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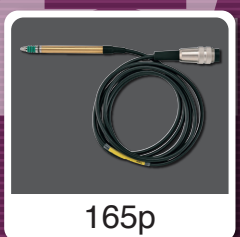
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# MEASUREMENT SENSOR

MEASUREMENT SENSOR
MEASURING TABLE

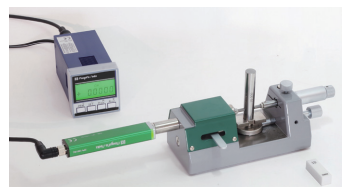
DIGITAL PRECISION INDICATOR **NEW!**

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Achieve wide-range, high-precision measurements with a measuring range of 10mm and a resolution of 0.1  $\mu\text{m}$  when combined with a display unit!  
A digital precision indicator that can also function as a positioning sensor.



DPI-1001SC

DPI-1001LC  
(Low measuring force type)

## &lt;Connection Example&gt;

Digital precision indicator DPI-1001SC, Bench table for outside BTO-25C, LCD display for DPI DPI-DRC, Connection Cable for DPI (L) DPI-CL2C, Mounting Jig BTO-SPC

## USE

- For wide-range, high-precision measurements when mounted on measuring stands or automated machines.

## MATERIAL

- Body: Zinc ● Retention Section: Stainless Steel ● Spindle: Tool Steel ● Probe: Ceramic ● Rubber Bellows: NBR

## FEATURES

- A digital precision indicator that can be connected to a separately sold display unit for precision dimensional measurement and use as a positioning sensor.
- Instantly reads absolute positions upon power-on, eliminating the need for frequent master adjustment and reducing setup time.
- The slim and durable W-bearing structure features metal bearings both above and below the measuring section, installed in a robust die-cast body for exceptional durability. ● The DPI-1001LC is a low measuring force type.

## SPECIFICATIONS

- Position detection method: Optical absolute linear encoder
- Operating temperature range: -10 to 55°C (no condensation or freezing)
- Vibration resistance: 10 to 500Hz, double amplitude 3mm (MAX 20G), 2 hours in XYZ directions
- Probe: Ceramic Ball  $\phi 3.175\text{mm}$  (M2.5 mounting thread)
- Compatible cables: DPI-CS2C (Straight 2m) / DPI-CL2C (L-shaped 2m)
- Compatible display Unit: DPI-DRC

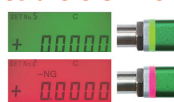
Order No.	Model No.	Measuring Range (mm)	Minimum Reading Value ( $\mu\text{m}$ )	Indication Accuracy ( $\mu\text{m}$ )	Measuring Force (N)	Mechanical Response Speed	Protection Class	Weight
<b>NEW!</b> 152411	DPI-1001SC	10	0.1	1 or less	1.65 or less	5Hz	Equivalent to IP67	80g
<b>NEW!</b> 152412	DPI-1001LC				0.35 or less (when rubber bellows are not installed)	2Hz (when rubber bellows are installed)	Equivalent to IP67 (when rubber bellows are installed)	80g

LCD DISPLAY FOR DPI **NEW!**

Displays measurement values when connected to an optional digital precision indicator. Compatible with the integrated measuring device communication software SK-LOG.



DPI-DRC



<Equipped with tolerance setting function>

When configured on the display unit, the indicator body also synchronizes to illuminate the color lamp.

## USE

- Connects to the digital precision indicators DPI-1001SC/LC for displaying measurement values.

## MATERIAL

- Body: ABS

## FEATURES

- A display unit for digital precision indicators ● Compact controller with a one-channel specification ● The backlight changes to green (OK) or red (NG) based on the set values, enabling easy tolerance judgment even from a distance ● Reset can be performed at any position
- Equipped with preset, data hold, peak hold, and error functions
- Enabling switching of measurement direction ● Up to seven measurement conditions can be registered

## SPECIFICATIONS

- External input/output: RS-232C ● Input signals: reset, hold, peak clear
- Output signals: -NG, OK, +NG, error ● Compatible indicators: DPI-1001SC, DPI-1001LC (Low measuring force type)
- Compatible cables: DPI-CS2C (Straight 2m) / DPI-CL2C (L-shaped 2m)

## ACCESSORIES

- AC Adapter (AC100-240V) ● Panel Mounting Frame ● Connector ● Screws x2

Order No.	Product Name	Model No.	Size	Weight
<b>NEW!</b> 152413	DISPLAY	DPI-DRC	W49×H49×D100mm	110g
<b>NEW!</b> 152439	AC ADAPTER	DPI-ADC	Cable Length : 1.6m	80g

CONNECTION CABLE FOR DPI **NEW!**

Connects an optional digital precision indicator to a display unit



DPI-CS2C



DPI-CL2C

## USE

- For connecting the digital precision indicators DPI-1001SC/LC to the display unit DPI-DRC.

## FEATURES

- A connector cable for connecting a digital precision indicator to a display unit.






## SPECIFICATIONS

- Compatible indicators: DPI-1001SC, DPI-1001LC (Low measuring force type)
- Compatible display unit: DPI-DRC

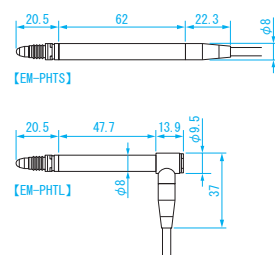
Order No.	Model No.	Connector Type	Cable Length (m)	Weight
<b>NEW!</b> 152415	DPI-CS2C	Straight	2	50g
<b>NEW!</b> 152416	DPI-CL2C	L-shaped		50g

## ELECTRIC MICROMETER PROBE

For high precision measuring of  $0.01\ \mu\text{m}$  resolution by using SNAP GAUGE and ELECTRIC MICROMETER DISPLAY

<b>Display of Measurement Values▶</b> Electric Micrometer Display  <b>P165</b>	<b>Measuring Jig▶</b> S-Line Snap Gauge  <b>P282</b>
<b>For Precision Measurement of Hole Diameters▶</b> S-Line Cylinder Gauge  <b>P264</b>	<b>For Measuring Eccentricity▶</b> Eccentricity Measurement System  <b>P272 ~275</b>
<b>For Holding Probes▶</b> Comparator Stand  <b>P280 ~281</b>	

### ● DIMENSIONS Units: mm



### USE

- For high precision measurement

### MATERIAL

- Steel

### FEATURES

- Applicable to  $0.01\ \mu\text{m}$  resolution by using ball bearing
- To be combined with ELECTRIC MICROMETER DISPLAY M3 and SNAP GAUGE (sold separately)

### SPECIFICATIONS

- Linearity:  $0.25\% / \pm 1\text{mm}$
- Measuring force: ①0.63N ②0.16~4.0N (by spring conversion)
- Outer mount diameter:  $\phi 8\text{mm}$  - Fit tolerance h6
- Carrier frequency: 13kHz ● Input voltage: 3.0V
- Durability: Approx. 10,000,000 times ● Cable length: 2m

### POWER

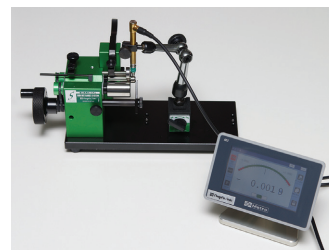
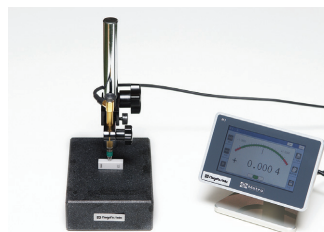
- Supplied from ELECTRIC MICROMETER DISPLAY M3

### ACCESSORIES

- Replacement wrench

EM-PHTL

EM-PHTS



To be used with ELECTRIC MICROMETER DISPLAY M3 and SNAP GAUGE (sold separately).  
(This unit cannot be functioned without them.)

Order No.	Model No.	Type	Measuring Range (mm)	Movable Range (mm)	Resolution ( $\mu\text{m}$ )	Repeat Error ( $\mu\text{m}$ )	Weight
152092	EM-PHTS	Straight	$\pm 1$	4.6	0.01	0.01	120g
152093	EM-PHTL	L shape					120g

## ELECTRIC MICROMETER DISPLAY

High reliability  $0.01\ \mu\text{m}$  resolution. For displaying measurement value by combination use of ELECTRIC MICROMETER PROBE (sold separately).

### USE

- For displaying measurement value by combination use of ELECTRIC MICROMETER PROBE EM-PHTS / EM-PHTL

### MATERIAL

- Body: Aluminum

### FEATURES

- Simultaneous display of up to two channels. Tolerance of each channel can be set independently. ● Measurement data can be output to PC
- Touch-screen display ● Color display. OK/NG judgement and control point are shown in three colors (green, red, yellow).
- Display mode can be chosen from dial display or bar-graph display

### SPECIFICATIONS

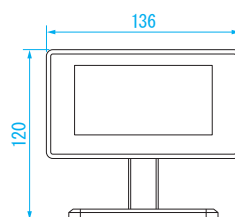
- Two channels simultaneous display
- Math function (Max. value, Min. value, Max. (minus) Min. value, average value and median value) ● Independent tolerance setting

### POWER

- DC5V (AC adaptor <AC100-240V> included)

<b>For Data Output Operation by Foot▶</b> Mini Plug Foot Pedal  <b>P238</b>
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### ● DIMENSIONS Units: mm



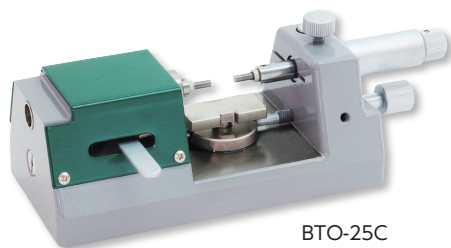
Order No.	Model No.	Resolution ( $\mu\text{m}$ )	Output Signal	Applicable Models	Weight
152091	M3	0.01	RS-232C, USB	EM-PHTS EM-PHTL	600g

BENCH TABLE FOR OUTSIDE/INSIDE **NEW!**

High-Precision Measurement of Mass-Produced Products is Possible by Attaching Digital Precision Indicators or Electric Micrometers.

Made-to-Order Product

(BTI-260C)



BTO-25C



BTI-67C



&lt;Connection Example&gt;

Digital Precision Indicator DPI-1001SC, Outer Diameter Measuring Device BTO-25C, Display Unit DPI-DRC, Connection Cable (L) DPI-CL2C, Mounting Jig BTO-SPC

## USE

- Enables high-precision measurement of mass-produced items by attaching digital precision indicators or electric micrometers.

## MATERIAL

- Body: Cast Iron ● Probe Tip: Carbide

## FEATURES

- An outer diameter and inner diameter measuring device that supports high-precision comparative measurements by attaching optional dial gauges or indicators. ● Equipped with a lever for moving the probe back and forth, ensuring consistent and stable measurement force. (BTO-25C)
- \*This product is a comparative measuring device. Please prepare a master gauge tailored to the dimensions of your workpiece.

P277 Detailed Specifications

Order No.	Model No.	Type	Measuring Range (mm)	Probe Stroke (mm)	Measuring Force (N)	Table Size (mm)	Weight
<b>NEW!</b> 152417	BTO-25C	Outer diameter measurement	0 ~ 25	25	Compatible indicators	—	1.6kg
<b>NEW!</b> 152419	BTI-23C	Inner diameter measurement	$\phi 2 \sim \phi 20$ (Maximum $\phi 23$ with Optional Probe Replacement)	1	1.47	$\phi 50$ (Center plate)	1.3kg
<b>NEW!</b> 152418	BTI-67C		$\phi 4 \sim \phi 59$ (Maximum $\phi 23$ with Optional Probe Replacement)	3	0.98 ~ 2.94	170 × 140	6kg
<b>NEW!</b> 152420	BTI-260C		$\phi 10 \sim \phi 260$	5	0.98 ~ 2.94	303 × 220	30kg

■ Optional Accessory: Mounting Jig [Required mounting jig for using the precision indicator in combination with Bench table for outside BTO-25C.]

Order No.	Model No.
<b>NEW!</b> 152421	BTO-SPC

## MEASURING BENCH SET

Ideal for measuring outer diameter of small precision parts.  
Use with electric micrometer or digital indicator.



## USE

- Enables measurement of small and precision parts by attaching digital precision indicators (stem diameter:  $\phi 8$ mm) or electric micrometers.

## FEATURES

- Compact and light weight for carrying and saving space
- Equipped with two retraction levers
- XYZ stage with fine adjustment
- Adjustable measuring force (0.3 ~ 1.0N)
- Bench table can also be installed vertically

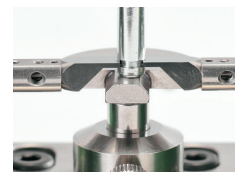
## SPECIFICATIONS

- Standard probe: blade probe (0.7mm thickness)
  - Repeatability: within  $1\mu\text{m}$
  - ※ This product is a Measuring Comparison Tool and therefore it will require a gauge that has the same precision measurement for comparison standard
  - ※ The probe attachment of this product is in parallel condition when produced in factory.
- Parallel adjustment by using wrapping device (Model LD-SET) is required when the probe angle or the attachment.
- Also the direction of anvil is able to be adjusted to requested specification when ordered.

Various Replacement Probes▶  
Probes for Bench Set

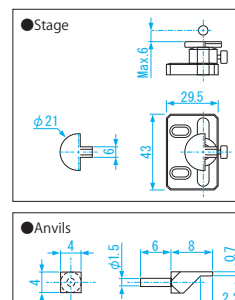
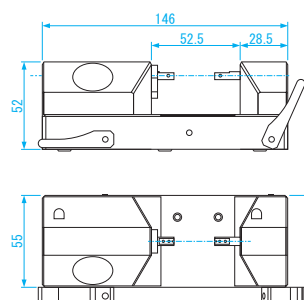


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## ● DIMENSIONS

Units: mm



Order No.	Model No.	Measuring Range (mm)	Weight
151771	BT-10-SET	0-10	1.9kg