



Digital Advanced Sensors

Sensing Control Leading | Sensor Specialized Company

Digital Protractor

DIGIANGLE-1D/2D

Digital protractor for measuring inclination,
displacement, movement and horizontality
or verticality.

High precise MEMS inclinometer

High strength aluminum housing and
optional handle

Low-power LCD display and automatic
power saving USB-rechargeable Li-ion
battery

Digital Protractor

DIGIANGLE-1D/2D

Digital protractor (angular indicator) DIGIANGLE-1D/2D is high precise inclinometer to measure inclination, displacement and movement of buildings and structures. DIGIANGLE-1D/2D is applicable for measuring any kind of horizontality, verticality or precise angular measurement.



● General Specifications

Item	Specification
Measuring Range	±30° (deg)
Resolution	0.001° (deg)
Display Precision	0.1° ~0.001° (deg) / 0.1mm
Non-Linearity	0.1% FS
Battery	3.7V 500mAh (Li-ion)
Battery Duration	150 hours
Communication output	USB to RS232 (Default 115.200)
Recharger	USB 5V 500mA
Operating Temp.	0°C ~ +65°C
Dimensions	W110 x D32 x H80mm
Weight	430g

● Data Descriptions

- Convert from degree to length displacement

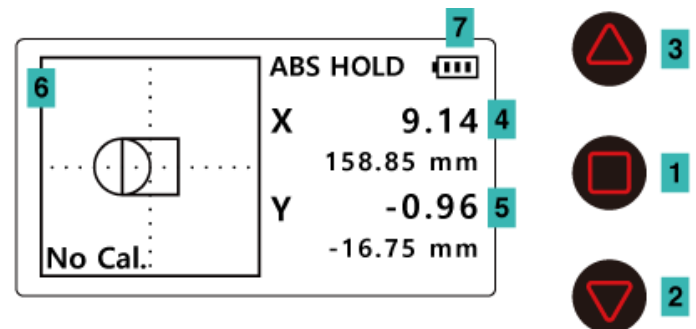
$$\text{Displacement (mm)} = L \cdot \sin \theta$$

L = 1,000mm (fixed)

θ = measured angular degree

※ For convenience, standard length on DIGIANGLE-1D is fixed as 1,000mm.

● General Specifications



- 1) Press button long to power on and off. Push it short to hold and unhold current value. During the value is halt, HOLD message is appeared on the display.
- 2) You can turn the screen lighting (backlight) on and off by press the button. If you press long (about 2 seconds), it switches to the user change menu screen.
- 3) If you press the button, the ABS display will be canceled on the screen, and you can set the current position as the origin (user reference angle). When pressed again, ABS appears on the screen and returns to the factory default origin (absolute value).
- 4) X-axis measurement angle and length.
(Length = 1000 x sin θ)
- 5) Y-axis measurement angle and length. (not for 1D)
- 6) Measured degree is below 0.3 deg, Fine Tuning message is appeared.
- 7) Shows battery status. C mark is appeared during recharging.

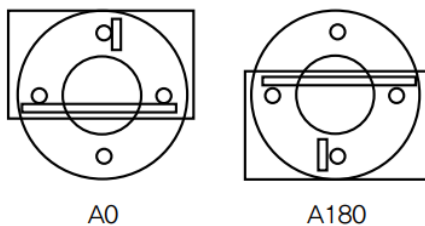
Digital Protractor

DIGIANGLE-1D/2D

● Measurements



Measuring inclination, displacement and movement by DIGIANGLE-1D as following :

- 1) ABS (Absolute Value, with ABS marker) Measuring from zero-position of factory value.
- 2) None-ABS (without ABS marker) Measuring from zero-position by zero-set. For convenience, set initial value as zero-position in long-term measurement place.
- 3) Check-Sum
Check-sum is necessary at measuring displacement or movement in geotechnical engineering. Once measure A0 direction, measure A180 direction again and take the difference from two measurements.



● Measurements

Format : DIGIANGLE-①-②

①	Axis	1D	1 axis
		2D	2 axis
②	Direction (SET)	W-SET	
		F-SET (2D only F)	

※ Circular plate attached to the measurement site is not an item handled by our company

● Recharging

Recharge DIGIANGLE through the USB port on the rear by connecting USB-A to A cable (provided basically) to PC or USB recharger.

● Accessories

- Leather pouch with shoulder strap
- USB-A to A cable (2.0m)

● Notes

- 1) MEMS based inclinometer (tilt sensor) measures tilt (degree) by gravity. Check sensing directions before use.
 - 2) Check battery status before
 - 3) Color of the aluminum housing can be changed without prior notice. (unrelated to performance or quality)
 - 4) 12 months warranty is provided after released. Warranty provided only in case of using for designed purpose correctly.
- ※ Specifications, design and components can be changed without prior notice to improve its performances.

DAS Co., Ltd.

128 Bibong-ro, Bibong-myeon,
Hwaseong-si, Gyeonggi-do, 18284
Republic of Korea

TEL : +82 31) 356-3541

E-mail : overseas@das-co.com

Web : <http://das-co.com>