

# Reliable®

## Model F1FR Model F1FR Recessed Quick Response Sprinklers

### Model F1FR Sprinkler Types

Standard Upright  
Standard Pendent  
Conventional

### Model F1FR Recessed Sprinkler Types

Recessed Pendent

For Model F1FR ½" K 5.6 (80) Sprinkler Types refer to Bulletin 014 for technical specifications and approvals.

### Listings & Approvals

1. Listed by Underwriters Laboratories, Inc. (UL)
2. Listed by Underwriters' Laboratories of Canada (ULC)
3. Factory Mutual Approvals (FM)
4. Loss Prevention Council (LPCB, UK)
5. NYC BS&A No. 587-75-SA
6. Meets MIL-S-901C and MIL-STD 167-1
7. Verband der Schadenversicherer GmbH
8. NYC MEA 258-93-E

### UL Listing Category

Sprinklers, Automatic & Open  
Quick Response Sprinkler

### UL Guide Number

VNIV

### Product Description

Reliable Models F1FR and F1FR Recessed Sprinklers are quick response sprinklers which combine the durability of a standard sprinkler with the attractive low profile of a decorative sprinkler.

The Models F1FR and F1FR Recessed automatic sprinklers utilize a 3.0 mm frangible glass bulb. These sprinklers have demonstrated response times in laboratory tests which are five to ten times faster than standard response sprinklers. This quick response enables the Model F1FR and F1FR Recessed sprinklers to apply water to a fire much faster than standard sprinklers of the same temperature rating.

The glass bulb consists of an accurately controlled amount of special fluid hermetically sealed inside a precisely manufactured glass capsule. This glass bulb is specially constructed to provide fast thermal response. The balance of parts are made of brass, copper and beryllium nickel.



Upright



Pendent



Conventional



Recessed Pendent  
(Model FP Shown)

At normal temperatures, the glass bulb contains the fluid in both the liquid and vapor phases. The vapor phase can be seen as a small bubble. As heat is applied, the liquid expands, forcing the bubble smaller and smaller as the liquid pressure increases. Continued heating forces the liquid to push out against the bulb, causing the glass to shatter, opening the waterway and allowing the deflector to distribute the discharging water.

The temperature rating of the sprinkler is identified by the color of the glass bulb.

### Application

Quick response sprinklers are used in fixed fire protection systems: Wet, Dry, Deluge or Preaction. Care must be exercised that the orifice size, temperature rating, deflector style and sprinkler type are in accordance with the latest published standards of the National Fire Protection Association or the approving Authority Having Jurisdiction. Quick response sprinklers are intended for installation as specified in NFPA 13, FM Global Loss Prevention Data Sheet 2-8N or other applicable standards. Quick response sprinklers and standard response sprinklers should not be intermixed.



## Installation

Quick response sprinklers are intended for installation as specified in NFPA 13, FM Global Loss Prevention Data Sheet 2-8N or other applicable standards. Quick response sprinklers and standard response sprinklers should not be intermixed.

The Model F1FR Recessed Quick Response Sprinklers are to be installed as shown. The Model F1 or F2 Escutcheons illustrated are the only recessed escutcheons to be used with the Model F1FR Sprinklers. The use of any other recessed escutcheon will void all approvals and negate all warranties.

When installing Model F1FR Sprinklers, use the Model D Sprinkler Wrench. When installing Model F1FR Recessed Pendent or Sidewall Sprinklers, use the Model GFR1 Sprinkler Wrench. Any other type of wrench may damage these sprinklers.

Glass bulb sprinklers have orange bulb protectors to minimize bulb damage during shipping, handling and installation. REMOVE THIS PROTECTION AT THE TIME THE SPRINKLER SYSTEM IS PLACED IN SERVICE FOR FIRE PROTECTION. Removal of the protectors before this time may leave the bulb vulnerable to damage. RASCO wrenches are designed to install sprinklers when covers are in place. REMOVE PROTECTORS BY UNDOING THE CLASP BY HAND. DO NOT USE TOOLS TO REMOVE THE PROTECTORS.

## Temperature Ratings

Classification	Sprinkler Temperature		Maximum Ambient Temperature		Bulb Color
	°F	°C	°F	°C	
Ordinary	135	57	100	38	Orange
Ordinary	155	68	100	38	Red
Intermediate	175	79	150	66	Yellow
Intermediate	200	93	150	66	Green
High <sup>(1)</sup>	286	141	225	107	Blue

<sup>(1)</sup> Not Available for recessed sprinklers.

## Escutcheon Data

Escutcheon Model	Adjustment	"A" Dimension	Face of Fitting to Ceiling or Wall Dimension
F1	Max Recess	1 1/2" (38.1mm)	3/16" - 15/16" (5mm - 24mm)
	Min Recess	3/4" (19.1mm)	
F2	Max Recess	1 1/2" (38.1mm)	3/16" - 11/16" (5mm - 17mm)
	Min Recess	1" (24.5mm)	
FP Push-on/Thread-off	Max Recessed	5/16" (8mm)	1 1/2" (38.1mm)
	Min Recessed	15/16" (24mm)	

## Maintenance

The Models F1FR and F1FR Recessed Sprinklers should be inspected quarterly and the sprinkler system maintained in accordance with NFPA 25. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove dust by using a soft brush or gentle vacuuming. Remove any sprinkler which has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers. Prior to installation, sprinklers should be maintained in the original cartons and packaging until used to minimize the potential for damage to sprinklers that would cause improper operation or non-operation.

## Sprinkler Types

Standard Upright  
Standard Pendent  
Conventional  
Recessed Pendent

## Finishes<sup>(1)(2)</sup>

Standard Finishes	
Sprinkler	Escutcheon
Bronze Chrome Plated White Polyester Coated <sup>(4)(5)</sup>	Brass Chrome Plated <sup>(3)</sup> White Painted <sup>(3)</sup>
Special Application Finishes	
Sprinkler	Escutcheon
Bright Brass Black Plated Black Paint Off White <sup>(3)</sup> Satin Chrome	Bright Brass Black Plated Black Paint Off White Satin Chrome

<sup>(1)</sup> Other finishes and colors are available on special order. Consult the factory for details.

<sup>(2)</sup> FM Approvals is limited to bronze and brass, chrome or black plated finishes only.

<sup>(3)</sup> FP Push-on/Thread-off escutcheon.

<sup>(4)</sup> UL and ULC listed corrosion resistance.

SIN numbers: R3621, R3622, R3623, R3625.

<sup>(5)</sup> FM Approved for SIN No. R3622

**Note:** For 1/2" orifice pendent FM approved white polyester coated and UL approved white polyester corrosion resistant sprinklers refer to Bulletin 014.

## Ordering Information

### Specify:

1. Sprinkler Model
2. Sprinkler Type
3. Orifice Size
4. Deflector Type
5. Temperature Rating
6. Sprinkler Finish
7. Escutcheon Type
8. Escutcheon Finish (where applicable)

**Note:** When Model F1FR Recessed sprinklers are ordered, the sprinklers and escutcheons are packaged separately.

# Reliable...For Complete Protection

Reliable offers a wide selection of sprinkler components. Following are some of the many precision-made Reliable products that guard life and property from fire around the clock.

- Automatic sprinklers
- Flush automatic sprinklers
- Recessed automatic sprinklers
- Concealed automatic sprinklers
- Adjustable automatic sprinklers
- Dry automatic sprinklers
- Intermediate level sprinklers
- Open sprinklers
- Spray nozzles
- Alarm valves
- Retarding chambers
- Dry pipe valves
- Accelerators for dry pipe valves
- Mechanical sprinkler alarms
- Electrical sprinkler alarm switches
- Water flow detectors
- Deluge valves
- Detector check valves
- Check valves
- Electrical system
- Sprinkler emergency cabinets
- Sprinkler wrenches
- Sprinkler escutcheons and guards
- Inspectors test connections
- Sight drains
- Ball drips and drum drips
- Control valve seals
- Air maintenance devices
- Air compressors
- Pressure gauges/identification signs
- Fire department connection

The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Products manufactured and distributed by Reliable have been protecting life and property for over 90 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.

Manufactured by

**Reliable**<sup>®</sup>

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