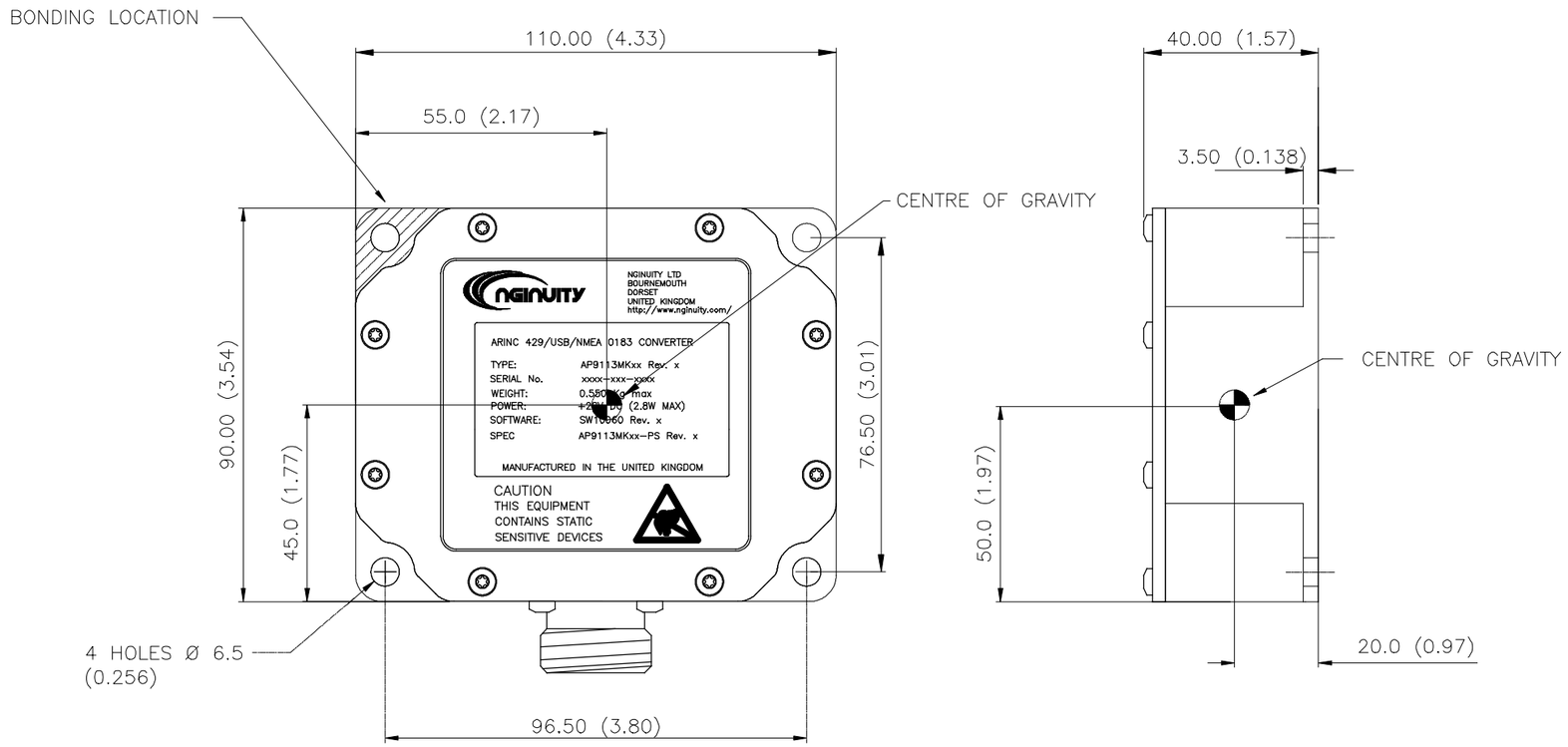

TECHNICAL DATA

THE AP9113MKXX IS A +28V POWERED PROTOCOL CONVERTER, PROVIDING BOTH AN ARINC-429 DATA STREAM AND AN NMEA 0183 NAVIGATION DATA STREAM. THE MODULE CONSISTS OF TWO ARINC-429 INPUT CHANNELS AND TWO USB OUTPUT CHANNELS.
USB CHANNEL ONE CONTAINS THE RAW ARINC-429 DATA STREAM,
USB CHANNEL TWO CONTAINS THE CONVERTED NMEA 0183 NAVIGATIONAL DATA STREAM.

THE 'MKXX' PART NUMBER SUFFIX DEFINES THE CUSTOMER SPECIFIC CONFIGURATION OPTIONS, SUCH AS BAUD RATE, PARAMETER MAPPING AND INTERFACE TYPE.

GENERAL SPECIFICATION

POWER REQUIREMENTS: +28V POWERED (2.8 watts MAX)

WEIGHT: 0.550 kg MAX

TEMPERATURE:

OPERATING TEMPERATURE -45 TO +70 DEGREES C
STORAGE TEMPERATURE -55 TO +85 DEGREES C

INTERFACE CONTROL DOCUMENT (ICD)

AP9113MKXX-ICD.doc Rev. 1

PRODUCT SPECIFICATION

AP9113MKXX-PS.doc Rev. 1

SOFTWARE

SOFTWARE DEVELOPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF DO-178B LEVEL E.

COOLING

FREE AIR CONVECTION

PRODUCT REVISION IDENTIFICATION

THE PRODUCT FOR WHICH THIS DOCUMENT RELATES SHALL BE IDENTIFIED WITH THE MAJOR REVISION NUMBER ONLY.

FOR EXAMPLE

DOCUMENT REVISION 2.03 REFERS TO PRODUCT REVISION 2

MINOR REVISIONS ARE RESERVED FOR DOCUMENTATION UPDATES THAT DO NOT AFFECT FORM FIT OR FUNCTION OF THE PRODUCT.

THIRD ANGLE PROJECTION TO B.S. 8888.
FOR GENERAL TOLERANCES & FINISHES
SEE NGINUITY STANDARD NCP001.

IF IN DOUBT ASK

CAUTION- THIS DRAWING MAY NOT HAVE BEEN PRINTED FULL SIZE

APPROVED / CHECKED: LJC	MATERIAL:- PRINCIPALLY ALUMINIUM ALLOY	FINISH:- ALOCROM & BLACK POWDER COAT	TOLERANCES .XX +/-0.75 .XXX +/-0.25	ISSUE	1													
				DATE	19.01.09													
				CHANGE	NEW													
DRAWN: PDC	NGINUITY AVIONICS & ELECTRONICS	SCALE: 1:1 DIMS: MM	TITLE: ARINC-429 TO USB / NMEA CONVERTER MODULE	DRAWING NUMBER: AP9113MKXX SHEET 1 OF 2													SIZE: A2	

ELECTRICAL CONNECTIONS

PIN	SIGNAL NAME	CONFIGURED FUNCTION
1	28VDC	+28V AIRCRAFT POWER
2	OVDC	0V AIRCRAFT POWER
3	CHASSIS	CHASSIS
4	DIGITAL GROUND	DIGITAL GROUND
5	ANALOGUE GROUND	NOT CONNECTED
6	DISCRETE INPUT 1	ARINC-429 CHANNEL 1 BUS SPEED SELECT (ACTIVE LO)
7	DISCRETE INPUT 2	ARINC-429 CHANNEL 2 BUS SPEED SELECT (ACTIVE LO)
8	DISCRETE INPUT 3	NOT CONNECTED
9	DISCRETE INPUT 4	NOT CONNECTED
10	DISCRETE OUTPUT	SYSTEM VALIDITY (ACTIVE 0V)
11	SERIAL PORT 0 TX/A	RS-232 TX (MANUFACTURING TEST USE ONLY)
12	SERIAL PORT 0 TX/B	RS-232 RX (MANUFACTURING TEST USE ONLY)
13	SERIAL PORT 1 RX A (HI)	ARINC 429 INPUT CHANNEL 1 A (HI)
14	SERIAL PORT 1 RX B (LO)	ARINC 429 INPUT CHANNEL 1 B (LO)
15	SERIAL PORT 1 TX A (HI)	NOT CONNECTED
16	SERIAL PORT 1 TX B (LO)	NOT CONNECTED
17	SERIAL PORT 2 RX A (HI)	ARINC 429 INPUT CHANNEL 2 A (HI)
18	SERIAL PORT 2 RX B (LO)	ARINC 429 INPUT CHANNEL 2 B (LO)
19	SERIAL PORT 2 TX A (HI)	NOT CONNECTED
20	SERIAL PORT 2 TX B (LO)	NOT CONNECTED
21	INTERFACE BOARD PIN 1	NOT CONNECTED
22	INTERFACE BOARD PIN 2	NOT CONNECTED
23	INTERFACE BOARD PIN 3	NOT CONNECTED
24	INTERFACE BOARD PIN 4	NOT CONNECTED
25	INTERFACE BOARD PIN 5	NOT CONNECTED
26	INTERFACE BOARD PIN 6	NOT CONNECTED
27	INTERFACE BOARD PIN 7	NOT CONNECTED
28	INTERFACE BOARD PIN 8	NOT CONNECTED
29	INTERFACE BOARD PIN 9	NOT CONNECTED
30	INTERFACE BOARD PIN 10	NOT CONNECTED
31	INTERFACE BOARD PIN 11	NOT CONNECTED
32	INTERFACE BOARD PIN 12	NOT CONNECTED
33	INTERFACE BOARD PIN 13	NOT CONNECTED
34	INTERFACE BOARD PIN 14	USB +5V
35	INTERFACE BOARD PIN 15	USB DP
36	INTERFACE BOARD PIN 16	USB DM
37	INTERFACE BOARD PIN 17	USB 0V

NOTE

ALL INSTALLATION WIRES SHOULD BE SCREENED AND TERMINATED TO THE CONNECTOR BACKSHELL EXCEPT FOR POWER INPUT (PINS 1 & 2)

EFFECTIVITY

BUS SPEED SELECT DISCRETE INPUTS (PINS 6 & 7), LINK TO 0V DC (PIN 2) FOR 12.5KHZ OPERATION, OPEN CCT. OR LINK TO +28V DC (PIN 1) FOR 100KHZ OPERATION

RS-232 SIGNALS (PINS 11 & 12) REFERENCED TO DIGITAL GROUND (PIN 4)

VALIDITY OUTPUT (PIN 10) REFERENCE TO 0V DC (PIN2)

USB CABLE NOT TO EXCEED 5 METRES IN LENGTH

THIRD ANGLE PROJECTION TO B.S. 8888.
FOR GENERAL TOLERANCES & FINISHES
SEE NGINUITY STANDARD NCP001.

IF IN DOUBT ASK

CAUTION- THIS DRAWING MAY NOT HAVE BEEN PRINTED FULL SIZE

APPROVED / CHECKED: LJC	MATERIAL:- PRINCIPALLY ALUMINIUM ALLOY	FINISH:- ALOCROM & BLACK POWDER COAT	TOLERANCES .XX +/-0.75 .XXX +/-0.25	ISSUE	1													
				DATE	19.01.09													
				CHANGE	NEW													
DRAWN: PDC	NGINUITY AVIONICS & ELECTRONICS	SCALE: 1:1 DIMS: MM	TITLE: ARINC-429 TO USB / NMEA 0183 CONVERTER MODULE	DRAWING NUMBER: AP9113MKXX SHEET 2 OF 2													SIZE: A2	