



# Rate of Rise Detector

## Operation Theory

When detector's ambient temperature rises rapidly and has reached the pre-fire standard (alarm temperature), inside of detector will inflate and then press the sensing diaphragm to conduct the metal contact. Thus, the fire signal will be sent to control panel. Detector itself has auto balance function when temperature changed rapidly, so false alarm wouldn't happen.

## Construction and Characteristics

- Heated sensing diaphragm can operate consecutively for unlimited times, not effected by temperature, especially the conducting part use gold coating to avoid oxidation.
- Use alloy air equalizer to avoid humidity and stable the ventilate function. Alloy itself has many micro-holes that can expel non-fire heat to avoid false alarm.
- This detector has passed strict quality control by automatic test. To process auto mechanical setting for auto adjustment and repetitious test under stable temperature and humidity condition by computer control. Thus, the quality reliability from the first detector produced to the million's are consistency.
- With accumulated water discharger to eliminate leakage of water from the distributing pipe and ceiling, which may leak into the detector and cause false alarm.

## Specification

|                     |                          |      |                               |
|---------------------|--------------------------|------|-------------------------------|
| Model               | AHR-871                  |      |                               |
| Type                | 2-wire , 3-wire , 4-wire |      |                               |
| Alarm Contact       | N/A                      | N/A  | 0.8A @30V DC<br>0.4A @125V AC |
| Voltage Range       | 12 ~ 30V DC              |      |                               |
| Alarm Current       | 40mA                     | 40mA | 30mA                          |
|                     | @24V DC 470Ω             |      |                               |
| Alarm Temperature   | Comply to EN54, CNS      |      |                               |
| Ambient Temperature | 0°C ~ +55°C              |      |                               |
| Material            | Fire-proof plastic       |      |                               |
| Dimensions          | 102mm(Dia.) x 45mm(H)    |      |                               |
| Weight              | About 130g               |      |                               |
| Color               | White                    |      |                               |

## Effective Alert Area

|                     |                   |                   |
|---------------------|-------------------|-------------------|
| Construction/Height | Under 4M          | 4M ~ 8M           |
| Fire-proof Building | 90 M <sup>2</sup> | 45 M <sup>2</sup> |
| Ordinary Building   | 50 M <sup>2</sup> | 30 M <sup>2</sup> |