



# Air Data Computer 8EB3AAA1

## DESCRIPTION

AMETEK has designed a compact, solid state Air Data Computer for military applications. The Air Data Computer utilizes a digital signal processor for fast calculation and response of air data parameters. Silicon pressure transducers provide the static and Pitot pressure values and are easily replaced without calibration.

The AMETEK Air Data Computer incorporates a unique power supply that allows the unit to operate through 5 second power interrupts when at any input voltage in its operating range. This ensures that critical air data parameters reach the cockpit and control systems under a wide variety of conditions.

Thirteen (13) different air data parameters are provided on the MIL-STD-1553B interface and are calculated by the internal processor at a 40 ms rate.

An 11-bit reported pressure altitude interface encoded per FAA order 1010.51A is available for Identification Friend or Foe equipment.



## FEATURES

- ✓ The MIL-STD-1553 interface  
40 ms update rate
- ✓ 11-bit reported pressure  
altitude interface
- ✓ AOA and total temperature  
inputs
- ✓ Low weight: 2.29 lbs.
- ✓ Small size: 6.81" x 6.0" x 2.5"
- ✓ Low power: 1.5 watts
- ✓ DO-178B level A software

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## SPECIFICATIONS

### PERFORMANCE CHARACTERISTICS

Power: DO-160, Section 16 Cat Z or MIL-STD-704A-F  
5 second power Interruption immunity at any input voltage

Power Consumption: 1.5 watts

Operating Temperature: -55°C to +71°C; 1/2 hour at +90°C

Weight: 2.29 lbs.

Time Response: 40 ms

Inputs: Resistive Angle of Attack

Total Air Temperature (RTD)

Up to four discretes for selecting up to sixteen sets of Source Static Error Correction factors

Outputs: Reported pressure altitude discrete interface

I/O: MIL-STD-1553B remote terminal and RS-232 interface for software upload

Environmental Qualifications: Per MIL-STD-810C

EMI Qualifications: Per MIL-STD-461D – CE101, CD102, CS101, CS114, CS115, CS116, RE102, and RS103

Lightning: Per DO-160E, Category A4J44

### Air Data Parameters

- ADC Altitude Rate Output (Hpp or dHp/dt)
- True Airspeed Output (Vt)
- Calibrated Airspeed Output (Vc)
- Indicated Airspeed Output (IAS)
- Mach Number Output (Mt)
- Air Density Ratio Output ( $\rho/\rho_0$ )
- Total Temperature Output (Tt)
- Static Pressure Output (Ps)
- Dynamic Pressure Output (Pd)
- True Angle of Attack Output (AOAT)
- Barometer Corrected Altitude Output (Hpb)
- Pressure Altitude Output (Hp)
- Reported Pressure Altitude Output (Hpg)



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