RTS125+

Real Time Fiber Optic Sensing

Features

- Ruggedized
- 8 simultaneously monitored fiber optic sensing channels
- 2048 equally spaced sensors per fiber
- Software selectable spatial resolution down to 6.3mm.
- Real time strain and temperature measurements through FBGs
- Up to 100 Hz refresh rate
- Deflection sensing capability
- 3D shape sensing capability
- Immune to EMI/RFI and radiation for reliable operation in demanding environments.
- Networking capability via Ethernet

Benefits

- *Lifecycle Monitoring:* Monitor a product during design, development, production and operation with the same platform.
- *More Data*: Fully distributed sensing provides enough data for confident testing and model validation.
- *Multi-Sensing*: Simultaneously measure strain, temperature, deflection, 3D shape, liquid level and magnetic fields.
- *Adjustability:* The lead length is fully adjustable so users can place the sensor exactly where it needs to be.
- *Reduces Risk*: Having access to better data empowers engineers to detect design flaws earlier in product development, preventing costly failures after a product is launched.
- *Improves efficiency*: Replacing multiple technologies in a single platform, the RTS125 + allows organizations to consolidate their testing and monitoring equipment.

Application examples

- *Aerospace:* Monitor changes in wing load distribution, shape, liquid level and more in real time.
- *Automotive*: Studying truck or automobile frames to improve safety and performance.
- *Structures*: Monitoring the overall health of structures that undergo constant stress, such as bridges, dams and buildings
- *Medical*: Determining the shape of medical instruments used in non-invasive and minimally invasive surgical procedures.

www.sensuron.com/rts125

	RTS125+[1]
Interrogator accuracy	1.25 με / 0.15 °C
Strain repeatability	±2.0 με after time filtering, ±6.5 με continuous output
Temperature repeatability[2]	±0.25 °C after time filtering, ±0.78°C continuous output
Features	
Channels	8
Total sensors	16,384
Total sensing length	104 m
Sensing length per channel	13 m
Gage spacing	25.4 mm to 6.3 mm
Gage length	25.4 mm to 6.3 mm
Performance	
Data rate[3]	Up to 100 Hz
Spatial resolution	6.3 mm
Interrogator strain measurement range[4]	±17,500 με
Interrogator temperature measurement range	-270-1200 °C
Sensor temperature range[5]	-200-400 °C
Mechanical and Environmental	
Lead length[6]	User defined between 0-30 m. Contact Sensuron for longer lengths.
Dimensions	181mm x 162mm x 330mm (WxHxD)
Weight	13 lbs

[1]Upgrades are available for deflection and 3D shape sensing. Contact Sensuron for more details.

[2]This figure was calculated via a conversion from strain repeatability.

[3]RTS125+ data rates are independent of sensor length. 100 Hz yields approximately ±800 με.

[4]The strain range is software adjustable within the listed range.

[5]This figure is for the standard fiber and coating supplied by Sensuron. Contact us for other fiber options for temperatures up to 900 °C.

[6]Lead lengths greater than 30m are possible. Contact Sensuron for more information.

Please contact Sensuron at 512-827-2040 or info@sensuron.com to discuss your specific application needs.