

DIGITAL AIR DATA COMPUTER

AC32 WITH **SUPERSONIC** CAPABILITY
(OPTIONAL RVSM AND/OR AOA)



GENERAL

THOMMEN is a leading manufacturer of Air Data Systems and aircraft instruments that are used worldwide on many aircraft types. These include helicopters, corporate turbine aircraft and commercial airliners.

A recent innovation introduced the AC32 Digital Air Data Computer to the Aviation market. The AC32 has integrated vibrating cylinder pressure sensors that give very high degree of accuracy and stability for pitot and static ports.

The AC32 easily complies with the 1000 ft. vertical separation-minimums required for aircraft to operate in RVSM airspace.

In fact, it providing up to 2x16 SSEC curves which makes it quite unique among all Air Data Computers in the market today.

The highly commended THOMMEN AC32 Digital Air Data Computer exceeds the FAA Technical Standard Order (TSO) requirements for accuracy.

The computed air-data parameters are transmitted via the configurable ARINC 429 interface data bus. This has two ARINC 429 transmit and receive-channels where you can adjust the baro-setting.

The AC32 meets the requirements for multiple platforms. This includes TAWS, ACAS/TCAS, EGPWS or FMS systems. It also supports the Air Data for enhanced safety infrastructure capabilities of Transponders. Additionally, an ICAO encoded altitude-output is also available as an option.

The AC32 uses the aircraft standard 28 VDC to guarantee a low consumption of less than 7 watts. The Thommen AC32 also has an extensive Built-In-Test (BIT) that guarantees safe operation.

The low weight of only 2.2 lb (1000 grams) is another plus point that optimizes it for use in different state-of-the-art avionic systems. You can easily configure the AC32 for different applications.

* restricted by ARINC 429-IF

** □/○

□ Output

○ ARINC429 accuracy met

ARINC 429 PARAMETERS

Label 203	Pressure Altitude (1013,25 mb)	-1,000	to	80,000	feet
Label 204/220	Baro Corrected Altitude #1/ #2	-1,000	to	80,000	feet
Label 205	MACH Number	0/0.200**	to	2.900	MACH
Label 206	Computed Airspeed (CAS)	0/40	to	1024*	knots
Label 207	Max. Allowable Airspeed (VMO)	150	to	1024*	knots
Label 210	True Airspeed (TAS)	0/100**	to	2048*	knots
Label 211	Total Air Temperature (TAT)	-61°	to	+512°*	celsius
Label 212	Vertical Speed (RoC)	-32,768	to	32,768*	ft/min.
Label 213	Static Air Temperature (SAT)	-100°	to	+100°	celsius
Label 221	Indicated Angle of Attack	-60°	to	+60°	degree
Label 234/236	Baro Correction #1/ #2	20.67	to	31.16	inHg
Label 235/237	Baro Correction #1/ #2	700	to	1066	mbar
Label 353	Indicated Airspeed (IAS)	0/40**	to	2000	knots
Label 241	Corrected Angle of Attack	-60°	to	+60°	degree

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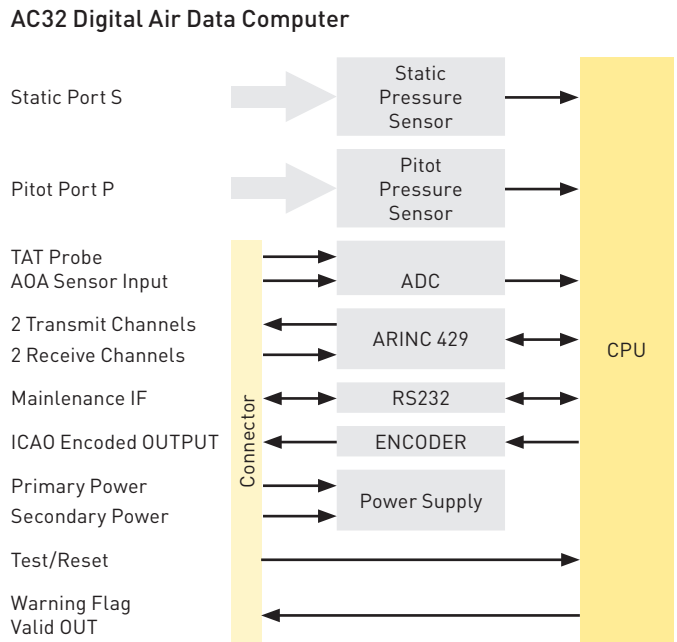
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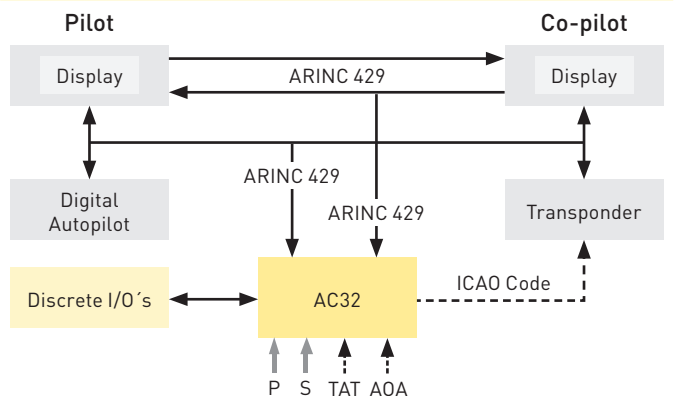
CHARACTERISTICS

FEATURES:	Vibrating Cylinder Pressure Sensors non RVSM (or RVSM compliant optional) Static Source Error Correction, 2 x 16 Continuous Built-In-Test BIT Failure Memory RS232 Maintenance Interface
SIGNAL INPUTS:	Primary Power 28 VDC (< 7 Watts) Emergency Power 28 VDC ARINC 429 Serial Data Bus, 2 Receive Channels TAT Probe Input 500 Ω @ 0°C (Optional 100 Ω @ 0°C) AOA Sensor Input (2 KΩ) (1 KΩ, 5 KΩ optional)
SIGNAL OUTPUTS:	ICAO Encoded Altitude per TSO C-88a Warning Flag Valid 28 VDC ARINC 429 Serial Data Bus, 2 Transmit Channels
OPERATING SPECIFICATIONS:	Altitude Scale Error -1,000 to 20,000 feet ±10 feet 20,000 to 29,000 feet ±20 feet 29,000 to 41,000 feet ±30 feet 41,000 to 53,000 feet ±50 feet 53,000 to 80,000 feet ±150 feet RTCA/DO-178B Level A RTCA/DO-160D - Operating Temperature -55 ... 70 °C - Storage Temperature -55 ... 85 °C Reliability: MTBF 21,000 hours (est.) Delivered with Certificate of Conformity

INTERNAL BLOCK DIAGRAM



DATA COMMUNICATION BLOCK DIAGRAM



MECHANICAL DRAWING

