

Digimatic Indicators

Comparison measuring instruments which ensure high quality, high accuracy and reliability.

ABSOLUTE Digimatic Indicator ID-SX SERIES 543

MeasurLink ENABLED
Data Management Software by Mitutoyo

- Cost-effective oriented design
ID-SX indicators use a button-type battery (SR44) and come with the minimum of functionality for ease of use. There is a choice of models in the lineup allowing selection of 0.01 mm, 0.001 mm or inch-based measurement resolutions.
- IP53 dust/water protection level
The models listed below also provide IP53 dust/water protection level specifications:
543-794/94B/95/95B/96/96B

- ABS (absolute) scale
These Digimatic indicators employ Mitutoyo's proprietary ABS (absolute) scale, which makes it possible to restore the origin point even if the power is turned off. This eliminates the need to perform origin restoration each time the power is turned on. Furthermore, this scale ensures that overspeed errors do not occur, which improves reliability.
- Equipped with a data output port that enables incorporation into measurement networking and statistical process control systems (refer to page A-3).



SPECIFICATIONS

Order No.	Range (mm)	Resolution (mm)	Accuracy*1 (mm)			Back type	Measuring force (N)	Battery life*3	Dust/Water protection level*4
			Overall*2	Hysteresis	Repeatability				
543-790	12.7	0.001	0.003	0.002	0.002	With lug	1.5 or less	18,000 hours (Continuous use)	IP42
543-790B						Flat			
543-794						With lug			
543-794B						Flat			
543-781						With lug			
543-781B	0.01	0.02	0.02	0.01	Flat	1.5 or less	20,000 hours (Continuous use)	Approx. 5 years (Normal use)	IP42

Order No.	Range	Resolution	Accuracy*1			Back type	Measuring force (N)	Battery life*3	Dust/Water protection level*4	
			Overall*2	Hysteresis	Repeatability					
543-791	0.5 in/ 12.7 mm	0.00005 in /0.001 mm	±0.0001 in /0.003 mm	0.0001 in /0.002 mm	0.0001 in /0.002 mm	With lug	1.5 or less	18,000 hours (Continuous use)	Approx. 5 years (Normal use)	
543-791B						Flat				
543-792						With lug				
543-792B						Flat				
543-793						With lug				
543-793B						Flat				
543-795		0.00005 in /0.001 mm	±0.0001 in /0.003 mm	0.0001 in /0.002 mm	0.0001 in /0.002 mm	0.0001 in /0.002 mm	With lug	2.5 or less	20,000 hours (Continuous use)	Approx. 5 years (Normal use)
543-795B							Flat			
543-796							With lug			
543-796B							Flat			
543-782							With lug			
543-782B							Flat			
543-783	0.0005 in /0.01 mm	±0.0010 in /0.02 mm	0.0010 in /0.02 mm	0.0005 in /0.01 mm	0.0005 in /0.01 mm	With lug	1.5 or less	20,000 hours (Continuous use)	Approx. 5 years (Normal use)	
543-783B						Flat				

*1 These values apply at 20 °C, and quantizing error of ±1 count is excluded.
 *2 Overall magnification and linearity.
 *3 The battery life varies, depending on the number of times the Digimatic indicators are used as well as the way it is used. The values listed above are approximations.
 *4 This is only valid when the data socket cover is in place. Does not apply if the cover is removed, a lifting accessory is attached, or a connecting cable is attached.
 Note: Regarding origin setting, refer to "Origin Setting of Digimatic Indicators" on page F-25.

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Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).

ABSOLUTE™



An inspection certificate is supplied as standard. Refer to page U-11 for details.

Technical Data

- Display: 6-digit LCD, sign
- Usable orientation: All
- Scale type: ABSOLUTE electrostatic linear encoder
- Battery: SR44 (1 pc.), **938882** for initial operational checks (standard accessory)
- Maximum response speed: No limit (except for scanning measurement)

Functions

- Origin set (Zero-setting)
- Direction switching
- Data output
- Low battery voltage alarm display
- Error alarm display

Optional Accessories

- Lifting
 - Lifting lever **21EZA198** (ISO/JIS/DIN Type), **21EZA199** (ASME/ANSI/AGD Type)
 - Lifting knob **21EZA105** (ISO/JIS/DIN Type), **21EZA150** (ASME/ANSI/AGD Type)
 - Lifting cable **540774**
- SPC Cable:
 - 905338** (1 m)
 - 905409** (2 m)
- USB Input Tool Direct (2 m): **06AFM380F**
Note: Please separately purchase **USB-ITPAK** since there is no data output switch on the measurement instrument.
Refer to pages A-13, A-20 to A-22 for details.
- Input Tool Series
 - IT-016U** (USB Keyboard Signal Conversion Type): **264-016-10**
 - IT-007R** (RS-232C Communication Conversion Type): **264-007**
 Refer to page F-66 for details.
- Connecting Cables for **U-WAVE-T** (160 mm): **02AZD790F**
For foot switch: **02AZE140F**
Refer to page F-66 for details.
- Digimatic Mini-Processor **DP-1VA LOGGER: 264-505**
- Contact points for Mitutoyo's dial indicators (Refer to pages F-57 to F-60 for details.)
- Interchangeable backs for 2 series (Refer to page F-61 for details.)
- Measuring stands (Refer to pages F-84 to F-92 for details.)

IP53 dust/water protection level

Level 5: Dust protection

While complete protection against intrusion of dust is not provided, protection is adequate to prevent dust intrusion in amounts that would inhibit the prescribed operations and safety of the electronic equipment.

Level 3: Protection against spraying water

The product suffers no harmful effects when subjected to water sprayed at an angle of up to 60 degrees on both sides.

For details on the dust/water protection level test conditions, refer to IEC 60529: 2001 and JIS C 0920: 2003. IP code is the degree of protection against the intrusion of solid foreign objects and water. Mitutoyo offers a lineup of coolant proof, ID-N/B indicators that have excellent resistance to oil, water and dust and so are suitable for use in environments that include splashing cutting fluid.

Dimensions

