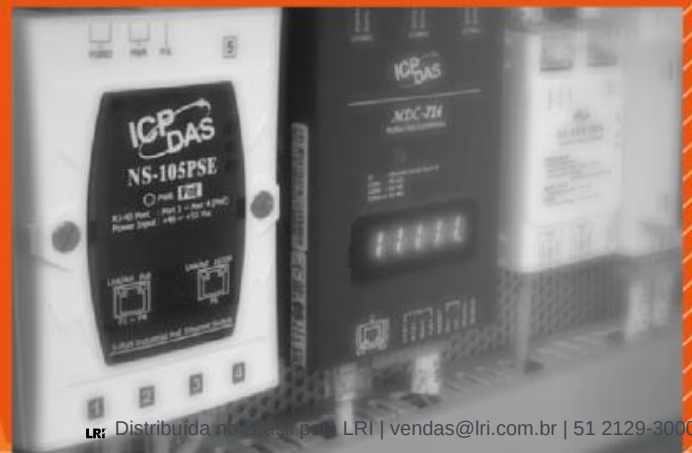
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How to calibrate iSN-81x module



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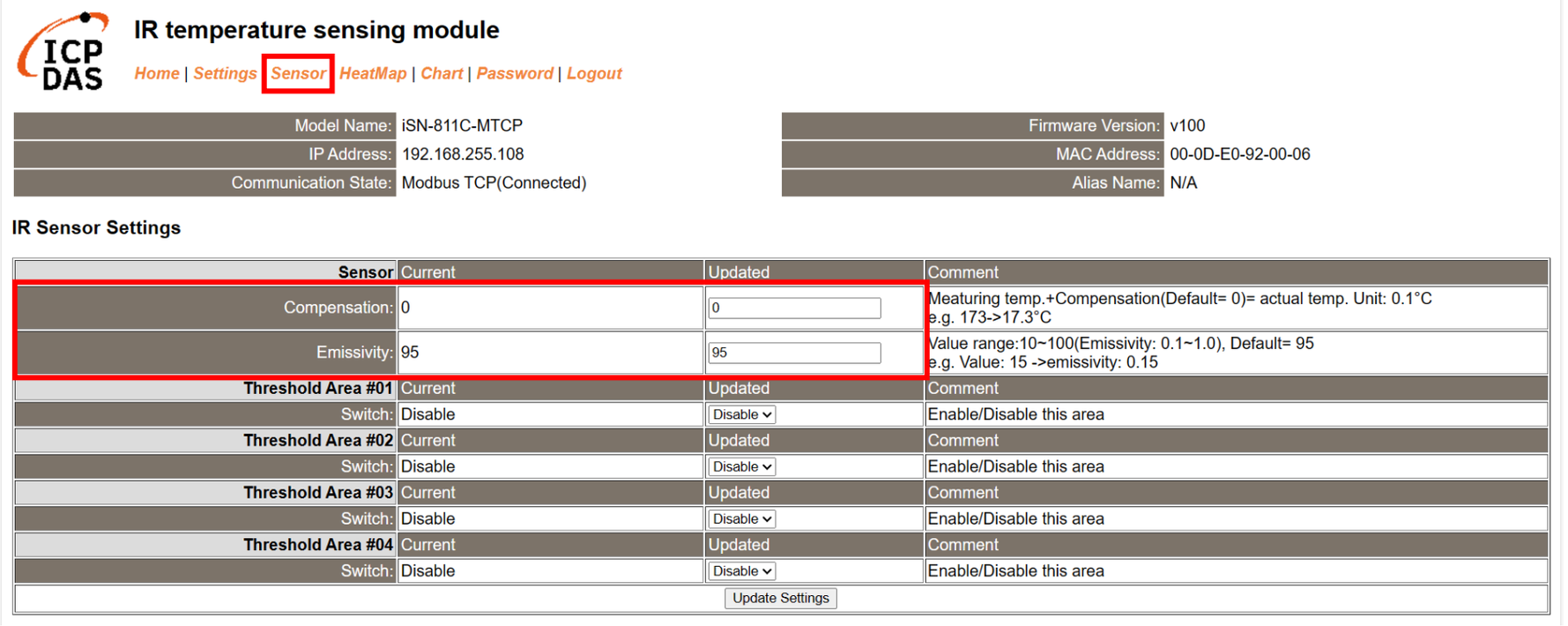
➢ How to calibrate iSN-81x module

- iSN-81x module provides two parameters for calibrating the sensor
  - Emissivity
    - Emissivity of each material to be tested is different. When calibrating, you need to query the emissivity of the material to be tested and adjust this parameter
  - Compensation
    - After adjusting the emissivity, adjust the offset to compensate for the difference between the measured temperature and the actual temperature.

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➢ How to calibrate iSN-81x module

- Adjust Emissivity and Compensation
  - RTU
    - Emissivity: Modbus Holding register 51
    - Compensation: Modbus Holding register 50
  - TCP



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IR temperature sensing module

Home | Settings | Sensor | HeatMap | Chart | Password | Logout

Model Name:	iSN-811C-MTCP	Firmware Version:	v100
IP Address:	192.168.255.108	MAC Address:	00-0D-E0-92-00-06
Communication State:	Modbus TCP(Connected)	Alias Name:	N/A

IR Sensor Settings

Sensor	Current	Updated	Comment
Compensation:	0	0	Meaturing temp.+Compensation(Default= 0)= actual temp. Unit: 0.1°C e.g. 173->17.3°C
Emissivity:	95	95	Value range:10~100(Emissivity: 0.1~1.0), Default= 95 e.g. Value: 15 ->emissivity: 0.15
Threshold Area #01	Current	Updated	Comment
Switch:	Disable	Disable	Enable/Disable this area
Threshold Area #02	Current	Updated	Comment
Switch:	Disable	Disable	Enable/Disable this area
Threshold Area #03	Current	Updated	Comment
Switch:	Disable	Disable	Enable/Disable this area
Threshold Area #04	Current	Updated	Comment
Switch:	Disable	Disable	Enable/Disable this area

Update Settings

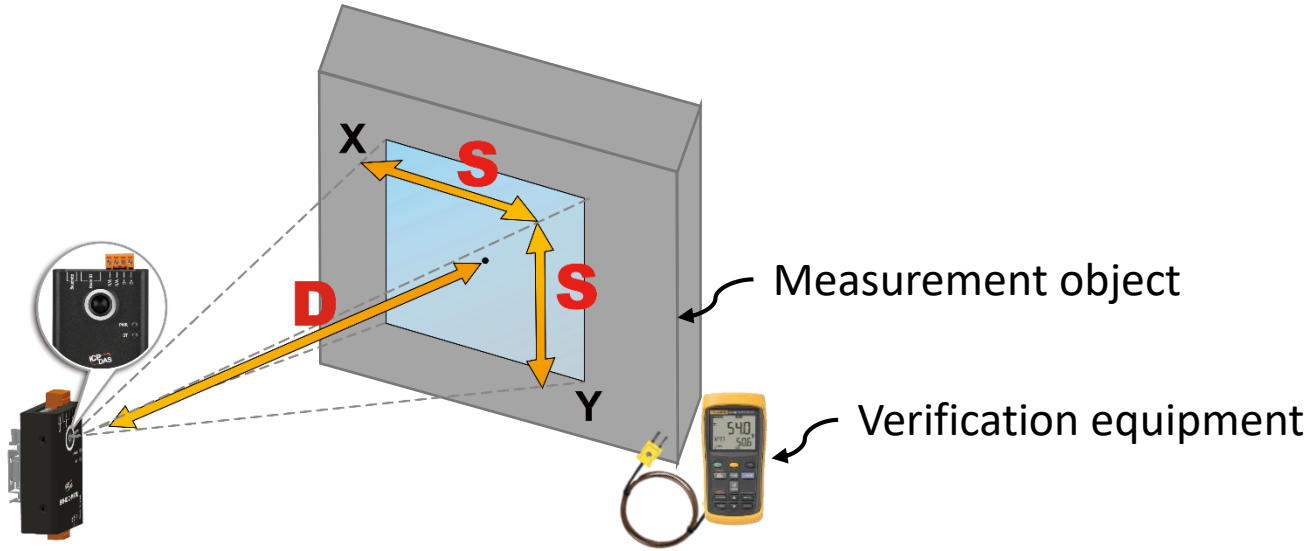
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➢ How to calibrate iSN-81x module

During calibration, the distance between iSN-81x module and the measurement object depends on whether the sensor's measurement field of view is covered by the measurement object.

For example:

- Measurement object
  - Emissivity=0.95
  - length*width=80cm*40cm
- Model :iSN-812-MTCP
  - X→D : S =1 : 2.86
  - Y→D : S =1 : 1.53

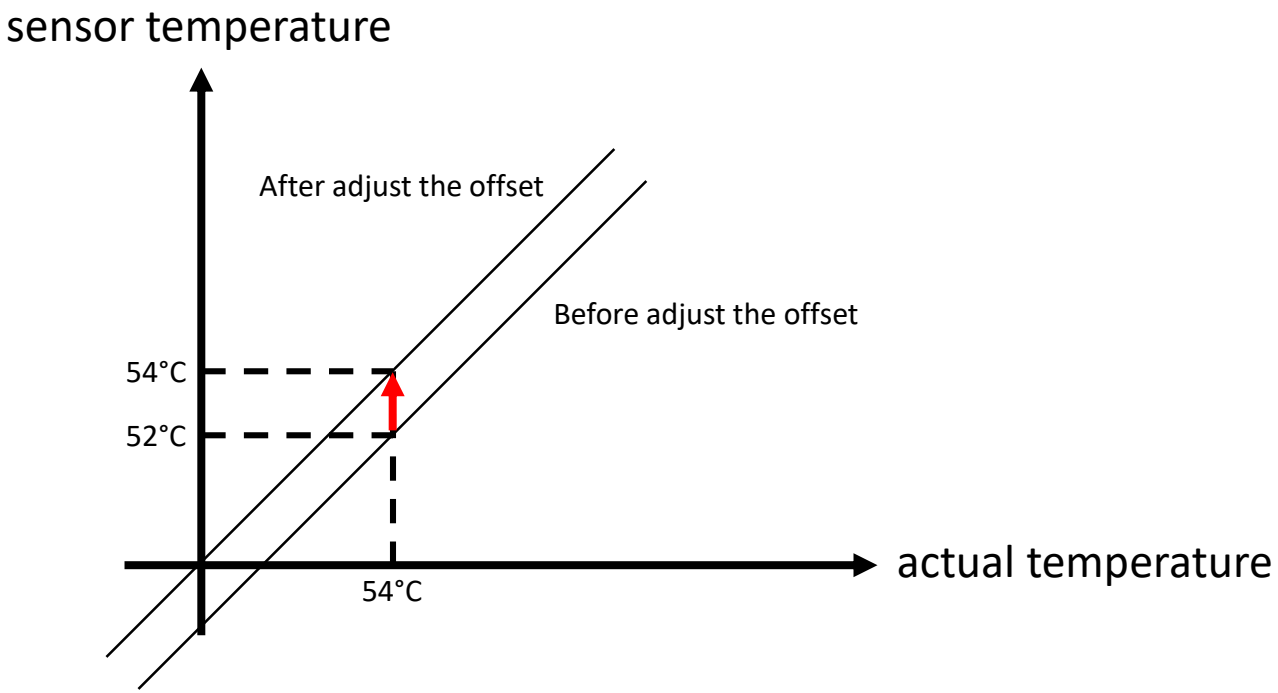


The distance between the two is 15cm. Calculated according to D:S, it is 42.9cm*22.95cm. The sensor field of view is covered by the measurement object.

1) The emissivity of iSN-812-MTCP was set to 95 and then measured.
2) The measured value of iSN-812-MTCP was 52°C, and the measured value of the verification equipment was 54°C, so set the compensation value to 2 to compensate.

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➢ How to calibrate iSN-81x module



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