



"Your Direct source for Plant Maintenance, Reliability, Test & Measurement"

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RAYNGER® ST™ 80-IS PRO PLUS

ALL THE FEATURES OF THE ST80 PLUS AN INTRINSICALLY SAFE RATING

Intrinsic Safety is a technique for preventing explosions in hazardous areas. Intrinsic safety is achieved by limiting the energy and surface temperature of a device during normal operation, or during foreseeable fault conditions, to an insufficient level to ignite an explosive environment. The presence of dusts, gases, grains, and fibers are some of the factors that can lead to ignition. An Intrinsically Safe rating is earned by passing the rigorous approval process of a recognized entity. Upon approval, the exact approved hazardous situations are displayed on the label attached to the unit.

Factory Mutual is one of the most recognized approving organizations in North America. Its approval is accepted in many parts of the world (checking with the end-user customer is the only way to be sure outside North America). Certification from TUV is the most common approval in Europe. The ST80-IS does not have TUV approval and it is not currently planned.

- **The Professional's Choice for:**

Hazardous Locations, Fire Safety, Electrical and Industrial, Automotive and Diesel, HVAC/R Systems, Facility Maintenance, Food Safety, Asphalt Work and Marine Maintenance

- **FM approval of Intrinsically Safe**

Can get portable noncontact temperature measurements in many hazardous locations. For most customers, the ST80-IS will be the only means to do this! Brings all the benefits of noncontact temperature measurement including speed, safety, convenience, to "hazlocs" (hazardous locations)

- **Extra Bright Laser Point Sighting**

Visible in all conditions, especially outdoors

- **1%/1°F (2°C) Accuracy at Normal Operating Ambient**

Ideal for use in critical monitoring applications (steam traps, relief valves, furnaces, boilers, sewers)

- **Long-Range (50:1) Optical Resolution (D:S)**

Allows measurement of smaller targets at longer distances (e.g. inch/cm scale targets at 10 ft/3 m). Often eliminates need for climbing, reaching in dangerous areas. Increases safety



- **Sub-Zero (-25°F/-32°C) & Hi-Temp (1400°F/760°C) Range Capability**

Increases instrument versatility and application capabilities at variety of temperature ranges found in chemical processing and other hazardous locations

- **500 msec Response Time**

Accurate readings when target temperature is changing rapidly. Improved response when using instrument to sweep wide target regions. Dangerous problems can be seen instantly

- **Rubberized Grip; Overmolded Nose/Back**

Rugged — less prone to dropping. Improved shock resistance. Resistant to common chemicals, such as, gasoline

- **FM approved RTD probe included**

Ability to do both contact and noncontact temperature measurement in hazardous locations with one product. Closely adjust emissivity on site. Measure intake and outlets simultaneously

- **Twelve point data logging**

Accurately record several key temperatures for subsequent analysis in a nonhazardous area

ST 80-IS PRO PLUS, CONTINUED

Who Can Benefit By Using This Intrinsically Safe Device?

- Petrochemical refineries and tank farms
- Oil exploration, especially offshore drilling rigs
- Pumping stations for petroleum and gas
- Solid propellant manufacture
- Chemical/ pharmaceutical plants
- Ink, laminate, and coating processes that emit volatile vapors
- Fire departments in situations where flammable gases can be present
- Hazardous waste disposal and sewage
- Aviation fueling and maintenance (also, any refueling situation for rail, auto, ship)
- Liquid natural gas storage
- Arms manufacture and storage
- Boiler rooms
- Hydrogen generating facilities

INTRINSICALLY SAFE APPROVAL DETAILS

All Intrinsically Safe Approved equipment must carry a label that specifies exactly where it can be used and the name of the testing laboratory. The exact approval language can be very important for a customer determining if a particular application is covered by the FM Intrinsically Safe approval.

The label on the side of the ST80-IS reads: "FM Approved. Intrinsically Safe, Class I, Division 1, Groups A, B, C, D. Class I, Zone 0, AEX ia IIC, T4 at 50C when used with 9v alkaline battery."

This language means that the ST80-IS can be used where flammable material is present continuously and in the presence of acetylene, hydrogen, ethylene or propane gases at a maximum temperature of 135°C (though Raytek specifies a maximum ambient temperature of 50° for reliable thermometer operation). The rating does not apply to coal dust, grain dust, metal dust, or fibers.

Reliability Direct, Inc.

www.reliabilitydirectstore.com, www.extech-direct.com