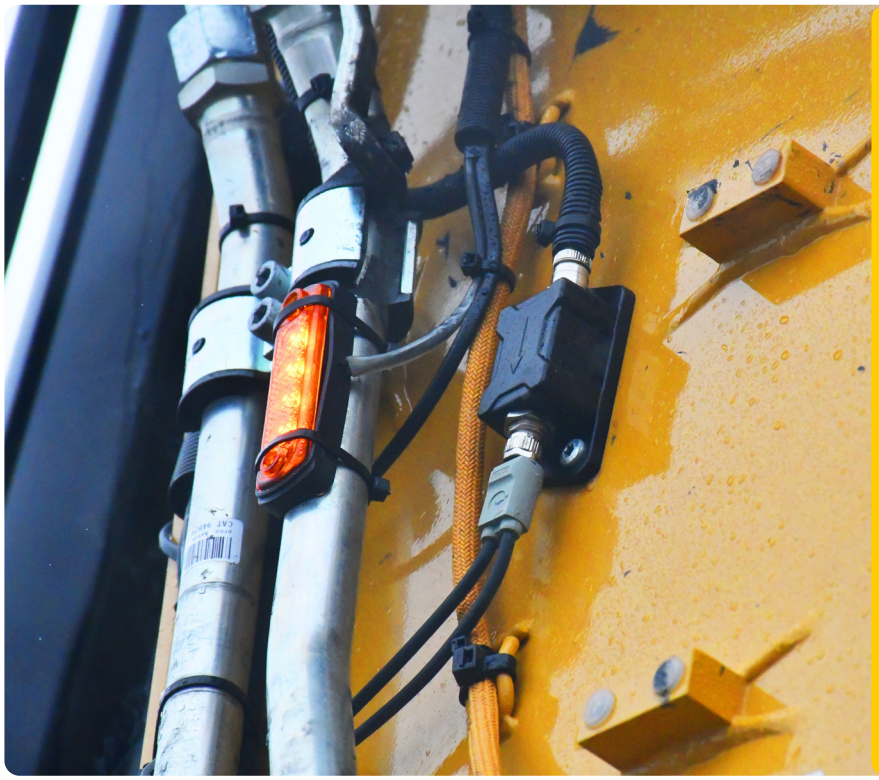
Novatron® G3 IMU Sensor

Next Generation Inertial Measuring Unit from the pioneer of machine control

Novatron® G3 sensor is a masterpiece of engineering that combines 30 years of experience in sensor technology and mobile machinery.

Small in size, yet full on high technology and performance. Novatron® G3 sensors offer accuracy and speed in any conditions.



Suitability

Suitable for any moving machine or part whose position needs to be measured

- Excavators
- Dredgers
- Mining machinery, e.g. drills
- Accurate 3D orientation for mobile machinery

For over 30 years, our field proven sensor technology is used worldwide in various mobile machine applications, in harsh enviroments.

Novatron® G3 IMU Sensor offers outstanding dynamic tracking that enables speed, performance and accuracy when measuring position of tool during movement, for example.

Full performance in any circumstances

Temperature compensation enables linear measuring results throughout the whole temperature range (-40 - +85). Thanks to proprietary temperature calibration methods the sensor outputs accurate results regardless of the ambient conditions.

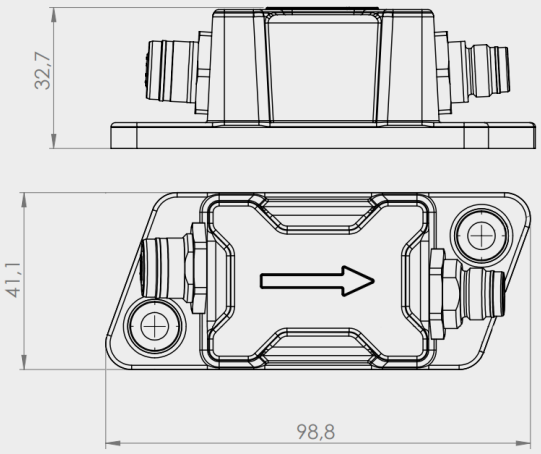
Factory calibration with robotic accuracy

Our **Calibration Robot**, developed in-house, guarentees uniform sensor orientation ensuring consistent readings across the board. This makes replacements effortless, and eliminates the need for recalibration in the field.

Specifications

Accelerometer

Full Scale Range	2G (16G)
0G Deviation Over Life	±1mg
Noise Density	15 µg/√Hz
Bandwidth	260 Hz
Data Rate	833 Hz



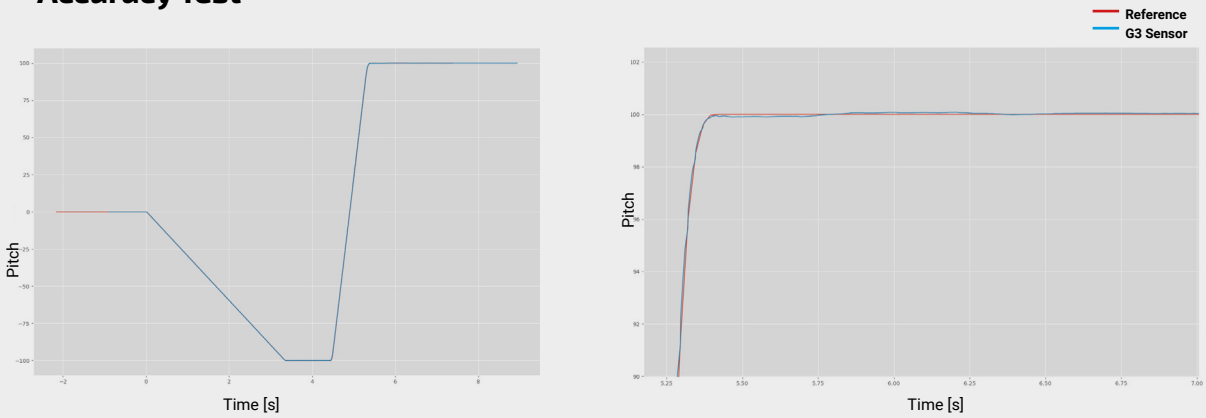
Gyro / IMU

Range	±1000°/s
Sensitivity	32,8 LSB/°/s
Bandwidth	116 Hz
Data Rate	1000Hz

General

Static Accuracy	1mm/m/-40deg (pitch 0.045 deg, roll 0.013deg)
Output Rate	200 Hz
Temperature Range	-40...+85deg
Voltage	9-36VDC
Current	<350mA (125mA @24V)
IP Classification	IPX9, IPX8 Mated
Measurement Latency	<5ms (for acquisition)
Coordinate System	Default left-handed, Selectable left/right-handed
Interface	2xCAN bus connectors, 125kbit - 1Mbit/s CAN-bus, CANopen, J1939
Outputs	E.g. Angle, Orientation, Angular Velocity, Acceleration
Weight	165g
Size	33 x 41 x 99 mm
Hardware	Cast aluminium housing, Potted electronics

Accuracy Test



Novatron® G3 sensor maintains high accuracy in rapid movements and sudden stops without any overshoot. Sensor's latency stays under 10ms even in varying dynamic rest-to-rest trajectories.

Test Made By Tampere University