

DIGITAL ENCODING ALTIMETER

AD32 DEA80

THOMMEN
AIRCRAFT EQUIPMENT



GENERAL

THOMMEN AD32 digital encoding altimeter (DEA) with extended altitude range suits to every aircraft category including those reaching altitudes above the usual air traffic.

Technically based on the rugged AD32 air data unit design, this DO-178B Level A certified altimeter system exceeds any TSO C10b accuracy requirements throughout the entire altitude range up to 80'400 ft / 24.500 m.

Available in two case designs and with different lighting options incl. optional MIL-STD3009 NVIS green A/B compliance, it easily replaces obsolete mechanical altimeters.

The integrated high-end VCT sensor makes AD32 DEA free from needs for scheduled maintenance or re-calibration.

Together with a fast reacting stepper-motor driven pointer, this sensor type enables virtually "real-time" indication of the altitude also during high-speed vertical maneuvers.

Optionally the system features an integrated altitude alerter (up to FL650) with configurable parameters, altitude preselect,

alerter light and discrete output to a warning tone generator.

The extended barometric setting range from 700...1066 mbar allows QFE operation on high-elevation airfields.

Compliance to TSO C88a is provided with the output of Gillham gray code (ICAO) to enable direct replacement of older encoders or encoding altimeters.

In addition, labels 203 (pressure altitude) and 204 (baro corrected altitude) can be output via two ARINC429 TX channels.

By pressing the optional scale button, the measurement units can be switched between meter and feet and the barometric setting between mbar/hPa and InHg.

Continuous Built-in-Test (BIT) software secures safe operation; the BIT-failure memory can be read out via the RS232 maintenance interface without removing the unit from the aircraft.

ARINC 429 PARAMETERS

Label 203	Pressure Altitude (1013.25 mbar)	- 1,000	to	+80,400	feet
Label 204/220	Baro Corrected Altitude #1 / #2	- 1,000	to	+80,400	feet
Label 212	Altitude Rate physically	0	to	50,000	feet/min.
Label 212	Altitude Rate submitted per ARINC 429	0	to	32,768	feet/min.
Label 235/237	Baro Correction #1 / #2	20.67	to	31.48	inHg
Label 234/236	Baro Correction #1 / #2	700	to	1,066	Mbar/hPa

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CHARACTERISTICS

FEATURES:	Vibration Cylinder Technology (VCT) static pressure sensor	SIGNAL OUTPUTS:	ARINC 429 data bus 2 transmit channels
	English/metric scale setting		OPERATING SPECIFICATIONS:
Baro Push-to-Reset function	Push-to-Test and continuous Built-In-Test	- 1,000 to 20,000 feet ± 10 feet	
BIT Failure memory	Display with LCD / stepper motor driven pointer	29,000 to 41,000 feet ± 30 feet	41,000 to 53,000 feet ± 50 feet
RS232 Maintenance Interface	28V or 5 V lighting power	65,000 to 80,000 feet ± 150 feet	FAA TSO-C10b/TSO-C88a (applies up to 53'000 ft)
White, white-red or white-green-NVIS green lighting			RTCA/DO-178B Level A
			RTCA/DO-160D
			- Operating Temperature -30° ... 70°C
			- Storage Temperature -55° ... 85°C
SIGNAL INPUTS:	Primary power 28 VDC		Reliability: MTBF 21,000 hours
	Emergency power 28 VDC		
	Lighting power 28 VDC (Optional 5 VDC)		
	ARINC 429 serial data bus 2 receive channels		
SIGNAL OUTPUTS:	Encoded Altitude ICAO Per TSO C-88a		
	Warning Flag Valid GND/28 VDC		
	Optional Baro Potentiometer Output		

MECHANICAL DRAWING

