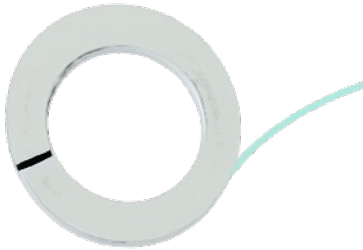




LumiSens Smart washer

Measure force, pressure, temperature from inside the bolted joint



Know exact bolt tension and prevent failures.

Bolted connections on engines, turbines, and structures are monitored with manual spot checks, or not at all. Pressure sensors are expensive and maintenance-heavy and strain gauges drift. So, either flying blind on bolt integrity or paying a fortune for data. Meanwhile, one undetected bolt failure can cascade into hundreds of thousands in damage.



Five measurements, one washer

Force, pressure, temperature, speed, and vibration, all from a single optical washer placed under the bolt head.



Retrofit, zero modifications

Installs like a standard washer during any scheduled stop. No structural changes, no specialist crew. M12 to M54.



No drift, any environment

Optical sensing is inherently safe, temperature-compensated and immune for EMI.

24 kHz

Sample rate for vibration analysis

1%

Exact tension force accuracy full scale

IP68

ATEX zone 0 certified by nature

One platform, multiple products

LumiSens BoltTense

Continuous bolt preload monitoring

Detect preload loss the moment it starts. Continuous tension, temperature, and vibration data replaces manual torque inspections. Know exactly which bolt, when, and how critical.

LumiSens Combust

Non-intrusive cylinder pressure monitoring

Real cylinder head pressure, per cycle, at 24 kHz. Without opening the combustion chamber. Detect misfires, knock, and injection timing to optimize and before they become issues

How it works

1

Install

Place the sensor washer under the bolt.

2

Stream

Continuous data via Modbus to SCADA, control systems, or cloud dashboard.

3

Act

Real-time alerts, trends, and tension monitoring, maintenance on data, not intervals.