

TECHNICAL DATA

THE IP5018MK01 MIL-STD-1553B TO NMEA-0183 CONVERTER MODULE, IS A 28VDC POWERED RUGGEDISED PROTOCOL CONVERTER, COMPRISING OF A DUAL REDUNDANT MIL-STD-1553B INTERFACE, 1 RS-232 OUTPUT CHANNEL AND 1 RS-422 OUTPUT CHANNEL.

THE IP5018MK01 PROVIDES AN NMEA-0183 OUTPUT STREAM CONTAINING GGA AND RMC SENTENCES, ASSEMBLED FROM PARAMETERS RECEIVED ON THE MIL-STD-1553B INTERFACE.

THE 'MK01' PART NUMBER SUFFIX DEFINES THE CUSTOMER SPECIFIC CONFIGURATION OPTIONS, SUCH AS BAUD RATE, PARAMETER MAPPING AND INTERFACE TYPE.

PLEASE SEE SHEET 2 FOR FULL DETAILS.

GENERAL SPECIFICATION

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

WEIGHT: 0.300 kg MAX

TEMPERATURE:

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

PRODUCT SPECIFICATION

IP5018MK01-PS-R1

INTERFACE CONTROL DOCUMENT (ICD)

IP5018MK01-ICD-R1

SOFTWARE

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

COOLING

FREE AIR CONVECTION

PRODUCT REVISION IDENTIFICATION

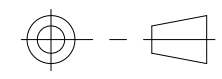
THE PRODUCT FOR WHICH THIS DOCUMENT RELATES SHALL BE IDENTIFIED WITH THE MAJOR REVISION NUMBER ONLY.

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 NGINUIITY STANDARD NCP001.



© COPYRIGHT

IF IN DOUBT ASK

CAUTION- THIS DRAWING MAY NOT HAVE BEEN PRINTED FULL SIZE

APPROVED CHECKED	MATERIAL:- PRINCIPALLY ALUMINIUM ALLOY	FINISH:- ALOCROM 1200	TOLERANCES .XX +/-0.75 .XXX +/-0.25	ISSUE 1	DATE 02.06.11														
LJC				CHANGE NEW															
DRAWN PDC			SCALE: 1:1 DIMS: MM	TITLE MIL-STD-1553B TO NMEA-0183 CONVERTER MODULE					DRAWING NUMBER IP5018MK01 SHEET 1 OF 2					SIZE A2					

J1 - DAA15P (POWER & SIGNAL)

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

J2 - BJ157 (MIL-STD-1553B BUS A)

PIN	FUNCTION	
A	DATA HI	MIL-STD-1553B BUS A - DATA HI
B	DATA LO	MIL-STD-1553B BUS A - DATA LO
C	CHASSIS	CHASSIS

J3 - BJ157 (MIL-STD-1553B BUS B)

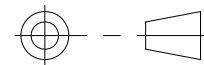
PIN	FUNCTION	
A	DATA HI	MIL-STD-1553B BUS B - DATA HI
B	DATA LO	MIL-STD-1553B BUS B - DATA LO
C	CHASSIS	CHASSIS

NOTES:

- +28V DC POWER IS SUPPLIED TO THE IP5018MK01 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 PINS 14 & 15 FOR 120R RS-422 LINE TERMINATION
- INTERNAL OVER CURRENT PROTECTION 0.5A (SELF RESETTING)
- INTERNAL OVER TEMPERATURE PROTECTION (+105°C)
- INTERNAL REVERSE POLARITY PROTECTION (SERIES DIODE)
- NMEA OUTPUT PARAMETER ACCURACY:

± 1 LSB OF CORRESPONDING MIL-STD-1553B INPUT PARAMETER,
EXCLUDING MIL-STD-1553B SOURCE DATA ERRORS

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



©COPYRIGHT

IF IN DOUBT ASK

CAUTION- THIS DRAWING MAY NOT HAVE BEEN PRINTED FULL SIZE

APPROVED CHECKED	MATERIAL:- PRINCIPALLY ALUMINIUM ALLOY	FINISH:- ALOCROM 1200	TOLERANCES .XX +/-0.75 .XXX +/-0.25	ISSUE 1 DATE 02.06.11 CHANGE NEW																
LJC																				
DRAWN PDC			SCALE: 1:1 DIMS: MM	TITLE MIL-STD-1553B TO NMEA-0183 CONVERTER MODULE										DRAWING NUMBER IP5018MK01 SHEET 2 OF 2		SIZE A2				

MIL-STD-1553B SOURCE DATA WORD DEFINITIONS

RT	SA	WORD	T/R	PARAMETER NAME	TYPE	BITS	MSB	RESOLUTION	RATE	UNITS
7	10	03	R	GMT	BCD	20	x10	0.1	5Hz	HHMMSS
---	---	---	---	UTC	---	---	---	---	---	---
---	---	---	---	MAGNETIC VARIATION	---	---	---	---	---	---
7	10	02	R	PRESSURE ALTITUDE	---	---	---	---	---	---
7	10	05	R	DATE	BCD	20	x10	1	5Hz	DDMMYY
7	10	07	R	PRESENT POSITION LATITUDE	BNR	20	90	0.0001717	5Hz	DEG
7	10	09	R	PRESENT POSITION LONGITUDE	BNR	20	90	0.0001717	5Hz	DEG
7	09	05	R	GROUND SPEED	BNR	15	2048	0.125	30Hz	KTS
7	09	02	R	TRUE HEADING	BNR	15	90	0.005493	30Hz	DEG
---	---	---	---	MAGNETIC HEADING	---	---	---	---	---	---

CONFIGURATION OPTIONS

OPTION	CONFIGURATION
RS-232 BAUD RATE	4800
RS-422 BAUD RATE	4800
NO OF SATELLITES	12
ELEVATION UNITS	METRES
USE FIXED ELEVATION DATA	FALSE
FIXED ELEVATION VALUE	0
CALCULATE TRUE HEADING	FALSE
TIME DATA SOURCE	GMT
NMEA VALID RECORD CHARACTER	A
NMEA INVALID RECORD CHARACTER	F
NMEA OUTPUT PERIOD	1 SEC
NMEA OUTPUT MESSAGES	\$GPGGA, \$GPRMC, \$PNGYC
MIL-STD-1553B INPUT TIMEOUT PERIOD	2 SEC
MIL-STD-1553B BUS TOPOLOGY	TRANSFORMER (STUB) COUPLED
MIL-STD-1553B INTERFACE TYPE	BUS MONITOR

BUILD INFORMATION

ASSEMBLY	IDENTIFIER	REVISION	CHECKSUM
SOFTWARE PROGRAM	SW50225MK01	1.01	001EC5AA