# Adaptive AHRS / GSNS (GPS) / Air Data Computer Connector Pinout Diagram

The AHRS connector is a 25-pin female d-sub connector. Serial data to the AHRS is not required for normal operation, but is required to change the mounting orientation from the default, to view maintenance data, and store other user calibration data such as altimeter, fine magnetometer calibration and roll/pitch/yaw orientation adjustments. The AHRS harness provided with the an EFIS system is 4 feet long except for the magnetometer wires, which are 20 feet long.

| Pin | | Function | Wire Color |
|-----|---|----------|------------|
| 1 | ♉ | AHRS1 Serial Out 1 | YEL |
| 2 | | AHRS1 Serial Out 1 (Note 1) | |
| 3 | ▲ | AHRS1 Serial Out 2 | YEL/GRY |
| 4 | | AHRS1 Serial Out 2 (Note 1) | |
| 5 | ♉ | AHRS1 Serial In | BRN |
| 6 | | Reserved - Do Not Connect | |
| 7 | | Reserved - Do Not Connect | |
| 8 | ♉ | Magnetometer Serial In | WHT/BRN |
| 9 | | AHRS2 Power In A (9-30 Vdc, 0.1A) | RED/WHT |
| 10 | ▲ | Outside Air Temperature IN | Gray |
| 11 | | Reserved - Do Not Connect | |
| 12 | | Reserved - Do Not Connect | |
| 13 | ♉ | Ground (Interchangable with pin 14) | BLK |
| 14 | | Magnetometer Ground | BLK |
| 15 | ▲ | GPS Serial Out | ORANGE |
| 16 | ▲ | GPS Serial In (Optional) | BLUE |
| 17 | | AHRS2 Power In B (9-30 Vdc 0.1A) | |
| 18 | | AHRS2 - Serial Input | WHT/BLU |
| 19 | | AHRS2 - Serial Output | YEL/WHT |
| 20 | | AHRS2 - Serial Output | |
| 21 | | AHRS2 - Serial Output | |
| 22 | | Magnetometer Power OUT (4.3-5.0Vdc) | WHT/RED |
| 23 | ♉ | AHRS1/GPS Power In A 9-30Vdc 0.15 A | RED |
| 24 | ▲ | AHRS1/GPS Power In B 9-30Vdc 0.15 A | RED/BLU |
| 25 | ▲ | AHRS1/GPS Power In C 9-30Vdc 0.15 A | RED/GRN |

♉  Wire pre-installed in factory supplied cable.

▲  Wire included but in installed in connector housing.

Note 1: Use this serial port in systems with more than two display units.

Note 2: Case is electrically connected to ground. Do not allow 12V to touch AHRS case.

AHRS mating (wiring harness) connector as viewed from REAR (the side the wires are inserted into).
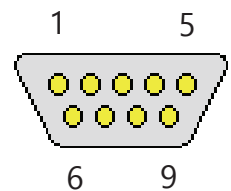


13        1

25        14
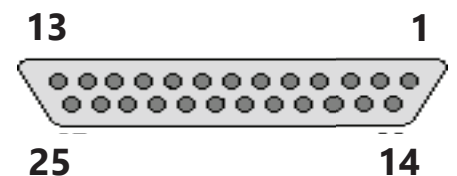
# Digital Magnetometer Connector Pinout Diagram

The AHRS connector may have these wires pre-installed, but the magnetometer cable is provided without the connector attached for easier routing through the airframe. Use the following diagram to attach the connector to the cable after running the wires. Be sure to inspect the pins before inserting them into the D-sub, as damage can occur from pulling them through holes in the airframe.

The digital magnetometer may be wired to an unlimited number of Adaptive AHRS and/or Mini-X/Mini-AP EFIS systems. This is accomplished by connecting the serial output from the magnetometer to as many devices a desired. If a battery-backup is included in a Mini that is using a magnetometer, we recommend wiring to it for the magnetometer power and ground, so that it remains powered in the event the airplane is flown on this backup. Similarly, if no Mini- EFIS systems are in the airplane, but one AHRS is provided with a battery backup, this AHRS should be used for the magnetometer power and ground.

The digital magnetometer has a 9-pin male d-sub connector. The mating cable should use hardware that is not ferrous metal to the greatest extent possible. Mounting should be per the HX/HXr installation manual.

| Pin | | Function | Wire Color | Connects to AHRS Pin |
|-----|---|----------|------------|----------------------|
| 1 | | Ground | Black | 14 |
| 2 | | NC | | |
| 3 | | NC | | |
| 4 | | NC | | |
| 5 | | Mag Power | WHT/RED | 22 |
| 6 | | NC | | |
| 7 | | NC | | |
| 8 | | Mag Serial In (NC) | | No Connect |
| 9 | | Mag Serial Out | WHT/BRN | 8 |

1     5

6     9

Mating (Wiring Harness) Connector as viewed from REAR (the side the wires are inserted into).