Digimatic Indicators

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

ABSOLUTE™ (Refer to page IX for details.)

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

- With the max./min. value holding function, this indicator can output the signal of the GO/±NG judgement result against the peak value set. In contrast to conventional electro-mechanical systems, the judgement is made and indicated by electronic processing of the measurement data obtained. This provides high reliability as there are no electrical contact points to deteriorate.
- Employing Mitutoyo's ABSOLUTE Linear Encoder, the Signal ID-C always displays the spindle "Absolute Position" from the origin at power-on. Also, the reliability has been increased due to the elimination of over-speed errors.
- The judgment signal can be output to an external device, such as a sequencer
- Provided with a 4m cable.
- External power DC 12 – 24V.
- Dust-water protection level: Conforms to IP54

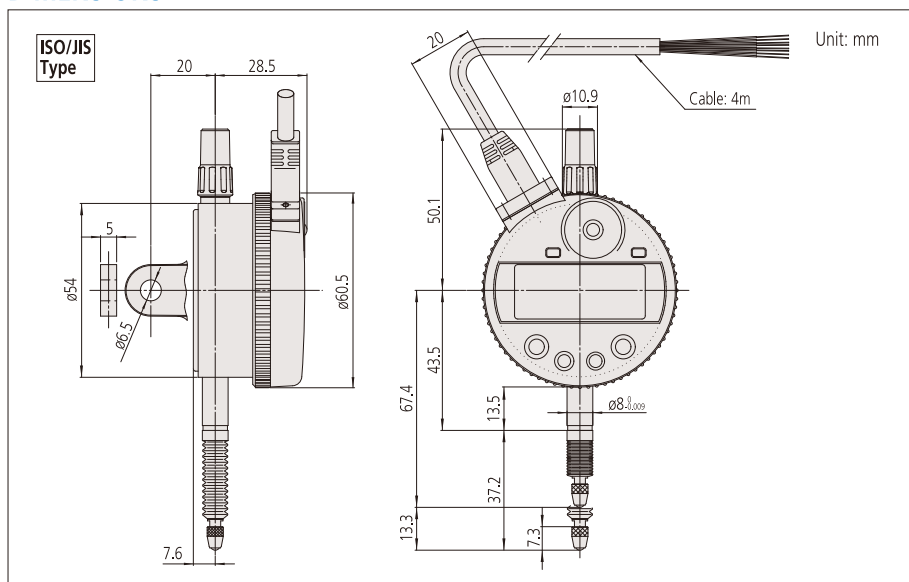*1 Regarding the origin setting, refer to "Origin Setting of Digimatic Indicators" on page F-18.

543-280

IP54

Functions
Signal output (–NG/OK/+NG, NPN open collector), Remote control (hold-reset, preset-recall, zero-set), Preset, Zeroset, GO/±NG judgment, Max/Min/Runout value holding, Counting direction switching, Power ON/OFF, inch/mm conversion (inch/mm models)
Alarm: Counting value composition error, Overflow error, Tolerance limit setting error

Optional accessories
Spindle lifting lever (ISO/JIS type) : **902011***4
Spindle lifting lever (ANSI/AGD type) : **902794***4
Spindle lifting cable: **540774***4
Rubber boot: **02ACA376**
Contact points for Mitutoyo's dial indicators*5
Interchangeable backs for Series 2 models*6
Note: Use the waterproof types of Series 2 for plain backs. Measuring stands
*4 Dust-water protection is not guaranteed.
*5 Refer to pages F-46 to F-49 for details.
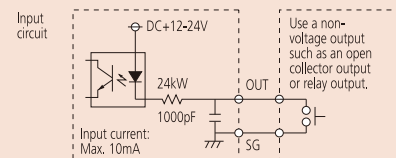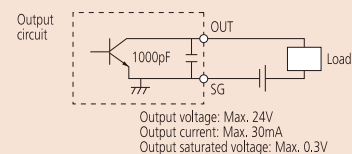*6 Refer to page F-50 for details.

Output pattern

Wire	– NG	OK	+ NG	Composition error
Orange (– NG)	Low	High	High	High
Green (OK)	High	Low	High	High
Brown (+ NG)	High	High	Low	High
LED	Red	Green	Red	Red (blinking)
LCD	<	O	>	"x.xxE" indication

SPECIFICATIONS

Metric   ☐ ISO/JIS type   ☐ ANSI/AGD type

Order No. (w/ lug, flat-back)		Resolution	Range	Accuracy*	Measuring force	Remarks
543-280	543-280B	0.001mm	12.7mm	0.003mm	2.0N or less	—

Inch/Metric

Order No. (w/ lug, flat-back)		Resolution	Range	Accuracy*	Measuring force	Remarks
543-281	543-281B	.00005"/0.001mm	.5"	.00012"	2.0N or less	—
543-282	543-282B	.00005"/0.001mm	.5"	.00012"	2.0N or less	—
543-283	543-283B	.0005"/0.01mm	.5"	.00012"	2.0N or less	—

Notes:
1) LCD readout does not rotate.
2) Max./min. holding: sample rate is 50 readings/sec; max. rate of change of reading is 50μm/sec.
3) Products with an Order No. suffixed "B" have a flat back
4) Standard contact point: **901312** (ISO/JIS type), **21BZA005** (ANSI/AGD type)
* Quantizing error of ±1 count is excluded.

I/O Specifications

Wire	Signal	I/O	Description
Black	– V (GND)	—	Connected to minus (-) terminal
Red	+ V	I	Power supply (12 - 24VDC)
Orange	– NG	O	Tolerance judgment result output: Only the terminal corresponding to a judgment result is set to the low level.
Green	OK	O	
Brown	+ NG	O	
Yellow	PRESET_RECALL ZERO	I	External input terminal: If the relevant terminal is set to the low level, its signal becomes true.
Blue	HOLD_RESET	I	
Shield	FG	—	Connected to GND (The earth)

Note: Measurement data cannot be output.

DIMENSIONS

ISO/JIS Type

20 28.5
5
ø54
ø6.5
20
50.1
ø60.5
43.5
13.5
67.4
13.3
37.2
7.3
7.6
ø10.9
ø8₋₀.₀₀₉
Cable: 4m
Unit: mm

Output circuit

1000pF
OUT
SG
Load

Output voltage: Max. 24V
Output current: Max. 30mA
Output saturated voltage: Max. 0.3V

Input circuit

DC+12-24V
24kW
1000pF
OUT
SG

Input current: Max. 10mA

Use a non-voltage output such as an open collector output or relay output.

Note 1: Dimensions of the inch (ANSI/AGD Type) dial indicator partly differ from those of the metric (ISO/JIS Type) indicator.
Note 2: Inch (ANSI/AGD Type) dial indicators are provided with a stem of 3/8" dia. and #4-48UNF thread mount for the contact point.

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Mitutoyo