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.

Compliant to TSO C88a, the analogue Gillham gray code (ICAO) is provided to enable direct replacement of older encoders or encoding altimeters.

In parallel, labels 203 (pressure altitude) and 204 (baro corrected altitude) are supplied 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.

### GENERAL

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### PARAMETERS

<table>
<thead>
<tr>
<th>Label</th>
<th>Parameter</th>
<th>Min.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label 203</td>
<td>Pressure Altitude</td>
<td>-1,000</td>
<td>+80,400</td>
<td>feet</td>
</tr>
<tr>
<td>Label 204/220</td>
<td>Baro Corrected Altitude</td>
<td>1,000</td>
<td>+80,400</td>
<td>feet</td>
</tr>
<tr>
<td>Label 212</td>
<td>Altitude Rate physically</td>
<td>0</td>
<td>50,000</td>
<td>feet/min.</td>
</tr>
<tr>
<td>Label 212</td>
<td>Altitude Rate submitted per ARINC 429</td>
<td>0</td>
<td>32,768</td>
<td>feet/min.</td>
</tr>
<tr>
<td>Label 235/237</td>
<td>Baro Correction</td>
<td>20.67</td>
<td>31.48</td>
<td>inHg</td>
</tr>
<tr>
<td>Label 234/236</td>
<td>Baro Correction</td>
<td>700</td>
<td>1,066</td>
<td>Mbar/hPa</td>
</tr>
</tbody>
</table>
CHARACTERISTICS

FEATURES:
- Vibration Cylinder Technology (VCT) static pressure sensor
- English/metric scale setting
- Baro Push-to-Reset function
- Push-to-Test and continuous Built-In-Test
- BIT Failure memory
- Display with LCD / stepper motor driven pointer
- RS232 Maintenance Interface
- 28V or 5V lighting power
- White, white-red or white-green-NVIS green lighting

SIGNAL INPUTS:
- Primary power 28 VDC
- Emergency power 28 VDC
- Lighting power 28 VDC (Optional 5 VDC)
- ARINC 429 serial data bus 2 receive channels

SIGNAL OUTPUTS:
- ARINC 429 data bus 2 transmit channels
- Encoded Altitude ICAO Per TS0 C-88a
- Warning Flag Valid GND/28 VDC
- Optional Baro Potentiometer Output

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
  - 65,000 to 80,000 feet ± 150 feet
- FAA TS0-C10b/TSO-C88a (applies up to 53'000 ft)
- RTCA/DO-178B Level A
- RTCA/DO-160D
  - Operating Temperature -30° ... 70°C
  - Storage Temperature -55° ... 85°C
- Reliability: MTBF 21,000 hours

MECHANICAL DRAWING

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EASA Part-21 G + O | EASA Part-145 | AS / EN 9100
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