MeasurLink® ENABLED Data Management Software by Mitutoyo

ABSOLUTE™

PROPRIETARY INSPECTION CERTIFICATE

ABSOLUTE Digimatic Indicator ID-C SERIES 543 — Calculation Type

- Calculation function operates on spindle displacement.
  Entering the appropriate formula factors for a fixture dedicated to the application enables direct measurement readout, thereby eliminating any need for the conversion tables previously needed for those applications where fixtures are typically used.
- Five buttons, status icons, and clear button indications allow for easy operation of a wide variety of functions.
- Wide LCD and new analog bar graph are now standard on all models.
- The ABS (absolute) scale restores the last origin position* automatically when the indicator is turned on, and realizes high reliability by eliminating over-speed errors.
- By using the parameter setup kit (optional) and the dedicated software, the functions and the parameters can be configured using a computer.
- Equipped with a data output port that enables incorporation into measurement networking and statistical process control systems. (Refer to page A-3)

* Refer to "Origin Setting of Digimatic Indicators" on page F-25.

543-342B-10

Functions

- Calculation f (x') =Ax'+B+Cx'$^{-1}$
  (x'=x+offset)
- Peak detection (MAX/MIN)
- Runout (MAX - MIN) Hold

Note: Peak detection
1) Sampling rate: 10 readings/s
2) Capturing speed: 10 µm/s (max.)

Settings can be changed to:
1) Sampling rate: 50 readings/s
2) Capturing speed: 50 µm/s (max.)

- Zero-setting (INC system)
- Preset (ABS system)
- Tolerance judgment
  (3 pairs of ABS, INC memory function)
- Analog bar resolution selectable
- Key lock
- Display hold (when no external device is connected)
- Data output
- External PC setting input
- Display rotation (330°)
- Low battery voltage alarm display
- Error alarm display
- Resolution switching*

Resolution (mm)		
0.0002	0.005	0.1
0.0005	0.01	0.2
0.001	0.02	0.5
0.002	0.05	1

Resolution (in)		
0.00001	0.0002	0.005
0.00002	0.0005	0.01
0.00005	0.001	0.02
0.0001	0.002	0.05

* Since the calculation resolution is one micrometer (0.001 mm), using sub-micrometer resolution settings may result in the 4th-place digit being unreliable, particularly when B is set to a very low value and C=0. It does not change at all with certain combinations of calculation coefficient (for example, A=1, B=C=0). The 3rd-place digit representing micrometers (if displayed) is always reliable.

Optional Accessories

- Lifting
  Lifting lever **21EZA198**
  Lifting knob **21EZA105**
- SPC Cable:
  905338 (1 m)
  905409 (2 m)
- USB Input Tool Direct (2 m): **06AFM380F**
- Input Tool Series
  IT-020U (USB Keyboard Signal Conversion Type): **264-020**
  IT-007R (RS-232C Communication Conversion Type): **264-007**
- Connecting Cables for **U-WAVE-T** (160 mm): **02AZD790F**
  For foot switch: **02AZE140F**
- Digimatic Mini-Processor **DP-1VA LOGGER**: **264-505**
- Parameter setup kit: **21EZA313**

Note: Parameter setting software (can be downloaded for free from the Mitutoyo website) is also required.

SPECIFICATIONS

ISO/JIS type ASME/ANSI/AGD type

Metric

Order No.	Range (mm)	Resolution (selectable)	Maximum permissible error*1 (mm) MPE$_E$*2	Hysteresis MPE$_H$	Repeatability MPE$_R$	Measuring force MPL (N)	Power supply	Battery life (normal use)*4	Net mass (g)
543-340B-10	12.7	12 steps*4	0.003	0.002	0.002	1.5 or less	CR2032x1 pc.	Approx. 1 year	170
543-590B-10	25.4					1.8 or less*3			190
543-595B-10	50.8		0.006			2.3 or less*3			260

Inch/Metric

Order No.	Range	Resolution (selectable)	Maximum permissible error*1 MPE$_E$*2	Hysteresis MPE$_H$	Repeatability MPE$_R$	Measuring force MPL (N)	Power supply	Battery life (normal use)*4	Net mass (g)
543-341B-10	0.5 in /12.7 mm	12 steps*4	±0.0001 in /0.003 mm	0.0001 in /0.002 mm	0.0001 in /0.002 mm	1.5 or less	CR2032x1 pc.	Approx. 1 year	170
543-342B-10									
543-591B-10	1 in /25.4 mm					1.8 or less*3			190
543-592B-10									
543-596B-10	2 in /50.8 mm		±0.00025 in /0.006 mm			2.3 or less*3			260
543-597B-10									

*1 Valid for resolution set to 0.001 mm/0.00005 in and coefficients A=1, B=0 and C=0.
*2 Error of indication for the total measuring range
*3 Applies for a spindle orientation between the spindle pointing vertically downward to the spindle horizontal.
*4 Applies only if not connected to a data processor. Battery life depends on use of the indicator. Use the above value as a guide only.
Note: Flat-back type only.

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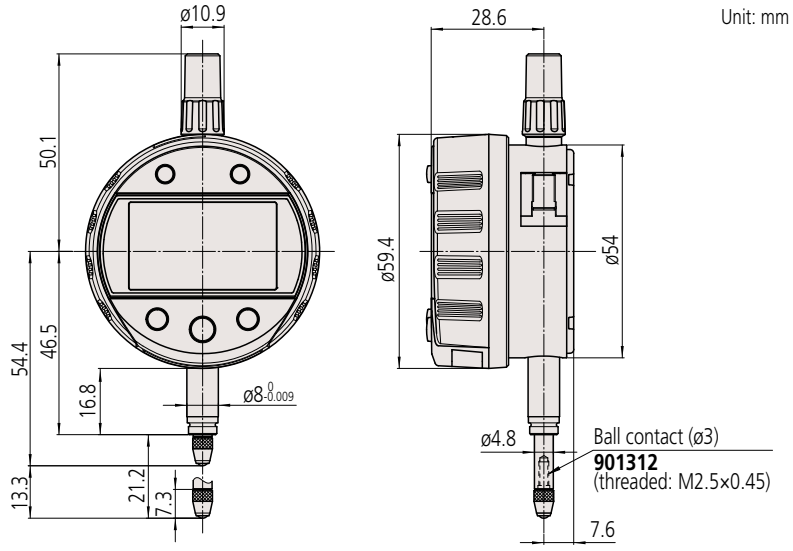
DIMENSIONS

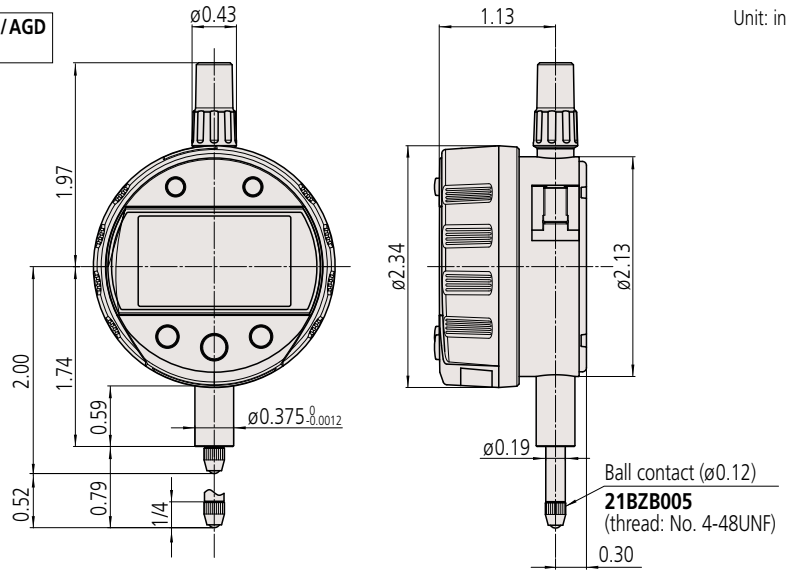
ISO / JIS Type

Unit: mm



ASME / ANSI / AGD Type

Unit: in



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