

Digimatic Indicators

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

- Slim body design (body width: only 35 mm). Rated to IP66: Can be used confidently even in adverse environments.
- 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.
- Back plunger design (**ID-B**) is widely used for dial indicators. 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.
- Equipped with a data output port that enables incorporation into measurement networking and statistical process control systems. (Refer to page 09-3)

* Refer to "Precautions for use" on page 07-2.



543-575

543-585

SPECIFICATIONS

Metric		ISO/JIS Type						Remarks
Code No.	Range (mm)	Resolution (mm)	Maximum permissible error (MPE)*1 (mm)				Maximum permissible limit (MPL)	
			Partial measuring range P_{MPE}	Total measuring range T_{MPE}	Hysteresis H_{MPE}	Repeatability R_{MPE}	Measuring force (N)	
543-570	12.7	0.01	0.02	0.02	0.02	0.01	2.5 or less	Slim type
543-580	5.08						2.0 or less	Back Plunger type
543-575	12.7	0.001/0.01 (selectable)	0.003/0.01	0.003/0.01	0.002	0.002	2.5 or less	Slim type
543-585	5.08						2.0 or less	Back Plunger type

Inch / Metric		ASME/ANSI/AGD Type					
Code No.	Range (in)	Resolution	Maximum permissible error (MPE)*1 (in)			Maximum permissible limit (MPL)	Remarks
			Overall*2	Hysteresis	Repeatability	Measuring force (N)	
543-571	0.5	0.0005 in / 0.01 mm	±0.0010	0.0010	0.0005	2.5 or less	Slim type
543-581	0.2					2.0 or less	Back Plunger type
543-576	0.5	0.00005 / 0.0005 in, 0.001 / 0.01 mm (selectable)	±0.00010	0.00010	0.00010	2.5 or less	Slim type
543-586	0.2					2.0 or less	Back Plunger type

• Power source: SR44 battery (1 pc.), **938882** included as standard (for operational checks)

*1 These values apply to normal measurements at 20 °C.

*2 Overall magnification and linearity

Bifurcated connection cable with zero-setting terminal (optional)

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.



SPC cable

Bifurcated connection cable with zero-setting terminal

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

ABSOLUTE[™]

IP66

PROPRIETARY INSPECTION CERTIFICATE

TÜVRheinland
CERTIFIED

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

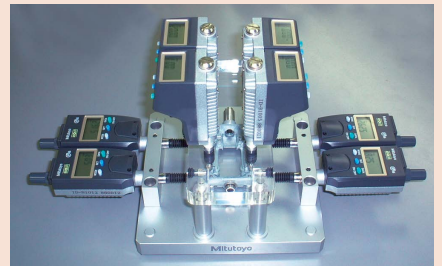
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ID 000007182

Applicable models:
543-57X

Applicable models:
543-58X

Typical application



Functions

- Zero-setting (INC system)
- Presetting (ABS system)
- Measuring direction switching
- Tolerance judgment
- Display readout reversal
- Resolution switching
(For 0.001 mm or 0.00005 in resolution type)
- Data output
- Display value holding
(when no external device is connected)
- Low battery voltage alarm display
- Error alarm display

Optional Accessories

Code No.	Type	Description
264-020	—	USB Input Tool Series USB Keyboard Signal Conversion Type IT-020U
21EAA194	G	Connection cable (1 m)
21EAA190	G	Connection cable (2 m)
06AFM380G	G	USB Input Tool Direct (2 m)
02AZD730G	IP67	U-WAVE-T
02AZD880G	Buzzer	U-WAVE-T
02AZD790G	G	Connection cable for U-WAVE-T (160 mm)
02AZE140G	G	Connection cable for U-WAVE-T For foot switch
264-622	IP67	U-WAVE-TM
264-623	Buzzer	U-WAVE-TM
02AZD810D	—	U-WAVE-R
264-626	IP67	U-WAVE-TMB
264-627	Buzzer	U-WAVE-TMB
02AZF675	—	U-WAVE-TM/TMB mounting bracket: for ID-N (Slim Type)*

* Cannot be used with **ID-B** (Back Plunger Type) since it may apply stress to the cable.

Typical application



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



Optional Accessories

- Lug
21EZA145 (ISO/JIS type)
21EZA146 (ASME/ANSI/AGD type)
- Contact points for Mitutoyo's Digimatic indicators (optional)
Refer to pages 07-63 to 07-68 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



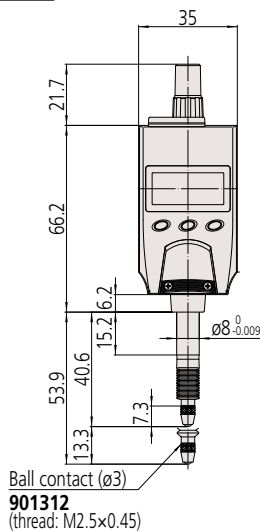
- Rubber boot
For oil resistance (NBR) **21EAA423** (for **ID-N**)
21AAB562 (for **ID-B**)
For durability (silicone) **238774** (for **ID-N**)
21EAA212 (for **ID-B**)

DIMENSIONS

Slim Type ID-N

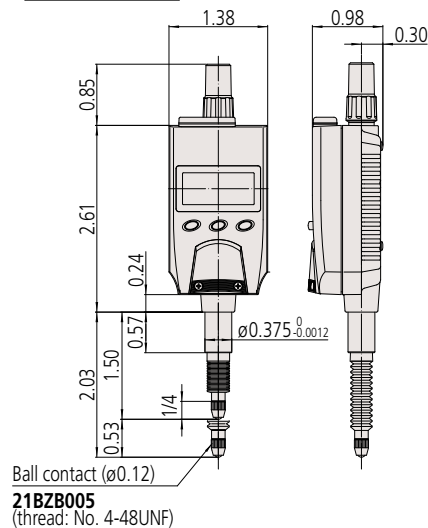
ISO/JIS
Type

Unit: mm



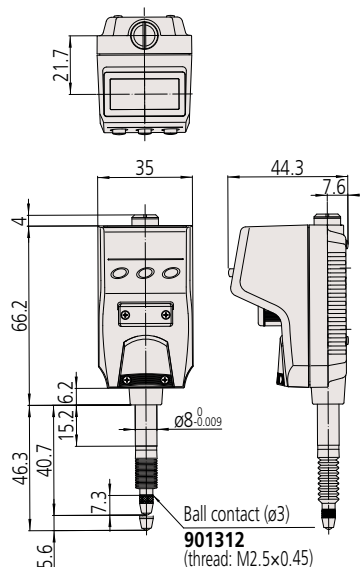
ASME/ANSI/AGD
Type

Unit: in



Back plunger Type ID-B

ISO/JIS
Type



ASME/ANSI/AGD
Type

