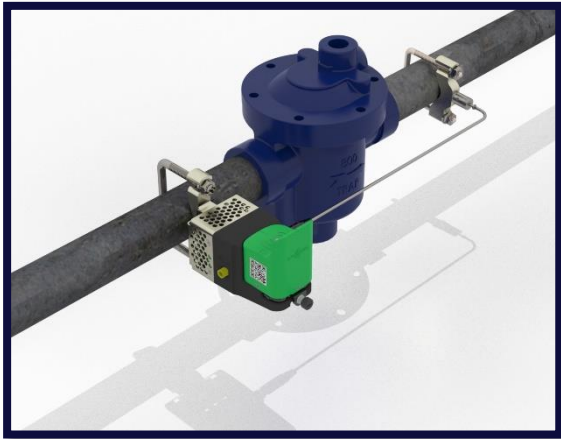


Steam Trap Monitoring (STM)

Continuous Insight with Batteryless Sensors
+ SAGE® Software Integration



Everactive batteryless sensors continuously stream data to the cloud, providing a **24/7 analytics service** for steam trap health.

Features

Monitored Parameters

- » Real-time steam trap operating state
 - Good
 - Suspected Blowthrough
 - Leaking
 - Suspected Cold Failure
 - Steam Off
- » Ambient temperature
- » Steam trap inlet temperature
- » Steam trap outlet temperature

Intended Use

- » All steam trap makes & models
- » All steam trap applications

SAGE® User Interface

- » Integrated into Armstrong International's best-in-class trap management software
- » Dashboard view of steam system
 - Triage list of traps that require attention
 - Losses and savings to date
- » Detailed view of each steam trap
- » Real-time interactive data display & charts
- » Email alerts and status updates
- » Access to all time-series temperature data



Specifications

Eversensor

| Data Measurement & Transmission | |
|---|---|
| Measurement interval | Default every 60 seconds |
| Transmission interval | |
| Temperature Measurements | |
| Integrated and Remote Probe measurement range | -40°F to 392°F (-40°C to 200°C) |
| Remote Probe accuracy | +/-5.4°F (3°C) |
| Integrated Probe accuracy | +/-6.3°F (3.5°C) |
| Ambient measurement range | -40°F to 185°F (-40°C to 85°C) |
| Ambient accuracy | +/- 0.9°F (0.5°C) |
| Wireless Communication (Eversensor ↔ Evergateway) | |
| Protocol | Evernet 2.0, proprietary sub-GHz link |
| Certification(s) | US (FCC) |
| Range (non-line-of-sight) | Up to 820 ft. (250m) |
| Range (line-of-sight) | Up to ½ mile (~1km) |
| Mechanical | |
| Ingress protection class | IP66* |
| Hazardous location | Class I, Division 2* |
| Operating temperature (Eversensor) | -40°F to 185°F (-40°C to 85°C) |
| Operating temperature (TEG† + Temp. Probe Module) | -40°F to 392°F (-40°C to 200°C) |
| Storage temperature | -40°F to 185°F (-40°C to 85°C) |
| Vibration resistance | 10-60Hz @ 0.44mm peak displacement 60-2,000Hz @ 3.0g |
| Shock & impact resistance | 100g @ 6mS |
| Dimensions (Eversensor) | 2.44" x 1.88" x 3.11" (62mm x 48mm x 79mm) |
| Dimensions (TEG Module) | 5.2" x 4.3" x 2.5" (132mm x 109mm x 70mm) |
| Dimensions (Cable and Temp. Probe Module) | 0.5" dia x 30" (13mm dia. x 762mm) |
| | 16" length also available |
| | 2.9" x 1.6" x 0.5" (74.6mm x 41.5mm x 12mm) |
| Weight (Eversensor) | 0.23 lbs. (106g) |
| Weight (TEG Module) | 0.78 lbs. (352g) |
| Weight (Cable and Temp. Probe Module) | 0.2 lbs. (94g) |
| Mounting | 5/16-18 and ¼-20 U-bolts |
| Material | PC-PET / Aluminum / Stainless Steel |



Eversensor (above) connects into TEG harvesting module (below) for power and remote temperature measurements.



*Pending final certification

†TEG = Thermoelectric generator, the energy harvesting source

Evergateway

| Power Supply Options | |
|----------------------------|--|
| AC main power | AC Input 85-264V~, 0.35A/115V 0.25A/230V, 47-63 Hz |
| Power-over-Ethernet | Compliant with IEEE 802.3af |
| Wireless Communication | |
| Protocol to Eversensor | Evernet 2.0, proprietary sub-GHz link |
| Protocol to SAGE® | LTE, Wi-Fi, or Ethernet |
| Data transmission interval | Configurable, default every 60 seconds |
| Range (non-line-of-sight) | Up to 820 ft. (250m) |
| Range (line-of-sight) | Up to ½ mile (~1km) |
| Mechanical | |
| Ingress protection class | IP66 |
| Hazardous location | Class I, Division 2 with added enclosure |
| Operating temperature | -22°F to 158°F (-30°C to 70°C) |
| Storage temperature | -40°F to 185°F (-40°C to 85°C) |
| Vibration resistance | 10-60Hz @ 0.295mm peak displacement 60-500Hz @ 2.0g |
| Shock & impact resistance | 100g @ 6ms |
| Dimensions | 10.5" x 8.7" x 5.3" (267mm x 221mm x 133mm) |
| Weight | 5.8 lb. (2.64 kg) |
| Mounting | Mounting tabs |
| Material | Polycarbonate |

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STM System Schematic

