

LM40

Medium Intensity Aviation Obstruction Light



Products description and application

LM40 Series type A aviation obstruction light ICAO certificate.
LM40 play a warning role in tall building to reduce aviation hazards, day time is white, at night is white or red (optional).
Advanced LED, optical and system control technology to meet the advantage of the most demanding applications.
For towers, chimnery, wind turbines and other aircraft need to play a warning role in the occasion.
Applicable to obstacles with a height of 105m to 150 m.
Applicable to high salinity areas.

Features

- Aluminium alloy die-cast shell, yellow electrostatic powder coating surface, anti-vibration, corrosion-resistant.
- Anti-UV, shock-resistant PC housing; Flammability level: UL94V0
- Waterproof silicone seal structure.
- Optical design based on Fresnel principle, the light source using LED technology, long life, low energy consumption, high efficiency.
- Professional EMC design, anti-electromagnetic interference.
- Luminous intensity with the ambient light automatically switch (daytime: 20000±25% cd, night 2000±25%);
- Luminous intensity with the ambient light auto switch (daytime: 20000±25% cd, night 2000±25%);
- Wind load level: 240km/h
- Day and night auto switch, can be controlled by local time or photocell.
- Lamp with fault alarm detection and alarm output.

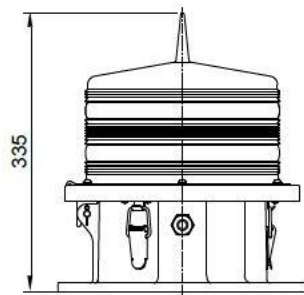
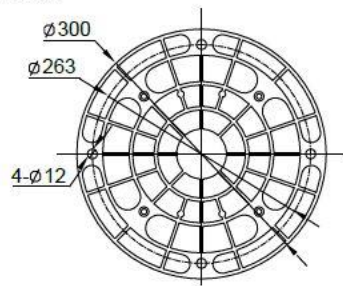
Lamp Specifications			
Standard	CAAC	MH6012-2015	
	ICAO	ICAO Annex 13 Volume 1, Eighth Edition Aerodrome Design and Operations	
	FAA	L865	
Electrical parameters		Mechanical parameters	
Input Voltage	DC48V	Operating temperature	-40 °C~+55°C
Power Consumption	Daytime:20FPM≤50W,30FPM≤75W, 40FPM≤30W Night: 20FPM≤15W,30FPM≤23W, 40FPM≤30W; 60FPS≤45W, Steady burning≤60W	Ambient humidity	0%~95% RH(No condensation)
Surge Lighting	IEC61000-4-5 L-L -3kV	Storage temperature	-55°C~+70°C
Protection	IEC61000-4-5 L-G -6kV	IP rate	IP66
Electrostatic discharge	IEC61000-4-2 Contact discharge 8kV	Weight	7Kg
Optical parameters			
Light source	LED		
LED lifespan	≥100000h		
Signal Type	flashing		
Flash Rate	Daytime 20/30/40FPM Night:20/30/40/60 FPM, Steady burning:Default 20FPM		
Light color	White/White + Red		
Horizontal Beam	360°		
Spread Vertical Beam	≥3°		
Intensity	Day time: 20.000±25%cd Night: 2000±25%cd	On/Off level	50-200lux

AC Power cabinet technical parameters

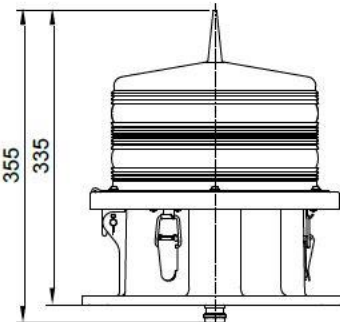
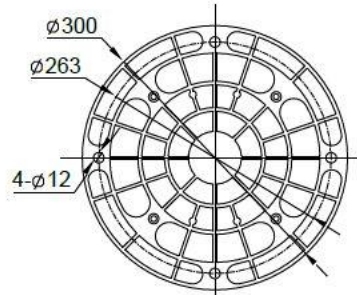
Electric parameters	Mechanical parameters
Voltage Input: AC100-240V, output DC48V	Storage temperature -40°C~+70°C
Fault atarm Dry contact (NO or NC optional, Default ON)	Operating temperature -40°C~+55°C
Consumption 1200W	Ambient Humidity 0%~90% RH (No condensation)
	IP Rate IP65
	Weight 13Kg

Mounting dimensions

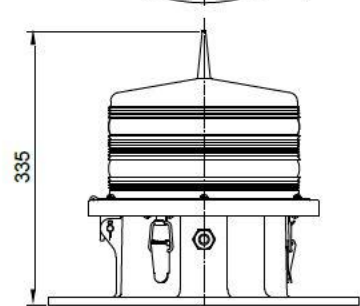
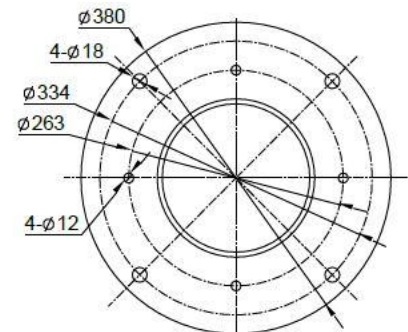
Unit:mm



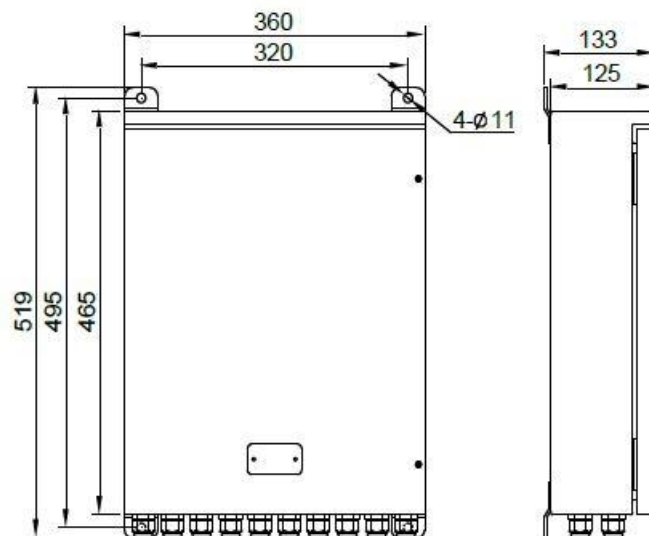
picture 1 regular base size(Side outlet)



picture 2 regular base size(Bottom outlet)



picture 3 big base size(Side outlet)

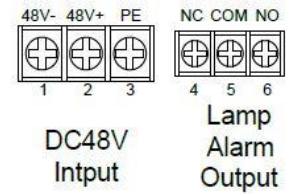


picture 4AC Powercabinet installation dimensions

Wiring diagram



picture 5 AC Powercabinet installationWiring diagram



picture 6 Lamp connection Wiring diagram

Installation method of use

Secure the light on a smooth surface which has enough strenght, if there is no mounthins surface we can customize special mounting bracket as request.

When installation, please stay away the nearby light source, at the same time, ensure the phottocell do not cover by the the near object (suitable for light photocell)

Make sure the power supply can match the rated power of the light before connecting.

GPS synchronization function test in the outdoor without blocking the enviroment test, synchronization takes about 30 minutes (only for lights with GPS)

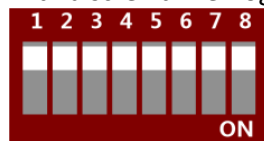
DC voltage obstruction lights first open the three buckie on the base, turn the lamp body, exposed terminal block; connect power wire through waterproof gland. Connect the power wire (positive, negative, ground) and fault alarm wire acording to the terminal definition on the label (picture 6) and then check the line, please tighten the waterproof gland and buckles, and finally connected to the DC48V power supply, the lights began to work.

AC voltage obstruction lights through the bottom of the power box waterproof gland access AC input power wire (L, N and ground wire), fault ararm wire (COM/NO or COM/NC) (optional) and DC48V output power wire (5*1,5mm² jacket line, and less than 3m), Correctly connect all power wires and fault atarm wires, pay attention to positive and negative polarity acording to the terminal definition an the label (picture 5) and the check the line, please tighten the waterproof gland and buckles. After power, push the circuit breaker and manual switch to the ON side, the light starts to work.





Light dial switch function using the method

*this product has mode manual adjustment function

*Flas mode manual adjustment method, please operate in the case of power off, oppen the lamp body, with a screwdriver loggle loggle DIP switch





BIT1、BIT2 : Obstruction light daytime flashing FPM setting as below:

Dial Number	11	10	01	00
DIP figure				
Flash frequency	40FPM	40FPM	30FPM	20FPM





Noted 1: The factory setting defaults to 40FPM.

BIT3 : Obstruction light working model setting as below:

Dial Number	1	0
DIP figure		
Working status	Night steady burning	Night flashing



Noted 2: The factory setting defaults to night flashing model.

BIT4, BIT5 : Obstruction light night flashing FPM setting as below:

Dial Number	00	01	10	11
DIP figure				
Flash frequency	20FPM	30FPM	40FPM	60FPM



Noted 3: The factory setting defaults to 40FPM.

BIT6 : Day and night switch selection as below:

Dial value	0	1
DIP		
Work status	Time control priority	Photocell priority



Noted 4: The factory setting defaults to photocell controlled priority.

BIT7 : DIP switch function setting below:

Dial Number	0	1
DIP figure		
Control	Dial the frequency non-effective	Dial the frequency

Noted 5: The factory setting defaults to flash frequency setting valid.

BIT8 : DIP switch function setting below:

Dial Number	0	1
DIP figure		
Red light optional	YES	NO

Noted 6: If the lamp including red light, the factory setting defaults to red light priority.

Noted 7: The DIP switch is 0 at the digital end, and 1 at the ON

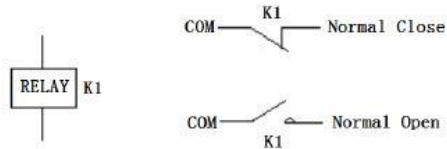
Time control priority application introduction

*Time controlled factory default settings time slot open schedule:

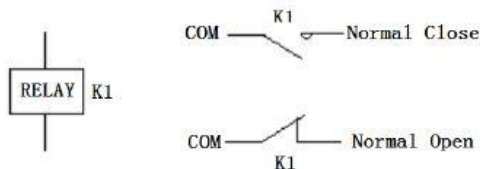
Season(Start-End Date)	Day time	Night
Spring (21th March-21th June)	7: 00 -18:00	18: 00 -7:00
Summer(21th June-22th Sep)	5: 00 -19:00	19: 00 -5:00
Autumn(23th Sep- 21th Dec)	7: 00 -18:00	18: 00 -7:00
Winter(22th Dec- 19th March)	7: 00 -17:00	17: 00 -7:00

Fault alarm function

*When the lamp is not receiving a power supply or a lamp fault: The relay has no action, „common terminal” and „normal close terminal” close as below:



*The lights are connected to the power supply and working properly; Relay action, „common terminal” and „normal open terminal” close as below:



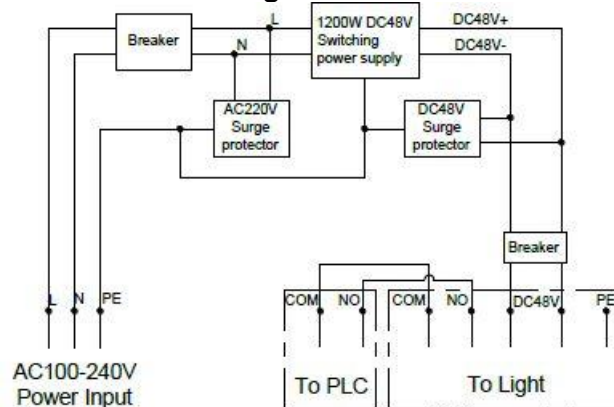
*If there is no power access, or failure are received „disconnect” signal, the alarm signal line connected to the „common” + „normally open”;

*If the „closed” signal is received when there is no power supply access or the fault, the alarm signal line is connected to „common”+”normal closed”

*Power cabinet(only AC voltage product)

To Light:Lamp failure alarm terminal: obstruction light normal work when the port is normally closed state. This part is disconnected when the obstruction is faulty

AC power cabinet schematic diagram



Precautions

For high-power lamp, the surface temperature is high, it cannot be covered. And the distance from the object no less than 3m, to avoid burning or fire.

Using PC material components (such as lamp cover shell) can not be in direct or indirect contact with industrial alcohol, banana water, isopropyl alcohol, carbon tetrachloride, cyclohexanone and other solvents, otherwise it will be corrosio cracking.

Make sure delay judgment about 15s after photocell change detected and about 10s delay alarm detected which as normal phenomenon.

Obstruction lights and power box connection diameter greater than 4mm², cable lenght less than 15m, otherwise there may be pressure drop loss to the obstruction light can not start or lack of light intensity.

Please do not open any components inside by yourself and do not look light horizontally to protect your eys wile the light working.

It is important to note that ambient temperature conditions are consistent with this product. Otherwise it will not work properly

This product will be working when the temperature reise, are normal.

This product is sealed structure, non-professional personnel do not disassemble, once discovered, the cmpany will not warranty.

Oder number

Product No.	Input Voltage	Color	Work Styles	Photocell	GPS Synchronization	Fault Alarm	Installation Method
1000243-001	DC48V	White(daytime) White(night)	Default 40FPM	YES	YES	YES	Small base (cable diameter Ø13-18mm)
1000243-001	AC100-240	White(daytime)+red(night) +Whitestandby(night)	Default 40FPM	YES	No	YES	Small base (cable diameter Ø9-14mm)
1000243-001	AC100-240	White(daytime) White(night)	Deytime 40FPM Night 20FPM	YES	YES	YES	Small base (cable diameter Ø9-14mm)
1000243-001	AC100-240	White(daytime) White(night)	Default 40FPM	YES	YES	YES	Small base (cable diameter Ø9-14mm)
1000243-001	DC48V	White(daytime)+red(night) +Whitestandby(night)	Default 40FPM	YES	YES	YES	Small base (cable diameter Ø13-18mm)
1000243-012	AC100-240	White(daytime)+red(night) +Whitestandby(night)	Default 40FPM	YES	YES	YES	Small base (cable diameter Ø9-14mm)
1000243-014	AC100-240	White(daytime) White(night)	Default 40FPM	YES	YES	YES	Small base (cable diameter Ø13-18mm)
1000243-015	AC100-240	White(daytime)+red(night) +Whitestandby(night)	Default 20FPM	YES	YES	YES	Small base (cable diameter Ø9-14mm)