TECHNICAL DATA SHEET

1. General

The HCU200 unit is a control unit for a DC-load like a pitot/static tube heater to prevent aircrew from misleading information of non-working heaters or excessive current draw conditions for a variety of aircraft.

The HCU200 is consisting of:

- A solid state switch
- A current monitor with flag output
- Self test circuit
- Redundant switch drive circuit

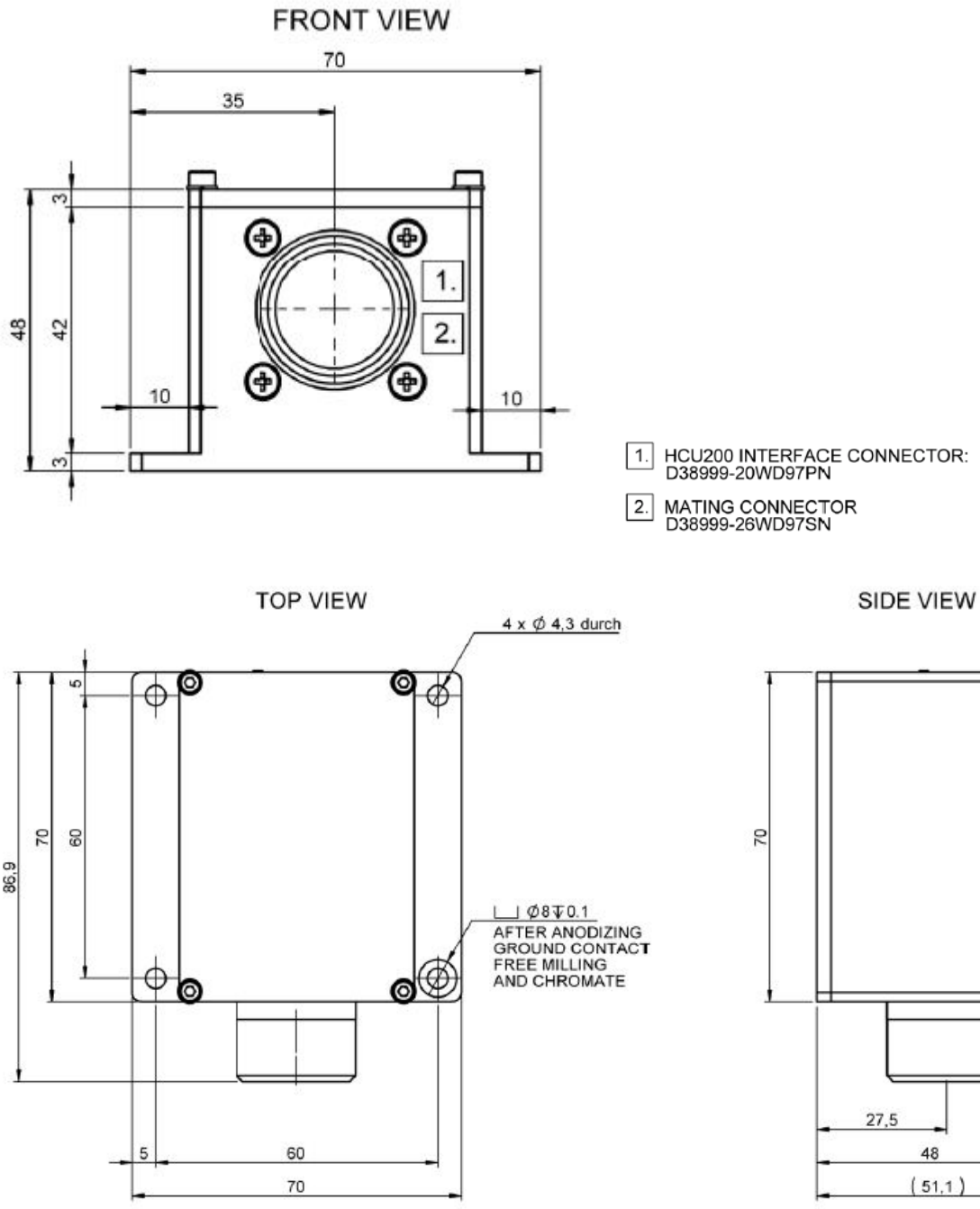
2. Operation:

The HCU200 contains one heater control circuit that includes a solid state power switch, a current sensing amplifier, a high- and low-current comparator and flag driver circuitry.

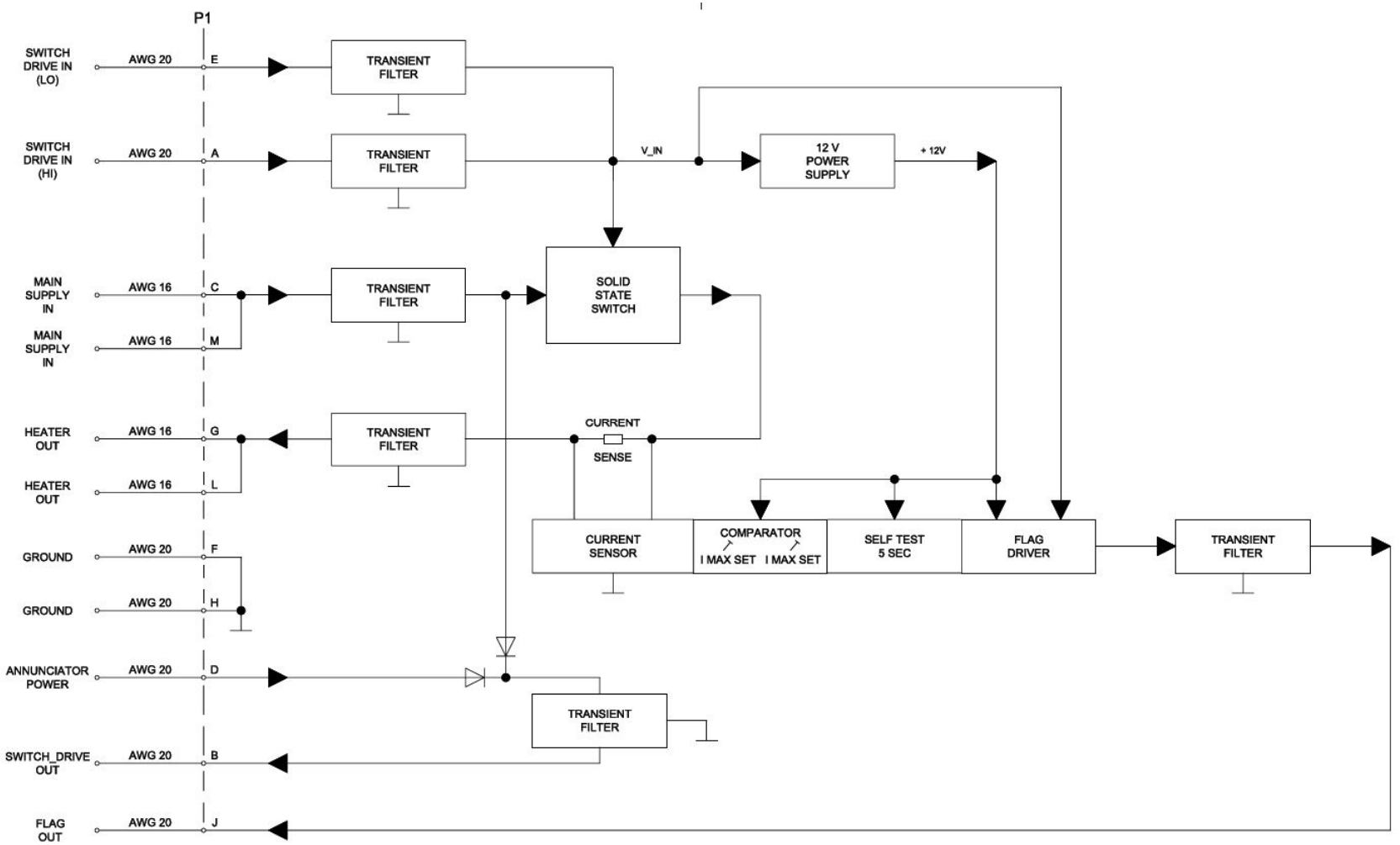
The warning flag signal provides a visual warning signal in case of operational errors of the heater circuitry which may be non-operational state, low-current-state or over-current condition. In case of any error-detection a +28VDC-flag signal is triggering a separate annunciator device installed in the A/C.

The high- and low-current limits are adjustable to match a specific application.

3. Dimensions

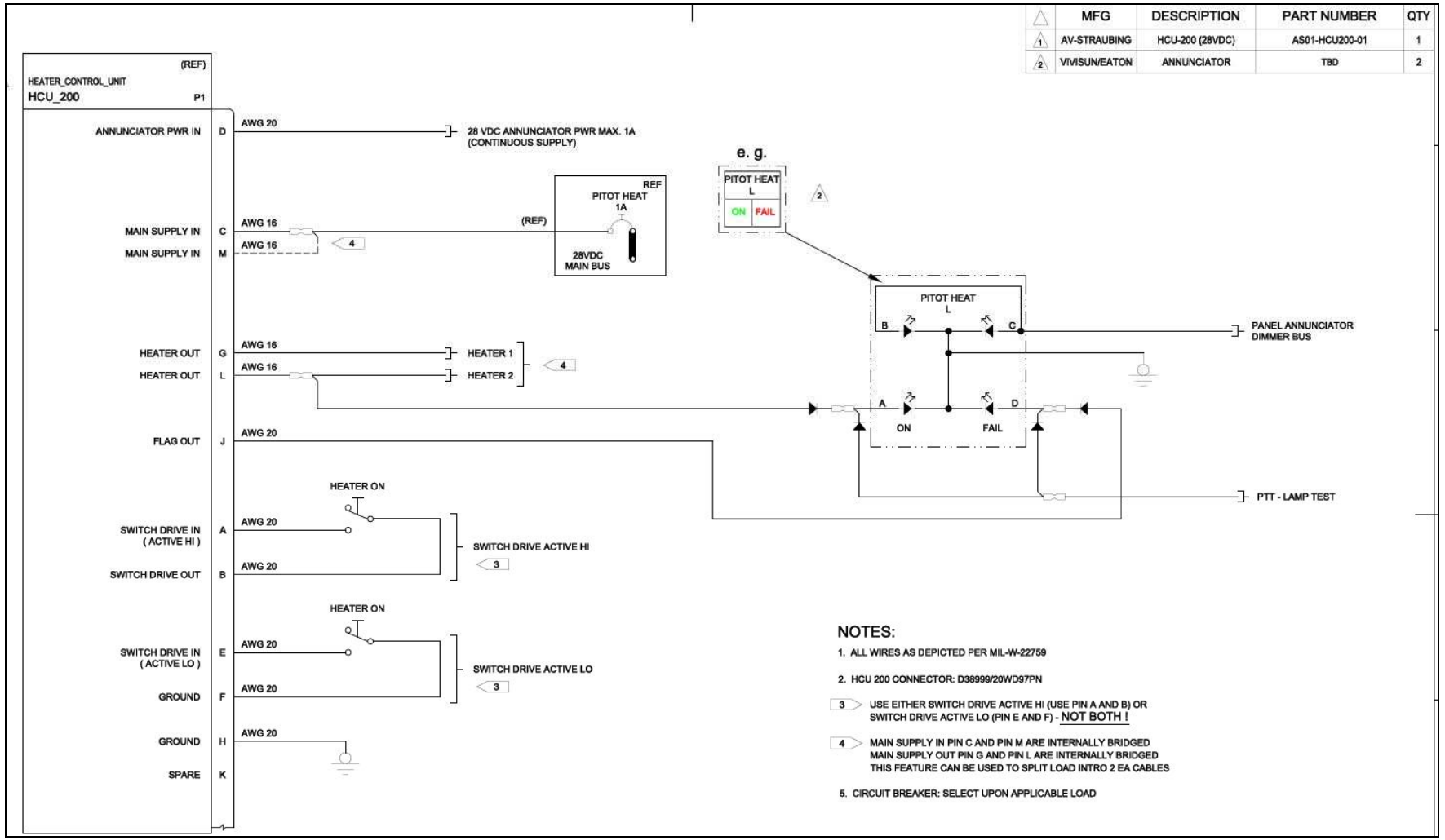


4. Block Diagram



5. Description of Block Diagramm

6. Wiring


MFG | DESCRIPTION | PART NUMBER | QTY
1 AV-STRAUBING | HCU-200 (28VDC) | AS01-HCU200-01 | 1
2 VIVISUN/EATON | ANNUNCIATOR | TBD | 2
(REF)
HEATER_CONTROL_UNIT
HCU_200 P1
ANNUNCIATOR PWR IN D
MAIN SUPPLY IN C
MAIN SUPPLY IN M
HEATER OUT G
HEATER OUT L
FLAG OUT J
SWITCH DRIVE IN (ACTIVE HI) A
SWITCH DRIVE OUT B
SWITCH DRIVE IN (ACTIVE LO) E
GROUND F
GROUND H
SPARE K
AWG 20
AWG 16
28 VDC ANNUNCIATOR PWR MAX. 1A (CONTINUOUS SUPPLY)
REF
PITOT HEAT 1A
28VDC MAIN BUS
e. g.
PITOT HEAT L
ON FAIL
PANEL ANNUNCIATOR DIMMER BUS
HEATER 1
HEATER 2
HEATER ON
SWITCH DRIVE ACTIVE HI
SWITCH DRIVE ACTIVE LO
PTT - LAMP TEST
NOTES:
1. ALL WIRES AS DEPICTED PER MIL-W-22759
2. HCU 200 CONNECTOR: D38999/20WD97PN
3 USE EITHER SWITCH DRIVE ACTIVE HI (USE PIN A AND B) OR SWITCH DRIVE ACTIVE LO (PIN E AND F) - NOT BOTH !
4 MAIN SUPPLY IN PIN C AND PIN M ARE INTERNALLY BRIDGED
MAIN SUPPLY OUT PIN G AND PIN L ARE INTERNALLY BRIDGED
THIS FEATURE CAN BE USED TO SPLIT LOAD INTRO 2 EA CABLES
5. CIRCUIT BREAKER: SELECT UPON APPLICABLE LOAD

7. Installation Description

The HCU200 unit should be installed at a convenient place between applicable load (heater) and its circuit breaker within the aircraft fuselage.

Heater (PITOT HEAT) switch and the optional annunciators can be placed at any convenient panel position.

8. Environmental Qualification

The System has been certified to RTCA-DO160F

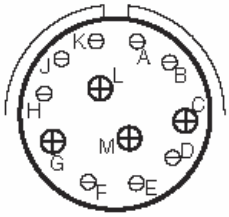
(F2)BAB[(S/M)(S/L)(H/R)]XWXXFSAAAR(ZC)WL(A3C3X)XXAX

9. Technical Specification

Nominal operating voltage:	28VDC
Supply voltage range:	18VDC – 32,2VDC
Current consumption:	< 100mA
Max. Load:	15A
Optional outputs:	+28VDC-flag signal
Dimensions:	70 x 70 x 48 mm
Weight:	215 g
Cooling:	No cooling required

10. System Interconnections

Connector:	**J1** D38999-20WD97PN, MIL-DTL-38999, Series III Connector or compatible, Wall Mount receptable, shell size D/15, insert arrangement 15-97, 12-pin, male		
PIN	**Designation**	**Type/Description**	**I/O**
A	SWITCH DRIVE IN HIGH	Switch Drive active high, +10 to +32VDC = active / OPEN = inactive	IN
B	SWITCH DRIVE OUT	28V Switch drive out	OUT
C	MAIN SUPPLY	MAIN SUPPLY INPUT from CB	IN
D	ANNUNCIATOR	28V Continuous Supply	IN
E	SWITCH DRIVE IN LO	Switch active drive LO	IN
F	GND	Ground	/
G	HEATER	OUTPUT TO HEATER	OUT
H	GND	Ground	/
J	FLAG	FLAG OUT active +28V	OUT
K	SPARE	SPARE	/
L	HEATER	OUTPUT TO HEATER	OUT
M	MAIN SUPPLY	MAIN SUPPLY INPUT from CB	IN



D38999-20WD97PN / Wall Mount receptable