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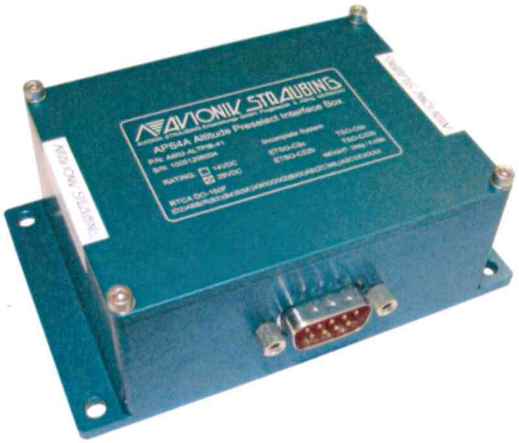
INSTALLATION MANUAL

FOR

ALTITUDE PRESELECT SYSTEM APS4A



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1. List of Amendments

Rev.	Description	Pages changed	Amendment date	changed by
00	Initial Release	all	06/07/2009	PL
01	Revision 01:		09/07/2009	LG
	1.3 internally configured added	5		
	1.4 internally configured added	5		
02	Revision 02:		27/09/2009	LG
	1.3 Configuration table added	5		
03	Revision 03:		03/08/2009	LG
	3.2 Pins changed	11		
04	Revision 04:		26/01/2010	MF
	1.5 TSO added	6		
	2.2 Installation Restrictions added	8		
05	Revision 05:		26/10/2010	MF
	Description removed	1		
	1.3 Configuration changed	5		
	1.4 update technical specification	6		
	2.2 update Installation restrictions	9		
	3.1 pin 7 Description added	13		
	6.2 Update Wiring	15		
06	Revision 06:		28/02/2012	RO
	1.1 installation kit P/N: AS12-ALTPKT-00 added	4		
07	Revision 07:		23/05/2012	RO
	Change into new style sheet	all		
	7.2 autopilot systems added	12		
08	Revision 08:		20/06/2012	RO
	6.3 Configuration changed	8		
	6.4 new chapter added	8		
	6.5 Technical Specification changed	10		
	7.6.2 Altitude Interface Box changed	13		
	7.6.3 Indicator / Switch changed	13		
	7.3.6.1 and 7.6.3.2 added	13-17		
	Figure 3: Title changed	15		
	8.2 Indicator / Switch changed	18		

09	Revision 09:		10.11.2016	PL
	FAA statement	9		
	Note added	12		
	APPENDIX added	21		

2. List of Abbreviations

Abbreviation	Description
APS4A, ALTPRE	Altitude Preselect System
AVSR, ASR	AVIONIK Straubing
ETSO / TSO	European Technical Standard Order
GND	Ground
IMA	Installation Manual
MDL	Master Documents List
MIL	Military
P/N	Partnummer
RTCA	Radio Technical Commission for Aeronautics

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6. General Description

6.1. Introduction

The Altitude Preselect System APS4A, P/N: AS01-ALTPRE-xx, is intended to be used as an interface for Air Data Displays or Primary Flight Displays with Alerter function and a variety of existing autopilot systems to supply altitude Preselect- and Hold-Function.

The System is mainly designed for retrofit installation and consists of a small lightweight interface box, the Altitude Preselect Interface Box P/N: AS02-ALTPIB-XX, an Altitude Preselect Indicator/Switch P/N: AS03-ALTPIN-XX and an installation kit P/N: AS12-ALTPKT-00.

6.2. System Overview

6.2.1. Block Diagram

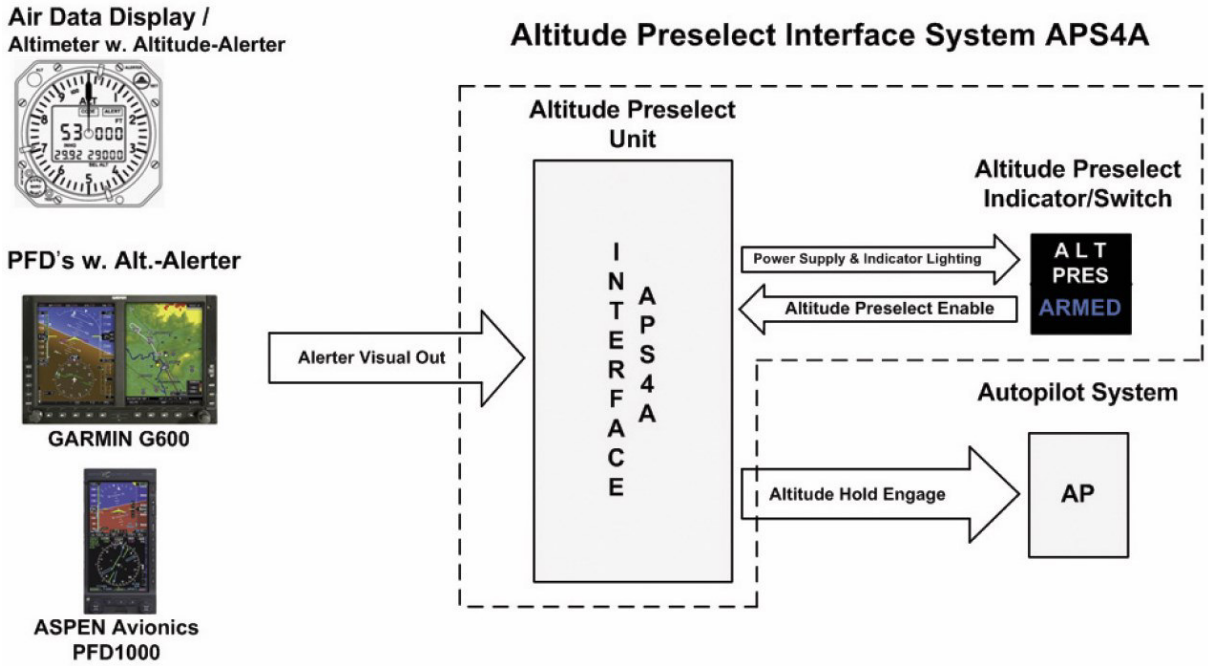


Figure 1: Block Diagram

6.3. Configuration

The Altitude Preselect System APS4A can be configured to match almost any given aircraft installation needed.

Supply voltage:	14VDC or 28VDC	(internally configured by jumper)
Output voltage to Indicator:	28VDC or GND	(internally configured by jumper)
Relay action:	wiping or latching	(internally configured by jumper)
Altimeter on preselected altitude:	GND or +10VDC	(internally configured)

Only AVIONIK STRAUBING Entwicklungs GmbH is allowed to configure APS4A!

P/N°	Power Input (JP1)		ARM out (JP2)		Relay action (JP3)		INPUT From Altimeter
AS02-ALTPIB-00	14VDC	Pin 3-4	LO	Pin 3-4	Wiping	Pin 3-4	GND
AS02-ALTPIB-01	14VDC	Pin 3-4	LO	Pin 3-4	Wiping	Pin 3-4	10V
AS02-ALTPIB-10	14VDC	Pin 3-4	LO	Pin 3-4	Latching	Pin 1-2	GND
AS02-ALTPIB-11	14VDC	Pin 3-4	LO	Pin 3-4	Latching	Pin 1-2	10V
AS02-ALTPIB-20	14VDC	Pin 3-4	HI	Pin 1-2	Wiping	Pin 3-4	GND
AS02-ALTPIB-21	14VDC	Pin 3-4	HI	Pin 1-2	Wiping	Pin 3-4	10V
AS02-ALTPIB-30	14VDC	Pin 3-4	HI	Pin 1-2	Latching	Pin 1-2	GND
AS02-ALTPIB-31	14VDC	Pin 3-4	HI	Pin 1-2	Latching	Pin 1-2	10V
AS02-ALTPIB-40	28VDC	Pin 1-2	LO	Pin 3-4	Wiping	Pin 3-4	GND
AS02-ALTPIB-41	28VDC	Pin 1-2	LO	Pin 3-4	Wiping	Pin 3-4	10V
AS02-ALTPIB-50	28VDC	Pin 1-2	LO	Pin 3-4	Latching	Pin 1-2	GND
AS02-ALTPIB-51	28VDC	Pin 1-2	LO	Pin 3-4	Latching	Pin 1-2	10V
AS02-ALTPIB-60	28VDC	Pin 1-2	HI	Pin 1-2	Wiping	Pin 3-4	GND
AS02-ALTPIB-61	28VDC	Pin 1-2	HI	Pin 1-2	Wiping	Pin 3-4	10V
AS02-ALTPIB-70	28VDC	Pin 1-2	HI	Pin 1-2	Latching	Pin 1-2	GND
AS02-ALTPIB-71	28VDC	Pin 1-2	HI	Pin 1-2	Latching	Pin 1-2	10V

Table 1: Configuration

6.4. Indicator

The Altitude Preselect System APS4A can be configured installed with following indicator.

Manufacturer	LED	Lamp	Partnumber Manufacturer	Partnumber AVSR
VIVISUN	☒	☐	LED-41-12-BB-E07FE	AS03-ALTPIN-00
EATON	☐	☒	58210A2B0C3F4L12N2(L,G),P11	AS03-ALTPIN-01
EATON	☒	☐	58220A2B0C3F84L5212N2(D,L),P11	AS03-ALTPIN-02

Table 2: Partnumber Definition Indicator

6.5. Technical Specification

Supply Input

Supply Voltage Range:	10 to 32 Volts DC (internally configured by jumper)
Current Consumption:	max. 0.150 Ampere

Signal Input

Preselect Input:	Active LOW/ +10V (internally configured)
Altitude Hold Input:	Active LOW

Output to Indicator

Indicator Lighting:	28VDC
Indicator Lighting ARMED:	28VDC or GND (internally configured by jumper)
Output Current:	0.05 Ampere

Autopilot Output

Relay Contact:	momentarily or continuous contact 1 Ampere resistive (internally configured by jumper)

Mechanical characteristics

Connector:	D-Sub IP67 Size9 / 9PIN
Weight:	250g
Dimensions:	105 x 72 x 39 (L x W x H; in mm)
Mounting:	4 ea. Screws 4mm or 6/32”
Cooling:	Cooling not required

6.6. TSO / ETSO Limitations

The System is certified and limited to TSO-C9c / ETSO-C9c and TSO-C52b / ETSO-C52b standards.

A FAA validation document is enclosed to the APPENDIX.

6.7. Certification of Hardware

The system has been qualified according to RTCA DO-160F:

Section	Description	Category	Remarks
4	Temperature and Altitude	D2	
5	Temperature Variation	A	
6	Humidity	B	
7	Operational Shocks and Crash Safety	B	
8	Vibration	R, S	1
9	Explosive Atmosphere	X	
10	Waterproofness	W	
11	Fluids Susceptibility	X	
12	Sand and Dust	X	
13	Fungus Resistance	X	
14	Salt Fog	X	
15	Magnetic Effect	Z	
16	Power Input	B	
17	Voltage Spike	A	
18	Audio Frequency Conducted Susceptibility - Power Inputs	B	
19	Induced Signal Susceptibility	ZC	
20	Radio Frequency Susceptibility (Radiated and Conducted)	W	
21	Emission of Radio Frequency Energy	L	
22	Lightning Induced Transient Susceptibility	A3C3X	
23	Lightning Direct Effects	X	
24	Icing	X	
25	Electrostatic Discharge (ESD)	A	
26	Fire, Flammability	X	
Remark 1) R: Curve B3&B4; S: Curve M			

Table 3: Environmental Tests

Env. Cat: (D2)ABB(R,S)XWXXXXZBAB(ZC)WL(A3C3X)XXAX

6.8. Certification of Software

No software used.

6.9. Remarks for intrinsic safe installation

None

6.10. Limited Warranty

The Altitude Preselect System is warranted to be free from defects in materials or workmanship for two years from date of purchase. This warrant does not cover failures due to abuse, misuse, accident or unauthorized alterations or repairs.

IN NO EVENT AVIONIK STRAUBING ENTWICKLUNGS GMBH WILL BE LIABLE FOR ANY INCIDENTAL, SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM USE, MISUSE OR INABILITY TO USE THIS PRODUCT OR DEFECTS IN THE PRODUCT.

AVIONIK STRAUBING Entwicklungs GmbH retains exclusive right to repair or replace the unit or offer a full refund of the purchase price at its sole discretion. This shall be a sole and exclusive remedy for any breach of warranty.

To obtain warranty service contact AVIONIK STRAUBING Entwicklungs GmbH or the aircraft Manufacturer (OEM).

AVIONIK STRAUBING Entwicklungs GmbH
Flugplatzstr. 5
D-94348 Atting
Germany

7. Installation

7.1. Introduction

To achieve the desired reliability and performance of the APS4A careful planning of the installation with all advices has to be considered.

7.2. Installation Restrictions

The Altitude Preselect System is an Incomplete System, therefore it is restricted to be used with following autopilot systems only:

- ARC (Cessna) 400B
- ARC (Cessna) 800B
- ARC (Cessna) 1000
- Century 4
- Century 41
- Century 2000
- Collins AP106
- Bendix King KFC 200
- Bendix King KFC 250
- Bendix King KFC 300
- M4D
- S-TEC System 30
- S-TEC System 50
- S-TEC System 55
- S-TEC System 55X
- S-TEC System 60
- S-TEC System 65

The Altitude Preselect System can be used with any Air Data Display or Primary Flight Display with Alerter function that provides a GND or a +10V signal when the desired altitude is reached.

NOTE:

To install the Altitude Preselect System with GARMIN G500/600, SD card GDU620, Altitude Preselect Enablement Card 010-00769-52 is required.

For further information see GARMIN G600/G600 Installation Manual.

7.3. Installation Considerations

The Altitude Preselect Interface Box can be mounted in any mechanical position.

7.4. Locations of Installation

Inside the aircraft not exposed to direct airflow.

7.5. Wirings and Cables

Use AWG 22 Tyco-Raychem MIL-C 22759/ or equivalent wires for the connection of the Altitude Preselect System.

7.6. Installation Procedure

7.6.1. General

Use Installation Kit (P/N: AS12-ALTPKT-00), consisting of:

- P/N: ET000000000312 Connector female D-Sub 9 Pin
- P/N: ET000000000245 Crimp Socket HD-20
- P/N: ET000000001022 Shell D-Sub

7.6.2. Altitude Interface Box

Mounting the Interface Box:

Use four M4 screws or equivalent (e.g. 6/32”) with retainer for fixation. Bonding has to be ensured.

7.6.3. Indicator / Switch

7.6.3.1 VIVISUN

Panel Mounting Spacer:

A panel mounting spacer is supplied with each unit so as to place the switch mounting flange flush with a 0.235" thick edge lighted panel. For other switch applications the spacer is discarded.

Mounting Sleeve:

A reversible mounting sleeve is supplied with each unit so as to be usable with or without the panel mounting spacer.

Mounting Plate Thickness:

The mounting sleeve allows the switch to be installed on mounting plates ranging from 0.032" to 0.187" thick.

Front Mounting:

The switch assembly is mounted from the front of the mounting plate by means of a screwdriver only. All mounting screws are integral to the switch.

Mounting the Switch:

Using the extraction slots, pull the pushbutton cap fully out of the switch body and allow the cap to rotate 90° where it is held by the retaining element as shown in Figure 2. Remove the mounting sleeve and insert the switch body into the mounting plate cut-out. Then, from behind the mounting plate, slide the mounting sleeve onto the switch body. Tighten the two screws inside the switch body until the integral mounting hardware pulls the mounting sleeve up tight against the mounting plate using typically 18 inch-ounces of torque. The pushbutton cap is then reinserted and the QUIK-CONNECT™ plug can be plugged into the switch housing. A side view of a properly mounted switch is shown in Figure 2.

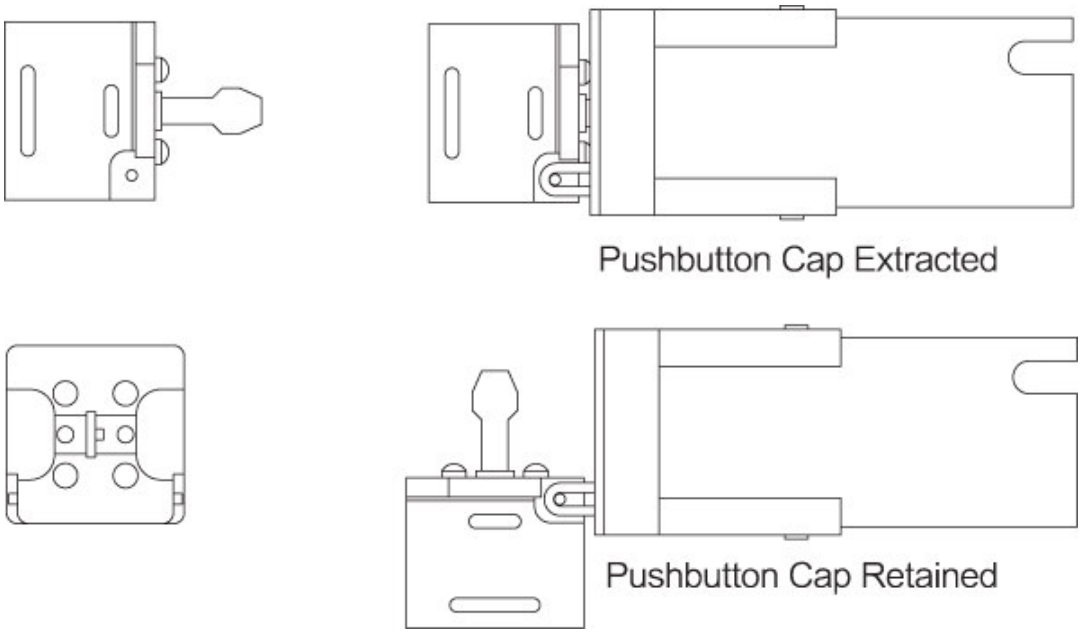


Figure 2: VIVISUN - Pushbutton Cap Extracted and Retained

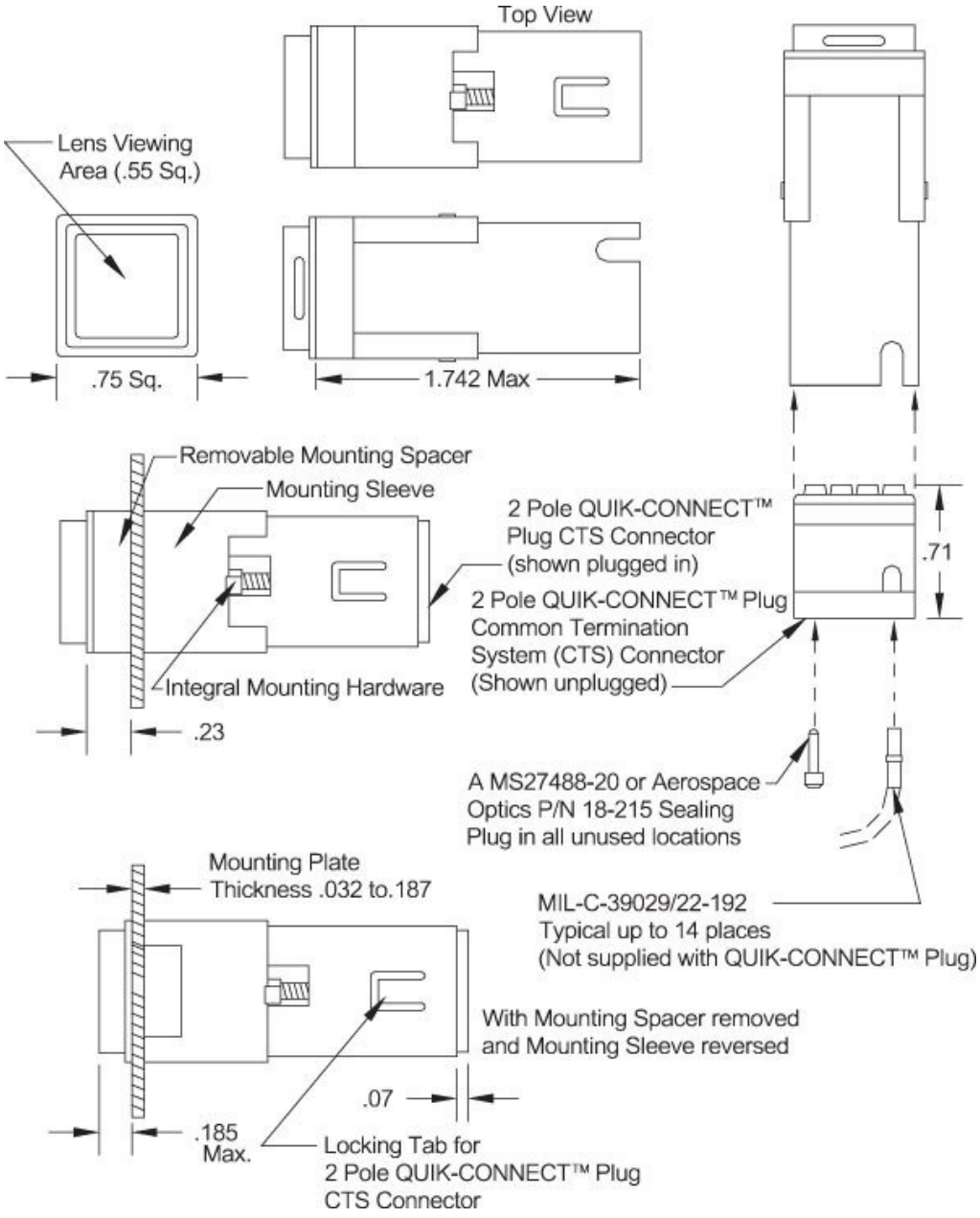


Figure 3: VIVISUN - Mounting the switch

7.6.3.2 EATON

Panel Mounting Spacer:

Panel spacers are used to adjust the exposure of the switch in front of the panel and to reduce the extension of the switch behind panel. When a light plate is used, it is common for a spacer to be used above panel to mount the housing flange flush with the light plate. In situations where behind panel depth is an issue, a panel spacer can be used to make the unit fit the space available. Custom switches with a shorter switch housing that expose more of the button can be designed for your specific application, if desired.

Mounting System:

Termination systems for the 582 include solder, PCB and plug-in interfaces. A rod mount system is also available. In the rod mount version, the front housing flange is eliminated and a semi-circular relief is provided in the switch body. These alterations allow the units to be stacked together and configured within the smallest space possible. The units are assembled together by fastening rods through the hole formed by aligning the two semi-circular features on adjoining switches to end plates located on either end of the switch stack.

Mounting Plate Thickness:

To calculate the actual behind panel depth for your application, subtract the thickness of the panel, the thickness of spacers used above panel and 0.030 inches for the drip-proof panel seal, if required, from the length of unit (see Figure 5).

Front Mounting:

The switch assembly is mounted from the front of the mounting plate by means of a screwdriver only. All mounting screws are integral to the switch.

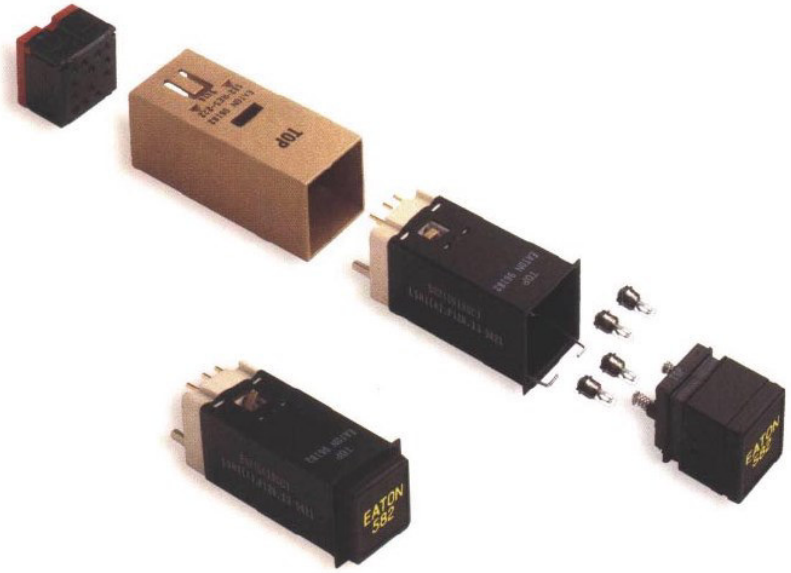
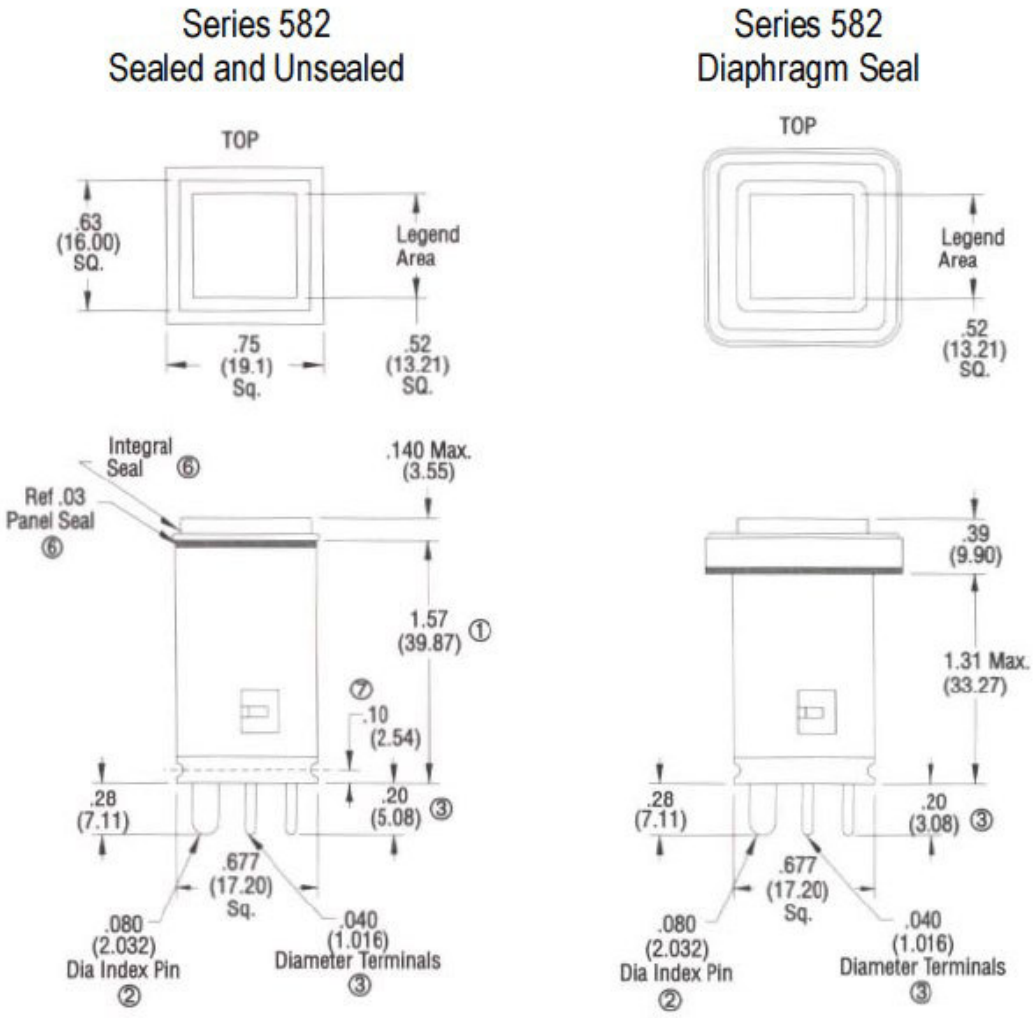


Figure 4: EATON - Mounting System



① For short unit subtract .210" from dimension shown.

② Included on plugin/crimp type termination units.

③ For PCB shall be .030 diameter. For solder shall be single turret .050 diameter.

4 . Dimensions are in inches. Unless otherwise specified, tolerances are ±.010 for three place decimals and ±.03 for two place decimals.

5. Mounting screw torque 16 ±4 in-oz.

⑥ For sealed units only.

⑦ Required for rodmount. Optional for other types.

Figure 5: EATON - Mounting the switch

8. System Interconnection

8.1. Altitude Interface Box

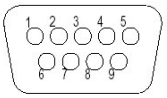


Figure 6: Connector Altitude Interface Box

APS4A connector socket: D-Sub 9 Pin, IP67 male
Corresponding cable connector : D-Sub 9 Pin, female

PIN	Description
1	Relay NC
2	Relay C
3	Relay NO
4	Indicator Lighting (28VDC)
5	Indicator Lighting ARMED (28VDC or GND to Ind./Switch)
6	Altitude Preselect ARM (moment. GND, enable from Indicator/Switch)
7	Preselect Input (GND / +10V from Altimeter when reached preselected Altitude
8	GND
9	Supply Voltage Range (10 to 32VDC Power Supply; internal straps for 14/28VDC operation)

Table 4: Pin Description APS4A

8.2. Indicator / Switch

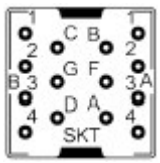


Figure 7: VIVISUN Indicator

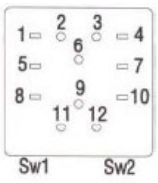


Figure 8: EATON Lamp Indicator

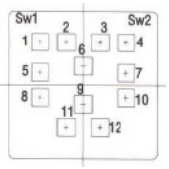


Figure 9: EATON LED Indicator

PIN Interface Box	Description	PIN VIVISUN	PIN EATON Lamp	PIN EATON LED
5	Indicator Lighting ARMED (28VDC or GND to IND. / Switch)	A	12	12
	GND	B	2	2
	N/C	C	4	4
	PTT Lamp Test	D	11	11
4	Indicator Lighting (28VDC)	F	9	9
	28VDC / BRT DIM	G	6	6
6	Altitude Preselect ARM	A1	1	1
	N/C	A2	5	5
	GND	A3	8	8
	N/C	A4	7	7
	N/C	B1	10	10
	N/C	B2		
	N/C	B3		
	N/C	B4		
	GND	-	3	3

Table 5: Pin Description Indicator

9. Post Installation Checkout

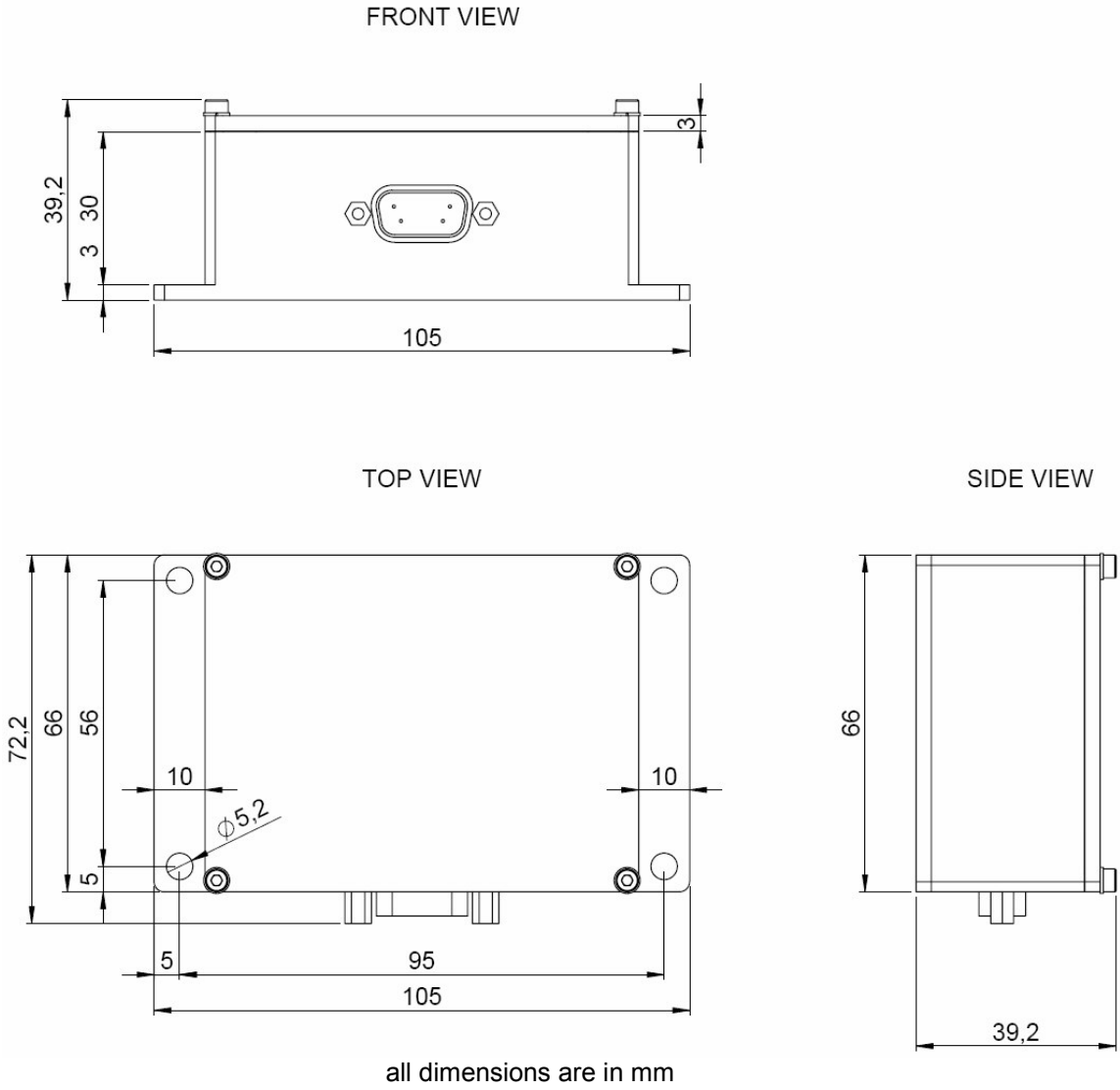
Perform Ground Test. (see Pilots Operating Manual).

10. Troubleshooting

For Troubleshooting see Altitude Preselect System APS4A Maintenance Manual or call AVIONIK STRAUBING Entwicklungs GmbH.

11. Dimensions and Wirings

11.1 Dimensions



all dimensions are in mm

Figure 10: Dimensions

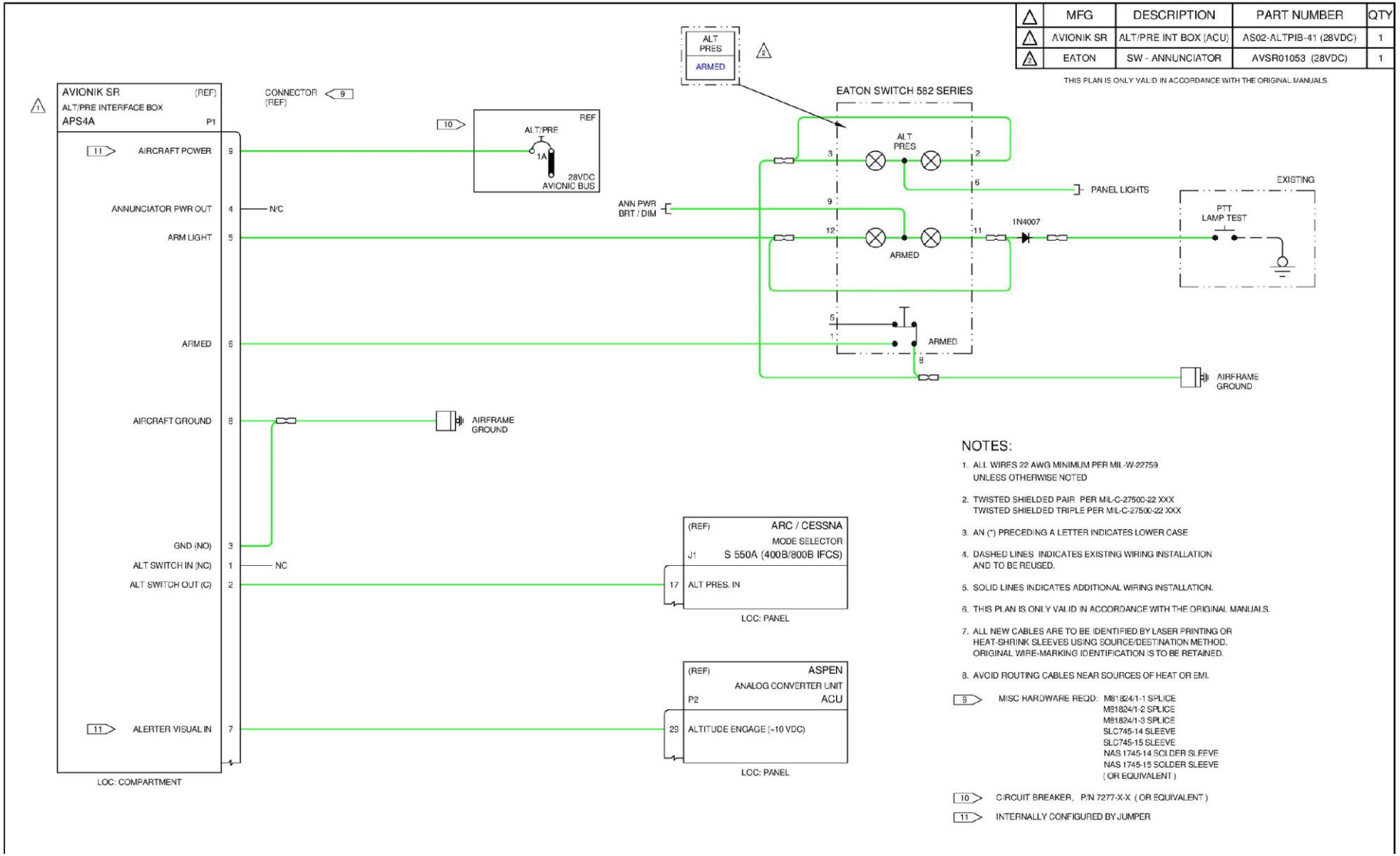
11.2 Wirings

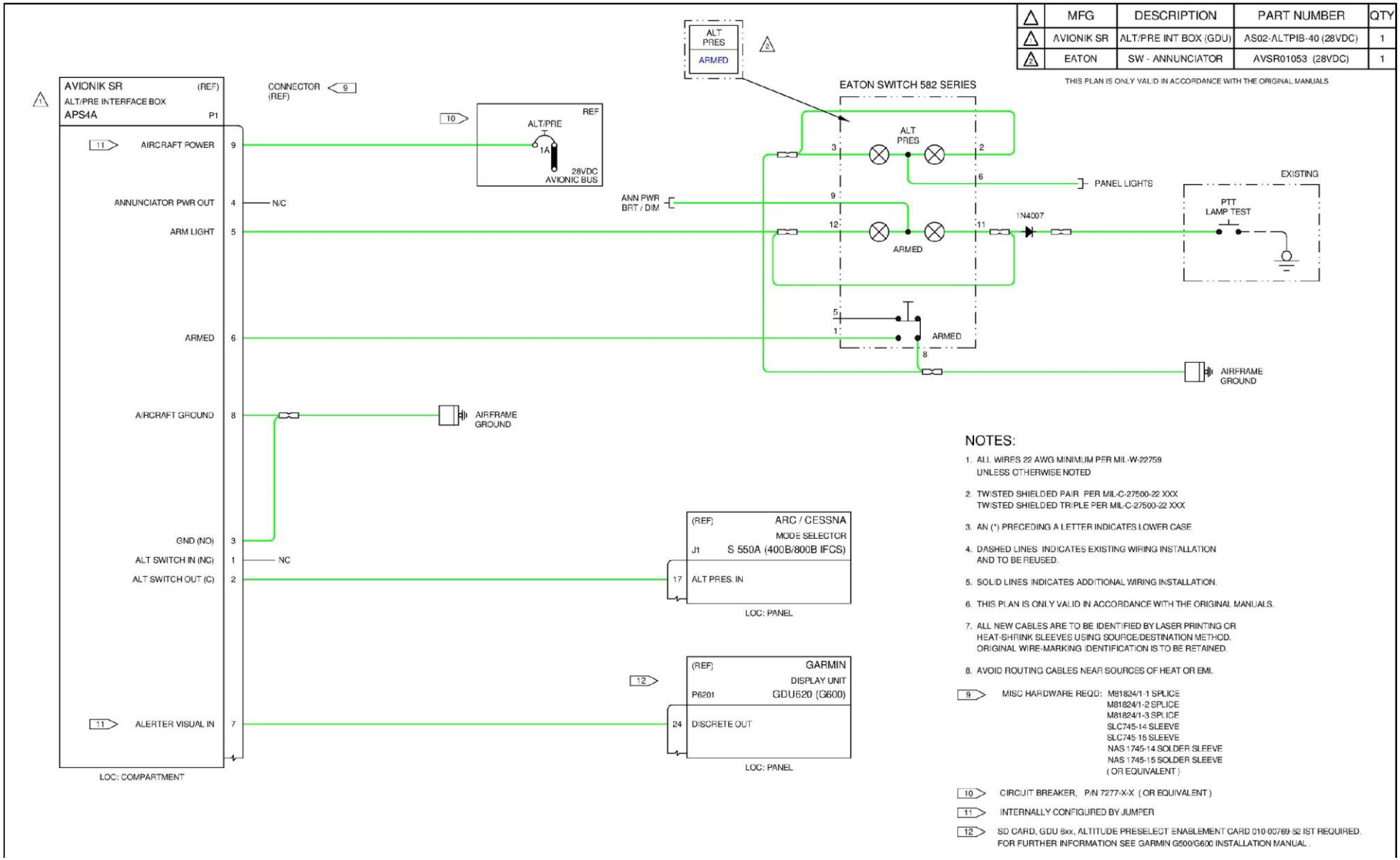
For wirings refer to APPENDIX.

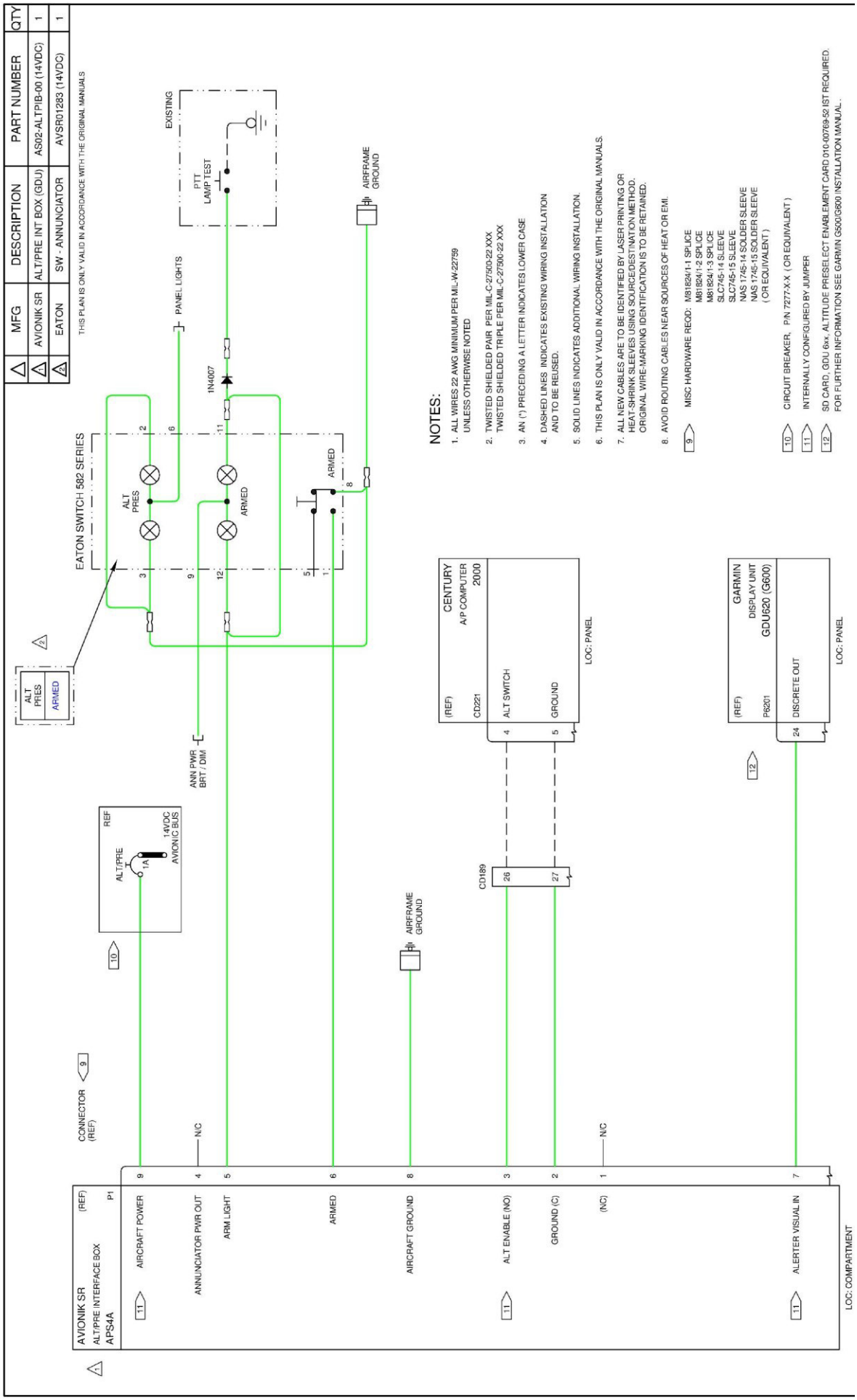
12. APPENDIX

APPENDIX

Table of APPENDIX


MFG | DESCRIPTION | PART NUMBER | QTY
AVIONIK SR | ALT/PRE INT BOX (ACU) | AS02-ALTPIB-41 (28VDC) | 1
EATON | SW - ANNUNCIATOR | AVSR01053 (28VDC) | 1
THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS
ALT PRES
ARMED
EATON SWITCH 582 SERIES
AVIONIK SR (REF)
ALT/PRE INTERFACE BOX
APS4A P1
CONNECTOR (REF) 9
10
REF
ALT/PRE
1A
28VDC AVIONIC BUS
AIRCRAFT POWER 9
ANNUNCIATOR PWR OUT 4
N/C
ANN PWR BRT / DIM
ARM LIGHT 5
ARMED 6
AIRCRAFT GROUND 8
AIRFRAME GROUND
GND (NO) 3
ALT SWITCH IN (NC) 1
NC
ALT SWITCH OUT (C) 2
ALERTER VISUAL IN 7
LOC: COMPARTMENT
ALT PRES
ARMED
PANEL LIGHTS
1N4007
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
(REF) ARC / CESSNA
MODE SELECTOR
J1 S 550A (400B/800B IFCS)
17 ALT PRES. IN
LOC: PANEL
(REF) ASPEN
ANALOG CONVERTER UNIT
P2 ACU
29 ALTITUDE ENGAGE (+10 VDC)
LOC: PANEL
NOTES:
1. ALL WIRES 22 AWG MINIMUM PER MIL-W-22759 UNLESS OTHERWISE NOTED
2. TWISTED SHIELDED PAIR PER MIL-C-27500-22 XXX
TWISTED SHIELDED TRIPLE PER MIL-C-27500-22 XXX
3. AN (*) PRECEDING A LETTER INDICATES LOWER CASE
4. DASHED LINES INDICATES EXISTING WIRING INSTALLATION AND TO BE REUSED.
5. SOLID LINES INDICATES ADDITIONAL WIRING INSTALLATION.
6. THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS.
7. ALL NEW CABLES ARE TO BE IDENTIFIED BY LASER PRINTING OR HEAT-SHRINK SLEEVES USING SOURCE/DESTINATION METHOD. ORIGINAL WIRE-MARKING IDENTIFICATION IS TO BE RETAINED.
8. AVOID ROUTING CABLES NEAR SOURCES OF HEAT OR EMI.
9 MISC HARDWARE REQD: M81824/1-1 SPLICE
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER


△ | MFG | DESCRIPTION | PART NUMBER | QTY
△1 | AVIONIK SR | ALT/PRE INT BOX (GDU) | AS02-ALTPIB-40 (28VDC) | 1
△2 | EATON | SW - ANNUNCIATOR | AVSR01053 (28VDC) | 1
THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS
ALT PRES
ARMED
△2
EATON SWITCH 582 SERIES
AVIONIK SR (REF)
ALT/PRE INTERFACE BOX
APS4A P1
CONNECTOR (REF) 9
10
REF
ALT/PRE
1A
28VDC AVIONIC BUS
11 AIRCRAFT POWER 9
ANNUNCIATOR PWR OUT 4 N/C
ARM LIGHT 5
ANN PWR BRT / DIM
ALT PRES
ARMED
PANEL LIGHTS
EXISTING
PTT LAMP TEST
1N4007
ARMED 6
AIRCRAFT GROUND 8
AIRFRAME GROUND
GND (NO) 3
ALT SWITCH IN (NC) 1 NC
ALT SWITCH OUT (C) 2
(REF) ARC / CESSNA
MODE SELECTOR
J1 S 550A (400B/800B IFCS)
17 ALT PRES. IN
LOC: PANEL
12
(REF) GARMIN
DISPLAY UNIT
P6201 GDU620 (G600)
11 ALERTER VISUAL IN 7
24 DISCRETE OUT
LOC: PANEL
LOC: COMPARTMENT
NOTES:
1. ALL WIRES 22 AWG MINIMUM PER MIL-W-22759 UNLESS OTHERWISE NOTED
2. TWISTED SHIELDED PAIR PER MIL-C-27500-22 XXX TWISTED SHIELDED TRIPLE PER MIL-C-27500-22 XXX
3. AN (*) PRECEDING A LETTER INDICATES LOWER CASE
4. DASHED LINES INDICATES EXISTING WIRING INSTALLATION AND TO BE REUSED.
5. SOLID LINES INDICATES ADDITIONAL WIRING INSTALLATION.
6. THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS.
7. ALL NEW CABLES ARE TO BE IDENTIFIED BY LASER PRINTING OR HEAT-SHRINK SLEEVES USING SOURCE/DESTINATION METHOD. ORIGINAL WIRE-MARKING IDENTIFICATION IS TO BE RETAINED.
8. AVOID ROUTING CABLES NEAR SOURCES OF HEAT OR EMI.
9 MISC HARDWARE REQD: M81824/1-1 SPLICE
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS1745-14 SOLDER SLEEVE
NAS1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER
12 SD CARD, GDU 6xx, ALTITUDE PRESELECT ENABLEMENT CARD 010-00769-52 IST REQUIRED. FOR FURTHER INFORMATION SEE GARMIN G500/G600 INSTALLATION MANUAL .


MFG
DESCRIPTION
PART NUMBER
QTY
AVIONIK SR
ALT/PRE INT BOX (GDU)
AS02-ALTPIB-00 (14VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01283 (14VDC)
1
THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS
NOTES:
1. ALL WIRES 22 AWG MINIMUM PER MIL-W-22759 UNLESS OTHERWISE NOTED
2. TWISTED SHIELDED PAIR PER MIL-C-27500-22 XXX TWISTED SHIELDED TRIPLE PER MIL-C-27500-22 XXX
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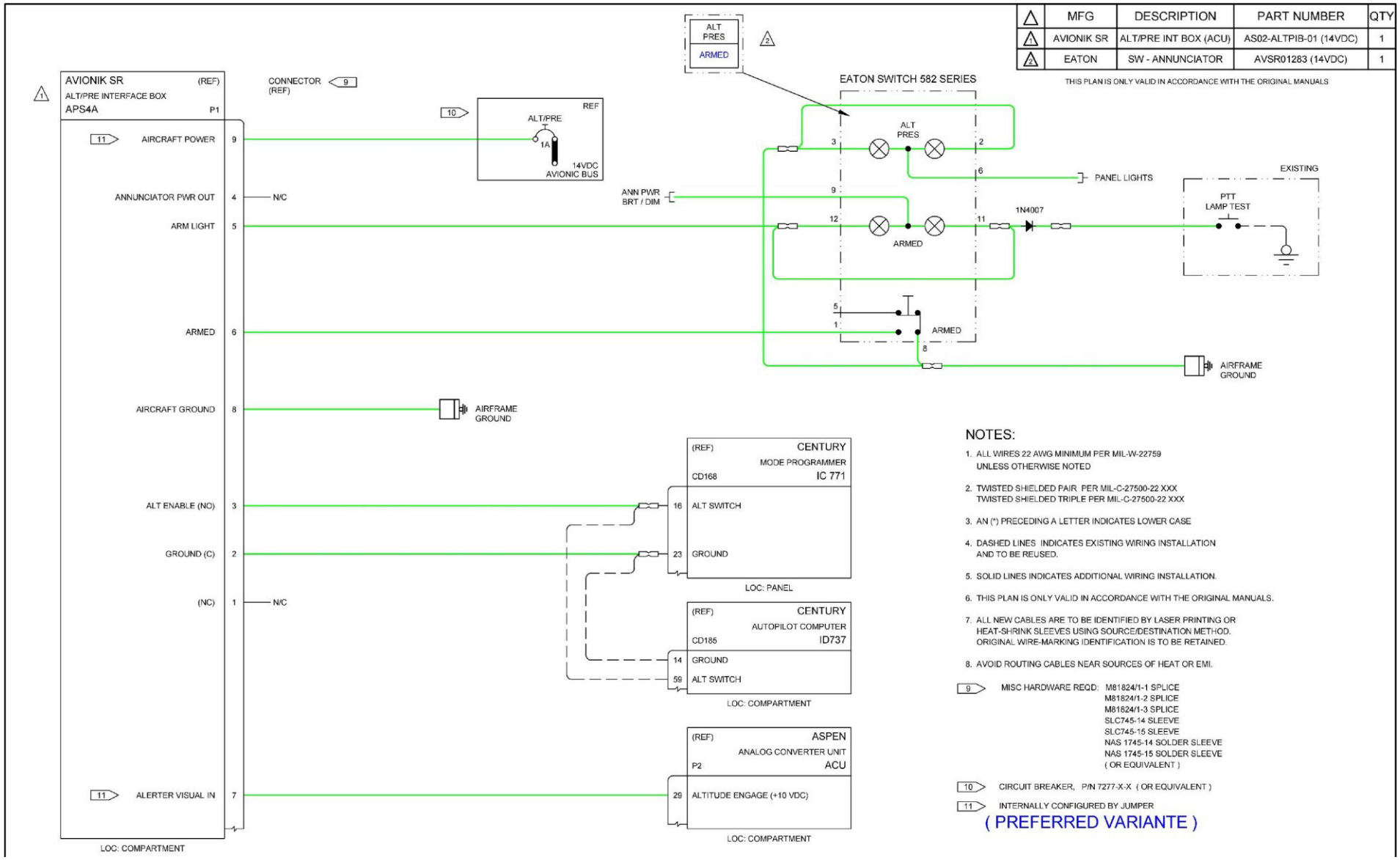
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10. CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11. INTERNALLY CONFIGURED BY JUMPER
12. SD CARD, GDU 6xx, ALTITUDE PRESELECT ENABLEMENT CARD 010-00769-52 IST REQUIRED. FOR FURTHER INFORMATION SEE GARMIN G500/G600 INSTALLATION MANUAL.
EXISTING
PTT
LAMP TEST
PANEL LIGHTS
1N4007
AIRFRAME GROUND
EATON SWITCH 582 SERIES
ALT PRES
ARMED
ANN PWR BRT / DIM
REF
ALT/PRE
14VDC AVIONIC BUS
CONNECTOR (REF)
CENTURY
A/P COMPUTER
2000
(REF)
CD221
ALT SWITCH
GROUND
LOC: PANEL
CD189
GARMIN
DISPLAY UNIT
GDU620 (G600)
P8201
DISCRETE OUT
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
P1
AIRCRAFT POWER
ANNUNCIATOR PWR OUT
ARM LIGHT
ARMED
AIRCRAFT GROUND
ALT ENABLE (NO)
GROUND (C)
(NC)
N/C
ALERTER VISUAL IN
LOC: COMPARTMENT



	MFG	DESCRIPTION	PART NUMBER	QTY
1	AVIONIK SR	ALT/PRE INT BOX (ACU)	AS02-ALTPIB-01 (14VDC)	1
2	EATON	SW - ANNUNCIATOR	AVSR01283 (14VDC)	1

THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS

NOTES:

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   TWISTED SHIELDED TRIPLE PER MIL-C-27500-22 XXX
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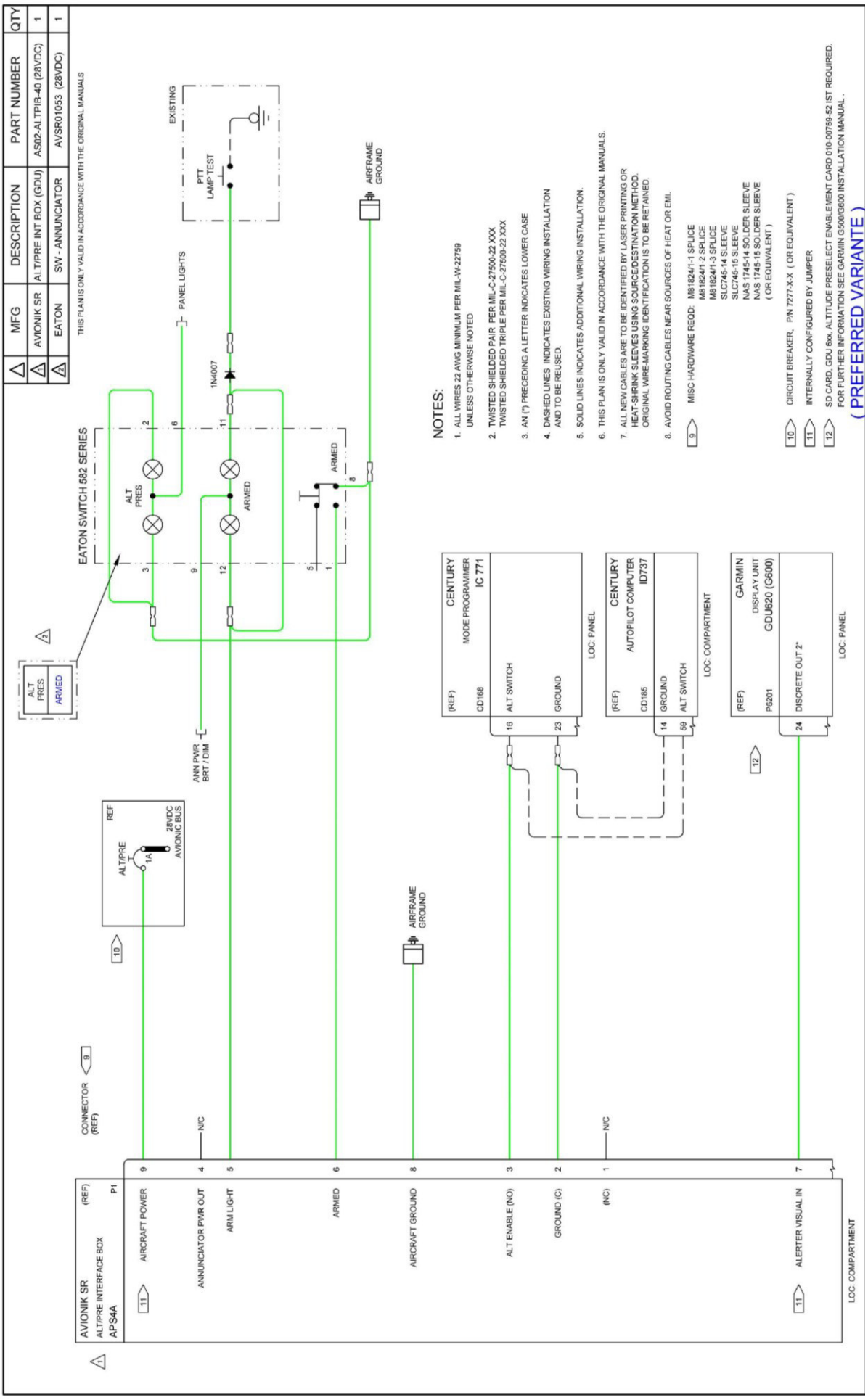
8. AVOID ROUTING CABLES NEAR SOURCES OF HEAT OR EMI.

9 MISC HARDWARE REQD: M81824/1-1 SPLICE
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)

10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)

11 INTERNALLY CONFIGURED BY JUMPER

(PREFERRED VARIANTE)


MFG
DESCRIPTION
PART NUMBER
QTY
AVIONIK SR
ALT/PRE INT BOX (GDU)
AS02-ALTPIB-40 (28VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01053 (28VDC)
1
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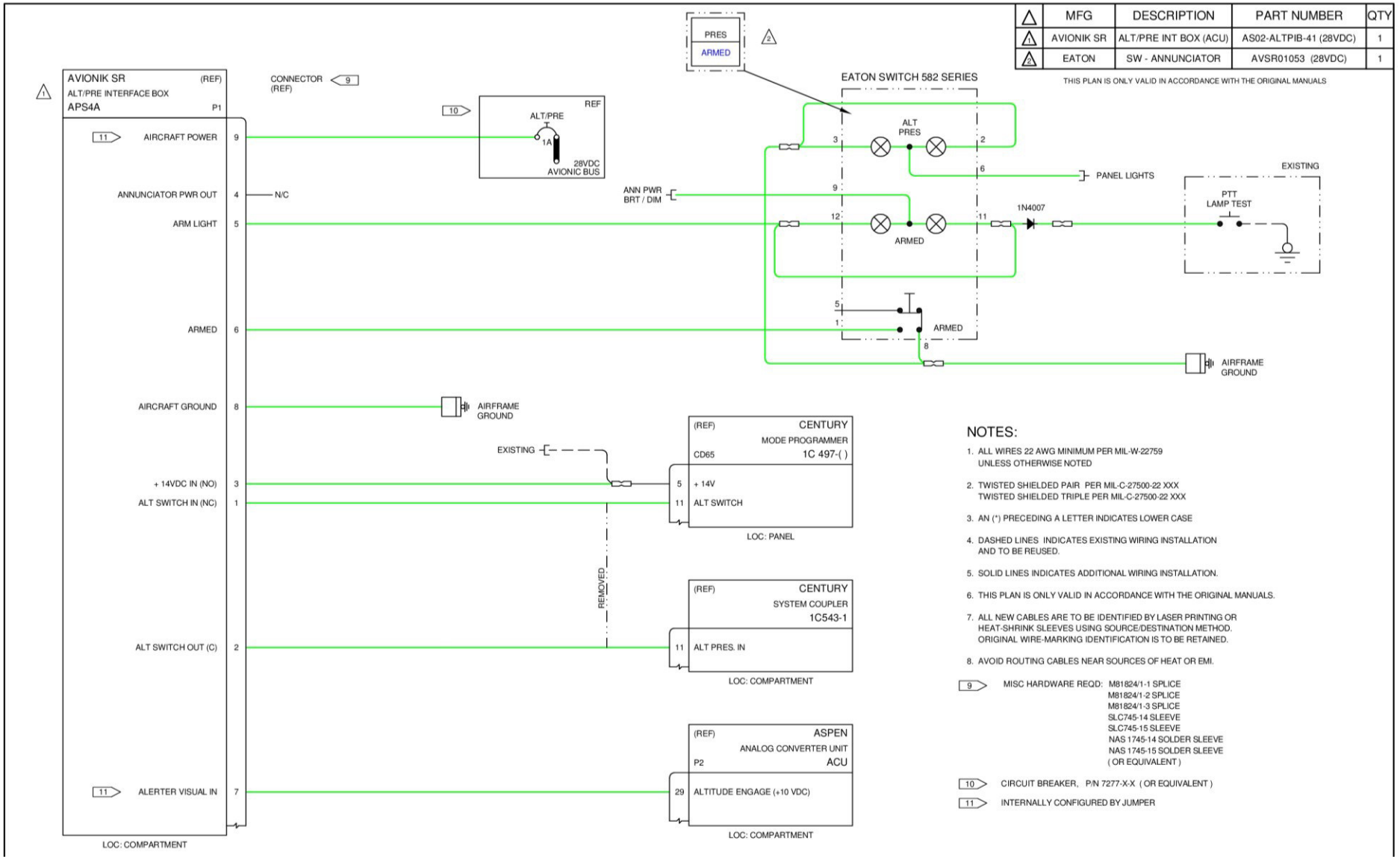
8. AVOID ROUTING CABLES NEAR SOURCES OF HEAT OR EMI.
9 MISC HARDWARE REQD: M81824/1-1 SPLICE
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-16 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER
12 SD CARD, GDU 6xx, ALTITUDE PRESELECT ENABLEMENT CARD 010-00759-52 IST REQUIRED. FOR FURTHER INFORMATION SEE GARMIN G500/G600 INSTALLATION MANUAL.
(PREFERRED VARIANTE)
EATON SWITCH 582 SERIES
ALT PRES
ARMED
PANEL LIGHTS
1N4007
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
ANN PWR BRT / DIM
CONNECTOR (REF)
REF
ALT/PRE
1A
28VDC AVIONIC BUS
CENTURY
MODE PROGRAMMER
IC 771
(REF)
CD168
ALT SWITCH
GROUND
LOC: PANEL
CENTURY
AUTOPILOT COMPUTER
ID737
CD165
GROUND
ALT SWITCH
LOC: COMPARTMENT
GARMIN
DISPLAY UNIT
GDU620 (G600)
P6201
DISCRETE OUT 2*
LOC: PANEL
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
P1
AIRCRAFT POWER
ANNUNCIATOR PWR OUT
ARM LIGHT
ARMED
AIRCRAFT GROUND
ALT ENABLE (NO)
GROUND (C)
(NC)
ALERTER VISUAL IN
N/C
LOC: COMPARTMENT



△	MFG	DESCRIPTION	PART NUMBER	QTY
1	AVIONIK SR	ALT/PRE INT BOX (ACU)	AS02-ALTPIB-41 (28VDC)	1
2	EATON	SW - ANNUNCIATOR	AVSR01053 (28VDC)	1

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NOTES:

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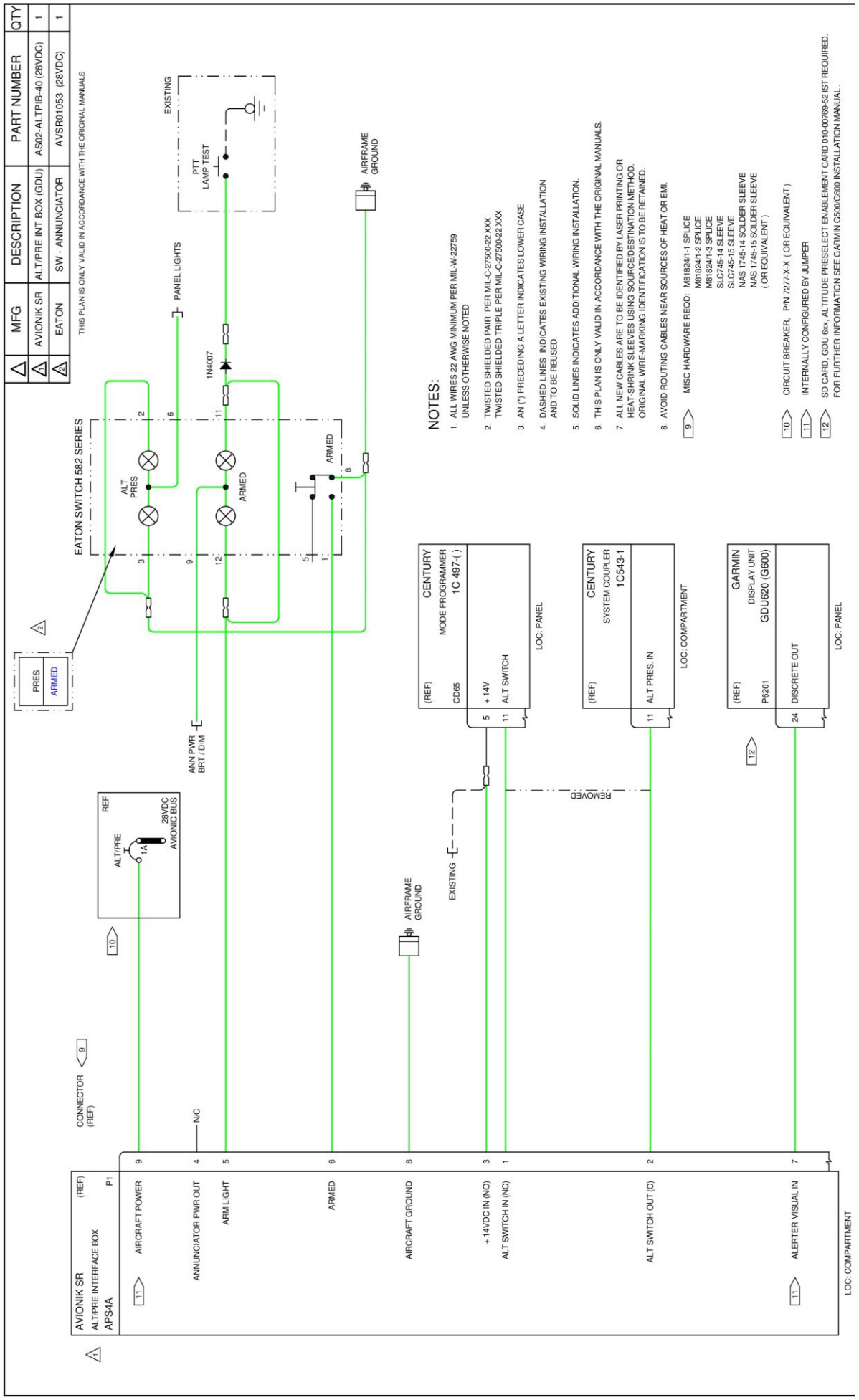
8. AVOID ROUTING CABLES NEAR SOURCES OF HEAT OR EMI.

9 MISC HARDWARE REQD: M81824/1-1 SPLICE
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)

10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)

11 INTERNALLY CONFIGURED BY JUMPER


MFG
DESCRIPTION
PART NUMBER
QTY
AVIONIK SR
ALT/PRE INT BOX (GDU)
AS02-ALTPIB-40 (28VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01053 (28VDC)
1
THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS
NOTES:
1. ALL WIRES 22 AWG MINIMUM PER MIL-W-22759 UNLESS OTHERWISE NOTED
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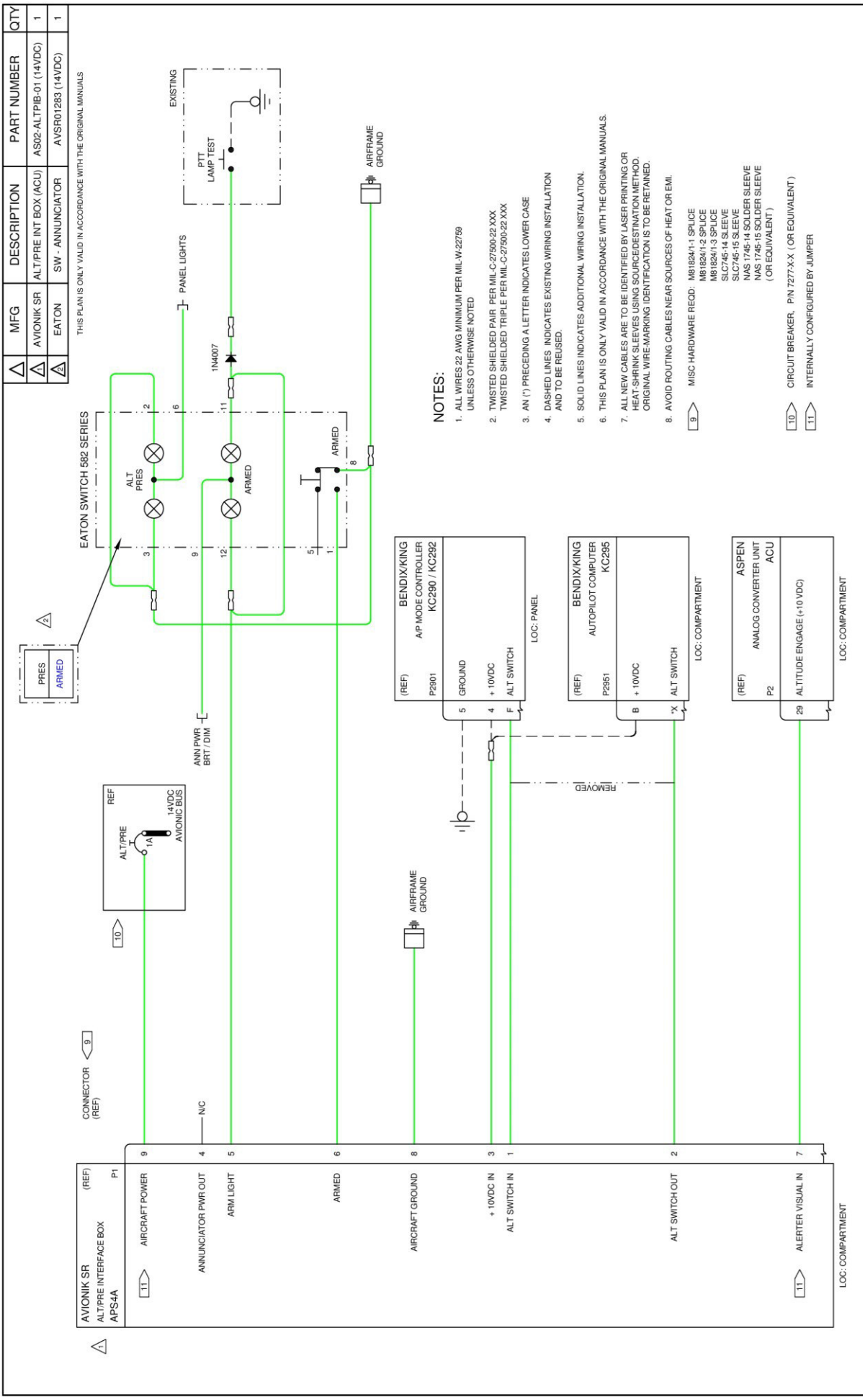
9 MISC HARDWARE REQD: M81824/1-1 SPLICE M81824/1-2 SPLICE M81824/1-3 SPLICE SLC745-14 SLEEVE SLC745-15 SLEEVE NAS 1745-14 SOLDER SLEEVE NAS 1745-15 SOLDER SLEEVE (OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER
12 SD CARD, GDU 6xx, ALTITUDE PRESELECT ENABLEMENT CARD 010-00769-52 IST REQUIRED. FOR FURTHER INFORMATION SEE GARMIN G500/G600 INSTALLATION MANUAL.
EATON SWITCH 582 SERIES
PRES
ARMED
ALT PRES
ARMED
ARMED
1N4007
PANEL LIGHTS
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
ANN PWR BRT / DIM
REF
ALT/PRE
1A
28VDC AVIONIC BUS
CONNECTOR (REF)
N/C
EXISTING
AIRFRAME GROUND
REMOVED
CENTURY
MODE PROGRAMMER
1C 497-( )
(REF)
CD65
+ 14V
ALT SWITCH
LOC: PANEL
CENTURY
SYSTEM COUPLER
1C543-1
(REF)
ALT PRES. IN
LOC: COMPARTMENT
GARMIN
DISPLAY UNIT
GDU620 (G600)
(REF)
P6201
DISCRETE OUT
LOC: PANEL
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
(REF)
P1
AIRCRAFT POWER
ANNUNCIATOR PWR OUT
ARM LIGHT
ARMED
AIRCRAFT GROUND
+ 14VDC IN (NO)
ALT SWITCH IN (NC)
ALT SWITCH OUT (C)
ALERTER VISUAL IN
LOC: COMPARTMENT


MFG
DESCRIPTION
PART NUMBER
QTY
AVIONIK SR
ALT/PRE INT BOX (ACU)
AS02-ALTPIB-01 (14VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01283 (14VDC)
1
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NOTES:
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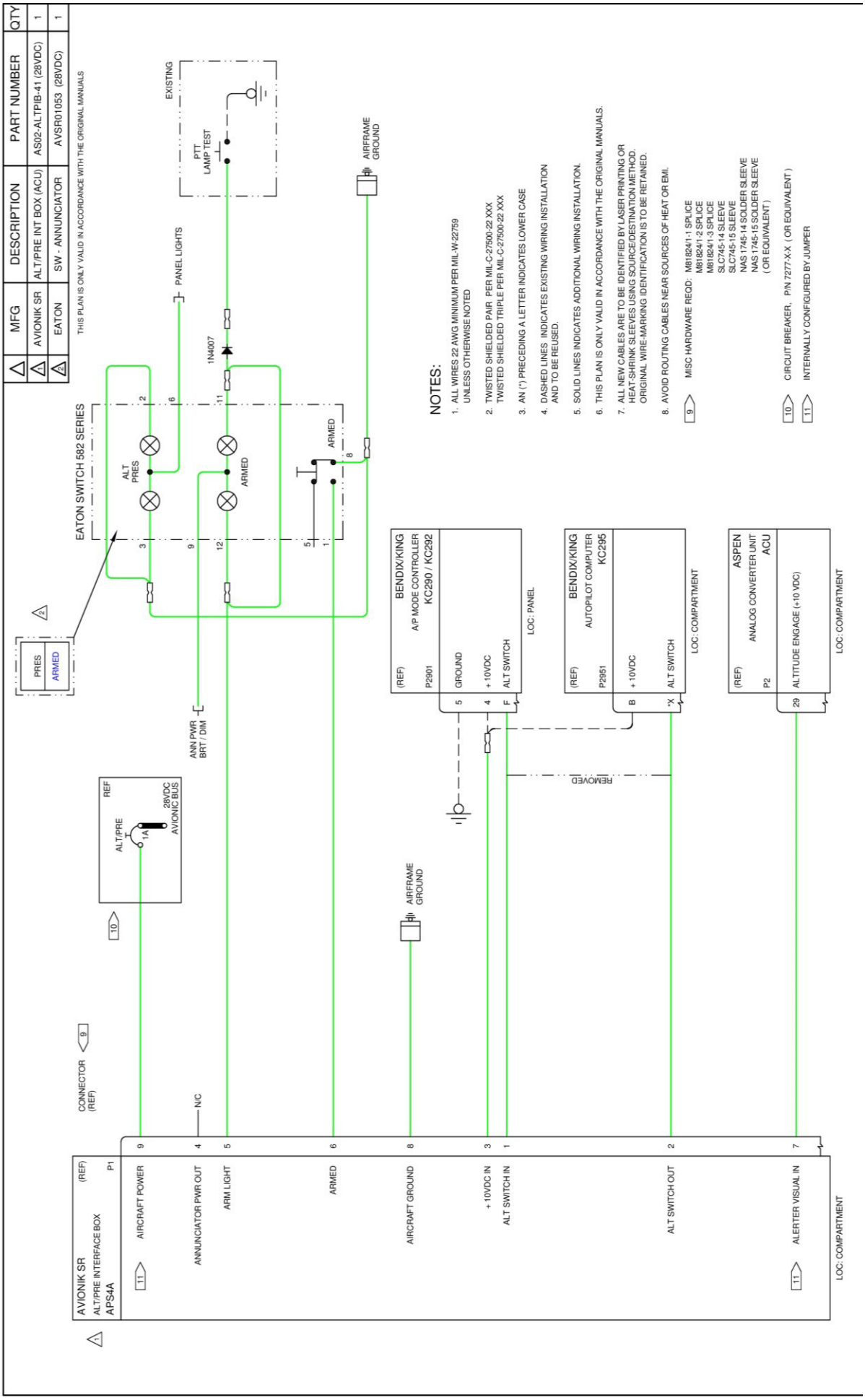
10. CIRCUIT BREAKER. P/N 7277-X-X (OR EQUIVALENT)
11. INTERNALLY CONFIGURED BY JUMPER
EATON SWITCH 582 SERIES
PRES
ARMED
ALT PRES
ARMED
ARMED
1N4007
PANEL LIGHTS
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
AIRFRAME GROUND
ANN PWR BRT / DIM
REF
ALT/PRE
14VDC AVIONIC BUS
BENDIX/KING
A/P MODE CONTROLLER
KC290 / KC292
P2901
GROUND
+ 10VDC
ALT SWITCH
LOC: PANEL
BENDIX/KING
AUTOPILOT COMPUTER
KC295
P2951
+ 10VDC
ALT SWITCH
LOC: COMPARTMENT
ASPEN
ANALOG CONVERTER UNIT
ACU
P2
ALTITUDE ENGAGE (+10 VDC)
LOC: COMPARTMENT
REMOVED
CONNECTOR (REF)
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
P1
AIRCRAFT POWER
ANNUNCIATOR PWR OUT
ARM LIGHT
ARMED
AIRCRAFT GROUND
+ 10VDC IN
ALT SWITCH IN
ALT SWITCH OUT
ALERTER VISUAL IN
LOC: COMPARTMENT


MFG
DESCRIPTION
PART NUMBER
QTY
AVIONIK SR
ALT/PRE INT BOX (ACU)
AS02-ALTPIB-41 (28VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01053 (28VDC)
1
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M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
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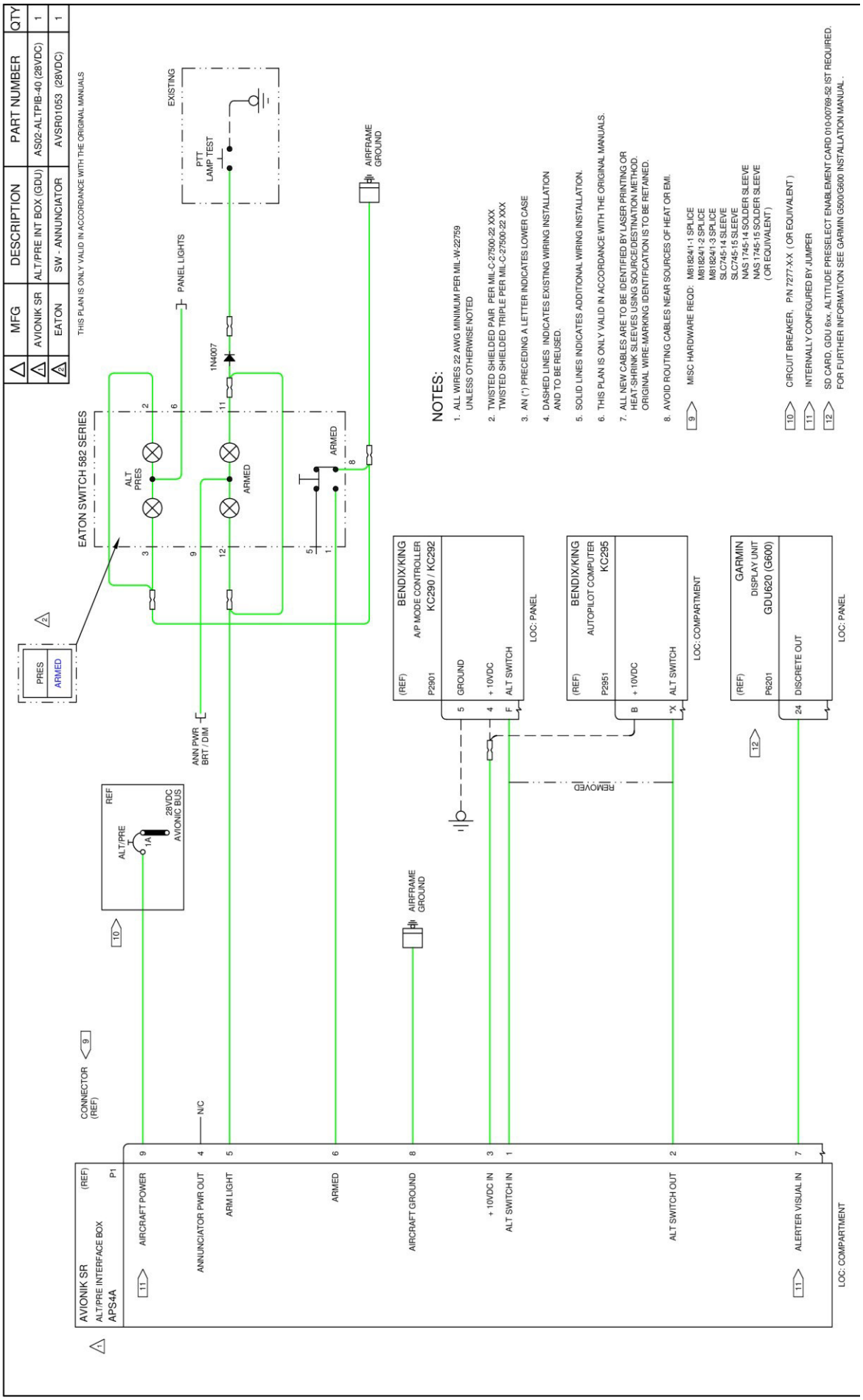
EATON SWITCH 582 SERIES
PRES
ARMED
ALT PRES
ARMED
ARMED
1N4007
PANEL LIGHTS
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
ANN PWR BRT / DIM
REF
ALT/PRE
1A
28VDC AVIONIC BUS
10
CONNECTOR (REF)
9
AIRFRAME GROUND
REMOVED
BENDIX/KING
A/P MODE CONTROLLER
KC290 / KC292
(REF)
P2901
GROUND
+ 10VDC
ALT SWITCH
LOC: PANEL
BENDIX/KING
AUTOPILOT COMPUTER
KC295
(REF)
P2951
+ 10VDC
ALT SWITCH
LOC: COMPARTMENT
ASPEN
ANALOG CONVERTER UNIT
ACU
(REF)
P2
ALTITUDE ENGAGE (+10 VDC)
LOC: COMPARTMENT
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
(REF)
P1
11
AIRCRAFT POWER
ANNUNCIATOR PWR OUT
ARM LIGHT
ARMED
AIRCRAFT GROUND
+ 10VDC IN
ALT SWITCH IN
ALT SWITCH OUT
11
ALERTER VISUAL IN
LOC: COMPARTMENT
N/C


MFG
DESCRIPTION
PART NUMBER
QTY
AVIONIK SR
ALT/PRE INT BOX (GDU)
AS02-ALTPIB-40 (28VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01053 (28VDC)
1
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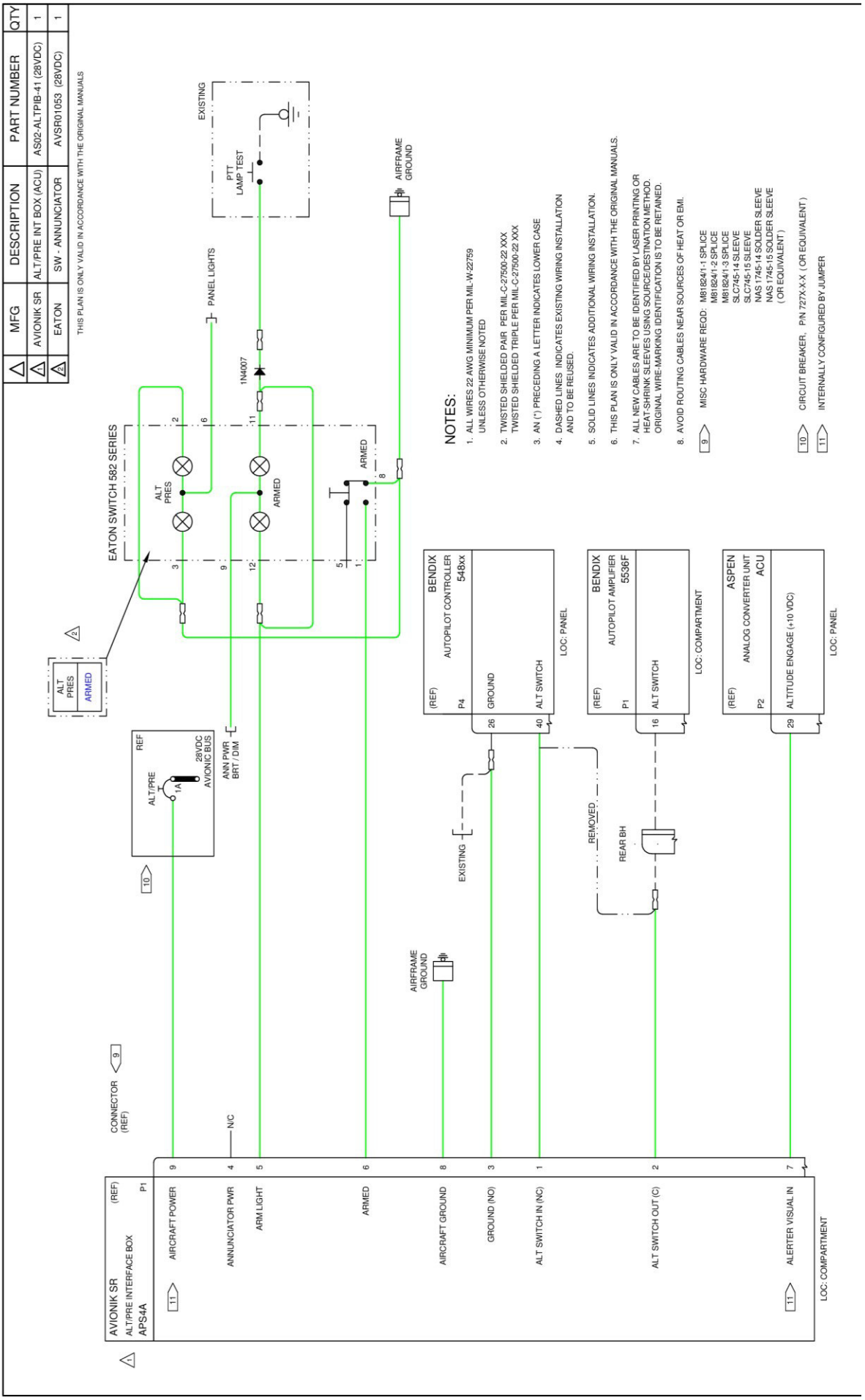
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10. CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11. INTERNALLY CONFIGURED BY JUMPER
12. SD CARD, GDU 6xx, ALTITUDE PRESELECT ENABLEMENT CARD 010-00789-52 IST REQUIRED. FOR FURTHER INFORMATION SEE GARMIN G500/G600 INSTALLATION MANUAL.
EATON SWITCH 582 SERIES
PRES
ARMED
ALT PRES
ARMED
1N4007
PANEL LIGHTS
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
ANN PWR BRT / DIM
REF
ALT/PRE
1A
28VDC AVIONIC BUS
AIRFRAME GROUND
CONNECTOR (REF)
BENDIX/KING
A/P MODE CONTROLLER
KC290 / KC292
(REF)
P2901
GROUND
+ 10VDC
ALT SWITCH
LOC: PANEL
BENDIX/KING
AUTOPILOT COMPUTER
KC295
(REF)
P2951
+ 10VDC
ALT SWITCH
LOC: COMPARTMENT
REMOVED
GARMIN
DISPLAY UNIT
GDU620 (G600)
(REF)
P6201
DISCRETE OUT
LOC: PANEL
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
(REF)
P1
AIRCRAFT POWER
ANNUNCIATOR PWR OUT
N/C
APR LIGHT
ARMED
AIRCRAFT GROUND
+ 10VDC IN
ALT SWITCH IN
ALT SWITCH OUT
ALERTER VISUAL IN
LOC: COMPARTMENT


MFG
DESCRIPTION
PART NUMBER
QTY
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ALT/PRE INT BOX (ACU)
AS02-ALTPIB-41 (28VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01053 (28VDC)
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8. AVOID ROUTING CABLES NEAR SOURCES OF HEAT OR EMI.
9 MISC HARDWARE REQD: M81824/1-1 SPLICE
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 727X-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER
EATON SWITCH 582 SERIES
ALT PRES
ARMED
PANEL LIGHTS
EXISTING
PTT LAMP TEST
1N4007
AIRFRAME GROUND
CONNECTOR (REF)
N/C
ANN PWR BRT / DIM
28VDC AVIONIC BUS
ALT/PRE
REF
BENDIX AUTOPILOT CONTROLLER 548xx
BENDIX AUTOPILOT AMPLIFIER 5536F
ASPEN ANALOG CONVERTER UNIT ACU
GROUND
ALT SWITCH
ALTITUDE ENGAGE (+10 VDC)
LOC: PANEL
LOC: COMPARTMENT
REMOVED
REAR BH
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
AIRCRAFT POWER
ANNUNCIATOR PWR
ARM LIGHT
AIRCRAFT GROUND
GROUND (NO)
ALT SWITCH IN (NC)
ALT SWITCH OUT (C)
ALERTER VISUAL IN

△	MFG	DESCRIPTION	PART NUMBER	QTY
1	AVIONIK SR	ALT/PRE INT BOX (ACU)	AS02-ALTPIB-01 (14VDC)	1
2	EATON	SW - ANNUNCIATOR	AVSR01283 (14VDC)	1

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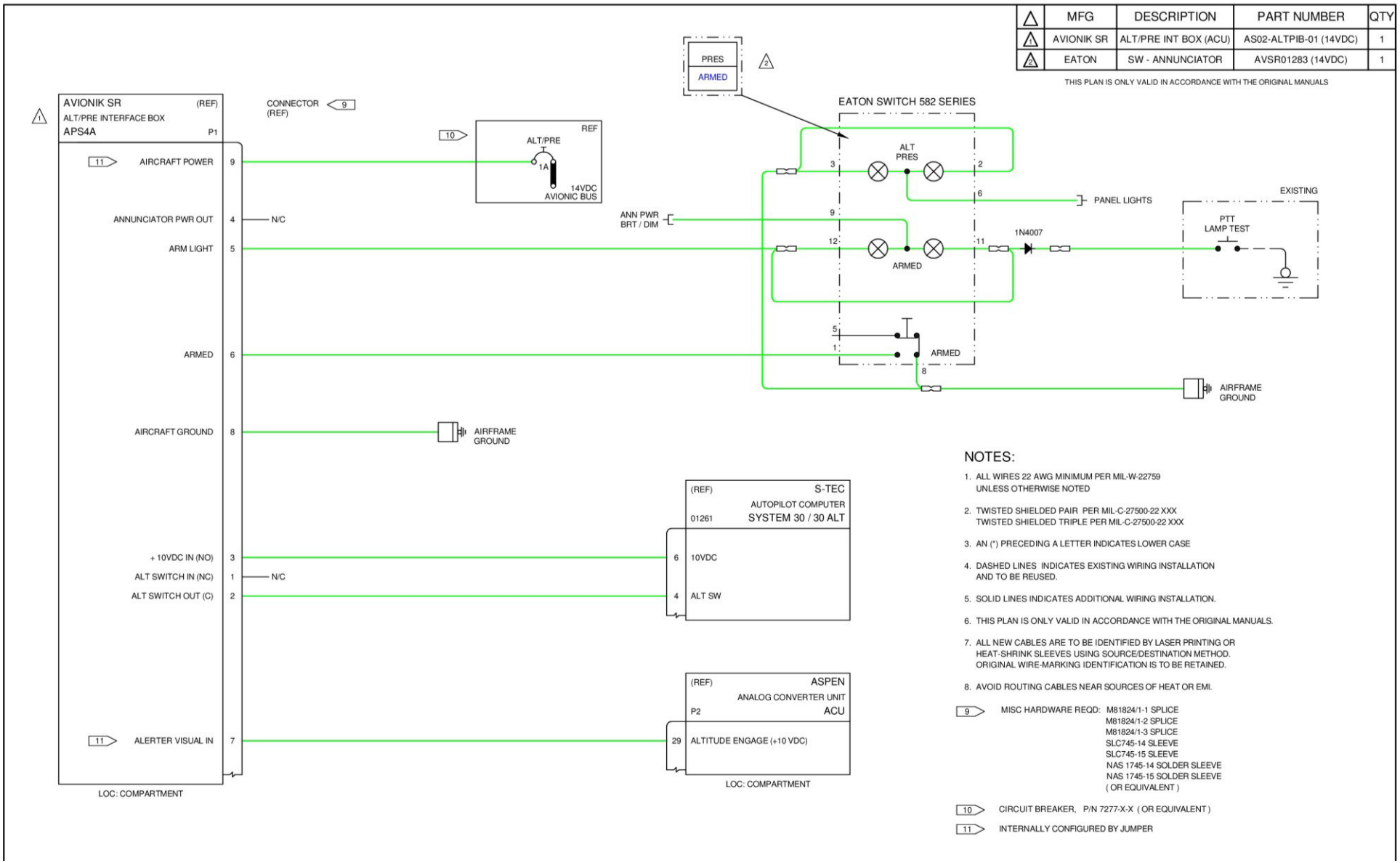

NOTES:

1. ALL WIRES 22 AWG MINIMUM PER MIL-W-22759 UNLESS OTHERWISE NOTED
2. TWISTED SHIELDED PAIR PER MIL-C-27500-22 XXX
   TWISTED SHIELDED TRIPLE PER MIL-C-27500-22 XXX
3. AN (*) PRECEDING A LETTER INDICATES LOWER CASE
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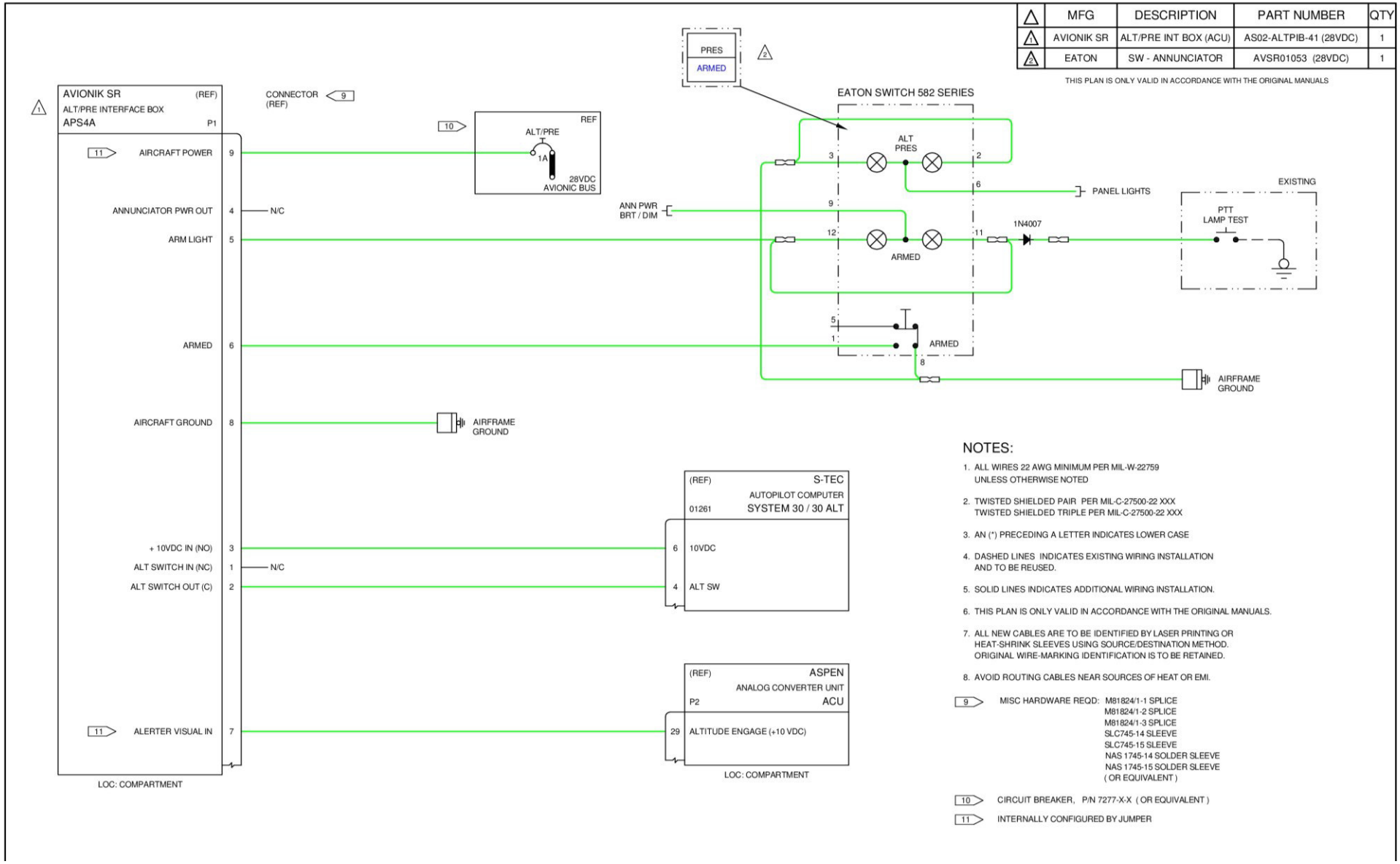
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)

10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)

11 INTERNALLY CONFIGURED BY JUMPER


MFG | DESCRIPTION | PART NUMBER | QTY
1 AVIONIK SR | ALT/PRE INT BOX (ACU) | AS02-ALTPIB-41 (28VDC) | 1
2 EATON | SW - ANNUNCIATOR | AVSR01053 (28VDC) | 1
THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS
AVIONIK SR (REF)
ALT/PRE INTERFACE BOX
APS4A P1
CONNECTOR (REF) 9
AIRCRAFT POWER 9
ANNUNCIATOR PWR OUT 4 N/C
ARM LIGHT 5
ARMED 6
AIRCRAFT GROUND 8
+ 10VDC IN (NO) 3
ALT SWITCH IN (NC) 1 N/C
ALT SWITCH OUT (C) 2
ALERTER VISUAL IN 7
LOC: COMPARTMENT
10
REF
ALT/PRE
1A
28VDC AVIONIC BUS
PRES
ARMED
EATON SWITCH 582 SERIES
ALT PRES
PANEL LIGHTS
ANN PWR BRT / DIM
1N4007
ARMED
ARMED
AIRFRAME GROUND
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
(REF) S-TEC
AUTOPILOT COMPUTER
01261 SYSTEM 30 / 30 ALT
6 10VDC
4 ALT SW
(REF) ASPEN
ANALOG CONVERTER UNIT
P2 ACU
29 ALTITUDE ENGAGE (+10 VDC)
LOC: COMPARTMENT
NOTES:
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M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER

△	MFG	DESCRIPTION	PART NUMBER	QTY
1	AVIONIK SR	ALT/PRE INT BOX (ACU)	AS02-ALTPIB-01 (14VDC)	1
2	EATON	SW - ANNUNCIATOR	AVSR01283 (14VDC)	1

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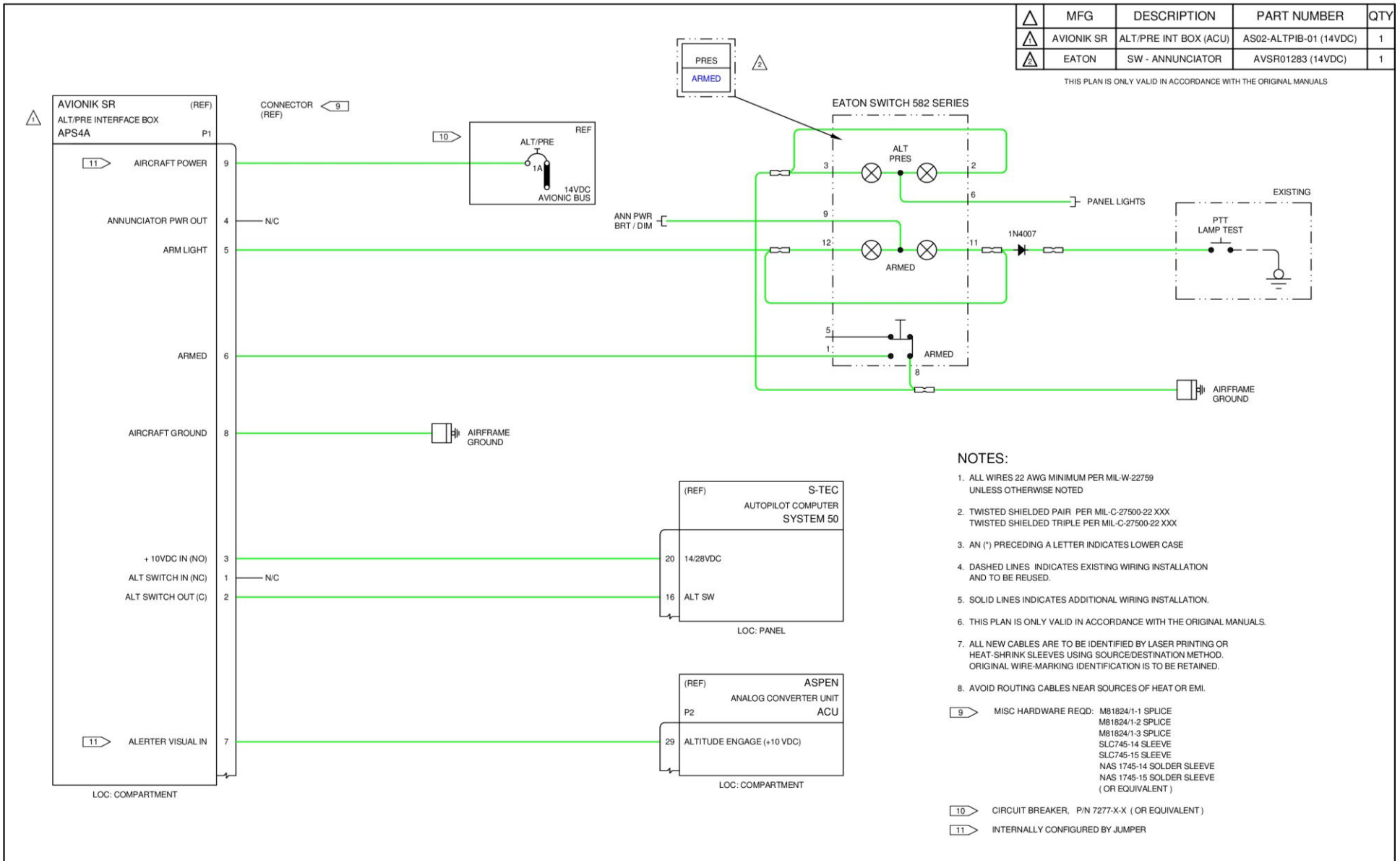

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M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)

10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)

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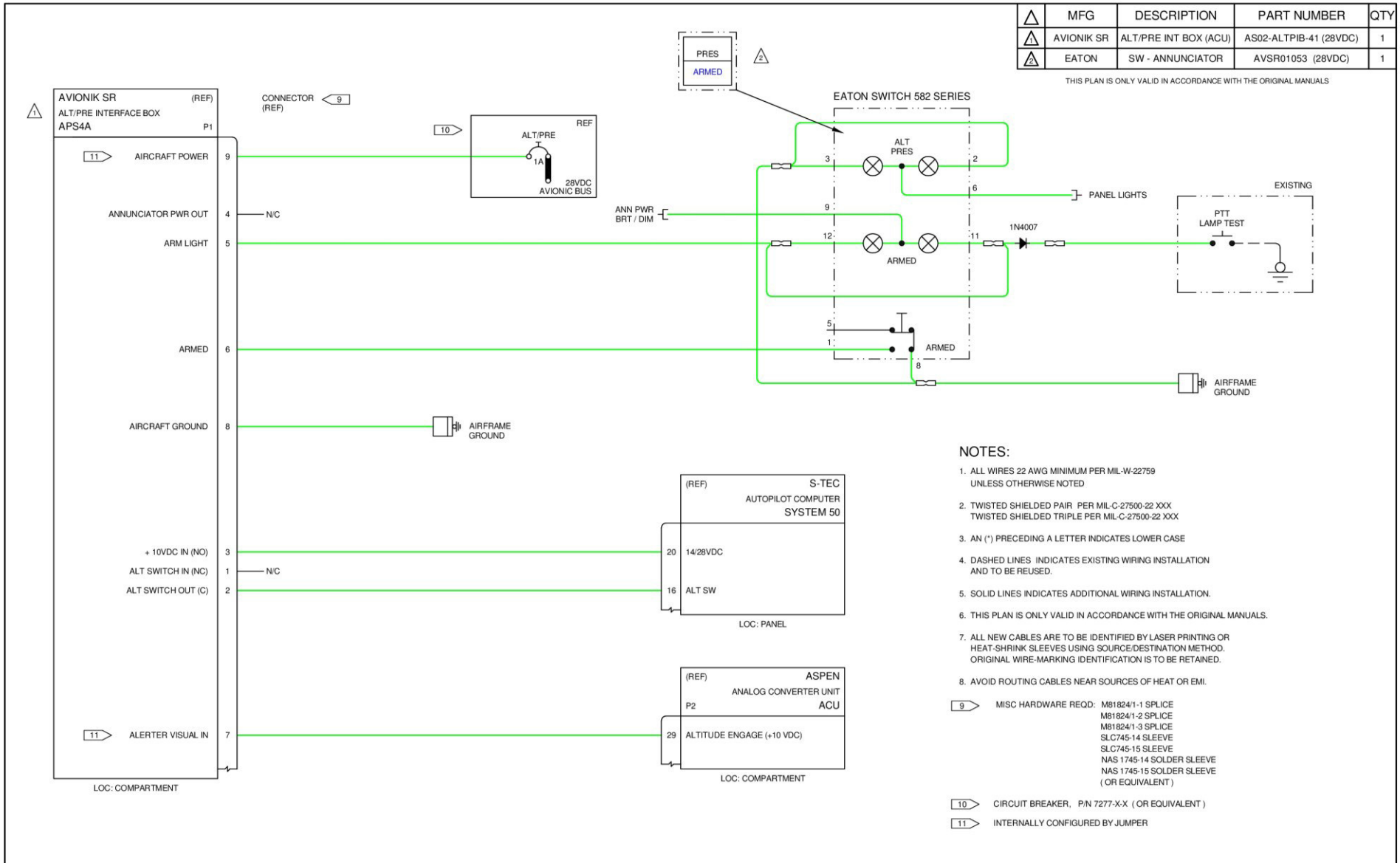
MFG | DESCRIPTION | PART NUMBER | QTY
1 AVIONIK SR | ALT/PRE INT BOX (ACU) | AS02-ALTPIB-41 (28VDC) | 1
2 EATON | SW - ANNUNCIATOR | AVSR01053 (28VDC) | 1
THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS
AVIONIK SR (REF)
ALT/PRE INTERFACE BOX
APS4A P1
CONNECTOR (REF) 9
AIRCRAFT POWER 9
ANNUNCIATOR PWR OUT 4 N/C
ARM LIGHT 5
ARMED 6
AIRCRAFT GROUND 8
+ 10VDC IN (NO) 3
ALT SWITCH IN (NC) 1 N/C
ALT SWITCH OUT (C) 2
ALERTER VISUAL IN 7
LOC: COMPARTMENT
10
REF
ALT/PRE
1A
28VDC AVIONIC BUS
PRES
ARMED
EATON SWITCH 582 SERIES
ALT PRES
PANEL LIGHTS
ANN PWR BRT / DIM
1N4007
ARMED
ARMED
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
AIRFRAME GROUND
(REF) S-TEC
AUTOPILOT COMPUTER
SYSTEM 50
20 14/28VDC
16 ALT SW
LOC: PANEL
(REF) ASPEN
ANALOG CONVERTER UNIT
P2 ACU
29 ALTITUDE ENGAGE (+10 VDC)
LOC: COMPARTMENT
NOTES:
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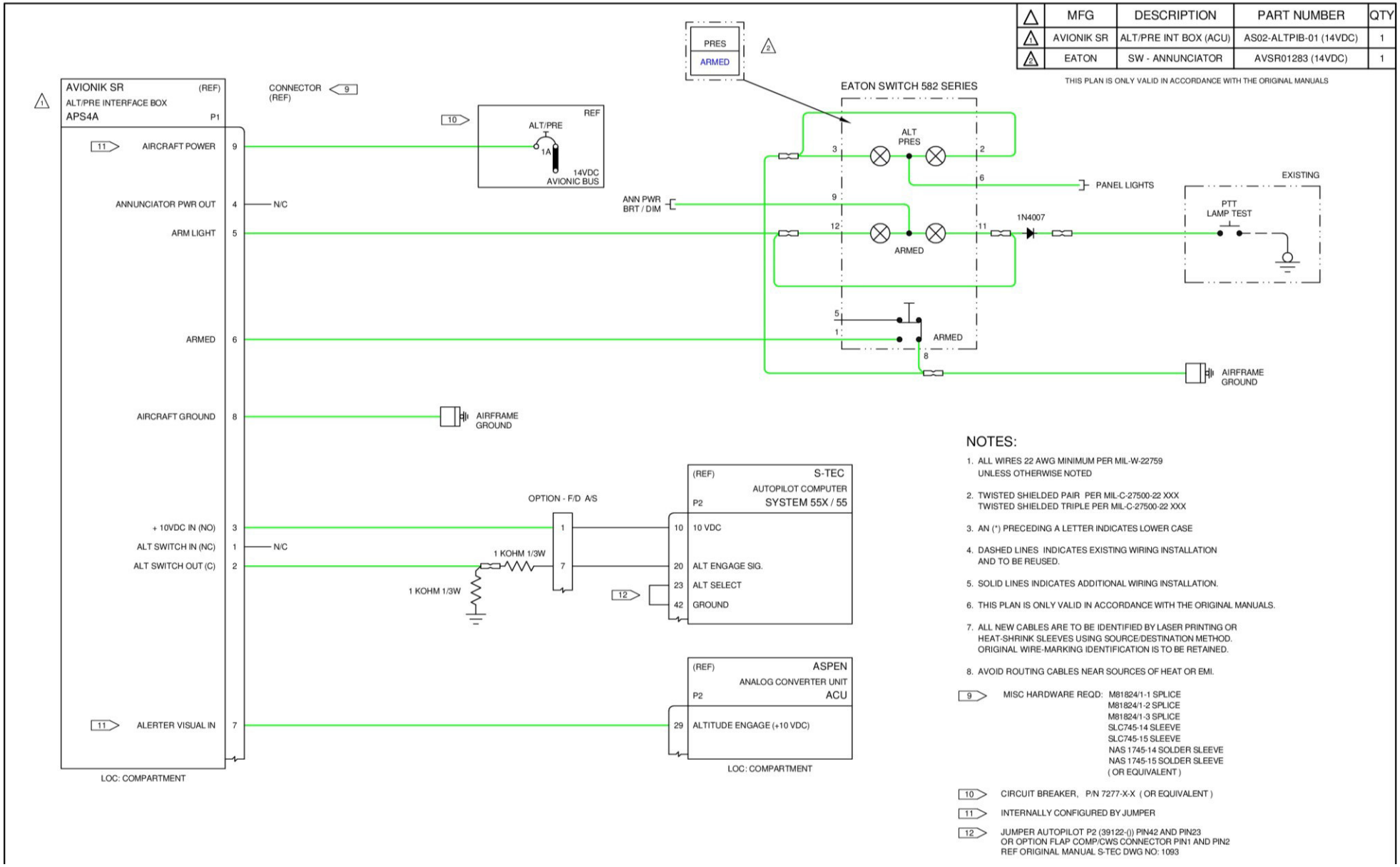
M81824/1-2 SPLICE
M81824/1-3 SPLICE
SLC745-14 SLEEVE
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER

	MFG	DESCRIPTION	PART NUMBER	QTY
1	AVIONIK SR	ALT/PRE INT BOX (ACU)	AS02-ALTPIB-01 (14VDC)	1
2	EATON	SW - ANNUNCIATOR	AVSR01283 (14VDC)	1

THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS



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M81824/1-2 SPLICE
M81824/1-3 SPLICE
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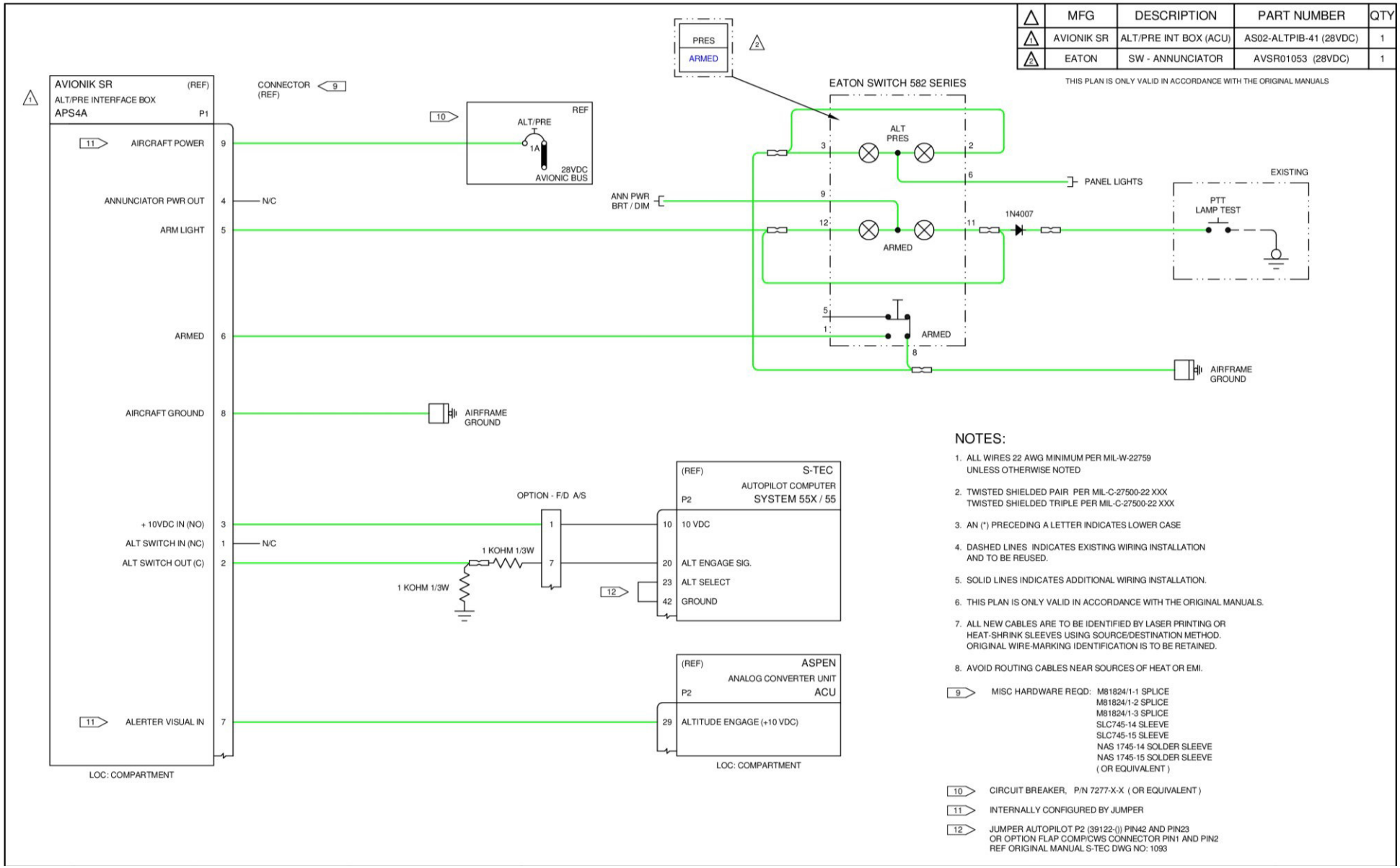
SLC745-15 SLEEVE
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)

10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)

11 INTERNALLY CONFIGURED BY JUMPER

12 JUMPER AUTOPILOT P2 (39122-()) PIN42 AND PIN23
OR OPTION FLAP COMP/CWS CONNECTOR PIN1 AND PIN2
REF ORIGINAL MANUAL S-TEC DWG NO: 1093


△ | MFG | DESCRIPTION | PART NUMBER | QTY
1 | AVIONIK SR | ALT/PRE INT BOX (ACU) | AS02-ALTPIB-41 (28VDC) | 1
2 | EATON | SW - ANNUNCIATOR | AVSR01053 (28VDC) | 1
THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS
AVIONIK SR (REF)
ALT/PRE INTERFACE BOX
APS4A P1
CONNECTOR (REF) 9
AIRCRAFT POWER 9
ANNUNCIATOR PWR OUT 4
N/C
ARM LIGHT 5
ARMED 6
AIRCRAFT GROUND 8
+ 10VDC IN (NO) 3
ALT SWITCH IN (NC) 1
N/C
ALT SWITCH OUT (C) 2
ALERTER VISUAL IN 7
LOC: COMPARTMENT
10
REF
ALT/PRE
1A
28VDC AVIONIC BUS
PRES
ARMED
EATON SWITCH 582 SERIES
ALT PRES
PANEL LIGHTS
ANN PWR BRT / DIM
1N4007
ARMED
ARMED
AIRFRAME GROUND
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
OPTION - F/D A/S
1 KOHM 1/3W
1 KOHM 1/3W
12
(REF) S-TEC
AUTOPILOT COMPUTER
P2 SYSTEM 55X / 55
10 VDC
ALT ENGAGE SIG.
ALT SELECT
GROUND
(REF) ASPEN
ANALOG CONVERTER UNIT
P2 ACU
ALTITUDE ENGAGE (+10 VDC)
LOC: COMPARTMENT
NOTES:
1. ALL WIRES 22 AWG MINIMUM PER MIL-W-22759 UNLESS OTHERWISE NOTED
2. TWISTED SHIELDED PAIR PER MIL-C-27500-22 XXX TWISTED SHIELDED TRIPLE PER MIL-C-27500-22 XXX
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M81824/1-2 SPLICE
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SLC745-14 SLEEVE
SLC745-15 SLEEVE
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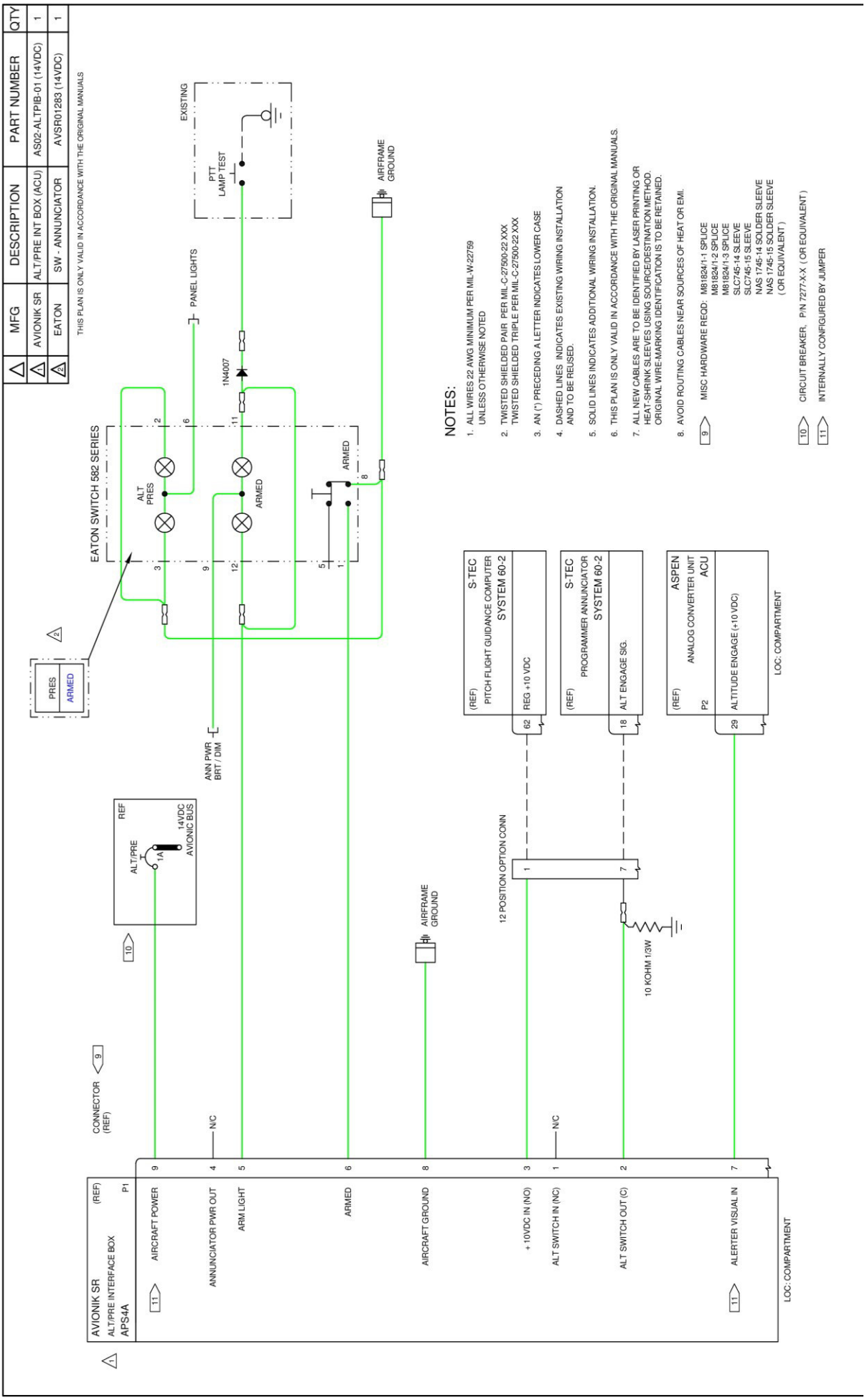
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER
12 JUMPER AUTOPILOT P2 (39122-()) PIN42 AND PIN23
OR OPTION FLAP COMP/CWS CONNECTOR PIN1 AND PIN2
REF ORIGINAL MANUAL S-TEC DWG NO: 1093


MFG
DESCRIPTION
PART NUMBER
QTY
AVIONIK SR
ALT/PRE INT BOX (ACU)
AS02-ALTPIB-01 (14VDC)
1
EATON
SW - ANNUNCIATOR
AVSR01283 (14VDC)
1
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NOTES:
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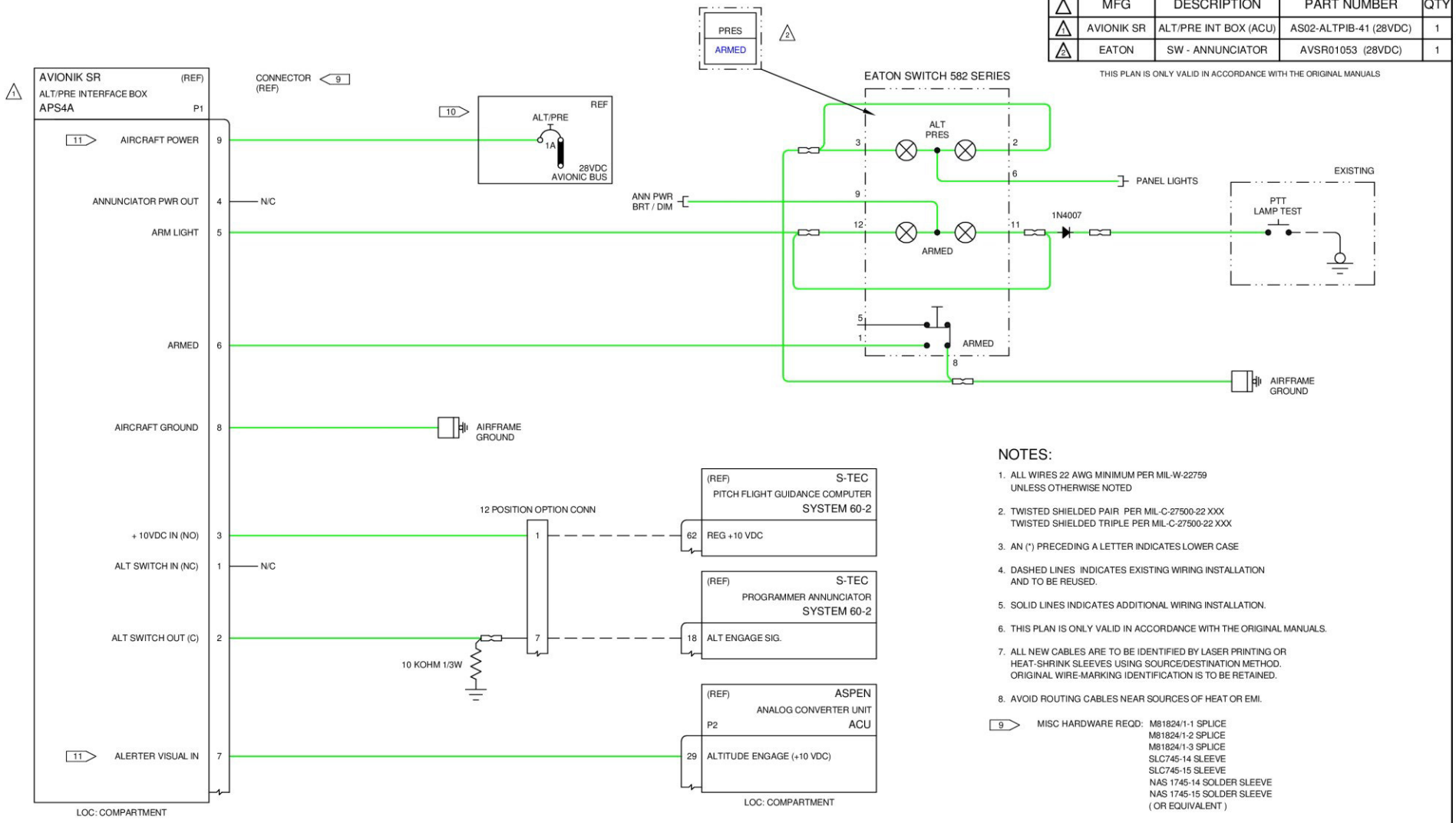
NAS 1745-14 SOLDER SLEEVE
NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)
10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)
11 INTERNALLY CONFIGURED BY JUMPER
AVIONIK SR
ALT/PRE INTERFACE BOX
APS4A
P1
(REF)
AIRCRAFT POWER
ANNUNCIATOR PWR OUT
ARM LIGHT
ARMED
AIRCRAFT GROUND
+ 10VDC IN (NO)
ALT SWITCH IN (NC)
ALT SWITCH OUT (C)
ALERTER VISUAL IN
LOC: COMPARTMENT
CONNECTOR (REF)
N/C
N/C
EATON SWITCH 582 SERIES
ALT PRES
ARMED
PRES
ARMED
1N4007
PANEL LIGHTS
ANN PWR BRT / DIM
EXISTING
PTT LAMP TEST
AIRFRAME GROUND
AIRFRAME GROUND
REF
ALT/PRE
1A
14VDC AVIONIC BUS
12 POSITION OPTION CONN
10 KOHM 1/3W
(REF)
S-TEC
PITCH FLIGHT GUIDANCE COMPUTER
SYSTEM 60-2
62 REG +10 VDC
(REF)
S-TEC
PROGRAMMER ANNUNCIATOR
SYSTEM 60-2
18 ALT ENGAGE SIG.
(REF)
ASPEN
ANALOG CONVERTER UNIT
ACU
P2
29 ALTITUDE ENGAGE (+10 VDC)
LOC: COMPARTMENT

	MFG	DESCRIPTION	PART NUMBER	QTY
1	AVIONIK SR	ALT/PRE INT BOX (ACU)	AS02-ALTPIB-41 (28VDC)	1
2	EATON	SW - ANNUNCIATOR	AVSR01053 (28VDC)	1

THIS PLAN IS ONLY VALID IN ACCORDANCE WITH THE ORIGINAL MANUALS



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NAS 1745-15 SOLDER SLEEVE
(OR EQUIVALENT)

10 CIRCUIT BREAKER, P/N 7277-X-X (OR EQUIVALENT)

11 INTERNALLY CONFIGURED BY JUMPER

U.S. Department
of Transportation
**Federal Aviation
Administration**

Engine & Propeller Directorate

Boston Aircraft Certification Office
12 New England Executive Park
Burlington, MA 01803-5299

FEB 1 8 2010

REF A/1860
23. Feb. 2010

In reply refer to: SH/sn/2/16/2010-529

Mr. Markus Görnemann
Certification Manager Parts & Appliances
European Aviation Safety Agency (EASA)
Postfach 10 12 53
D-50452 Köln
Germany

Dear Mr. Görnemann:

This letter refers to Avionik Straubing Entwicklungs GmbH letter dated 17. Nov. 2009, by which they made application for Technical Standard Order (TSO) design approval. This letter also acknowledges receipt of Avionik Straubing Entwicklungs GmbH Statement of Compliance dated 7th December 2009, and of European Aviation Safety Agency (EASA) letter Reference EASA C1(2009)D/75617, dated 08 December, certifying in accordance with 14 CFR § 21.617, that the Altitude Preselect System listed below complies with the requirements of TSO-C9c and C52b, as designated in 14 CFR § 21.305(b).

Based on the EASA certification and receipt of the required data, we hereby accept Avionik Straubing Entwicklungs GmbH TSO design approval to include the Altitude Preselect System listed below for manufacture at Avionik Straubing Entwicklungs GmbH located at Flugplatzstr. 5, D-94348 Atting, Germany.

Approved Model/Part Number	Description
P/N AS01-ALTPRE-00	APS4A Altitude Preselect System
P/N AS02-ALTPIB-( )-( )	APS4A Altitude Preselect System Interface Box

The Altitude Preselect System is an incomplete autopilot/flight director system and must interface with a compatible autopilot and either an altimeter or primary flight display with altitude alerter output function to meet the airborne system functional requirements required by TSO-C9c and TSO-C52b.

This letter of TSO design approval, together with the EASA Certificate of Airworthiness for Export, will authorize Avionik Straubing Entwicklungs GmbH to identify the Altitude Preselect System with the TSO marking requirements described in 14 CFR § 21.607(d) and in TSO-C9c and C52b, and is issued in accordance with 14 CFR § 21.617, governing issuance of TSO design approval for import appliances. Each item must be accompanied by an EASA Form One issued by Luftfahrt-Bundesamt (LBA) – Germany or a duly authorized designee/ organization (14 CFR § 21.502(a)).

Any additional deviations from the established design approval should be accomplished in accordance with 14 CFR § 21.609. The request for approval to deviate, together with all pertinent data, should be submitted to the Federal Aviation Administration (FAA) through EASA and should contain information to show that the particular deviation is compensated for by factors or design features providing an equivalent level of safety.

As required by the TSO, the following statement must be furnished with each manufactured unit:

"The conditions and tests required for TSO approval of this article are minimum performance standards. It is the responsibility of those installing this article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within the TSO standards. TSO articles must have separate approval for installation in an aircraft. The article may be installed only if performed under 14 CFR part 43 or the applicable airworthiness requirements."

A letter of TSO design approval issued under 14 CFR § 21.617 is not transferable and is effective until surrendered, withdrawn or otherwise terminated by the FAA (14 CFR § 21.621).

The FAA may, upon notice, withdraw the letter of TSO design approval of any manufacturer who identifies with a TSO marking any article not meeting the performance standards of the applicable TSO (14 CFR § 21.619). The EASA airworthiness certification is essential to the determination that the item meets the performance standards of the applicable TSO.

Please note that technical data retained by the FAA may be subject to Freedom of Information Act (FOIA) request. As such, this office will notify you of all such requests pertaining to your data and afford you the opportunity to defend the release of the data.

If there are any questions, please feel free to have your staff contact Terry Fahr at (781) 238-7155.

Sincerely,

Robert G. Mann
Manager, Boston Aircraft Certification Office,
ANE-150