

Digital Air Data Computer

C-130 DADC – P/N 9D-81050-3

Technical Overview

The IS&S Digital Air Data Computer (DADC), P/N 9D-81050-3, was developed as an avionics upgrade to the C-130 aircraft. The DADC receives air mass, air temperature, and aircraft status inputs in the form of pneumatic and electrical signals. These inputs are used to compute accurate air data information and scale it for primary flight data displays, navigation, and flight controls.

DADC interfaces are compatible with the C-130 and many other equivalent air data systems on alternate aircraft.



The 9D-81050-3 DADC replaces the SAT/TAS/TAT computer, as well as the altitude and airspeed sensors on the C-130 aircraft. Air data information is provided digitally to onboard systems, including flight management and navigation systems, through dual MIL-STD-1553B and dual ARINC 429 busses. Continuous BIT insures the integrity of all data provided.

- ❑ **Computes air data for interfacing equipment in analog, digital, and discrete formats.**
- ❑ **Dual MIL-STD-1553B data busses**
- ❑ **Dual ARINC 429 data busses**
- ❑ **Integral data checking and fault detecting operation.**
- ❑ **RTCA/DO-178b, Level A Software**

This DADC uses the latest transducer and electronic component technologies, increasing the level of accuracy, while greatly enhancing reliability.

A further upgrade in performance of the air data system results when purchased in conjunction with the IS&S Solid State Barometric Altimeter (P/N 9D-80101-1, IS&S Airspeed Indicator (9D-80201-1), and IS&S Altitude Alerter (9D-80301-1).



Signal Outputs

TAS 1 Signal:	DC Potentiometer
TAS 2 Signal:	AC Potentiometer
TAS/SAT Valid:	Discrete
SAT Signal:	DC Voltage
IAS Valid:	Discrete
Baro Alt. Rate:	DC Voltage
Alt. Rate Valid:	Discrete
Indicated Airspeed 1:	DC Voltage
Indicated Airspeed 2:	DC Voltage Ratio
Coarse/Fine Static Pressure:	DC Voltage Ratio
Indicated Airspeed Pot No. 1:	Potentiometer
Indicated Airspeed Pot No. 2:	Potentiometer
Total Air Temperature:	DC Voltage
DADC Valid:	Relay
1553 Bus A Interface:	Serial Data
ARINC 429 Bus A:	Serial Data
ARINC 429 Bus B:	Serial Data
Serial Bus B:	Serial Data
Preselect Err Coarse/Fine:	AC Phase Reversing
Preselect Knob-in-Motion:	Discrete
Altitude Select Interlock:	Relay
1553 Bus B Interface:	Serial Data

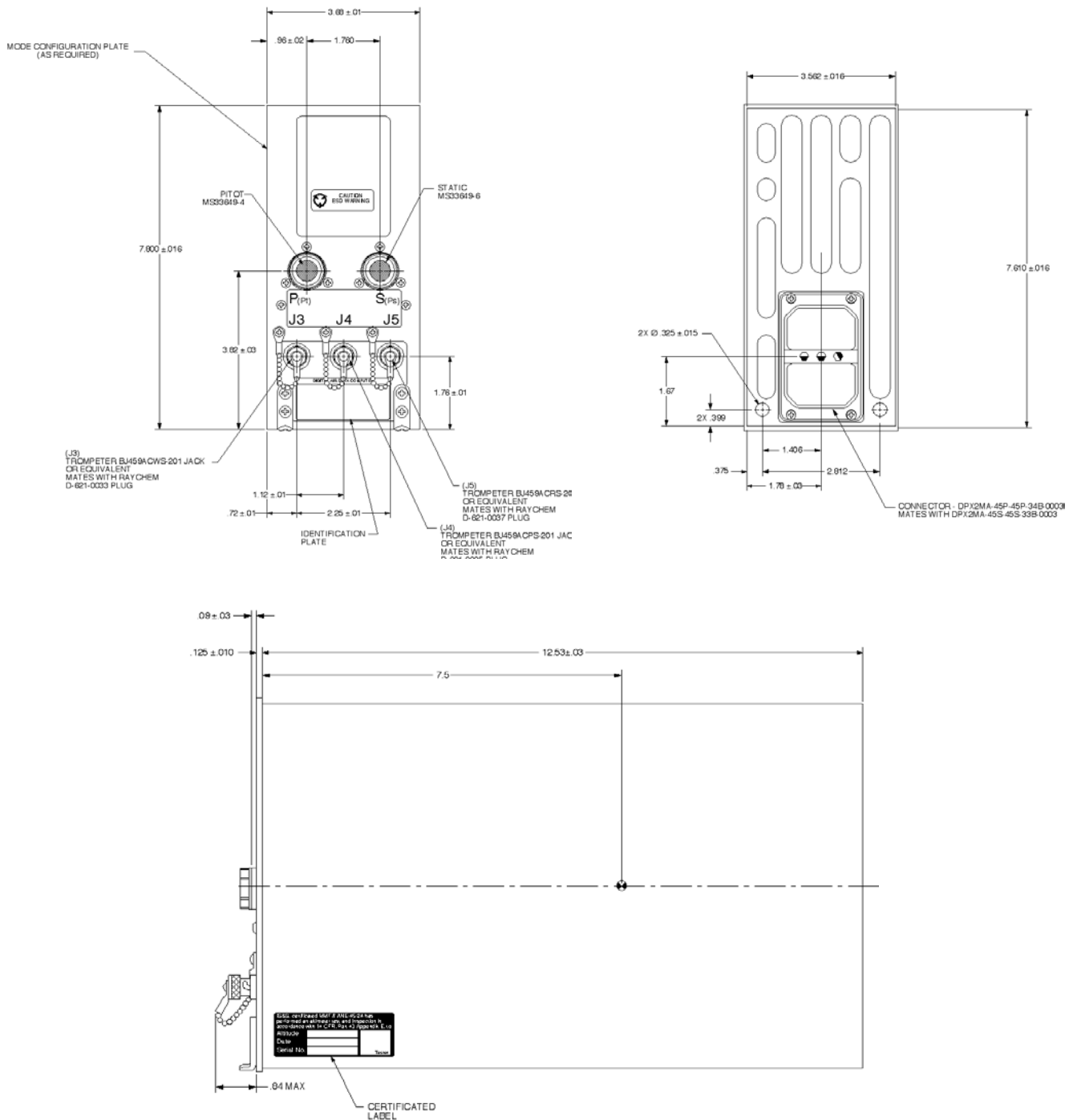
Signal Inputs

Aircraft Identification:	Discrete
Indicated Total Air Temperature:	Resistance
Primary Power:	115VAC, 400 Hz (200mA max)
Baro Pressure Setting:	MIL-A-83419C
Static Pressure:	Pneumatic
Pitot Pressure:	Pneumatic
Digital Serial Bus:	Serial Data
System Test Switch:	Discrete
1553 RT Address:	Discrete

Operating Specifications

Altitude Range:	-1000 to 50,000 ft
Airspeed:	25 to 400 kts
Mach Number:	0.05 to 0.99 Mach
Environment:	MIL-STD-810E
	MIL-STD-461/462
Reliability:	>30,000 hours MTBF, per MIL-HDBK-217 AIC
Weight:	12 lbs max.

Outline Dimensions



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