



MADC-200 Miniature Air Data Computer

High performance ADC for airborne applications

- ✓ Long term stability
- ✓ Temperature range -40°C to 71°C
- ✓ Predicted MTBF above 20,000hrs
- ✓ PUBIT and CBIT

Astronautics' MADC-200 is a modern Air Data Computer for airborne platforms. The MADC-200 is RVSM (Reduced Vertical Separation Minima) compliant, providing high-reliability, high-accuracy air data measurement for the avionics. The MADC-200 uses the latest technology pressure transducers with outstanding performance.



The MADC-200 sensors are pre-calibrated at Astronautics, with no need for re-calibration in the field. The MADC-200 provides long term stability, maintaining stable and accurate reading over time, freeing the user from the frequent need to calibrate the sensors.

The MADC-200 inputs are:

- Static/Total pressure from Pitot tube
- Outside air temperature
- Aircraft discrete (BIT initiate, etc.)

Main features:

- Calculates Air Data parameters such as - True Air Speed, Mach number, Calibrated Air Speed, Baro altitude, Air density etc. Calculations are based on Astronautics' algorithms that are accurate and field proven.
- Interface to the aircraft via RS-422 serial channel.
- Build In Test, with BIT results transmitted over the RS-422 channel, plus FAIL discrete out signal,
- High reliability
- Pressure sensors are factory calibrated. No requirements to re-calibrate in the field.



MADC-200 Miniature Air Data Computer

Accuracy and Long-Term Stability



CHARACTERISTICS

Power	28 VDC
Static Pressure	0-32 inch Hg
Total Pressure	1-90 inch Hg
OAT	Typically -70°C to +120°C
Warmup time	3 seconds
Altitude Output (RS-422)	-1,500 to 60,000 ft; Accuracy – 20 feet or 0.2% Hp
True Air Speed (RS-422)	70 to 1700 knots; Accuracy – 5 Kt over flight envelope
Calibrated Air Speed (RS-422)	50 to 1700 knots; Accuracy – 2 Kt over flight envelope
Mach Number (RS-422)	0.1 to 3M; Accuracy – 0.005M, over flight envelope
Air Temperature (RS-422)	-100°C to +150°C ; Accuracy – 0.05°C
Altitude rate	6000 FPM; Accuracy – 40 FPM

OTHER

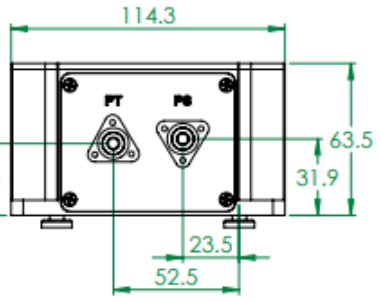
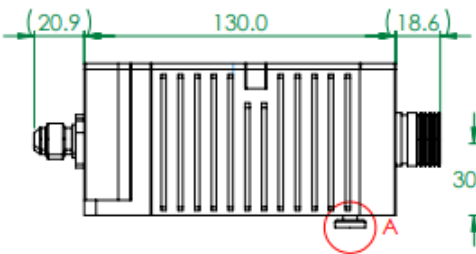
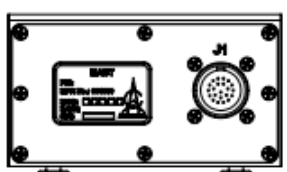
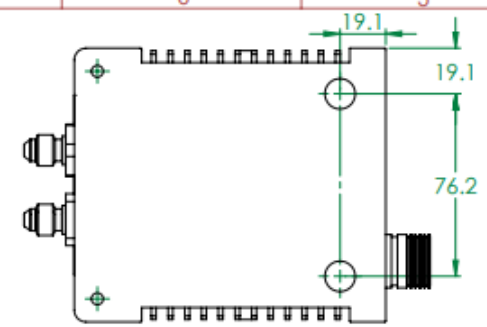
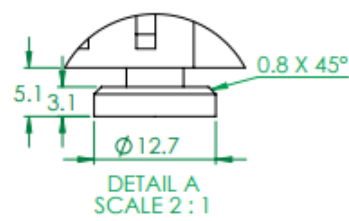
Environment	MIL-STD-810B, MIL-STD-704A (power), MIL-STD-461G, MIL-E-5400T
MTBF	25,000 Hours
Dimensions	63.5mm (H) x 114.2mm (W) x 130mm (D) , Without connectors
Weight	1 Kg



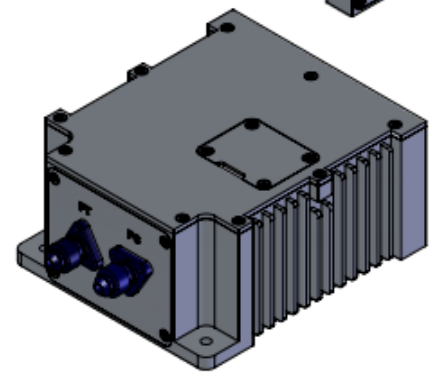
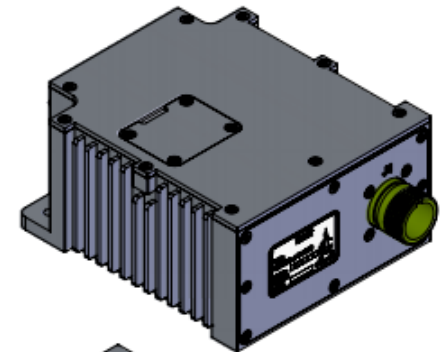
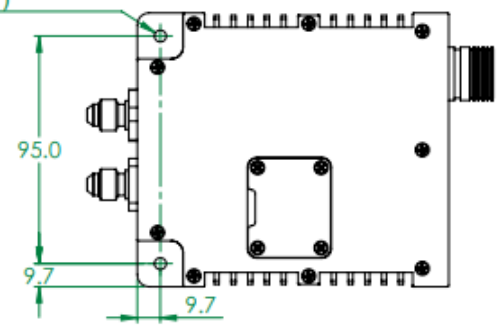
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REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
1	PRELIMINARY. NOT RELEASED	11-MAY-21	ADI H.



CAPTIVE #10-32 CAPTIVE LENGTH TBD (X 2)



PRELIMINARY

NOTES:

- SDRL No.: A0311
- UNIT CONFORM TO PUB 303146
- CONNECTORS DETAILS SEE TABLE A.
- WEIGHT: 1043.0[gr] MAX.
- ALL SURFACES ARE GRAY, COLOR NUMBER. 36231 PER FED-STD-595 EXCEPT MOUNTING BRACKETS, MAIN CONNECTOR WITH THEIR SCREWS, BOTTOM SURFACE AND AREA UNDER MAINTENANCE COVER
- PRECAUTIONARY PACKAGING, HANDLING, AND PROCESSING PROCEDURES SHALL BE USED TO PREVENT DAMAGE FROM ELECTROSTATIC, ELECTROMAGNETIC AND OTHER ENVIRONMENTAL FIELD FORCES

TABLE A - CONNECTORS LIST

CONNECTOR ID	P.N. / TYPE	MATES WITH P.N. / TYPE
J1	D38999/20WC35PN	D38999/26WC35SN
PT	AS4350-04	AS5202-04
PS	AS4350-06	AS5202-06

PROPRIETARY NOTICE
 THIS MATERIAL IS THE SOLE PROPERTY OF ASTRONAUTICS C.A LTD. AND EMBODIES A PROPRIETARY DESIGN. IT HAS BEEN FORWARDED TO YOU IN CONFIDENCE FOR A SPECIFIC PURPOSE AND AS RECIPIENT YOU AGREE NOT TO USE, DISCLOSE, REPRODUCE OR TRANSFER IT IN WHOLE OR PART WITHOUT THE EXPRESS WRITTEN CONSENT OF SAID CORPORATION AND TO IMMEDIATELY RETURN SAME UPON REQUEST.

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN mm
 TOL: ANGLE: ±0.3°; 1 PL ±0.2; 2 PL ±0.10
 INTERPRET DIM AND TOL PER ASME Y14.5M-1994
 SURFACE ROUGHNESS 6.3
 MUST BE FREE OF BURRS AND SHARP CORNERS
 MACHINED CORNERS 0.2 RADIUS OR CHAMFER
 SURFACE FLATNESS 0.1 MAX.



DRAWN	DATE
NATANEL B.	05-MAY-21
CHECKER	DATE
ADI H.	05-MAY-21
ENGINEER	DATE
NATANEL B.	05-MAY-21
APPROVED	DATE
ADI H.	05-MAY-21
DES. ACTIVITY APPROVAL	DATE
OTHER APPROVAL	DATE

Astronautics c.a.ltd ISRAEL

TITLE: **MINIATURE AIR DATA TRANSDUCER (MADT)**

SIZE: **A3** CAGE CODE: **SL510** DWG NO.: **891700** REV: **1**

SCALE 1:2 SHEET 1 OF 1