



HARRINGTON
FIRE ALARM

IS820

Analog Addressable Duct Smoke Detectors

Harrington Signal Inc.
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Description

IS820 Analog Addressable duct smoke detectors provide early detection of smoke and products of combustion present in air moving through an HVAC duct. These devices are designed for prevention of smoke re-circulation in areas by the air handling system (s). Fans, blowers, and complete systems may be shut down directly by the two 10A form "C" alarm relays provided in the duct smoke unit when smoke is detected. The duct detector requires an external 24VDC supply, so as not to load down the analog addressable loop (SLC). Visual indicators, pilot and alarm, are mounted on the housing front for status indication. A manual test alarm relay switch is also provided on the front of the detector. Remote accessories can be accommodated. The IS820 utilizes a Harrington Signal, Inc photoelectric (-P) or ionization (-N) analog addressable detector head which is included with the unit. These devices have unique features that benefit the installer

and the end user; it's user friendly addressing, extended data and alarm feature meet the demands of today's high-technology environments, codes and standards, as well as providing additional life safety functionality. Each Harrington Signal, Inc duct detector is supplied with an X-pert card. In order to set the proper address, consult the addressing guide. Place a screwdriver in the pip's slit and five it a firm twist. Removal of the proper pip(s) completes the addressing procedure. Slide the coded x-pert card into the side of the base, making sure it locks in position. Once the detector head is placed into the base, the remaining pips will operate the address buttons on the detector head and the address will be read by the head's electronics. Factory pre-programmed X-Pert cards which have the appropriate address pips removed, and the address number silk screened on the protruding tab can be purchased if desired.



Air sampling is accomplished by two tubes which protrude in the duct. An exhaust tube of one standard length (7") is provided with the detector housing.

Intake sampling tubes, which must be ordered separately, are supplied in three standard lengths.

Ordering Information

Model Number	Part Number	Description
IS820-N	IS820-N	4 wire addressable duct detector w/relay ION
IS820-P	IS820-P	4 wire addressable duct detector w/relay PHOTO
IC-ST5-1	IC-ST5-1	Sampling tube for 12" or less duct width
IC-ST5-2.5	IC-ST5-2.5	Sampling tube for 6" to 2.5' duct width
IC-ST5-5	IC-ST5-5	Sampling tube for 2.5' to 5.0' duct width
IC-ST5-10	IC-ST5-10	Sampling tube for 5.0' to 10.0' duct width
IS819/820-RA	IS819/820-RA	Remote Alarm
IS819/20-RD	IS819/20-RD	Remote Pilot
IS819/20-RH	IS819/20-RH	Remote Alarm Horn
IS820-RAP	IS820-RAP	Remote Alarm, Pilot
IS820-RAPR	IS820-RAPR	Remote Alarm,(Red)Pilot (Green)Push-Button Test/Reset Switch RA/P/R
IS820-RHPA	IS820-RHPA	Remote Alarm, Pilot, Horn
IS820-RHKAPR	IS820-RHKAPR	Remote Alarm, Pilot, Horn, Key-Operated Test/Reset Switch
IS820-KAR	IS820-KAR	Remote Alarm, Key-Operated Test/Switch
IS820-KAPR	IS820-KAPR	Remote Alarm, Pilot, Key-Operated Test/Reset Switch

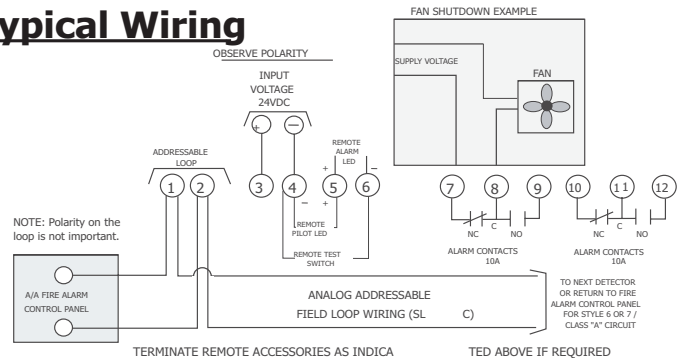


Features

- UL Listed
- 4-wire 24VDC input
- Large terminal connection screws
- Accommodated remote accessories
- Rugged steel back box with clear cover
- Mechanical installation without cover removal
- Interchangeable "plug-in" photoelectric or ionization head
- Advanced detector head design yields internal dust filtering
- No screens or filters to clean or replace
- Installation template included
- Easy to see LED'S

Refer to installation instructions for additional, more detailed wiring and information.

Typical Wiring



Engineers and Architects Specifications

- *Duct smoke detectors shall be Harrington Signal Inc. IS820 Series. For ionization detectors the model number is IS820-N , for photoelectric detectors the model number is IS820-P . The detectors shall be listed by Underwriters Laboratories per UL 268A. The detectors shall operate at air velocities from 500 feet per minute to 4000 feet per minute.
- *The duct detector housings shall be of metal construction and complete mechanical installation may be performed without removal of detector cover
- *Detector heads shall not require additional filters or screens which must be maintained, nor contain location specific address mechanism
- *The method of addressing shall be contained stationary with the base/duct detector
- *The housing shall contain a detector base which will accept photoelectric or ionization detector heads.
- *Terminal connections shall be of the screw type and be a minimum of #6 screw. (#12 to #22AWG compatible)
- *All wiring must comply with local codes and regulations.



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Product Specifications

MODEL NUMBER:	IS820-N IS820-P	4-Wire Ionization duct smoke detector 4-Wire Photoelectric duct smoke detector
DETECTORHEAD MODEL NUMBER:	55000-550 55000-650	Ionization detector for IS820-N Photoelectric detector for IS820-P
SAMPLINGTUBES:	IC-STS-2.5 IC-STS-5.0 IC-STS-10.0	Sampling tube for 6" to 2.5' duct width Sampling tube for 2.5' to 5.0' duct width Sampling tube for 5.0' to 10.0' duct width
POWER REQUIREMENTS:	18-30VDC (24VDC nominal)	
STANDBY CURRENT:	.010A @ 24VDC	
ALARM CURRENT:	.055A @ 24VDC	
STANDBY CURRENT WITH REMOTE PILOT LED	.025A @ 24VDC	
ALARM CURRENT WITH REMOTE ALARM LED:	.070A @ 24VDC	
AIR VELOCITY:	500 to 4000 ft./min.	
AMBIENT TEMPERATURE:	32°F to 100°F (0°C TO 38°C)	
HUMIDITY:	0% to 85% RH Non-Condensing/Non-Freezing	
WIRING:	Solid or stranded; #12 to #22 AWG terminals	
APPROVALS:	UL Listed, (UL268A) File #S5541-S2829.1	
MATERIAL:	18GA steel backbox; clear plastic cover (Makrolon 94V-0)	
FINISH:	Gray Paint on backbox	
DIMENSIONS:	10" H x 8.25" W x 2.25" D (25.4cm H X 21cm W x 5.7cm D)	
MAX. NET WT.:	4 lbs.	
RADIOACTIVE ELEMENT:	For IS820-N; Americium 241; 0.9 Micro-Curie Do not expose to corrosive atmospheres.	
HARDWARE:	7" exhaust tube, sampling tube end cap, mounting template, and mounting hardware included	

NOTICE: The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information are provided with the product and are available from Harrington Signal Inc. Fire Alarm. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact Harrington Signal Inc. Harrington Signal Inc. Fire Alarm reserves the right to change specifications without notice.