



## Duct Smoke Detector Accessories

*Expand the versatility of the InnovairFlex™ line of duct smoke detectors with System Sensor notification and test accessories.*



### Available Accessories

|                |                              |
|----------------|------------------------------|
| APA151         | Piezo Annunciator            |
| MHR            | Mini-Horn, Red               |
| MHW            | Mini-Horn, White             |
| RA100Z/RA100ZA | Remote Annunciator           |
| RTS151         | Remote Test Station          |
| RTS151KEY      | Remote Test Station with Key |
| RTS2           | Multi-Signaling Accessory    |
| AOS            | Add-On Strobe                |
| RTS2-AOS       | Multi-Signaling Accessory    |

**Duct smoke detector accessories** add functionality to the duct smoke detection system by allowing quick, convenient inspections at eye level and effective audible and visible notification options. All System Sensor duct smoke detectors and accessories are UL listed.

The **APA151** piezo annunciator, which replaces the APA451 with a new, improved look, provides an audible alarm signal, a red LED to indicate alarm status, and a green LED to indicate power status. It is intended for use with System Sensor 4-wire conventional duct smoke detector applications without a system control panel, to comply with NFPA 90A.

The **MHR and MHW** SpectrAlert® Advance mini-horns feature temporal or continuous tones at high and low volume settings. Their small footprint allows mounting to single-gang back boxes for applications where a small device is desired.

The **RA100Z and RA100ZA** remote annunciators are designed for both conventional and intelligent applications. Their red LED provides visual indication of an alarm condition.

The **RTS151 and RTS151KEY** remote test stations are automatic fire detector accessories designed to test duct smoke detectors from a convenient location. For 4-wire detectors, the RTS151KEY test station features a multi-colored LED that alternates between steady green and red. For 2-wire detectors, the LED illuminates red for alarm.

The **RTS2 and RTS2-AOS** multi-signaling accessories are designed to work with InnovairFlex 4-wire conventional duct smoke detectors. These accessories include a key switch that can be used to select one of two connected sensors to be tested, reset, or both by a push button switch. They also enable sensitivity measurements using the SENS-RDR sensitivity reader (sold separately). The AOS (Add-On Strobe) is an optional accessory included with the RTS2-AOS model.

### Agency Listings



## Specifications, Duct Smoke Detector Accessories

### APA151 Piezo Annunciator

|                       |                             |
|-----------------------|-----------------------------|
| Voltage               | Regulated 24 VDC            |
| Operating Voltage     | 16 to 33 VDC                |
| Maximum Alarm Current | 30 mA                       |
| Temperature Range     | 0°C to 49°C (32°F to 120°F) |
| Relative Humidity     | 10 to 93% non-condensing    |
| Wire Gauge            | 12 to 18 AWG                |
| Dimensions            | 4.6" H x 2.9" W x .45" D    |

### MHR/MHW SpectrAlert® Advance Mini-Horns

|                           |                                                                                                                                                              |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Voltage                   | Regulated 12 DC or FWR (Full Wave Rectified) or Regulated 24 VDC or FWR                                                                                      |
| Operating Voltage         | 8 to 33 VDC<br>(9 to 33 VDC with Sync-Circuit™ Module)                                                                                                       |
| Sounder Current Draw      | 22 mA RMS max. at 8 to 17.5 Volts DC<br>17 mA RMS max. at 8 to 17.5 Volts FWR<br>29 mA RMS max. at 16 to 33 Volts DC<br>25 mA RMS max. at 16 to 33 Volts FWR |
| Temperature Range         | 0°C to 49°C (32°F to 120°F)                                                                                                                                  |
| Humidity Range            | 10 to 93% non-condensing                                                                                                                                     |
| Nominal Sounder Frequency | 3 kHz                                                                                                                                                        |
| Wire Gauge                | 12 to 18 AWG                                                                                                                                                 |
| Dimensions                | 4.6" H x 2.9" W x 0.45" D                                                                                                                                    |

### RA100Z/RA100ZA Remote Annunciator

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| Voltage Range         | Conventional System: 3.1 to 32 VDC<br>Intelligent System: 18 to 32 VDC |
| Maximum Alarm Current | 12 mA                                                                  |
| Dimensions            | 4.6" H x 2.8" W x 1.3" D                                               |

### RTS151 Remote Test Station

|                     |                                                                    |
|---------------------|--------------------------------------------------------------------|
| Power Requirements  | Alarm LED: 2.8 to 32 VDC, 12 mA max.<br>Total Current: 105 mA max. |
| Test Switch         | 10 VA @ 32 VDC                                                     |
| Reset Switch        | 10 VA @ 32 VDC                                                     |
| Alarm Response Time | 40 seconds max.                                                    |
| Temperature Range   | -10°C to 60°C (14°F to 140°F)                                      |
| Relative Humidity   | 95% non-condensing                                                 |
| Wire Gauge          | 14 to 18 AWG                                                       |
| Dimensions          | 4.8" H x 2.90" W x 1.4" D                                          |

### RTS151KEY Remote Test Station with Key

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| Power Requirements  | Power LED (Green): 14 to 35 VDC, 12 mA max.<br>Alarm LED (Red): 2.8 to 32 VDC, 12 mA max.<br>Total Current: 105 mA max. |
| Alarm Response Time | 40 seconds max.                                                                                                         |
| Temperature Range   | -10°C to 60°C (14°F to 140°F)                                                                                           |
| Relative Humidity   | 95% non-condensing                                                                                                      |
| Wire Gauge          | 14 to 18 AWG                                                                                                            |
| Dimensions          | 4.6" H x 2.75" W x 1.8" D                                                                                               |

### RTS2 and RTS2-AOS Multi-signaling Accessory

|                    |                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------|
| Voltage            | 20 to 29 VDC                                                                                                       |
| Power Requirements | Standby: 3.0 mA max.<br>Trouble: 16.0 mA max.<br>Alarm without strobe: 30 mA max.<br>Alarm with strobe: 55 mA max. |
| Sounder            | 85 dBA at ten feet                                                                                                 |
| Temperature Range  | -10°C to 60°C (14°F to 140°F)                                                                                      |
| Relative Humidity  | 95% non-condensing                                                                                                 |
| Wire Gauge         | 14 to 22 AWG                                                                                                       |
| Dimensions         | 4.8" W x 5.3" H x 1.6" D                                                                                           |

For the very latest product specifications and listing information, please visit the System Sensor Web site at [www.systemsensor.com](http://www.systemsensor.com).



RTS151 UL S4011



RTS151KEY UL S2522



APA151 UL S4011



RTS2-AOS UL S2522



RA100Z UL S2522



MHW UL S4011



MHR UL S4011



AOS



3825 Ohio Avenue • St. Charles, IL 60174  
Phone: 800-SENSOR2 • Fax: 630-377-6495

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Product specifications subject to change without notice. Visit [www.systemsensor.com](http://www.systemsensor.com) for current product information, including the latest version of this data sheet.  
A05-0423-001 • 2/10 • #2309

## Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: January 5, 2017

Attention: [stl-cac@cannondesign.com](mailto:stl-cac@cannondesign.com)

Contact Person / WTA Field Inspector:  
Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Joe Krussel

Project No. WT 14127.01

☐

UPS

☐

Courier

☒

Email

| Copies | No.       | Description                                                        |
|--------|-----------|--------------------------------------------------------------------|
| 1 PDF  | 267100E02 | (Submittal No.'s:) (R&B CxSRC )                                    |
|        |           | (Cannon #267100-004) - (Paric #15051-0400) - <del>(WES #607)</del> |
|        |           | ➤ <b>Fire Alarm Product Data</b>                                   |
|        |           |                                                                    |
|        |           |                                                                    |
|        |           |                                                                    |
|        |           |                                                                    |

Remarks:

c: **Kelvin Patel**  
[Kpatel@cannondesign.com](mailto:Kpatel@cannondesign.com)

☒

**Furnish as Submitted**

☐

Furnish as Noted

☐

Rejected

☐

Revise & Resubmit

☐

Reviewed

☐

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

**14127.01 - 267100 E02**  
**JTK TO REVIEW**  
**12/27/16**

**WTASHOP - Webster ISB - 26 7100-003 and 004**

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**From:** STL-CAC <STL-CAC@CANNONDESIGN.COM>  
**To:** 'Patrick Garner' <pgarner@wmtao.com>, "WTASHOP (WTASHOP@wmtao.com)" <WTA...>  
**Date:** 12/27/2016 11:31 AM  
**Subject:** Webster ISB - 26 7100-003 and 004  
**Cc:** "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>  
**Attachments:** 267100-003 Fire Alarm Shop Drawings.pdf; 267100-004 Fire Alarm Product Data.pdf

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Attached for review.

**Melissa Pirtle**

**CANNONDESIGN**

1100 Clark Ave  
St. Louis, Missouri 63102  
T [314.425.8797](tel:314.425.8797)  
[cannondesign.com](http://cannondesign.com)

## SUBMITTAL IDENTIFICATION SHEET

**To be completed by Contractor/CM**

|                               |                                   |
|-------------------------------|-----------------------------------|
| PROJECT NAME                  |                                   |
| <input type="text"/>          |                                   |
| ADDRESS                       |                                   |
| <input type="text"/>          |                                   |
| NUMBER                        |                                   |
| <input type="text"/>          |                                   |
| OWNER                         |                                   |
| <input type="text"/>          |                                   |
| ARCHITECT / ENGINEER          |                                   |
| <input type="text"/>          |                                   |
| SUBMITTED BY                  |                                   |
| <input type="text"/>          | <input type="text"/>              |
| CONTRACTOR / CM SUBMITTAL NO. | CANNON DESIGN SUBMITTAL NO.       |
| <input type="text"/>          | <input type="text"/>              |
| DRAWING / DETAIL REFERENCE    | SPECIFICATION SECTION / PARAGRAPH |
| <input type="text"/>          | <input type="text"/>              |
| MANUFACTURER / SUPPLIER       | ITEM / PRODUCT ID                 |
| <input type="text"/>          | <input type="text"/>              |
| REQUIRED DATE                 | PRIORITY                          |
| <input type="text"/>          | <input type="text"/>              |
| CRITICAL                      | <input type="radio"/>             |

**To be completed by Reviewer**

|                                |
|--------------------------------|
|                                |
| CANNON DESIGN SUBMITTAL NUMBER |
|                                |
| RECEIVED DATE                  |

- ☐ **A. No Exceptions Taken**  
No further review of submittal is required.
- ☐ **B. Make Corrections Noted**  
Incorporate corrections in work;  
resubmission is not required.
- ☐ **C. Revise and Resubmit**  
Revise as noted, and resubmit for review.
- ☐ **D. Rejected**  
Submittal is not in compliance with Contract Documents;  
provide new submittal.
- ☐ **E. For Record / Information Only**  
Submittal was reviewed for Record / Information  
purposes only.
- ☐ **F. Not Required for Review**  
Submittal is not required by Contract Documents  
and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

## ITEM BEING SUBMITTED (check only one)

- ☐ Shop Drawings      ☐ Certification / Qualifications      ☐ Coordination Drawing  
☐ Samples      ☐ Record Documents      ☐ Calculations  
 ( \_\_\_\_\_ copies)      ☐ Product Data      ☐ Schedules  
☐ LEED Submittal      ☐ O&M Manuals  
☐ Other \_\_\_\_\_

## ITEM BEING SUBMITTED FOR (check only one)

- ☐ Action      ☐ Information Only      ☐ Record

## REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION  
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)



PARIC CORPORATION  
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

Ry:

**Devin D. Gates**

|             |      |
|-------------|------|
|             |      |
| REVIEWED BY | DATE |

## A/E COMMENTS

- ☐
- See attached sheet(s) for additional comments

|             |      |
|-------------|------|
|             |      |
| REVIEWED BY | DATE |



77 Westport Plaza  
Suite 250  
St. Louis, MO 63146

**TRANSMITTAL**

**No. 15051-0400**

*Paric Corporation*

**PROJECT:** 15051-Webster University Interdisciplinary Science Building

**DATE:** 12/20/2016

**TO:** Cannon Design  
1100 Clark Ave  
St Louis MO 63102

Fax;  
314-241-2203

**RE:** Fire Alarm Product Data

**ATTN:** Kelvin Patel

**JOB:** 15051

| WE ARE SENDING:                                         | SUBMITTED FOR:                               | ACTION TAKEN:                                     |
|---------------------------------------------------------|----------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> Shop Drawings                  | <input checked="" type="checkbox"/> Approval | <input type="checkbox"/> Approved as Submitted    |
| <input type="checkbox"/> Letter                         | <input type="checkbox"/> Your Use            | <input type="checkbox"/> Approved as Noted        |
| <input type="checkbox"/> Prints                         | <input type="checkbox"/> As Requested        | <input type="checkbox"/> Returned After Loan      |
| <input type="checkbox"/> Change Order                   | <input type="checkbox"/> Review and Comment  | <input type="checkbox"/> Resubmit                 |
| <input type="checkbox"/> Plans                          |                                              | <input type="checkbox"/> Submit                   |
| <input type="checkbox"/> Samples                        | <b>SENT VIA:</b>                             | <input type="checkbox"/> Returned                 |
| <input type="checkbox"/> Specifications                 | <input type="checkbox"/> Attached            | <input type="checkbox"/> Returned for Corrections |
| <input checked="" type="checkbox"/> Other: Product Data | <input type="checkbox"/> Separate Cover Via: | <input type="checkbox"/> Due Date:                |

| <i>Item</i> | <i>Package</i> | <i>Code</i> | <i>Rev.</i> | <i>Copies</i> | <i>Date</i> | <i>Description</i>      | <i>Status</i> |
|-------------|----------------|-------------|-------------|---------------|-------------|-------------------------|---------------|
| Submittal   |                | 267100-004  | 1           |               | 12/20/2016  | Fire Alarm Product Data | Submitted     |

**NOTES:**

**CC:**

**Signed:** \_\_\_\_\_  
Devin Gates



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## **Design Installation Service**

Tech Electronics is Your Source for CABLE on these Electronic Systems.

For information, Availability & Pricing of CABLE Please Call:

**John Idoux**

**(314)951-1718**

For All Other Information on This Project, Please Call:

**Keith Hinote**

**(314) 951-1743**

Tech Electronics, Inc.

6437 Manchester Ave., St. Louis, MO 63139    [www.techelectronics.com](http://www.techelectronics.com)

**Offices & Representatives in Other Cities**