# **Mitutoyo**

# DIGIMATIC INDICATORS ID-C Series

For Calculation, Peak-Value Hold and Bore Gage Applications



## Digimatic Indicators For Calculation Applications



#### **FEATURES**

- Calculation function operates on spindle displacement.
- Entering the appropriate formula factors for a fixture dedicated to the application enables direct measurement readout, thereby eliminating the need for conversion tables previously needed for those applications where fixtures are typically used.
- Peak-Value TIR/MAX/MIN Hold enables GO/±NG judgment for peak value.
- Simple operation of many functions using five buttons and status icons.
- Wide LCD and new analog bar graph are now standard on all models.
- Performs sampling at 50 times per second and detects peak value more correctly.







## Digimatic Indicators For Peak-Value Hold Applications



#### **FEATURES**

- Peak-Value TIR/MAX/MIN Hold enables GO/±NG judgment for peak value.
- Simple operation of many functions using five buttons and status icons.
- Wide LCD and new analog bar graph are now standard on all models. Performs sampling at 50 times per second and detects peak value more correctly.







## Digimatic Indicators For Bore Gage Applications



#### FEATURE:

- Dedicated for inside measurement with minimum value hold and tolerance judgment function.
- Measurement data memory function (9 measurement results can be stored)
- Simple operation of many functions using five buttons and status icons.
- Wide LCD and new analog bar graph are now standard on all models.
- Performs sampling at 50 times per second and detects peak value more correctly.









### **SPECIFICATIONS**

Type/Model	Calculation						
Order No.	543-340B	543-341B 543-342B	543-590B	543-591B 543-592B	543-595B	543-596B	543-597B
Measuring range	12.7 mm	.5" = 12.7 mm	25.4 mm	1" = 25.4 mm	50.8 mm	50.8 mm 2" = 50.8 mm	
Magnification and linearity (overall) *1	0.003 mm	±.00010" / 0.003 mm	0.003 mm	±.00010" / 0.003 mm	0.006 mm	0.006 mm ±.00025" / 0.006 mm	
Hysteresis *1	0.002 mm	.00010" / 0.002 mm	0.002 mm	.00010" / 0.002 mm	0.002 mm	.00010" / 0.002 mm	
Repeatability *1	0.002 mm	.00010" / 0.002 mm	0.002 mm	.00010" / 0.002 mm	0.002 mm		010" / 0.002 mm
Stem diameter	ø81	mm ø9.52mm=.375"(3/8") DIA	ø81		A ø8	mm	ø9.52mm=.375"(3/8") DIA
Display rotate	330°						
Resolution (selectable)	12 steps						
Analog bar display	±20 scales						
Preset	Three Preset values (P1, P2 and P3) can be set and stored.						
Tolerance judgment Peak detection	Four sets of upper and lower limits (P1, P2, P3 and INC) can be set and stored.						
Peak detection	TIR, Max, Min						
SCalculation	Displayed value = $Ax'+B+Cx'^{-1}$ ( $x' = plunqer displacement + offset$ )						
Others	Display value HOLD						
Data output	<u>Diginatic</u>						
Input from PC (Dedicated I/F)	Yes						
Key lock (set from instrument or PC)	Yes						
Parameter lock (set from PC)	Yes						
Detection method	Capacitance-type absolute-linear-encoder						
Response speed	infinite						
Measurement   Normal mode   Peak detection   FAST mode OFF	10 times/sec						
frequency mode FAST mode ON	50 times/sec						
Power supply	CR2032 x 1 pc.						
Battery life (normal use) *2	Approx. 1 year						
Type of back	Flat						
Net weight	170 g 190 g 260 g						

#### **SPECIFICATIONS**

Type/Model	Peak-value hold							
Order No.	543-300	543-300B	543-301	543-301B	543-302	543-302B		
Measuring range	12.	12.7 mm .5" = 1.			2.7 mm			
Magnification and linearity (overall) *1	0.00	0.003 mm			±.00010" / 0.003 mm			
Hysteresis *1	0.002 mm .00010" / 0.002 mm							
Repeatability *1	0.00	0.002 mm .00010* / 0.002 mm						
Stem diameter		ø8mm ø9.52mm			ø9.52mm=.	.375"(3/8") DIA		
Display rotate	330°							
Resolution	0.001/	0.001/0.01 mm .00005/.0001/.0005 "// 0.001/0.01 mm			" // 0.001/0.01 mm			
Analog bar display	±20 scales							
Preset	Three Preset values (P1, P2 and P3) can be set and stored.							
Tolerance judgment	Four sets of upper and lower limits (P1, P2, P3 and INC) can be set and stored.							
Peak detection	TIR, Max, Min							
SCalculation	Ax							
Others	Display value HOLD							
Data output	Digimatic							
Input from PC (Dedicated I/F)	Yes							
Key lock (set from instrument or PC)	Yes							
Parameter lock (set from PC)	Yes							
Detection method	Capacitance-type absolute-linear-encoder							
Response speed	infinite							
Measurement Normal mode	10 times/sec							
frequency mode   FAST mode OFF   FAST mode ON	50 times/sec							
Power supply	CR2032 x 1 pc.							
Battery life (normal use) *2	Approx. 1 year							
Type of back	With lug	Flat	With lug	Flat	With lug	Flat		
Net weight	180 g	170 g	180 g	170 g	195 g	170 g		

### **SPECIFICATIONS**

Type/Model	Bore gage				
Order No.	543-310B	543-311B	543-312B		
Measuring range	12.7 mm	.5" = 12.7 mm			
Magnification and linearity (overall) *1	0.003 mm	±.00010" / 0.003 mm			
Hysteresis *1	0.002 mm	.00010" / 0.002 mm			
Repeatability *1	0.002 mm	.00010" / 0.002 mm			
Stem diameter	ø8i	8mm ø9.52mm=.375"(3/8") DIA			
Display rotate		330°			
Resolution	0.001/0.01 mm	.00005/.0001/.0005" // 0.001/0.01 mm			
Analog bar display	±20 scales				
Preset	Three Preset values (P1, P2 and P3) can be set and stored.				
Tolerance judgment Peak detection	Three sets of upper and lower limits (P1, P2 and P3) can be set and stored.				
Peak detection	Min				
Calculation Others					
	Measurement data memory (9 measurement results can be stored), Display value HOLD				
Data output	Digimatic				
Input from PC (Dedicated I/F)	Yes				
Key lock (set from instrument or PC)	Yes				
Parameter lock (set from PC)	Yes				
Detection method	Capacitance-type absolute-linear-encoder				
Response speed	infinite				
Measurement Normal mode	10 times/sec				
frequency Peak detection mode FAST mode OFF FAST mode ON	50 times/sec				
Power supply	CR2032 x 1 pc.				
Battery life (normal use) *2	Approx. 1 year				
Type of back	Flat				
Net weight	170 g				

<sup>\*1</sup> Does not include quantizing error (£1 count). Valid for resolution set to 0.001mm/".00005" and coefficients A=1, B=0 and C=0.
\*2 When data processors are not connected. Battery life depends on use of the indicator. Use the above value as a guide only. (TIP) Battery life with Peak detection mode and FAST mode ON is about 10 months.

<sup>\*1</sup> Does not include quantizing error (±1 count). Valid for resolution set to 0.001mm/'.00005' and coefficient A=1.
\*2 When data processors are not connected. Battery life depends on use of the indicator. Use the above value as a guide only. (TIP) Battery life with Peak detection mode and FAST mode ON is about 4.5 months.

<sup>\*1</sup> Does not include quantizing error (±1 count). Valid for resolution set to 0.001mm/'.00005".
\*2 When data processors are not connected. Battery life depends on use of the indicator. Use the above value as a guide only. (TIP) Battery life with Peak detection mode and FAST mode ON is about 4.5 months.



Whatever your challenges are, Mitutoyo supports you from start to finish.

Mitutoyo is not only a manufacturer of top-quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver bespoke measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.

# Mitutoyo



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