

TRM-WaterWire™-HT

Water detection cable for use in High Temperature steam conduits



Product Description

TRM-WaterWire™-HT is designed to detect and locate water collecting in high temperature steam and condensate conduit systems. TRM-WaterWire™-HT is fabricated to withstand ambient temperature up to 450°F (232°C) permitting it to be installed adjacent to saturated steam piping operating at 400 psig or below. However it is important to note that TRM-WaterWire™-HT does not detect live steam leaks. A leak will be detected and located only as a puddle of liquid water.

TRM-WaterWire™-HT is primarily designed to monitor the interior of steam and condensate piping conduits. The cable is capable of detecting and locating water in other, lower temperature, environments but the primary design objective is the ability to survive long term exposure to temperatures associated with steam pipe. TRM-WaterWire™-HT can be used in ordinary or hazardous areas.

TRM-WaterWire™-HT is directly compatible with the TraceTek standard for 4-wire leak locating cables and can be monitored by TraceTek's TTSIM-1, TTSIM-1A, TTSIIM-2 and TTDM-128.

Key Features

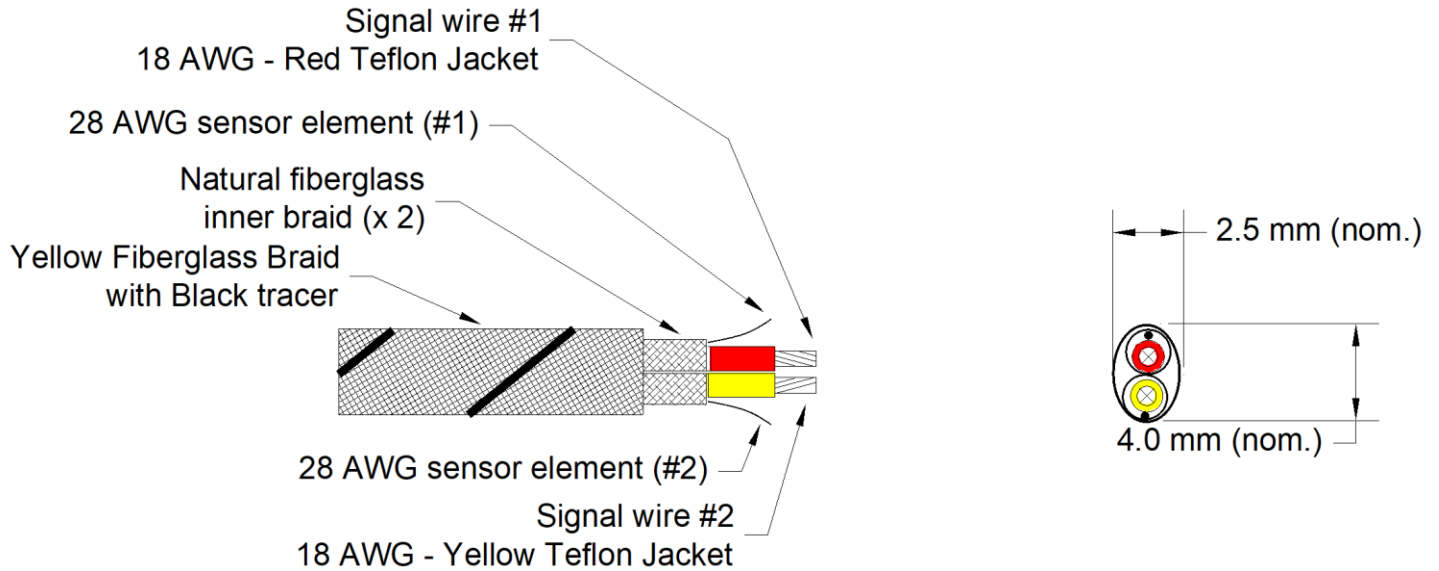
- Passive, conductivity based sensor cable
- Small diameter: 2.5 mm x 4 mm oval cross section
- Flexible: Bend radius less than 12 mm
- Sold on bulk reels with high temperature steel crimp splice kits, branch connectors, and feed-through fittings.
- A compatible high temperature 4 conductor jumper cable is available
- Compatible with TraceTek TT-SIM family

Product Specifications

- Operating temperature:
 - Continuous exposure to 450°F (232°C)
 - Note that water vapor is not directly detected – water is only detected in the liquid phase between 32°F (0°C) and 212°F (100°C)
- 4-wire circuit leak detection and locating circuit compatible with TraceTek monitoring devices
 - TTSIM-1; TTSIM-1A; TTSIM-2; TTC-1, etc.
- Physical parameters:
 - Diameter: 2.5 mm x 4 mm cross section
 - Bend radius 12 mm
 - Breaking strength: >90 lbs (recommended maximum pull force: 50 lbs)
 - Weight per 1000 feet: 18.2 lbs (8.3 kg)
- Construction:
 - Signal wires: 18 AWG stranded copper, Teflon insulated, rated to 250°C
 - Sensor wires: 28 AWG corrosion resistance chromium based alloy, rated to > 250°C
 - Two internal fiberglass braid layers and one external braid layer without saturant rated to > 250°C
- Electrical and safety parameters:
 - Resistance: Signal wires: 6.4 Ω/ 1000 ft
 - Resistance: Sensor wires: ~ 4.25 Ω/ft
 - Cable capacitance: 30 pf / ft
 - Cable Inductance: 0.63 uH / ft
 - Cable L/R ratio: 1.6 x 10⁻⁴
- Pre-assembled branch fittings (ready to crimp) allow branch lines and sub-branch lines to be monitored without need for return jumper runs
- No connectors: Sensor/Jumper splicing, end termination and branch connectors use high temperature steel crimps, fiberglass sleeves and high temperature glass tape.

TRM Sensors LLC

TRM-WaterWire™



Ordering Information:

System Component	Description
TRM-WaterWire™-HT (Sensor Cable)	Water detection cable for high ambient temperature environments
TRM-WaterWire™-JC (Jumper Cable)	4 conductor jumper wire compatible with TRM-WaterWire™-HT
TRM-WaterWire™-USK (Universal Splice Kit)	Crimps, fiberglass sleeves and tape used for sensor-to-sensor; sensor-to-jumper; jumper-to-jumper splices, feed through connections and end termination
TRM-WaterWire™-FTF (Feed-Through Fitting)	Epoxy filled, stainless steel, bulk head fitting (feed through). 3/4" NPT male thread both ends.
TRM-WaterWire™-BC (Branch Connector)	Pre-assembled branch connector with three legs and all necessary crimps, sleeves etc. to connect a branch or sub-branch leg to the main cable run.
TRM-WaterWire™-CT	Ratcheted, high force crimp tool needed for steel crimps used in TRM-WaterWire™-HT splices

Approvals and Certifications:

TRM-WaterWire™-HT is approved for installation in ordinary areas without additional safety barriers and hazardous areas when used in conjunction with an approved zener safety barrier. TRM Sensors LLC recommends the use of MTL7767+ zener safety barriers. 2 safety barriers are required per circuit.

TRM-WaterWire™-HT is "simple apparatus" in accordance with US National Electrical Code NFPA 70 - 2014 edition, article 504 and IEC 60079-11:2011 (and EN 60079-11:2012) clause 8.7. Connection of simple apparatus to an approved zener barrier does not adversely impact the approval associated with the zener barrier. However capacitance, inductance (or L/R ratio) limits published by the zener barrier manufacturer must be observed. Take note of Electrical and Safety parameters in the Product Specification section.

Made in USA Patent Pending
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