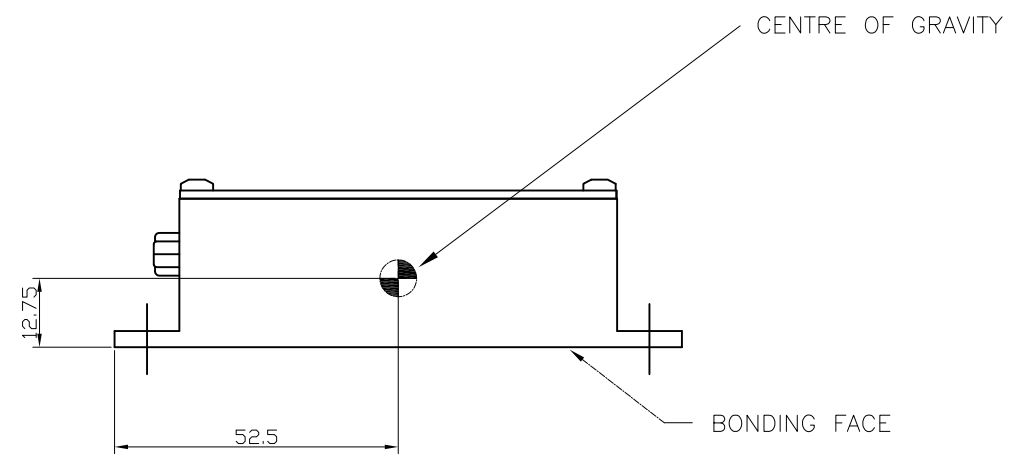


4 HOLES Ø 5.5

MATING ELECTRICAL PLUG
TYPE ITT CANNON
DAA15S-A197-F0



TECHNICAL DATA

THE IP5017MK01 IS A +28V POWERED PROTOCOL CONVERTER, PROVIDING A SINGLE CHANNEL ARINC-407 SYNCHRO (26V 400HZ) INPUT AND A SINGLE CHANNEL ARINC-429 OUTPUT.

THE IP5017MK01 INCLUDES AN RS-232 MAINTENANCE INTERFACE FOR FIELD PROGRAMMING AND CONFIGURATION, A DISCRETE INPUT FOR SYNCHRO VALIDITY AND A DISCRETE INPUT FOR ARINC-429 DATA RATE SELECTION.

A SINGLE ARINC-407 SYNCHRO INPUT IS PROVIDED FOR MAGNETIC HEADING. THE CONVERTED SERIAL DATA IS OUTPUT ON ARINC-429 LABEL 320 AT 20HZ INTERVALS.

GENERAL SPECIFICATION

POWER REQUIREMENTS: +28V POWERED (3W MAX)

WEIGHT: 0.200Kg MAX

TEMPERATURE:

OPERATING TEMPERATURE -40 TO +70 DEGREES C
STORAGE TEMPERATURE -55 TO +85 DEGREES C

PRODUCT SPECIFICATION

IP5017MK01-PS

INTERFACE CONTROL DOCUMENT (ICD)

IP5017MK01-ICD

SOFTWARE

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

COOLING

FREE AIR CONVECTION

PRODUCT REVISION IDENTIFICATION

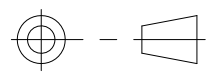
THE PRODUCT FOR WHICH THIS DOCUMENT RELATES SHALL BE IDENTIFIED WITH THE MAJOR REVISION NUMBER ONLY.

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 NGINIVITY STANDARD NCP001.



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IF IN DOUBT ASK

CAUTION- THIS DRAWING MAY NOT HAVE BEEN PRINTED FULL SIZE

APPROVED	MATERIAL:- PRINCIPALLY ALUMINIUM ALLOY	FINISH:- ALOCROM 1200	TOLERANCES .XX +/-0.75 .XXX +/-0.25	ISSUE	E1	1	2	2.01												
CHECKED				DATE	28.09.11	18.01.12	28.03.12	14.09.16												
NSK				CHANGE	NEW	CR00194	CR00198	CR00320												
DRAWN		SCALE: 1:1	TITLE	ARINC-407 TO ARINC-429 CONVERTER MODULE														DRAWING NUMBER		SIZE
PDC																				

ELECTRICAL CONNECTIONS

PIN	FUNCTION	NOTES
1	+28VDC POWER INPUT	AIRCRAFT POWER +18 TO +32 VDC (+28V NOMINAL)
2	0V POWER INPUT	AIRCRAFT GROUND
3	ARINC-429 SPEED SELECT	+28V = 100kHz, 0V OR OPEN = 12.5kHz
4	ARINC-429 TX A	SEE NOTE 6
5	ARINC-429 TX B	SEE NOTE 6
6	MAGNETIC HEADING INPUT (X)	SEE NOTE 5
7	MAGNETIC HEADING INPUT (Y)	SEE NOTE 5
8	MAGNETIC HEADING INPUT (Z)	SEE NOTE 5
9	MAGNETIC HEADING VALID I/P (LO)	SEE NOTE 4
10	RS-232 RXD	SEE NOTE 3
11	RS-232 TXD	SEE NOTE 3
12	DIGITAL GROUND	GROUND FOR ARINC-429 & RS-232 INTERFACES
13	MAGNETIC HEADING VALID I/P (HI)	SEE NOTE 4
14	MAGNETIC HEADING REF HI (H)	
15	MAGNETIC HEADING REF LO (C)	

NOTES:

- +28V DC POWER IS SUPPLIED TO THE IP5017MK01 ON PIN 1 WITH POWER GROUND ON PIN 2 RECOMMENDED CIRCUIT BREAKER RATING 2A
- ALL INSTALLATION WIRES SHOULD BE SCREENED AND TERMINATED TO THE CONNECTOR BACKSHELL EXCEPT FOR POWER INPUT (PINS 1 & 2)
- RESERVED FOR MANUFACTURING TEST AND FIELD PROGRAMMING, REFERENCE TO PIN 12
- IF VALID FLAG = +28V, CONNECT FLAG TO PIN 13 AND CONNECT PIN 9 TO MAGNETIC HEADING INSTRUMENT POWER RETURN (0V/GND).
IF VALID FLAG = 0V, CONNECT FLAG TO PIN 9 AND CONNECT PIN 13 TO MAGNETIC HEADING INSTRUMENT POWER SUPPLY (+28V).
SUPPLY OR RETURN FROM THE MAGNETIC HEADING INSTRUMENT MUST BE USED TO ENSURE CORRECT OPERATION WHEN IP5017 POWER IS REMOVED.
- INPUT REFERENCE TO PINS 14 & 15
- OUTPUT REFERENCE TO PIN 12
- INTERNAL OVER CURRENT PROTECTION 0.5A (SELF RESETTING)
- INTERNAL OVER TEMPERATURE PROTECTION (+105°C)
- INTERNAL REVERSE POLARITY PROTECTION (SERIES DIODE)
- "--" IN THE OUTPUT RATE COLUMN INDICATES THE PARAMETER IS NOT CONFIGURED FOR OUTPUT ON THE BUS AND IS ONLY AVAILABLE IN MAINTENANCE MODE.
- MAGNETIC HEADING OUTPUT PARAMETER ACCURACY:
±0.3680 DEGREES, EXCLUDING AIRCRAFT SOURCE DATA ERRORS

ARINC-407 HEADING SOURCE PARAMETERS

PARAMETER	DESCRIPTION
VOLTAGE	26VAC (11.8V LINE TO LINE)
FREQUENCY	400Hz
RANGE	0-360 DEGREES

ARINC-429 OUTPUT PARAMETERS (SEE NOTE 10)

LABEL	PARAMETER NAME	TYPE	BITS	MSB	RESOLUTION	RATE	UNITS
214	ELAPSED TIME	BNR	18	131072	1	--	HOURS
320	MAGNETIC HEADING	BNR	15	90	0.005493	20HZ	DEG
270	STATUS WORD	BIN	19	N/A	DISCRETE	--	N/A
350	SOFTWARE VERSION 1	BCD	18	x1000	x1	--	VER
351	SOFTWARE VERSION 2	BCD	18	x1000	x1	--	VER

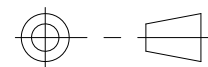
CONFIGURATION OPTIONS

OPTION	CONFIGURATION
SYNCHRO INPUT BANDWIDTH	100HZ
SYNCHRO INPUT MAX. VELOCITY	6 ROTATIONS PER SECOND
SYNCHRO ANGLE OFFSET	0 DEGREES
SYNCHRO DIRECTION INVERTED	FALSE
SYNCHRO INPUT VALIDITY	VALID WHEN DRIVEN
RS-232 BAUD RATE	115200

BUILD INFORMATION

ASSEMBLY	IDENTIFIER	REVISION	CHECKSUM
SOFTWARE PROGRAM	SW50216MK01	1.01	0x0011117B
LOGIC PROGRAM	LP50217	1.01	0x00031AB9

THIRD ANGLE PROJECTION TO B.S. 8888.
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APPROVED CHECKED	MATERIAL:-	FINISH:-	TOLERANCES	ISSUE	E1	1	2	2.01									
NSK	PRINCIPALLY ALUMINIUM ALLOY	ALOCROM 1200	.XX +/-0.75 .XXX +/-0.25	DATE	28.09.11	18.01.12	28.03.12	14.09.16									
DRAWN			SCALE: 1:1	TITLE	ARINC-407 TO ARINC-429 CONVERTER MODULE												
PDC			DIMS: MM	DRAWING NUMBER													IP5017MK01 SHEET 2 OF 2