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Universal Power Supply

AC-PS-0700

User's Manual and Reference

Doc #: 03-32-10018

Rev: 03



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DALSA is an international high performance semiconductor and electronics company that designs, develops, manufactures, and markets digital imaging products and solutions, in addition to providing wafer foundry services. DALSA's core competencies are in specialized integrated circuit and electronics technology, and highly engineered semiconductor wafer processing. Products include image sensor components; electronic digital cameras; and semiconductor wafer foundry services for use in MEMS, power semiconductors, image sensors and mixed signal CMOS chips.

DALSA is a public company listed on the Toronto Stock Exchange under the symbol "DSA". Based in Waterloo, On. Canada, the company has operations in Bromont, PQ; Colorado Springs, CO; Eindhoven, NL; Munich, Germany and Tokyo, Japan.

All DALSA products are manufactured using the latest state-of-the-art equipment to ensure product reliability. All electronic modules and cameras are subjected to a 24 hour burn-in test.

For further information not included in this manual, or for information on DALSA's extensive line of image sensing products, please call:

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1

Introduction

1.1 Universal Power Supply Highlights

Features

- Support for most DALSA area scan cameras.
- CE certification compliant when used with DE certified DALSA cameras and cables.
- UL/CSA approved

Description

The Universal Power Supply is a DALSA approved power source for most DALSA area scan cameras. It is part of a matched system design to ensure the highest performance of your DALSA area scan camera.

Compatibility

The Universal Power Supply is compatible with the following DALSA cameras:

- 1Mxx
- 4Mxx
- 4M4
- 6Mxx

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1.2 Performance Specifications

Table 1: Universal Power Supply Performance Specifications

Physical Characteristics	Units				Notes
Size	WxHxD cm	25.5x10.5x27.5			
Weight	kg	<5			
Operating Temperature Range	°C	10 – 40			
Regulatory Compliance		UL/CSA, PSE			1
Shock Immunity		Pending			
Vibration Immunity		Pending			
Operating Ranges	**Units**	**Option 1**	**Option 2**	**Option 3**	**Option 4**
Operating Voltages	V (AC)	100	120	220	240
Frequency	Hz	60	60	50	50
Output		Max Current 60 Hz (A)	Max Current 50 Hz (A)		
Supplied Voltages	**Units**	**Current (Amps)**			
+15 Voltage	V (DC)	2.5			
- 15 Voltage	V (DC)	1.25			
+ 5 Voltage	V (DC)	6.0			
- 5 Voltage	V (DC)	6.0			

Notes:

1. CE Certified when used with certified cables and camera.

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2

Hardware Interface

2.1 Installation Overview

WARNING: Failure to set the power supply to the correct input voltage will damage the camera.

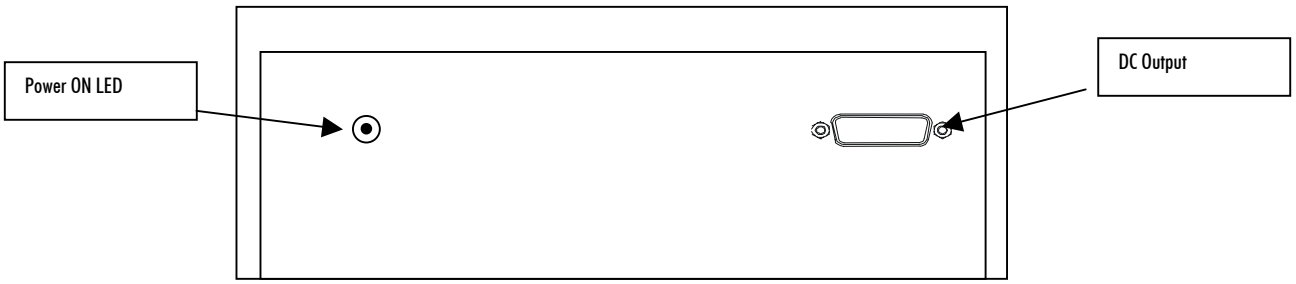
In order to set up the universal power supply, follow these steps:

1. Power down all equipment. Turn all power switches to the "OFF" position.
2. Inspect all cables and connectors prior to installation. Do not use damaged cables or connectors or the camera may be damaged.
3. Check the input power Voltage selector shunt for the correct input voltage. If the voltage is incorrect, reference section 2.3 for correction.
4. Insert the AC power cord into the socket on the back of the Universal Power Supply.
5. Connect the camera power cable to the Universal Power Supply.
6. Plug the Universal Power Supply into the power source.
7. Follow all instructions defined in the your camera user's manual.

2.2 Input/Output

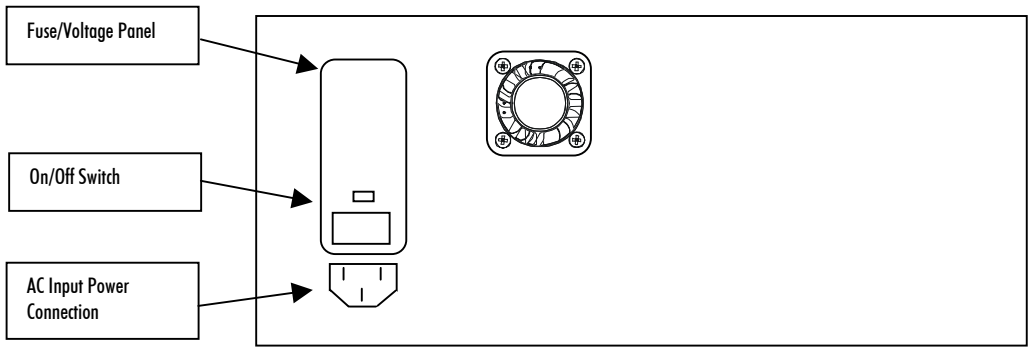
The Universal Power Supply provides direct current (DC) power required for your camera's operation. The following diagram illustrates the connections required to connect the Universal Power Supply.

Figure 1: Universal Power Supply Front Panel



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Figure 2: Universal Power Supply Back Panel



2.3 AC Power Input Selection

WARNING: Always disconnect the Power Supply from all power sources prior to changing input voltage. Failure to do so can result in severe injury or death.

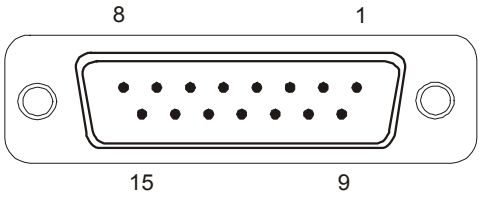
The Universal Power Supply has selectable input voltage for compatibility in a variety of industrial and geographical environments. To change the AC input voltage requirement, use the following instructions:

1. Turn the power supply OFF.
2. Disconnect all cables from the power supply (both camera and AC power).
3. Remove the Fuse/Voltage Selector cover from the back panel.
4. Slide the voltage selector shunt straight out from the socket. Be sure not to twist or bend the socket pins.
5. Rotate the voltage selector shunt so the desired voltage is facing you.
6. Insert the voltage selector shunt into the socket.
7. Replace the Fuse/Voltage selector cover.
8. Verify the correct voltage is visible in the window of the Fuse/Voltage selector cover.

2.4 DC Power Output

The Universal Power Supply uses a standard 15-pin connector for DC output to the camera.

Figure 3: DC Output Connector



Mating Part: DB15M (AMP Part # 747236-4 or equivalent)

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Table 2: Power Connector Pinout

Pin	Symbol
1	+5V
2	+5V
3	- 5V
4	+15V
5	- 15V
6	- 15V
7	GND
8	GND
9	+5V
10	- 5V
11	+15V
12	+15V
13	- 15V
14	GND
15	GND



WARNING: It is extremely important that you apply the appropriate voltages to your camera. Incorrect voltages will damage the camera.

The DALSA Universal Power Supply has the following DC output.

V (DC)	±% @ 50% Load Change)	Max Ripple mV	A 60 Hz
+15	0.5	10.5	2.5
-15	0.5	10.5	1.25
+5	+0.5 -0.05	5.5	6
-5	0.5	5.5	3

When connecting the camera's power supplies, follow these guidelines:

- Do not connect or disconnect cable while power is on.
- Do not use the shield on a multi-conductor cable for ground.
- Keep leads as short as possible to reduce voltage drop.

2.5 Changing Fuses



WARNING: Always disconnect the Power Supply from all power sources prior to changing fuses. Failure to do so can result in severe injury or death.

To protect the Universal Power Supply and camera, there are two fuses in the unit. To check, or replace, the fuses, use the following instructions:

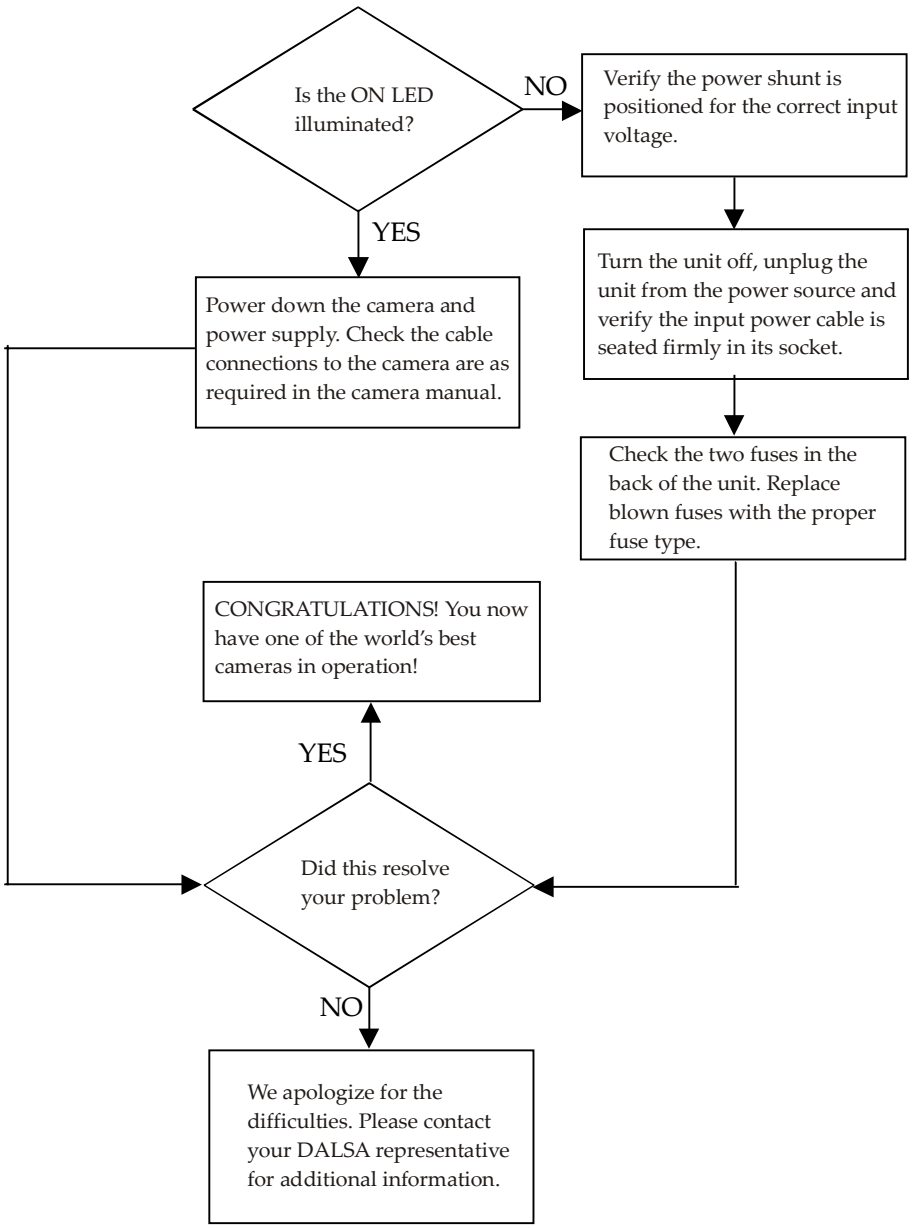
1. Turn the power supply OFF.
2. Disconnect all cables from the power supply (both camera and AC power).
3. Remove the Fuse/Voltage Selector cover from the back panel.
4. Slide the fuse(s) from the fuse socket(s).
5. Insert a good fuse of the proper rating (250V/2A) into each fuse socket.
6. Replace the Fuse/Voltage selector cover.
7. Verify the correct voltage is visible in the window of the Fuse/Voltage selector cover.

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Troubleshooting



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4

Warranty

4.1 Limited One-Year Warranty

What We Do

This product is warranted by DALSA for one year from date of original purchase. Please refer to your Purchase Order Confirmation for details.

What is Not Covered

This warranty does not apply if the product has been damaged by accident or misuse, or as a result of service or modification by other than DALSA, or by hardware, software, interfacing or peripherals not provided by DALSA. DALSA shall have no obligation to modify or update products once manufactured. This warranty does not apply to DALSA Software Products.

How to Obtain Service for Your Equipment

If you need to return your product for repair, contact DALSA Technical Support in order to obtain a Return Goods Authorization form. Repair cannot begin until the form is issued, completed, and returned to DALSA

DALSA Technical Support

Phone: 519 886 6000
Fax: 519 886 8023
email: support@DALSA.com

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