SENSYS

Sensorik & Systemtechnologie

SENSYS® UAV / drone survey kit

MagDrone R3

Applications

- Surveying
- Exploration
- Detection
- Surveillance

Features

- System with two sensors attachable to any drone
- Data logging on internal SD card
- Power concept with function for data loss prevention
- 200 Hz sampling rate
- Measurement data time stamped
- Internal GPS module

The MagDrone R3 is a portable magnetometer survey kit to be attachable to any UAV / drone with a minimum payload of 1kg.

The kit consists of an ultra light weight sensor tube with two built-in 3-axis Fluxgates, a 1-button data logger with internal SD card, rechargeable batteries and an integrated GPS. It is made and optimized for small and mid size survey UAVs / drones that are shaped for less payload and longer flight times.

Depending on capabilities of the UAV / drone in terms of maneuverability and GPS precision, the MagDrone R3 survey kit can be used for general purpose surveys, science related magnetic cartographies, exploration studies on hidden minerals, as well as for safety relevant operations. Those can include area scanning for bombs and ammunition, as well as preventive surveillance of areas and camps against intrusion.

The frame ensures an easy attachment to any kind of UAV / drone by screwing, strapping or bonding both together.

The data logger is continuously recording while in air. Afterwards the data can be downloaded to any Windows® computer to further process the measurement values i.e. using the SENSYS software MAGNETO®, GIS tools or Matlab for own scripting.

Note: drone not part of the package.

Technical Data MagDrone R3

General Technical Data	
Power Supply	11.1 V; 1,950 mAh Li-Ion re-chargeable battery
Operating Temperature	-20°C to +50°C
Operating Weight / with Li-Ion battery	0.78 kg / 0.91 kg
Overall power consumption	500 mA
Sensor tube dimensions (W x D x H)	1,070 x 22 mm

FGM3D/75 Fluxgate	
Number and orientation of sensors	2 pieces, laid horizontal, parallel
Specified measurement range	±75,000 nT
Number of sensor axis	3
Distance between sensor centre points	1,000 mm

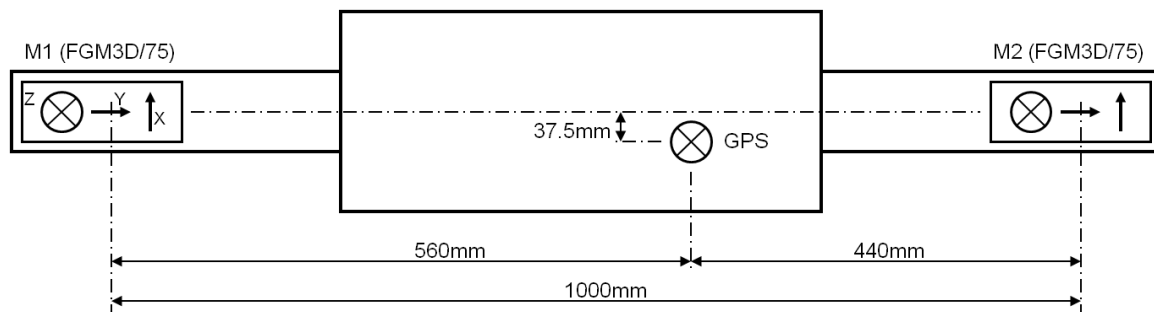| Datalogger	
Power	50 mA
Sensor input	Internal wired
User Interface	On/Off + Start/Stop button; status LED
Survey mode	Recording when start/stop pressed
Sampling rate	200 Hz
Internal memory	512 MB
Datalogger dimensions (W x D x H)	230 x 128 x 43/73 mm

Standard package	
MagDrone R3	Sensor tube, 2 pcs. built-in FGM3D/75 sensors, data logger (fixed to tube), 2 pcs. Batteries, wall charger
Rugged case (W x D x H)	1120 x 290 x 110 mm
Internal GPS	U Blox PAM-7Q
Peripherals	Data transfer cables (serial, serial to USB), set of internat. power plugs, accessory bags, USB memory stick
Documentation	Certificate, manual, quick guide
PC software	Download software

Optional accessories	
MAGNETO® Software	For data processing
Computer	Rugged field laptop to download and process measurement data

Scheme of MagDrone R3 kit