.		Graduation (mm)	Range (range/rev) (mm)	Maximum permissible error (MPE) (µm)						Dial reading	Measuring force (N)
w/lug	Flat-back			Indication error				Hysteresis	Repeat-ability		
				1/10 Rev	1/2 Rev	1 Rev	Measuring range				
2046S-60	2046SB-60	0.01	10 (1)	5	9	10	13	3	3	±0-100	2.5 or less
2044S-60	2044SB-60	0.01	5 (1)	5	9	10	12	3	3	±0-100	2.5 or less
2109S-70	2109SB-70	0.001	1 (0.2)	2	3	4	5	2	0.5	0-100-0	2.0 or less
2110S-70	2110SB-70	0.001	1 (0.1)	2	3	4	5	2	0.5	±0-100	2.0 or less

Note: Completed products inspection is performed in the vertical orientation (contact point downward) and the stated accuracy is guaranteed.