

Self-contained TOF Laser Sensor LR-T Series Setting Guide

For precautions and operation details, refer to the instruction manual included with the product.

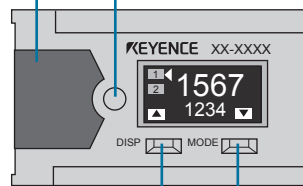


Indicator

- Output 1 ON : Orange*
- Output 1 OFF: Green*
- Error : Flashing red
- * The indicator flashes when two conditions below are met;
 - Stability output turns ON.
 - Output 1 turns OFF when output logic is N.O. or turns ON when output logic is N.C.

[DISP/▲] Button

- Pressed for 1 second or less: Changes the setting value
- Held for 3 seconds or more: Switches to the display screen



[SET] Button

- The operation of this button varies depending on the detection mode.
- Example: 2-point calibration
1. Press this button with no workpiece present.
 2. Press this button with a workpiece present.

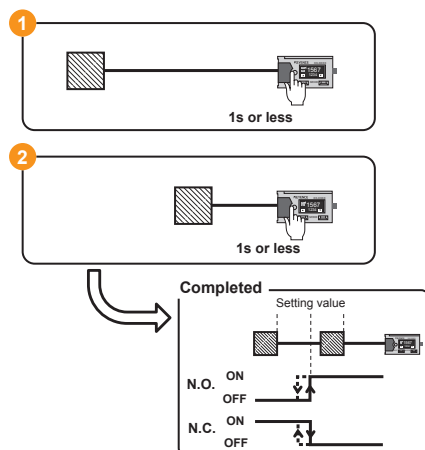
[MODE/▼] Button

- Pressed for 1 second or less: Changes the setting value
- Held for 3 seconds or more: Switches to the setting screen

Basic Calibration Settings (Standard mode)

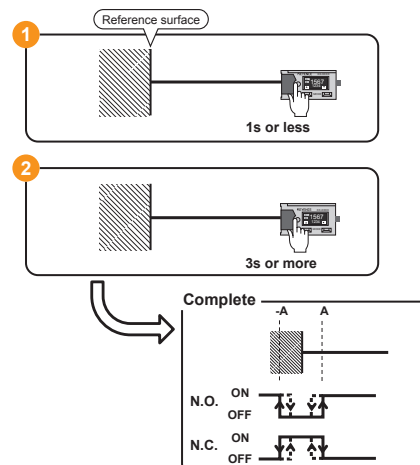
2-point calibration

The value will be automatically set to the mid-point between when there is no workpiece and when there is a workpiece.



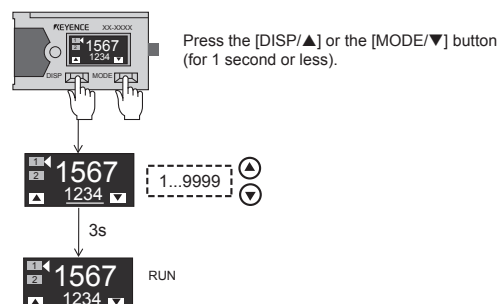
DATUM calibration

This sets an arbitrary background (= reference surface) to "0", and displays height from the reference surface. This mode is useful in detecting the passage of workpieces in front of a stationary background.



Manual adjustment

The setting value can be finely adjusted manually.

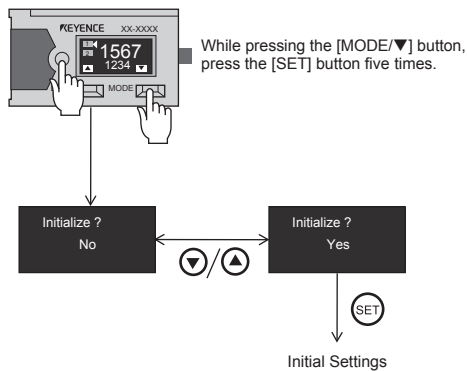


If the setting has become too complicated and you wish to start over...

Initializing the Settings

Initialization resets the product to its factory default settings.

Using the shortcut keys to execute the initialization

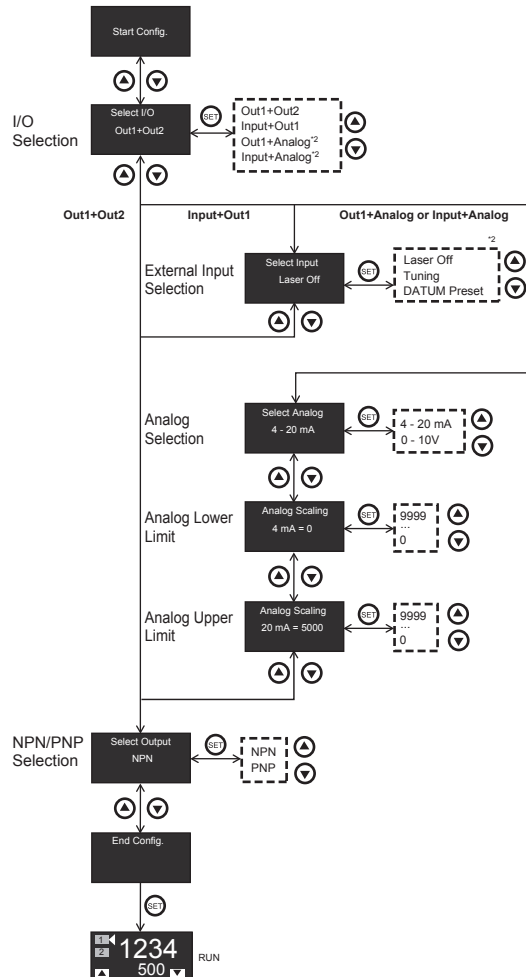


Using the setting menu to execute the initialization

On the "Initialize?" screen, select "Yes".

Initial Settings

When you turn on the LR-TB Series for the first time after you purchase it or when you have initialized the LR-TB Series, the following initial settings must be configured.



*1 After you have finished configuring the initial settings, you will not be able to reconfigure the unit, I/O, analog selection, or NPN/PNP selection. To change any of these settings, you will have to initialize the product.

*2 Can be set only for LR-TB5000■

FS-N

LV-N

LR-Z

LR-T

CZ-V20

GV

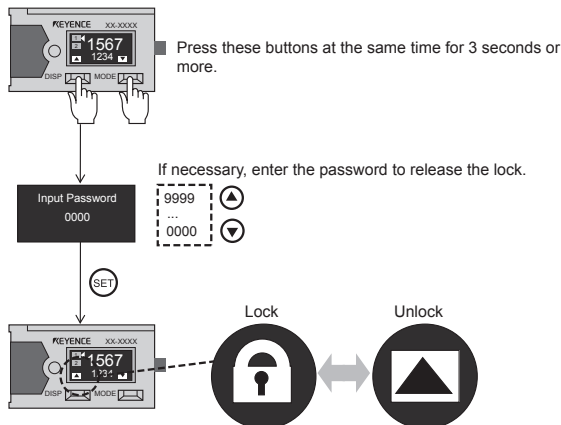
GP-M

PZ-V/M

PX

Key Lock

To require a password to release the key lock.



Output Mode and Corresponding Calibration Method

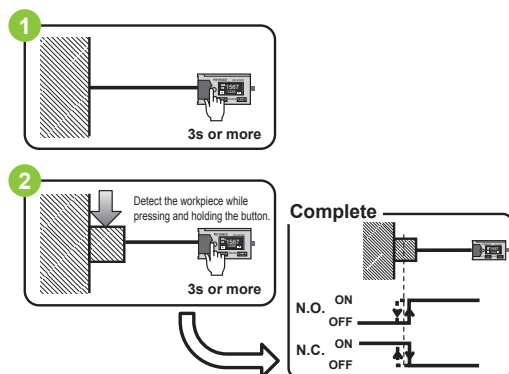
| Output Mode | Output Mode and Corresponding Calibration Method |
|-----------------------|--|
| Standard [Standard] | DATUM calibration 2-point calibration Full auto calibration 1-point calibration |
| Window [Window] | 2-point calibration 1-point calibration |
| Stability [Stability] | - |
| Error [Error] | - |

* The output mode can be switched in "Detailed Settings" described later.

Advanced Calibration Settings (Standard mode)

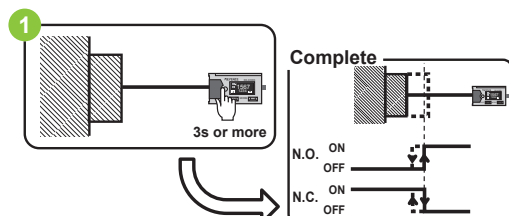
Full auto calibration

The sensitivity can be automatically set while passing the workpiece through. This is effective when the line operation cannot be stopped.



1-point calibration

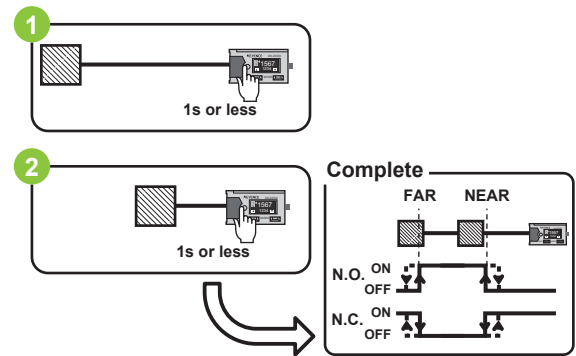
The value is set slightly higher than the height when the setting was made. This is effective when installing workpieces at the upper limit that you do not want to detect.



Advanced Calibration Settings (Window mode)

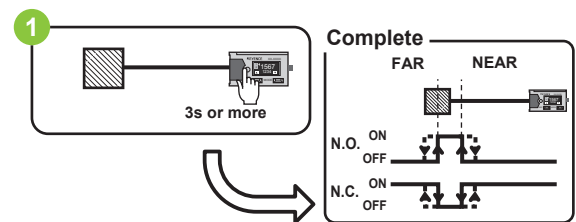
2-point calibration

Set values for FAR side and NEAR side respectively. This is effective when installing workpieces at the upper limit and lower limit.

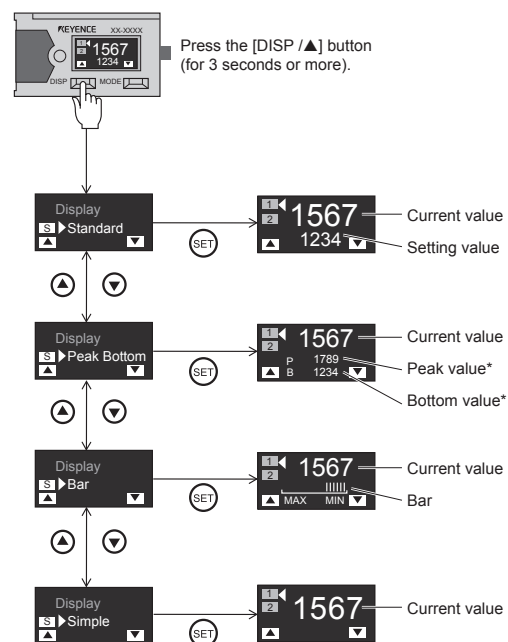


1-point calibration

The height when the setting was made is on the FAR side. Use this function when you cannot move detected objects away from the center of the detection range.



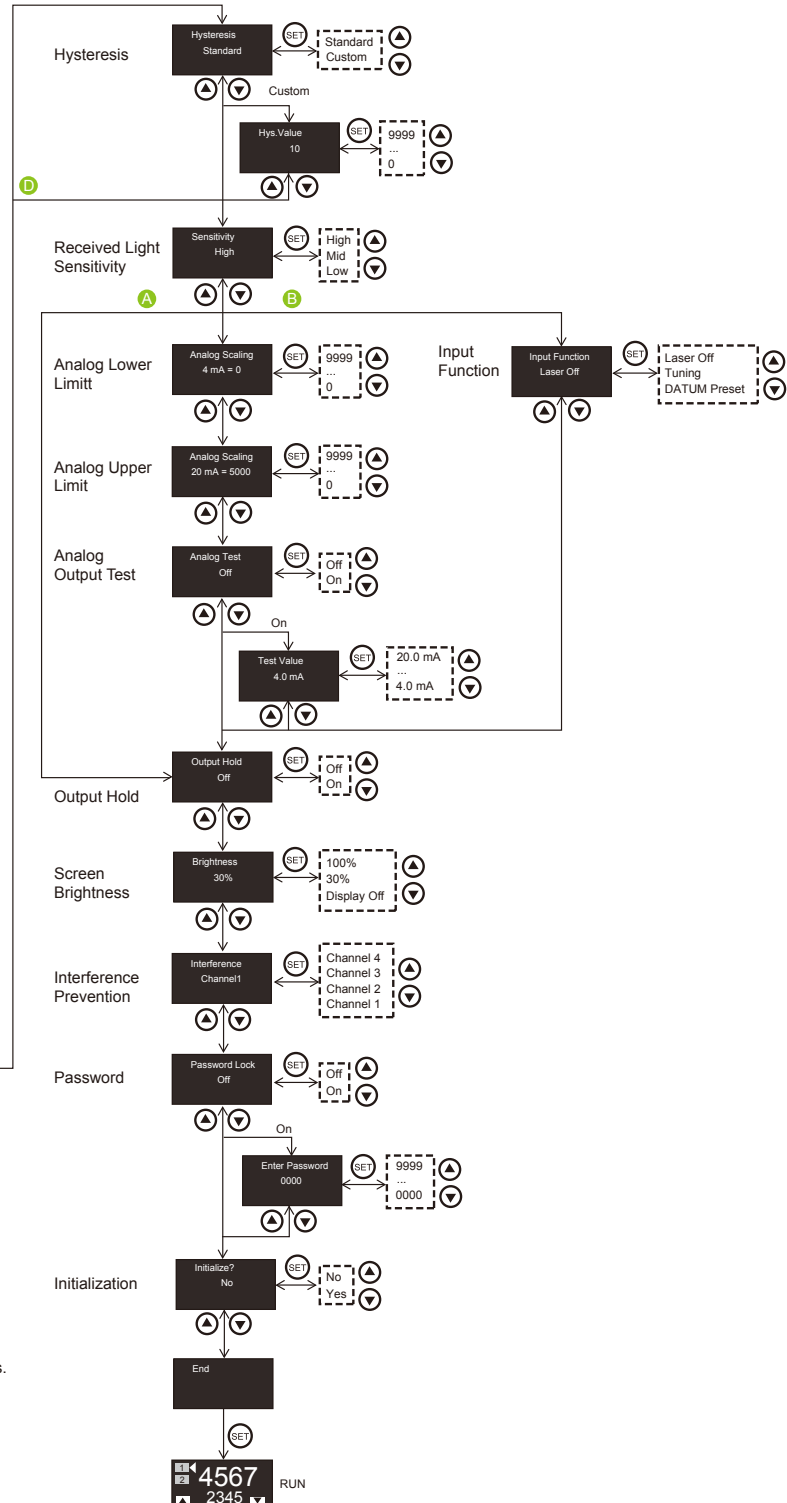
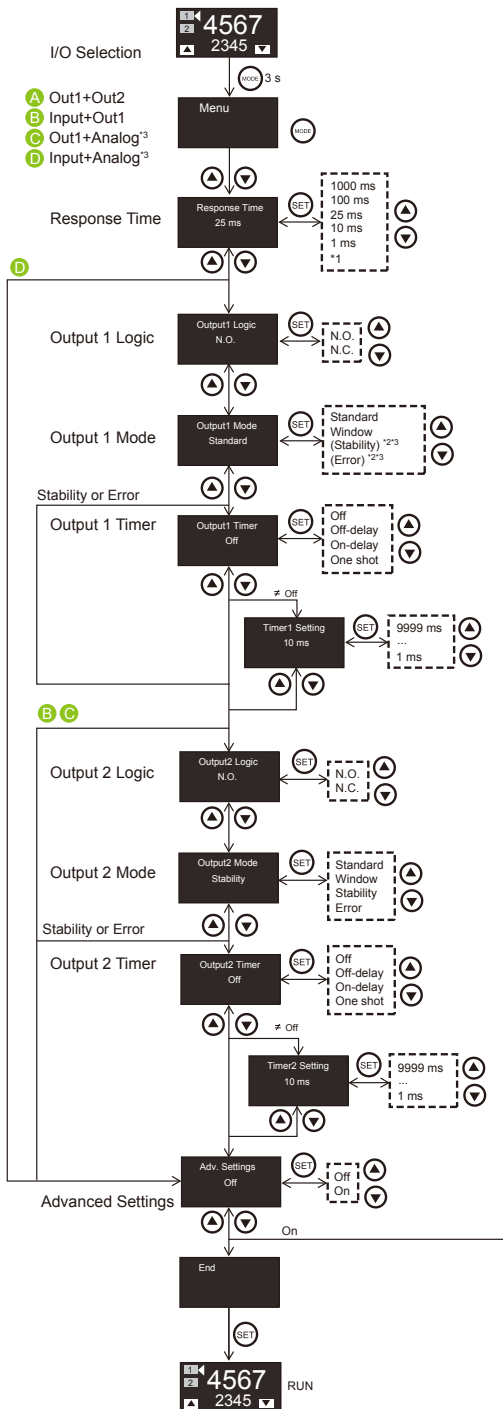
Switching the Display



* When the output changes from ON to OFF, the bottom value is reset to the current value. When the output changes from OFF to ON, the peak value is reset to the current value. When the analog output [Analog] is selected for LR-TB5000, pressing [DISP/▲] or [MODE/▼] will reset both bottom value and peak value to the current value.

Detailed Settings

The values shown on the display screen are the initial values.



*1 The LR-T2000CL/LR-TB5000CL has the following response times.
 2000 ms
 200 ms
 50 ms
 20 ms
 2 ms

*2 Only when the I/O selection

*3 Can be set only for LR-TB5000■

FS-N

LV-N

LR-Z

LR-T

CZ-V20

GV

GP-M

PZ-V/M

PX