




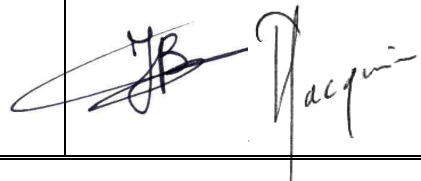

INTERFACE CONTROL DOCUMENT

LED ANTICOLLISION LIGHT SYSTEM

LIGHT P/N: 644 16 01 AMD(0)

POWER UNIT SUPPLY: 644 16 02 AMD(0)

ETSO-C96a Class II

Diffusion	Interne à JPC			Externe à JPC	
	1 ex →			1 ex → EASA	
Version	Document	Issue.	Date	Last evolution	
	644 16 01 & 02 ICD 01	2	28/06/2016	See page 2	
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1 General

1.1 Generalities

This document defines the electrical, mechanical and thermal interfaces for “Led Anticollision Light System”, Light P/N 644 16 01 amd(0) and Power unit supply 644 16 02 amd(0).

1.2 Destination

Light Aircraft Anticollision light.

1.3 Description

The Led anticollision Light system aims to produce a flashing white light in accordance with CS-ETSO (ETSO-C96a Class II).

The light P/N 644 16 01 is connected to Power unit supply P/N 644 16 02.

This Led Anticollision Light system is a variant of Xenon Anticollision system use on ALL robin aircraft and SOCATA TB10 & TB20 , with the same interface.

Light:

The source of light is made up of 27 white diodes leds associated in only one serial network, and broken down by sector of 3 leds positioned at 40°.

The led in the center of each sector is equipped with an elliptic collimator.

The Leds diodes type is SMD LED 1 Watt with 120 °distribution, with high performances, identical to that already used in our strobe and anti-collision lights certified FAR25 or FAR29 for planes and helicopters. The shape and the mechanical interface of the light are preserved compared to Xenon anti-collision lights currently installed.

Power Unit Supply:

The electronic system include the current regulation, the flashing command and EMI/EMC protections.

This system is a variant of power unit supply use on Robin aircraft and SOCATA TB10 & TB20, with the same interface, and with [same led driver](#) qualified on Helicopters and on FALCON 900/2000 Programs.

This design offers an extremely high reliability, a high resistance to shocks and vibration.

2 Physical, electrical and optical features

2.1 Physical features

2.1.1 Light

- Individual weight : 160 grs +/- 10 %
- Dimensions : see 2D drawing in annex
- Number of LEDs : 27 white LED
- Envelope color : Aluminum with alodine A1200 protection

2.1.2 Power Unit Sypply

- Individual weight : 340 grs +/- 5 %
- Dimensions : see 2D drawing in annex
- Envelope color : Aluminum with alodine A1200 protection

2.2 Electrical features

2.2.1 Light

2 wires with plastic connector :

AMP P/N. : 1-480-305-0

Pin allocation

1	=	+ V
2	=	NC
3	=	0 V

2.2.2 Power Unit Sypply

Input:

AMP connector P/N: 1-480 304-0

Pin allocation

1	=	+ V
2	=	- V
3	=	NC

Output:

AMP connector P/N : 1-480 304-0

Pin allocation

1	=	+ V
2	=	NC
3	=	0 V

2.3 Optical features

- 27 high power white LED CREE X serial
- Led : Diffusion angle 120°
- Light energy in accordance with CS-ETSO requirements

2.4 Operating temperature

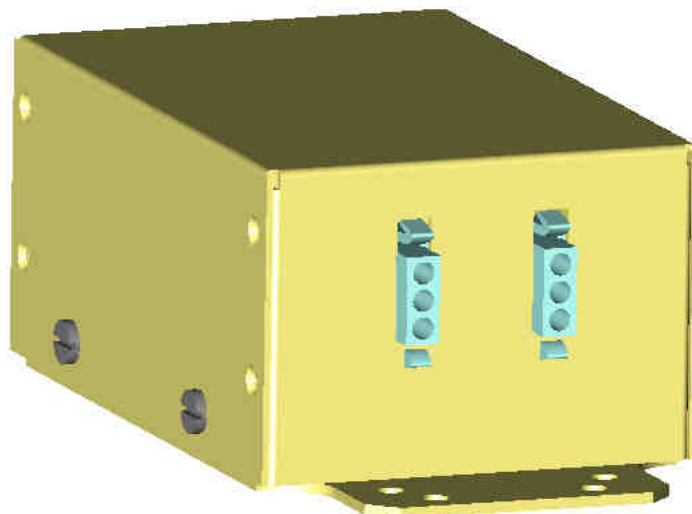
- Positive temperature : +70°C
- Negative temperature : - 45°C

3 Network

3.1 Light



3.2 Power Unitr Supply



3.3 Electrical interface

3.3.1 Light

AMP P/N : 1-480-305-0

Pin allocation

1	=	+ V
2	=	NC
3	=	0 V

3.3.2 Power Unit Supply

Input:

AMP connector P/N: 1-480 304-0

Pin allocation

1	=	+ V
2	=	- V
3	=	NC

Output:

AMP connector P/N : 1-480 304-0

Pin allocation

1	=	+ V
2	=	NC
3	=	0 V

3.4 Electrical power supply

3.4.1 Light

Forward voltage	:	80 V
Forward current	:	0.5 A

3.4.2 Power Unit Supply

Supply Voltage	:	14 / 28 V DC (DO 160 D, cat A)
Same performances from		12 to 32 V
Peak current during 0.25 s	:	5.1 A at 14 V 1.95 A at 28 V
Rating	:	0.75 Hertz (+/- 5 %)
Lamp time ON	:	250 ms

Performances In other situations (18, 21, 28 and 32 V):

Power supply level (in Volts)	Peak current during 0.25 s	Performances
12 V	6.8 A	Preserved
14 V	5.1 A	Normal
16 V	3.9 A	Preserved
24 V	2.3 A	Preserved
28 V	1.95 A	Normal
32 V	1.6A	Preserved

3.5 Power dissipation

3.5.1 Light:

Power dissipation average	5 W
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3.5.2 Power Unit Supply:

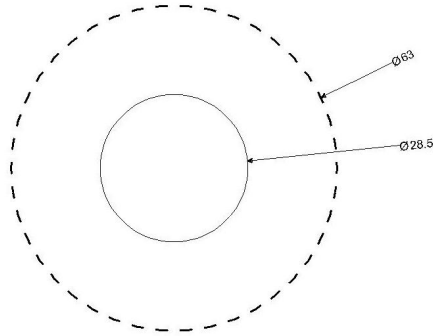
Power dissipation average	5 W
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3.6 Mechanical interface

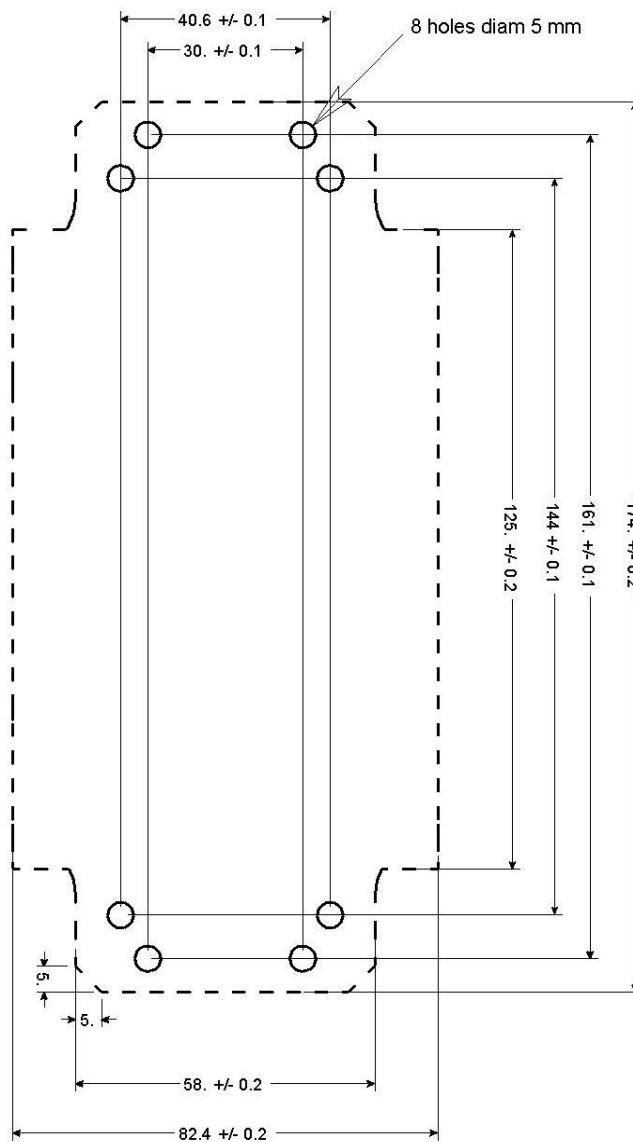
3.6.1 Light:

Fixation by N°21 Nut, provided with the anticollisi on light.

Max torque: 20 nm



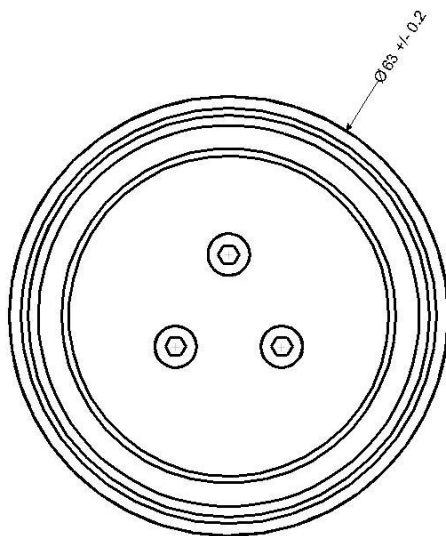
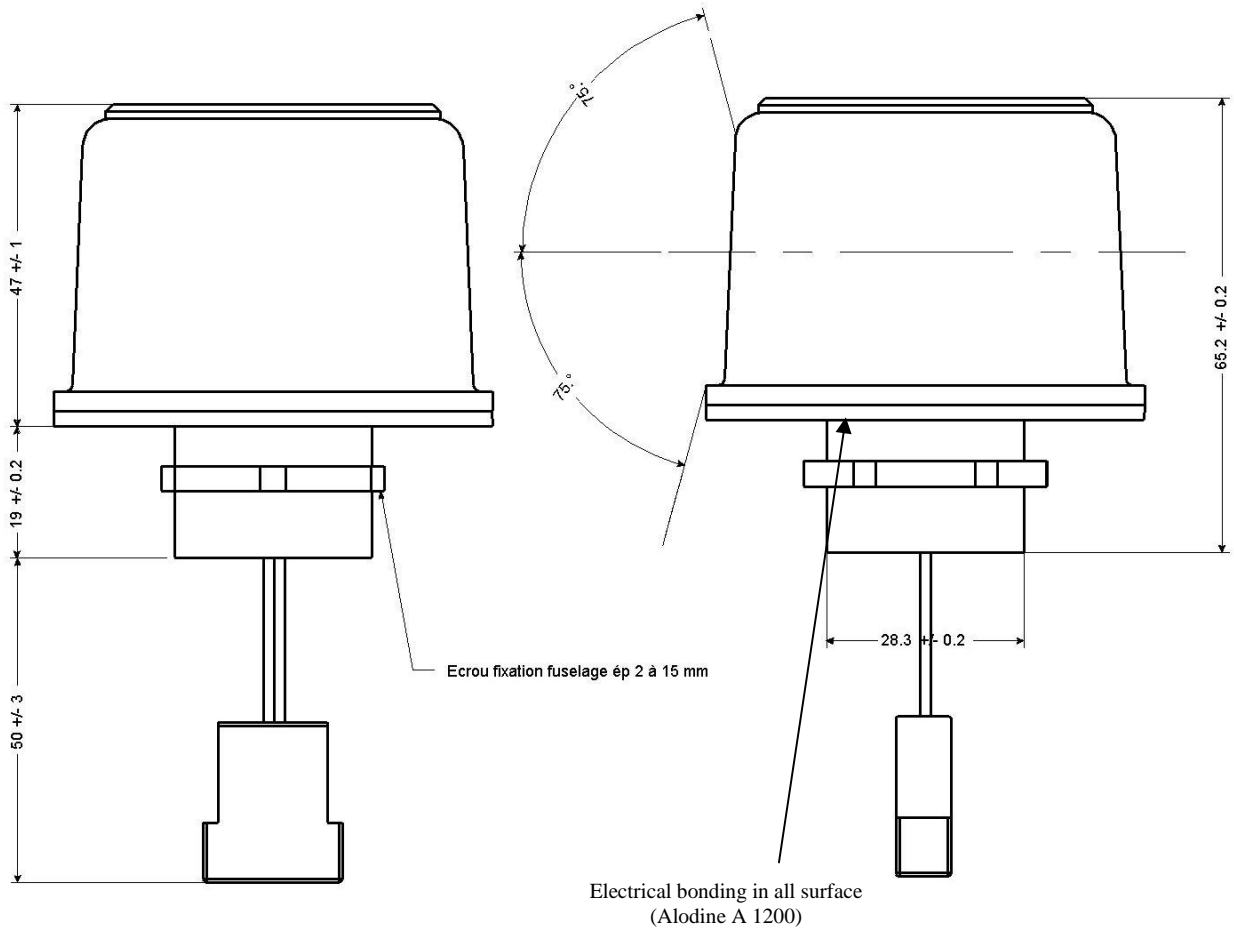
3.6.2 Power Unit Supply:



4 Annexes

4.1 2D drawing

4.1.1 Light



Référence : 6441601
 Matière : Aluminum 2017A
 Traitement : Alodine A 1200
 Verrine : Polycarbonate incolore traité anti UV
 Masse : 160 g +/- 10%
 Temperature de fonctionnement : - 45 °C / + 70 °C
 Raccordement :
 Connecteurs AMP Réf. : 1-480-701-0
 Brochage
 1=+ V
 2=NC
 3=0 V

4.1.2 Power Unit Supply

