

SERIES 2 — Long Stroke Type

- Long stroke dial indicators with a ø57 mm
- Watertight assembly of bezel and crystal as well as the use of an O-ring prevents water or oil penetration.
- The stem and the spindle are made of highstrength quench-hardened stainless steel suitable for heavy-duty use.
- A carbide contact point is employed.
- The grand gear is made of stainless steel with high resistance to wear and deformation.
- Application of an anti-reflective and hard surface coating improves scale visibility along with scratch and chemical resistance.
- The bezel clamp and lifting lever* (optional) can be attached to either the right or left side. These parts can be easily installed and removed without any tools.
- These cannot be used on water-proof models and models with a measuring range of 30 mm.







Graduation: 0.01 mm, Measuring range: 20 mm 2050A With damper at lowest rest point

2050A-19

2050A-60 **■** Waterproof

Shockproof

→ Jeweled bearing With damper at

lowest rest point



Graduation: 0.01 mm, Measuring range: 30 mm

With damper at

lowest rest point

2052A-19 **Shockproof**

→ Jeweled bearing With damper at lowest rest point

Continuous scale

Graduation: 0.01 mm, Measuring range: 30 mm

2330A-10 With coaxial revolution counter

With damper at lowest rest point

→ Jeweled bearing



Continuous scale



2320A-10 Graduation: 0.01 mm, With coaxial Measuring range: 20 mm revolution

counter With damper at lowest rest point **→ Jeweled bearing**



Measuring range: 30 mm With damper at

lowest rest point



Optional Accessories

Limit hand (2 pcs.): 21AZB195
 Bezel clamp: 21AZB148 (for metric type)
 21RZA065 (for inch type)
 21RZA067 (for 2424A(B)-19)

FEATURES

Metric									
Order No.				\Box	5	64	T		
w/lug	Flat-back	90 ⁰ 10	10 0 10	+1	کا	رسا	-	W	L
2050A	2050AB	~					~		
2050A-60	2050AB-60	~				~			
2050A-19	2050AB-19	~			~		~	~	
2320A-10	2320AB-10	~					~	~	~
2052A	2052AB	~					~		
2052A-19	2052AB-19	~			~		~	~	
2330A-10	2330AB-10	~					~	~	~
2952A	2952AB			~			~		

SPECIFICATIONS

Metric		LISO/JIS type									
Ord	er No.	Cardination	Range	1	Maximum	permissi	ble error (MPE) (µm)	D:-I	Managina
w/lug	Flat-back	Graduation (mm)	(range/rev) (mm)	1/10 Rev	Indication 1/2 Rev	on error 1 Rev	Measuring range	Hysteresis	Repeat- ability	Dial reading	Measuring force (N)
2050A	2050AB	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.0 or less
2050A-60*	2050AB-60*	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.5 or less
2050A-19	2050AB-19	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.0 or less
2320A-10	2320AB-10	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.0 or less
2052A	2052AB	0.01	30 (1)	10	12	15	25	7	5	±0-100	2.5 or less
2052A-19	2052AB-19	0.01	30 (1)	10	12	15	25	7	5	±0-100	2.5 or less
2330A-10	2330AB-10	0.01	30 (1)	10	12	15	25	7	5	±0-100	2.5 or less
2952A	2952AB	0.01	30 (1)	10	12	15	25	7	5	100-0	2.5 or less
			_								

^{* 2050}A-60 and 2050AB-60 are water-proof types that use a rubber bellows to cover the spindle.

Note that the outer diameter of the bellows (ø9.5) is larger than that of the stem (ø8).

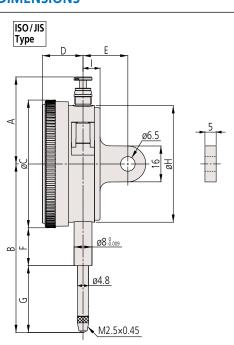
Note: Completed products inspection is performed in the vertical orientation (contact point downward) and the stated accuracy is guaranteed.

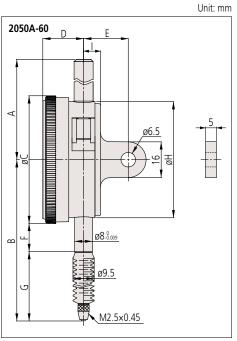
Inch								
Orde	3	3	E	£)		墨		
w/lug	Flat-back	90 0 10	10 0 10	S	1			
2416A	2416AB	~						
2416A-06	2416AB-06	1						
2416A-10	2416AB-10	~				~		
2417A	2417AB		~					
2424A-19	2424AB-19	>		•		•		•
2776A	2776AB	~						
2904A	2904AB				1			

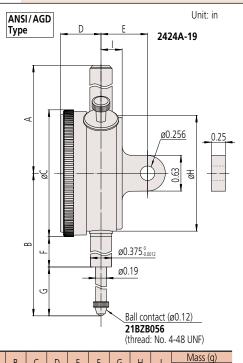
w/lug Flat-back (in) (range/rev) (in) First 1 Rev/2.5 Rev/10 Rev Retrace ability (in) reading force 2416A 2416AB 0.001 1 (0.1) ±0.001/±0.001/±0.002 0.0002 ±0.0002 ±0-100 1.8 or	Inch							[ANS	I/AGD type
2416A 2416AB 0.001 1 (0.1) ±0.001/±0.002 0.0002 ±0.0002 ±0-100 1.8 or	Orde	e r No. Gra				curacy (in)	ıracy (in)		Dial	Measuring
	w/lug	Flat-back	(in)	(range/rev) (in)	First 1 Rev/2.5	Rev/10 Rev	Retrace	ability (in)	reading	force (N)
2416A-06 2416AB-06 0.001 1 (0.1) ±0.001/±0.001/±0.002 ±0.0002 ±0.0002 ±0-100 1.8 or	2416A	2416AB 0	0.001	1 (0.1)	±0.001/±0.0	01/±0.002	0.0002	±0.0002	±0-100	1.8 or less
	2416A-06	2416AB-06 0	0.001	1 (0.1)	±0.001/±0.0	01/±0.002	0.0002	±0.0002	±0-100	1.8 or less
2416A-10 2416AB-10 0.001 1 (0.1) ±0.001/±0.001/±0.002 ±0.0002 ±0.0002 ±0-100 1.8 or	2416A-10	2416AB-10 0	0.001	1 (0.1)	±0.001/±0.0	01/±0.002	0.0002	±0.0002	±0-100	1.8 or less
2417A 2417AB 0.001 1 (0.1) ±0.001/±0.002 0.0002 ±0.0002 0-50-0 1.8 or	2417A	2417AB 0	0.001	1 (0.1)	±0.001/±0.0	01/±0.002	0.0002	±0.0002	0-50-0	1.8 or less
2424A-19 2424AB-19 0.001 2 (0.1) $\pm 0.001/\pm 0.002/\pm 0.003$ 0.00033 ± 0.0002 ± 0.100 2.5 or	2424A-19	2424AB-19 0	0.001	2 (0.1)			0.00033	±0.0002	±0-100	2.5 or less
2776A 2776AB 0.0005 1 (0.05) $\pm 0.0005/\pm 0.0005/\pm 0.0015/\pm 0.002$ 0.0002 ± 0.0001 ± 0.0001 ± 0.50 2.5 or	2776A	2776AB 0.	0.0005	1 (0.05)			0.0002	±0.0001	±0-50	2.5 or less
2904A 2904AB 0.001 1 (0.1) ±0.001/±0.002 0.0002 ±0.0002 100-0 1.8 or	2904A	2904AB 0	0.001	1 (0.1)	±0.001/±0.0	01/±0.002	0.0002	±0.0002	100-0	1.8 or less

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

DIMENSIONS







3/4 0.54 1.37 2.05 0.30

3/4 | 0.54 | 1.37 | 2.05 | 0.30

5/6 2.14 2.35 2.05 0.37

3/4 0.54 1.37 2.05 0.30

w/lug | Flat-back

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	В	_	D	E	F	G	Н	1	Mas	s (g)
Α	D	C	D	Е	F	Ö	П	'	w/lug	Flat-back
38.8	75.2	57	18.1	20	16.9	29.8	52	7.6	149	140
58.2	87.2	57	18.1	20	12.3	31.1	52	7.6	155	146
38.8	75.2	57	18.1	20	16.9	29.8	52	7.6	149	140
38.8	75.2	57	18.1	20	16.9	29.8	52	7.6	150	141
38.8	88.7	57	18.1	20	16.9	43.3	52	7.6	152	143
38.8	88.7	57	18.1	20	16.9	43.3	52	7.6	152	143
38.8	88.7	57	18.1	20	16.9	43.3	52	7.6	153	144
38.8	88.7	57	18.1	20	16.9	43.3	52	7.6	152	143
	38.8 58.2 38.8 38.8 38.8 38.8	88.8 75.2 68.2 87.2 88.8 75.2 88.8 75.2 88.8 88.7 88.8 88.7 88.8 88.7	88.8 75.2 57 88.2 87.2 57 88.8 75.2 57 88.8 75.2 57 88.8 88.7 57 88.8 88.7 57 88.8 88.7 57	88.8 75.2 57 18.1 88.2 87.2 57 18.1 88.8 75.2 57 18.1 88.8 75.2 57 18.1 88.8 88.7 57 18.1 88.8 88.7 57 18.1 88.8 88.7 57 18.1	88.8 75.2 57 18.1 20 88.2 87.2 57 18.1 20 88.8 75.2 57 18.1 20 88.8 75.2 57 18.1 20 88.8 75.2 57 18.1 20 88.8 88.7 57 18.1 20 88.8 88.7 57 18.1 20 88.8 88.7 57 18.1 20 88.8 88.7 57 18.1 20	88.8 75.2 57 18.1 20 16.9 88.2 87.2 57 18.1 20 12.3 88.8 75.2 57 18.1 20 16.9 88.8 75.2 57 18.1 20 16.9 88.8 88.7 57 18.1 20 16.9 88.8 88.7 57 18.1 20 16.9 88.8 88.7 57 18.1 20 16.9 88.8 88.7 57 18.1 20 16.9	88.8 75.2 57 18.1 20 16.9 29.8 88.2 87.2 57 18.1 20 12.3 31.1 88.8 75.2 57 18.1 20 16.9 29.8 88.8 75.2 57 18.1 20 16.9 29.8 88.8 88.7 57 18.1 20 16.9 43.3 88.8 88.7 57 18.1 20 16.9 43.3 88.8 88.7 57 18.1 20 16.9 43.3	88.8 75.2 57 18.1 20 16.9 29.8 52 58.2 87.2 57 18.1 20 12.3 31.1 52 58.8 75.2 57 18.1 20 16.9 29.8 52 58.8 75.2 57 18.1 20 16.9 29.8 52 58.8 88.7 57 18.1 20 16.9 43.3 52 58.8 88.7 57 18.1 20 16.9 43.3 52 58.8 88.7 57 18.1 20 16.9 43.3 52 58.8 88.7 57 18.1 20 16.9 43.3 52	88.8 75.2 57 18.1 20 16.9 29.8 52 7.6 88.2 87.2 57 18.1 20 12.3 31.1 52 7.6 88.8 75.2 57 18.1 20 16.9 29.8 52 7.6 88.8 75.2 57 18.1 20 16.9 29.8 52 7.6 88.8 88.7 57 18.1 20 16.9 29.8 52 7.6 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6	88.8 75.2 57 18.1 20 16.9 29.8 52 7.6 149 88.8 75.2 57 18.1 20 16.9 29.8 52 7.6 155 88.8 75.2 57 18.1 20 16.9 29.8 52 7.6 149 88.8 75.2 57 18.1 20 16.9 29.8 52 7.6 149 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6 152 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6 152 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6 152 88.8 88.7 57 18.1 20 16.9 43.3 52 7.6 152

2416A-10 1.53 3.02 2.24 0.71 3/4 0.54 1.37 2.05 0.30

1.53 3.02 2.24 0.71 3/4 0.54 1.37 2.05 0.30

1.53 3.02 2.24 0.71 3/4 0.54 1.37 2.05 0.30

Order No.

2416A

2417A

2776A

2904A

В C D

2416A-06 1.53 3.02 2.24 0.71

2424A-19 4.65 5.61 2.24 0.71

1.53 3.02 2.24 0.71

1.53 3.02 2.24 0.71

Note: Refer to pages F-57 to F-60 for details of contact points.

