

# Configuration | Flame Detectors and Adapters

## "R" ADAPTERS for FLAME DETECTORS

Flame detector adapters are available for specific flame detectors. Adapters have a sealing window and a ¼" tube (½" NPT) connector for cooling or purging air.

The most common configuration is to use purge air, where approximately 2 to 3 cfm of air is used to keep the fire side of the quartz sealing lens clean as well as to provide cooling to the UV scanner and adapter assembly. In the purge air configuration, the flame detector is isolated from the purging air and burner environment/combustion chamber by the quartz sealing lens. When using the purging configuration on a burner developing backpressure and/or firing into a positive combustion chamber, use sufficient air pressure to assure positive purge air flow through the adapter. Purge air flow can influence the lighting characteristics of certain burners and/or limit their performance range at reduced firing rate. Care must be taken to adjust the purge air flow for adequate purge and cooling without introducing an undesirable limitation in burner ignition reliability or performance.

The alternate configuration is to use cooling air, where approximately 1 cfm of air (at 8 psig pressure) is used to cool the adapter as it passes through the space between the quartz sealing lens and the flame detector. This configuration is only used when no purge air flow can be tolerated by the burner.

"R" Adapters are shipped with a setscrew plugging the hole that vents cooling air. Leave the setscrew in place for purging air. Remove the setscrew if cooling air is employed and mount the detector on the tube side of the adapter, opposite of the sealing window.

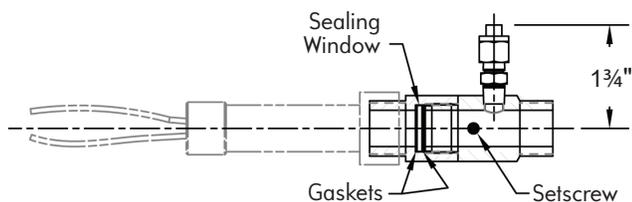
Adapters have a ¾" NPT thread to fit the ¾" NPT flame detector mounting provision of most North American burners. The basic 8835-R unit is common to all "R" adapters. It has a ¾" NPT on both ends. Other adapters are made from the 8835-R by adding the appropriate fitting to one end. The 8835-R adapter is also available with 1" NPT connection as 8833-R. All "R" adapters are rated for up to 10 psig backpressure.

## ADAPTERS and DETECTORS

Adapter	Detector Connection Size	Burner Connection Size
8831-R	¾" MNPT	¾" MNPT
8833-R	1" MNPT	1" MNPT
8834-R	¾" FNPT	¾" MNPT
8835-R	¾" MNPT	¾" MNPT
8836-R	½" MNPSM	¾" MNPT
8837-R	1" MNPSM	¾" MNPT
8839-R	1" MNPT	¾" MNPT

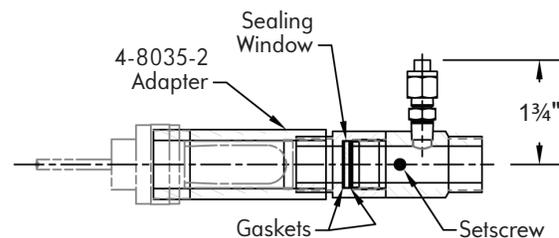
All Series R adapters have the following parts in common:

Cooling Air Connector	R916-2211
Sealing Window	4-7628-1
Gasket (2 req'd)	4-7629-1
Body	4-9770-2
¾" Mtg. Adapter	4-7932-1
#8-32 Setscrew	R776-1431-N



**8835-R**

3½" long  
Shown with PC11 UV Scanner



**8837-R**

6¼" long  
Shown with C7035A-1080 UV Scanner