



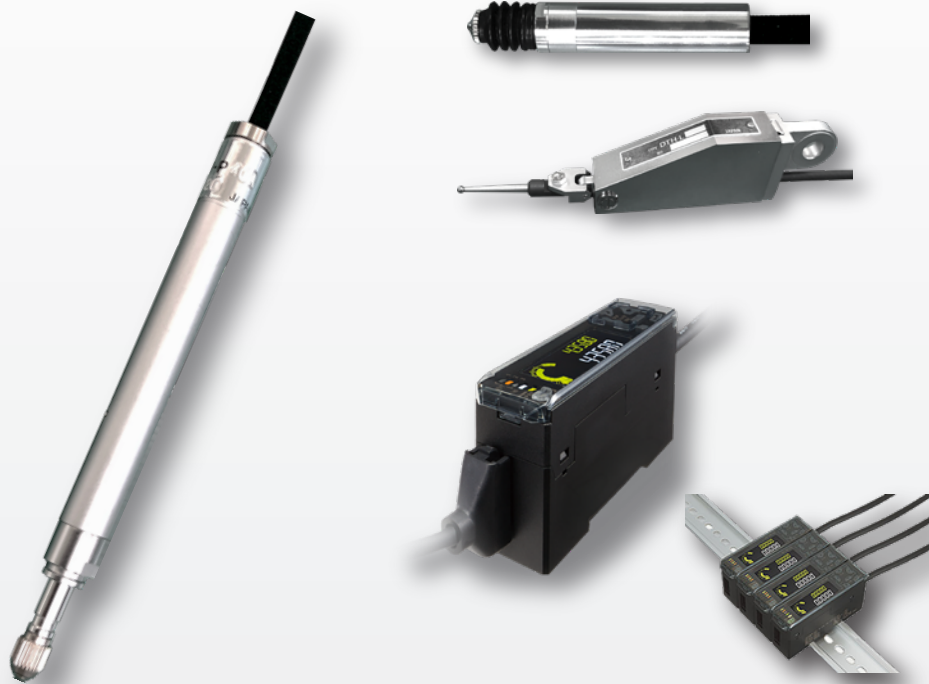
Electric Micrometer

# DAIMETRON

Electric Probe

Digital Display Unit

Controller



# Electric Probe

## 【Features】

The electric micrometer "Daimetron" is an electronic micrometer that uses a sensor head. It offers high sensitivity and high accuracy, and can be used for a wide range of measurements, including those requiring low measuring force.

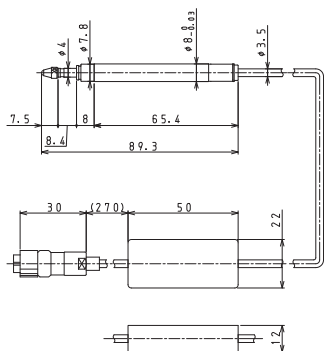
Two types of sensor heads are available: a plunger type (DTH-P type) and a lever type (DTH-L type), allowing selection according to the application.

The sensor heads are adjusted to maintain compatibility between each other.



## DTH-P□-D

Ideal for low measuring force applications. Wide measuring force range available.



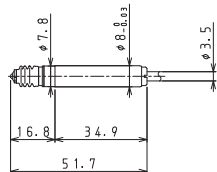
Resolution	0.1 μm	Measuring Force	0.2 N	Measuring Force	0.4 N	Measuring Force	0.7 N	Measuring Range	±1 mm	Cable Length	3 m	System Diameter	8 mm
------------	--------	-----------------	-------	-----------------	-------	-----------------	-------	-----------------	-------	--------------	-----	-----------------	------

Type	Standard Type			Air Lift Type
	DTH-P20-D	DTH-P40-D	DTH-P70-D	DTH-P16AL-D
Model	DTH-P20A-D	DTH-P40A-D	DTH-P70A-D	—
Measuring Force	0.196N	0.392N	0.686N	0.157N
Measuring Range	±1 mm (Type A: -0.4 to +1 mm)			
Stroke	4mm (Type A: 3.5mm)			
Zero Position	Approx. 2 mm (Type A: 0.5 mm)			
Repeatability	0.3 μm			
Guaranteed Accuracy Temperature Range	24°C ± 5°C			
Operating Temperature Range	0~50°C			
Weight (Main Unit Only)	Approx. 25 g			
Standard Specifications	Cable Length	3m		
	Contact Point	F-001-D		
	Rubber Bellows	F-131-D (Included)		

©Measuring force values are specified without the rubber bellows; installing it increases the force by approx. 0.05~0.15 N.

## DTH-P□S-D

Compact type, ideal for machine integration



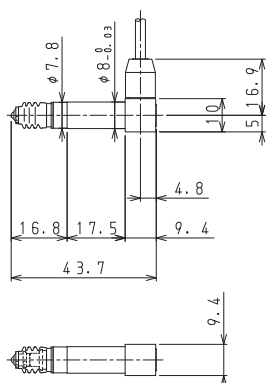
Resolution	0.1 μm	Measuring Force	0.2 N	Measuring Force	0.4 N	Measuring Force	0.7 N	Measuring Range	±0.7 mm	Cable Length	3 m	System Diameter	8 mm
------------	--------	-----------------	-------	-----------------	-------	-----------------	-------	-----------------	---------	--------------	-----	-----------------	------

Model	DTH-P20S-D	DTH-P40S-D	DTH-P70S-D
Measuring Force	0.196N	0.392N	0.686N
Measuring Range	±0.7mm		
Stroke	2mm		
Zero Position	Approx. 1mm		
Repeatability	0.3 μm		
Guaranteed Accuracy Temperature Range	24°C ± 5°C		
Operating Temperature Range	0~50°C		
Weight (Main Unit Only)	Approx. 20g		
Standard Specifications	Cable Length	3m	
	Contact Point	F-171-D	
	Rubber Bellows	F-131-D	

©Measuring force values are specified without the rubber bellows; installing it increases the force by approx. 0.05~0.15 N.

## DTH-P□SH-D

Compact side-exit cable type



Resolution	0.1 μm	Measuring Force	0.2 N	Measuring Force	0.4 N	Measuring Force	0.7 N	Measuring Range	±0.7 mm	Cable Length	3 m	System Diameter	8 mm
------------	--------	-----------------	-------	-----------------	-------	-----------------	-------	-----------------	---------	--------------	-----	-----------------	------

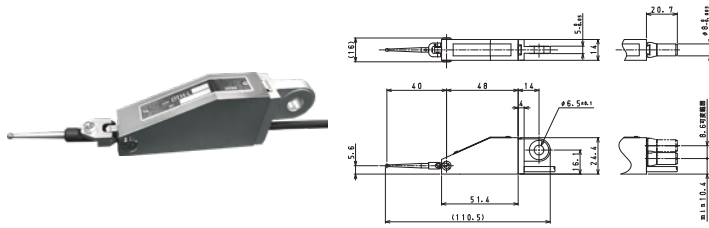
Model	DTH-P20SH-D	DTH-P40SH-D	DTH-P70SH-D
Measuring Force	0.196N	0.392N	0.686N
Measuring Range	±0.7mm		
Stroke	2mm		
Zero Position	Approx. 1mm		
Repeatability	0.3 μm		
Guaranteed Accuracy Temperature Range	24°C ± 5°C		
Operating Temperature Range	0~50°C		
Weight (Main Unit Only)	Approx. 20g		
Standard Specifications	Cable Length	3m	
	Contact Point	F-171-D	
	Rubber Bellows	F-131-D	

©Measuring force values are specified without the rubber bellows; installing it increases the force by approx. 0.05~0.15 N.

# DTH-L□-D

Lever type, ideal for flatness and roundness measurement

Resolution	0.1 $\mu\text{m}$	Measuring Force	0.02 N	Measuring Force	0.08 N	Measuring Force	0.15 N	Measuring Range	$\pm 0.5$ mm	Cable Length	3 m
------------	-------------------	-----------------	--------	-----------------	--------	-----------------	--------	-----------------	--------------	--------------	-----

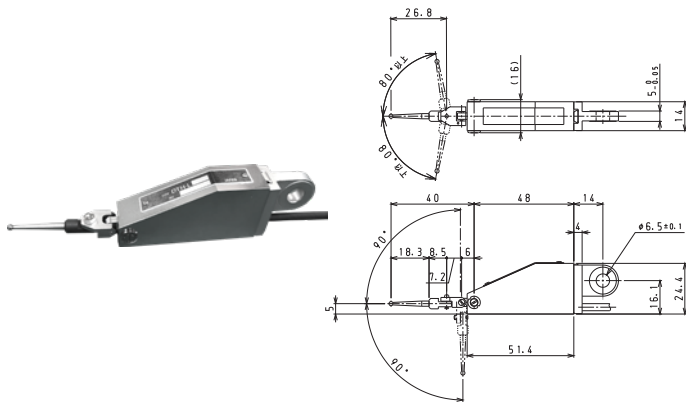


Model	DTH-L02-D	DTH-L08-D	DTH-L15-D
Measuring Force	0.0196N	0.0785N	0.147N
Measuring Range	$\pm 0.5$ mm		
Stroke	1.5mm		
Zero Position	Approx. 0.5mm		
Repeatability	0.3 $\mu\text{m}$		
Guaranteed Accuracy Temperature Range	24°C $\pm$ 5°C		
Operating Temperature Range	0~50°C		
Weight (Main Unit Only)	Approx. 115g		
Standard Specifications	Cable Length	3m	
	Contact Point	F-138-D	

# DTH-L□U-D

Lever-type universal model with probe direction adjustable  $\pm 80^\circ$

Resolution	0.1 $\mu\text{m}$	Measuring Force	0.02 N	Measuring Force	0.08 N	Measuring Force	0.15 N	Measuring Range	$\pm 0.5$ mm	Cable Length	3 m
------------	-------------------	-----------------	--------	-----------------	--------	-----------------	--------	-----------------	--------------	--------------	-----



Model	DTH-L02U-D	DTH-L08U-D	DTH-L15U-D
Measuring Force	0.0196N	0.0785N	0.147N
Measuring Range	$\pm 0.5$ mm		
Stroke	1.5mm		
Zero Position	Approx. 0.5mm		
Repeatability	0.3 $\mu\text{m}$ (in linear direction)		
Guaranteed Accuracy Temperature Range	24°C $\pm$ 5°C		
Operating Temperature Range	0~50°C		
Weight (Main Unit Only)	Approx. 115g		
Standard Specifications	Cable Length	3m	
	Contact Point	F-118-D	

## Digital Display Unit

# Electric Micrometer Digital Display Unit Smp2

Touch panel display unit with a compact housing and versatile functions

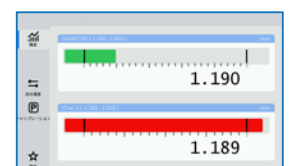
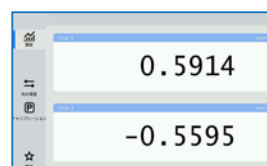
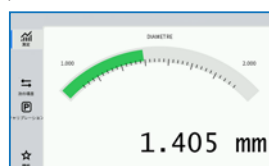
### Easy Operation for Anyone

- Smooth, intuitive operation via touch panel —just like using a smartphone
- No adjustment knobs; all settings can be easily configured on the touch screen
- Clear and easy-to-understand icon display



### Clear Measurement Results at a Glance —Preventing Misreading

Selectable display modes such as dial, bar graph, and dual-channel display to suit your application and preference. Calculations between two channels are also available.



# Controller

## Enhanced display capability with dual display (NAVI function included)

Dual digital display allows simultaneous viewing of the sensor head measurement value (actual value) and the judgment value (calculated value).

## Equipped with an all-direction LCD

High contrast ensures clear visibility with a wide viewing angle.

## Equipped with an intuitive, easy-to-read circular meter

Displays green when within the allowable maximum and minimum range, and orange when outside, allowing the tolerance margin to be seen at a glance.



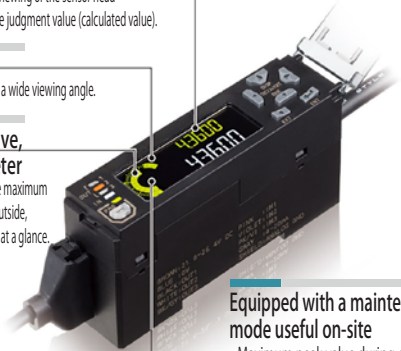
Above maximum value Below minimum value

## Functions to be copied can be selected freely at any time.

Function-based copying significantly reduces setup and maintenance time.



Achieves high-speed response of 3 ms with all sensor head combinations.



## Equipped with a maintenance mode useful on-site

- Maximum peak value during operation
- Number of times the maximum stroke has been exceeded
- Cumulative spindle travel distance (m) recorded for on-site analysis

## Check for overtravel with alarm settings

An alarm can be output when overtravel (stroke) exceeds a preset threshold.

## Easy to use with dual digital display

Dual display allows simultaneous viewing of the sensor head measurement value and judgment value.



Sub display: Displays various values in addition to the sensor head measurement value  
Main display: Judgment value

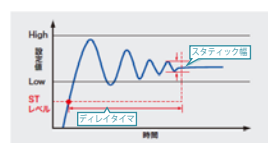
## Easy and user-friendly tolerance setting

Simple one-point teaching Tolerance can be easily set by aligning with the master workpiece and pressing the ENTER key once.



## Easy to use without trigger input

Equipped with lift-trigger hold function



The timing from measurement start until stabilization can be set, helping to suppress measurement fluctuations caused by spindle vibration at stop.

### ① Static width setting

After exceeding the ST level, a user-defined stability range can be set. Sets the range considered stable.

### ② Delay timer setting

After exceeding the ST level, a user-defined delay time can be set. Sets the range considered stable.

# SA-SD1AP-D/SD1AC-D/SD1C-D/SDNC-D

Compact controller capable of linking up to 16 units.  
Units can be connected and mounted via DIN rail.



Conversion cable for probe (DTH) connection, E2SA

Model	Type	Main Unit	Sub Unit		
	NPN	SA-SD1AP-D	SA-SD1AC-D	SA-SD1C-D	SA-SDNC-D
	PNP	SA-SD1AP-P-D	SA-SD1AC-P-D	SA-SD1C-P-D	
Display	All-direction VA LCD				
	Polarity, measurement value (2-level display), and circular bar display				
Display Resolution ※1	0.1 μm/1 μm/10 μm/100 μm				
Display Range	-199.9999~199.9999mm				
Analog Output	○ (4~20mA)		—		
I/O Output	○		—		
Number of Gauge Inputs	1ch				
Linking Capability	Up to 15 sub units can be connected to one main unit				
Calculation Capability	Max., Min., Flatness, Average, Reference Difference, Twist, Warp, Thickness				
Hold Function	Sample hold, Max., Min., Max.-Min., (Max.-Min.)/2, etc.				
Power Supply Voltage	DC24V(±10%)				
Power Consumption ※2	70 mA max. (with sensor head connected)				
Cable	Power supply Analog output, Combined I/O Cable (2 m included)	Analog output, Combined I/O Cable (2 m included)	Combined I/O Cable (2 m included)	—	

※1 Depends on the minimum resolution of the sensor head used.

※2 Power consumption does not include analog current output.

◎ Up to 14 sub units can be connected when using communication units (SA-ERS-D) or (SA-ECL-D).  
An E2SA is required to connect DTH series probes.

## ◎ OPTIONS

### • SA-ERS-D



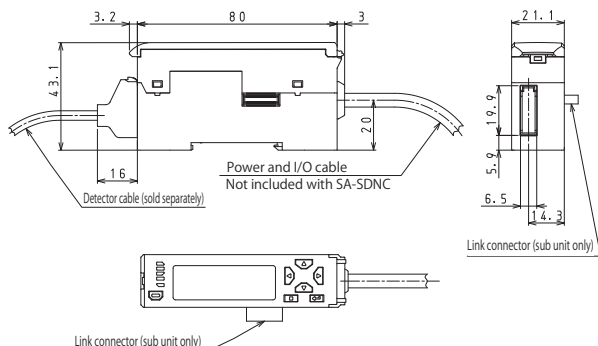
Designed exclusively for SA-SD, enabling integration into measurement and monitoring systems.

The integrated dedicated connector allows easy connection and disconnection.  
Up to 15 controllers (1 main unit + 14 sub units) can be connected to a single SA-ERS unit.  
Communication unit compatible with RS-485 Modbus, enabling high-speed data transmission.

### • SA-ECL-D



Communication unit compatible with CC-Link.  
Supports high-speed communication up to 10 Mbps.



DAI-ICH SOKUHAN WORKS CO.



HP <https://www.issoku.jp>



□ HEAD OFFICE FACTORY 826-2 Tubono, Ojiya City, Niigata Pref., 947-0044 TEL 0258-84-3911 FAX 0258-81-2113 E-Mail info@issoku.jp

□ OVERSEAS BUSINESS DN 826-2 Tubono, Ojiya City, Niigata Pref., 947-0044 TEL 0258-84-3922 FAX 0258-81-2113 E-mail kaigai@issoku.jp