

ELECTRICAL CONNECTOR (J1)
TO MIL-C-38999 SERIES III
SHELL SIZE D, TYPE 20 & 16 PINS
ELECTROLESS NICKEL FINISH
LARGE KEY UPPERMOST

MATING ELECTRICAL PLUG
TYPE D38999/26FD97SN
/ TVS06RF-15-97SN

GENERAL DESCRIPTION

THE DAQPOWER-651205 IS A +28V DC POWERED, AIRBORNE POWER CONVERTER MODULE, PROVIDING A REGULATED HIGH POWER (50W) +12V DC PRIMARY OUTPUT AND A REGULATED LOW POWER (15W) +5V DC AUXILIARY OUTPUT.

THE DAQPOWER-651205 HAS AN OPTO-ISOLATED SHUTDOWN DISCRETE INPUT AND OPTO-ISOLATED PRIMARY STATUS OUTPUT.

THE DAQPOWER-651205 MODULE IS INTENDED FOR USE AS A SUPPLEMENTARY POWER SUPPLY TO ACCOMPANY THE DAQ9000 SERIES PRODUCT, PROVIDING A DC POWER SOURCE FOR TELEMETRY UNITS, DATA RECORDERS, SENSORS AND TRANSDUCERS.

WEIGHT

0.850 kg MAX

TEMPERATURE

OPERATING TEMPERATURE -15°C TO +55°C
OPERATING TEMPERATURE -45°C TO +70°C (OPTION E SUFFIX)
STORAGE TEMPERATURE -55°C TO +85°C

INTERFACE CONTROL DOCUMENT (ICD)

DAQPOWER-651205-ICD

PRODUCT SPECIFICATION

DAQPOWER-651205-PS

COOLING (E OPTION ONLY)

FREE AIR CONVECTION 10% POWER DERATING @ +70°C
FORCED AIR COOLING OF 200LFM NO DERATING

PRODUCT REVISION IDENTIFICATION

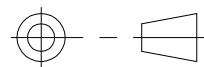
THE PRODUCT FOR WHICH THIS DOCUMENT RELATES SHALL BE IDENTIFIED WITH THE MAJOR REVISION NUMBER ONLY.

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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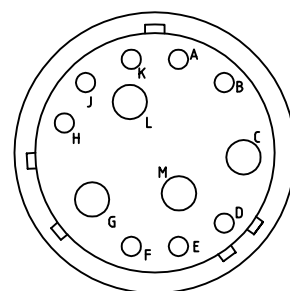
IF IN DOUBT ASK

CAUTION- THIS DRAWING MAY NOT HAVE BEEN PRINTED FULL SIZE

APPROVED CHECKED NSK	MATERIAL:- PRINCIPALLY ALUMINIUM ALLOY TO BS1470/1474 6082-T6	FINISH:- ALOCROM 1200 + INTERNATIONAL ORANGE PAINT	TOLERANCES	ISSUE	1														
				DATE	08.01.13														
				CHANGE	NEW														
DRAWN PDC			SCALE: 1:1 DIMS: MM	TITLE DAQPOWER™ - 65W DUAL OUTPUT POWER CONVERTER MODULE												DRAWING NUMBER DAQPOWER-651205 SHEET 1 OF 2		SIZE A2	

ELECTRICAL CONNECTIONS

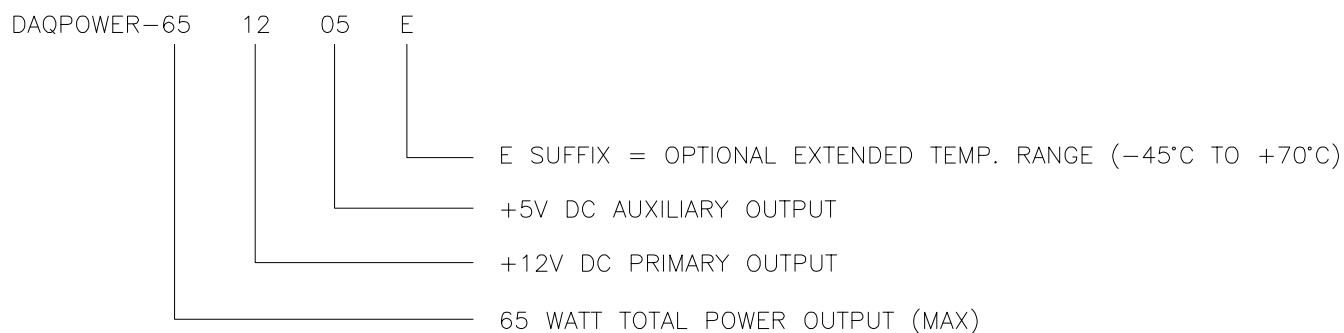
PIN	DESCRIPTION	ADDITIONAL INFORMATION
A	N/A	RESERVED
B	N/C	RESERVED
C	28 V I/P	AIRCRAFT SUPPLY (+28V)
D	PRIMARY STATUS O/P	0V=NORM, 0/C=FAIL
E	N/C	RESERVED
F	SHUTDOWN I/P	0V=SHUTDOWN, 0/C=NORM
G	0V I/P	AIRCRAFT SUPPLY (0V)
H	N/C	RESERVED
J	+V O/P CH2	+5V DC OUTPUT (AUXILIARY)
K	-V O/P CH2	GND (AUXILIARY)
L	+V O/P CH1	+12V DC OUTPUT (PRIMARY)
M	-V O/P CH1	GND (PRIMARY)



NOTES

CONNECTIONS TO PINS C,G,L,M MUST HAVE A MINIMUM CURRENT CAPACITY OF 7.5 AMPS
 CONNECTIONS TO PINS J & K MUST HAVE A MINIMUM CURRENT CAPACITY OF 3.5 AMPS
 STATUS OUTPUT AND SHUTDOWN I/P WITH REFERENCE TO AIRCRAFT GROUND ON PIN G
 +28V DC POWER TO BE SUPPLIED ON PIN C, WITH AIRCRAFT GROUND ON PIN G
 RECOMMENDED CIRCUIT BREAKER RATING 7.5A

PART NUMBER DESIGNATION



ELECTRICAL SPECIFICATION – INPUT

INPUT VOLTAGE RANGE	18–36VDC
INPUT POWER	<5W TYP. (NO LOAD) 75W MAX (FULL LOAD)

ELECTRICAL SPECIFICATION – OUTPUT 1 (PRIMARY – 50W)

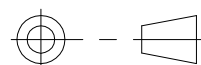
OUTPUT POWER	50W MAX
VOLTAGE SET ACCURACY	±1%
VOLTAGE REGULATION	0.2% MAX (0%–100% LOAD VARIATION) 0.2% MAX (18 TO 36V INPUT VARIATION)
MINIMUM LOAD	NOT REQUIRED
RIPPLE & NOISE*	100mV PK–PK MAX
START UP TIME	25ms TYP.
START UP VOLTAGE	17VDC (16VDC TYP.)
TRANSIENT RESPONSE	500us TYP. (25% STEP LOAD CHANGE)
OUTPUT CURRENT LIMIT	110% TO 160% OF MAX LOAD
OVER VOLTAGE PROTECTION	115% to 140% OF SET VOLTAGE
SHORT CIRCUIT PROTECTION	INDEFINITE, AUTOMATIC RECOVERY
CAPACITIVE LOAD	1250uF MAX
DERATING (E SUFFIX ONLY)	-10% @ 70°C (FREE AIR CONVECTION) 0% @ 70°C (200LFM FORCED COOLING)
OVER TEMPERATURE CUTOUT	105°C
SWITCHING FREQUENCY	300kHz TYP. PULSE WIDTH MODULATION
STATUS TRIP THRESHOLD	±2% OF NOMINAL VALUE

ELECTRICAL SPECIFICATION – OUTPUT 2 (AUXILIARY 15W)

OUTPUT POWER	15W MAX
VOLTAGE SET ACCURACY	±1%
VOLTAGE REGULATION	0.2% MAX (0%–100% LOAD VARIATION) 0.2% MAX (18 TO 36V INPUT VARIATION)
MINIMUM LOAD	NOT REQUIRED
RIPPLE & NOISE*	100mV PK–PK MAX
START UP TIME	25ms TYP.
START UP VOLTAGE	17VDC (16VDC TYP.)
TRANSIENT RESPONSE	250us TYP. (25% STEP LOAD CHANGE)
OUTPUT CURRENT LIMIT	120% TO 150% OF MAX LOAD
OVER VOLTAGE PROTECTION	110% to 140% OF SET VOLTAGE
SHORT CIRCUIT PROTECTION	INDEFINITE, AUTOMATIC RECOVERY
CAPACITIVE LOAD	5500uF MAX
DERATING (E SUFFIX ONLY)	-10% @ 70°C (FREE AIR CONVECTION) 0% @ 70°C (200LFM FORCED COOLING)
OVER TEMPERATURE CUTOUT	105°C
SWITCHING FREQUENCY	400kHz TYP. PULSE WIDTH MODULATION

*20MHZ BANDWIDTH MEASUREMENT

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