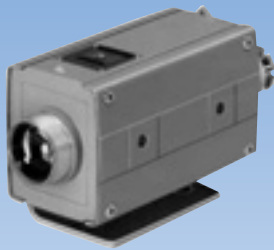


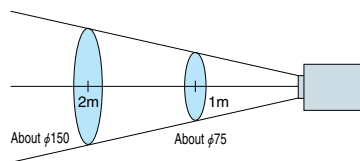
Lowest detectable temperature: 150°C



Model KD150C

KD150C is extremely compact and low-cost for amplifier-integrated water-cooled sensors. KD150C directly detects infrared radiation and outputs ON-OFF signals, which is useful for applications such as detection of passage or position of red-hot steel materials including ingots, slabs, steel plates and mold steel.

- Detection field of view  
Model: KD150C



- Without hood
- Detection object larger than detection field

## Features

- Water-cooled  
KD150C is the smallest of water-cooled sensors with built-in amplifiers and enclosed in robust case that withstands severe operating conditions.
- Reasonable cost  
High performance allows detection of low-temperature (150°C min.) steel material. Streamlined design offers even more reasonable price.
- Performance comparable to full-size HMDs  
Long detecting distance, sensitivity adjustment feature and high sensitivity offer excellent stability.
- Attachable airless dust hood or air purge hood  
For the prevention of dirt deposits on lens, dust hoods that do not require air (F38S, F38N) and air purge hoods (302NC-305NC) are available.

# KD150C

## Rating/Performance/ Specification/ Environmental Specification

| Model                        | KD150C   |
|------------------------------|--|
| Detection method             | Radiation detection  |
| Power Supply                 | 12-24VDC $\pm 10\%$  |
| Current consumption          | 20 mA max  |
| Output mode                  | <ul style="list-style-type: none"> <li>Open collector output<br/>Rating: 100 mA (30 VDC) max.<br/>Hysteresis: about 2 °C</li> <li>Analog output<br/>Op-amp voltage output<br/>0-3 V (3 V at 300 °C)</li> </ul> |
| Detection object temperature | 150 °C min. (iron oxide)   |
| Effective lens diameter      | $\phi 28\text{mm}$   |
| Response time                | 0.5s   |
| Indicator                    | Operation indicator (red LED)  |
| Sensitivity adjustment       | Adjustable with volume   |
| Ambient temperature          | 10 +55°C (Non-freezing)/ 180 °C max. with water-cooling  |
| Ambient humidity             | 35 - 85%RH max. (Non-condensing)   |
| Storage temperature          | -20 +65°C. (Non-condensing)  |
| Protective structure         | IP66   |
| Vibration                    | 10-55 Hz / 1.5 mm amplitude / 2 hours each in 3 direction  |
| Dielectric withstanding      | AC 500V for 1 minute   |
| Shock                        | 500 m/s <sup>2</sup> / 3 times each in 3 directions  |
| Insulation resistance        | 250 VDC, 20 M $\Omega$ or higher   |
| Case material                | Aluminum die-cast (cord opening ground hub)  |
| Connection                   | Terminal block   |
| Mass                         | About 2kg  |

### • Cooling water specification

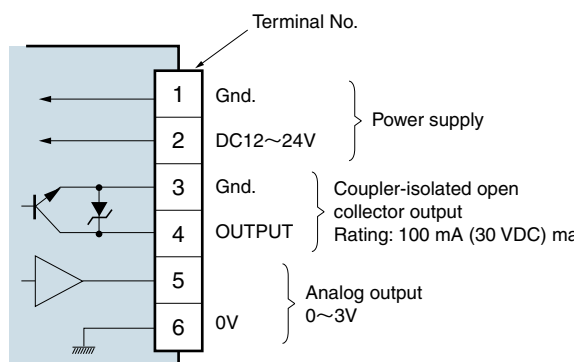
|                   |                 |
|-------------------|-----------------|
| Flow rate         | 2 l/minute min. |
| Temperature       | +10~+35°C       |
| Withstand voltage | 0.29MPa         |

### • Air purge specification (with optional part)

|                   |                   |
|-------------------|-------------------|
| Flow rate         | 200 l/minute min. |
| Withstand voltage | 0.98MPa           |

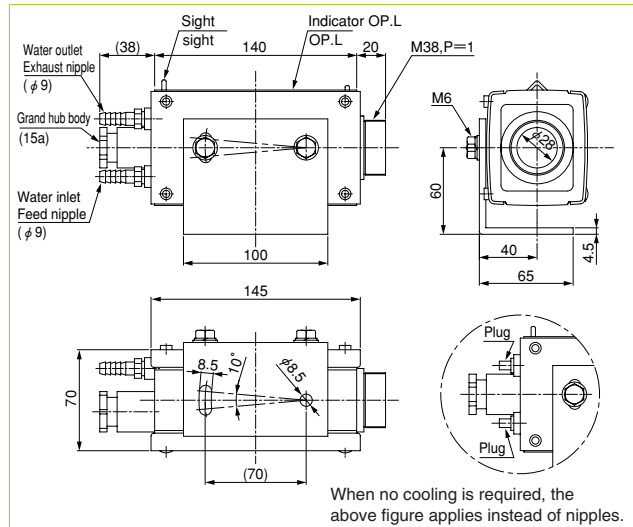
Air not required for use of airless dust hood.

## Connection

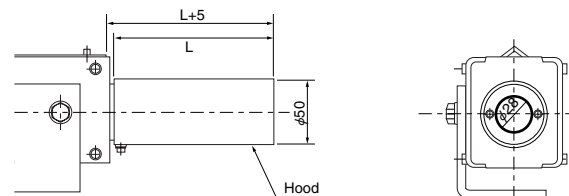


Note) The open collector output is isolated from power supply. The analog output "0" and "0" of power supply have different potentials.

## Dimensions(in mm)

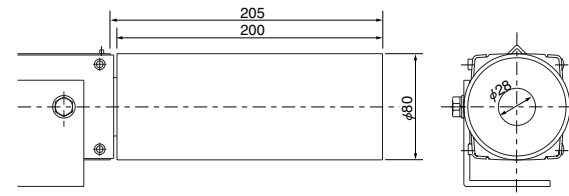


### • With Airless hood F38S Series attached

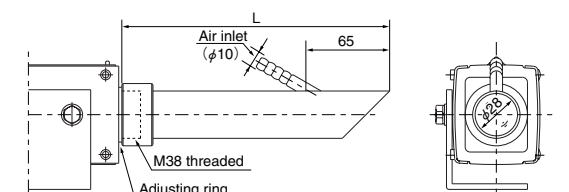


| Model   | Length (L) |
|---------|------------|
| F38S    | 120mm      |
| F38S-03 | 300mm      |
| F38S-04 | 400mm      |
| F38S-05 | 500mm      |

### • With Airless hood F38N Series attached



### • With air purge hood attached



| Model | Length (L) |
|-------|------------|
| 302NC | 215mm      |
| 303NC | 315mm      |
| 304NC | 415mm      |
| 305NC | 515mm      |