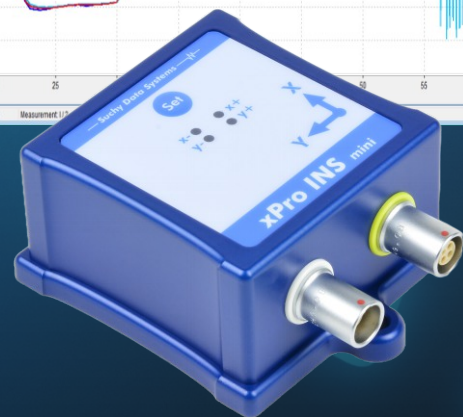
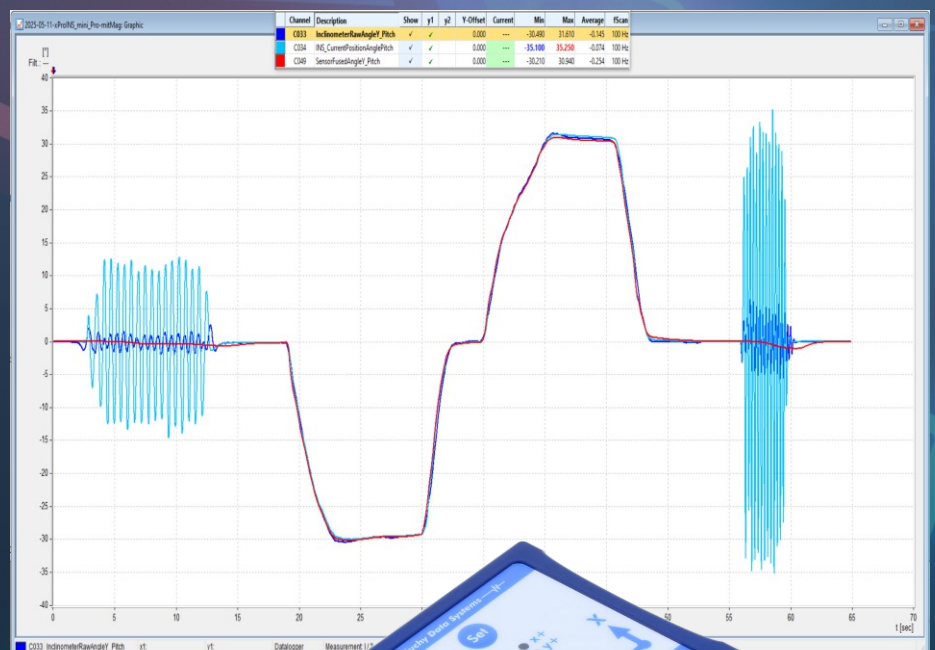




xproINS_IP68

innovative and fresh new Sensor Concept



Multi-Sensor Plattform with a sophisticated Sensor Fusion

clever Testing with **xpro**®

xProINS_IP68 innovative Inertial Sensor

Multi-Sensor Plattform with 6D IMU, Tilt-Sensor and Sensor-Fusion

Using multiple specialized Sensors

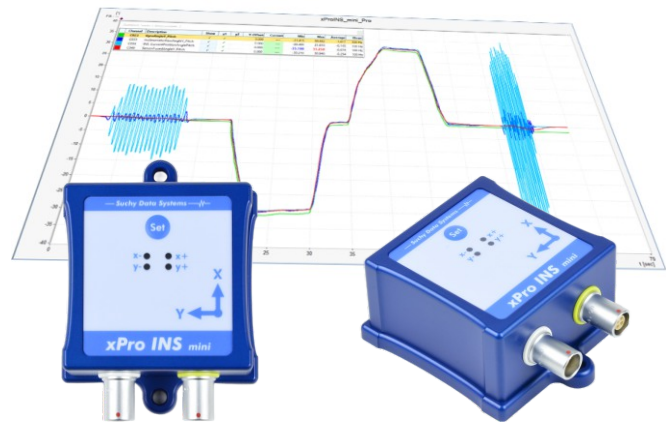
Instead of a single sensor element, in xproINS_IP68 we use four different sensors. Each individual type is optimized for the respective area of application.

- 6D main sensor with low noise and low drift
- 6D-IMU with extended measuring range 16g / 2000°/s
- High-precision 2-axis tilt sensor for static angles
- Magnetometer for future firmware expansion

With this concept, xproINS_IP68 covers several different application areas with optimum signal quality in each case.

This makes xproINS_IP68 a valuable and flexible tool for all types of dynamic measurements.

We also offer you application-specific modifications of the various filter parameters.



Included Firmware Features

xproINS_IP68 communicates via CAN bus with an external data acquisition system. CAN-FD is already prepared.

The CAN bus is used to transmit both the basic variables of the individual sensors as well as the calculated derived values.

Among others, xproINS_IP68 provides the following software features:

- Kalman filter for signal smoothing in real time
- Module for calculating dynamic angles via sensor fusion
- Fast compensation of mounting angle via push-button
- 4 status LEDs to display the zero position

Firmware update / adaptation of system

Robust Design and IP68 protection

The housing of xproINS_IP68 is made of aluminum and is milled from a solid block.

The sensor unit can be fixed to a support in a stable and vibration-free manner using two M4 holes.

The signal/power connector is also protected and waterproof.

A laser-cut seal made of temperature-resistant material ensures reliable sealing against moisture and dirt.

There is a button on the top of the sensor to compensate the installation position. The zero position is signaled via four LEDs.

Technical Data

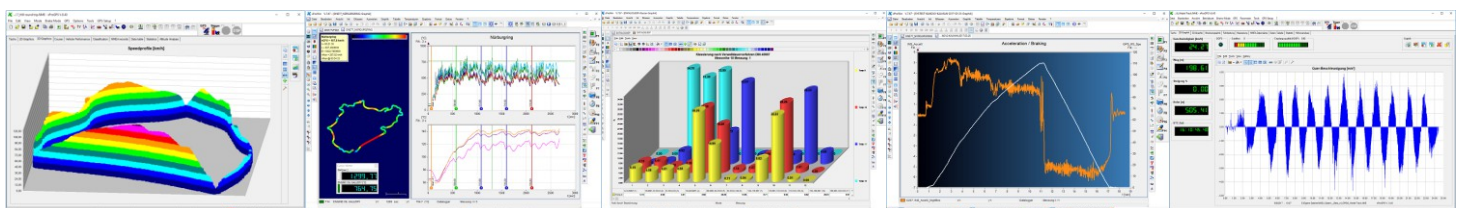
Measuring range sensors

- Accelerometer #1 6g m/s² (Main-Sensor) @ 100 Hz
- Accelerometer #2 2g / 4g / 8g / 16g (Default 2g)
- Gyroscope #1 300 deg/s Allan Variance 0.5 deg /h
- Gyroscope #2 125 / 250 / 500 / 1000 / 2000 deg/s

Communication

- CAN 2.0B with 500 kBit/s / 1 MBit/s, CAN-FD up to 5MB/s
- CAN-Bus-Interface with galvanic Isolation
- COM-Port Rx/D / Tx/D for Firmware-Update

Size: 52 * 52.6 * 30 mm Weight: appx. 200 g



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