



GE Interlogix

ARITECH

300 Series Conventional Detectors Installation and Service Manual

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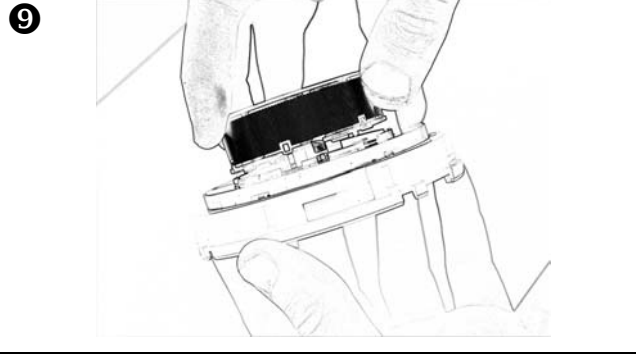
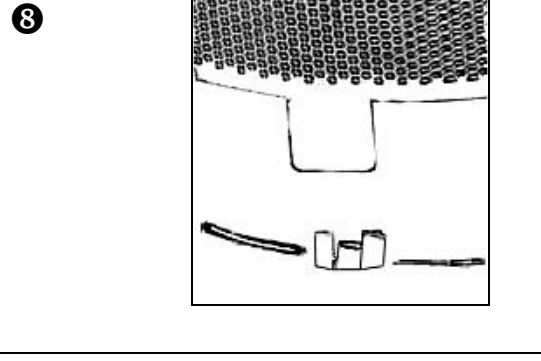
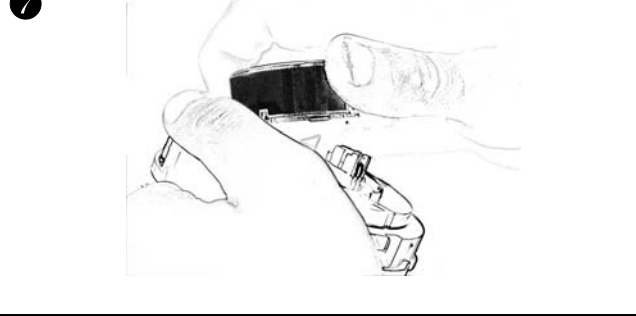
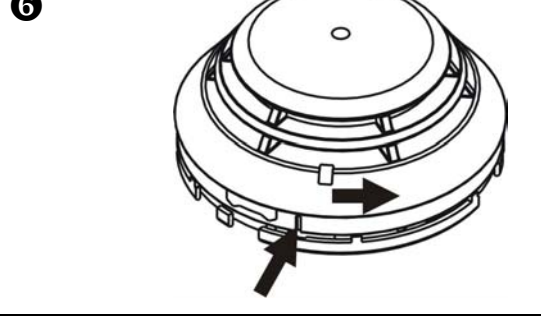
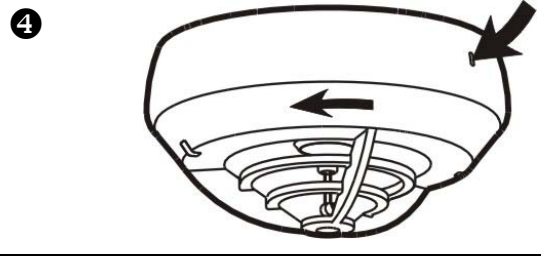
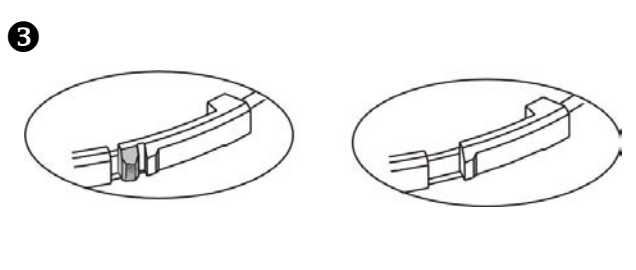
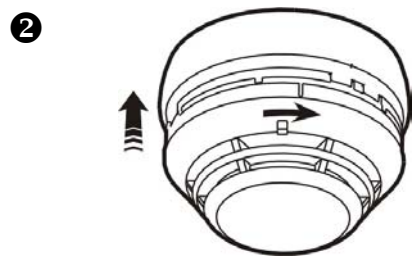
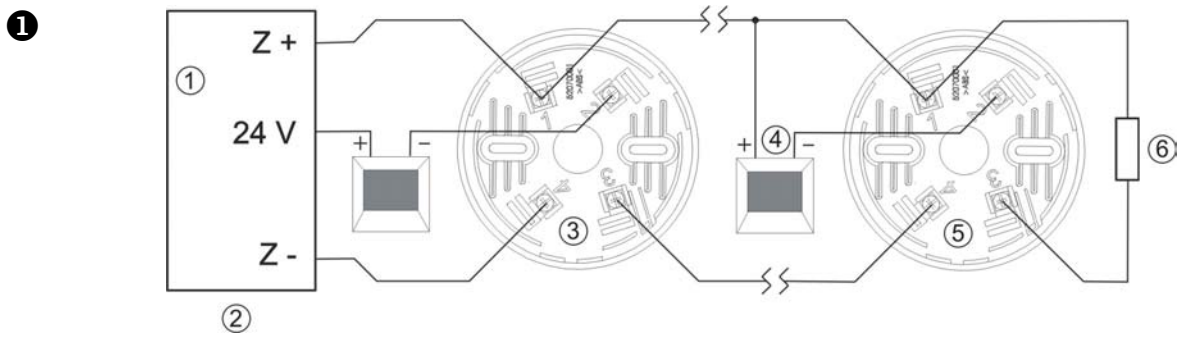
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Installation and Service Manual



DESCRIPTION

The 300 Series of conventional detectors comprises:

- **DI322I** Smoke detector – ionisation.
- **DP321I** Smoke detector – optical.
- **DP331I** Smoke detector – optical.
- **DT313I** Heat detector.

INSTALLATION

Figure 1: Wiring diagram

- ① Fire alarm initiating circuit; ② Compatible control panel; ③ First detector; ④ Remote indicator device; ⑤ Last detector; ⑥ End-of-line device

Note:

- Polarity must be observed when using remote indicators.
- If not used with Aritech control panels, it is recommended to use a 300-ohm resistor in series with the 24 V supply to protect the panel.
- If not used with Aritech control panels, the DP331I power supply must be current-limited to 100mA.

Fire Sensor Placement and Spacing

Locate ceiling mounted smoke detectors near the center of the room or hall whenever possible. Always place sensors a minimum of 100 mm from any wall. When the sensor is wall mounted, the top of the detector should be 100-300 mm from the ceiling.

When more than one detector is used, use the spacing of 9 m as a guide on smooth ceilings. Other spacing may be used depending on ceiling height, high air movement, and other conditions or response requirements. Local regulations should be observed at all times.

Where NOT To Place Sensors

One of the major causes of nuisance alarms is improper placement of sensors. Avoid locating sensors:

- Too close to kitchens or wood stoves where smoke can be generated.
- In garages and furnace rooms (due to exhaust fumes).
- Too close to bathrooms. This can cause problems from steamy baths or showers.
- Where normal ambient air temperature can exceed 40°C, such as attics.

Installing the Detector Head

To install a detector head, insert the head and rotate it clockwise until it is properly aligned and “sets” into the base (Figure 2). Rotate it further clockwise to lock it in place.

Consider the Locking Mechanism BEFORE Installation

Each 300 Series detector head is equipped with a break-away locking tab slot to prevent unauthorized removal of the detector head (Figure 3). If needed, detectors may be locked in the base by removing the tab before inserting them into the base. Inserting a small screwdriver into the slot on the side of the base and pressing in while simultaneously turning the detector head counterclockwise (Figure 4), allows the head to be removed again.

TESTING THE SYSTEM

After all connections are completed and the wiring is checked, apply power to the system. There should *not* be an alarm. If there is, determine whether a detector is activated or if there is a problem with the wiring. If no alarm has occurred, check that there is power at the last detector using a voltmeter.

Testing Each Detector

Test all smoke detectors in place annually, or according to local regulations, to ensure smoke entry into the sensing chamber and alarm response. If canned smoke (test aerosol) is used, carefully follow the manufacturer's directions to avoid damage to the detector.

This is a simple go/no-go test and is not a reliable indication of detector sensitivity. If it is successful, the LED will remain lit. Heat detectors continuously sample for heat. Test heat sensors by using a heat detector tester (Figure 5). Aim at heat sensor from 15 to 25 cm

away. The detector should go into alarm in less than 30 seconds. Be careful not to melt plastics.

MAINTENANCE AND CLEANING

Detectors DI322I, DP321I and DT313I

No special maintenance required. Only qualified personnel should carry out cleaning. Do not open the detector head.

Detector DP331I

The following should be carried out by qualified personnel.

To clean the optical chamber

1. Remove the detector from the mounting base.
2. Remove the detector cover by pressing the catch with a screwdriver, turning and lifting (Figure 6).
3. Use a vacuum cleaner or compressed air to remove dust from the chamber.
4. Replace detector cover and place detector into mounting base.

To replace the optical chamber



To avoid injury wear gloves when changing the optical chamber.

Follow steps 1 and 2 above.

To remove optical chamber place thumb on the OUT mark of the steel mesh area, hold the detector and pull firmly (Figure 7).

To insert the new optical chamber align the hanging mesh (Figure 8) with its entry area and press down firmly to ensure chamber clips into place (Figure 9).

Once the optical chamber has been replaced the detector **must** be calibrated with calibration unit KCT731 before it can be used.

Manuel d'installation et de maintenance



DESCRIPTION

La série 300 comprend les détecteurs suivants:

- **DI322I** Détecteur de fumée - ionique
- **DP321I** Détecteur de fumée - optique
- **DP331I** Détecteur de fumée - optique
- **DT313I** Détecteur de chaleur

INSTALLATION

Schéma de raccordement (voir figure 1)

- ① Circuit de détection incendie; ② Centrale compatible; ③ Premier détecteur; ④ Indicateur d'action; ⑤ Dernier détecteur; ⑥ Résistance fin de ligne.

Notes:

- Les têtes de détection sont insensibles à la polarité. Les indicateurs d'action nécessitent la polarité correcte!
- En cas d'utilisation d'une centrale non-Aritech, il est recommandé d'utiliser une résistance de 300 ohm en série avec l'alimentation 24V pour la protection de la centrale.
- En cas d'utilisation d'une centrale non-Aritech, l'alimentation du DP331I doit être limitée à un courant de 100mA.

Installation du détecteur et emplacement

En général, les détecteurs sont montés au plafond et doivent être installés au milieu de la pièce chaque fois que c'est possible. Les détecteurs doivent être placés à plus de 100 mm d'un mur. Lorsque le détecteur est installé sur un mur, le haut du détecteur doit se trouver de 100 à 300 mm du plafond.

Lorsqu'il est nécessaire d'installer plus d'un détecteur, un espacement tous les 9 m est requis pour des hauteurs normales de plafond. D'autres espacements peuvent être choisis, dépendant en cela de la hauteur du plafond, des turbulences d'air importantes ou d'autres conditions d'environnement. Les règlements/normes locales doivent dans tous les cas être observées.

Où ne pas placer les détecteurs de fumée

Une des principales causes de fausses alarmes provient du mauvais placement des détecteurs. Il faut éviter de placer les détecteurs

- Trop près de cuisines ou de fourneaux, c'est à dire, d'endroits susceptibles de dégager de la fumée.

TECHNICAL SPECIFICATIONS

	DI322I	DP321I	DP331I	DT313I
Supply voltage	18 – 28 VDC	18-28 VDC	9-28 VDC	18-28 VDC
Standby current	30 µA	85 µA	85 µA	70 µA
Alarm current	< 100 mA	< 100 mA	< 100 mA	< 100 mA
Operating temperature	-10 to 60 °C	-10 to 60 °C	-10 to 70 °C	-10 to 70 °C
Storage temperature	-10 to 70 °C	-10 to 70 °C	-10 to 70 °C	-10 to 80 °C
Maximum relative humidity	95%	95%	95%	95%
Dimensions	45 x Ø 99 mm	45 x Ø 99 mm	45 x Ø 99 mm	45 x Ø 99 mm
Maximum number of detectors per zone	20	20	20	20
EMC standards	EN 50130-4, EN 50081-2	EN 50130-4, EN 50081-2	EN 50130-4, EN 50081-2	EN 50130-4, EN 50081-2
Protection index	IP42	IP42	IP42	IP42