

### Description

NB380F conventional heat detectors are state-of-the-art detectors suitable for connection to conventional fire detection control and indicating equipment, or to addressable fire detection control and indicating equipment that can accept conventional type detectors<sup>1</sup>.

An electronic thermistor sensor provides sensitive rate-of-rise alarm operation, or fixed-temperature operation when the response threshold value is exceeded.

The NB380F range of conventional detectors provide fire detection and alarm system designers with a Standards-compliant, economical heat detector for property protection applications<sup>2</sup> where smoke or multi-sensor detectors may not be suitable due to environmental conditions.



**NB380F conventional heat detector**  
(The address flag is only for indication)

### Features

The NB380F heat detectors are available in a wide range of variants to suit many applications.

- Advanced algorithms provide excellent detection discrimination
- Easy installation. No programming required
- Low maintenance
- Sleek low-profile housing design
- Durable sensor. No adjustment or replacement required
- Wide operation voltage range to be accommodate DC12V and DC24V supply
- Surface-mount device (SMD) circuit board design
- Dual LEDs for 360° visibility
- 2-wire and 4-wire models for DC 12 V and DC 24 V operation
- 4-wire models include a N/C or N/O alarm relay output
- 4-wire models available with optional auto-reset function
- Base options include
  - Low profile 100 mm diameter base new version
  - Low profile 100 mm diameter base with remote LED Connection
  - Low profile 100 mm diameter base 4 wire
- Connects to zone monitor for use with addressable control and indicating equipment

### Approvals

NB380F heat detectors shall have the following approvals.

|            | EN 54-5 <sup>a</sup> | CE | MED <sup>b</sup> |
|------------|----------------------|----|------------------|
| NB380F-H2  | ✓                    | ✓  | ✓                |
| NB380F-H2L | ✓                    | ✓  | ✓                |
| NB380F-H4R | ✓                    | ✓  | ✓                |

<sup>a</sup> EN 54-5 Fire detection and fire alarm systems. Heat detectors. Point detectors.

<sup>b</sup> MED Marine Equipment Directive

### Accessories

The following accessories are compatible with NB380F heat detectors.

| Description                                                 | Part number | Datasheet |
|-------------------------------------------------------------|-------------|-----------|
| Low profile 100 mm diameter base new version                | 972913      |           |
| Low profile 100 mm diameter base with remote LED Connection | 972914      |           |
| Low profile 100 mm diameter base 4 wire                     | 974915      |           |
| Remote indicator <sup>a</sup>                               | NB106       | 31-0012   |
| Zone monitor                                                | NB773       | 31-0056   |

<sup>a</sup> Suitable for NB380F-H2L only. Will not have Standards approval.

<sup>1</sup> May be used in conjunction with the NB773 zone monitor module.

<sup>2</sup> **WARNING** – Hazardous levels of smoke and toxic gas can build up before a heat detector might operate. Where life safety and building evacuation is necessary in the event of a fire, smoke, gas or combination detectors usually provide earlier warning than heat detectors alone.



## Specifications

|                                 | <b>NB380F-H2<br/>NB380F-H2L</b>                                                                                                                                                                                  | <b>NB380F-H4R</b>                                       |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Operating voltage               | DC (9 ~ 33) V                                                                                                                                                                                                    | DC (10 ~ 28) V                                          |
| Start-up current                | ≤ 350 μA                                                                                                                                                                                                         |                                                         |
| Start-up time                   | ≤ 8 s                                                                                                                                                                                                            |                                                         |
| Standby current                 | ≤ 45 μA                                                                                                                                                                                                          |                                                         |
| Alarm current (max)             | 19 mA (without remote LED) @ 9 V<br>24 mA (with remote LED) @ 9 V<br>77 mA (without remote LED) @ 28 V<br>102 mA (with remote LED) @ 28 V<br>64 mA (without remote LED) @ 24 V<br>85 mA (with remote LED) @ 24 V | 12 mA @ 10 V<br>48 mA @ 28 V<br>40 mA @ 24 V            |
| Maximum permitted current       | 100 mA without remote LED                                                                                                                                                                                        |                                                         |
| Sampling time                   | 5 s                                                                                                                                                                                                              |                                                         |
| Reset voltage                   | ≤ 2.1 V                                                                                                                                                                                                          |                                                         |
| Reset time                      | ≤ 3 s                                                                                                                                                                                                            |                                                         |
| Alarm response threshold        | A1R                                                                                                                                                                                                              |                                                         |
| Alarm relay                     | —                                                                                                                                                                                                                | SPST. N/O or N/C. 2.0 A @ DC 30 V /<br>0.5 A @ AC 125 V |
| Operating temperature           | -10 °C ~ +50 °C                                                                                                                                                                                                  |                                                         |
| Operating humidity              | 0 % ~ 95 % RH, non-condensing                                                                                                                                                                                    |                                                         |
| Storage temperature             | -25 °C ~ +80 °C                                                                                                                                                                                                  |                                                         |
| Storage humidity                | 0 % ~ 98 % RH, non-condensing                                                                                                                                                                                    |                                                         |
| Alarm indicator                 | Two continuous emitting red LEDs                                                                                                                                                                                 |                                                         |
| Dimensions (excluding contacts) | Φ 100 mm × 38 mm                                                                                                                                                                                                 |                                                         |
| Ceiling spacing for heat sensor | ≤ 15 m                                                                                                                                                                                                           |                                                         |

## Ordering Information

|                         | <b>2-Wire</b> | <b>4-Wire</b> | <b>Nominal Operating Voltage</b> | <b>Remote LED Output</b> | <b>Alarm Relay Output</b> |
|-------------------------|---------------|---------------|----------------------------------|--------------------------|---------------------------|
| NB380F-H2               | ✓             | —             | DC 24 V                          | —                        | —                         |
| NB380F-H2L <sup>a</sup> | ✓             | —             | DC 24 V                          | ✓                        | —                         |
| NB380F-H4R              | —             | ✓             | DC 24 V                          | —                        | ✓                         |

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