

## Flame-M Five Way Flame Detection Module User Instruction Manual

#### Features:

- Five-way flame sensor design,
- Wide detection range (greater than 120°)
- Ability to output digital signals (high and low levels) for easy use
- Ability to output analog signals (voltage signals) for more accurate measurement of signals, suitable for high precision applications
- All five outputs have status indicators, which makes great convenience in debugging or in actual operation.
- Digital output detection distance is adjustable, analog output sensitivity is adjustable, and design is more flexible
- 1% resistor design, more accurate signal output, suitable for highprecision measurement





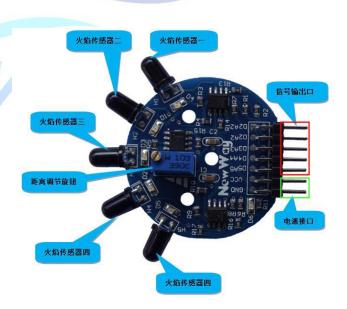
#### Occasion

- Three M3 mounting holes on the board for easy installation
- 3.3V-9V power supply, compatible with most single-chip systems
- SMD devices are all fully automatic welded by SMT process, and the quality of military products is trustworthy.

## Module principle

- This product is capable of detecting the short range of the flame from 700-1100 nm.
- Wave near infrared (SW-NIR), which is output by an electrical signal (voltage signal).

# Module interface description





## Signal output (from top to bottom):

- 1. A1 (the first output port is marked as A2 on the module): The first flame sensor analog signal output port, the output voltage rises as the flame intensity increases.
- 2. D1 (the first output port is marked as D2 on the module): The first flame sensor digital signal output port, high level means there is flame (indicator is on), low level means no flame (indicator off)
- 3. A2: The second flame sensor analog signal output port, the output voltage rises as the flame intensity increases.
- D2: The second way flame sensor digital signal output port, high level means there is flame (indicator is on), low level means no flame (indicator off)
- 5. A3: The third channel flame sensor analog signal output port, the output voltage rises as the flame intensity increases.
- 6. D3: The third way flame sensor digital signal output port, high level means there is flame (indicator is on), low level means no flame (indicator off)
- 7. A4: The fourth channel flame sensor analog signal output port, the output voltage rises as the flame intensity increases.
- 8. D4: The fourth channel flame sensor digital signal output port, high level means there is flame (indicator is on), low level means no flame (indicator off)
- 9. A5: The fifth channel flame sensor analog signal output port, the output voltage rises as the flame intensity increases.



- 10. D5: The fifth channel flame sensor digital signal output port, high level means there is flame (indicator is on), low level means no flame (indicator off)
- 11. Power interface (connected horizontally, just pick one):
- 12. VCC: module power supply positive input port, input range 3.3V-9V (relative to GND)
- 13. GND: Module power supply negative input port distance adjustment knob: For analog output: counterclockwise rotation (to indicate the rotation of the raised position), the sensitivity is increased, only a small input is required to get a high voltage output for the digital output: inverse Hour hand rotation (want to identify the rotation of the raised place), the detection increases, and the digital output can be obtained at a long distance.

Distance adjustment knob Note: 5 channels share one adjustment knob

#### **Technical Parameters**

• Detection wavelength: 700-1100 nm

Detection distance: greater than 1.5m

Supply voltage: 3V-9V



#### **Precautions**

- Sunlight has a certain influence on it, avoiding the use of sunlight when using it, in order to reduce interference,
- Heat the shrink tube at the sensor end.



