

# Digimatic Indicators

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

## ABSOLUTE Digimatic Indicator ID-C SERIES 543 — Signal Output Function Type

- Enables a tolerance judgment to be output to external equipment for a measurement result against user-defined limits. Solid-state switching provides high reliability by avoiding metallic switch contacts.
- Output is enabled by directly connecting to external devices (sequencers, etc., for which a logical invert is available if required). The measurement and judgment results are displayed on the LCD. The judgment result is also indicated by 2 LEDs.
- A peak-detection function is equipped for measuring and judging peak values, such as runout.
- Measurements are absolute (ABS system) relative to an origin point\*<sup>1</sup> as set by the user, which holds indefinitely so does not require resetting at every power-on.
- Provided with a 4 m cable.
- External power supply required is DC5-24 V/100 mA (max).
- Dust-water protection level: Conforms to IP54.

\*<sup>1</sup> Regarding origin setting, refer to "Origin Setting of Digimatic Indicators" on page F-25.



543-350  
IP54

### SPECIFICATIONS

Metric				Accuracy* <sup>2</sup> (mm)			Measuring force (N)
Order No. (w/lug, flat-back)	Range (mm)	Resolution (mm)	Overall* <sup>3</sup>	Hysteresis	Repeatability		
543-350	543-350B	12.7	0.001/0.01	0.003 or less	0.002	0.002	2.5 or less

Inch / Metric				Accuracy* <sup>2</sup>			Measuring force (N)
Order No. (w/lug, flat-back)	Range	Resolution	Overall* <sup>3</sup>	Hysteresis	Repeatability		
543-351	543-351B	0.5 in / 12.7 mm	0.00005/0.0001/0.0005 in / 0.001/0.01 mm	±0.00010 in / 0.003 mm or less	0.0001 in / 0.002 mm	0.0001 in / 0.002 mm	2.5 or less

\*<sup>2</sup> Quantizing error of ±1 count is excluded.

\*<sup>3</sup> Overall magnification and linearity.

Note 1: LCD readout does not rotate.

Note 2: MAX/MIN holding: sample rate is 100 readings/s; max. rate of change of reading is 100 μm/s.

Note 3: Products with an Order No. suffixed "B" have a flat back

Note 4: Standard contact point: **901312** (ISO/JIS type), **21BZB005** (ANSI/AGD type)

ABSOLUTE™



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

### Functions

- Signal output (-NG/OK/+NG, N-ch open drain, logical invert is available)
- Remote control (peak start preset/zero-set)
- Peak detection (MAX/MIN)
- Runout range measurement (Difference between Max. and Min. values)
- Zero-setting (INC system)
- Presetting (ABS system)
- Direction switching
- Tolerance judgment (3 pairs of ABS, INC memory function)
- Resolution switching
- Calculation:  $f(x) = Ax$
- Key lock
- Calibration mode (Signal output in Digimatic code format)
- Error alarm display

### Optional Accessories

- Lifting\*<sup>1</sup>
  - Lifting lever **21EZA198** (ISO/JIS/DIN Type), **21EZA199** (ASME/ANSI/AGD Type)
  - Lifting cable **540774**
  - Lifting knob **21EZA105** (ISO/JIS/DIN Type), **21EZA150** (ASME/ANSI/AGD Type)
- Digimatic power supply unit: **21EZA345**  
To denote your AC power cable add the following suffixes to the order No.: A for UL/CSA, D for CEE, DC for CCC, E for KC. No suffix is required for JIS/100VAC. Used in the calibration mode when executing automatic inspection using i-Checker **IC2000**. In such a case, purchase connecting cable **21EAA194** (1 m), or **21EAA190** (2 m).  
Note: It can't be used as a power supply when using in the normal mode.
- Contact points for Mitutoyo's dial indicators.\*<sup>2</sup>
- Interchangeable backs for Series 2 models. Dust-water protection is not guaranteed. Use the waterproof types of Series 2 for plain backs if required.\*<sup>3</sup>
- Measuring stands (Refer to pages F-84 to F-92 for details).

\*<sup>1</sup> Dust-water protection is not guaranteed.

\*<sup>2</sup> Refer to pages F-57 to F-60 for details.

\*<sup>3</sup> Refer to pages F-61 for details.

### Output signals and LCD display

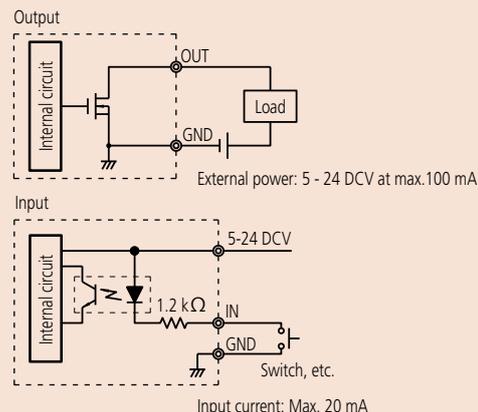
Wire	- NG	OK	+ NG	Composition error
Orange (- NG)	Low	High	High	High
Green (OK)	High	Low	High	High
Brown (+ NG)	High	High	Low	High
LCD	◀	○	▶	"x.xxE" indication

Note: Logical invert is available.

### I/O Specifications

Wire	Signal	I/O	Description
Black	- V (GND)	—	Connected to minus (-) terminal
Red	+ V	—	Power supply (5 - 24VDC)
Orange	- NG	O	Tolerance judgment
Green	OK	O	result output: Only the terminal corresponding to a judgment result is set to the low level.
Yellow	PRESET_RECALL ZERO	I	External input terminal: If the relevant terminal is set to the low level, its signal becomes true.
Blue	PEAK_START	I	
Shield	FG	—	Connected to GND (Earth)

Note: Measurement data cannot be output.



## DIMENSIONS

