K-AHRS

Attitude & Heading Reference System

K-AHRS Sensor

High performance Heading, Bank and Elevation

K-AHRS is an AHRS (Attitude & Heading Reference System) that precisely measures roll, pitch, yaw angles as well as the heading angle. Unlike Digital Magnetic Compass (DMC) systems, K-AHRS is able to calculate heading angles under heavy magnetic interference and disturbance. Moreover, unlike DMC systems, it can correctly calculate tilt (roll / pitch or bank / elevation) angles of dynamic systems under motion. K-AHRS includes a 3D accelerometer, a 3D gyroscope and a 3D magnetometer as its primary sensors and a powerful microprocessor to employ its advanced sensor fusion / AHRS algorithms.

- **Fully compensated magnetometer, less affected by magnetic field disturbances or ferromagnetic materials.**
- **Suitable for dynamic systems under acceleration thanks to its gyro-calculated tilt (bank / elevation) angles.**
- **Numerous modes, settings and options for utilization with great flexibility.**
- **Can be provided as PCB without casing, ready to be assembled to your board.**

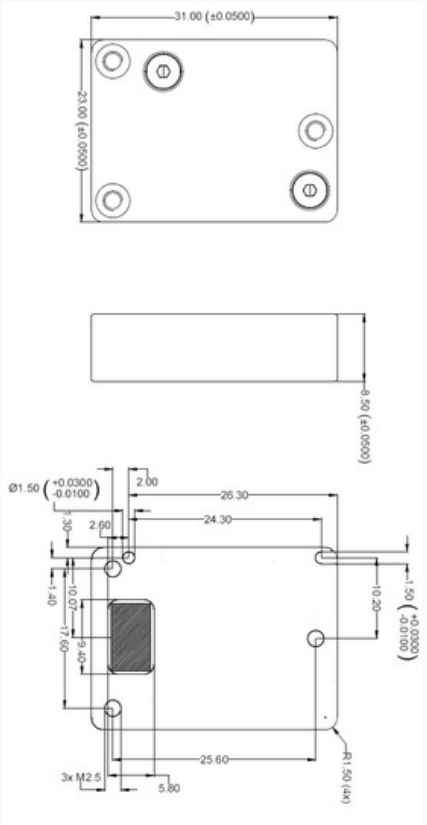
Static Roll/Pitch Accuracy	Static Heading Accurcy
0.1° RMS	0.25° RMS

K-PUS Micro SPECIFICATONS

SYSTEM PERFORMANCE PARAMETERS	
	K-PUS-MIKRO
Roll/Pitch Accuracy	0.1˚ RMS
Static Heading Accuracy*	0.25˚ RMS
Dynamic Heading Accuracy*	0.8˚ RMS
Pitch/Roll Operational Range	- 80˚ / + 80˚
Sampling Rate	Up to 50 Hz

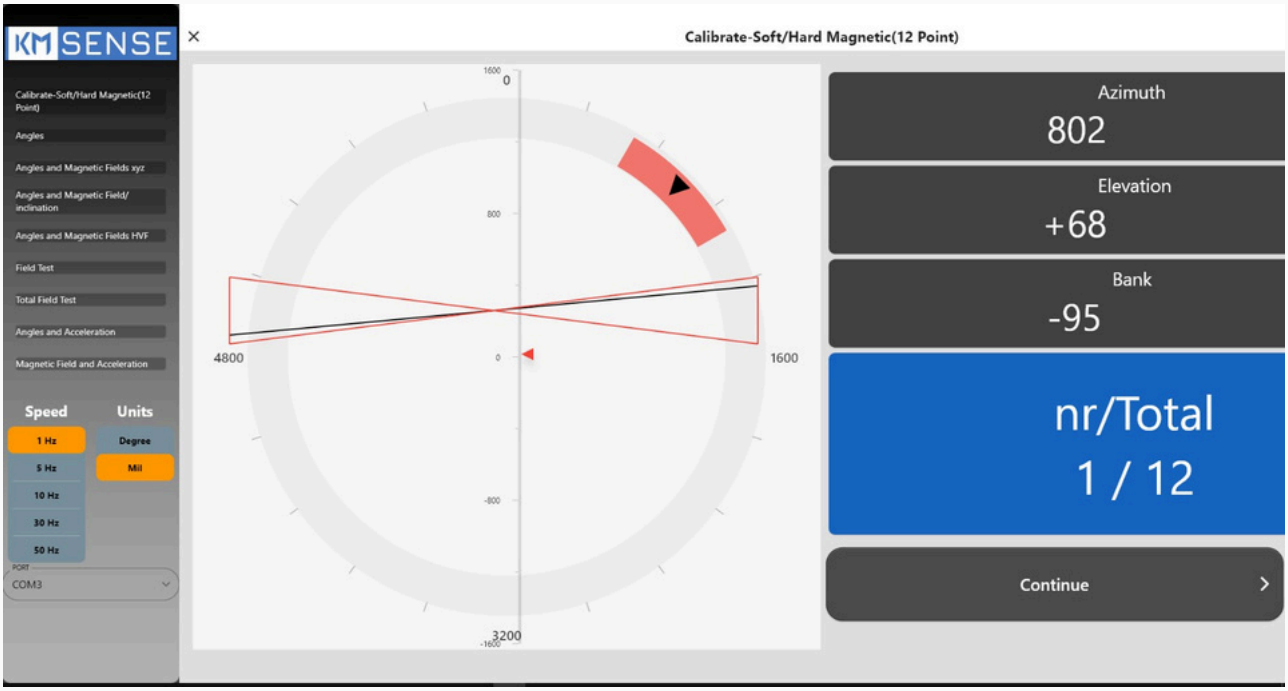
*Values may change due to magnetic distortion and metal objects around the system. Typical heading accuracy is 0.1˚

PHYSICAL AND ELECTRICAL PROPERTIES	
Communications Interface	UART (TTL)
Power Supply	5.0 V (± %5)
Dimensions	31x23x8.5 mm
Sampling Rate	1 to 50 Hz
Weight	< 11 gr
Power Consumption	160 mW
Operating Temprature	-32˚C to 65˚C



Mechanical drawing dimensions are in mm

K-PUS series sensors User Interface



Sensor systems can be connected to a windows based computer via USB interface, so that users perform easy calibration, easy configuration and real time visualization of the sensor.

KMSENSE is a brand of KARAKAMLAR AEROSPACE

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