



TECHSAVIATION

Training Center

Este material em hipótese alguma substituirá os manuais do fabricante para qualquer ação de manutenção. Consulte os manuais correspondentes. **EDUCATIONAL PURPOSE ONLY**

Lights

Lights-General Description

The lighting systems have software in the Common Computing Resource (CCR) cabinet. The lighting systems have interfaces on the Common Data Network (CDN).

Remote Power Distribution Units (RPDU) give power to the lighting systems.

The lighting systems use these types of lamps:

- Light Emitting Diode (LED)
- Halogen lamps
- High Intensity Discharge (HID).

These are the components of the lighting systems:

- Miscellaneous Power Control Units (PCU)
- Controller Area Network (CAN) PCU
- Triple power supply
- Double power supply
- Light assemblies.

Operation

For most lighting systems, a switch input goes through an RDC to the CDN. The inputs go through the CDN to the CCR cabinet. The lighting system Hosted Application (HA) operates on the inputs. The lighting system HA outputs the applicable control signal.

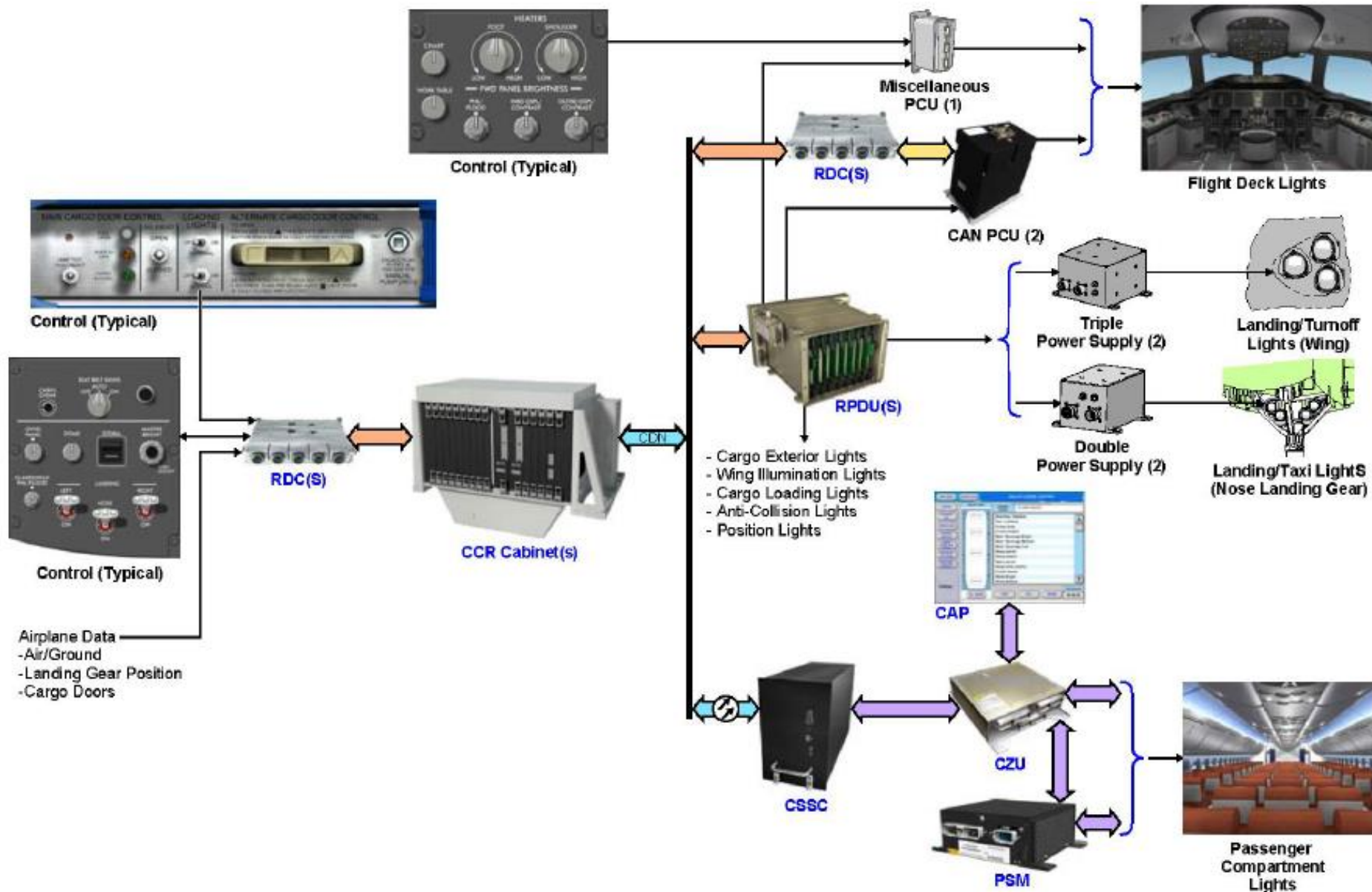
For the flight deck lights, the control signal goes through the CDN to the RDCs. The RDC sends the signal to the CAN PCU. The CAN PCU routes power from the RPDU to the applicable light. The miscellaneous PCU gets the switch input from the switch. The miscellaneous PCU routes power from the RPDU to the applicable light.

For the wing landing/turnoff lights, the control signal goes to the applicable RPDU. The RPDU sends power to the applicable triple power supply. The triple power supply sends power to the applicable light.

For the nose landing gear landing/taxi lights, the control signal goes to the applicable RPDU. The RPDU sends power to the applicable double power supply. The double power supply sends power to the applicable light.

For most light assemblies, the control signal goes to the applicable RPDU. The RPDU sends power to the applicable light assembly.

Most of the control for the passenger compartment lights is in the passenger compartment.



Emergency Lights

The emergency lighting system consists of exit signs and interior and exterior emergency lights. These lights give illumination during emergency evacuation.

Description

The emergency lights are Light Emitting Diodes (LED). The lighting system has:

- Exit locator signs to direct passengers to each exit
- Exit marking signs to designate each exit
- Exit identifiers to identify each exit when there is smoke overhead
- General illumination lights to give the required illumination in the aisles and exit areas
- Seat floor proximity lights to illuminate the floor
- Exterior passenger door viewing lights to illuminate the ground outside each exit
- Wireless Control Units (WCU) that consist of rechargeable lithium ion batteries and a WCU Battery Unit (WBU)
- A flight compartment switch and attendant switch.

Operation

The emergency lighting system is a Wireless Emergency Lighting System (WELS). The system has a network of WCUs that controls the illumination of the emergency lights.

Each WCU gives DC power to the lights that connect to it. The lights remain on for 15 minutes.

There are two types of WCUs: prime WCUs (4) that control and maintain the communication network and remote WCUs (25) to respond to the primary units. All WCUs are hard-wired to Remote Power Distribution Units (RPDU) for 115V AC charge power and to the airplane for control logic. The prime WCUs also have hard-wired interfaces with the Common Core System (CCS) and Remote Data Concentrators (RDC) through CAN buses. This is for BITE, health management, and EICAS messages. Remote WCUs communicate wirelessly to the prime WCUs for these functions.

Three variable voltage settings are controlled with the flight compartment or attendant switch.

The emergency lights are set to:

- ON
- ARMED
- OFF.



Exit Identifier/Exit Marking Sign



- Floor Proximity Lights
- General Illumination Lights
- Exit Locator



Exit Locator Sign



Flight Deck Escape Hatch

