Steam Flow Monitoring

Datasheet

UFM - Bren Star

UFM - Bren Star Steam Flow Monitoring is an advanced solution designed to optimize industrial steam systems. It offers real-time steam mass flow tracking and steam quality analysis, helping operators monitor and maintain efficient system performance. The system also generates energy optimization reports, enabling better energy management and cost savings, while also providing carbon emission reports to support sustainability goals.

With its wireless, battery-free design, UFM - Bren Star Steam Flow Monitoring integrates seamlessly into your existing infrastructure with minimal installation effort. The data-driven software offers real-time insights, empowering operators to make informed decisions and proactively manage their steam systems for enhanced performance and sustainability.





Features

Real-time Steam Mass-Flow monitoring
Monitors steam mass flow in real time to support process monitoring and control.

Steam Dryness measurement
Measures steam dryness ratio to help assess steam quality and process performance.

Steam Hammer and Pressure Fluctuation detection
Detects steam hammer events and pressure fluctuations to help identify potential issues in the steam system.

Energy optimization and Carbon Emission reporting
Provides energy-related insights and carbon emission reports through the BrenCloud platform.

Wireless data transmission and cloud-based analysis
Supports LoRa, LoRaWAN and NB-IoT communication, with data analysis and reporting through BrenCloud.

Technical specifications

Parameter	Specification
Model	UFM - Bren Star – Steam Flow Monitoring
Ambient temperature	−20°C to +80°C
Measurement temperature	−70°C to +500°C
Measurement vibration	±2 / ±4 / ±8 / ±16 g (3 axes: X, Y, Z) *
Power supply	Self-powered with nanogenerator technology (−1.86 W). Max. temperature: continuous 200°C; intermittent 230°C.
Protection class	IP66
Housing	ABS fireproof and antistatic engineering plastic VO*
Product certifications	CE, ATEX IIC*
Hardware installation	Adjustable clamps; suitable for nominal pipe diameters (as stated by supplier).
Wireless protocols	LoRa / LoRaWAN / NB-IoT
Wireless bands	EU433, EU868, US915, AS923
RF output	+20 dBm (100 mW) constant RF output vs. V supply
LoRa antenna	5 dBi
LoRa communication range	Indoor: 0.1 km; outdoor: 1 km
Energy storage	3.7 V Li-ion/polymer battery (back-up)
Product warranty	2 years
Steam-flow accuracy	±3–5% of reading (depending on calibration and installation)
Steam-dryness ratio accuracy	±2% (relative)
Steam-hammer detection	Qualitative (event-based, not a % value)
Response time	10 seconds (sampling interval)
Repeatability	±1% of reading

** Valid for Bren STM v2.*

UFM Bren Star module:



Dimensions:

113 × 97 × 71 mm

