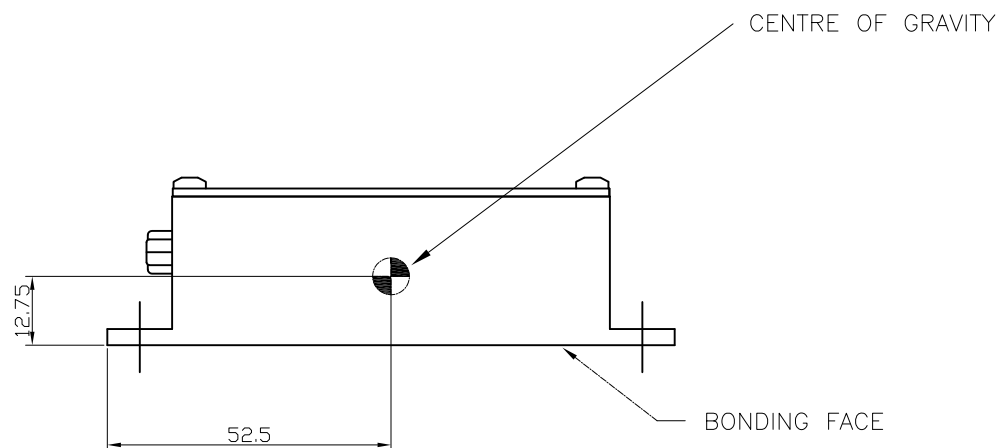


MATING ELECTRICAL PLUG
TYPE ITT CANNON
DAA15S-A197-F0



TECHNICAL DATA

THE IP5019MK01 NMEA-0183 TO ARINC-429 CONVERTER MODULE, IS A 28VDC POWERED RUGGEDISED PROTOCOL CONVERTER, COMPRISING OF 1 RS-232 INPUT CHANNEL, 1 RS-422 INPUT CHANNEL AND 1 ARINC-429 OUTPUT CHANNEL.

THE IP5019MK01 PROVIDES AN ARINC-429 BUS LIST, ASSEMBLED FROM THE GGA AND RMC SENTENCES RECEIVED ON THE NMEA-0183 INPUT STREAM.

THE 'MK01' PART NUMBER SUFFIX DEFINES THE CUSTOMER SPECIFIC CONFIGURATION OPTIONS, SUCH AS BAUD RATE, PARAMETER MAPPING AND NMEA SOURCE DATA INTERFACE TYPE (RS-232 OR RS-422).

PLEASE SEE SHEET 2 FOR FULL DETAILS.

GENERAL SPECIFICATION

POWER REQUIREMENTS: +28V POWERED (2W MAX)

WEIGHT: 0.200 kg MAX

TEMPERATURE:

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

PRODUCT SPECIFICATION

IP5019MK01-PS-E1

INTERFACE CONTROL DOCUMENT (ICD)

IP5019MK01-ICD-E1

SOFTWARE

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

COOLING

FREE AIR CONVECTION

PRODUCT REVISION IDENTIFICATION

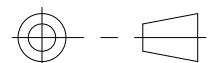
THE PRODUCT FOR WHICH THIS DOCUMENT RELATES SHALL BE IDENTIFIED WITH THE MAJOR REVISION NUMBER ONLY.

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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CAUTION- THIS DRAWING MAY NOT HAVE BEEN PRINTED FULL SIZE

APPROVED CHECKED LJC	MATERIAL:- PRINCIPALLY ALUMINIUM ALLOY	FINISH:- ALOCROM 1200	TOLERANCES .XX +/-0.75 .XXX +/-0.25	ISSUE DATE CHANGE	E1 08.03.12 NEW														
DRAWN PDC			SCALE: 1:1 DIMS: MM	TITLE NMEA-0183 TO ARINC-429 CONVERTER MODULE					DRAWING NUMBER IP5019MK01 SHEET 1 OF 2					SIZE A2					

ELECTRICAL CONNECTIONS

PIN	FUNCTION	NOTES
1	+28VDC POWER INPUT	+18 TO +32 VDC (+28V NOMINAL)
2	0V POWER INPUT	
3	CHASSIS	
4	RS-422 RX A	
5	RS-422 RX B	
6	DIGITAL GROUND	GROUND FOR RS-422 INTERFACE
7	RS-232 TX	
8	RS-232 RX	
9	DIGITAL GROUND	GROUND FOR RS-232 INTERFACE
10	ARINC-429 TX A	
11	ARINC-429 TX B	
12	DIGITAL GROUND	GROUND FOR ARINC-429 INTERFACE
13	RESERVED	
14	RESERVED	
15	ARINC-429 SPEED SELECT	SEE NOTE 3

NOTES:

- +28V DC POWER IS SUPPLIED TO THE IP5019MK01 ON PINS 1 & 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)
- LINK TO PIN 1 FOR 100KHZ OPERATION, OPEN CCT. OR LINK TO PIN 2 FOR 12.5KHZ OPERATION
- INTERNAL OVER CURRENT PROTECTION 0.5A (SELF RESETTING)
- INTERNAL OVER TEMPERATURE PROTECTION (+105°C)
- INTERNAL REVERSE POLARITY PROTECTION (SERIES DIODE)
- ARINC-429 OUTPUT PARAMETER ACCURACY:
 ± 1 LSB OF CORRESPONDING NMEA-0183 INPUT PARAMETER, PLUS 1 LSB OF ARINC-429 OUTPUT PARAMETER, EXCLUDING NMEA-0183 SOURCE DATA ERRORS

ARINC-429 OUTPUT DATA WORD DEFINITIONS

LABEL	PARAMETER NAME	TYPE	BITS	MSB	RESOLUTION	RATE	UNITS
125	GMT	BCD	18	x10	0.1	5Hz	HHMM.S
150	UTC	BNR	17	65536	1	5Hz	HHMMSS
147	MAGNETIC VARIATION	--	--	--	--	--	--
203	PRESSURE ALTITUDE	BNR	17	65536	1	10Hz	FEET
260	DATE	BCD	18	x10	1	5Hz	DDMMYY
310	PRESENT POSITION LATITUDE	BNR	20	90	0.0001717	10Hz	DEG
311	PRESENT POSITION LONGITUDE	BNR	20	90	0.0001717	10Hz	DEG
312	GROUND SPEED	BNR	15	2048	0.125	10Hz	KTS
314	TRUE HEADING	BNR	15	90	0.005493	10Hz	DEG
320	MAGNETIC HEADING	--	--	--	--	--	--

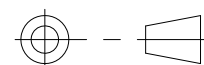
CONFIGURATION OPTIONS

OPTION	CONFIGURATION
ARINC-429 BNR VALID SSM VALUE	BIT 31 = 1, BIT 30 = 1
ARINC-429 BCD VALID SSM VALUE	BIT 31 = 0, BIT 30 = 0
NMEA BAUD RATE	4800
NMEA INTERFACE TYPE	RS-232
NMEA VALID RECORD CHARACTER	A
NMEA INVALID RECORD CHARACTER	F
NMEA INPUT PERIOD	1 SEC
NMEA INPUT MESSAGES	\$GPGGA, \$GPRMC
NMEA INPUT TIMEOUT PERIOD	2 SEC

BUILD INFORMATION

ASSEMBLY	IDENTIFIER	REVISION	CHECKSUM
SOFTWARE PROGRAM	SW50230MK01	E1	TBD
LOGIC PROGRAM	LP50231	E1	TBD

THIRD ANGLE PROJECTION TO B.S. 8888.
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DRAWN PDC			SCALE: 1:1 DIMS: MM	TITLE NMEA-0183 TO ARINC-429 CONVERTER MODULE				DRAWING NUMBER IP5019MK01 SHEET 2 OF 2				SIZE A2							