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

Absolute System Patented by MITUTOYO

(Refer to page VIII for details.)

FEATURES

- With the Max/Min Value holding function, the Signal ID-C indicator can output a GO/±NG judgment result against the tolerance values set. Substituting for the traditional mechanical/electrical contact, the judgment is carried out by direct numerical comparison with the peak measurement data obtained. This provides high reliability with no drift of tolerance value setting.
- The judgment signal can be output to an external device, such as a sequencer, through the NPN open-collector connection.
- The GO/±NG judgment result is also indicated by a green/red LED and "<, O, >" symbols on the LCD.
- Employing the ABSOLUTE linear encoder, the Signal ID-C always displays the spindle "Absolute Position" from the origin at power-on. Also unlimited response speed eliminates over-speed errors.
- The Signal ID-C achieves IP54 protection level to resist dust and contaminants for safe operation in harsh machine shop environments.

543-280

IP54

Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)
Resolution: 0.001mm, .00005"/0.001mm or .0001"/0.001mm
Display: LCD Character Height 8.5mm
Scale type: ABSOLUTE electrostatic linear encoder
Max. response speed: Unlimited
Measuring force: 2.0N or less
Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
Power supply: DC 12 - 24V±10%
Dust/Water protection level: IP54

Function

Signal output (–NG/OK/+NG, NPN open collector), Remote control (hold-reset, preset-recall, zero-set), Origin-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

902011: Spindle lifting lever* (ISO/JIS type)
902794: Spindle lifting lever* (ANSI/AGD type)
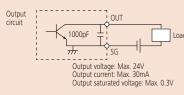**540774**: Spindle lifting cable*
02ACA376: Rubber boot
————: Backs (See page F-40.)
————: Contact points (See page F-36.)
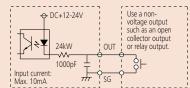*When using the spindle lifting lever/cable, IP54 is not guaranteed.

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

I/O Specifications

Wire	Signal	I/O	Description
Black	– V (GND)	—	Connected to minus (-) terminal
Red	+ V (GND)	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

Output circuit

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

Input circuit

Input current: Max. 10mA

SPECIFICATIONS

☐ ISO/JIS type   ☐ ANSI/AGD type

Metric

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

Inch/Metric

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

DIMENSIONS

Unit: mm

ISO/JIS Type

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 indicator is provided with a stem of 3/8" dia. and #4-48UNF thread mount for the contact point.

Mitutoyo