

# Flame Amplifiers—7800 SERIES Required Component

## R7747; R7748; R7749 Flame Amplifiers



Solid state plug-in units that respond to flame sensor signals to indicate the presence of flame. The R7747C amplifies the signals from ultraviolet radiation sensors. The R7747C is a rectification Dynamic Self-Check (electronics and ultraviolet sensor tube) amplifier.

The R7748B amplifies the output from an infrared radiation sensor. The R7748B is an AMPLI-CHECK™ amplifier, in which the amplifier electronics are checked.

The R7749B amplifies the signals from ultraviolet radiation sensors. The R7749B is an AMPLI-CHECK™ amplifier, in which the amplifier electronics are checked.

- Flame failure response time (FFRT) 0.5 second maximum (System: 2-4 seconds).
- Amplifiers plug into the BC 7700 Chassis Module by means of a printed circuit board. The printed circuit board edge connector is keyed to ensure proper orientation.

- Flame signal test jacks for measuring flame signal at the amplifier.
- Keyboard Display Module compatibility for display of flame signal strength.

- Flame signal output range of 0-5 Vdc.
- Color-coded labels for identification of amplifier types.

Approvals, Canadian Standards Association: Certified: File No. LR80141  
 Approvals, Factory Mutual: Approved: Report No. J.I.1T4A9.AF  
 Approvals, Industrial Risk Insurers: Acceptable  
 Approvals, Underwriters Laboratories, Inc.: Listed: File No. MP268,  
 Guide No. MCCZ

Flame Failure Response Time: 2 to 4 sec

Humidity Ratings: 85% RH continuous, non-condensing

Use With Primary Safety Control: BCS7700

Vibration: 0.5g continuous.

Temperature Rating (Shipping): -30 F to 150 F; -35 C to 66 C

Temperature Rating (Operating Range): 32 F to 130 F; 0 C to 54 C

Weight: 2.5 oz.; 71g

Dimensions: 4 1/32 in. wide, 2 in. high, 31/32 in. deep;

103 mm wide, 51 mm high, 25 mm deep.

ORDER NUMBER	Type	Color	Self Checking	Use With Flame Sensor:
R7747C1014	Flame Amplifier, Rectification	Green	Dynamic Self-Check	C7012E, F Flame Detector
R7748B1015	Flame Amplifier, Infrared	Red	AMPLI-CHECK	C0715 Flame Detector
R7749B1014	Flame Amplifier, Ultraviolet	Purple	AMPLI-CHECK	C7027, C7035 Flame Detector

## R7824; R7847; R7848; R7849; R7851; R7861; R7886 Flame Signal Amplifiers



Solid state plug-in amplifiers that respond to flame detector inputs to indicate the presence of flame when used with 7800 SERIES relay modules.

- Flame failure response time of 0.8 or 1 second; or 2.0 or 3.0 seconds, depending on amplifier and relay module selected.
- Flame signal strength ranges from 0.0 to 5.0 Vdc.
- Plug into 7800 relay module through printed circuit board edge connector keyed for proper orientation.
- Flame signal test jacks to measure amplifier flame signal voltage.
- Color-coded labels identify flame detection type:  
 Green—rectification.  
 Red—infrared.  
 Purple—ultraviolet  
 Blue—pulsed rectification  
 White—optical

- Dynamic Self-Check Amplifier test the detectors and all electronic components in the flame detection system; 7800 SERIES relay module locks out on safety shutdown with flame detection system failure.
- Compatible with existing Honeywell flame detectors (order separately).

Approvals, Canadian Standards Association: Certified: Report No. LR95329-3.

Approvals, Factory Mutual: Approved: Report No. J.I.1V9A0.AF

Approvals, Industrial Risk Insurers: Acceptable

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

Humidity Ratings: 85% RH continuous, non-condensing

Vibration: 0.5g continuous.

Temperature Rating (Operating Range): -40 F to 140 F; -40 C to 60 C

Weight: 2.5 oz.; 71g

Dimensions: 3 9/16 in. wide, 3 3/8 in. high, 7/8 in. deep.;

91 mm wide, 85 mm high, 23 mm deep.

Color: R7824; R7847—Green;

R7848—Red

R7849; R7861—Purple

R7851—White

R7886—Blue

Some products are available only through Honeywell Authorized Flame Safeguard Distributors and/or Wholesalers.

# Flame Amplifiers—7800 SERIES Required Component

ORDER NUMBER	Type	Flame Failure Response Time	Self Checking	Use With Flame Sensor:
R7824C1002	Flame Amplifier, Ultraviolet	3.0 sec	Dynamic Self-Check	C7024E, F Flame Detector
R7847A1025	Flame Amplifier, Rectification	0.8 sec or 1.0 sec	None (standard)	Gas: Rectifying Flame Rods C7004, C7007, C7005, C7008, C7009, Q179
R7847A1033		2.0 sec or 3.0 sec		Gas, oil, coal: Ultraviolet Flame Sensor C7012A, C Gas: Rectifying Flame Rods C7004, C7007, C7005, C7008, C7009, Q179
R7847A1074		0.8 sec or 1.0 sec		Gas: Rectifying Flame Rods C7004, C7007, C7005, C7008, C7009, Q179
R7847A1082		2.0 sec or 3.0 sec		Gas, oil, coal: Ultraviolet Flame Sensor C7012A, C with leadwire greater than 50 feet Gas: Rectifying Flame Rods C7004, C7007, C7005, C7008, C7009, Q179
R7847B1023		0.8 sec or 1.0 sec		AMPLI-CHECK
R7847B1031		2.0 sec or 3.0 sec	Gas, oil, coal: Ultraviolet Flame Sensor C7012A, C Gas: Rectifying Flame Rods C7004, C7007, C7005, C7008, C7009, Q179	
R7847B1064		0.8 sec or 1.0 sec	Gas: Rectifying Flame Rods C7004, C7007, C7005, C7008, C7009, Q179	
R7847B1072		2.0 sec or 3.0 sec	Gas, oil, coal: Ultraviolet Flame Sensor C7012A, C with leadwire greater than 50 feet Gas: Rectifying Flame Rods C7004, C7007, C7005, C7008, C7009, Q179	
R7847C1005			Dynamic Self-Check	
R7848A1008		Flame Amplifier, Infrared		None (standard)
R7848B1006			AMPLI-CHECK	
R7849A1015	Flame Amplifier, Ultraviolet	0.8 sec or 1.0 sec	None (standard)	Gas, Oil: Minipeeper C7027A, C7035A, C7044
R7849A1023		2.0 sec or 3.0 sec		
R7849B1013		0.8 sec or 1.0 sec	AMPLI-CHECK	
R7849B1021		2.0 sec or 3.0 sec		
R7851B1000	Flame Amplifier, White (Optical)			Gas, oil, C7927
R7851B1018		0.8 sec or 1.0 sec		
R7861A1026	Flame Amplifier, Ultraviolet	0.8 sec or 1.0 sec	Dynamic Self-Check	Gas, oil, coal: Ultraviolet Flame Sensor C7061
R7861A1034		2.0 sec or 3.0 sec		
R7886A1001				

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