

Digimatic Indicators

MeasurLink ENABLED
Data Management Software by Mitutoyo

ABSOLUTE™



High-performance ABS Digimatic Indicator ID-F SERIES 543 — with Back-lit LCD Screen

- Supports bidirectional communication between the **ID-F** and the computer, enabling data output to a computer and setting of various functions of **ID-F** from a computer.
- The face can be rotated 330° to maintain the ease of use and readability of the characters and the bar even when the **ID-F** is used horizontally or at an angle.
- GO/±NG judgment function: If a judgment result shows an out of tolerance condition, the display backlighting changes from green to red.

Green indication for GO judgment Red indication for ±NG judgment



- An analog bar indicator has been integrated to make upper/lower limit and turnover point reading more comfortable.
- 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.
- Easy-to-read large LCD readout with the height of the characters has been increased from 8.5 mm with the previous model to 11 mm (about 1.5 times as much).
- External power supply type: an AC adapter is a standard accessory. Does not require battery replacement.
- The maximum resolution is 0.5 μm (0.0005 mm). With an indication error corresponding to 0.0025 mm, this indicator can be used in high-precision applications.
- 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.

Technical Data

- Display: 7-digit LCD, sign, and analog bar with 2-color backlight
- Power supply: 5.9 V (via AC adapter) **06AGZ369***
- * To denote your AC power cable add the following suffixes to the order No.: **JA** for UL/CSA and PSE, **D** for CEE, **DC** for CCC, **E** for BS, **K** for KC
- Lifting lever: **21EAA426** (standard accessory)

Functions

- Peak detection (MAX/MIN)
- Runout range measurement (MAX - MIN)
- Zero-setting (INC system)
- Presetting (ABS system)
- Measuring direction switching
- Tolerance judgment
- Resolution switching
- Simple calculation $f(x) = Ax$
- Analog resolution selection
- Data hold (when not connected to an external device)
- Function Lock
- Calibration schedule warning
- Data output
- Display rotation (330°)
- Error alarm display

Optional Accessories

- Lifting knob:
 - 21EZA197** (25.4 mm/1 inch type)
 - 21EZA200** (50.8 mm/2 inch type)
 - Auxiliary spindle spring:
 - 02ACA571** (25.4 mm/1 inch type)
 - 02ACA773** (50.8 mm/2 inch type)
 - SPC cable:
 - 06AGL011** (1 m)
 - 06AGL021** (2 m)
 - USB Input Tool Direct (2 m): **06AGQ001F**
 - Measurement data collection software **USB-ITPAK V3.0: 06AGR543**
 - 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): **02AZG011**
 - For foot switch: **02AZG021**
 - Contact points for Mitutoyo's digimatic indicators*¹
 - Interchangeable backs for SERIES 2 models*²
 - Digimatic Mini-Processor **DP-1VA LOGGER: 264-505**
 - Measuring stands*³
- *¹ Refer to pages F-57 to F-60 for details.
*² Refer to page F-61 for details.
*³ Refer to pages F-84 to F-91 for details.

SPECIFICATIONS

Metric										
Order No.	Range (mm)	Resolution (mm)	Resolution switching (mm)	Maximum permissible error MPE (mm)			Response speed	Measuring force MPL (N)	Power supply	Net mass (g)
				MPE _E *	Hysteresis MPE _H	Repeatability MPE _R				
543-851	25.4	0.0005	0.0005/ 0.001/ 0.01	0.0025	0.002	0.002	Unlimited	1.8 or less	AC adapter (5.9 V)	240
543-853	50.8			0.004				2.3 or less		330
543-857	50.8			0.003						

Inch/Metric										
Order No.	Range	Resolution	Resolution switching	Maximum permissible error MPE			Response speed	Measuring force MPL (N)	Power supply	Net mass (g)
				MPE _E * ¹	Hysteresis MPE _H	Repeatability MPE _R				
543-852	1 in/ 25.4 mm	0.00002 in/ 0.00005 mm	0.00002/ 0.00005/ 0.0001/ 0.0005/ 0.001 in 0.005/ 0.01/ 0.01 mm	±0.0001 in/ 0.0025 mm	0.00008 in/ 0.002 mm	0.00008 in/ 0.002 mm	Unlimited	1.8 or less	AC adapter (5.9 V)	240
543-854	2 in/ 50.8 mm			±0.00016 in/ 0.004 mm				2.3 or less		330
543-858	2 in/ 50.8 mm			±0.00012 in/ 0.003 mm						

* Error of indication for the total measuring range (MPE_E)
Note: Measures precisely Max., Min., and TIR (amplitude (Max - Min) values). (Peak detection speed: 500 times/s)



DIMENSIONS

