

EN

INSTRUCTION MANUAL

Indicator for VW sensors

DIGIANGLE

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1. Before Start

1-1 Safety Guide

Users of this document should basically have a basic electrical knowledge of machine control and follow the general machine safety guidelines below.

- Use it properly after fully understanding the features and specifications of this product.
- Please do not open the module because this product is not available for field service.
- When supplying power to this product or system, a fuse must be installed externally.
- Please be sure to refer to the documentation on installation and wiring of this product before installation.

1-2 Warranty

- The manufacturer assumes no liability whatsoever for the product, except as otherwise expressly stated in writing.
- The manufacturer's warranty period is up to 18 months after delivery, and 12 months after use.
- The manufacturer provides a liability warranty against defects in the product and related firmware and hardware arising from defects in material, design or workmanship.
- Under this warranty, the manufacturer may replace the product or update the relevant firmware or repair the defective product at its sole discretion.
- The manufacturer is not responsible for all costs associated with the occurrence of product defects.
- The warranty becomes void if the purchaser or third parties do not use the product according to the manufacturer's user manual, or if the product or firmware has been modified.

2. Summary

The DIGIANGLE series has one frame and is manufactured with various products (digital goniometer, VW indicator, MV indicator, VW/MV indicator including digital goniometer function). This manual describes DIGIANGLE-NO-VW, which has a VW indicator function. DIGIANGLE-NO-VW has 3 input channels that can read 3 VW signals at once. In addition, it has a built-in battery that can be recharged by USB, so users can use it easily.

3. Specification

3-1 Size

- **Size** : 110(W) x 80(H) x 32(D)
- **Cable** : about 300mm
- **Weight** : about 400g

3-2 General Specification

- **Measuring Sensor**

- Only read a Vibrating Wire Type Sensor with Temp(Thermistor 3K)
- Frequency range : 450 to 6000Hz
- Coil resistance : 50 to 200 Ω
- Stimulation method : single pulse pluck

- **Power**

- Chargeable Lithium I(500mAh, 3.7V) battery.
- Continuous measurement of about 10 hours or more with a single charge

- **Sampling**

- Sampling for accuracy and noise rejection by integrating over 50/60Hz line period.
- Maximum sample speed : 25Hz
- Effective resolution : 0.01%
- Linearity : 0.01%
- Common mode rejection 25mV range : 90dB
- Line(50/60Hz) series mode rejection : 35dB

- **Serial Interface (USB)**

- Built-in RS232 to USB converter
- Speed : 9600 baud rate

- **Physical and Environment**

- Construction : Aluminum
- Physical dimensions : 100(W)X80(H)X32(D)mm
- Environment Temperature : -45 $^{\circ}$ C to 70 $^{\circ}$ C
- Humidity : 85%, non-condensing

4. How to Use

4-1 ON/OFF

- Automatically turns off when not in use for 5 minutes.

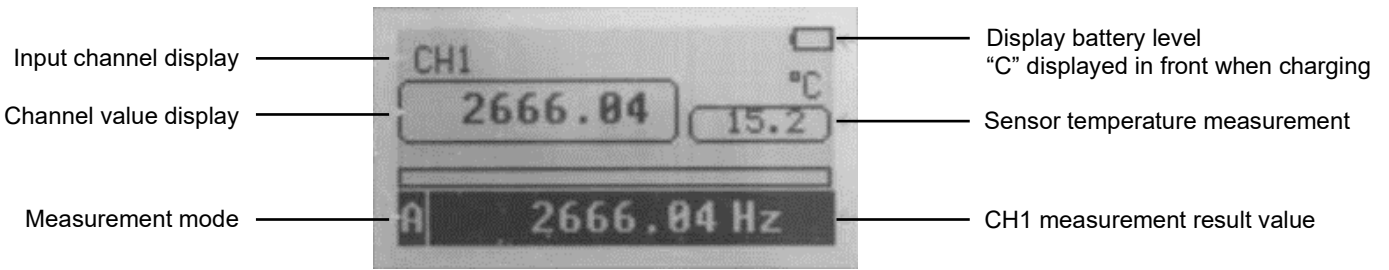


ON : Press and hold it for more than 1 second, the screen appears and when booting is completed, “beep” and buzzer sound for a long time.

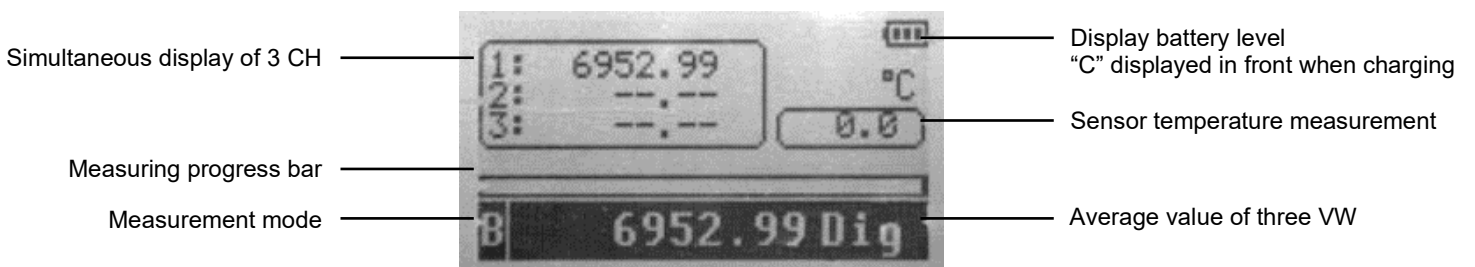
OFF : Press and hold for more than 1 second, a “beep” sounds once short and once long, and turns off.

4-2 Screen Layout

- 1 channel measurement



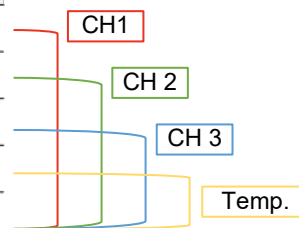
- 3 channel measurement



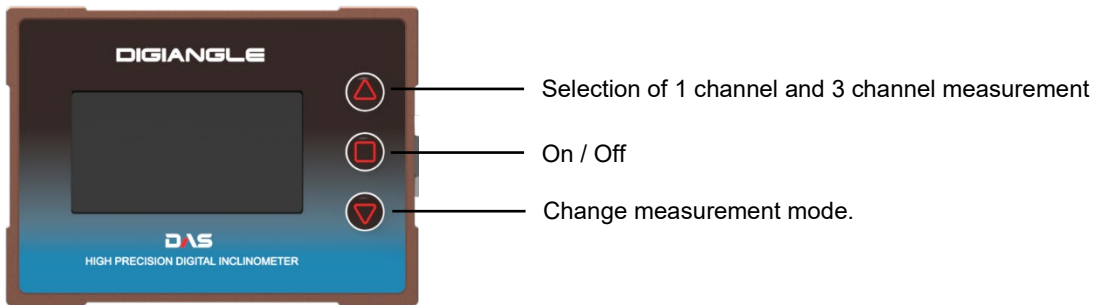
4-3 Sensor Connertion



Color	Description
RED	CH1
GREEN	CH2
BLUE	CH3
YELLOW	Temp. CH
BLACK	COM

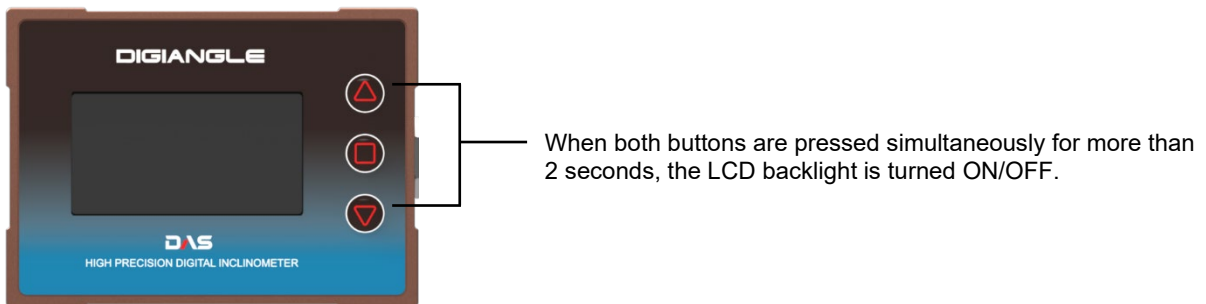


4-4 Measurement



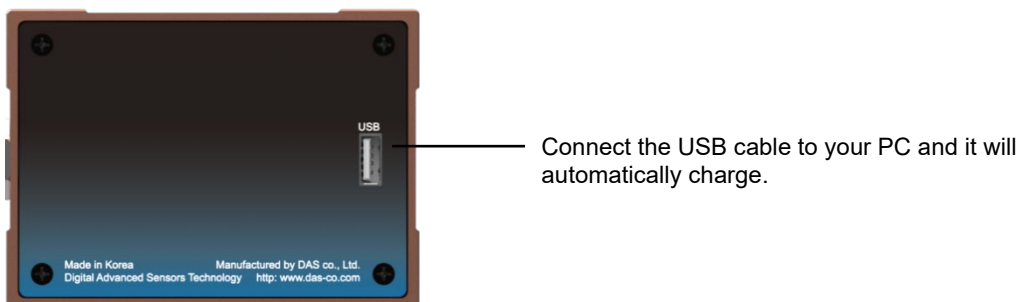
- Measurement starts automatically when the power is turned on.
- Measured at 3 second intervals.
- Buttons do not work at the moment of measurement.
- Measurement mode
 - MODE [A] : full sensor = Hz (450 ~6,000Hz bandwidth)
 - MODE [B] : Load gauge and piezometer = $\text{Hz}^2 \times 10^{-3}$ (1,200 ~ 3,500Hz bandwidth)
 - MODE [C] : Surface-attached strain gauge = $\text{Hz}^2 \times 10^{-3} \times 4.062$ (450 ~ 1,000Hz bandwidth)
 - MODE [D] : Buried type strain gage = $\text{Hz}^2 \times 10^{-3} \times 3.304$ (450 ~ 1,000Hz bandwidth)
 - MODE [E] : Spot welding strain gauge = $\text{Hz}^2 \times 10^{-3} \times 0.39102$ (1,000 ~ 3,500Hz bandwidth)

4-5 LCD Backlight ON/OFF



4-6 Recharge

- After connecting the USB cable, the driver installation screen appears.



5. Accessories

- Bag with shoulder straps: used while moving or storing
- USB cable for charging : 2m