

# DP721I

## 700 Series Conventional Optical Smoke Detector

### Preventing false alarms with self diagnostics

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All Aritech 700 series smoke detectors continuously monitor their sensitivity and operational status. Background drift is daily compensated to maintain the original calibrated sensitivity within the required limits.

Once a day the detector performs a full diagnostic test that includes dynamically testing the sensing chamber and internal electronics. If a detector drifts out of sensitivity range or fails the internal diagnostics test, this is reported back to the panel and indicated on the detector with a yellow fault LED.

### Maintenance friendly sensitivity level test mode

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The 700 Series photoelectric detectors include a sensitivity test mode that may be activated by simply holding a magnet near the detector's test point. This initiates a self-diagnostic routine and provides visual indication if service is required. This test mode allows field sensitivity testing without the requirement for external meters or test gas.

### Field cleaning and service

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The photoelectric sensing chamber unclips from the detector for easy field cleaning and service. During regular maintenance the detector cover can be removed, the optical chamber removed and replaced by a low cost, new chamber. On power up the detector auto-calibrates and returns to normal operating mode without any further intervention.

### The right detector for the right job

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For a truly fast and broad-spectrum detection the DP721RTA offers both optical and heat sensors. The interaction of both the smoke and heat algorithms ensure a quick response to both flaming and smoldering fires.

All bases are provided with an integral locking tab for extra security if required. Bases are equipped with a shorting bar between IN and OUT that opens when the head is installed and that may be manually restored when removing the head. This simplifies cable continuity testing.

### Note

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The DP721RTA must not be used in applications requiring compliance with commercial or residential fire standards such as EN54-5/EN54-7/EN54-29/CEA4021/EN14604. Always ensure compliance with local codes and standards.



### Details

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- Automatic self diagnostics with dynamic full detector and sensitivity test
- High false alarm immunity with floating background with drift compensation
- Separate fire and fault LEDs for unambiguous alarm reporting
- Wide operating voltage for use on most conventional systems
- Polarity insensitive for carefree installation
- Manual self diagnostic with visual sensitivity indication
- Field exchangeable and disposable optical chamber

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### Technical specifications

#### General

|                   |                                                     |
|-------------------|-----------------------------------------------------|
| Status indication | White LED (red in alarm), Yellow LED (test & fault) |
| User interface    | LEDs                                                |
| Reset voltage     | <2.5 V max                                          |
| Reset time        | 1 s                                                 |
| Alarm levels      | 1                                                   |
| Connectivity      | Aritech conventional base                           |

#### Electrical

|                     |                                                             |
|---------------------|-------------------------------------------------------------|
| Power supply type   | Zone powered                                                |
| Operating voltage   | 8.5 to 33 VDC                                               |
| Current consumption | 100 µA (quiescent at 24 VDC)<br><60 mA (in alarm at 24 VDC) |

#### Detection

|                     |                                      |
|---------------------|--------------------------------------|
| Detection principle | Optical light scatter                |
| Monitoring          | Alarm threshold, Contamination level |
| Sensitivity         | 10%/m (+1.6%, -3.3%)                 |
| Zone length         | Cable dependent                      |

#### Output

|                        |                  |
|------------------------|------------------|
| Output quantity        | 1                |
| Output type and rating | Remote indicator |
| Programmable           | No               |
| Remote alarm output    | 30 mA            |

#### Physical

|                     |                        |
|---------------------|------------------------|
| Physical dimensions | 100 x 50 mm (Ø x H)    |
| Net weight          | 112 g                  |
| Colour              | Cloud white (RAL 9001) |
| Mounting type       | Ceiling mount          |
| Material (body)     | Plastic                |

#### Environmental

|                                   |                        |
|-----------------------------------|------------------------|
| Vandal proof                      | No                     |
| Operating temperature             | -10 to +60°C           |
| Storage temperature               | -10 to 70°C            |
| Application temperature (typical) | +25°C                  |
| Relative humidity                 | 0 to 95% noncondensing |
| Environment                       | Indoor                 |
| IP rating                         | IP43                   |

#### Standards & regulation

|               |                         |
|---------------|-------------------------|
| Compliance    | CE, REACH, RoHS 3, WEEE |
| Certification | CPR                     |
| Standards     | EN45-7                  |



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