

High Speed On-line Infrared Thermometer

Model LX-200

FEATURES

- ① Compact light weight design
- ② Integrated temperature display
- ③ Parameter setting directly through keys on side panel
- ④ High-speed response utilizing optical response sensor
- ⑤ Bright LED beam covering target area
- ⑥ Easy to read and easy to set EL graphic display



DESCRIPTION

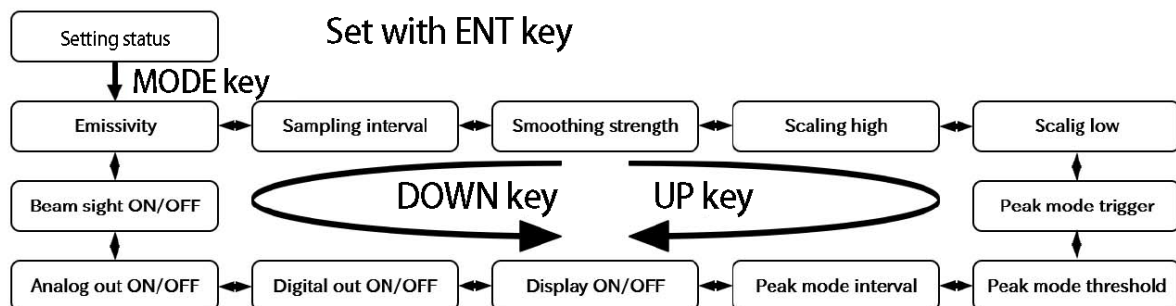
LX-200 is a compact light weight on-line infrared thermometer that utilizes state-of-the-art optical response InGaSb sensor for high speed non-contact sampling of temperature in five optional measuring ranges between 40°C to 1,300°C. Measured temperature is displayed on EL graphic display at its side panel. Various useful parameters/modes can be set directly using menu keys on its side panel. One of the five standard field of view options can be selected depending on specific application.

Sampling rate can be set in the range of 0.001 to 60 seconds.

Bright LED beam clearly defines target area being measured. Analog as well as digital output is available for remote display and recording or controlling devices.

LX-200 can be used for various applications in research and industry.

PARAMETER SETTINGS



MODEL

LX-200 - [A] - [B] - [C]

A	Temperature zone
1	40~300°C
2	40~600°C
3	40~1000°C
4	40~1300°C

5	100~1300°C
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B	Measurement area/distance
1	L=140
2	L=300
3	L=500
4	L=1000
5	L=100

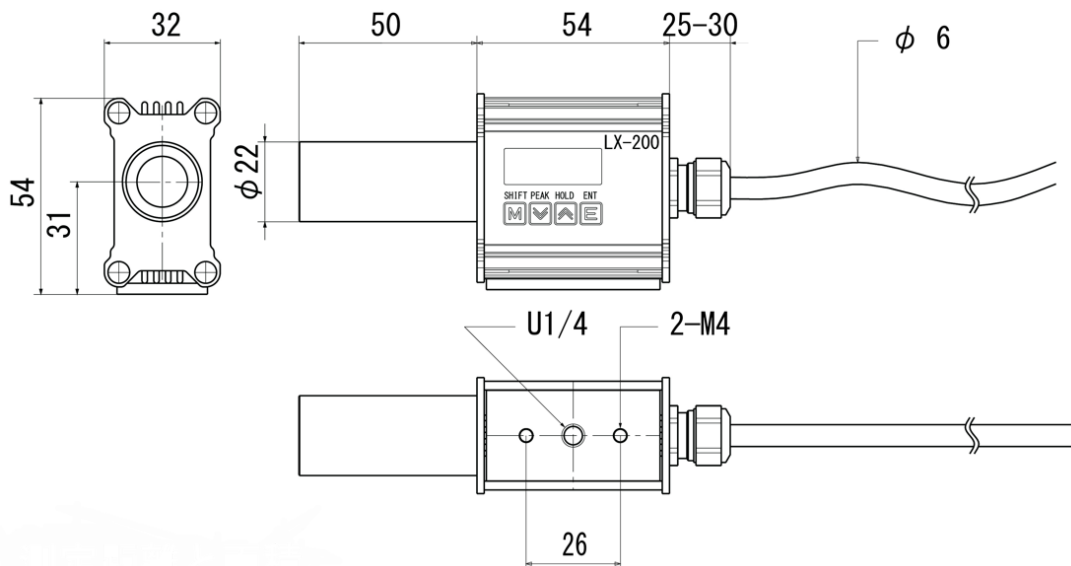
C	Code length
N/A	2m average
5	5m

If 5 in B is selected, the temperature range is a combination of 5 in A.

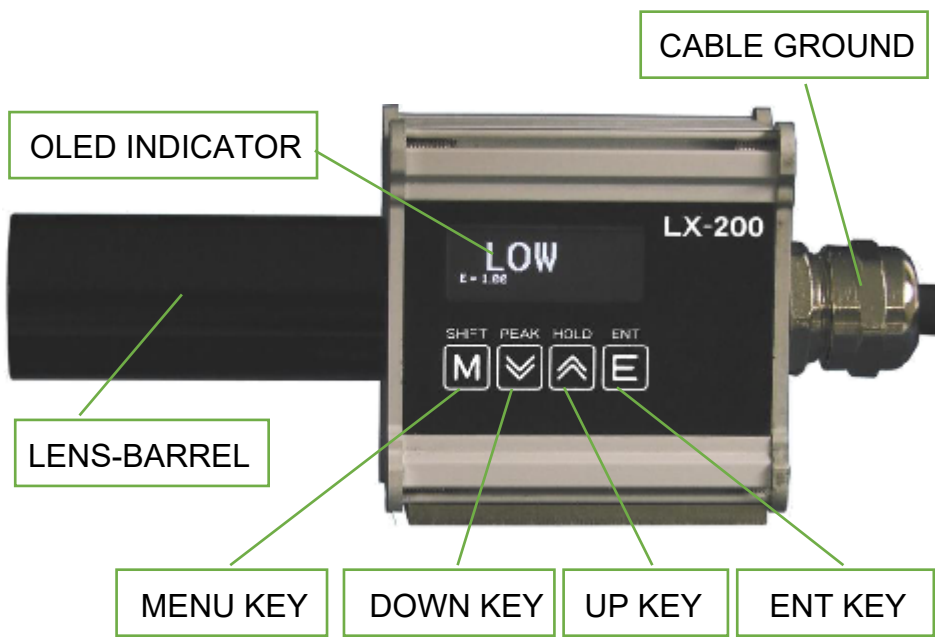
TECHNICAL SPECIFICATION

Model/ specifications	L X - 2 0 0				
Temperature range	40~300°C	40~600°C	40~1,000°C	40~1,300°C	100~1,300°C
Sensor	InGaSb sensor				
Spectral response	3~5 μm				
Accuracy	$\pm 1\%$ (FS) at $\varepsilon = 1.0$				
Repeatability	$\pm 1^\circ\text{C}$ +1 digit				
Resolution	1°C				
Emissivity	Adjustable from 0.05~2.00				
Response time	Sampling selectable from 0.001 to 60 sec. (Factory set at 0.1 sec)				
Target aiming	LED light equal to spot size				
Display	EL graphic display (OLED)				
Parameter setting	Through mode keys on side panel				
Modes/parameters	Emissivity, sampling interval, smoothing function, Hi & Lo scaling, peak mode trigger, peak mode threshold, peak mode interval, display on/off, digital output on/off analog output on/off, Beam sighting on/off adjustable through menu keys on front panel				
Analog output	4~20mA DC, Max. load resistance 500 Ω				
Digital output	RS-232C digital interface, synchronous pace: 115000 bps, 8bit, 1 stop-bit				
Power supply	12~36VDC				
Ambient temperature	0~50°C (non-condensation)				
Weight	320 grams (with 2-meter-long connection cable)				
Mounting	Optional camera stand/tripod				
Optional accessories	Multi-input panel meter with built-in power supply (85~240VAC) Mounting bracket TK-200, Swivel head LA-1B, and Tripod U-8000				
Cable length	Standard 2 meters long/5meters long				

DIMENSIONS (in mm)

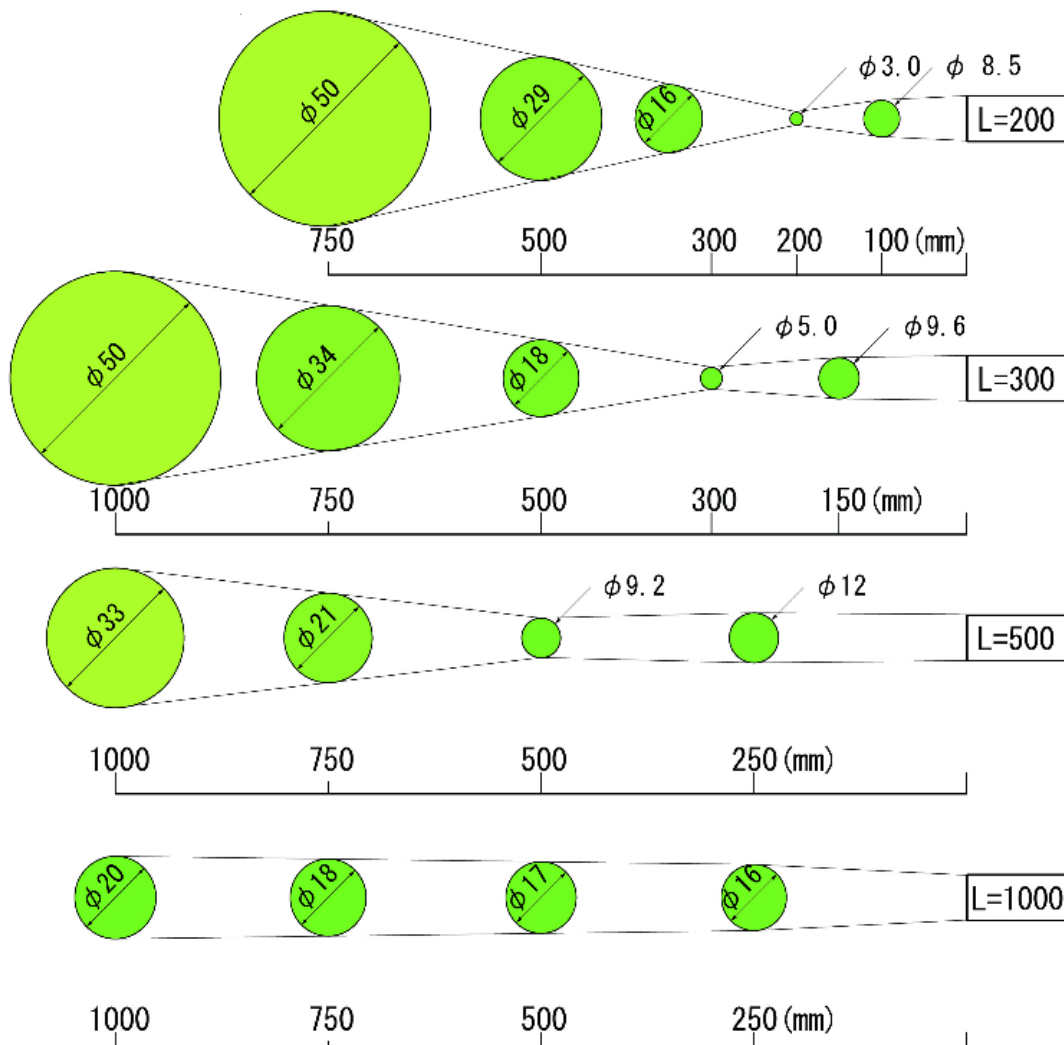


DETAIL OF SIDEPANEL KEYS



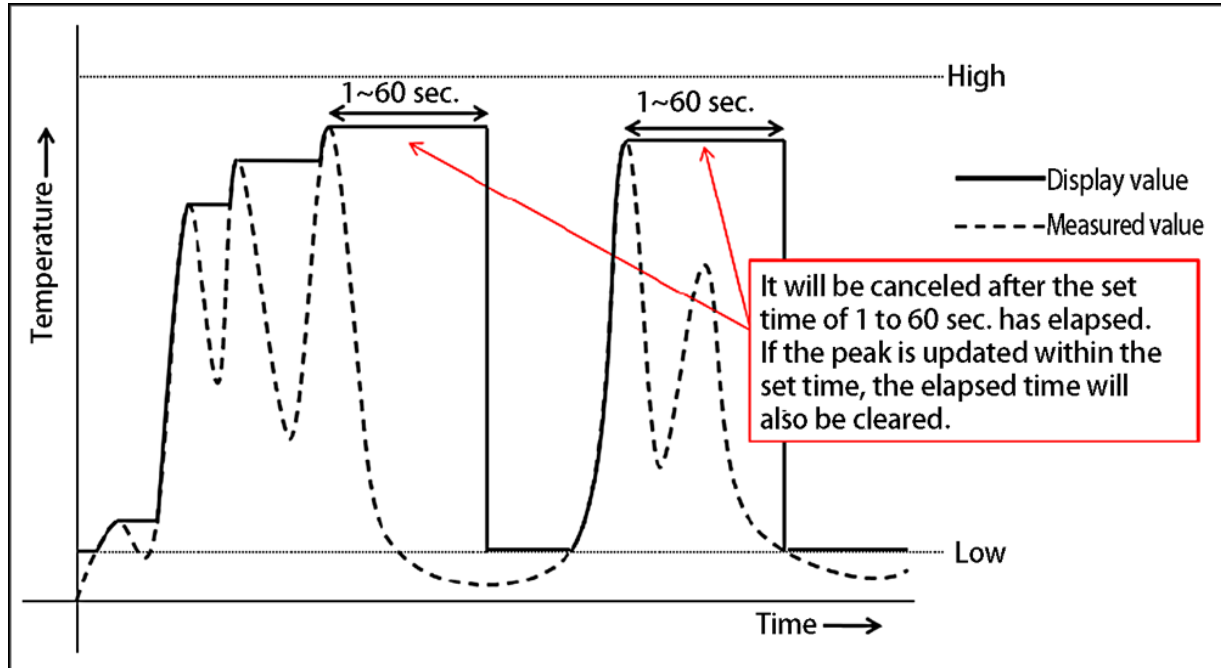
Wiring colors	Signal Names
Green	Power input - Digital output S.GND
Green / White	Power input +
Red	Analog output +
Red / White	Analog output -
Black	Digital output RX
Black / White	Digital output TX

FIELD OF VIEW OPTIONS



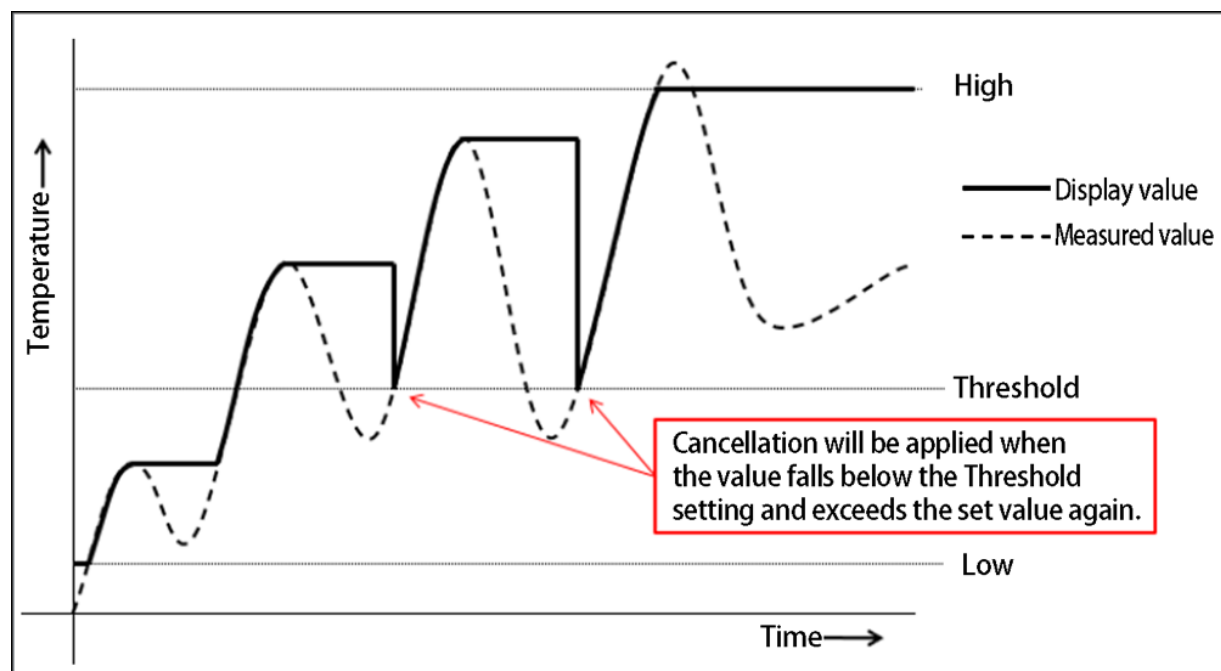
Interval behavior

After the specified time has passed, the maximum temperature will be released. If the peak value is updated within the set time, the elapsed time will be cleared.



Threshold behavior

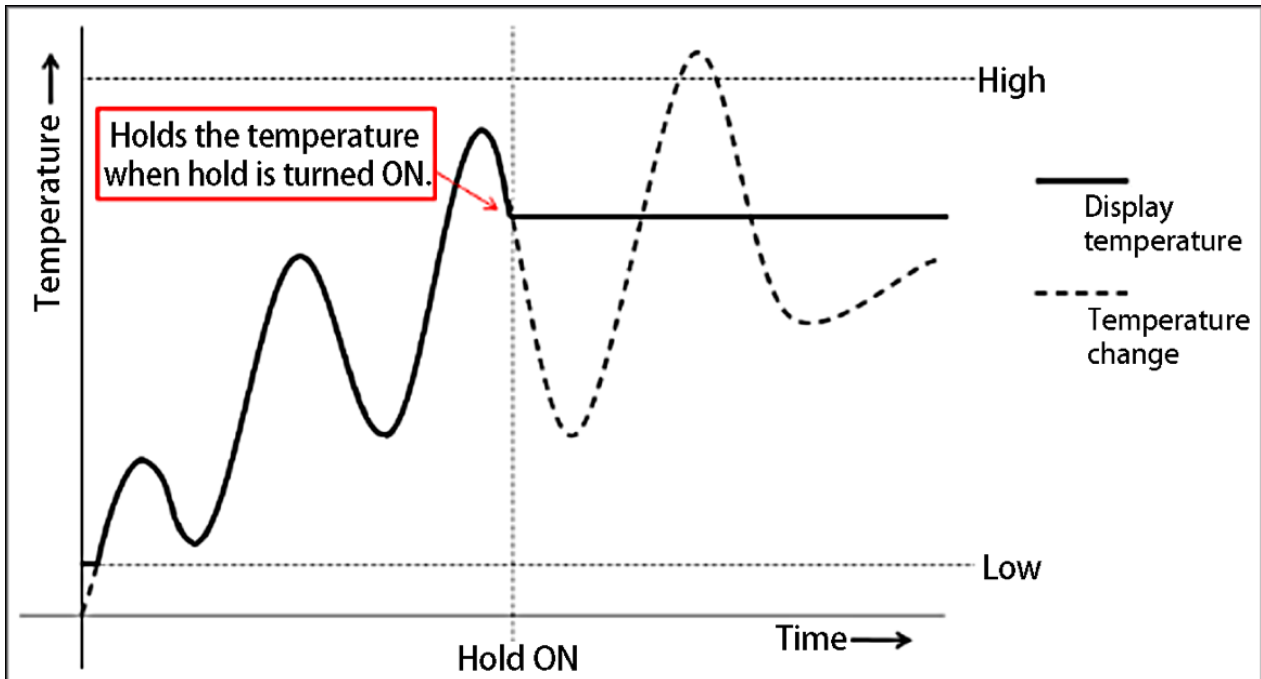
The maximum temperature is released when the temperature falls below the Threshold setting and exceeds the set value again.



Hold (Temperature holding)

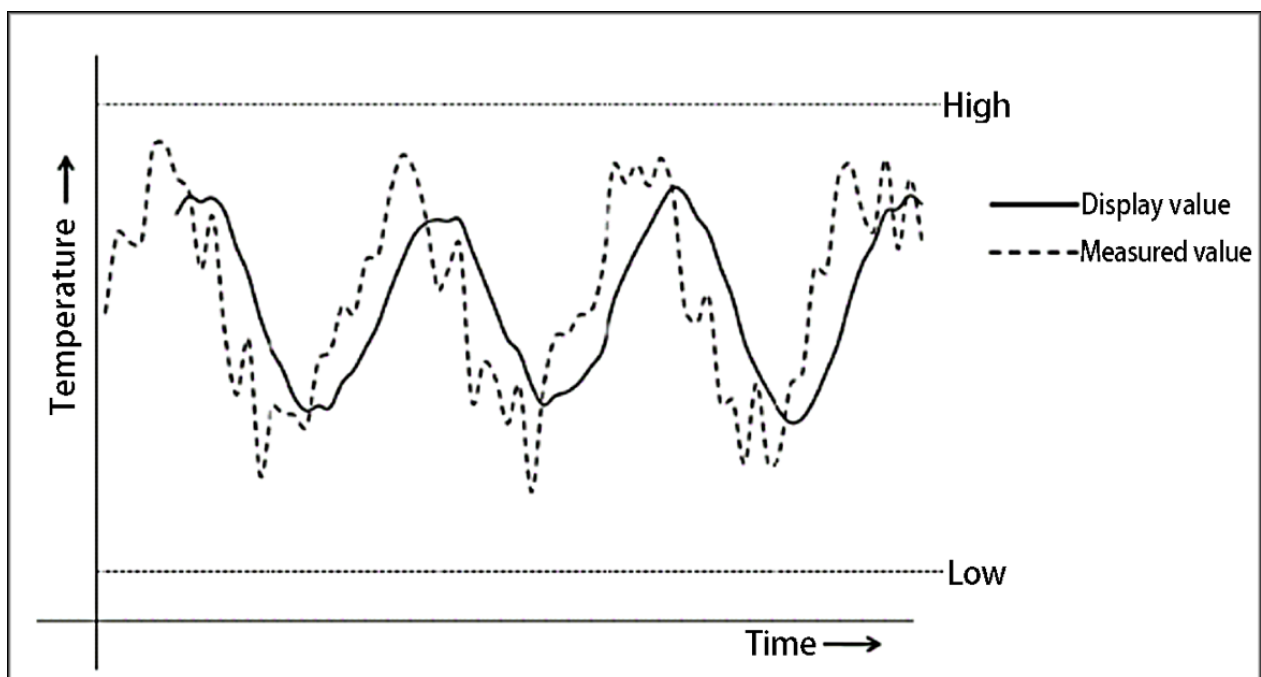
This is displayed until the measured value at the moment when the UP key is pressed in the measurement mode is released. Press the UP key again to cancel. When the hold function is turned on, the word HOLD is displayed at the bottom of the LCD. During the hold, all operations other than the release of the hold cannot be performed.

200°C
E=1.00 HOLD



Smoothing (Moving average)

A function that reduces small changes (jaggies) in rapidly changing data and makes it easier to understand. It is using a moving average. The stronger the smoothing intensity, the slower the response speed.



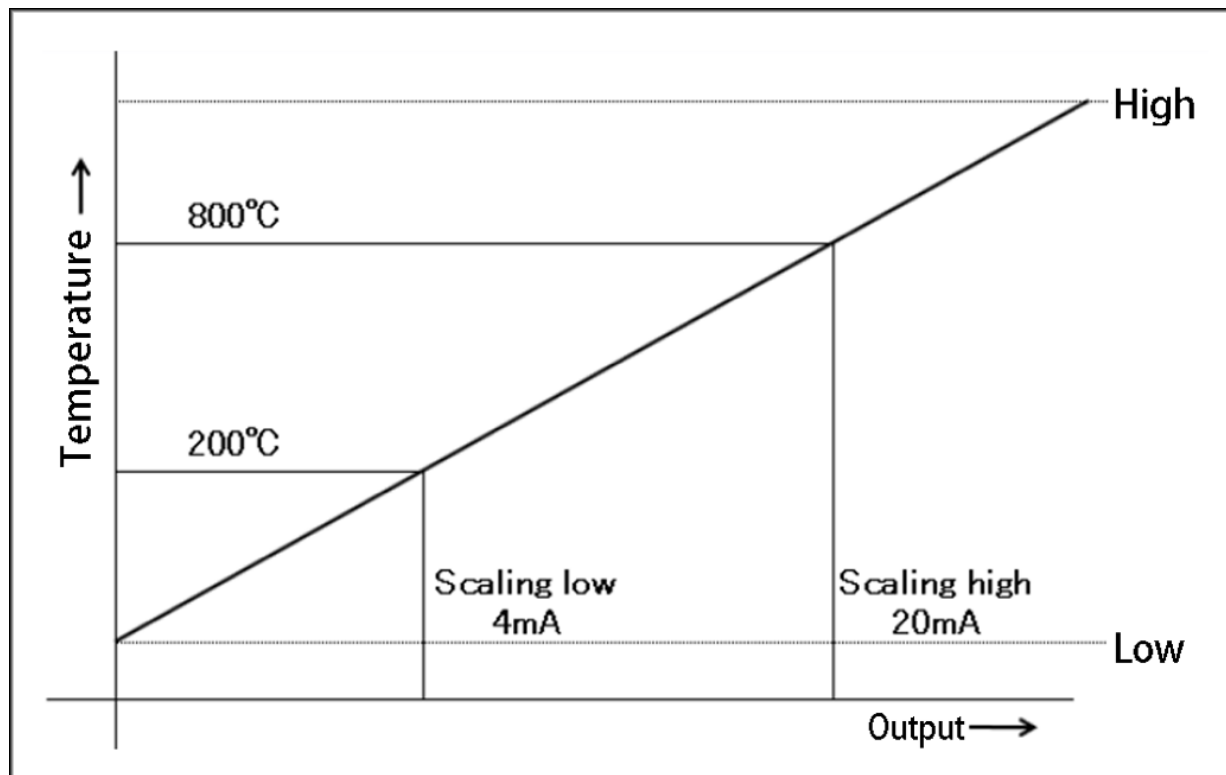
Scaling (Analog output adjustment)

Adjust the relationship between the measured value and the analog output.

$$\text{Output} = (\text{Measurement temperature} - \text{Scaling low}) / (\text{Scaling width} / \text{Output width}) + 4\text{mA}$$

Ex.) Scaling width = Scaling high - Scaling low = 800 - 200 = 600 °C

Output width = 20 - 4 = 16mA



ACCESSORIES

Mounting bracket TK-200	Multi-function DC24V power supply LD960A	Swivel head LA-1B	Tripod U-8000
			

DUE TO CONTINUOUS PRODUCT IMPROVEMENT, THE DESIGN AND TECHNICAL SPECIFICATIONS
ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

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