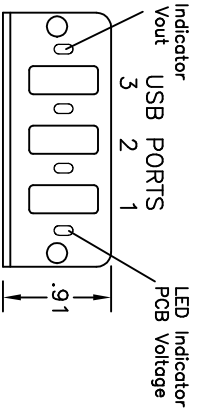
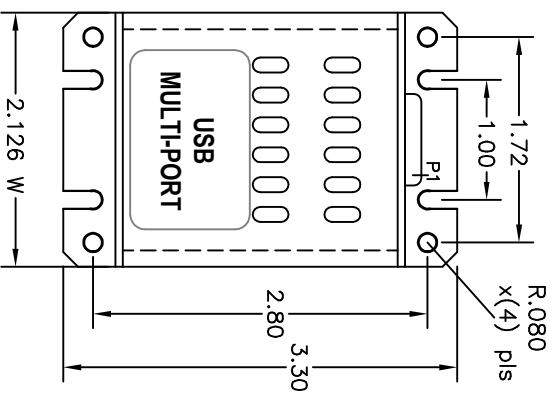
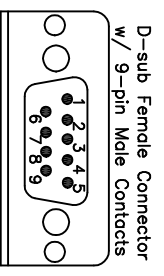


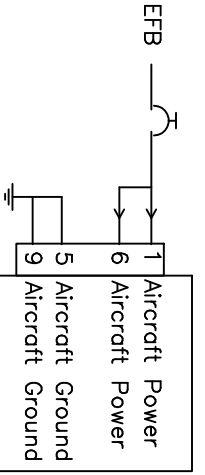
Lone Star Aviation Corp.
604 S. Wisteria Street
Mansfield, Texas 76063
682-518-8882
682-518-8831 fax
www.lonestaraviation.com



USB FEMALE RECEPTACLE

PIN	NAME	DESCRIPTION
1	VCC	+5 VDC
2	D-	2.7 VDC
3	D+	2.7 VDC
4	GND	GROUND

USB MULTI-PORT CONVERTER



Lone Star Connector kit:

- LS03-05029 (Multi-Port/Volt, 9 Pin FM)
- LS01-19072 Connector, Sub-D, 9pin (170-009-272L000)
- LS01-19072A Hood, plastic, 9pin (165X10139XE)
- LS01-19078 Pins, FM, 24-20ga, Au (2050901)
- LS01-13005 Grommets set, 0.4 dia (162-000-925R000)

Lone Star Harness kit:

- LS03-05029-M (Multi-Port, 9 Pin, FM w/ cigarette power adapter)
- 20 AWG MAX
- 7.5A PER CONTACT MAX

- Recommended Tools (TE Connectivity)
Crimping Tool: 601966-1
Crimp Tool Positioner: 601966-5
Insertion/Extraction Tool: 91067-2

Item	Description	Qty
1	AN 526 Screw 6-32 R	4
2	AN 960 Washer	4
3	AN356-632- Locknut	4

Equipment Inspection: Annual

- Visual inspection for the following:
1. Hardware: Check for loose hardware.
2. Connector: Check connector wiring.

Damaged Equipment Procedure:

If equipment fails to function normally call the factory for technical support.

Reference: Refer to FAA AC 43.13 Acceptable Methods, Techniques, and Practices - Aircraft Alterations

REV	ECN #	ZONE	DESCRIPTION OF CHANGE(S)	DATE	APPROVED
REV-0	N/A	N/A	Initial Release	7-21-14	JRM
REV-1			Updated Connector Information	15Dec14	JRM
REV-2			Updated Connector Information	6/20/16	JRM/DPC
REV-3			Updated Current Spec & Testing	8/24/16	JRM/DPC

USB Charger Applications:

Electronic Flight Bag (EFB)

Charger, rated for Class I, Class II and Class III, and Type A and Type B EFB Hardware. Works with most Personal Electronic Devices (PED). USB 2.0 Std COTS Design power supply (Commercial Off The Shelf).

Converter Circuit Protections:

The DC converter is internally protected from the following failure mechanisms:

- Under voltage protection
- Over voltage protection
- Over current
- Over Temp
- Reverse Polarity-pcb
- Input Fuse: Resettable

Mounting Limitations:

Mount DC Converter in electronics bay or cabin equipment rack near on board avionics equipment or electronics. Mount Converter vertical or horizontal on aluminum frame for maximum heat dissipation.

Part Number: LS03-05023-xxx

Product Specifications:

- Input Voltage: 10v-40v DC
- Input Current (max): 2.5A
- Output Voltages: 5.3v DC
- Output Current (max): 2.4A (per port)
- Connector Type: Sub-D, 9-pin
- Wire Gauge: 20 awg
- Dimensions: 3.30 x 2.13 x .915
- Weight: 2.9 oz. / 82 grams

- Maximum Temp: +55°C (+131°F)
- Minimum Temp: -45°C (-113°F)
- Maximum Altitude: 50,000 Feet (Pending)
- Vibration: Section 8, Cat S, (Pending)
- Shock: 15G (Pending)
- Humidity: 95-100%, 50°C 50% ±3°C
- EMI: 90KHz-1500MHz >200µV
- Load: +/- 2%
- Line: +/- 3%
- Flammability: UL94-V-0
- Efficiency: 90%
- Testing: TSO-C71 (Pending)
RTCA-DO160G (Pending)

- FAA AC 43.13: Aircraft Mods, Alterations
- FAA AC 20-173: Installation of EFBs
- FAA AC 120-76B: Operational use of EFBs
- FAA AC 91-78: Use of Class I or II EFBs

ITEM #	QTY	PART NO.	DESCRIPTION
UNLESS NOTED OTHERWISE TOLERANCE BLDCK. DIMENSIONS ARE IN INCHES DECIMALS ±1° ANGULAR XX ± .030 XXX ± .015 XXXX ± .0005 DD NOT SCALE DRAWING			
PREPARETARY THIS DOCUMENT AND THE DATA DISCUSSED HEREWITH IS NOT TO BE REPRODUCED, USED, OR DISCLOSED IN ANY MANNER WITHOUT WRITTEN AUTHORIZATION FROM LONE STAR AVIATION, INC			
DRAWN BY L DAVIS 3-24-14		DATE	
APPROVED BY JRM 3-24-14		DATE	
NEXT ASSY.			
MATERIAL			
FINISH			
NOTE			



TITLE: USB Multi-Port Charger

SCALE	DWG. FILE	REV
A	LS03-05023	3

8 7 6 5 4 3 2 1

DWG. NO. LS03-05023 1 of 1 REV. SH