cULus Listed and FM Approved for Storage and Non-storage applications

Features
1. Provides maximum coverage areas up to 196 ft² (18.21 m²) per sprinkler and 14 ft (4.27 m) by 14 ft (4.27 m) spacing.
2. cULus Listed for recessed installation in finished ceilings with 1/2" (13 mm) adjustment.
3. Available in brass, white polyester, black polyester, and custom color polyester finishes.
4. Ordinary, 165 °F (74 °C), and Intermediate, 212 °F (100 °C) temperature ratings.
5. cULus Listed for unobstructed or noncombustible obstructed construction.

Listings and Approvals
1. Listed by Underwriters’ Laboratories Inc. and UL certified for Canada (cULus).
2. FM Approved (Pendent only) as a K25.2 Extended Coverage Quick-Response Pendent Storage and Non-storage sprinkler.
3. Approved for use in New York City based on UL Listing per Local Law 33/2007 and MEA 258-93-E

UL Listing Categories
Sprinklers, Automatic & Open
Sprinklers for Storage Protection (Standard Response Area/Density)

UL Guide Number
VNIV

US Pat. No. 7,624,812

Product Description
The Models N252 EC Pendent and Recessed Pendent Sprinklers are control mode, extended coverage sprinklers for storage and non-storage density/area applications. This includes protection of the storage and display of Class I through Class IV commodities, non-expanded Group A Plastics, and non-expanded, exposed Group A Plastics in retail stores. The Model N252 EC sprinklers offer maximum coverage areas up to 14 ft by 14 ft (196 ft²), which is almost twice of that provided by standard coverage sprinklers. This offers the advantage of decreasing the number of required sprinklers, reducing labor and material costs.
Fig. 1
Model N252 EC Pendent

Fig. 2
Model N252 EC Recessed Pendant with Model FP Escutcheon
Operation

The Reliable Model N252 Extended Coverage Pendent and Recessed Pendent Sprinklers utilize a levered fusible alloy solder link. When the link reaches the rated temperature, the solder melts and the two link halves separate allowing sprinkler to operate and water to flow.

Installation

Model N252 sprinklers are to be installed as shown. Reliable Model FP escutcheons are the only recessed escutcheons Listed for use with Model N252 EC sprinklers. Use of any other recessed escutcheon will void all listings and warranties. When handling sprinklers, hold sprinklers only on frame arms and do not apply any force on the link assembly. Model N252 EC pendent sprinklers must be installed with the Model N (Fig. 3) or Model N1 (Fig. 4) sprinkler wrench. Model N252 EC

recessed pendent sprinklers must be installed with the Model N (Fig. 3) sprinkler wrench. Usage of wrenches other than those specified may damage these sprinklers. Sprinklers should be tightened between 22 to 40 ft-lb (30 - 54 N-m) torque. Sprinklers not tightened to recommended torque may cause leakage or impairment of the sprinklers. Damaged sprinklers must be replaced immediately.

Design Criteria for UL and C-UL

The Models N252 EC Pendent and Recessed Pendent Sprinklers are cULus Listed standard response control-mode, extended coverage density/area sprinklers for installation in accordance with the extended coverage pendent spray sprinkler criteria of NFPA 13, or other applicable NFPA standards, when used in combination with the following guidelines:

- Protection for extra hazard and high-piled storage occupancies using NFPA 13 density/area criteria.
- Suitable for use in wet pipe systems, and in dry-pipe and preaction systems as specifically allowed for pendent sprinklers in NFPA 13.
- cULus Listed for “unobstructed” or non-combustible “obstructed” construction. Given that the Model N252 EC sprinklers are specifically listed for noncombustible obstructed construction, they may be installed within trusses or bar joists having noncombustible web members greater than 1” (25.4 mm) when applying the “Four Times Rule” as defined in NFPA 13 under “Obstructions to Sprinkler Discharge Pattern Development.”
- Maximum area of coverage per sprinkler is 196 ft² (18.2 m²); minimum area of coverage is 100 ft² (9.3 m²). Maximum spacing between sprinklers is 14 ft (4.3 m); minimum spacing between sprinklers is 8 ft (2.4 m).
- Minimum flow requirement is based on the design density applied over the actual area of coverage per sprinkler. Example 1, a design density of 0.43 gpm/ft² (17.5 mm/min) applied over 14 ft x 14 ft (4.3 m x 4.3 m) spacing, or 196 ft² (18.2 m²), would require a minimum sprinkler design flow rate and pressure of 84.3 gpm (319.2 l/min) at 11.2 psi (0.77 bar). Example 2, a design density of 0.43 gpm/ft² (17.5 mm/min) applied over 14 ft x 12 ft (4.3 m x 3.7 m) spacing, or 168 ft² (15.6 m²), would require a minimum sprinkler design flow rate and pressure of 72.2 gpm (273.3 l/min) at 8.2 psi (0.57 bar).

Technical Data

<table>
<thead>
<tr>
<th>Temperature Classification</th>
<th>Temperature Rating</th>
<th>Maximum Ambient Ceiling Temp.</th>
<th>Link Color</th>
<th>Nominal K-Factor gpm/psi&quot; (l/min.bar&quot;³)</th>
<th>Thread Size</th>
<th>Thermal Sensitivity</th>
<th>Sprinkler Identification Number (SIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary</td>
<td>165 °F 74 °C</td>
<td>100 °F 38 °C</td>
<td>Black</td>
<td>25.2 (360)</td>
<td>1&quot; NPT (ISO 7-1 R1)</td>
<td>Response Time Index (RTI) of 50 (m.s)¹/² or less cULus Standard Response</td>
<td>RA0842</td>
</tr>
<tr>
<td>Intermediate</td>
<td>212 °F 100 °C</td>
<td>150 °F 66 °C</td>
<td>White</td>
<td></td>
<td></td>
<td>FM Quick Response</td>
<td></td>
</tr>
</tbody>
</table>
Design Criteria for FM

The Model N252 EC Pendent sprinkler is FM Approved for use in accordance with the following guidelines:

- FM Approved for installations governed by data sheets 2-0 and 8-9.
- The Model N252 EC Pendent is FM Approved as a K25.2 Extended Coverage Quick Response Pendent Storage and Non-storage sprinkler.

Maintenance

The Models N252 EC Pendent and Recessed Pendent Sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25, and local jurisdictional requirements. Do not clean sprinklers with soap and water, ammonia, or any other cleaning fluids or solvents. Remove dust by gentle vacuuming. Replace any sprinkler that has been painted (other than factory-applied) or otherwise altered after leaving the factory. 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 sprinkler that would cause improper operation or non-operation.

Ordering Information

Specify:
1. Sprinkler: Model N252 EC
2. Temperature Rating: [Ordinary, 165 °F(74 °C)][Intermediate, 212 °F (100 °C)]
3. Threads: [1” NPT][ISO 7-1R]
4. Finish: [Brass][White Polyester][Black Polyester][Custom Color Polyester – Specify]
5. Recessed Escutcheon: [None][Model FP – cULus Listed only]
6. Sprinkler Wrench: [None][Model N – Pendent and Recessed Pendent][Model N1 – Pendent only]

*Note: Intermediate temperature rated, 212 °F (100 °C), sprinklers in Brass finish are supplied with non-decorative white paint on the frame arms for identification of the temperature rating.