

Non-Contact Infrared Temperature

KIR - 350

Sensor / Transmitter



1. Features

KIR-350 non-contact infrared thermometer measures the infrared wavelength emitted from the target spot and converts it to standard current signal output (4~20mA) and RS-485 communication signal output.

It can measure from $-60^{\circ}\text{C}\sim 380^{\circ}\text{C}$ and RS-485 communication enables to store data in computer.

KIR-350 has a high precision by adopting optical lens which can enable to measure target exactly at a long distance through its 10:1 D:S (Distance to Spot).

● Applications

Plastics, Fluids, Rubber, Coated components, Asphalt, Wood, Paper, Ceramics, Textiles, Glass, Food etc.

2. Ordering information

Code Number **KIR-350** – □ – □ – □

MODEL	Description
KIR-350	
Code A	Temperature Range
1	$-60\sim 380^{\circ}\text{C}$
2	$0\sim 200^{\circ}\text{C}$
Z	Other
Code B	Output
M	DC $0\sim 20\text{mA}$
N	DC $4\sim 20\text{mA}$
Z	Other
Code C	Cable Length
1	1M
Z	Other (OPTION)

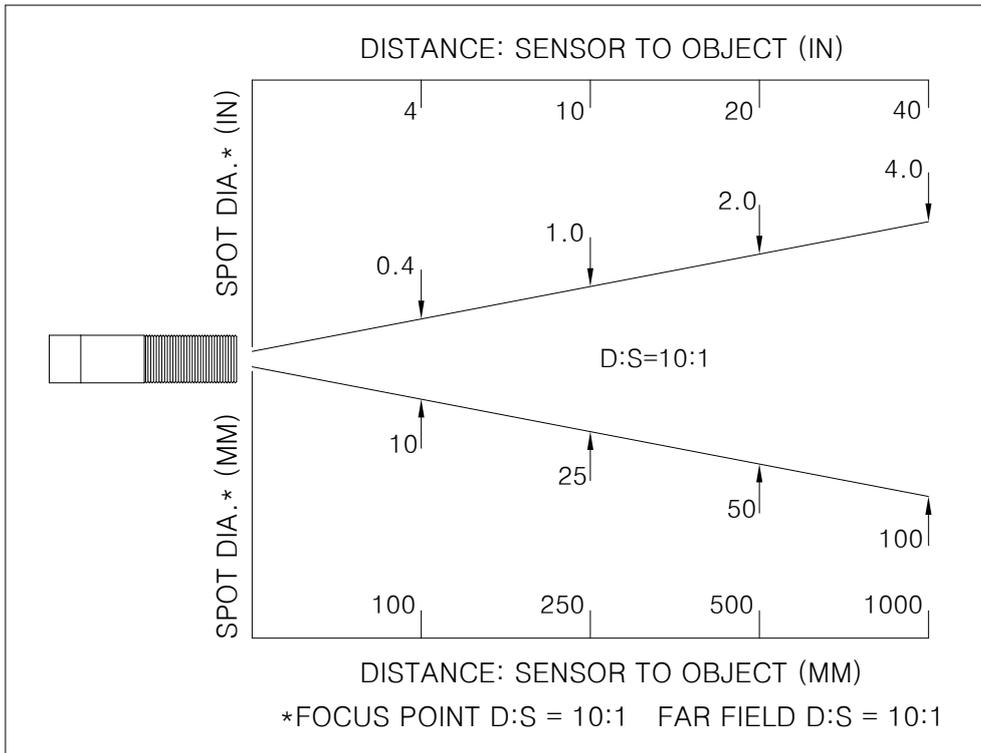
3. Accessory

Name	Picture	Usage	Remark
Fixing nut		Sensor fixing nut	Basic accessory
Mounting bracket		Sensor mounting bracket	Basic accessory

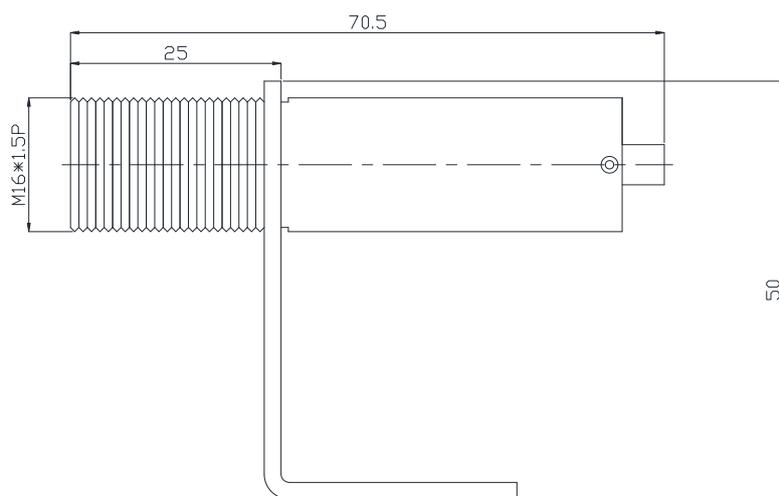
4. Specification

Segment	Specification
Measurement Range	-60~380°C
Device	Thermopile
Accuracy	±1% / full scale
Repeatability	±1% of reading
Field of View (D:S)	10:1
Optical spectrum wave	8~14μm
Responsive Time	0.1sec or below
Emissive rate	0.95 fixed ((Changeable when using PC software program))
Analog Output	4~20mA,
Communication output signal	RS-485
Power	DC 12~24V(Max 50mA)
Ambient temperature	-20~70°C
Temperature Resolution	0.1°C
Operating Relative Humidity	5~90%
Storage temperature	-30~85°C
Dimension	Ø16 ×70.5(L)
Casing material	SUS
Weight	75g
Cable length	1m, other(option)

5. Optical Field of View (D:S 10:1)



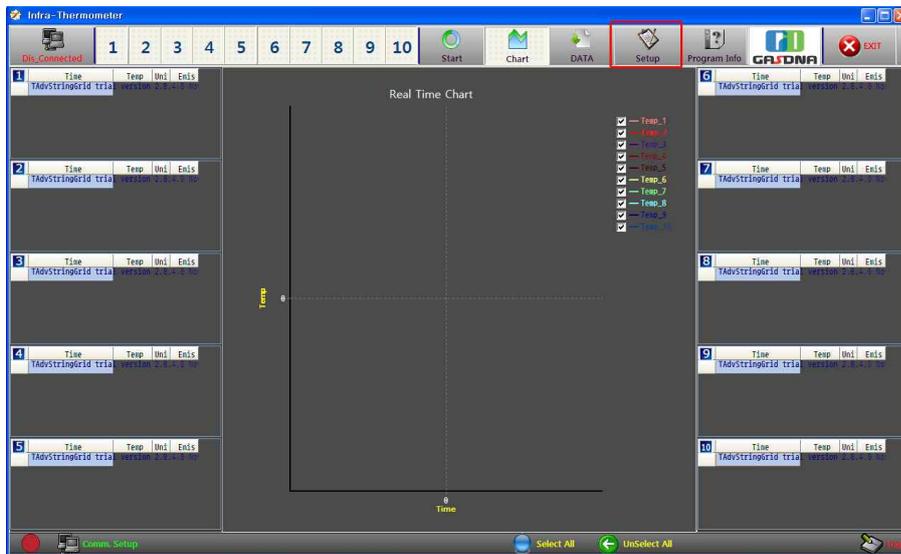
6. Dimension



7. Wiring

No.	Cable color	Usage
1	Black	Power 24VDC(+)
2	Red	Power 0V(-)
3	Yellow	mA (Current) Analog output
4	Green	TX+
5	White	TX-

8. Communication specification and Software

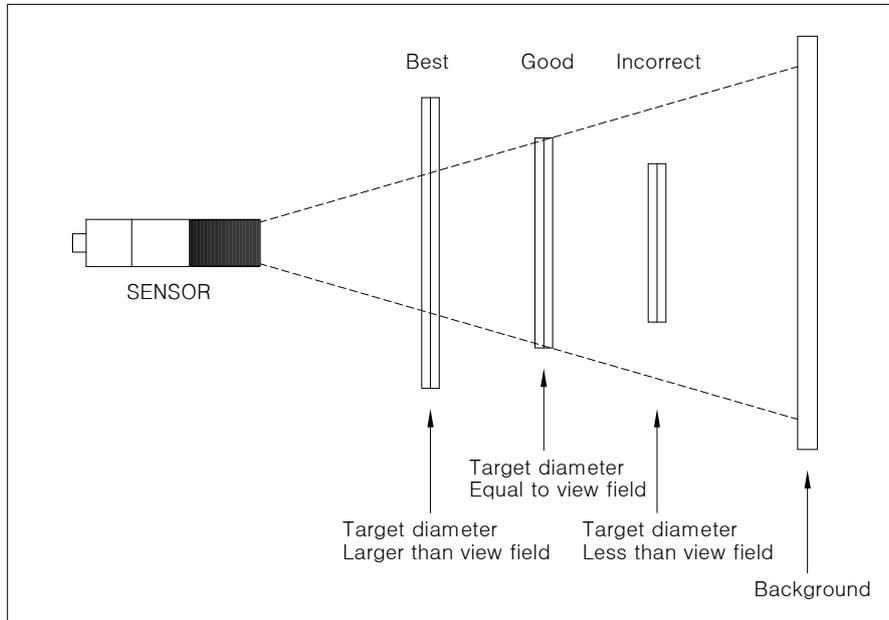


9. Emissivity Table

Material	Emissivity
Black body	0.95
Asphalt	0.90~0.98
Textiles, Fabric	0.98
Concrete	0.94
Ascon	0.95
Skin	0.98
Leather	0.75
Sand	0.90
Soil	0.92~0.96
Paint	0.8~0.95
Water	0.92~0.96
Ice	0.96~0.98
Rubber	0.94
Snow	0.83
Plastic	0.85~0.95
Wood	0.90
Ceramic	0.90~0.94
Glass	0.90~0.94
Marble	0.94
Chromic Oxide	0.78
Iron Oxide	0.78~0.82
Brick	0.93~0.96
Copper oxide	0.78
Mortar	0.89~0.91

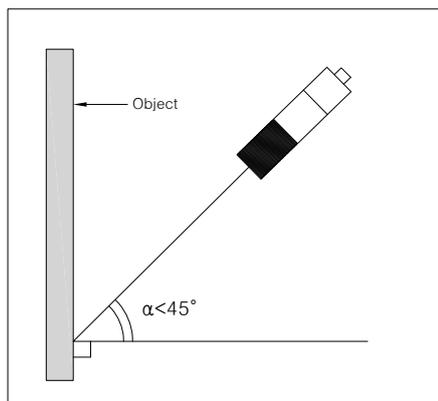
10. Installation

- Please make sure the target area is larger than the field of view.



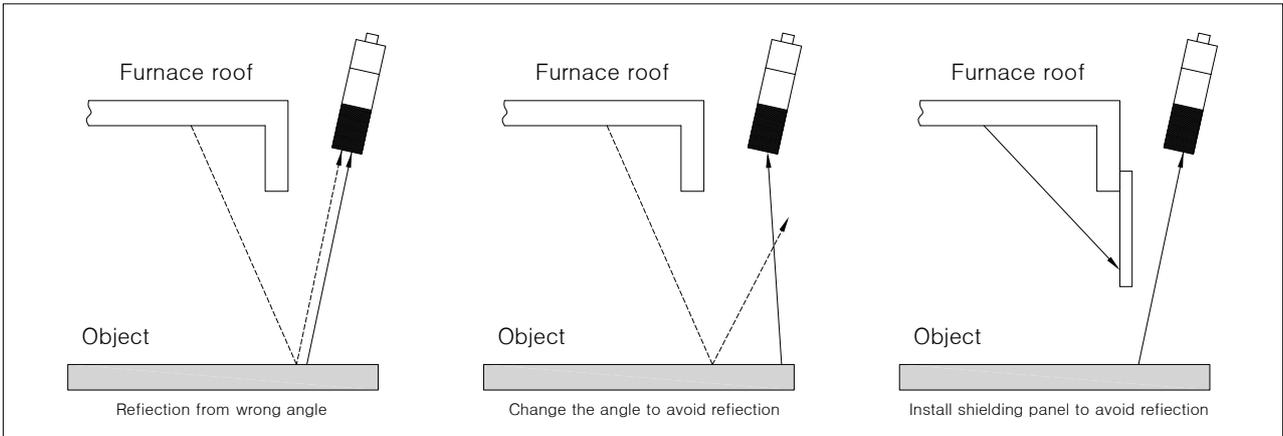
- The spot size is decided by the distance from the sensor to the target.
- Please refer to the 'section 5. Optical field of view' and make sure your target area is larger than the field of view.

- Please locate the sensor vertical against the target.

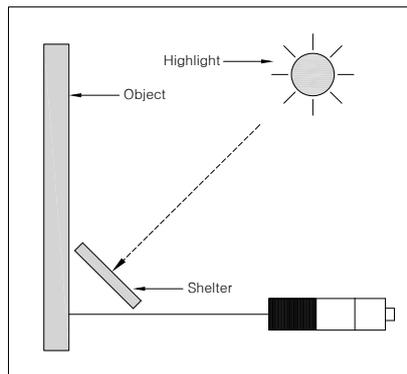


- It is the best for you to install the sensor vertical against the target area or object. If it is not available, the sensor should be more than 45° against the target area. Otherwise, it can affect the measuring accuracy.

- Please avoid the heat reflection from other high temperature materials



- Please avoid highlight.



- Please avoid electronic noise.

Please avoid the high frequency or high voltage area such as motor, pump, power line, and so on.