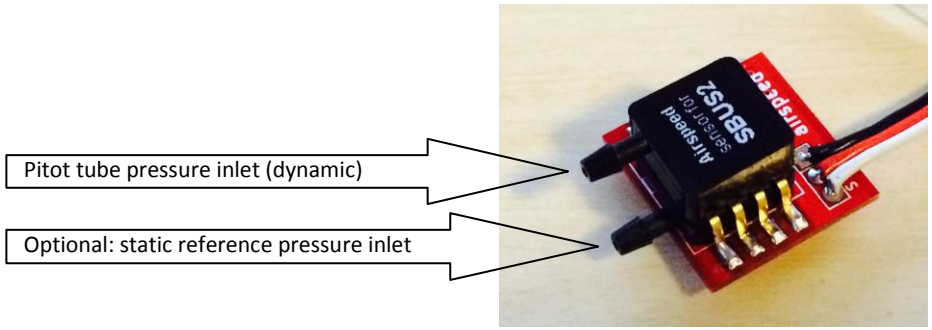
Airspeed Telemetry Sensor for SBUS2 - Version 2

Improved resolution & accuracy! + smaller size

Connections & Use

- Register the sensor to your transmitter - Refer to Transmitter's manual for details:
  1. Connect Servo cable to SBUS2 connector of your TX. (You also need to connect receiver battery with Y-lead to the transmitter's SBUS2 connector!)
  2. Go to *SENSOR* -menu and call *REGISTER* -method (*Change Slot / SET SLOT* -method also supported to initiate calibration & for manual slot selection as needed. *Reload & Relocate* -methods not functional / not needed)

     → Sensor appears to TX's slot list as **True Airspeed** sensor
- Connect servo cable to SBUS2 connection of Futaba's telemetry receiver. With dual receiver configuration use PRIMARY receiver!
- Define some switch for DG1 channel. Set DG1 channel to OFF by default - See calibration below.
- Connect Pitot tube's dynamic pressure to sensor's top inlet. Lower inlet can be left unconnected if static pressure conditions exists - otherwise connect static port of Pitot tube to the lower inlet of the sensor.
  - Airline pressure tubing (Festo etc) or standard silicon glow fuel tubing can be used: ID 2mm.
  - You can use simple brass tube as "pitot" to deliver dynamic airflow input only if airframe has solid static pressure conditions. Otherwise you need fex. Eagletree Prandtl Pitot-Static tube or equivalent.



Technical specifications

- Voltage range: 3.5V - 10V (2S LiPo OK)
- Current consumption: ~8mA @5.2V supply (typical)
- Indicated Airspeed (IAS): **~10...450km/h**
- **Resolution 1km/h over whole measurement range**
- Altitude & warning settings provided by Futaba TX menu
- Weight: ~8g. incl. 30cm SBUS2 cable
- Size: ~22x20x13mm
- Tested with Futaba SBUS2 receivers: R7008SB & R7003SB
- Tested with Futaba 18MZ (**v2.5.1**) & 14SG (**v6.0**)
- Compatible with Futaba & Robbe sensors
- Capable to provide IAS for every TX update round (15ms latency)

WARNING! Failure to comply may cause permanent damage:.

- Make sure selected slot is not conflicting with other sensors; Select free slots before connecting other sensors.
- Protect sensor from dust & other particles! Clean only with clean air.
- Do not apply excessive pressure to the sensor.
- Vibration will cause measurement errors: protect sensor from vibration. Do not drop the sensor on hard surface.
- Install Pitot tube in free air flow facing exactly onwards; turbulence & propeller/Turbine flow will cause measurement errors.
- Small fluctuation on low speed readings (<10km/h) is normal due to very small pressure changes.
- Do not use DG1 channel for any other purposes than as a calibration control

CALIBRATION

1. Connect sensor to receiver's SBUS2 port
2. Switch DG1 channel ON

   --> Once calibration is ready IAS Speed view changes to ~999km/h (actual exact value varies according to the altitude setting!)
3. Switch DG1 channel back OFF. When needed redo steps (2) & (3).

While performing calibration do not allow any airflow to the sensor! Both inlets should be in free static air.

Calibration is needed when temperature or sensor orientation changes. It's good practice to perform calibration always as a first thing of the flying day.

HINT: Indicated AirSpeed (IAS) is always valid for stall warnings. IF you want True Airspeed (TAS) you need to set right altitude: You could also play with altitude setting to compensate ambient temperature impacts (fex. for 25°C use 250m even you are on sea level instead of 0m -setting for 15°C)

Disclaimer

Manufacturer or seller of the sensor assumes no responsibility for possible damages or malfunctions caused directly or indirectly by the use of the sensor. Seller has no opportunity to ensure correct use of the sensor and sufficient testing before use. Also compatibility of other devices possibly used simultaneously in the same system cannot be verified by the seller or manufacturer.

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