

## UG-7-A60 UNIGUARD®

Optical Smoke Detector with Single High-Efficiency Sampling Tube



UG-7-A60 Series  
with pickup tube installed

Smoke entering a duct system will be dispersed throughout the entire building. Uniguard duct detectors utilize the photoelectric sensing method and are designed to sense the existence of smoke in the duct. This housing design, along with the detector technology, is capable of detecting unsafe conditions by sampling the air in the duct. When smoke is detected, the Uniguard's relays provide a signal which may be used to turn off circulating fans, blowers and any other auxiliary devices that are connected to the system. This enables the management of hazardous smoke through the space being monitored by the duct detection arrangement.

This Uniguard comes in two models: UG-7-A60-24V operates with 24 Vdc/ac and UG-7-A60-120V with 120 Vac. 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 UG-7-A60 detector contains an intelligent controlling circuit. This circuit is adjusting the sensitivity to give an optimal function during the entire lifetime 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 a maximum of 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.

### SPECIFICATIONS

Power Supply Voltage	UG-7-A60-24V: 24 Vdc (-5/+20%) 24 Vac (±10%), 50-60 Hz UG-7-A60-120V: 110-120 Vac, 50-60 Hz
Reset Time (by power down)	1 sec. max.
Power Up Time	1 min.

## Efficient Sampling Adjustable

Highly efficient single sampling tube

Automatic sensitivity adjustment.  
Multiple pickup tube lengths available.

## Easy to Install

Single sampling tube allows quick installation. Device can be installed on any side of the duct.

### APPLICATIONS

- Duct smoke detection in HVAC systems

Sensitivity Test	Nominal sensitivity 0.96 to 1.20%/ft.
Max. Standby Current	UG-7-A60-24V: 42 mA (DC mode), 82 mA (AC mode) UG-7-A60-120V: 31 mA at 120 Vac
Max. Alarm Current	UG-7-A60-24V: 83 mA (DC mode), 145 mA (AC mode) UG-7-A60-120V: 42 mA at 120 Vac
Link Current	5 mA
Total Max. Auxiliary Current Output, Terminals 2 & 5	Without linked detectors: 30 mA With linked detectors: 25 mA
Operating Temperature	32 to 100 °F (0 to 38 °C)
Storage Temperature	-22 to 158 °F (-30 to 70 °C)
Humidity	0 to 95% RH
Duct Air Velocity Range	100 to 4000 ft/min (0.5 to 20.32 m/s)
Dimensions (L x W x D)	11 x 6.5 x 3.27" (279 x 165 x 83 mm)
Weight	1.04 kg
Air Sampling Tube	Aluminium, hole diameter 1.5" (38 mm)

### RELAY CONTACT RATINGS

Alarm Initiation Contacts (SPST)	1.0 A @ 24 Vdc (resistive) 1.0 A @ 120 Vac (resistive)
Supervisory Contacts (SPST)	1.0 A @ 24 Vdc (resistive) 1.0 A @ 120 Vac (resistive)
Alarm Auxiliary Contacts (DPDT)	10 A @ 30 Vdc (resistive) 10 A @ 250 Vac (resistive) ½ HP @ 240 Vac ¼ HP @ 120 Vac

### WARRANTY

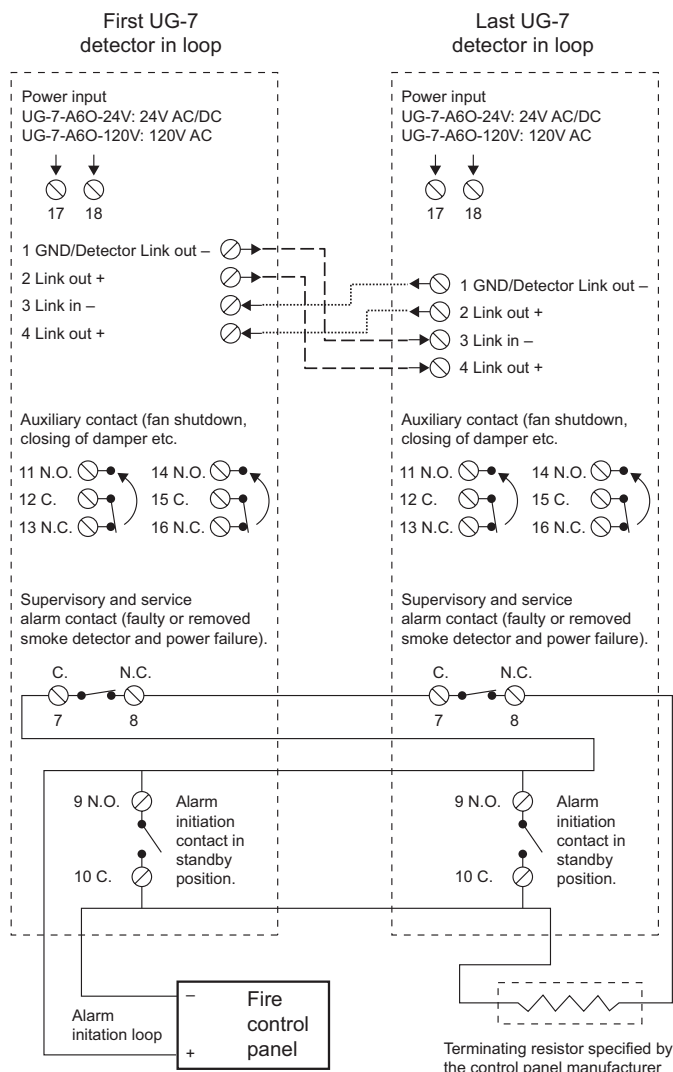
Limited Warranty	2 years
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### AGENCY APPROVALS

Agency Approvals	UL Signaling Listed: S24724 Fire Alarm Equipment Listed: California State Fire Marshall
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## WIRING DIAGRAM



## ORDERING INFORMATION

MODEL	DESCRIPTION
CAL-UG-7-A60-24V*	SMOKE,DUCT,24V,UL
CAL-UG-7-A60-120V*	SMOKE,DUCT,120V,UL
CAL-ST1	SMOKE,ACCY,PICKUP TUBE,1FT
CAL-ST2	SMOKE,ACCY,PICKUP TUBE,2FT
CAL-ST5	SMOKE,ACCY,PICKUP TUBE,5FT
CAL-ST9	SMOKE,ACCY,PICKUP TUBE,9FT
CAL-UG-MB-75	SMOKE,ACCY,MOUNTING BRACKET
CAL-UG-COVER-75	SMOKE,ACCY,CONDENSATION COVER

\*Pickup tube not included. Pickup tube ordered separately.



CAL-UG-MB-75  
Mounting Bracket



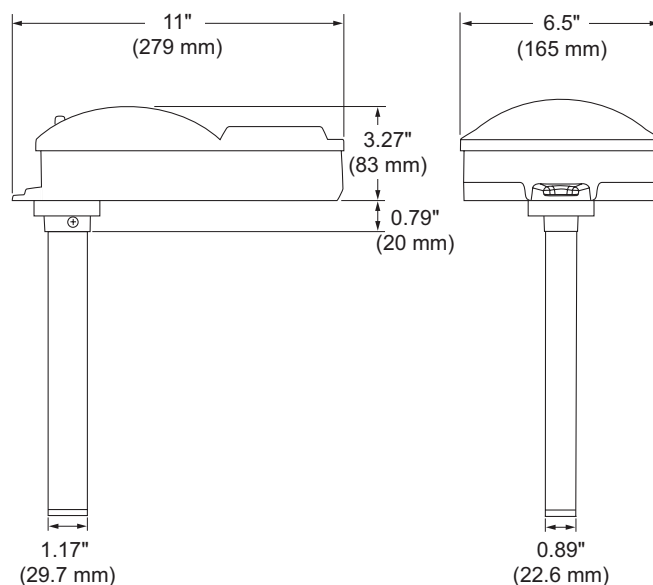
CAL-STx  
Pickup Tube



CAL-UG-COVER-75  
Condensation Cover

## DIMENSIONAL DRAWING

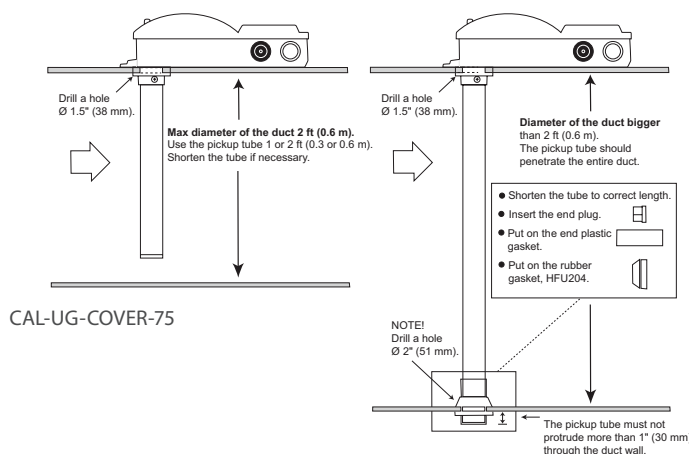
Inches (mm)



## AIR PICKUP TUBE

The air pickup tube has a continuous pickup along its entire length. The length of the pickup tube is chosen based on the width of the ventilation duct. Pickup tubes are available in four 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 pickup tube should penetrate the whole duct. See diagram below.

Hole diameter 1.5" (38 mm).



CAL-UG-COVER-75