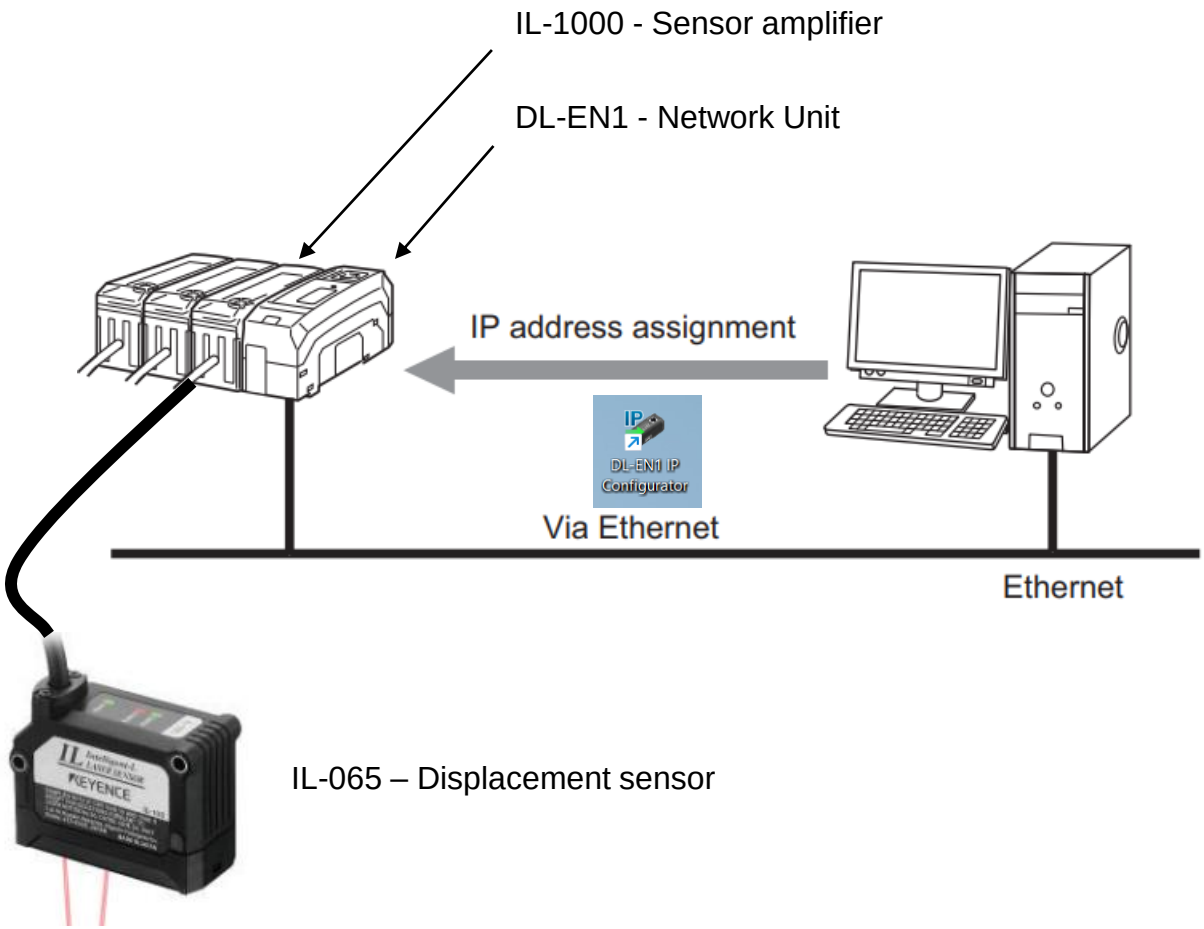
Test concept Displacement sensor

Detail: Date 6 May 2025
Description: Prove the sensor can measures all point on same high at 60 mm

Author : Atthaphan Paksakunnee 524161

Wiring Diagram



IL-065 Sensor

Specifications

Model		IL-065
Reference distance		65 mm 2.56"
Measurement range		55 to 105 mm 2.17" to 4.13"
Light source	Type	Red semiconductor laser, wavelength: 655 nm (visible light)
	Laser class	Class 2 (FDA (CDRH) Part1040.10)*1 Class 2 (IEC 60825-1)
	Output	560 µW
Spot diameter (at standard distance)		Approx. 550 × 1750 µm
Linearity		±0.1% of F.S. (55 to 75 mm 2.17" to 2.95")*2*3
Repeatability		2 µm*4
Sampling rate		0.33/1/2/5 ms (4 levels available)
Operation status indicators		Laser emission warning indicator: Green LED, Analog range indicator: Orange LED, Reference distance indicator: Red/Green LED
Temperature characteristics		0.06% of F.S./°C*5
Environmental resistance	Enclosure rating	IP67
	Pollution degree	3
	Ambient light	Incandescent lamp: 7,500 lux*6
	Ambient temperature	-10 to +50 °C 14 to 122 °F (No condensation or freezing)
	Relative humidity	35 to 85 % RH (No condensation)
	Vibration resistance	10 to 55 Hz, Double amplitude 1.5 mm 0.06", 2 hours in each of the X, Y, and Z directions
Material		Housing material: PBT, Metal parts: SUS304, Packing: NBR, Lens cover: Glass, Cable: PVC
Weight		Approx. 75 g

IL-065 Sensor

Command

Format

Send the "command format" in ASCII code from an external device.
For details on the parameters used with the command format, refer to "Command and Response Parameters".

The following four types of command formats are available.

(1)	M0 command	The measured values of all the connected sensor amplifiers are read.
(2)	MS command	The measured values and output statuses of all the connected sensor amplifiers are read.
(3)	SR command	The data of the specified connected sensor amplifier is read.
(4)	SW command	Data is written to the specified connected sensor amplifier.
(5)	FR command	The decimal position of the specified connected sensor amplifier is read.

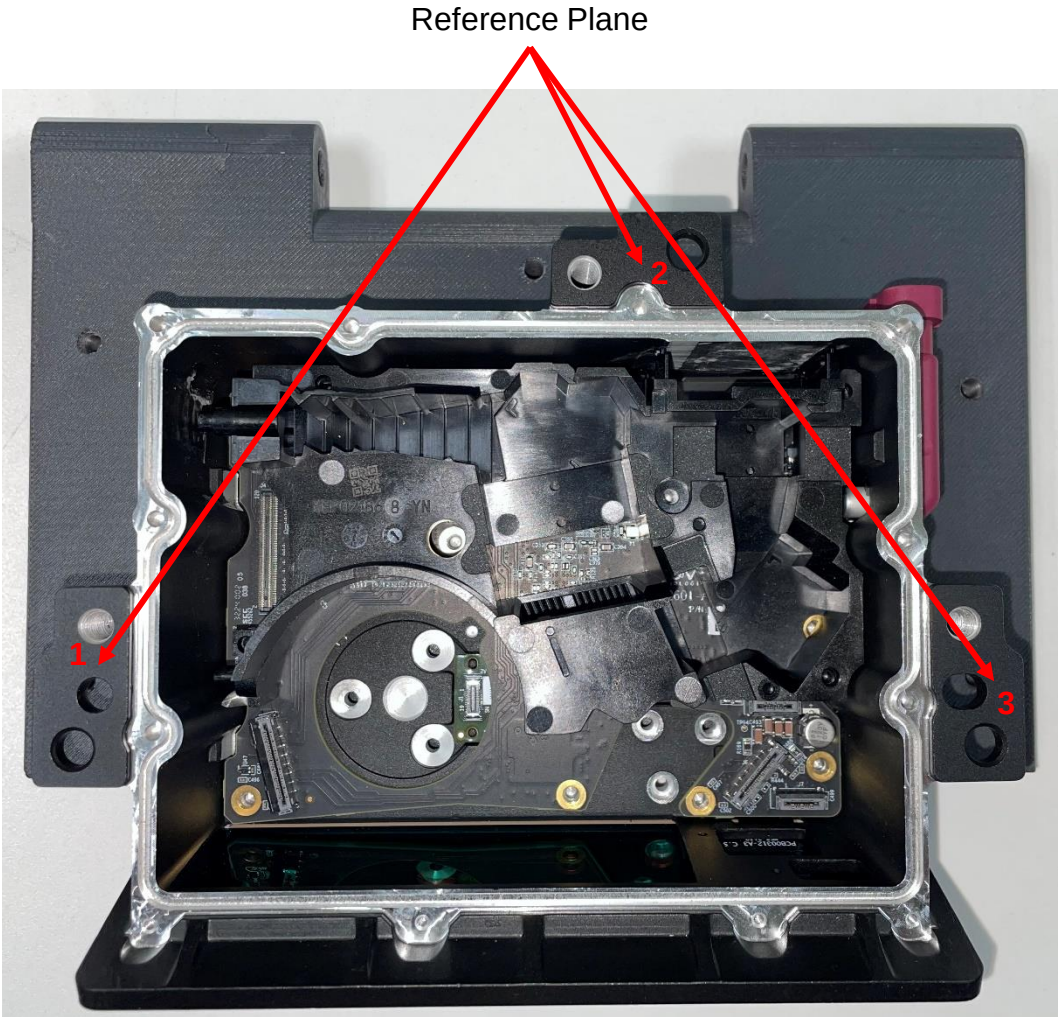
Functions	Input	Response
Read All Measured	"MS\r\n"	MS,01,-0.1253
Set sensor Zero shift	"SW,01,001,+000000001\r\n"	SW,01,001

Measure value

Sensor

Command Data number

Reference Point

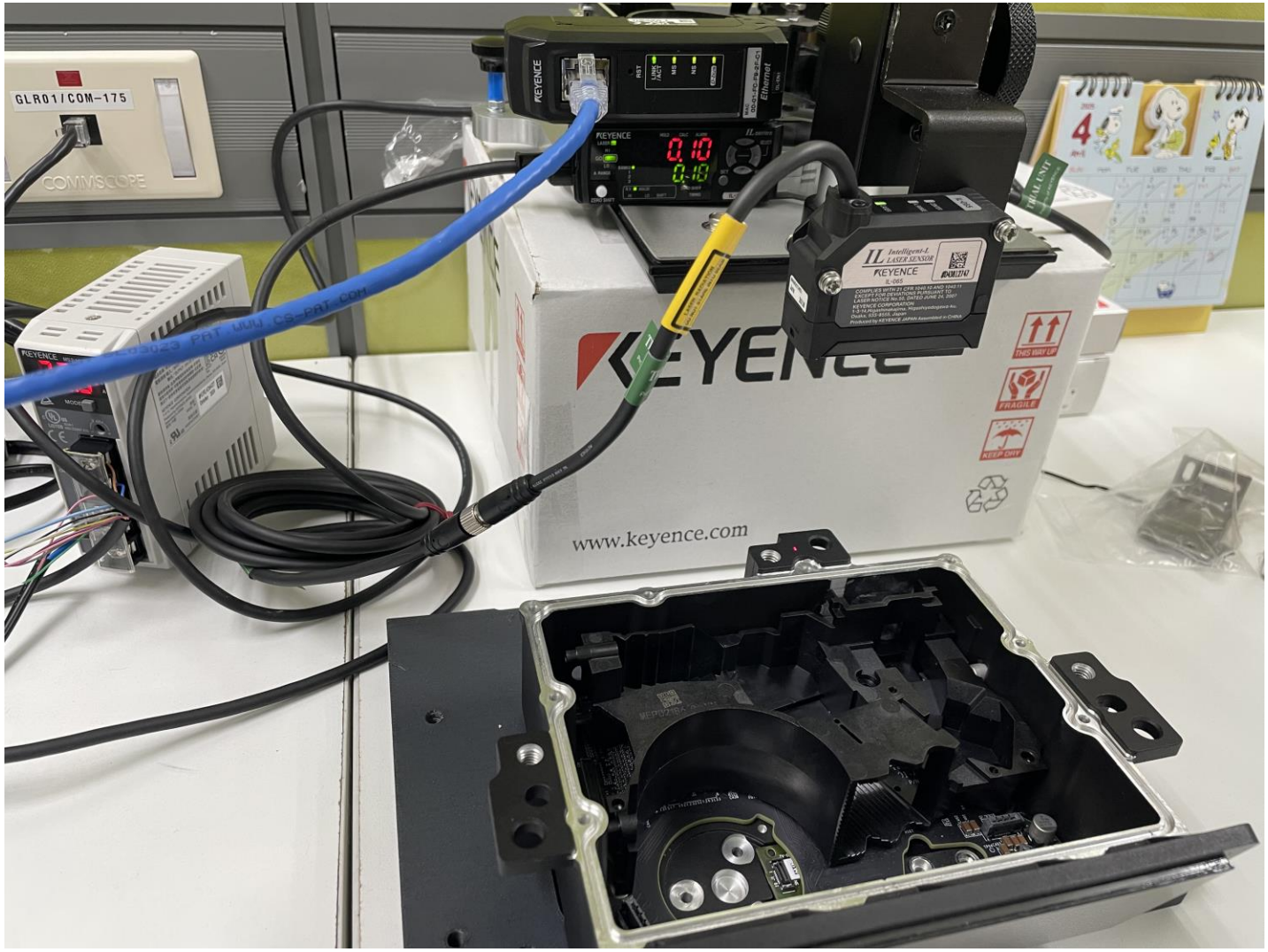


Reference Point

1

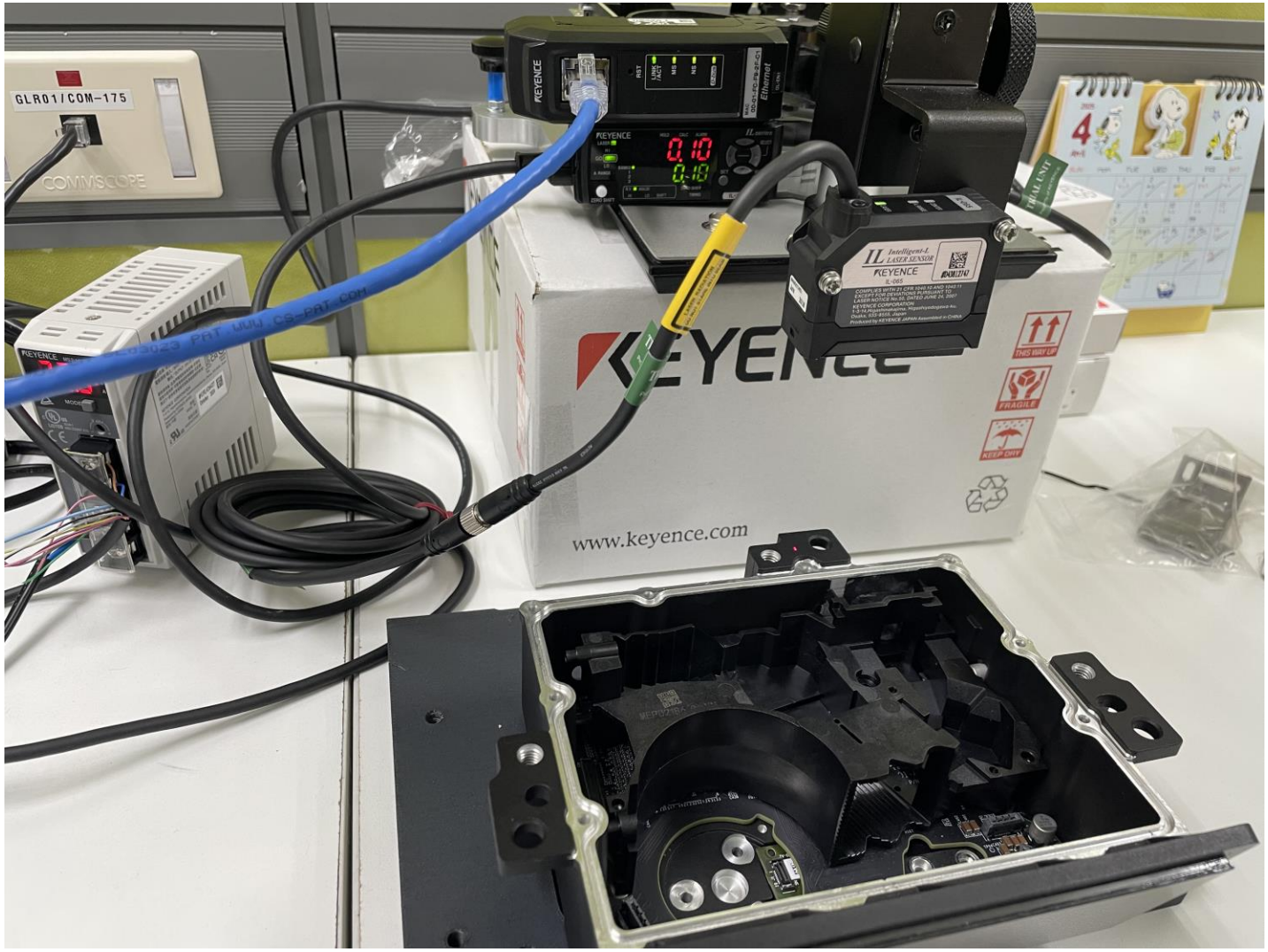
Reference Point

2



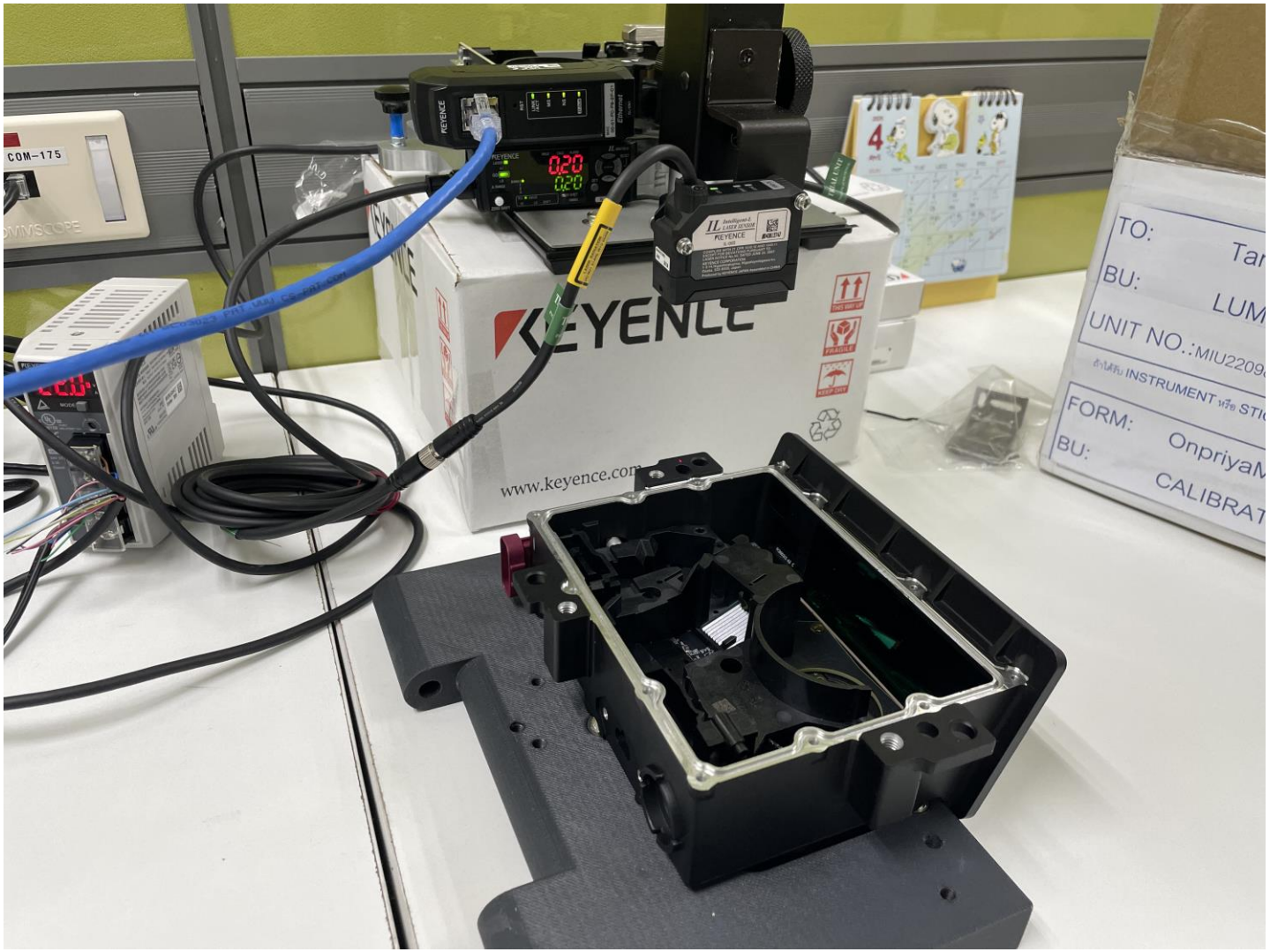
Reference Point

2

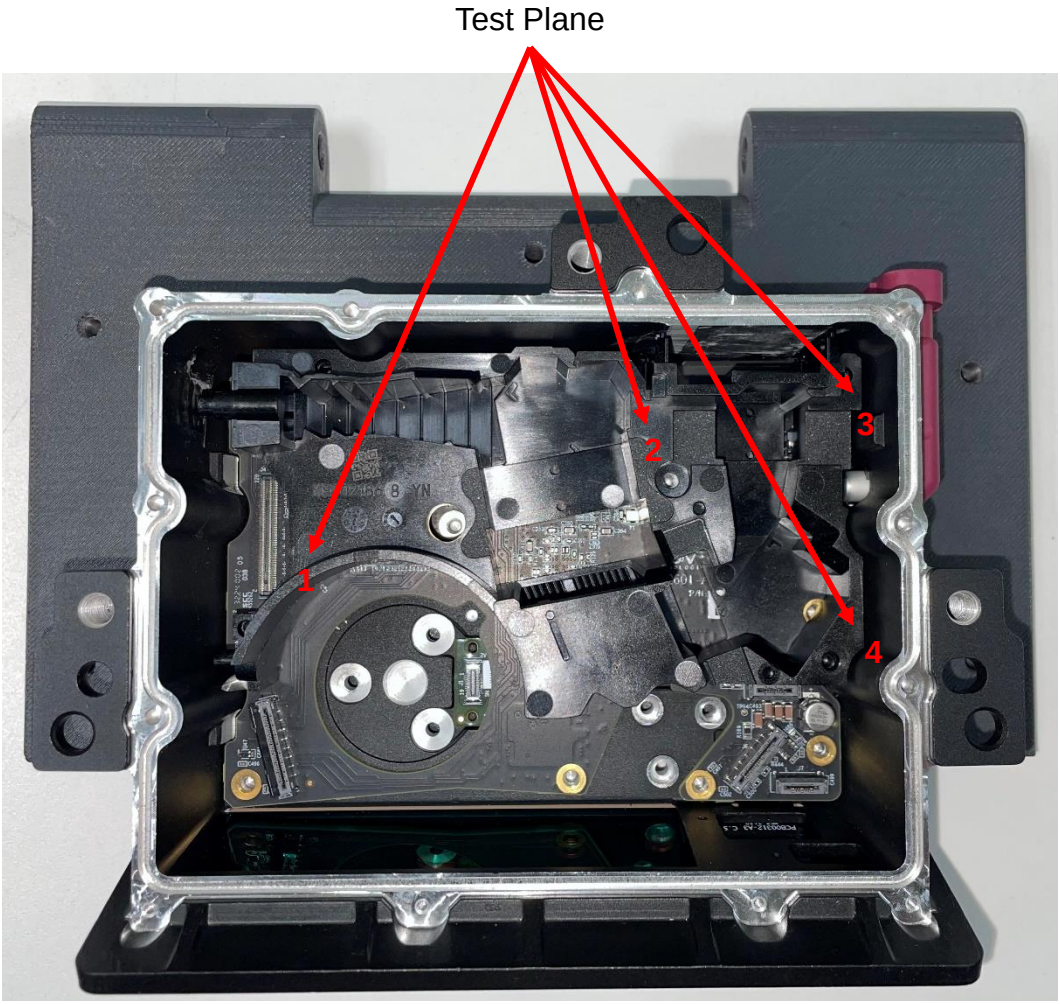


Reference Point

3

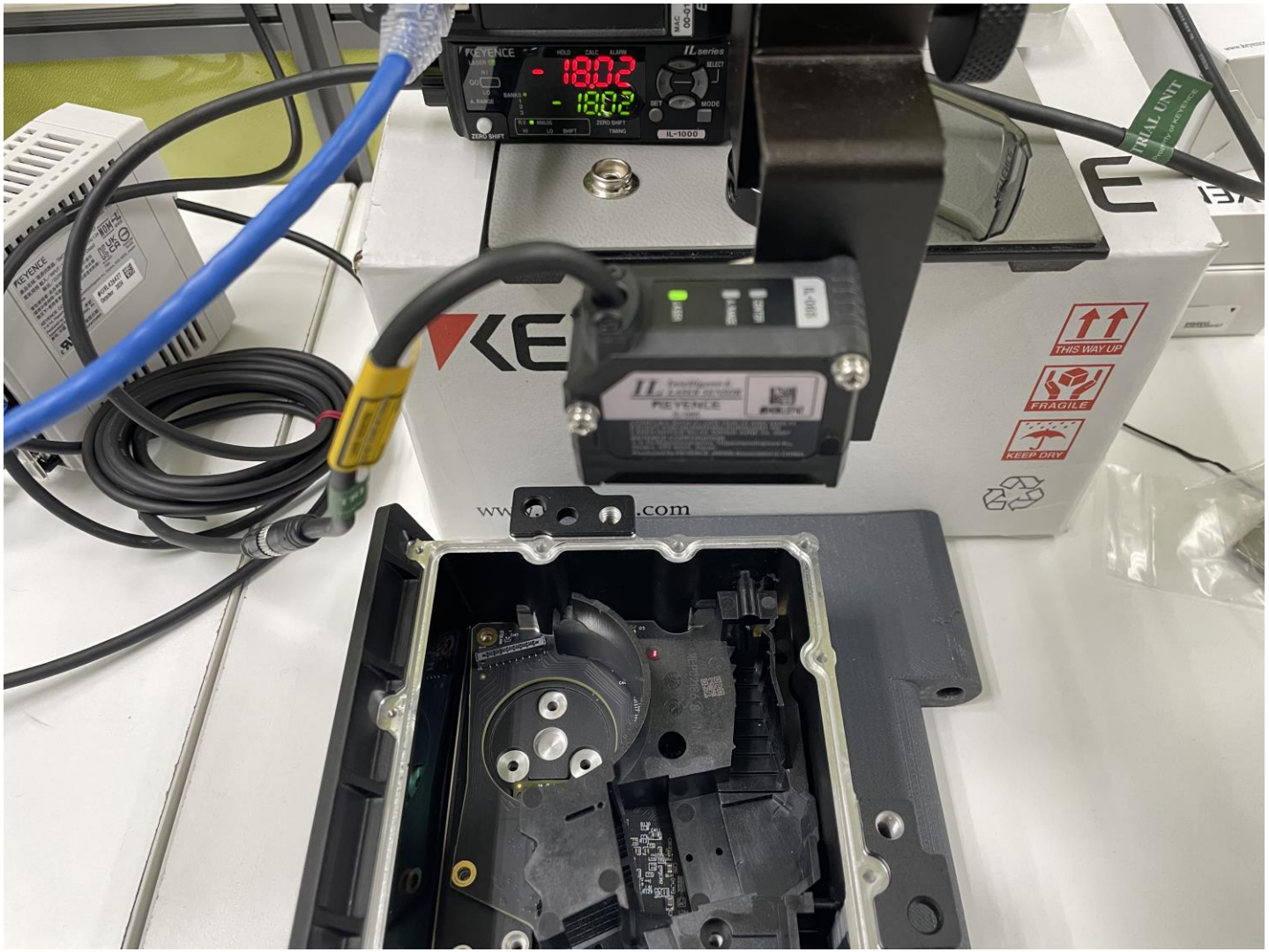


Test Point



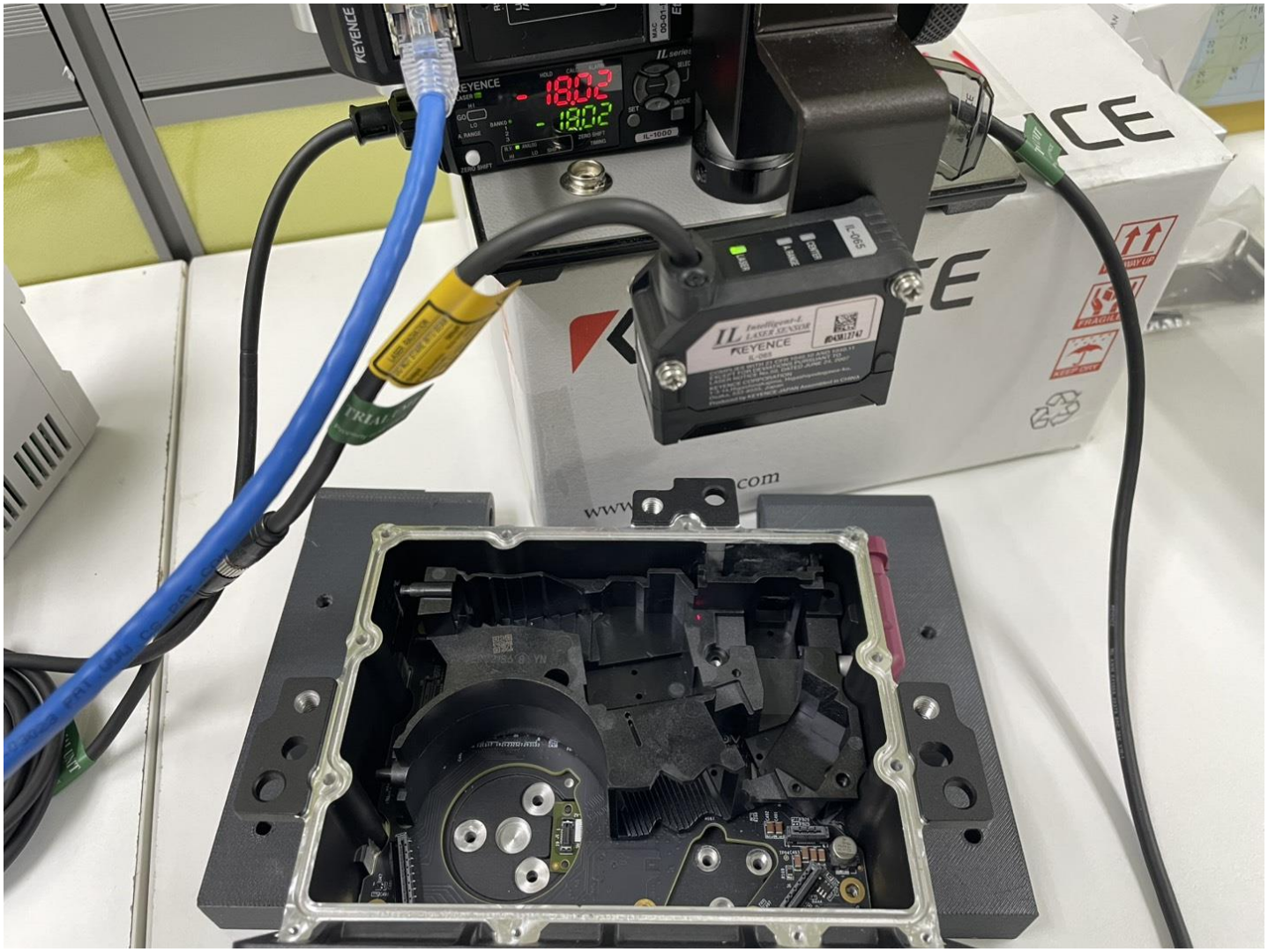
Test Point

1


KEYENCE
IL series
- 18.02
- 18.02
IL-1000
THIS WAY UP
FRAGILE
KEEP DRY
TRIAL UNIT

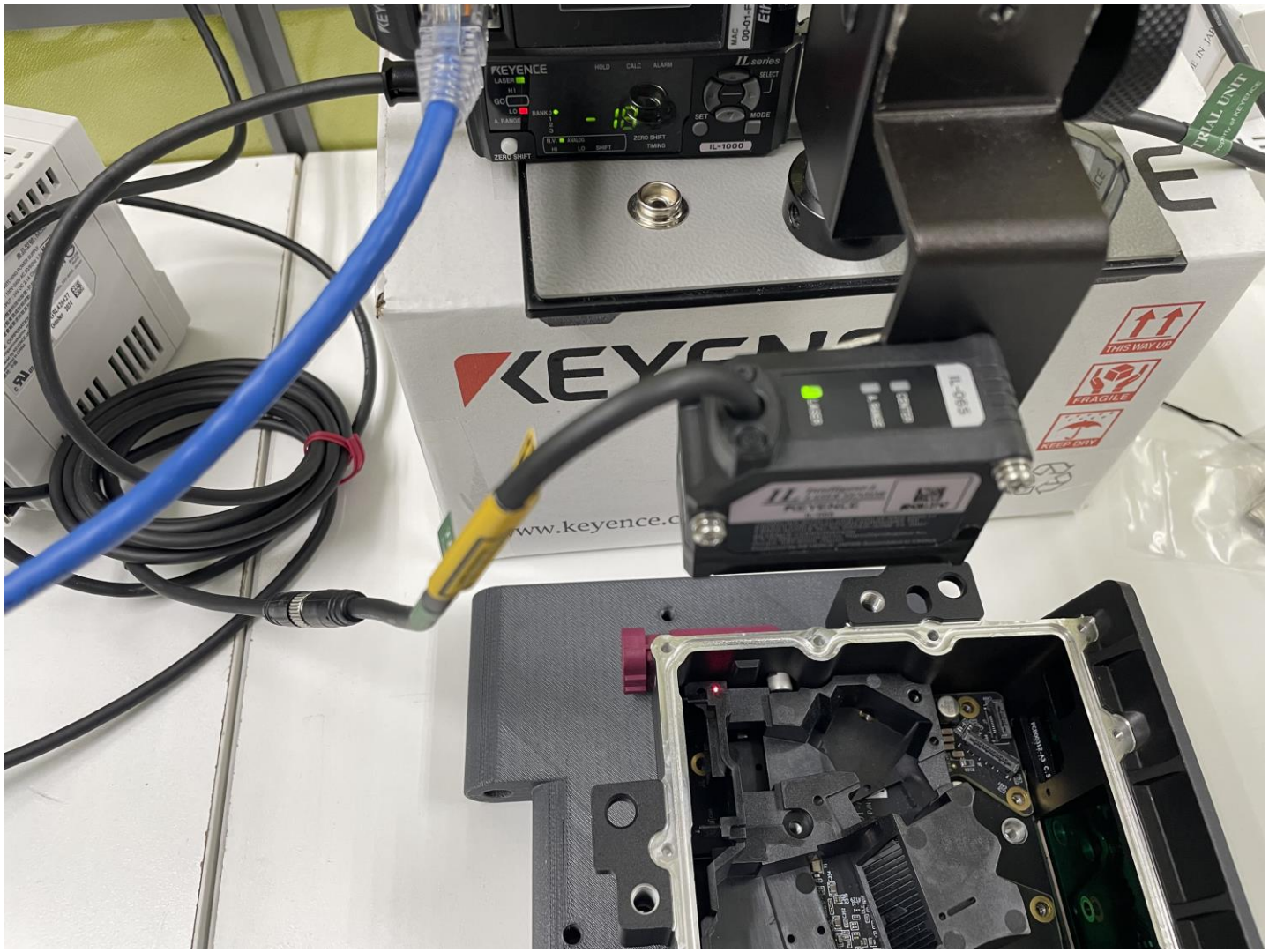
Test Point

2


KEYENCE
-18.02
-18.02
IL-1000
IL-085
Intelligent-L LASER SENSOR
KEYENCE

Test Point

3


KEYENCE
IL series
IL-1000
IL-065
TRIAL UNIT
THIS WAY UP
FRAGILE
KEEP DRY

Test Point

4