High Field NV Magnetometer

The **High Field NV Magnetometer** is an ultra-stable magnetometer that can be used to control **strong magnetic fields**. It allows the monitoring of magnetic field fluctuations in real time.

Due to its **low drift**, this magnetometer can be used in atomic physics experiments, MRI systems and particles accelerators…

The small dimensions of the sensor enable an **easy integration**, it is also **customizable** according to the needs.

The **High Field NV Magnetometer** consists of a **fiber-optic millimeter** measuring head, containing a **diamond with nitrogen vacancy (NV) centers**, and a **control unit**. The magnetic field measurement is performed by the **optical detection** of the electron **spin resonance** of the NV centers diamonds.

The communication with the control unit is done **directly with a computer**. The **High Field NV Magnetometer T** provides an **error signal**, relative to a magnetic field set point, which can be used to **stabilize the field**.

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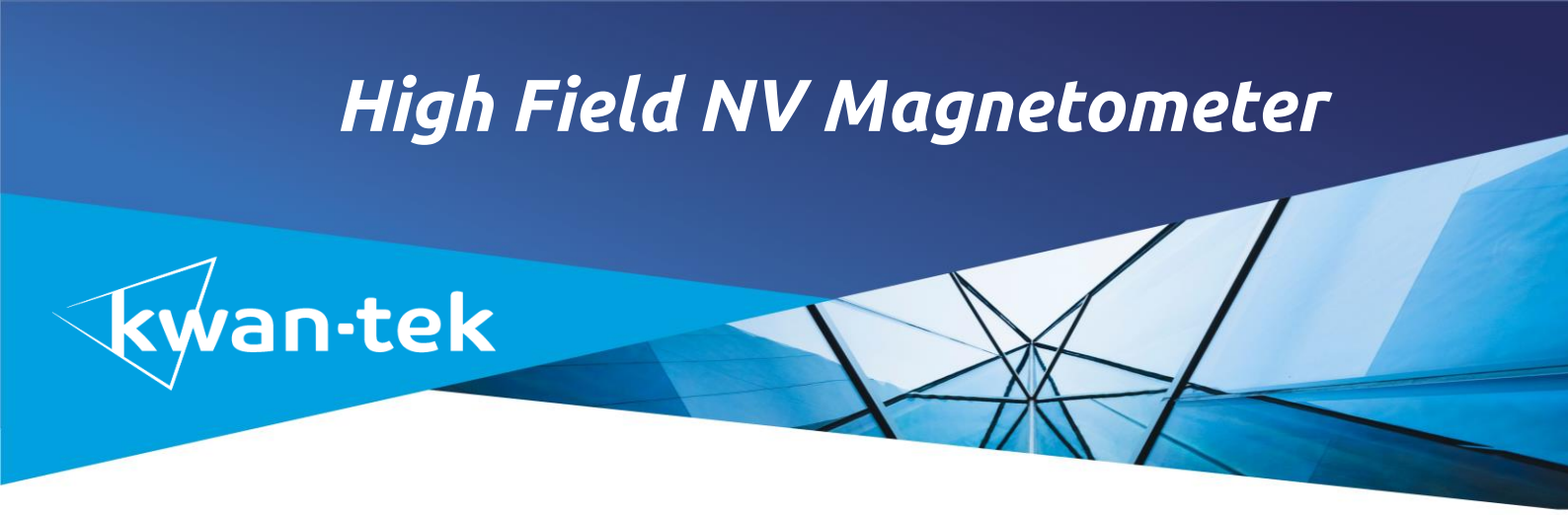

Stable
Due to the rejection of thermal fluctuations

Easily integrated
Due to the small size of the remote sensor

Wide magnetic field range
from 0.2 mT to 100 mT

Well balanced
Excellent compromise between high sensitivity and sensor size

Features

Magnetic field dynamics	From 0.2mT to 100 mT (standard*)
Drift	< ppm/day
Sensitivity	10 nT/√Hz
Bandwidth	250Hz Mag mode – 500Hz Servo mode
Sensors dimensions	Millimetric *
Distance between sensor and control unit	5 m*
Best performance	20 °C +/- 5 °C
Operating temperature	From -20 °C to 55 °C

*customizable on request

For more information, please contact our team at contact@kwan-tek.com