

# Dial Indicators

## SERIES 2 — Metric Standard Type

Series 2 dial indicators are Mitutoyo's most popular, and have the widest application.

### FEATURES

- Standard 0.01mm graduation dial gauges having an outer frame with an outside diameter of 57mm. All types come with limit pins and an outer frame clamp as standard.
- The outer clamp and lifting lever (optional) can be attached to either the right or left side. These parts can be easily installed and removed without tools.
- Secured adhesion between the outer frame and crystal as well as the use of an O-ring ensure countermeasures against water and oil permeation via the front face.
- The stem spindle is made of high-strength quench-hardened stainless steel which resists strenuous use.
- A carbide contact point is used.
- The grand gear uses stainless steel that is resistant to wear and deformation.
- Application of a hard coating on the surface of the crystal makes the gauge highly scratch- and chemical-resistant.



-  Shockproof type
-  Waterproof type
-  Long stem type
-  Jeweled bearing type
-  Double scale spacing type
-  w/ coaxial revolution counter
-  Reverse reading type
-  w/ damper at lowest rest point

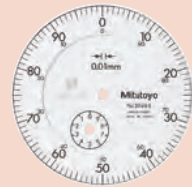
### SPECIFICATIONS

**Metric** Stem dia. ø8mm M2.5 x 0.45 Thread

 ISO/JIS type

Graduation	Range	Range / Rev	Dial reading	Order No.		Accuracy	Measuring force	Features								
				w/ lug	Flat-back			Shockproof	Waterproof	Long stem	Jeweled bearing	Double scale	Coaxial counter	Reverse reading	Damper	
0.001mm	1mm	(0.1mm)	0-100	<b>2110S-10</b>	<b>2110SB-10</b>	±0.005mm	1.5N or less	✓			✓	✓				
0.001mm	1mm	(0.1mm)	0-100	<b>2110S-70</b>	<b>2110SB-70</b>	±0.005mm	2.0N or less		✓		✓	✓				
0.001mm	1mm	(0.2mm)	0-100-0	<b>2109S-10</b>	<b>2109SB-10</b>	±0.005mm	1.5N or less	✓			✓	✓				
0.001mm	1mm	(0.2mm)	0-100-0	—	<b>2109SLB-10</b>	±0.005mm	1.5N or less	✓		✓	✓	✓				
0.001mm	1mm	(0.2mm)	0-100-0	<b>2109S-70</b>	<b>2109SB-70</b>	±0.005mm	2.0N or less	✓	✓		✓	✓				
0.001mm	2mm	(0.2mm)	0-100-0	<b>2113S-10</b>	<b>2113SB-10</b>	±0.007mm	1.5N or less	✓			✓	✓				
0.001mm	5mm	(0.2mm)	0-100-100	<b>2118S-10</b>	<b>2118SB-10</b>	±0.010mm	1.5N or less				✓	✓				
0.001mm	5mm	(0.2mm)	0-100-0	<b>2119S-10</b>	<b>2119SB-10</b>	±0.010mm	1.5N or less				✓	✓				
0.005mm	5mm	(0.5mm)	0-50	<b>2124S-10</b>	<b>2124SB-10</b>	±0.012mm	1.5N or less				✓	✓				
0.01mm	5mm	(1mm)	0-100	<b>2044S</b>	<b>2044SB</b>	±0.012mm	1.4N or less									
0.01mm	5mm	(1mm)	0-100	<b>2044S-09</b>	<b>2044SB-09</b>	±0.013mm	1.4N or less	✓								
0.01mm	5mm	(1mm)	0-100	<b>2044S-60</b>	<b>2044SB-60</b>	±0.012mm	2.5N or less		✓							
0.01mm	5mm	(1mm)	0-50-0	<b>2045S</b>	<b>2045SB</b>	±0.012mm	1.4N or less									✓
0.01mm	10mm	(1mm)	0-100	<b>2046S</b>	<b>2046SB</b>	±0.013mm	1.4N or less									
0.01mm	10mm	(1mm)	0-100	<b>2046SY</b>	<b>2046SYB</b>	±0.013mm	1.4N or less									
0.01mm	10mm	(1mm)	0-100	<b>2046SH</b>	<b>2046SHB</b>	±0.08mm	1.4N or less									
0.01mm	10mm	(1mm)	0-100	—	<b>2046SLB</b>	±0.013mm	1.4N or less				✓					
0.01mm	10mm	(1mm)	0-100	<b>2046S-09</b>	<b>2046SB-09</b>	±0.015mm	1.4N or less	✓								
0.01mm	10mm	(1mm)	0-100	<b>2046S-60</b>	<b>2046SB-60</b>	±0.013mm	2.5N or less		✓							
0.01mm	10mm	(1mm)	0-100	<b>2046S-69</b>	<b>2046SB-69</b>	±0.015mm	2.5N or less	✓	✓							
0.01mm	10mm	(1mm)	0-100	<b>2046S-15</b>	<b>2046SB-15</b>	±0.013mm	0.8N or less*					✓				
0.01mm	10mm	(1mm)	0-100	<b>2310S-10</b>	<b>2310SB-10</b>	±0.015mm	1.4N or less					✓		✓		
0.01mm	10mm	(1mm)	100-0	<b>2902S</b>	<b>2902SB</b>	±0.013mm	1.4N or less									✓
0.01mm	10mm	(1mm)	0-50-0	<b>2047S</b>	<b>2047SB</b>	±0.013mm	1.4N or less									
0.01mm	20mm	(1mm)	0-100	<b>2050S</b>	<b>2050SB</b>	±0.020mm	2.0N or less									✓
0.01mm	20mm	(1mm)	0-100	<b>2050S-60</b>	<b>2050SB-60</b>	±0.020mm	2.5N or less		✓							
0.01mm	20mm	(1mm)	0-100	<b>2050S-19</b>	<b>2050SB-19</b>	±0.020mm	2.0N or less	✓				✓				✓
0.01mm	20mm	(1mm)	0-100	<b>2320S-10</b>	<b>2320SB-10</b>	±0.020mm	2.0N or less					✓		✓		✓
0.01mm	30mm	(1mm)	0-100	<b>2052S</b>	<b>2052SB</b>	±0.025mm	2.5N or less									✓
0.01mm	30mm	(1mm)	0-100	<b>2052S-19</b>	<b>2052SB-19</b>	±0.025mm	2.5N or less	✓				✓				✓
0.01mm	30mm	(1mm)	0-100	<b>2330S-10</b>	<b>2330SB-10</b>	±0.025mm	2.5N or less					✓		✓		✓
0.01mm	30mm	(1mm)	100-0	<b>2952S</b>	<b>2952SB</b>	±0.025mm	2.5N or less								✓	✓

\*Use in a vertical position only (contact point downward).



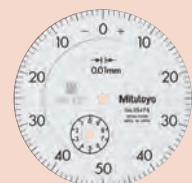
2046S  
2046SH  
2046S-09  
2046S-15  
2046S-80  
2046SLB



2046SY



2046S-60  
2046S-69



2047S

# Dial Indicators

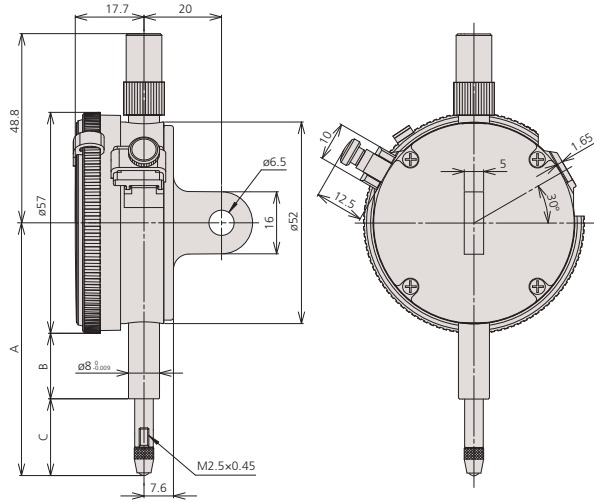
## SERIES 2 — Metric Standard Type



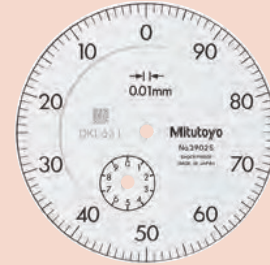
### DIMENSIONS

ISO/JIS  
Type

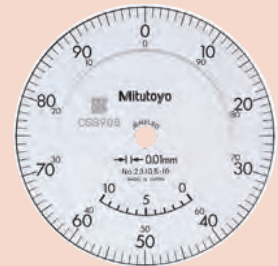
Unit: mm



Order No.	A	B	C
21245-10	60.3	16.9	14.9
21105-10	66.5	16.9	21.1
21105-70	67.5	12.3	26.7
21095-10	60.5	16.9	15.1
21095-70	65.3	12.3	24.5
21135-10	61	16.9	15.6
21185-10	60.3	16.9	14.9
21195-10	60.3	16.9	14.9
20445	65.2	16.9	19.8
20445-09	65.2	16.9	19.8
20445-60	70	12.3	29.2
20455	65.2	16.9	19.8
20465	65.2	16.9	19.8
20465SH	65.2	16.9	19.8
20465LB	85.2	36.9	19.8
20465-09	65.2	16.9	19.8
20465-60	70	12.3	29.2
20465-69	70	12.3	29.2
20465-15	65.2	16.9	19.8
23105-10	65.2	16.9	19.8
29025	65.2	16.9	19.8
20475	65.2	16.9	19.8



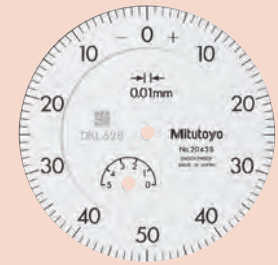
29025



23105-10



20445  
20445-60  
20445-09



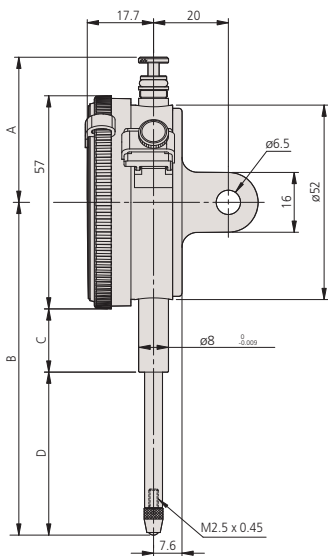
20455

### Optional Accessories

- : Backs (See page F-33.)
- : Contact points (See page F-34.)

ISO/JIS  
Type

Unit: mm



Order No.	A	B	C	D
2050S	38.8	75.2	16.9	29.8
2050S-60	59.8	87.2	12.3	46.4
2050S-19	38.8	75.2	16.9	29.8
2320S-10	38.8	75.2	16.9	29.8
2052S	38.8	88.7	16.9	43.3
2052S-19	38.8	88.7	16.9	43.3
2330S-10	38.8	88.7	16.9	43.3
2952S	38.8	88.7	16.9	43.3