Reliable®

Model GSR112 Series Sprinklers

Storage and Non-Storage Sprinklers
K11.2 (160 metric)

Product Description

Reliable Model GSR112 upright and pendent sprinklers are standard coverage standard-response sprinklers that utilize a sensitive 5mm glass bulb thermal element. These sprinklers are intended for use in hydraulically calculated control mode density area (CMDA) storage and non-storage occupancies in accordance with the requirements of NFPA 13 or other applicable standards.

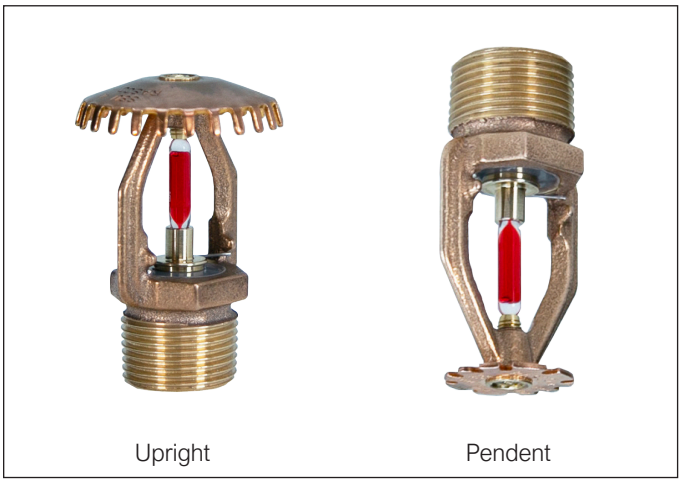
The Model GSR112 sprinkler is FM Approved as a standard-response storage and non-storage sprinkler when used in accordance with FM Global Property Loss Prevention Data Sheets.

The Model GSR112 is rated for a maximum working pressure of 175 psi (12 bar) and is available with either 3/4" NPT or ISO 7-R3/4 threads. Sprinklers without guards are installed using the Reliable Model H wrench.

For use as an intermediate level sprinkler, the Model GSR112 upright sprinkler is available with a factory installed water shield. Various other water shields, guards, or guard/shield options are also available for both upright and pendent models (please refer to Technical Specifications on following pages). Sprinkler guards or guard/shields may be installed in the field or factory installed. Use of the Reliable Model W15 sprinkler wrench is required for installation where a guard is added to the sprinkler prior to threading the assembly into a fitting.

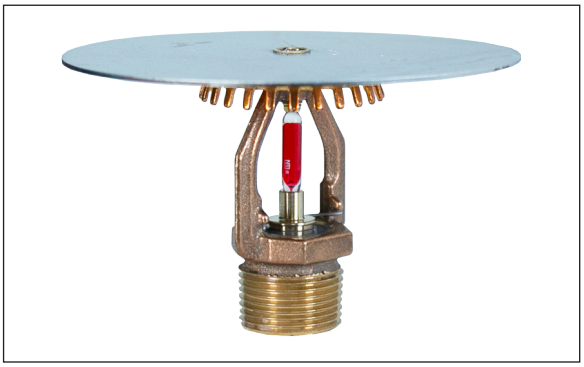
Table A below provides a summary of the key data and approvals for the Model GSR112 sprinkler. Additional technical information is found on the following pages.

Important! Reliable fire sprinklers must be handled, stored, and installed in accordance with the guidelines in Caution Sheet 310 and this bulletin. Failure to follow these instructions may result in unintended operation or nonoperation of the fire protection system.



Upright Pendent

Model GSR112 Series Sprinklers



Upright with Factory Installed Shield
(Intermediate Upright)

Model GSR112 Sprinkler Summary **Table A**

Style	Sprinkler Identification Number (SIN)	Listings and Approvals	Sensitivity	K-Factor
Upright Upright Intermediate	R608	FM	Standard Reponse	11.2 (160 metric)
Pendent	R607			

Model GSR112 Upright Sprinkler — SIN R608

Technical Specifications
- **Style:** Upright, Intermediate Upright
- **Threads:** 3/4” NPT or ISO 7-1R3/4
- **Nominal K-Factor:** 11.2 (160 metric)
- **Max. Working Pressure:** 175 psi (12 bar)

Material Specifications
- **Thermal Sensor:** 5mm Glass Bulb
- **Sprinkler Frame:** Brass Alloy
- **Button/Cup:** Bronze Alloy
- **Sealing Assembly:** Brass with PTFE
- **Load Screw:** Brass Alloy
- **Deflector:** Bronze Alloy
- **Kick Spring:** Stainless Steel

Sprinkler Finishes
- Bronze
- Chrome
- Electroless Nickel PTFE(1)

Sensitivity
- Standard response

Temperature Ratings
- 155°F (68°C)
- 200°F (93°C)
- 286°F (141°C)

Guards & Shields
- D-7 Guard & Water Shield
- D-8 Guard
- Water Shield (factory installed)

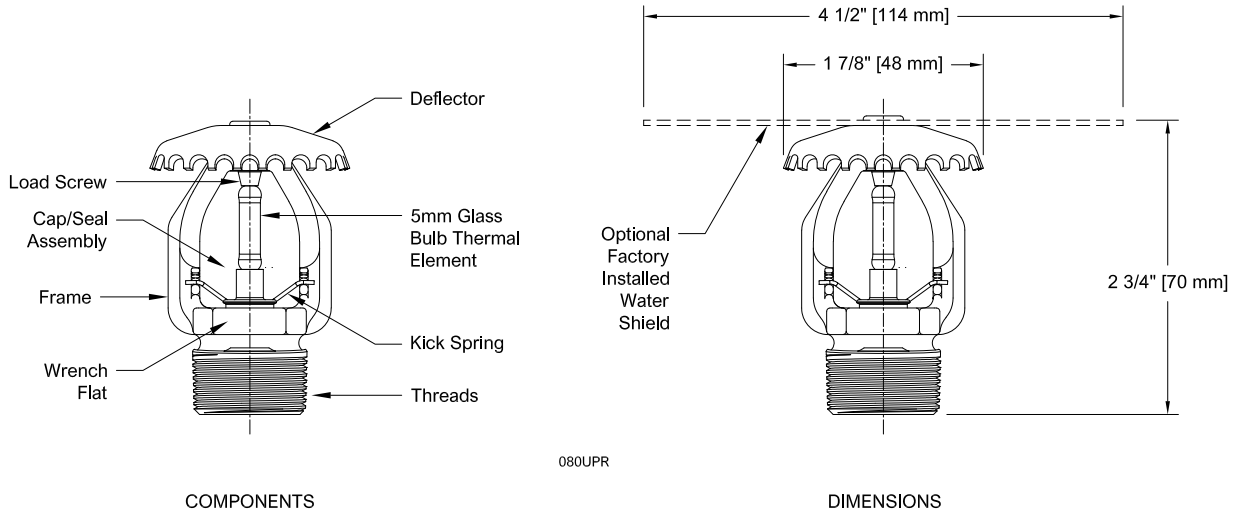
Sprinkler Wrenches
- Model H (without guard)
- Model W15 (with guard)

Listings and Approvals
- FM Approved



Notes:
1. FM Approved as corrosion resistant.

Model GSR112 Upright Components and Dimensions — Figure 1



Model GSR112 Pendent Sprinkler — SIN R607

Technical Specifications
- **Style:** Pendent
- **Threads:** 3/4” NPT or ISO 7-1R3/4
- **Nominal K-Factor:** 11.2 (160 metric)
- **Max. Working Pressure:** 175 psi (12 bar)

Material Specifications
- **Thermal Sensor:** 5mm Glass Bulb
- **Sprinkler Frame:** Brass Alloy
- **Button/Cup:** Bronze Alloy
- **Sealing Assembly:** Brass with PTFE
- **Load Screw:** Brass Alloy
- **Deflector:** Bronze Alloy
- **Kick Spring:** Stainless Steel

Sprinkler Finishes
- Bronze
- Chrome
- Electroless Nickel PTFE(1)

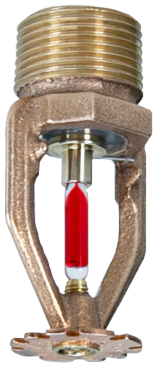
Sensitivity
- Standard response

Temperature Ratings
- 155°F (68°C)
- 200°F (93°C)
- 286°F (141°C)

Guards & Shields
- D-8 Guard
- D-9 Guard & Water Shield
- S-2 Water Shield

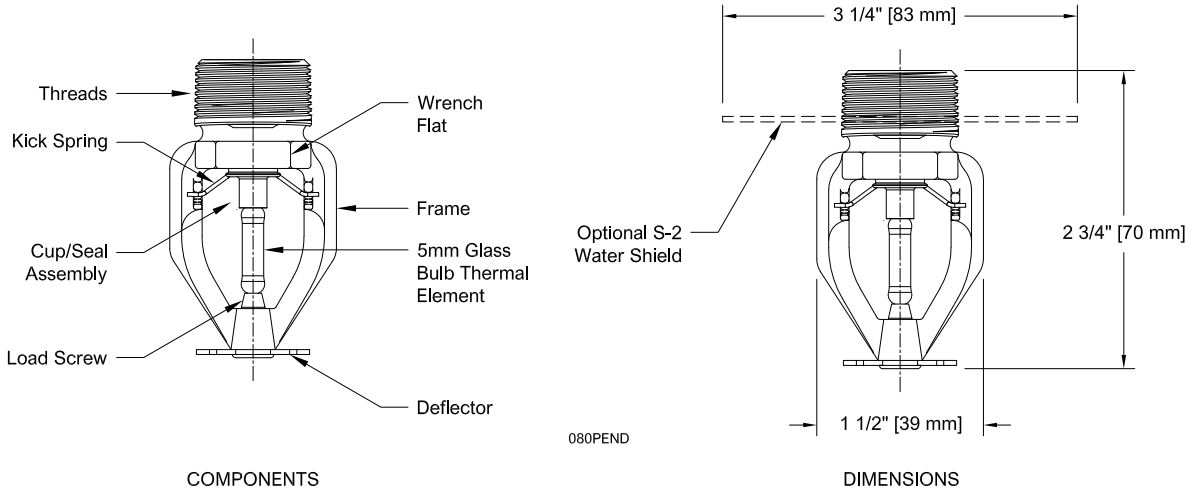
Sprinkler Wrenches
- Model H (without guard)
- Model W15 (with guard)

Listings and Approvals
- FM Approved



Notes:
1. FM Approved as corrosion resistant.

Model GSR112 Pendent Components and Dimensions — **Figure 2**



Model GSR112 Commodity Selection and Design Criteria Overview **Table B**

Storage Type	NFPA	FM GLOBAL
Sprinkler Type	CMDA	Storage
Response Type	SR	SR
System Type	Pendent - Wet Upright - Wet, Dry, Preaction	Pendent - Wet Upright - Wet, Dry, Preaction
Temperature Rating °F (°C)	155, 200, 286 (68, 93, 141)	155, 200, 286 (68, 93, 141)
Roof Construction	See NFPA 13	See FM Global 2-0
Ceiling Slope	See NFPA 13	See FM Global 2-0
Maximum Coverage Area	See NFPA 13	See FM Global 2-0
Minimum Coverage Area	See NFPA 13	See FM Global 2-0
Maximum Spacing	See NFPA 13	See FM Global 2-0
Minimum Spacing	See NFPA 13	See FM Global 2-0
Minimum Clearance to Commodity	See NFPA 13	See FM Global 2-0
Sprinkler Distance to Ceiling	See NFPA 13	See FM Global 2-0
Open Frame, Single, Double, Multiple Row, or Portable Rack Storage of Class I - IV Commodity and Group A Plastic	See NFPA 13	See FM 2-0 & 8-9
Solid Pile or Palletized Storage of Class I - IV Commodity and Group A Plastic	See NFPA 13	See FM 2-0 & 8-9
Idle Pallet Storage	See NFPA 13	See FM 2-0, 8-9 & 8-24
Rubber Tire Storage	See NFPA 13	See FM 8-3
Rolled Paper Storage	See NFPA 13	See FM 8-21 Pendent Only
Flammable Liquid Storage	See NFPA 30	See FM 7-29 and 8-9
Aerosol Storage	See NFPA 13	See FM 7-31
Auto Components in Portable Racks	See NFPA 13	See FM 2-0 and 8-9

Installation

Model GSR112 sprinklers must be installed according to appropriate NFPA Standards, FM Global Loss Prevention Data Sheets, and/or the requirements of the authority having jurisdiction using the Reliable installation wrench identified in this bulletin. Any other type of wrench may damage the sprinkler. Damaged sprinklers must be replaced immediately.

A leak tight joint should be obtained with a torque of 14 to 20 lb-ft (19 to 27 N·m) for 3/4 inch NPT and ISO 7-R3/4 thread sprinklers after applying an appropriate thread sealant. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinklers.

Wrenches **Figure 3**



Model H Wrench (sprinkler)



Model W15 Wrench (with guard installed)

Maintenance

Reliable Model GSR112 sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

Prior to installation, sprinklers should remain in the original cartons and packaging until used. This will minimize the potential for damage to sprinklers that could cause improper operation or non-operation.

Do not clean sprinklers with soap and water, ammonia liquid or any other cleaning fluids. Remove dust by gentle vacuuming without touching the sprinkler.

Replace any sprinkler which has been painted (other than factory applied). A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers.

Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

Guarantee

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Specify the following when ordering.

Model GSR112 Sprinkler
- Upright
- Intermediate Upright
- Pendent

Threads
- 3/4” NPT
- ISO 7-R3/4

Temperature Rating
- 155°F (68°C)
- 200°F (93°C)
- 286°F (141°C)

Finish
- Bronze
- Chrome
- Electroless Nickel PTFE

Wrench
- Model H (without guard)
- Model W15 (with guard installed)

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