



TORSO Detect

Easy detection of harmful torsional vibrations in shaft lines

Among the potential harmful conditions for turbo groups, torsional vibration is one that is generally overlooked although it can lead to dramatic failures. The issue requires special attention in today's new normal of constantly changing grid circumstances and interactions with wind farms and power electronics.

Reliable torsional vibration detection available to everyone — With TORSO Detect, ENGIE Laborelec provides a low-cost solution that enables you to monitor your turbomachinery system for the presence of harmful torsional vibrations.

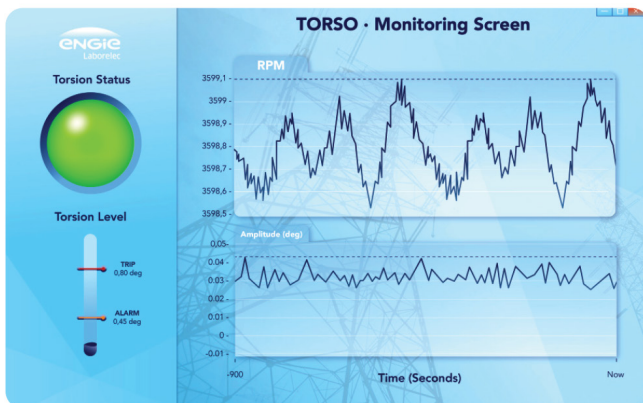
Built-in experience — This game-changing monitoring system is the fruit of ENGIE Laborelec's 30+ years of experience with torsional vibration issues in shaft lines all over the world.

Plug and play — Deploying the same technology as the high-end TORSO Protect system, TORSO Detect simply plugs into your existing system and monitors the torsional vibrations using the available array of sensors. It is an affordable early-warning system that allows you to timely take measures if needed.

Integrate with your DCS — TORSO Detect can be installed on most encountered types of machines and be integrated easily with your DCS or monitoring system.



Excessive amplitudes of torsional vibrations can lead to shaft cracking without warning.



TORSO Detect eliminates your worries for excessive torsional vibrations in today's situation of constantly changing grid circumstances.

GENERAL SPECIFICATION

Input channels	Up to 2 galvanically isolated channels (analogue or digital phase reference)
Speed range	0.05 Hz - 100 kHz pulse rate (depending on sensor type)
Analogue outputs	4x 4-20 mA of 4x $\pm 10V$
Pulse timing resolution	80 MHz
Post-processing capabilities	Long term trend based on analogue outputs
Amplitude tracking band-pass filters	Yes, configurable according to torsional modes

MECHANICAL SPECIFICATION

Dimensions	219.5 mm x 88.1 mm x 121.2 mm
Weight	1800 g

ELECTRICAL SPECIFICATION

Power requirement	90-245V AC 5A 50/60 Hz
	90-130V DC 5A
	24V DC - 5A

ENVIRONMENTAL SPECIFICATIONS

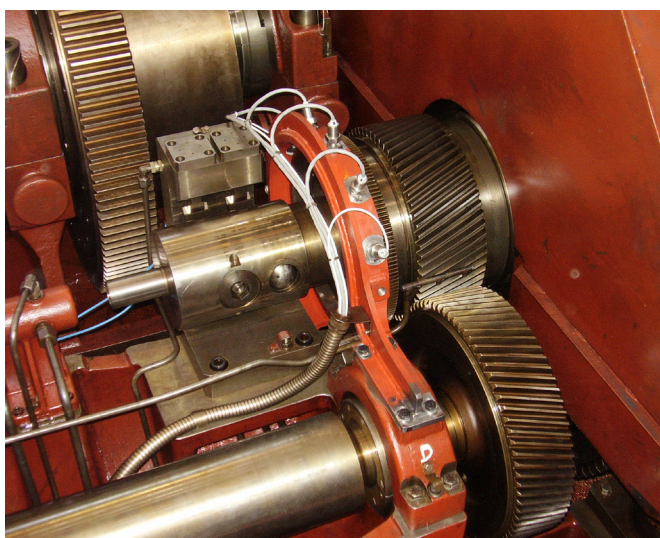
Operating temperature	-20°C - 55°C
Storage temperature	-40°C - 85°C
Operating humidity	10% RH - 90% RH, non condensing
Storage humidity	10% RH - 90% RH, non condensing

SHOCK AND VIBRATION

Random (IEC 60068-2-64)	5 g rms, 10 Hz - 500 Hz
Sinusoidal (IEC 60068-2-6)	5 g rms, 10 Hz - 500 Hz
Operating shock (IEC 60068-2-27)	30 g, 11 ms half sine; 50 g, 3 ms half sine; 18 shocks at 6 orientations

OTHERS

Visualization	Via DCS or monitoring system
Warranty	1 year for hardware components.
Electro-magnetic compatibility (EMC)	EN 61326 (IEC 61326-1; Class A emissions; Industrial immunity)
EC Compliance	Yes



TORSO Detect uses existing sensors enabling remote plug & play installation.

Five reasons for you to choose ENGIE Laborelec

- Wide-ranging technical expertise in electricity generation, grids, and end-use.
- Customers enjoy enhanced profitability and sustainability of energy processes and assets.
- Unique combination of contract research and operational assistance.
- Independent advice based on certified laboratory and field analysis worldwide.
- More than 50 years of experience.

Like to know more?

Please feel free to contact us via e-mail.

ENGIE Laborelec

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