



Dust- and Water- Protected
www.tuv.com ID: 000007181



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Applicable models:
543-57X

Applicable models:
543-58X

Functions

- Zero-setting (INC system)
- Presetting (ABS system)
- Measuring direction switching
- Tolerance judgment
- LCD readout reversal
- Resolution switching
(For 0.001 mm or 0.0005 in resolution type)
- Data output
- Display value holding
(when no external device is connected)
- Low battery voltage alarm display
- Error alarm display

ABSOLUTE Digimatic Indicator ID-N/B SERIES 543 — with Dust/Water Protection Conforming to IP66

- 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.
- Rated to IP66: can be used satisfactorily even in adverse environments where the indicator is subject to splashing by cutting fluid or coolant.
- Slim body design (body width: only 35 mm) is advantageous in multipoint measurement situations where space is restricted. The LCD readout can also be rotated 180° to allow reading from the most convenient direction.

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

- Succeeded in digitalization of the Back Plunger type widely used for dial indicators for ID-B. A 5 mm-stroke plunger with a higher degree of accuracy has been implemented by adopting a direct reading scale for plunger displacement.
- Tolerance judgment can be performed by setting upper and lower tolerance limits. The judgment result (GO/NO-GO) can be displayed in full-size characters.
- Equipped with a data output port that enables incorporation into measurement networking and statistical process control systems. (Refer to page A-3)



Rated to IP66 water- and dust-proofing standard and oil resistance improved.



Body width 35 mm



LCD readout reversal function

SPECIFICATIONS

Metric

Order No.	Range (mm)	Resolution (mm)	Maximum permissible error (mm)			Measuring force MPL (N)	Remarks
			MPE _E *	Hysteresis MPE _H	Repeatability MPE _R		
543-570	12.7	0.01	0.02	0.02	0.01	2.5 or less	Slim type
543-580	5.0					2.0 or less	Back Plunger type
543-575	12.7	0.01/0.001 (selectable)	0.01/0.003	0.002	0.002	2.5 or less	Slim type
543-585	5.0					2.0 or less	Back Plunger type

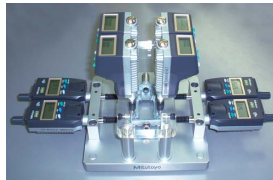
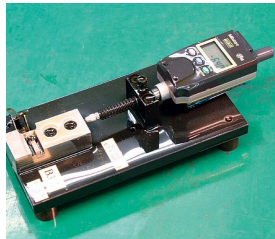
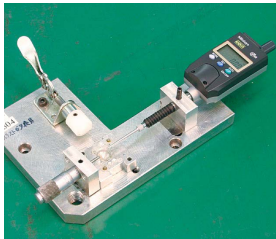
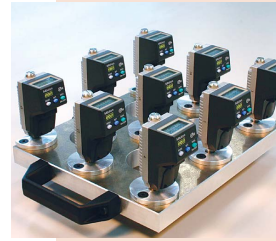
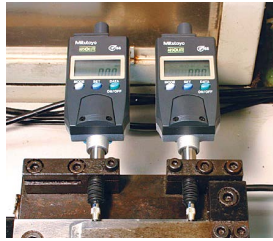
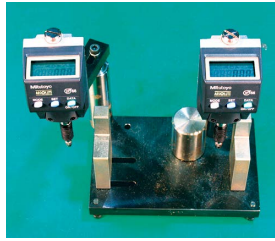
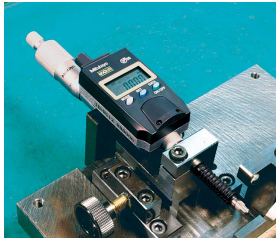
Inch/Metric

Order No.	Range (in)	Resolution	Maximum permissible error			Measuring force MPL (N)	Remarks
			MPE _E *	Hysteresis MPE _H	Repeatability MPE _R		
543-571	0.5	0.0005 in/0.01 mm	±0.001 in/0.02 mm	0.001 in/0.02 mm	0.0005 in/0.01 mm	2.5 or less	Slim type
543-581	0.2					2.0 or less	Back Plunger type
543-576	0.5	0.0005/0.0005 in 0.001/0.01 mm (selectable)	±0.0001 in/0.003 mm	0.0001 in/0.002 mm	0.0001 in/0.002 mm	2.5 or less	Slim type
543-586	0.2					2.0 or less	Back Plunger type

* Error of indication for the total measuring range
Note: One silver oxide button cell (SR44) for monitor included

Digimatic Indicators

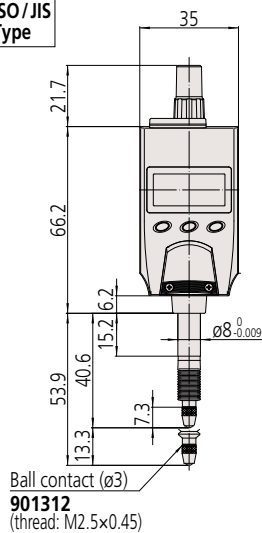
Typical applications



DIMENSIONS

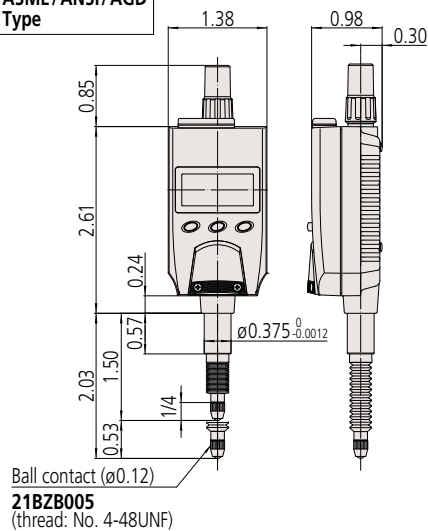
Slim Type ID-N

ISO/JIS
Type



Unit: mm

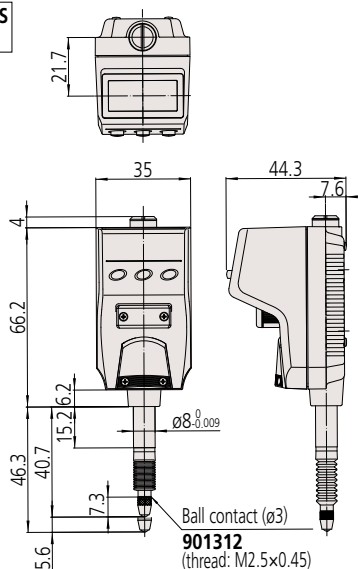
ASME/ANSI/AGD
Type



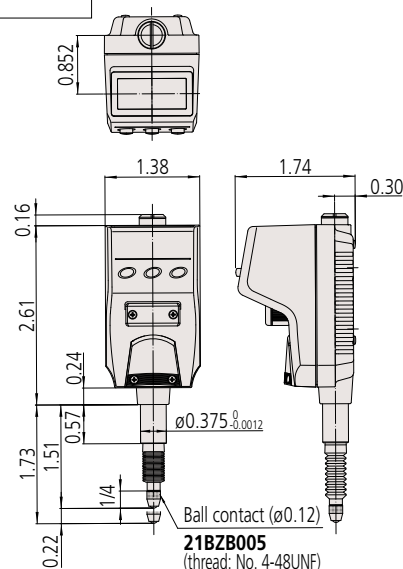
Unit: in

Back plunger Type ID-B

ISO/JIS
Type



ASME/ANSI/AGD
Type



Optional Accessories

- Lug
 - 21EZA145 (ISO/JIS type)
 - 21EZA146 (ASME/ANSI/AGD type)
- Contact points for Mitutoyo's digimatic indicators. (Refer to pages F-57 to F-60 for details.)
- Lifting knob (only for ID-N)
 - 21EZA105 (ISO/JIS type)
 - 21EZA150 (ASME/ANSI/AGD type)
 Spindle can be manually lifted. Remove the spindle cap for ID-N and attach the lifting knob to the spindle. Note that water resistance is not maintained in this configuration.

Typical application using the lifting knob



- Arm for ID-B (made-to-order)
- Rubber boot
 - For oil resistance (NBR) 21EAA423 (for ID-N)
 - 21AAB562 (for ID-B)
 - For durability (silicone) 238774 (for ID-N)
 - 21EAA212 (for ID-B)

- SPC cable:
 - 21EAA194 (1 m)
 - 21EAA190 (2 m)



- USB Input Tool Direct (2 m): 06AFM380G
- 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): 02AZD790G
 - For foot switch: 02AZE140G
- Digimatic Mini-Processor DP-1VA LOGGER: 264-505
- Bifurcated connecting cable with zero-setting terminal:
 - 21EAA210 (1 m)
 - 21EAA211 (2 m)
 Two of the wires inside the cable are separated for zero setting without touching the SET switch on the main body. Use these wires in combination with commercially available switches. Zero setting is performed by briefly connecting these two wires together (less than a second), and ABS preset & recall by connecting for a second or more.