

# UG-7-A60 UNIGUARD DUCT SMOKE DETECTOR

Optical smoke detector for duct installation.  
High efficient single sampling tube. Patented.



## TECHNICAL DATA

Detector type:	UG-7-A60-24V		UG-7-A60-120V
Power supply voltage:	24V DC (-5/+20%)	24V AC (±10%) 50-60 Hz	110-120V AC 50-60 Hz
Reset time (by power down):	1 sec. max.		
Power up time:	1 min.		
Sensitivity test:	Nominal sensitivity 0,96-1,20%/ft		
Max. standby current:	42 mA	82 mA	31 mA (at 120V AC)
Max. alarm current:	83 mA	145 mA	42 mA (at 120V AC)
Link current:	5 mA		
Total max. auxiliary current output on terminals 2 and 5:	Without linked detectors: 30 mA With linked detectors: 25 mA		

**Operating temperature:** 32°F to 100°F (0°C to 38°C)  
**Storage temperature:** -22°F to 158°F (-30°C to 70°C)  
**Humidity:** 0 to 95% RH  
**Duct air velocity range:** 100 - 4000 ft/min (0,5 - 20,32 m/s)  
**Dimensions (LxWxD):** 9,49x7,68x2,68" (241x195x68 mm)  
**Weigh:** 1,04 kg  
**Air sampling tube:** Aluminium.  
Hole diameter 1,5" (38 mm).

## ORDERING EXAMPLE

Item code	Designation
UG-7-A60-24V	Duct smoke detector 24V AC/DC
UG-7-A60-120V	Duct smoke detector 120V AC
ST1	Sampling tube length: 1 ft (0.3 m)
ST2	Sampling tube length: 2 ft (0.6 m)
ST5	Sampling tube length: 5 ft (1.5 m)
ST9	Sampling tube length: 9 ft (2.8 m)
UG-7-DV-T2	Diverter

## SIGNALING



## CHARACTERISTICS

- High efficient single sampling tube
- Easy to install
- Automatic sensitivity adjustment

## FUNCTION

Smoke entering the duct system will be dispersed throughout the whole building. The Uniguard duct detectors utilizes the photoelectric sensing method and is designed to sense the existence of smoke in the duct. This design of the housing along with the detector technology is capable of detecting unsafe conditions by sampling the air through the duct. When the smoke is detected, it will emit a signal that will create the urgency for proper action to be taken to turn off circulating fans, blowers and any other auxiliary devices that are connected to the system. The actions taken will enable the management of hazardous smoke through the entire space that is being protected by the duct detection arrangement.

This Uniguard comes in two models: UG-7-A60-24V is operating with 24V DC/AC and UG-7-A60-120V with 120V AC. Alarm and supervisory relay contacts are accessible to interface with a control panel, HVAC control, and multiple auxiliary functions including turning off the fan.

The Uniguard can be installed on any side of the duct.

The detector UG-7-A60 contains an intelligent controlling circuit. This circuit is adjusting the sensitivity to give an optimal function during the whole life time of the detector. When the controlling circuit can no longer compensate for contamination, a service alarm is indicated.

UG-7-A60 has a linking function that allows interconnection between maximum 100 units. The linking function can close dampers or stop fans further away in the ventilation system, before the smoke has reached the places where the linked detectors are installed. When one of the linked UG-7-A60 goes into smoke alarm, all other detectors AUX relays are activated.

## INSTALLATION

Uniguard detector is designed to be used in air handling systems with air velocities of 100 to 4000 ft/min (0,5 to 20,32 m/s). Duct widths from 6" to 9 ft (0.15 to 2.8 m) can be accommodated. Follow engineering specifications to ensure that the air velocity in the duct falls within these parameters. A sampling tube must be ordered to complete the installation. The sampling tube should penetrate approx. 90% of the width of the duct. Sampling tube lengths: 1 ft, 2 ft, 5 ft and 9 ft (0.3, 0.6, 1.5 and 2.8 m).

At velocities below 300ft./min the diverter model UG-7-DV-T2 (ordered separately) needs to be installed for normal operation. For velocities above 300ft./min the diverter is not required for normal operation.

For more information please see the Uniguard UG-7-A60 Installation and maintenance manual.

# UG-7-A60 UNIGUARD DUCT SMOKE DETECTOR

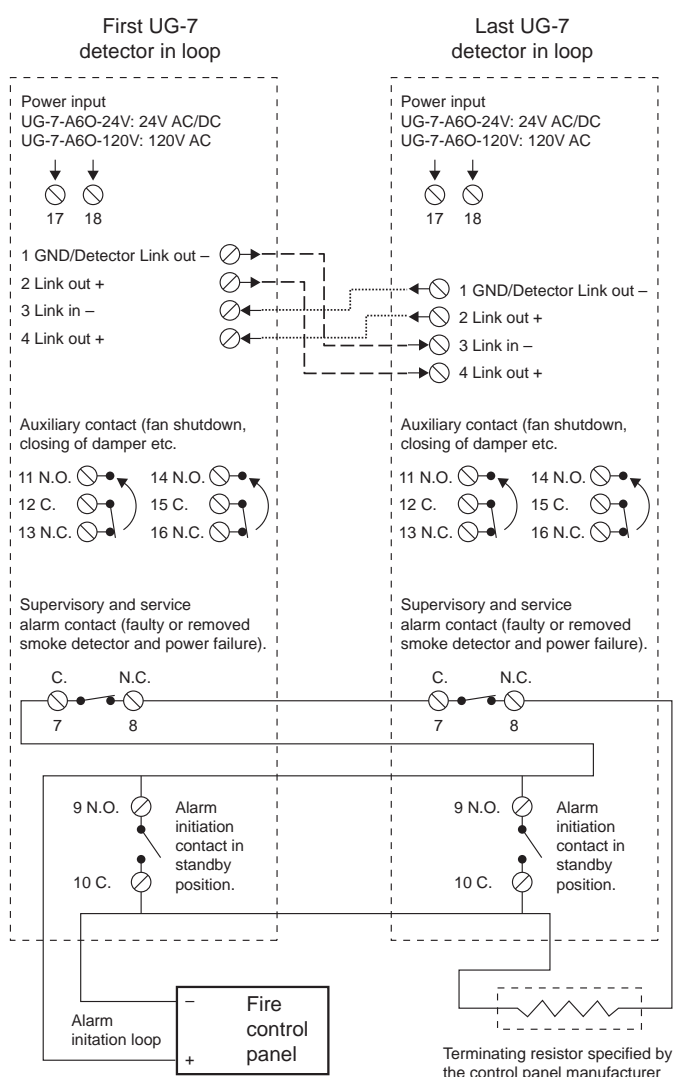
Optical smoke detector for duct installation.  
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## CONTACT RATINGS

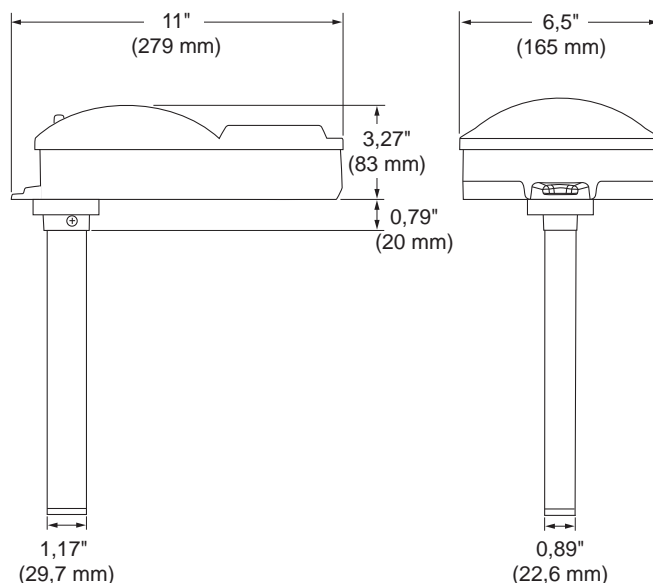
Contact ratings	
Alarm initiation contacts (SPST)	1,0 A @ 24V DC (resistive) 1,0 A @ 120V AC (resistive)
Supervisory contacts (SPST)	1,0 A @ 24V DC (resistive) 1,0 A @ 120V AC (resistive)
Alarm auxiliary contacts (DPDT)	10 A @ 30V DC (resistive) 10 A @ 250V AC (resistive) ½ HP @ 240V AC ¼ HP @ 120V AC

## WIRING DIAGRAM



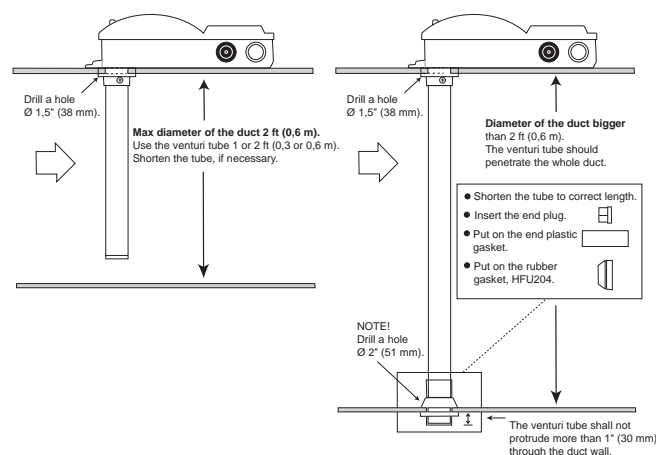
## DIMENSIONS

Inches / (mm)



## AIR SAMPLING TUBE

The length of the venturi tube shall be chosen based upon how wide the ventilation duct is. The venturi tubes are available in 4 lengths; 1, 2, 5 and 9 ft (0.3, 0.6, 1.5 and 2.8 m). When the ventilation duct is wider than Ø 2 ft (0.6 m), the venturi tube should penetrate the **whole** duct. Please see sketch below. Hole diameter 1,5" (38 mm).



SIGNALING

