

## Flame Detectors

### C7012 Solid State Purple Peeper® Ultraviolet Flame Detector



**Solid state electronic flame detectors for use with Honeywell Flame Safeguard controls and amplifiers. Sense ultraviolet radiation produced by combustion of gas, oil, coal or other fuels.**

- Mount horizontally, vertically or at any angle in between.
- Provide quick electrical hookup with threaded conduit fitting and color-coded leadwires.
- Reduced nuisance shutdowns by wiring two in parallel.
- C7012E1278 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- C7012A, E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7012C, F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

**Type:** Ultraviolet, Purple Peeper

**Application:** Gas, Oil or Coal fired burners

**Lead Length:** 96 in. (2438 mm)

**Power Consumption:** 2.5 W

**Approvals, CSA:** Certified: Master Report LR95329-1

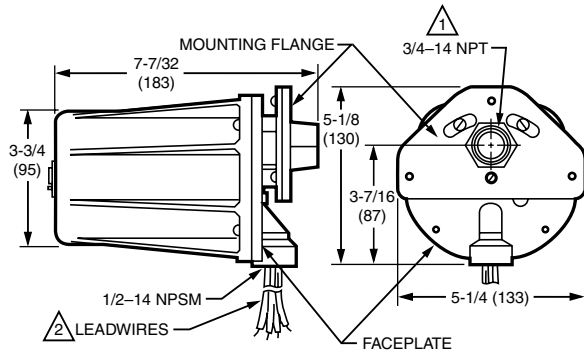
**Approvals, Swiss RE:** Acceptable

**Approvals, Factory Mutual:** Approved: Report No. 14740.01

Material Number	Frequency	Weight	NEMA Rating	Electrical Connections	Mounting	Electrical Ratings	Ambient Temperature Range	Approvals, Underwriters Laboratories Inc.	Approvals, Others	Includes	Used With
C7012A1145/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color- coded lead wires.	3/4 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, R7847A, R7257; Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1152/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color- coded lead wires.	1 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1160/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color- coded lead wires.	1 in. NPT	120 Vac	-40°F to +175°F (-40°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1186/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color- coded lead wires.	3/4 in. NPT	208 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1194/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color- coded lead wires.	3/4 in. NPT	240 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1202/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color- coded lead wires.	3/4 in. NPT	100 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, R7847A, R7257
C7012A1210/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color- coded lead wires.	3/4 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, R7847A, R7257
C7012C1042/U	50 Hz; 60 Hz	14.5 lb (6.6 kg)	Explosion Proof	4 NEC Class 1 Color- coded lead wires.	1 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. E34649, Guide No. ZTSZ			Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012G1019/U	50 Hz	4.25 lb (1.9 kg)	NEMA 4	5 NEC Class 1 Color- coded lead wires.	3/4 in. NPT	220 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	Meets DIN Standards	Cast case and cover	Flame Amplifiers: R7247C, R7847C

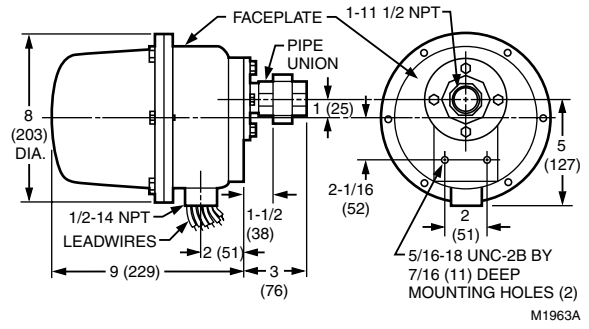
# Flame Detectors

Dimensions in inches (millimeters)



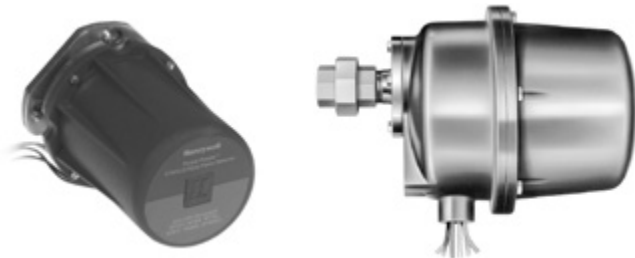
- 1 C7061A1046, C7061A1053: INCH NPT
- 2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

M10167D



M1963A

## C7012 Solid State Purple Peeper® Ultraviolet Flame Detector (Self-Checking)



**Solid state electronic flame detectors for use with Honeywell Flame Safeguard controls and amplifiers. Sense ultraviolet radiation produced by combustion of gas, oil, coal or other fuels.**

- Mount horizontally, vertically or at any angle in between.
- Provide quick electrical hookup with threaded conduit fitting and color-coded leadwires.

- Reduced nuisance shutdowns by wiring two in parallel.
- C7012E1278 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- C7012A, E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7012C, F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

**Type:** Ultraviolet, Purple Peeper, Self-Checking

**Application:** Gas, Oil or Coal fired burners

**Lead Length:** 96 in. (2438 mm)

**Power Consumption:** 7.0 W

**Approvals, CSA:** Certified: Master Report LR95329-1

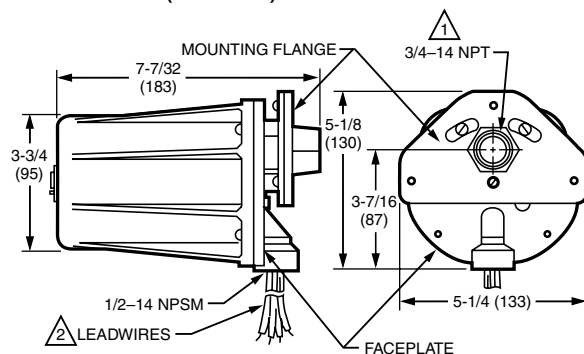
**Approvals, Swiss RE:** Acceptable

**Approvals, Factory Mutual:** Approved: Report No. 14740.01

**Used With:** Flame Amplifiers: R7247C, R7847C

Material Number	Frequency	Weight	NEMA Rating	Electrical Connections	Mounting	Electrical Ratings	Ambient Temperature Range	Approvals, Underwriters Laboratories Inc.	Approvals, Others	Includes
C7012E1104/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1112/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1120/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	-40°F to +175°F (-40°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1146/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	208 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover, with Hot refractory tube
C7012E1153/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	240 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1187/U	50 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	220 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	DIN (Europe)	Cast case and cover
C7012E1195/U	50 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	110 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	BGC (Europe)	Cast case and cover
C7012E1203/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	240 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	BGC (Europe)	Cast case and cover
C7012E1278/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	Brad Harrison type number 41310 connector	1 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012F1052/U	50 Hz; 60 Hz	14.5 lb (6.6 kg)	Explosion Proof	6 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. E34649, Guide No. ZTSZ		Explosion-proof, two piece, violet, cast aluminum enclosure

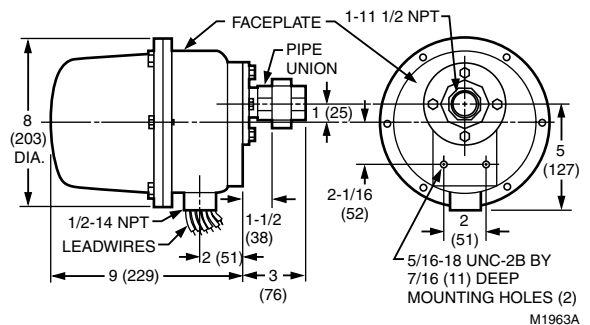
### Dimensions in inches (millimeters)



1 C7061A1046, C7061A1053: INCH NPT

2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

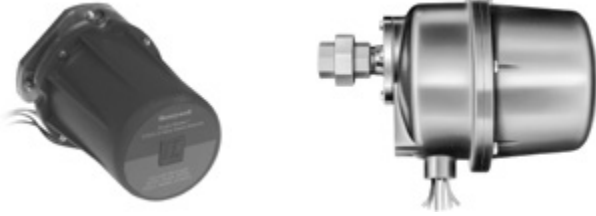
M10167D



M1963A

# Flame Detectors

## C7024 Solid State Purple Peeper® Ultraviolet Flame Detector



24 Vdc solid state electronic flame detectors for sensing the ultraviolet radiation emitted by the combustion of most carbon containing fuels, such as natural gas, LP gases, and oil.

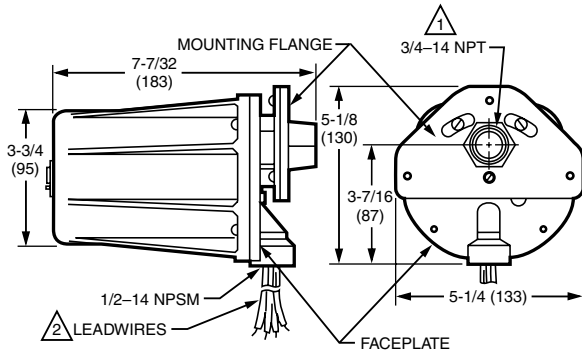
- Use with R7824C Dynamic Self-Check Flame Signal Amplifier.
- Circuitry provides low power consumption and high reliability.
- Mount horizontally, vertically or at any angle in between.
- Field-replaceable UV radiation sensing tube and quartz viewing window.
- Quick electrical installation with threaded conduit fitting and color-coded leadwires.
- Reduce nuisance shutdowns by wiring two in parallel.
- Oscillating shutter interrupts UV radiation using the R7824C amplifier.
- C7024E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7024F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

**Type:** Ultraviolet, Purple Peeper, Self-Checking  
**Application:** Coal fired burners; Gas fired burners; Oil fired burners  
**Lead Length:** 96 in. (2438 mm)  
**Electrical Connections:** Six NEC CLASS 1 color-coded leaders  
**Electrical Ratings:** 24 Vdc  
**Power Consumption:** 7.8 W maximum.

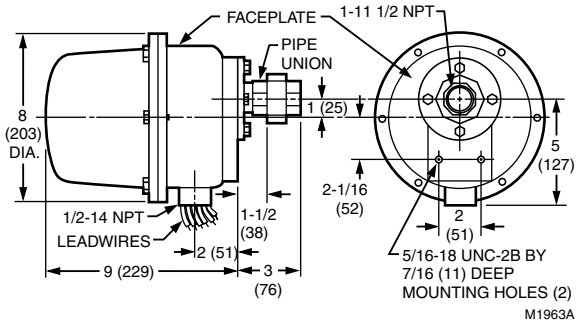
**Ambient Temperature Range:** -20°F to +175°F (-20°C to +79°C)  
**Approvals, CSA:** Certified: Master Report LR95329-3  
**Used With:** Flame Amplifiers: R7824C

**Accessories:**  
**190971G/U** – 24 Vdc Coil and Shutter Assembly for C7024E, F; C7961

Dimensions in inches (millimeters)



- 1 C7061A1046, C7061A1053: INCH NPT  
 2 C7061A1038 AND C7061A1046: TYPE CONNECTOR. M10167D



Material Number	NEMA Rating	Mounting	Approximate, Dimensions	Weight	Approvals, Underwriters Laboratories Inc.	Includes	Comments
C7024E1001/U	NEMA 4	3/4 in. NPT	5 1/4 in. diameter (includes mounting flange) x 7 7/32 in. long (133 mm diameter (includes mounting flange) x 183 mm long)	4.25 lb (1.9 kg)	Component Recognized: File No. MP268	Cast case and cover	Flame Amplifiers: R7824C
C7024F1009/U	Explosion Proof	1 in. NPT	8 in. diameter x 12 in. long (203 mm diameter x 305 mm long)	14.5 lb (6.6 kg)	Component Recognized: For use in hazardous locations; Class 1 Groups C and D; Class 2, Groups E, F and G; File no. E34649		Flame Amplifiers: R7824C

## C7027; C7044 Minipeeper Ultraviolet Flame Detector



**Compact Flame Detector for use with flame safeguard controls with ultraviolet amplifiers.**

- Use with Honeywell Flame Safeguard primary safety controls and burners requiring ultraviolet flame detection.
- C7027 mounts on a 1/2 in. sighting pipe by using an integral collar.
- Detectors can be wired in parallel for difficult sighting applications.
- C7027 seals against pressures up to 5 psi (34.5 kPa) when correctly installed.
- Allows for blast tube mounting due to compact size.
- C7044 mounts with a two screw bracket.
- The C7044 UV sensor tube is enclosed in a stainless steel housing.
- C7044 has the capability of side or end viewing in flame monitoring applications.

**Type:** Ultraviolet, Minipeeper

**Electrical Connections:** 2 NEC Class 1 leadwires

**Vibration:** 0.5 G max

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. MP268, Guide No. MCCZ

**Approvals, CSA:** Certified: Master Report LR95329-1

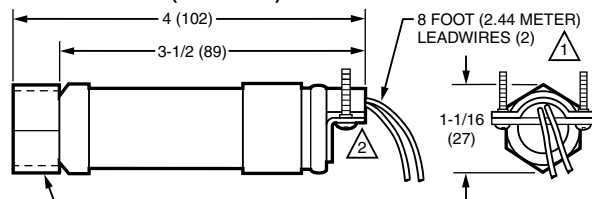
**Approvals, Swiss RE:** Acceptable

**Approvals, Factory Mutual:** Approved: Report No. 24181.03

**Used With:** Flame Amplifiers: R7249A, B, R7849A, B, R7749B, R7259, R7290

Material Number	Application	Lead Length	Mounting	Ambient Temperature Range	Approvals, Others	Includes	Comments
C7027A1023/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)			Detects ultraviolet radiation in flames
C7027A1031/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)			Detects ultraviolet radiation in flames
C7027A1049/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1056/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)	DIN (Europe)		Detects ultraviolet radiation in flames
C7027A1064/U	Coal fired burners; Gas fired burners; Oil fired burners	288 in. (7315 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1072/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1080/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)		136733 Heat Block and 390427B bushing	Detects ultraviolet radiation in flames
C7027A1114/U	Coal fired burners; Gas fired burners; Oil fired burners	44 in. (1118 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)		installed 22" flexible conduit	Detects ultraviolet radiation in flames
C7027A1122/U	Oil fired burners; Gas fired burners; Coal fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1130/U	Gas fired burners; Oil fired burners; Coal fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to +215°F (-40°C to +102°C)			Detects ultraviolet radiation in flames
C7044A1006/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	Mounting Bracket provided	0°F to 215°F (-18°C to +102°C)		Mounting bracket	Detects ultraviolet radiation in flames - Side Viewing

### Dimensions in inches (millimeters)



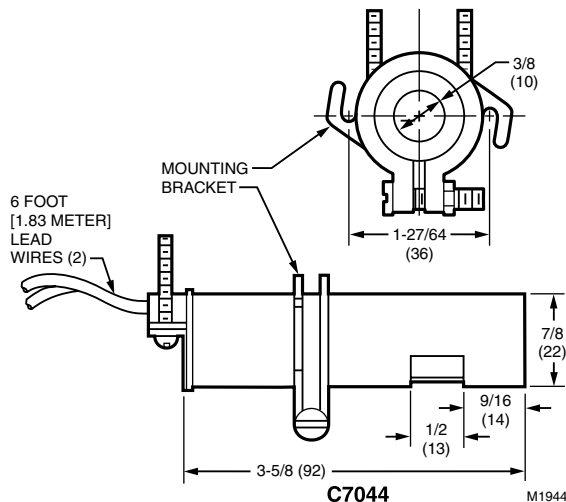
COLLAR WITH 1/2-14 NPSM INTERNAL THREADS

1 C7027A1064 HAS 24 FOOT (7.32 METER) LEADWIRES. C7027A1114 HAS 44 IN. (1.118 M) LEADWIRES WITH 22 IN. (558 MM) FLEXIBLE CONDUIT.

2 MODELS AVAILABLE WITH SPUD CONNECTOR (1/2-14 NPSM INTERNAL THREADS) INSTEAD OF CLAMP TYPE CONNECTOR.

**C7027**

M1943G

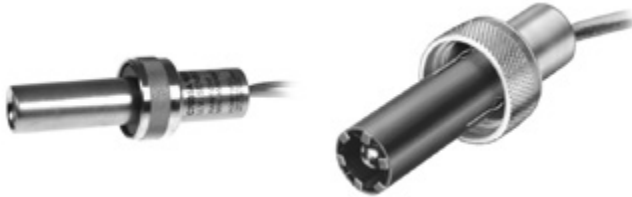


**C7044**

M1944D

# Flame Detectors

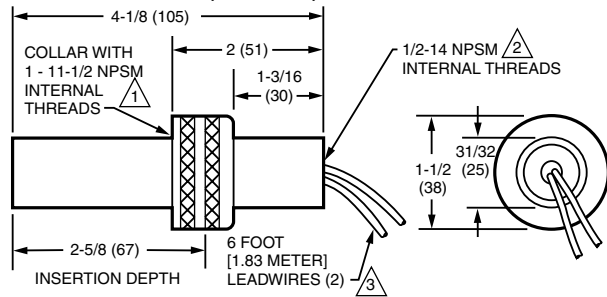
## C7035 Minipeeper Ultraviolet Flame Detector



**Compact flame detector for use with flame safeguard controls with ultraviolet amplifiers.**

- Use with Honeywell Flame Safeguard primary safety controls and burners requiring ultraviolet flame detection.
- Mounts on a 1 in. sighting pipe by using an integral collar.
- Protects the sensing tube with a shield.
- Meets outdoor rain tight requirements of Underwriters Laboratories Inc., NEMA 4 and NEMA 4X.
- Wires in parallel for difficult sighting applications.
- Seals against pressures as high as 5 psi (34.5 kPa) when correctly installed.
- Field-replaceable ultraviolet sensing tube.

**Dimensions in inches (millimeters)**



- △1 DIN APPROVED C7035A1064 HAS 1-11 BSP.P1 INTERNAL MOUNTING THREADS.  
 △2 DIN APPROVED C7035A1064 HAS 1/2-14 BSP-F INTERNAL MOUNTING THREADS.  
 △3 C7035A1056 HAS 12 FOOT (3.66 METER) LEADWIRES.

**C7035**

M1945E

**Type:** Ultraviolet, Minipeeper

**NEMA Ratings:** NEMA 3 and NEMA 4

**Electrical Connections:** 2 NEC Class 1 leadwires

**Vibration:** 0.5 G max

**Mounting:** Integral nut for 1 in. sighting pipe.

**Approximate, Dimensions:** 1 1/2 in. diameter x 4 1/8 in. long (38 mm diameter x 105 mm long)

**Weight:** 6 oz (0.17 kg)

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. MP268, Guide No. MCCZ

**Approvals, CSA:** Certified: Master Report LR95329-1

**Approvals, Swiss RE:** Acceptable

**Approvals, Factory Mutual:** Approved: Report No. 24181.03

**Comments:** Detects ultraviolet radiation in flames

**Used With:** Flame Amplifiers: R7249A, B, R7849A, B, R7749B, R7259, R7290

Material Number	Application	Lead Length	Ambient Temperature Range	Approvals, Others	Includes
C7035A1023/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	0°F to 250°F (-18°C to +121°C)		
C7035A1031/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	-40°F to +250°F (-40°C to +121°C)		
C7035A1049/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	0°F to 250°F (-18°C to +121°C)	DIN (Europe)	
C7035A1056/U	Coal fired burners; Gas fired burners; Oil fired burners	144 in. (3658 mm)	-40°F to +250°F (-40°C to +121°C)		
C7035A1064/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	-40°F to +250°F (-40°C to +121°C)		
C7035A1080/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	0°F to 250°F (-18°C to +121°C)		600F leads
C7035A1098/U	Oil fired burners; Gas fired burners; Coal fired burners	72 in. (1829 mm)	-40°F to +250°F (-40°C to +121°C)		

## C7061 Dynamic Self-Check Ultraviolet Flame Detector



**Dynamic self-checking flame detector used with R7861 Dynamic Self-check Amplifiers for sensing the ultraviolet radiation generated by the combustion of gas, oil, or other fuels.**

- Oscillating shutter interrupts ultraviolet radiation reaching the UV sensor to provide the UV sensor tube checking function.
- Can be mounted horizontally, vertically or at any angle in between.

- The detector requires faceplate alignment and has integral locating reference points to assure proper operation of the shutter mechanism.
- Field replaceable ultraviolet sensing tube and quartz viewing window.
- Models with threaded conduit fitting and color-coded leadwires allow rapid installation.
- C7061A1038 or A1046 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- Two detectors can be wired in parallel to reduce nuisance shutdowns in difficult flame sighting applications.
- Protective heat block built into mounting flange.
- -40°F (-40°C) rated ultraviolet sensing tube is supplied.
- C7061E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7061F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

**Type:** Ultraviolet, Purple Peeper, Self-Checking

**Application:** Gas fired burners; Oil fired burners

**Comments:** Dynamic self-checking flame detector

**Used With:** Flame Amplifiers: R7861

**Approvals, Underwriters Laboratories Inc.:** C7061A, M-Listed:

File No. MP268, Guide No. MCCZ; C7061F-Recognized: For use in hazardous locations, Class 1 Groups C and D; class 2, Groups E, F and G; File no. E34649

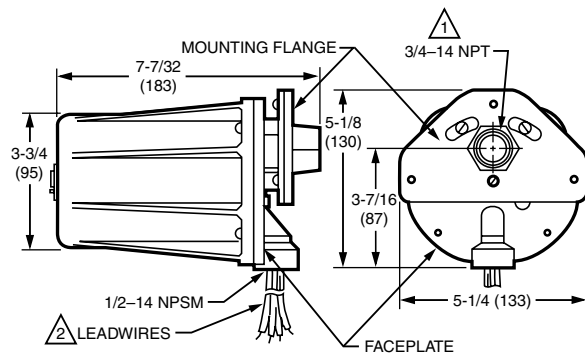
**Approvals, CSA:** Certified: Master Report LR95329-1

**Approvals, Swiss RE:** Acceptable

**Approvals, Factory Mutual:** Approved: Report No. 14740.01

Material Number	NEMA Rating	Lead Length	Electrical Connections	Mounting	Electrical Ratings	Frequency	Ambient Temperature Range	Approvals, Others
C7061A1004/U	NEMA 4	77 in. (1981 mm)	PVC jacketed cable	3/4 in. NPT	120 Vac	50 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1012/U	NEMA 4	96 in. (2438 mm)	Color-coded leadwires	3/4 in. NPT	120 Vac	51 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1020/U	NEMA 4		Terminal block	3/4 in. NPT	120 or 230 Vac	52 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1038/U	NEMA 4		Brad Harrison type number 41310 connector	3/4 in. NPT	120 Vac	53 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1046/U	NEMA 4		Brad Harrison type number 41310 connector	1 in. NPT	120 Vac	54 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1053/U	NEMA 4	96 in. (2438 mm)	Color-coded leadwires	1 in. NPT	120 Vac	55 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061F1003	Explosion Proof		Terminal block	1 in. NPT	120 or 230 Vac	56 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	CE and conforms to EEXD IIc
C7061F2001/U	Explosion Proof	96 in. (2438 mm)	Color-coded leadwires	1 in. NPT	120 Vac	57 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061M1008/U	NEMA 4	96 in. (2438 mm)	Color-coded leadwires	1 in. NPT	120 Vac	58 Hz; 60 Hz	-4°F to +175°F (-20°C to +79°C)	
C7061M1016/U	NEMA 4		Brad Harrison type number 41310 connector	1 in. NPT	120 Vac	59 Hz; 60 Hz	-4°F to +175°F (-20°C to +79°C)	

Dimensions for C7061A in inches (millimeters)

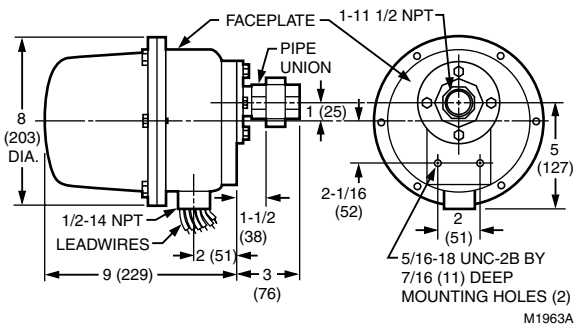


① C7061A1046, C7061A1053: INCH NPT

② C7061A1038 AND C7061A1046: TYPE CONNECTOR.

M10167D

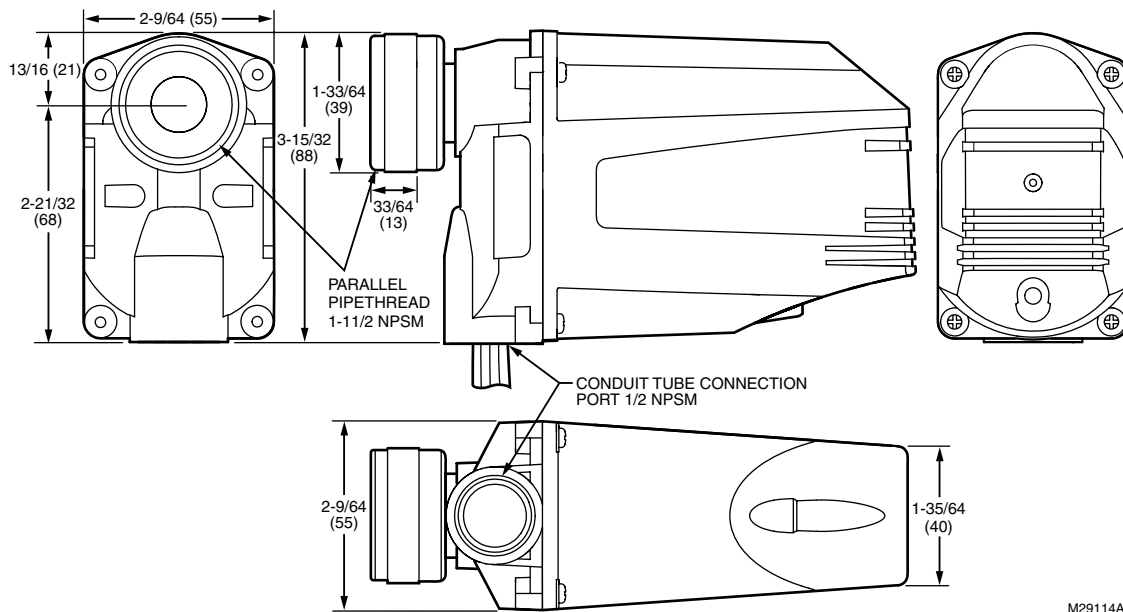
Dimensions for C7061F in inches (millimeters)



M1963A

# Flame Detectors

## Dimensions for C7061M in inches (millimeters)



M29114A



## C7076 Adjustable Sensitivity Ultraviolet Flame Detector



**Solid state dynamic self check flame detectors for use with BC7000, R4140 or FSP5075 with R7476 Amplifier and 7800 SERIES with R7886 Amplifier.**

- Use Honeywell Flame Safeguard primary safety controls requiring adjustable sensitivity ultraviolet flame detection.
- Detect ultraviolet radiation from flames.
- Include dual sensitivity adjustment.
- C7076A meets NEMA 4 standards with viewing window rated to 20 psi.
- C7076D has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

**Type:** Ultraviolet, Adjustable Sensitivity  
**Application:** Gas fired burners; Oil fired burners  
**Electrical Connections:** Terminal block  
**Vibration:** 0.5 G max  
**Mounting:** 1 in. NPT  
**Power Consumption:** 7.0 W

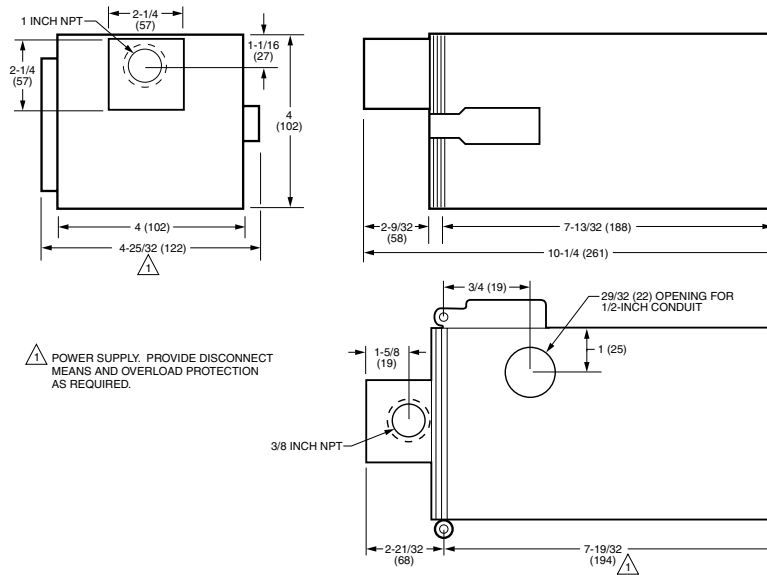
**Ambient Temperature Range:** -40°F to +160°F (-40°C to +71°C)  
**Approvals, CSA:** Certified: Master Report LR1620  
**Approvals, Swiss RE:** Acceptable  
**Approvals, Factory Mutual:** Approved: Report No. FM26980  
**Comments:** Dynamic self-checking flame detector with adjustable sensitivity

**Used With:** Flame Amplifiers: R7476, R7886

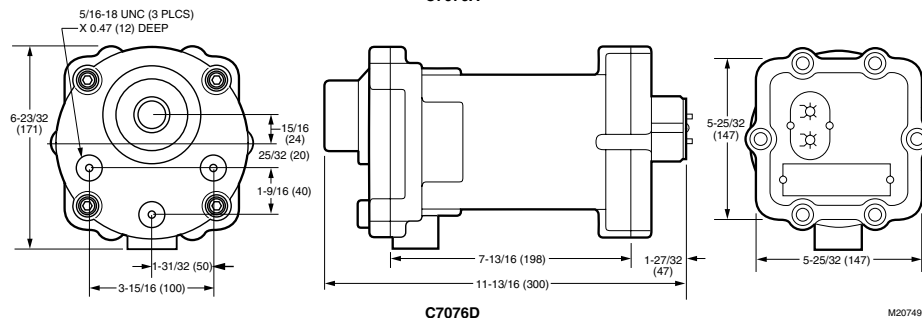
### Replacement Parts:

- 190971F/U** – 100 Vac Coil and Shutter Assembly for C7076A, D
- 190998A/U** – Aspiration assembly for C7076A
- 191002R/U** – 120 Vac Plug in Electronics less UV Sensing Tube for C7076D
- 191050/U** – Quartz Viewing Window for C7076
- 191053/U** – UV Sensing Tube for C7076

**Dimensions in inches (millimeters)**



**C7076A**



**C7076D**

M20749A

Material Number	NEMA Rating	Electrical Ratings	Frequency	Approximate, Dimensions	Weight	Approvals, Underwriters Laboratories Inc.	Approvals, Others
C7076A1007/U	NEMA 4	120 Vac	60 Hz	4 in. high x 4 in. wide x 10 1/4 in. deep (102 mm high x 102 mm wide x 261 mm deep)	6.6 lb (3 kg)	Listed: File No. MP268, Guide No. MCCZ	
C7076A1015/U	NEMA 4	100 Vac	50 Hz; 60 Hz	4 in. high x 4 in. wide x 10 1/4 in. deep (102 mm high x 102 mm wide x 261 mm deep)	6.6 lb (3 kg)	Listed: File No. MP268, Guide No. MCCZ	
C7076A1031/U	NEMA 4	220 Vac; 240 Vac	50 Hz; 60 Hz	4 in. high x 4 in. wide x 10 1/4 in. deep (102 mm high x 102 mm wide x 261 mm deep)	6.6 lb (3 kg)	Listed: File No. MP268, Guide No. MCCZ	
C7076D1027/U	NEMA 7	120 Vac	60 Hz	6 5/8 in. high x 6 3/16 in. wide x 11 3/4 in. deep (168 mm high x 158 mm wide x 300 mm deep)	17.6 lb (8 kg)	Listed: File No. E34649, Guide No. ZTSZ	Explosion Proof

# Flame Detectors

## C7927 Solid State Ultraviolet Flame Detector



The Solid State Ultraviolet Flame Detectors, sense ultraviolet radiation emitted by combustion flames. The flame detectors are used with Honeywell flame safeguard controls to provide flame supervision for gas, oil, or combination gas-oil burners.

- Properly installed the flame detectors are pressure rated for 5 psi.
- Flame detector is used with only the R7851B Flame Amplifier and the 7800 SERIES controls.
- Has an integral collar threaded (internal 1/2-14 NPSM) for mounting on a one-half inch sight pipe.

**Type:** Ultraviolet, Minipeeper

**Application:** Gas, Oil, or combination burners-intermittent operation only (burner cycled at least once each 24 hours).

**NEMA Rating:** NEMA 1

**Electrical Connections:** 2 NEC Class 1 leadwires

**Mounting:** 1/2 in. NPT pipe mounting

**Approximate, Dimensions:** 1 in. diameter x 3 3/4 in. long (25 mm diameter x 95 mm long)

**Approvals, Underwriters Laboratories Inc.:** Component Recognized: File No. MP268

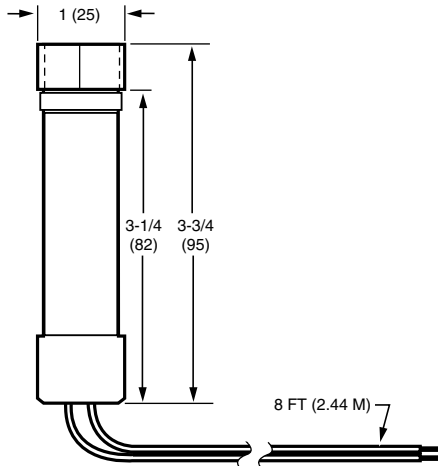
**Approvals, CSA:** Report 158158

**Approvals, Swiss RE:** Acceptable

**Approvals, Factory Mutual:** Approved: Report No. 3011020

**Comments:** Detects ultraviolet radiation in flames

Dimensions in inches (millimeters)



C7927A1016

M24714

Material Number	Lead Length	Ambient Temperature Range	Used With
C7927A1016/U	96 in. (2438 mm)	-40°F to +200°F (-40°C to +93°C)	Flame Amplifiers: R7851B

## C7961 Dynamic Self-checking Solid State Ultraviolet Flame Detector



**A self-checking flame detector using a solid state UV sensor to detect ultraviolet radiation in flames for supervision of gas, oil or combination gas-oil burners.**

- Designed for use with 7800 series controls with the R7851C flame amp.
- Oscillating shutter interrupts ultraviolet radiation reaching the UV sensor to provide the solid state UV sensor checking function.
- Can be mounted horizontally, vertically or at any angle in between.
- The detector requires faceplate alignment and has integral locating reference points to assure proper operation of the shutter mechanism.
- Models available with threaded conduit fitting and color-coded leadwires allow rapid electrical installation.
- C7961E1022 or E1030 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- Incorporates UV sensor tube checking feature; used with R7851C1008 Dynamic Self-check Amplifiers.
- Protective heat block built into mounting flange.
- -40°F (-40°C) rated ultraviolet sensing cell is supplied.
- C7961E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7961F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

**Type:** Ultraviolet, Self-Checking

**Application:** Gas, Oil or other fuels

**Electrical Ratings:** 120 Vac (-15% +10%)

**Frequency:** 50 Hz; 60 Hz

**Ambient Temperature Range:** -40°F to +175°F (-40°C to +80°C)

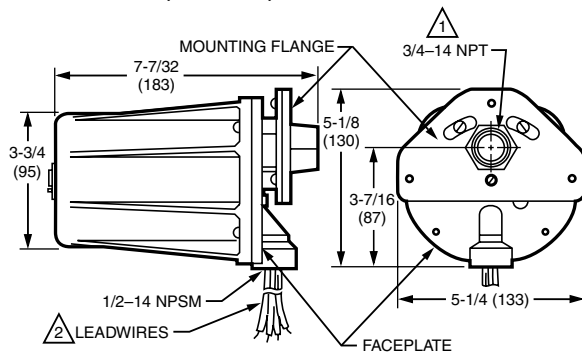
**Approvals, Underwriters Laboratories Inc.:** Component Recognized: File No. MP268

**Comments:** Detects ultraviolet radiation generated by combustion of gas, oil, or other fuels

**Approvals, Swiss RE:** Acceptable

**Used With:** R7851C Dynamic Self-Check Amplifier

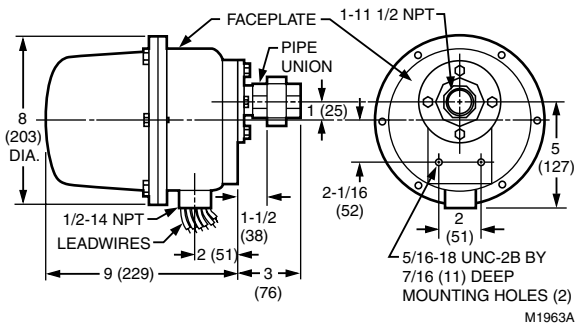
**Dimensions in inches (millimeters)**



1 C7061A1046, C7061A1053: INCH NPT

2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

M10167D



M1963A

Material Number	NEMA Rating	Lead Length	Electrical Connections	Mounting	Approximate, Dimensions	Weight	Approvals, CSA	Approvals, Factory Mutual	Includes
C7961E1006/U	NEMA 4	96 in. (2438 mm)	NEC Class 1 color-coded	3/4 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961E1014/U	NEMA 4	96 in. (2438 mm)	NEC Class 1 color-coded	1 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961E1022/U	NEMA 4		5 pin Brad Harrison Type Connector	1 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961E1030/U	NEMA 4		5 pin Brad Harrison Type Connector	3/4 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961F1004/U	Explosion Proof	96 in. (2438 mm)	NEC Class 1 color-coded	1 in. NPT	8 in. diameter x 12 in. long (203 mm diameter x 305 mm long)	14.5 lb (6.6 kg)		Approved: Report No. 14740.01	Quartz Viewing Window rated for 100 psi

# Flame Detectors

## C7915 Infrared Flame Detector



The C7915 Combination mount Lead Sulfide cell senses infrared radiation from gas, oil, and coal or dual-fuel flames.

- Used for combination or dual-fuel applications.
- Detects pilot and main flame.
- Mounts quickly and easily on a standard 3/4 in. sighting pipe.
- Works where flame rod or rectifying photocell mounts are difficult to apply.

**Type:** Infrared (Lead Sulfide)

**Application:** Used for combination or dual-fuel applications

**Electrical Connections:** Two no. 18 AWG wires

**Mounting:** 3/4 in. NPT

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. MP268, Guide No. MCCZ

**Approvals, CSA:** Certified: Master Report LR95329-1

**Approvals, Swiss RE:** Acceptable

**Approvals, Factory Mutual:** Approved: Report No. 24181.03

**Comments:** Infrared (Lead Sulfide) Flame Detector

**Replacement Parts:**

**32007255-001/U** – Lead Sulfide Cell for C7915

**50019469-001/U** – Magnifying Lens Assembly for C7915A

Material Number	Lead Length	Approximate, Dimensions	Ambient Temperature Range	Includes	Used With
C7915A1010/U	30 in. (762 mm)	1 1/4 in. diameter x 2 1/4 in. long (32 mm diameter x 58 mm long)	-20°F to 125°F operating range (-18°C to 52°C operating range)	With magnifying lens, 32007255-001 Cell	Flame Amplifiers: R7852
C7915A1028/U	48 in. (1219 mm)	1 1/4 in. diameter x 2 1/4 in. long (32 mm diameter x 58 mm long)	-20°F to 125°F operating range (-18°C to 52°C operating range)	With magnifying lens, 32007255-001 Cell, Orifice, heat block, and reducer bushing	Flame Amplifiers: R7852
C7915A1036/U	96 in. (2438 mm)	1 1/4 in. diameter x 2 1/4 in. long (32 mm diameter x 58 mm long)	-20°F to 125°F operating range (-18°C to 52°C operating range)	With magnifying lens, 32007255-001 Cell	Flame Amplifiers: R7852

## Optical Flame Detector Accessories or Parts

Material Number	Description	Used With
105172C/U	Pressure Seal-off Adapter (3/4 NPT) w/UV Quartz window for C7012, C7024, C7027, C7061	C7012, C7024, C7027, C7061; C7024; C7012; C7061
110634A/U	Magnifying Lens Assembly for C7015A	C7015
113228/U	UV Sensing Tube (-20°F to 175°F) for C7012; C7024	C7012; C7024
114372/U	Bulk Pack -20 PSI window for C7012E, F; C7024; C7061	C7024; C7012; C7061
114638/U	Rubber Washer (Red) for C7012A, E; C7024A; C7061A; C7961A	C7012; C7061; C7024
120739/U	Flange Gasket for C7012, C7024, C7061	C7024; C7012; C7061
120930/1662/F	Cover for C7012A,G, C7024E, C7061A, C7961E	C7012A,G, C7024E, C7061A, C7961E; C7012
120934-520/U	Mounting Flange (3/4") for C7012A, E; C7024A; C7061A; C7961E	C7012A,G, C7024E, C7061A, C7961E
122748/U	50 PSI Quartz Window for C7012, C7061	C7012; C7061; C7024
124198/U	Mounting Flange (1") for C7012A, E; C7024A; C7061A; C7961E	C7012A,G, C7024E, C7061A, C7961E
129464M/U	UV Power Tube (0°F to 250°F) for C7035	C7035
129464N/U	UV Power Tube (-40°F to 250°F) for C7035, C7061	C7061; C7035
129811B/U	Socket Assembly w/NPT threads	C7035
190971B/U	120 Vac Coil and Shutter Assembly for C7012E, F, C7061A, F	C7012E, F; C7061A, F
190971D/F	110 Vac 50 Hz Coil and Shutter Assembly for C7012E1187, 1195	C7012E
190971D/U	110 Vac 50 Hz Coil and Shutter Assembly for C7012E1187, 1195	C7012E
190971F/U	100 Vac Coil and Shutter Assembly for C7076A, D	C7076A, D
190971G/U	24 Vdc Coil and Shutter Assembly for C7024E, F; C7961	C7024;C7961
190998A/U	Aspiration assembly for C7076A	C7076A
190999/U	Grommet for C7076 Sensors	C7076
191002D/U	220/240 Vac Plug in Electronics less UV Sensing Tube for C7076A	C7076A
191002R/U	120 Vac Plug in Electronics less UV Sensing Tube for C7076D	C7076D
191050/U	Quartz Viewing Window for C7076	C7076
191053/U	UV Sensing Tube for C7076	C7076
191054/U	Housing Gasket for C7076	C7076
191203/0767/U	Hinge for C7076A	C7076
191284/U	Aluminum Shield for C7035	C7035
191702/U	Electronics less UV sensing tube for C7012F (120 Vac)	C7012F
32004080-001/U	120 Vac Electronics less UV Sensing Tube and Shutter for C7012C	C7012C
32004080-002/U	24 Vdc Plug in Electronics less UV Sensing Tube for C7024F	C7024F
32007255-001/U	Lead Sulfide Cell for C7915	C7915
390427B/U	Envelope with Reducer bushing (1/2" to 3/8" NPT)	C7027; C7015
50019469-001/U	Magnifying Lens Assembly for C7915A	C7915; C7015