

Digital Protractor

DIGITAL ADVANCED SENSORS **DAS**

DIGIANGLE-1D

- Digital protractor for measuring inclination, displacement, movement and horizontality or verticality.
- High precise MEMS inclinometer
- High strength aluminium housing and optional handle
- Low-power LCD display and automatic power saving
- USB-rechargeable Li-ion battery



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

General Specifications

Item	Specification
Measuring Range	+/-15 deg
Resolution	0.0013 deg
Display Precision	0.01 deg / 0.01mm
Non-Linearity	1% FS
Battery	3.7V 500mAh (Li-ion)
Battery Duration	150 hours
Recharger	USB 5V 500mA
Operating Temp.	0 ... +65 celsius
Dimensions	W110 X H80 X D32mm
Weight	430g

Data Descriptions

- Convert from degree to length displacement

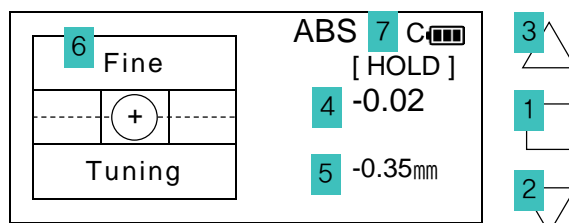
$$\text{Displacement (mm)} = L \cdot \sin \theta$$

$L = 1,000\text{mm}$ (fixed)

θ = measured angular degree

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

Instructions

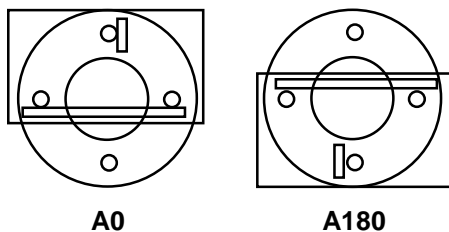


- 1) Push \square button long to power on and off. Push it short to hold and unhold current value. During the value is halt, HOLD message is appeared on the display.
 - 2) Push ∇ button to turn on and off the backlight.
 - 3) Push \triangle button to set zero-position. ABS marker is disappeared once zero-position is set. Push it again to return factory value (absolute value) and ABS message is appeared again.
 - 4) Shows measuring angular data.
 - 5) Shows length displacement converted from the angular data.
 - 6) Measured degree is below 0.3 deg, Fine Tuning message is appeared.
 - 7) Shows battery status. C mark is appeared during recharging.
- Power saving : Over 3 minutes without any command then power is off automatically.

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.



A0

A180

Ordering Code

Format : DIGIANGLE-(1)

(1)	1D	Digital Protractor
	MULTI	Digital Multi-Indicator
	VW	Digital Indicator for VW sensors

Options

- ✓ Handle for DIGIANGLE-1D



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 use.
- 3) Color of the aluminium 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.
- 5) Specifications, design and components can be changed without prior notice to improve its performances.

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