YARA Water Sensor
Quick Manual

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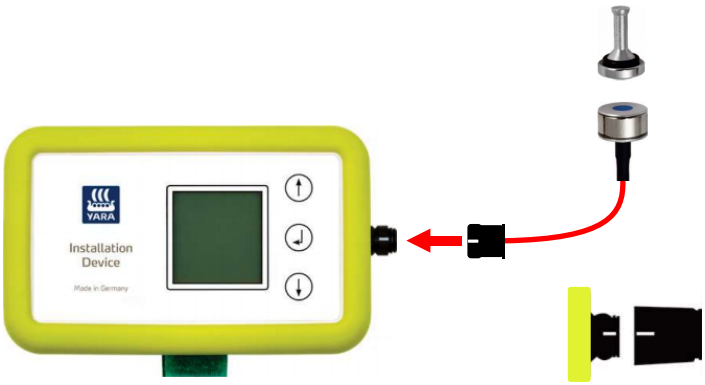
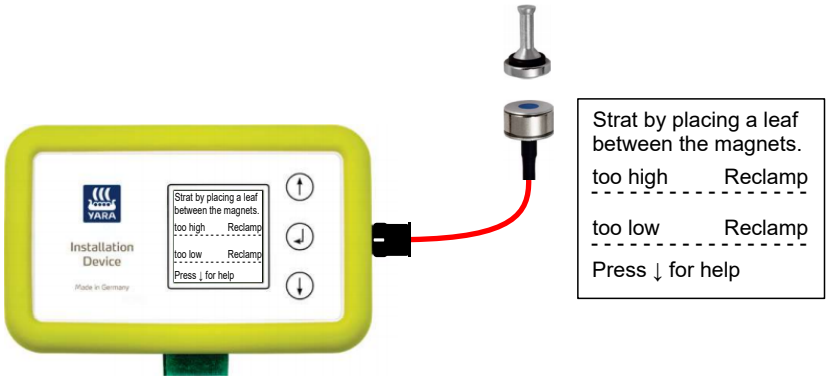
YARA Water Sensor
Installation Manual

When using the Yara Water Sensor, it is necessary to determine if the sensor is properly attached to the leaf.
Use Installation Device to determine if it is installed properly.

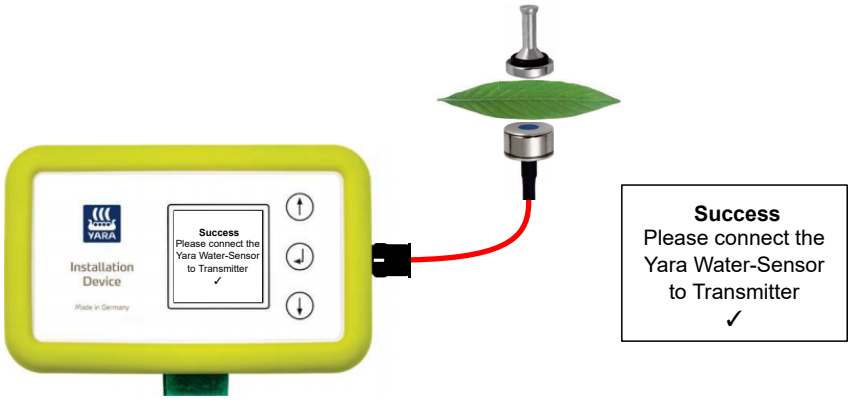


Installation Device

1. Connect the Water Sensor and Installation Device. Align the white wires of the male and female connectors when connecting.



2. When the sensor and Installation Device are connected, the DEVICE will start automatically. The display shows the above.



3. The display will change as shown above when the leaves are sandwiched properly. This state means that measurement can be started.

The magnetic force of the magnet is quite strong, so be careful not to damage the leaves.
If you can confirm the display of Success, remove the Water Sensor from the Installation Device.

＊When "Reclamp" is displayed, re-clamp until "Success" is displayed.

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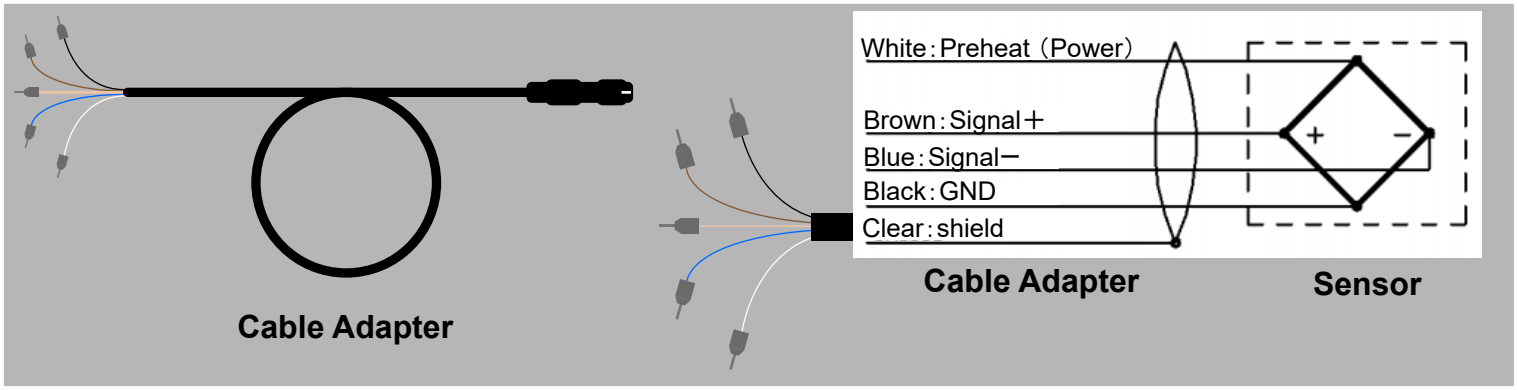
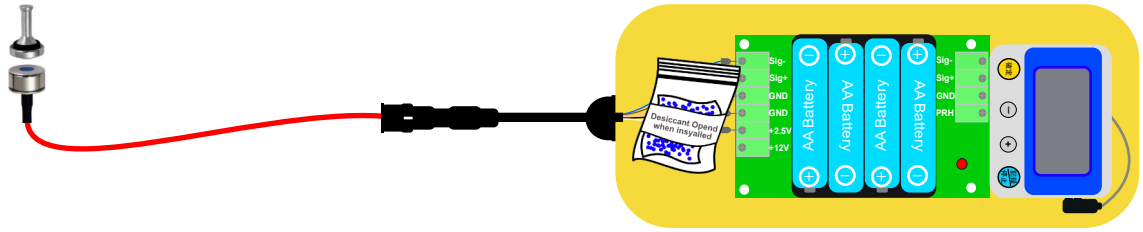
YARA Water Sensor
MIJ-12 Wiring Manual



Wire the cable adapter to the data logger, connect it to the YARA Water Sensor and start measuring. First, leave it for about 30 minutes and check if the data is taken. If there is no problem, continue the measurement.

*Because the internal wiring of Yara Water Snesor is a bridge circuit, please note that black (GND) and blue: signal (signal-) are insulated.

When using MIJ-12: Connect the Yara Cable Adapter to the PR01 board as shown in the table below.

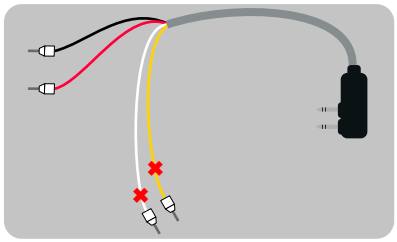


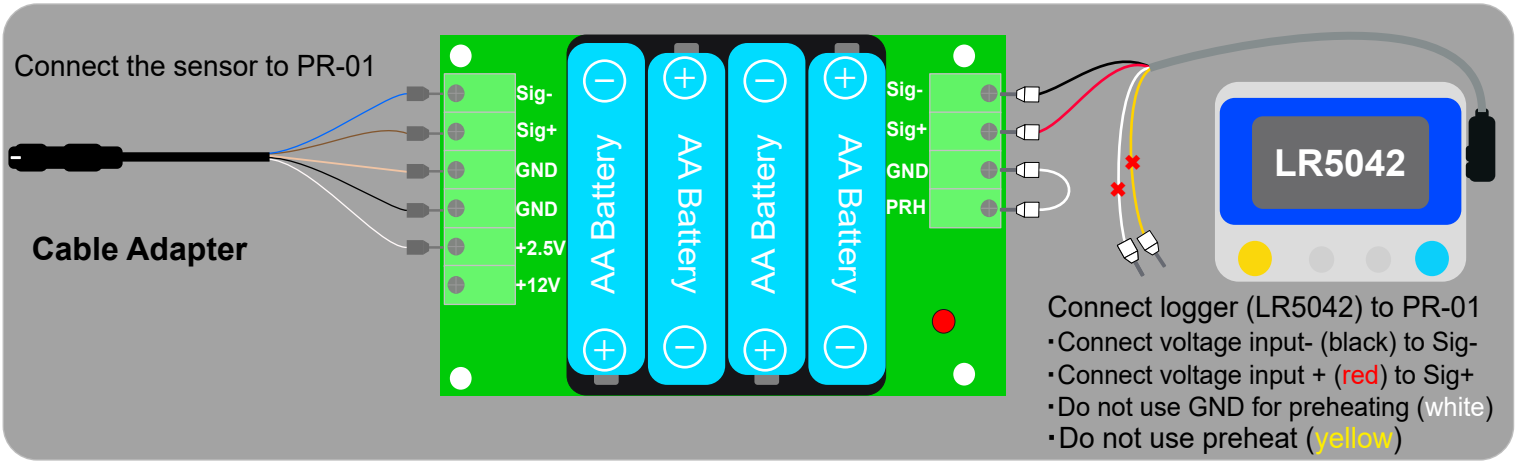
Cable Adapter pin assignment

青		Signal -
茶		Signal +
シールド		GND
黒		GND
白		PRH (2.5~5V)

Connect the LR5042 cable as follows. Connect the PRH on the PR01 board to the adjacent GND with a cable you have on hand.

赤		Signal +
黒		Signal -
白		Do not use
黄		Do not use





When all the wiring work is completed, you can starat measurment.
Before statrt measurment please press set button to see offset value and take note for offset value. (To see offset value please do not pintch leaf (Leave the magnet attached to the sensor.).
After note the offset value then you can can start measurment.
(Please see LR5042 manual for detailed usage.)
When using the MIJ-12 and Yara together, please replace the PR-01 battery every 9 days maximum.

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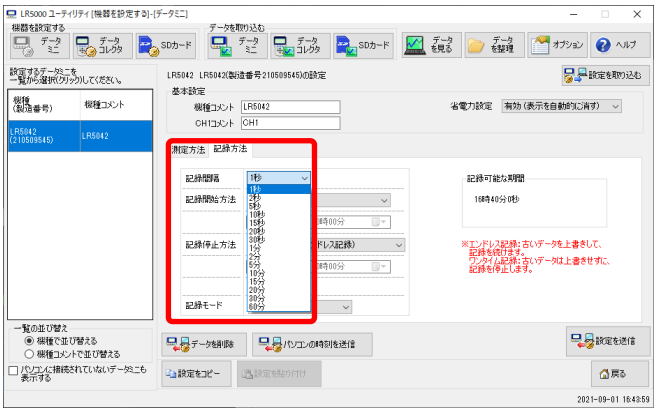
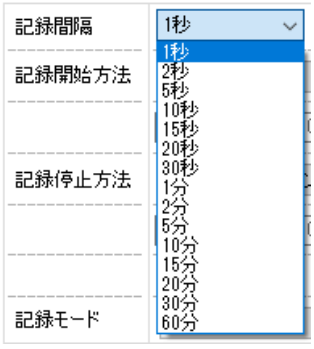
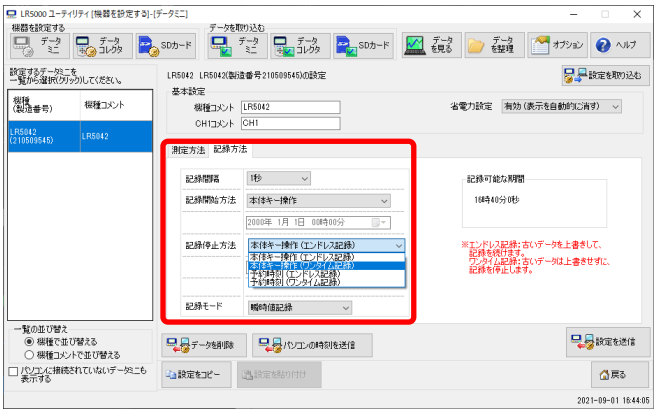
YARA Water Sensor
MIJ-12 Wiring Manual

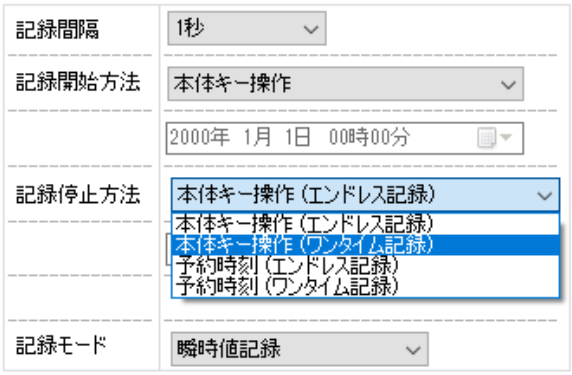
LR5042 setting contents



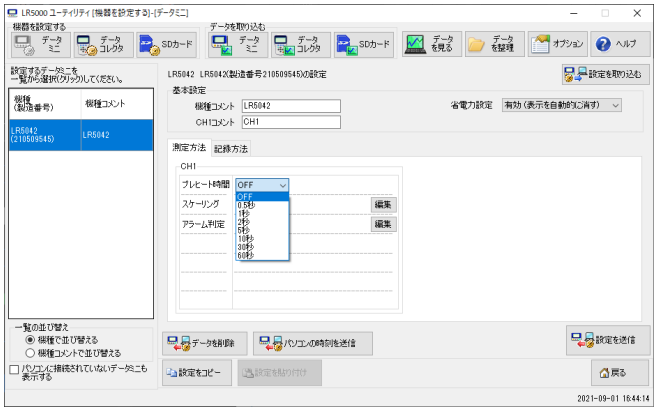


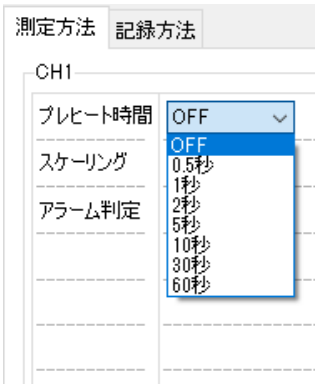
1. Please change the measurement interval (interval) arbitrarily.





2. Select one-time recording





3. For MIJ-12 and YARA water sensor, turn off preheat.

4. After completing the settings, be sure to press the [Send settings] button at the bottom right to complete.

For details on the functions of the LR5042, please visit the HIOKI website.
https://www.hioki.co.jp/jp/products/detail/?product_key=930

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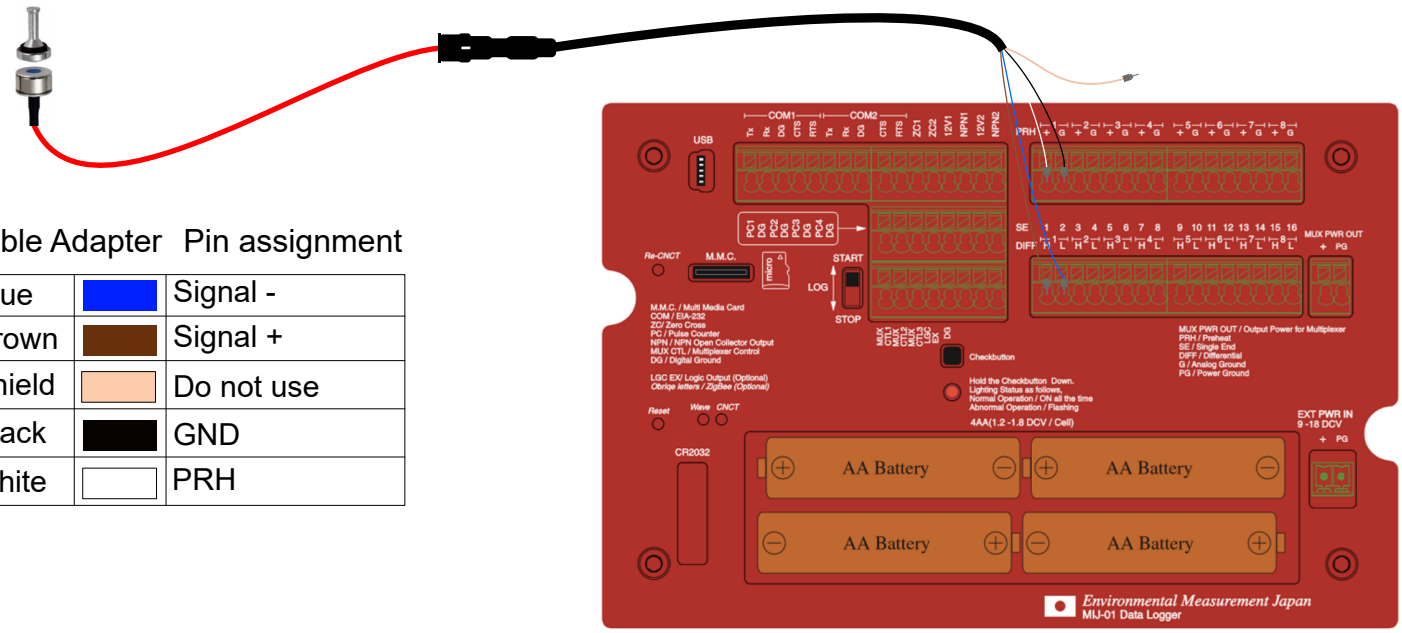
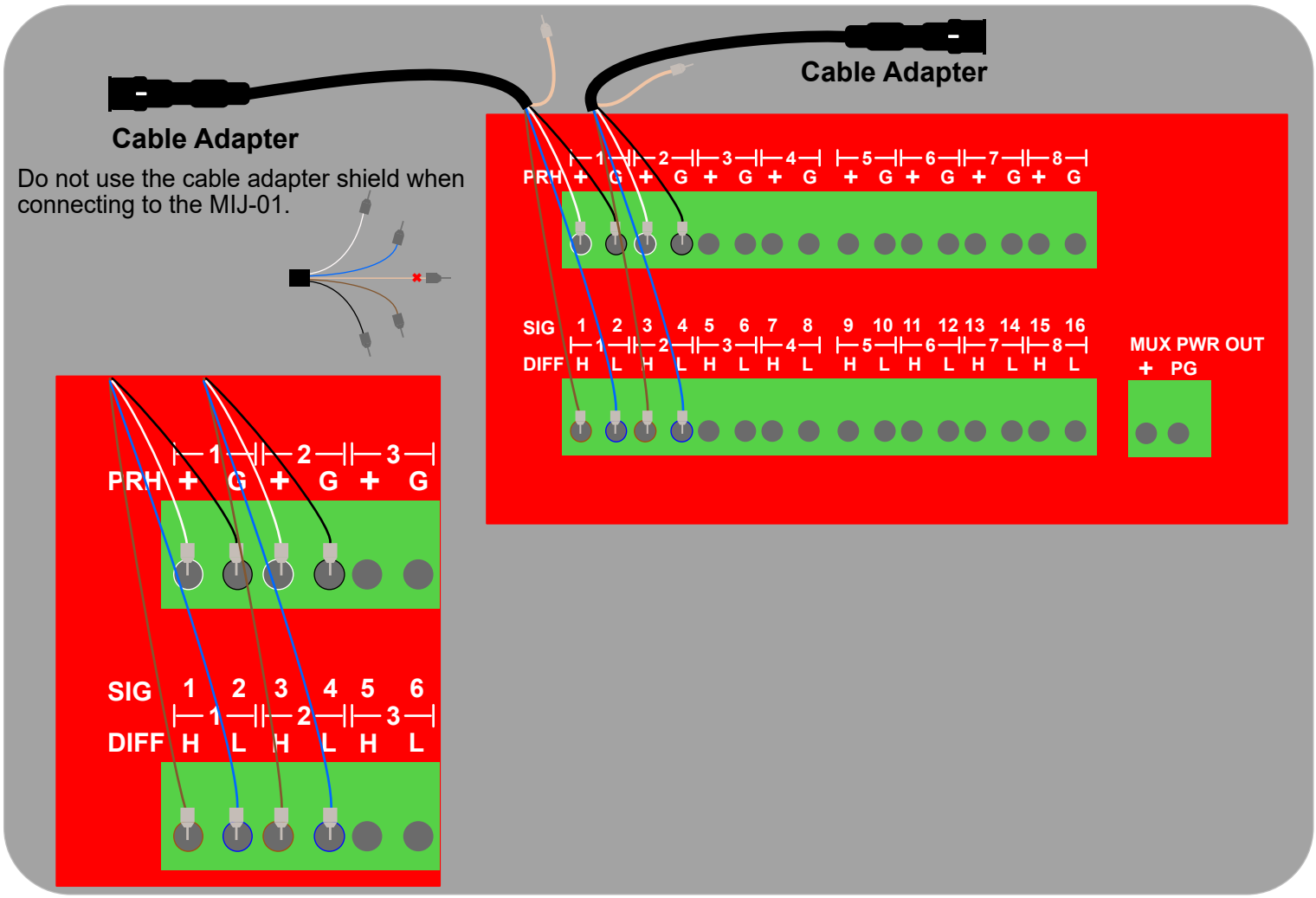
YARA Water Sensor
MIJ-01 Wiring Manual

When using MIJ-01: Connect the Yara Cable Adapter to the PR01 board as shown in the table below.



Cable Adapter Pin assignment

Blue		Signal -
Brown		Signal +
Shield		Do not use
Black		GND
White		PRH



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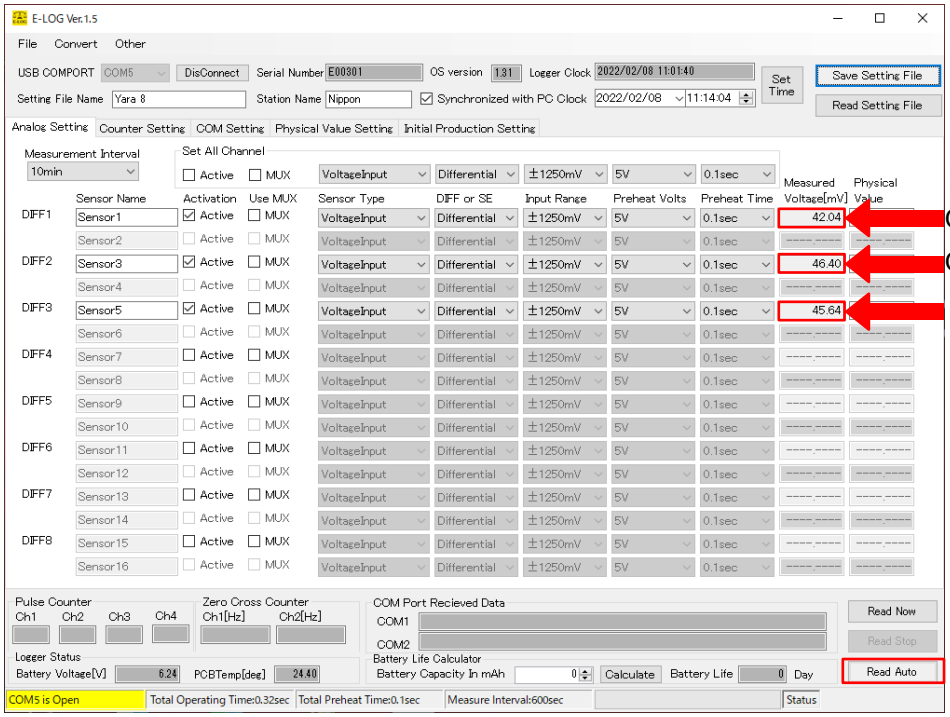
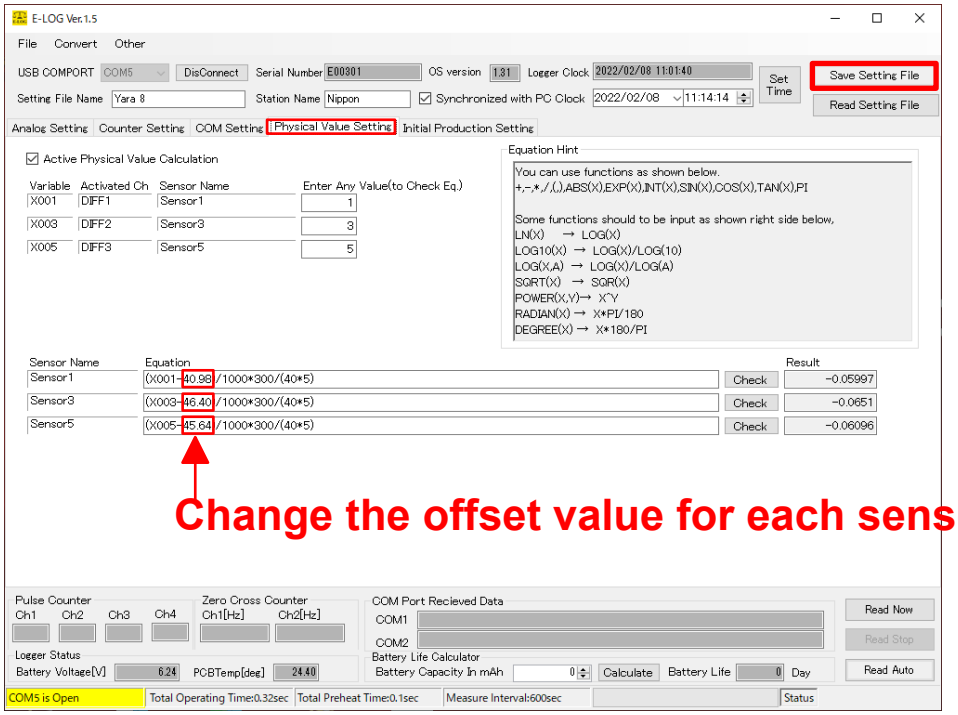
YARA Water Sensor
MIJ-01 ELOG Setting Manual

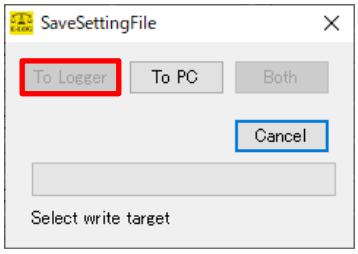
ELOG file setting



1. Download Yara8 setting file from the connection method and setting file on the page of Yara inflation pressure sensor or MIJ-01 and read the file. After attaching all the sensors to the cable adapter, press Read Auto to check the OFFSET value (do not put anything in the sensor at this time).

Configuration file details: Interval 10 minutes, connection method Differential, Preheat V 5V, Preheat Time 0.1sec





2. Users often forget to enter the OFFSET value for each sensor in Physical Value Setting. After completing the input, press the Save Setting File button on the upper right and select Both to save the settings to the logger and desktop.

For more detail: https://environment.co.jp/wp/wp-content/uploads/2021/01/MIJ-01-English-Manual.pdf

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YARA Water Sensor
How to adjust Magnetic force

Magnetic force adjustment method

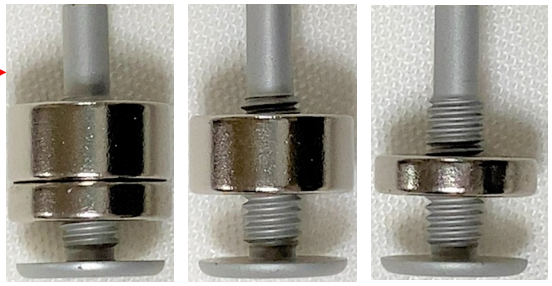
The neodymium magnets used in the Yara water sensor have a fairly strong magnetic force, and may crush the leaves.

If it is difficult to measure using the toric magnet in the photo, please use an accessory with adjustable magnetic force.

Magnetic force adjustment

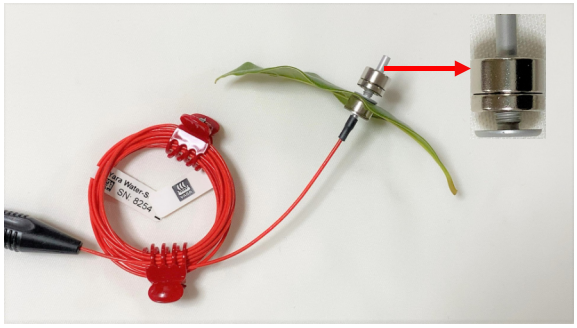
Accessories for adjusting magnetic force

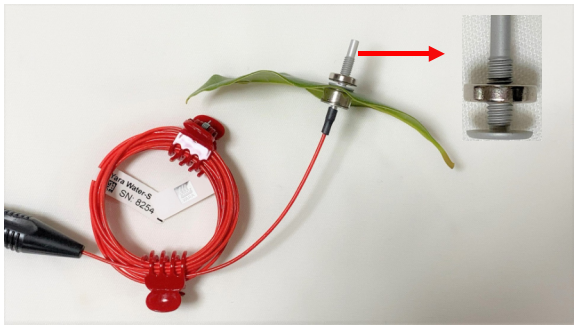
combinations

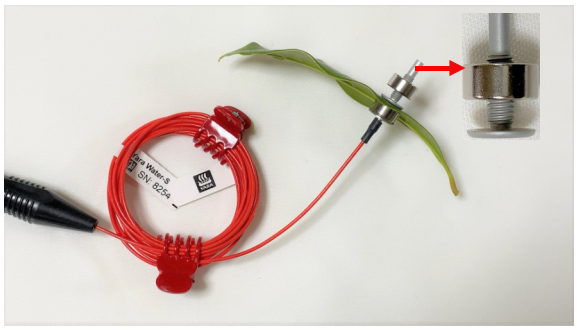


The magnetic force can be adjusted because the magnet can move.

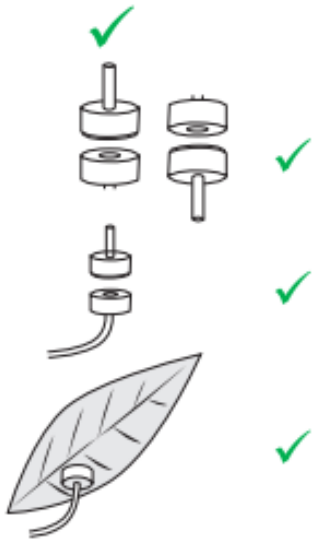
Please try to install it as shown in the picture according to the leaves to be measured.







Installation method



It is easy to do, just insert the leaves as shown in the figure.

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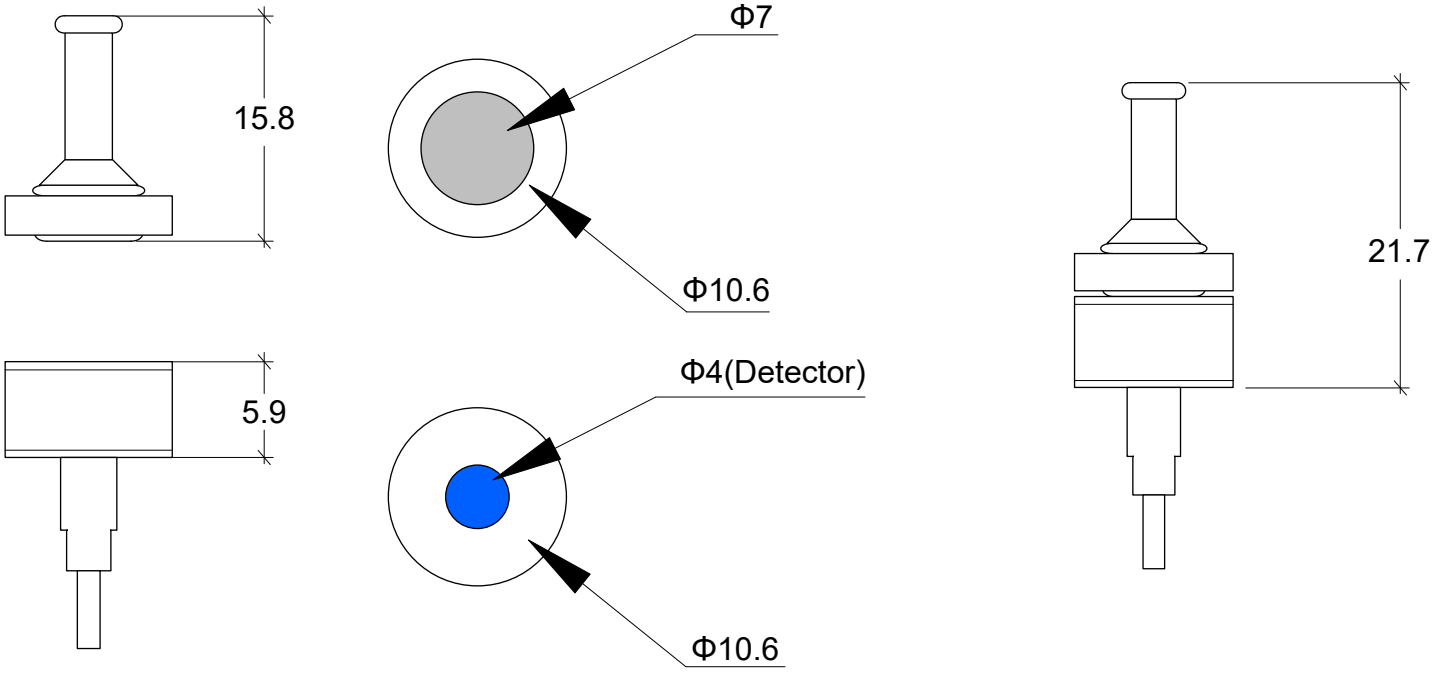
YARA Water Sensor

Specification & Arithmetic Equation

Specification

Supply voltage	2.5 ~ 5.5 V DC
Bridge resistance	3.0 ~ 3.8 KΩ (at 25℃)
Measurement Range	0 ~ 3000 kPa
Output voltage	40mV/V (at 300kPa, plus offset)
OffSet	-8 ~ +8mV/V (at no pressure)
Size please see below	
Weigt (include bottom sensor, red cable, and connector)	19g with standard magnet 19g with thick magnet 17g with thin magnet 22g with thick and thin magnet  Standard Thick Thin Thick & Thin
Pin assignment （Cable adaptor）	White：Preheat（power） Brown：signal＋ Blue：signal － Shield(clear)：Shield（Connect to GND for MIJ-12） Black：GND
Arithmetic Equation	$P_{patch} = (V_{signal} - V_{offset}) * 300\ kPa / (40\ mV * V_{supply})$ V_{signal} : Logger output when sandwiching leaves V_{offset} :Logger output when no leaf is sandwiched V_{supply} :Preheat（Power）



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