Reliable®

# F1-FTR Fixed Temperature Release

Bulletin 180 Rev.B

## Pilot Line Detector (PLD) Fixed Temperature Release

## Features:

1. Fixed Temperature Heat Responsive Detector
2. Installed Positions:
   - Pendent
   - Upright
3. Quick Response
4. Temperature Ratings: 135°F (57°C), 155°F (60°C), 175°F (79°C), and 200°F (93°C).
5. ½″ (15mm) Orifice with ½″ NPT (R½) Thread
6. Die cast Brass Frame
7. Listed spacing
   a. 40 ft x 40 ft (12m x 12m) for 155°F (60°C), 175°F (79°C) and 200°F (93°C)
   b. 50 ft x 50 ft (15m x 15m) for 135°F (57°C)

### Product Description:

The Fixed Temperature Release (FTR) Pilot Line Detector (PLD) is designed to be used on wet or dry pilot line release systems and trigger the operation of deluge systems, non-interlock preaction systems, single interlock and double interlock systems. The FTR incorporates a 2.5mm glass bulb with a Model F1 Sprinkler frame. It is identified as a Fixed Temperature Release (FTR) to differentiate it from a sprinkler. The FTR is made of die cast brass and is available in various finishes. During fire conditions the heat sensitive liquid in the bulb expands, the bulb shatters, releasing the cap and spring assembly. This triggers the opening of the pilot line, releasing the pressure (air, gas or water), causing the deluge or preaction system valve to open and deliver water under pressure to the system pipes.

### Listings and Approvals

1. Listed with Underwriters Laboratories Inc. and UL Certified for Canada (cULus)
2. NYC MEA 258-93-E

### Technical Data

Thread Size: ½″ NPT (R ½)
Orifice: Nominal ½″ (15mm)
Thermal Sensor: 2.5mm glass bulb
Rated to 175psi (12,1 bar) (12,066kPa)
Frame – Die cast Brass
Seal – Teflon Coated
Standard Finishes –
Brass, Chrome plated or white painted.

Factory tested Hydrostatically to 500 psi (34,5 bar) (34,475 kPa).

### Installation

The F1-FTR must be installed in accordance with NFPA-13 specifications and after the pilot line system piping is in place (to prevent possible damage to FTR). Before installing be sure the F1-FTR has the appropriate temperature rating which should be lower than the temperature rating of system nozzles or sprinklers. Apply a small amount of pipe joint compound to the male thread when installing FTR.

Install the F1-FTR into the pilot line piping using only the special Model D Wrench. (See Bulletin 205).

The F1-FTR must be handled carefully, and stored in a cool, dry place in the original container. Never install a F1-FTR that has been dropped or damaged in anyway. Do not install the F1-FTR if the bulb is cracked or seems low on liquid. If the F1-FTR is not returned to Reliable it should be destroyed. Never install a F1-FTR that has been exposed to a temperature in excess of the allowed ambient temperature.

The F1-FTR can be installed in any position; however, in locations where the pilot line system is exposed to freezing conditions install them in the upright position only. Wet pilot lines must be installed where there is adequate heat to avoid possible freezing. An F1-FTR pilot line that may be subject to mechanical damage must be protected by the appropriate sprinkler guard (see Bulletin 208) for the F1 Model.

# Warning

Any alternation to the detectors after they leave the factory including, but not limited to, painting, plating coating or other modification may render the detectors inoperative and will nullify all approvals.

## Important Precautions To Follow

1. Detectors are to be installed in accordance with the latest published standards of the National Fire Protection Association, other similar organizations and with the provisions of governmental codes or ordinances whenever applicable.
2. Use only the Model D wrench to install detector. Any other wrench may damage the detector.
3. Never install a detector after it has been dropped or damaged in any way. These detectors should be destroyed.
4. Never Install detectors in the fittings until the piping is in place on the ceiling. Detectors are liable to be damaged if installed when the lines are made up at the bench or on the floor.
5. Never attach wiring, ropes or fixtures to a detector or piping system.
6. Use guards on all detectors subject to injury by moving objects.
7. If pipe compound is used, apply to detector pipe thread only.
8. Store detectors in a cool, dry place. Prior to installation, detectors should be maintained in original cartons and packaging until used to minimize potential damage that would cause improper operations or non-operation.
9. NEVER APPLY PAINT OR ANY OTHER COATING TO DETECTOR.
10. Removal of paint or other coatings with solvents is not permissible.
11. When installing detector in plastic pipe, excess solvent cement used during pipe installation must not become an obstruction inside inlet. Install detector into the sprinkler fittings only after all piping is in place and solvent cement at each drop joint has cured at least 30 minutes.

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After installation the entire pilot line system must be pressure-tested to ensure proper operation, meeting the required application standards, verifying that no unit was damaged in shipping on installation, and that all detectors are securely tightened. If a thread leak is noticed the unit must be removed, new pipe joint compound applied and then reinstalled.

### Maintenance

Fire protection systems should be inspected in accordance with NFPA 25 guidance. Keeping the fire protection system in properly, maintained conditions is the responsibility of the owner. Model F1-FTR must be inspected regularly for corrosion, mechanical damage, paint etc. Do not clean them with soap and water, ammonia or any other cleaning fluid. Remove dust by using a soft brush or gentle vacuuming.

Remove any detectors that have been painted (other than factory applied) or damaged in any way. A stock of spare detectors should be maintained to allow quick replacement of damaged or inoperable units. Prior to installation, all detectors should be maintained in the original cartons until used. This minimizes the potential for improper or non-operation. Systems subjected to fire must be returned to service as soon as possible. The entire system must be inspected for damage and repaired or replaced as necessary. Sprinklers and fixed temperature releases that have been exposed to corrosive products of combustion or high ambient temperatures, but have not been operated, should be replaced. Refer to the Authority Having Jurisdiction for minimum replacement requirements.

| Release Temperature Classification | Nominal Temperature Rating of Release (Fusing Point) | Ceiling Temperature at Release | Bulb Color | Temperature Rating Color Code | Listed Spacing[2] |
|---|---|---|---|---|---|
| | | Max. Recommended Ambient Temp.[1] | | | |
| Ordinary | 135°F (57°C) | 100°F (38°C) | Orange | None | 50ft x 50ft (15m x 15m) |
| Ordinary | 155°F (68°C) | 100°F (38°C) | Red | None | 40ft x 40ft (12m x 12m) |
| Intermediate | 175°F (79°C) | 150°F (65°C) | Yellow | White | 40ft x 40ft (12m x 12m) |
| Intermediate | 200°F (93°C) | 150°F (65°C) | Green | White | 40ft x 40ft (12m x 12m) |

[1] Based on NFPA-13. Other limits may apply depending on fire loading, sprinkler location, and other Authority-Having-Jurisdiction requirements. Refer to specific installation standards.

[2] Listed spacings are for smooth, flat, horizontal ceilings. Installation must comply with NFPA 13; NFPA 15, 3-5.2 & NFPA 72, 2-2 and Appendix B

The equipment presented in this bulletin is to be installed in accordance with the latest pertinent 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 80 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

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