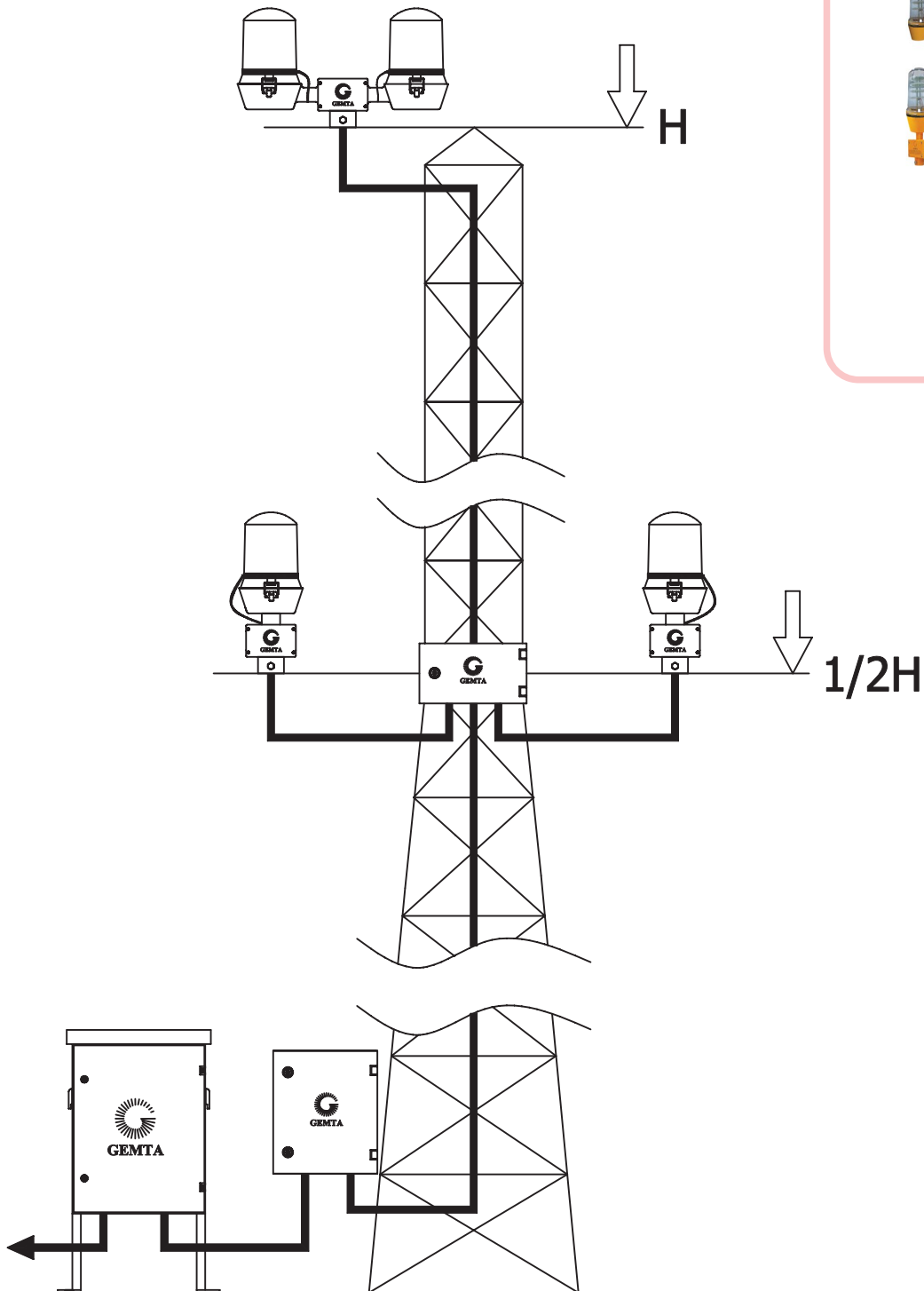


# AIRCRAFT WARNING LIGHT SYSTEMS

## LOW INTENSITY SYSTEMS



**GUIS-03 UPS** (AC Supplied,1 Double, 2 Single Warning Lamp+Control Box, Connector Box+DC Power Board)



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**GENERAL SPECIFICATIONS:** GEMTA Aircraft Warning Light System is designed and manufactured to warn aircraft against the high points above the ground which can be hazardous for flight safety. System consists of a double lamp armature, two single lamp armatures, a control box, a connector box and a uninterruptible power supply (UPS). System operates under the control of photocell relay so automatically turns the system on when ambience gets dark and turns it off when the ambience gets lighten. By the manual option of the photocell relay, system operates round the clock. Functionality tests must be conducted on manual mode at first installation. Upon request in ordering process, system options below are available.

**1- Supply Voltage ( $\pm 20\%$ ) :** 220-230V AC

**2- Lamp Type :** LED

**Gemta Led Lamp:** Gemta designed and produced lamps are especially recommended to customers.

The lamps are completely made by leds. That's why they have very long lifes. (approximately 100.000 hours)

**Light intensity:** Low intensity, Red light.

**3- Backup Systems:** System has two lamps on two separate arms. While one of the lamps is working the other lamp waits as a spare.(figure-1) If active lamp fails, it sends a failure code to the spare one and turn the spare one on after 4 second.

**4- Simultaneous (Non-Backup) Systems:** Two lamps on two arms works simultaneously.(figure-2) If one of the lamps fails it does not effect the other lamp.

Figure-1

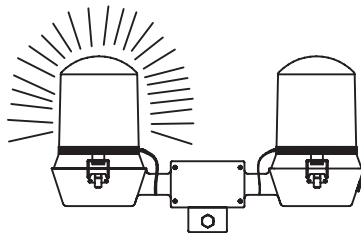
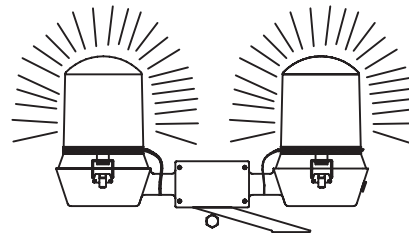


Figure-2



**5- Failure Warning Systems:** With this option, user is able to control the operation of system from a distant place. User installs the system by connecting failure outputs (COM:Common - NO:Normally Open) to sounded or lighted warning device. In case of any failure, system sends warning and warns the user. By means of Failure Warning System, problem is solved in a short time.

**6- Blink Systems:** Lamps blink 60 times in a minute.

**7- Continuous (Steady) Systems:** On this option system work continuously.

**8- Operating Temperature :** -40°C / 55°C

**Storage Temperature :** -55°C / 55°C

**9- Operating Frequency :** 50 Hz

#### MECHANICAL SPECIFICATIONS:

##### Double Armature;

- 1-Material : Aluminum Moulding
- 2-Paint : Ral-1028 Electrostatic Polyester
- 3-Bolts-Nuts-Washers : Stainless stell (inox)
- 4-Lamp Protective Cover: Polycarbonate
- 5-Protection Class : IP-55 / IP-65
- 6-Dimensions : See figure-3
- 7-Weight : 2.8 kg

##### Single Armature;

- 1-Material : Aluminum Moulding
- 2-Paint : Ral-1028 Electrostatic polyester
- 3-Bolts-Nuts-Washers : Stainless stell (inox)
- 4-Lamp Protective Cover: Red polycarbonate
- 5-Protection Class : IP-55 / IP-65
- 6-Dimensions : See figure-4
- 7-Weight : 2 kg

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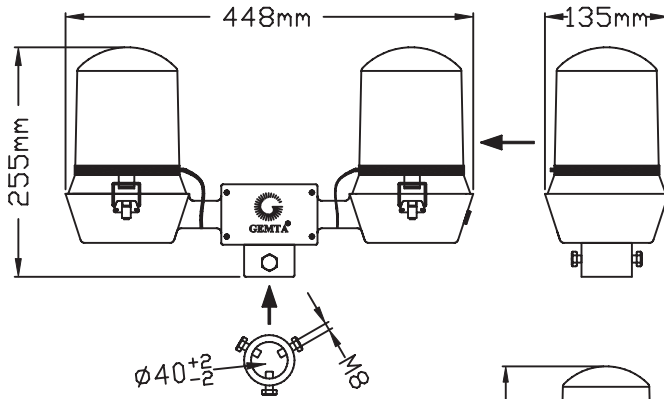


Figure-3

#### Control Box;

- 1-Material : Sheet Metal (ST-37)
- 2-Under Painting Surfacing : Electro Galvanized
- 3-Paint : Ral-7035 Electrostatic Polyester
- 4-Protection Class : IP-55 / IP-65
- 5-Dimensions : See figure-5
- 6-Weight : 10 kg

#### Connector Box;

- 1-Material : Sheet Metal (ST-37)
- 2-Under Painting Surfacing : Electro Galvanized
- 3-Paint : Ral-7035 Electrostatic Polyester
- 4-Protection Class : IP-55 / IP-65
- 5-Dimensions : See figure-6
- 6-Weight : 4 kg

#### PACKING SPECIFICATIONS:

##### Armatures Package;

- 1-Dimensions : 570x 480x 200mm
- 2-Weight : 8 kg
- 3-Piece in the System : 1
- 4-Content : Armatures, User manual
- 5-Max. Number of Stock : 5 pcs/package

##### Control and Connector Box Package;

- 1-Dimensions : 340x720x180mm
- 2-Weight : 16 kg
- 3-Piece in the System : 1
- 4-Content : Control and Connector box
- 5-Max. Number of Stock : 5 pcs/package

#### REQUIRED INFORMATION DURING THE ORDER:

- 1-Input Voltage
- 2-Backup or Simultaneous System Options
- 3-Continuous or Blink System Options
  - a-Armature 1-2-3 Continuous
  - b-Armature 1-2 Continuous / Armature-3 Blink
  - c-Armature 1-2 Blink / Armature-3 Continuous
  - d-Armature 1-2-3 Blink

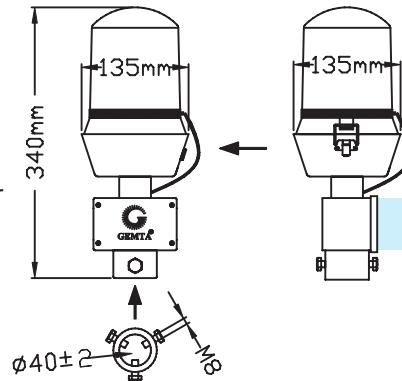


Figure-4

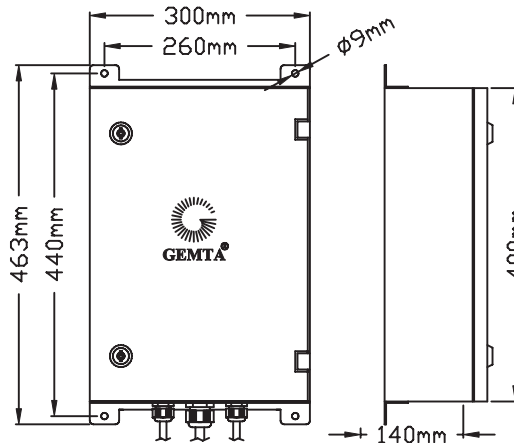


Figure-5

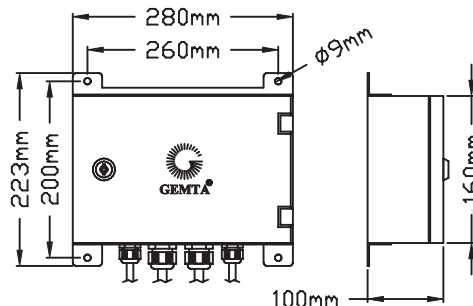


Figure-6

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### GUIS-03 UPS (AC Supplied,1 Double, 2 Single Warning Lamp+Control Box, Connector Box+DC Power Board)

#### UNINTERRUPTIBLE POWER SUPPLY(UPS):

UPS is monophase supplied. Device consists of two main parts: charging unit and battery group.

**1-Charging Unit:** Most important matter on using maintenance free batteries is appropriate charging method. Otherwise battery performance and life decrease. In UPS, constant voltage charging method is used and initial charging current limited at 1.5A. Thus battery life and performance increases. 220V AC input voltage is decreased to 30V AC by a transformer. And AC voltage is rectified, filtered and regulated to 2.30V/Cell and totally 27.6V DC at 20°C. Regulated output current is given to batteries after temperature compensation and fuses.

#### 2-Maintenance Free Battery Group:

There are 2 12V/18Ah maintenance free batteries inside the UPS. These batteries are connected serially to get 24V DC. Battery group is shipped fully charged. Maintenance free batteries have several advantages according to conventional lead-acid batteries.

- a- No acid leakage.
- b- Does not produce gas in the case of overcharging.
- c- No explosion danger.
- d- Normally (with temperature and power compensation) it does not need maintenance for 5 years.
- e- In the case of hard discharging, it can keep charge again.
- f- Very low self-discharging rate. (3% per rate)
- g- Operates in a large temperature range.
- h- Current feed up to 3 times of capacitance.
- i- Smooth discharge curve.

#### TECHNICAL SPECIFICATIONS:

- 1-Input voltage : 220V AC (±20%) / 50 Hz
- 2-Output voltage : 24V DC (Nominal)
- 3-Output current : 1.8A - 18A / 2 min.
- 4-Input power : 100VA / 80W
- 5-Output power : 45VA
- 6-Peak output power : 450VA
- 7-Number of cells : 12 Elements
- 8-Operating temperature : -4°C / 55°C

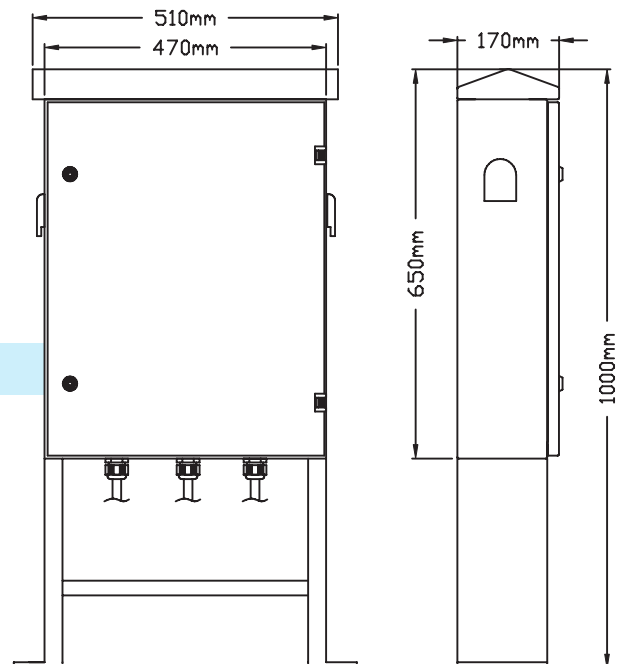
#### MECHANICAL SPECIFICATIONS:

- 1-Case : Sheet Metal (ST-37)
- 2-Case paint : Ral-7035 Electrostatic Polyester
- 3-Dimensions : See figure-7
- 4-Weight : 38kg
- 5-Protection Class : IP-55

#### PACKAGE DETAILS:

- 1-Package Dimensions : 685x750x250mm
- 2-Weight : 40 kg

Figure-7



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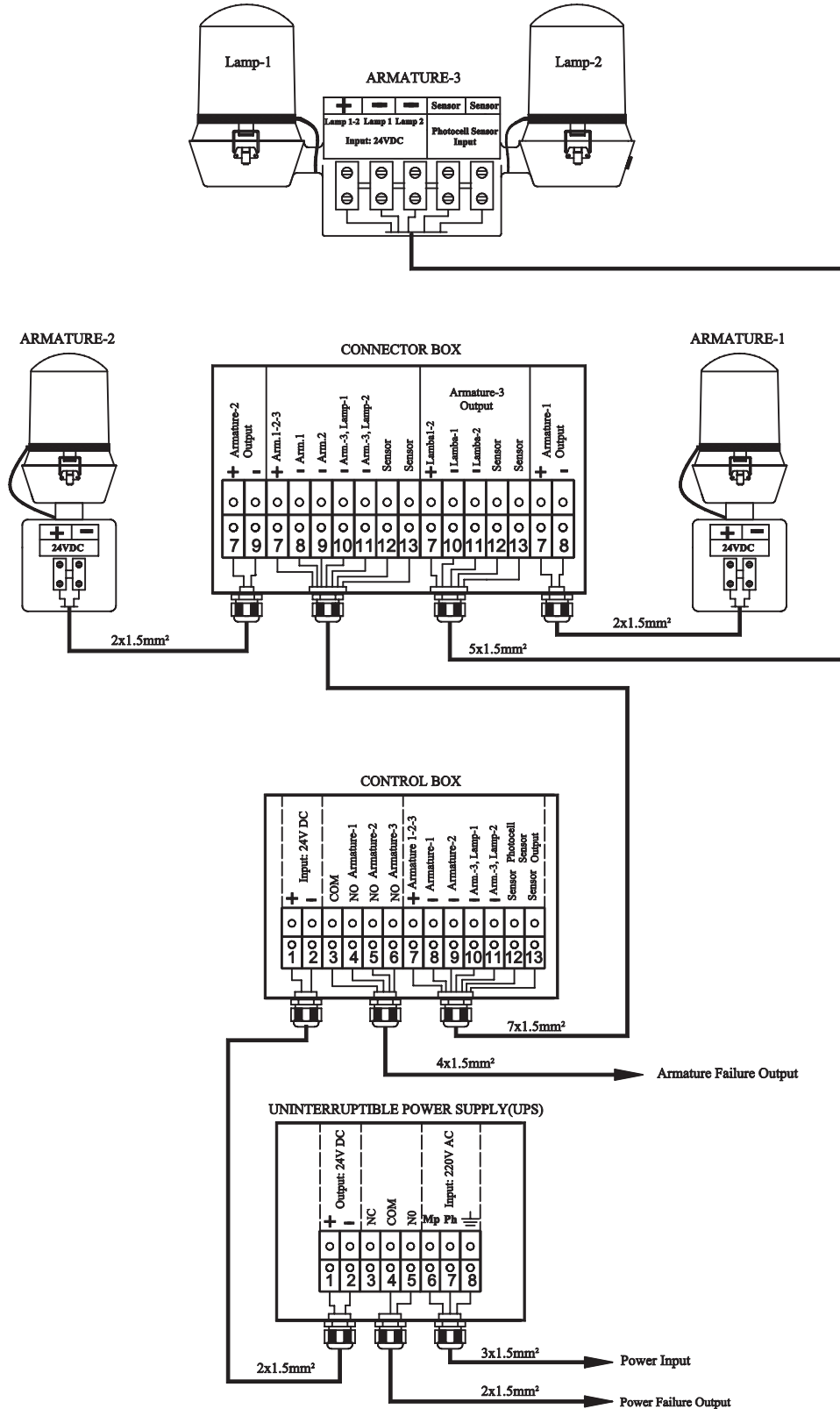


Figure-8

### WIRING DIAGRAM