ELECTRONIC SYSTEMS

chapter:

TLB1-H

5.7.1

Application

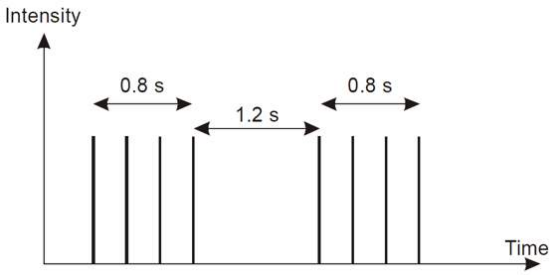
- omnidirectional heliport beacon
- used in the heliports where it is necessary to provide visual guidance over a long distance and this guidance is not provided by other visual means or where identification of the heliport is difficult due to ambient lights

Accordance with

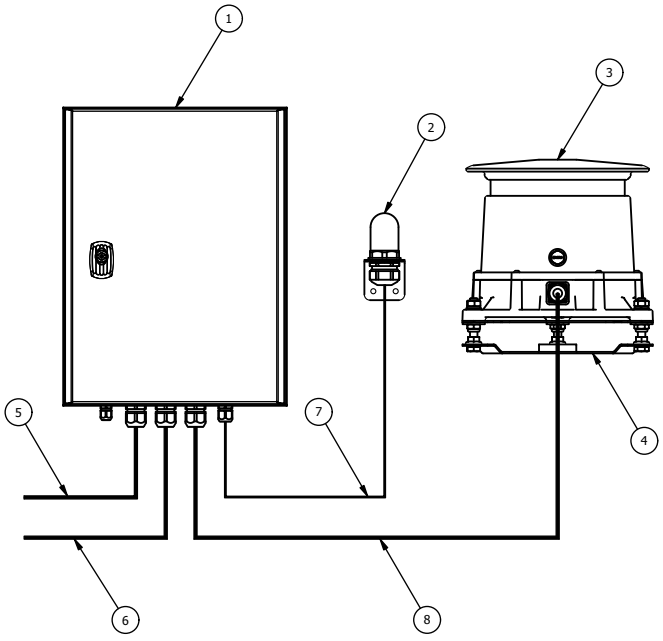
- ICAO Annex 14 – Volume II – Heliports, 5th Edition, July 2020

Description/Properties

- the flashing light has an omnidirectional lightning emission characteristics (the light beam is identical in all azimuth angles) and after switching on it emits a series of short flashes of white light



- luminous intensity (flash intensity) can be adjusted manually in three steps via remote control or automatically according to ambient light intensity (Illuminance) using an externally connected ambient light intensity sensor
- remote control methods (modification of the control unit):
  - 24 V DC contact control
  - 230 V AC contact control
  - RS 485 serial link control
  - 100Base-TX ethernet interface control



1. TLB1.CU Control Unit
2. LS-1 Ambient Light Intensity Sensor
3. TLB1-H.LE Flashing Light
4. TLB1.M1 Adjustable Flashing Light Support
5. Power Cable
6. Remote Control Cable
7. Ambient Light Intensity Sensor Cable
8. TLB1.UCAB Flashing Light Interconnecting Cable

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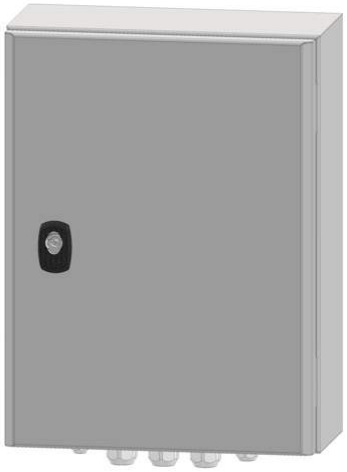

TLB1.CU Control Unit

- wall-mounting enclosure
- it contains electronic circuits ensuring control, monitoring of proper function and remote control and monitoring circuits
- an external ambient light intensity sensor can be connected to the control unit
- the power supply to the control unit is supposed from a separate outlet of a suitable switchboard with a recommended fuse rating of 6 A

Technical Parameters

- dimensions (w×h×d): 300 × 400 × 160 mm
- weight: 15 kg
- power network: 1NPE 50 Hz 1x230 V / TN-S
- supply voltage: 230 V AC (187 V – 253 V)
- wattage (without a beacon): max. 60 W
- working temperature: -20 – +55 °C
- IP Code: IP 54
- maximum air humidity: 80 % / 25 °C
- flash intensity control
  3 % (LOW), 10 % (MEDIUM), 100 % (HIGH)
- automatic intensity regulation:
  < 250 lx ~ 3 %, 250–500 lx ~ 10 %, > 500 lx ~ 100 %
- 24 V DC contact control
  - optocoupler input voltage: max 30 V DC
  - output relay voltage: max 30 V DC
  - output current: max 1 A
- 230 V AC contact control
  - main supply voltage : 230 V AC
  - monitoring output voltage:
    230 V AC (equal to supply voltage)
  - output current: max 0,5 A

TLB1-H.LE Flashing Light

- highly robust construction made of aluminum alloy castings
- glass ring resistant to environmental influences protecting the optical system
- the upper part is overhanged and protects the optical part from dirt and snow, at the bottom is an easily disconnectable connector for connecting the cable from the control box (shared for power and communication)
- it contains power supply and monitoring electronics of LED light sources
- the overall structural arrangement guarantees identical emission in all directions
  (azimuth -180° – +180°).

Elevation	
10°	250 cd*
7°	750 cd*
4°	1 700 cd*
2 1/2°	2 500 cd*
1 1/2°	2 500 cd*
0°	1 700 cd*
–180° Azimuth	+180°

(white light)

* Effective intensity

Technical Parameters

- dimensions (Ø×h): 290 x 216 mm (max)
- weight: 7,1 kg
- wattage: max. 40 W
- working temperature: -55 – +55 °C
- IP Code: IP 65
- wind resistance: 0–160 km/h
- corrosion resistance:
  materials resistant to salt fog and UV radiation
- LED lifetime: min. 10 000 hour
- optical parameters: min 2500 cd / 1,5–2,5°

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TLB1.UCAB Flashing Light Interconnecting Cable

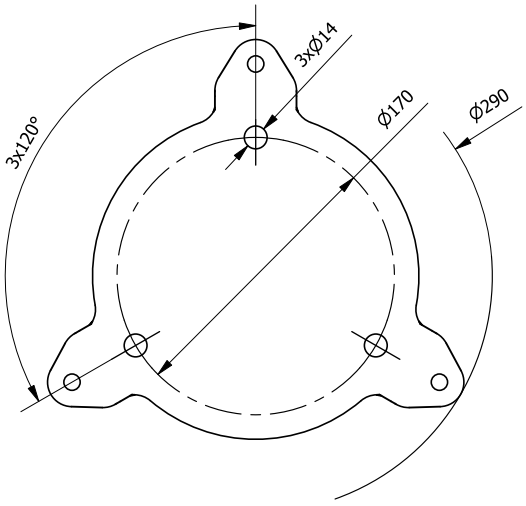
- the interconnection cable with a connector contains both 230 V AC power supply and communication
- the maximum possible length is 30 m

TLB1.M1 Adjustable Flashing Light Support

- mechanical fixing of the flashing light to a horizontal base
- the adjustment (rectification) of the basic mounting plane is done before the light is mounted by three adjusting screws

Technical Parameters

- dimensions (Ø×h): 290×44 mm (max)
- weight: 1,4 kg



LS-1 Ambient Light Intensity Sensor

- enables automatic adjustment of flash intensity (not needed for manual setting)
- the sensor is connected to the control unit using the supplied cable (standard length 10 m, maximum possible length 30 m)

Technical Parameters

- dimensions (Ø×h): cca 28×40 mm (without gland and support)
- weight: 0,1 kg
- working temperature: -55 – +55 °C
- IP Code: IP 65
- maximum cable length: 30 m
- optical sensor: fotorezistor

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SKU

- Power and Remote Control Units
  - 24 V DC contact control TLB1.CU.B24
  - 230 V AC contact control TLB1.CU.230
  - RS 485 serial link control TLB1.CU.R
  - Ethernet (LAN) TLB1.CU.N
- Flashing Light
  TLB1-H.LE
- Flashing Light Interconnecting Cables
  - length 5 m TLB1.UCAB5
  - length 10 m TLB1.UCAB10
  - length 15 m TLB1.UCAB15
  - length 20 m TLB1.UCAB20
  - length 35 m TLB1.UCAB35
- Accessories
  - Adjustable Flashing Light Support TLB1.M1
  - Ambient Light Intensity Sensor LS-1