

Application

- sequenced flashing light system is designed to improve identification of runway or identification of the runway threshold in reduced visibility conditions

In accordance with

- ICAO Annex 14, Vol. I
- EASA CS-ADR-DSN, Issue 4

Description / Properties

- the flashing light system consists of:
 - TFL-32.CU or TFL-32.RC control unit
 - elevated TFL-32.XE (xenon lamp) or TFL-32.LE (LED) flashing lights
 - low profile (6,35 mm) TFL-32.LI inset (LED) flashing lights with TFL-32.PI power electronics
 - TJB-32 junction boxes
- TFL-32.XE and TFL-32.LE flashing lights contain complete electronics
- a pair of TFL-32.LI inset flashing lights in combination with TFL-32.PI power electronics is intended for installation in paved surfaces
- a combination of xenon and LED lights in one lighting system is not recommended
- control, monitoring and synchronization of lights is provided by the TFL-32.CU or TFL-32.RC control unit

TFL-32.CU control panel characteristics

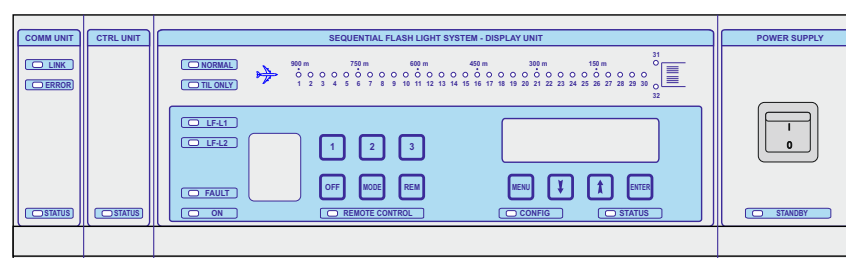
- remote and manual setting of flash intensity in three levels with indication on two-color LED display
- intuitive display of individual light status with two-color LED series
- indication of operating, diagnostic and fault information on a contrast OLED display
- intuitive operation with reliable mechanical buttons
- proven 19" modular design with guides for easy insertion into the rack
- easy individual module replacement reduces system downtime to a minimum in the event of the malfunction



- TFL-32.CU control unit
- TFL-32.RC control unit
- TFL-32.XE xenon flashing light
- TFL-32.LE LED flashing light
- TFL-32.LI inset LED flashing light
- TFL-32.PI power electronics
- TJB-32 junction box

Assembly/Connection/Power supply

- see pages 7–11 for different mounting methods
- the control unit and the junction boxes are connected via a power and data cable
- junction boxes and lights are connected via a cable with a combined function of power and data cable
- for easy replacement, the lights are connected via a connector



chapter:

5.6.1

TFL-32



TFL-32.CU Control Unit Specifications

- dimensions (w×h×d) 585×1350×550 mm
- weight 85 kg
- surface finish gray powder coating
RAL 7035/RAL 7030
- power supply 3NPE ~50 Hz 3×230/400 V/TN-S
- supply voltage 187÷253 V / 50 Hz
- power consumption <100 W
- operating temperature -25 °C ÷ +55 °C
- IP Code IP20
- relative humidity up to 80 % at 25 °C

TFL-32.RC Control Unit Specifications

- dimensions (w×h×d) 400×500×200 mm
- weight 15 kg
- surface finish gray powder coating
RAL 7035
- power supply 1NPE ~50 Hz 1×230 V/TN-S
- supply voltage 187 ÷ 253 V / 50 Hz
- power consumption <100 W
- operating temperature -25 °C ÷ +55 °C
- IP Code IP 54
- relative humidity up to 80 % at 25 °C

TJB-32 Control Unit Specifications

- dimensions (w×h×d) 280×230×110 mm
- weight 5,5 kg
- surface finish gray powder coating
RAL 7035
- operating temperature -55 °C ÷ +55 °C
- IP Code IP 66

TFL-32.XE Flashing Light Specifications

- dimensions (w×h×d) 242×290×240 mm
- weight 7,2 kg
- surface finish natural aluminium
- power consumption max. 90 W
- operating temperature -55 °C ÷ +55 °C
- IP Code IP 54
- lamp lifetime min. 1 000 hours

TFL-32.LE Flashing Light Specifications

- dimensions (w×h×d) 242×290×240 mm
- weight 6,8 kg
- surface finish natural aluminium
- power consumption max. 40 W
- operating temperature -55 °C ÷ +55 °C
- IP Code IP 54
- LED lifetime min. 10 000 hours

TFL-32.LI Inset Flashing Light and TFL-32.PI Power Electronics Specifications

- surface finish natural aluminium
- power consumption max. 40 W
- operating temperature -55 °C ÷ +55 °C
- IP Code IP 68
- TFL-32.LI
 - dimesions (diameter×height) 12"×120 mm
 - weight 6,9 kg
 - LED lifetime min. 10 000 hours
- TFL-32.PI
 - dimesions (diameter×height) 12"×180 mm
 - weight 8,2 kg

SKU:

- control units
 - standard TFL-32.CU
 - simplified design (for TIL system) TFL-32.RC
 - flashing lights
 - elevated xenon TFL-32.XE
 - elevated LED TFL-32.LE
 - inset LED TFL-32.LI
 - power electronics for two inset LED lights TFL-32.PI
 - set of two inset LED lights, two connecting cables and power electronics TFL-32.LPI
 - junction boxes
 - for the power and communication cable with outlet to the light/power electronics TJB-32
 - for the power cable only TJB-32.P
 - cables to the light
 - connecting cable (including connector) between junction box and light/power electronics
 - length 2 m TFL-32.UCAB2
 - length 5 m TFL-32.UCAB5
 - length 10 m TFL-32.UCAB10
 - length 15 m TFL-32.UCAB15
 - length 20 m TFL-32.UCAB20
 - length 35 m TFL-32.UCAB35
 - connecting cable for power supply electronics and inset LED flashing light (3 m) TFL-32.ICAB
 - connecting cable for power junction box and light in stock without connector TFL-32.UCAB
 - cable connector for lights connection (soldered contacts) TFL-32.UCON1
 - cable connector for lights connection (crimped contacts) TFL-32.UCON2
 - communication cable for control unit and junction boxes
 - in stock TFL-32.BCAB
 - power supply cable
 - 5×10 mm² CYKY-J 5×10(C)
 - 5×16 mm² CYKY-J 5×16(C)
 - 5×25 mm² 1-CYKY-J 5×25(C)
- * power and data cables for a specific project has to be ordered separately
- * assembly sets for mounting the junction boxes and flashing light supporting elements has to be ordered separately

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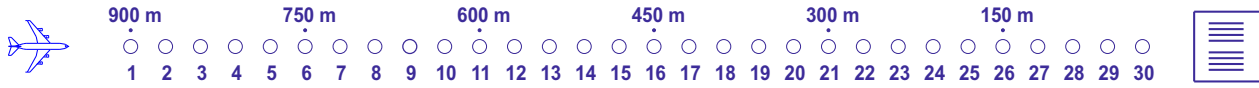
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TFL-32

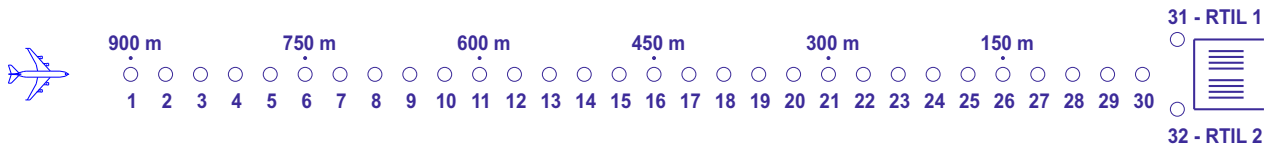


Installation options

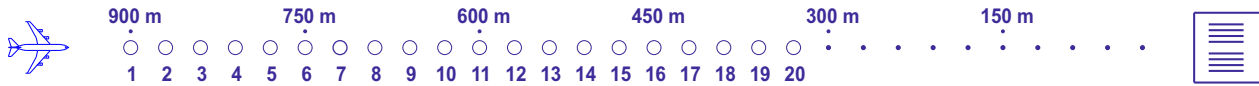
CAT I (30 lights)



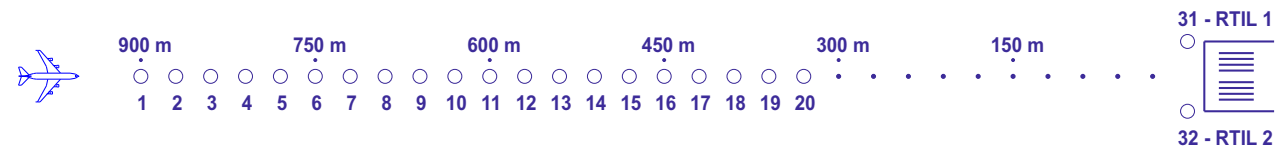
CAT I + RTIL (32 lights)



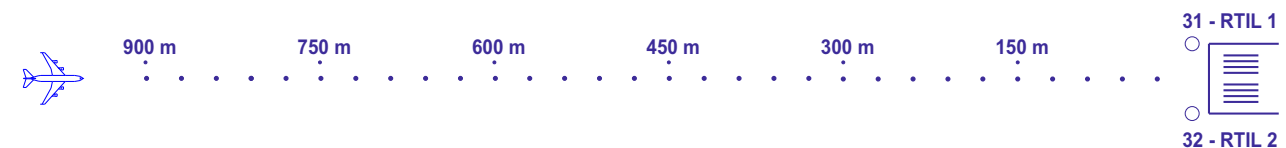
CAT II/III (20 lights)



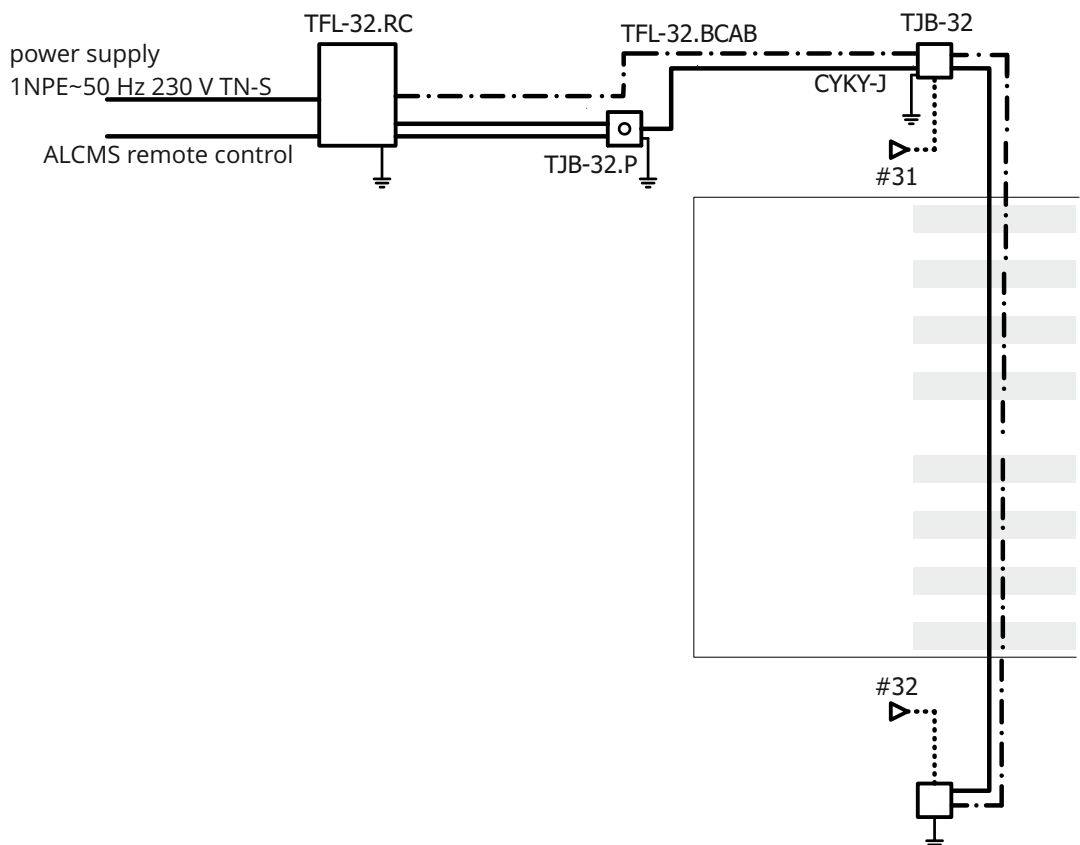
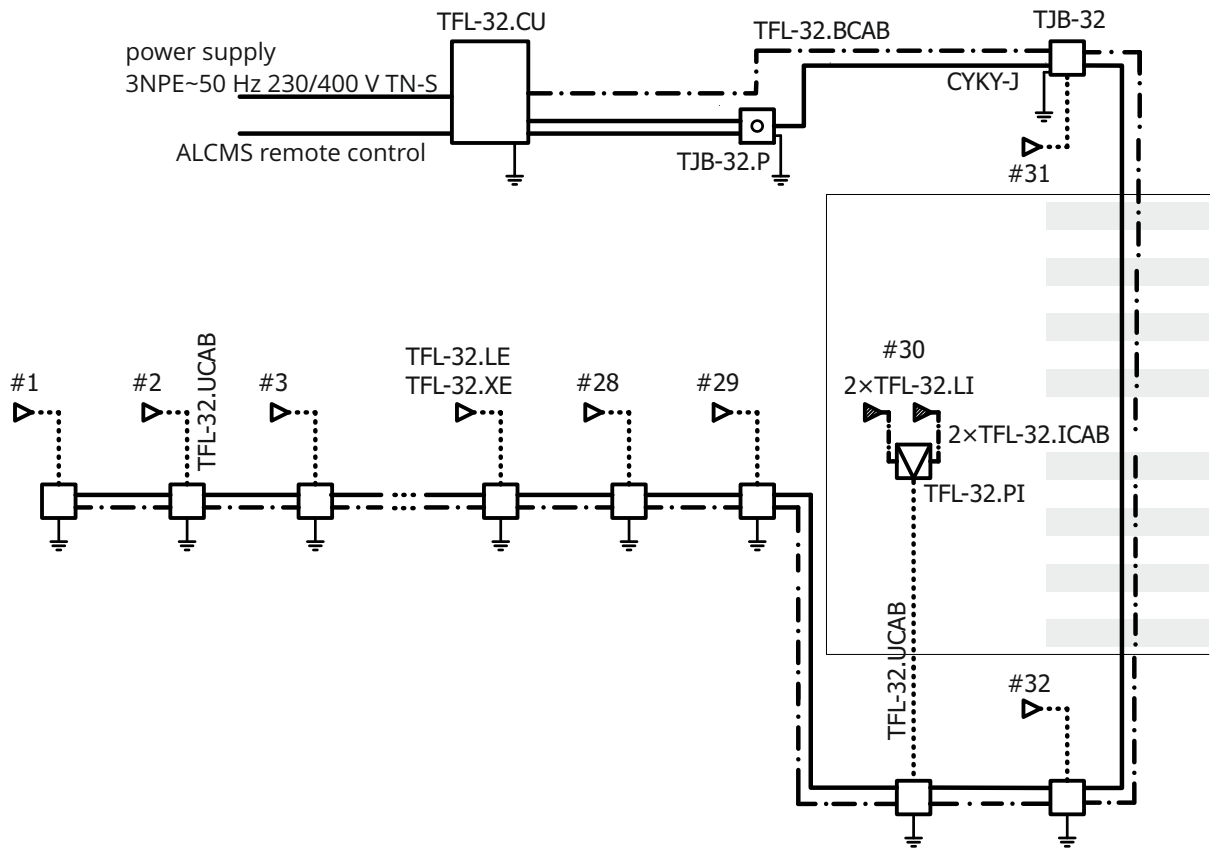
CAT II/III + RTIL (22 lights)



RTIL (2 lights)



Wiring diagram (examples)



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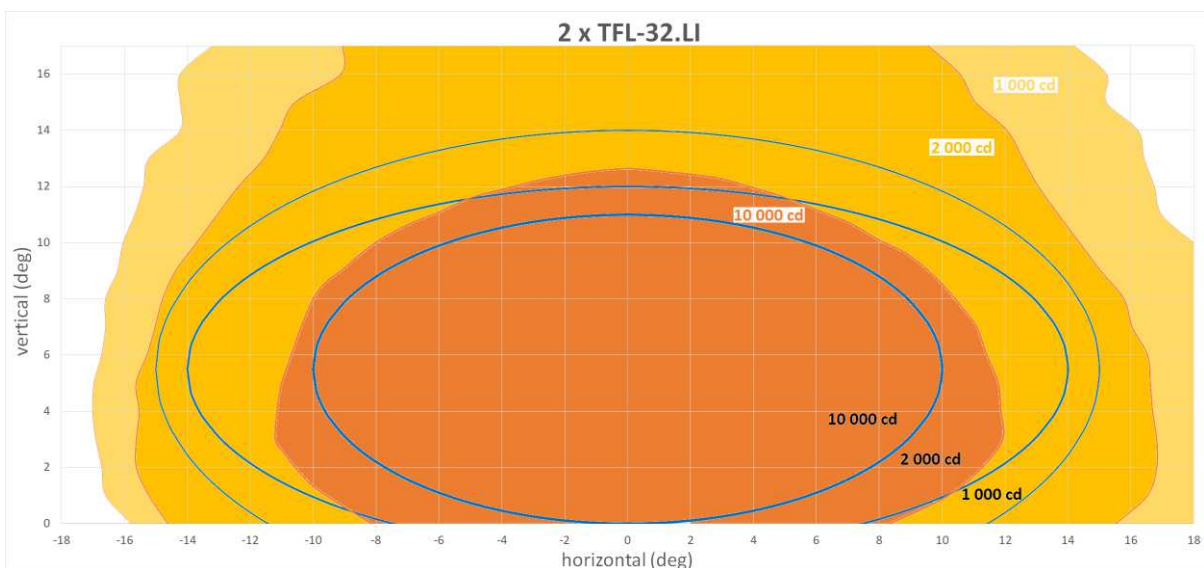
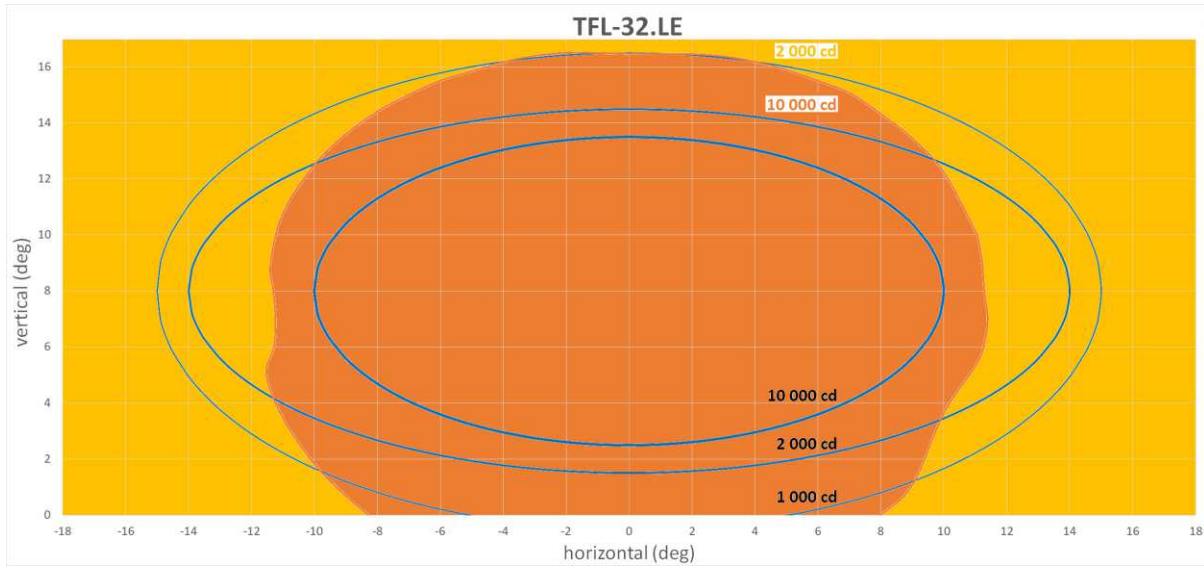
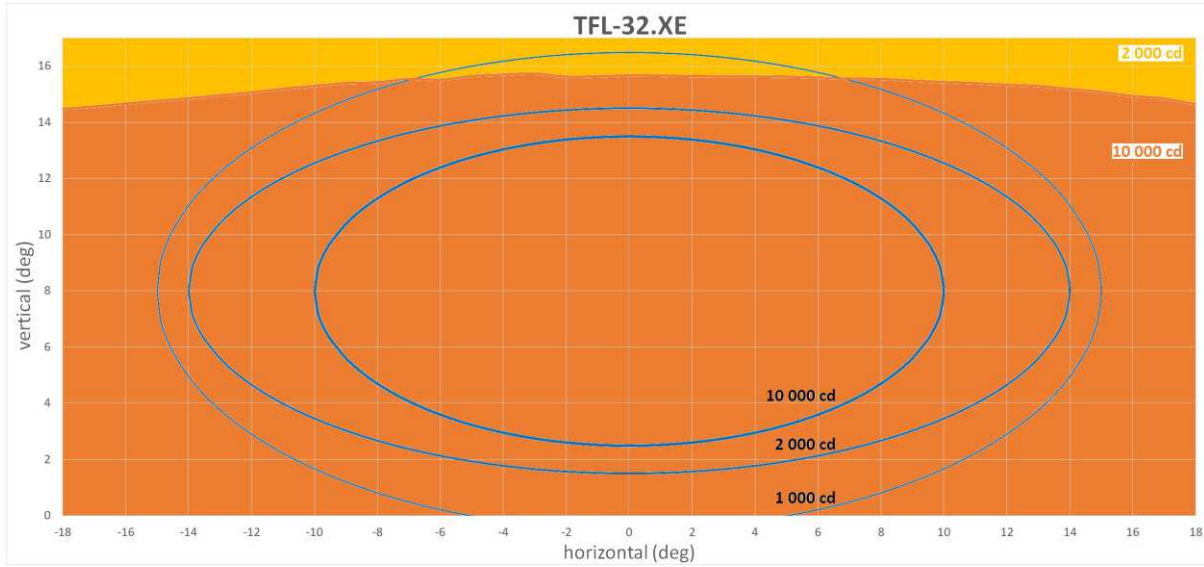
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TFL-32



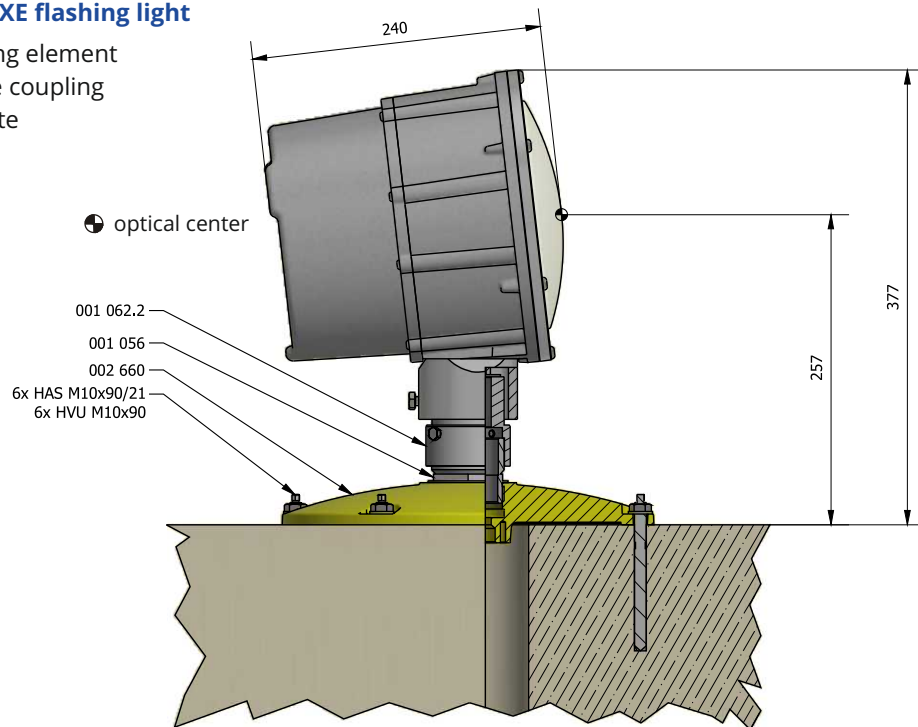
Photometry

- ICAO Annex 14 Vol. I, Fig. A2-1

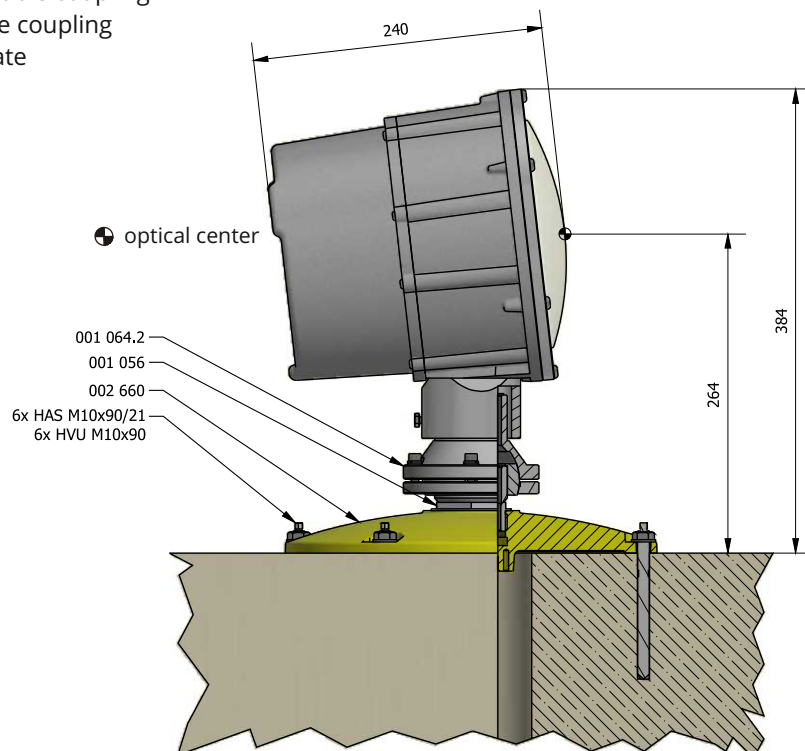


Assembly of TFL-32.XE flashing light

- 001 062.2 coupling element
- 001 056 frangible coupling
- 002 660 base plate

**Assembly of TFL-32.LE and TFL-32.XE flashing lights**

- 001 064.2 adjustable coupling
- 001 056 frangible coupling
- 002 060 base plate



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TFL-32

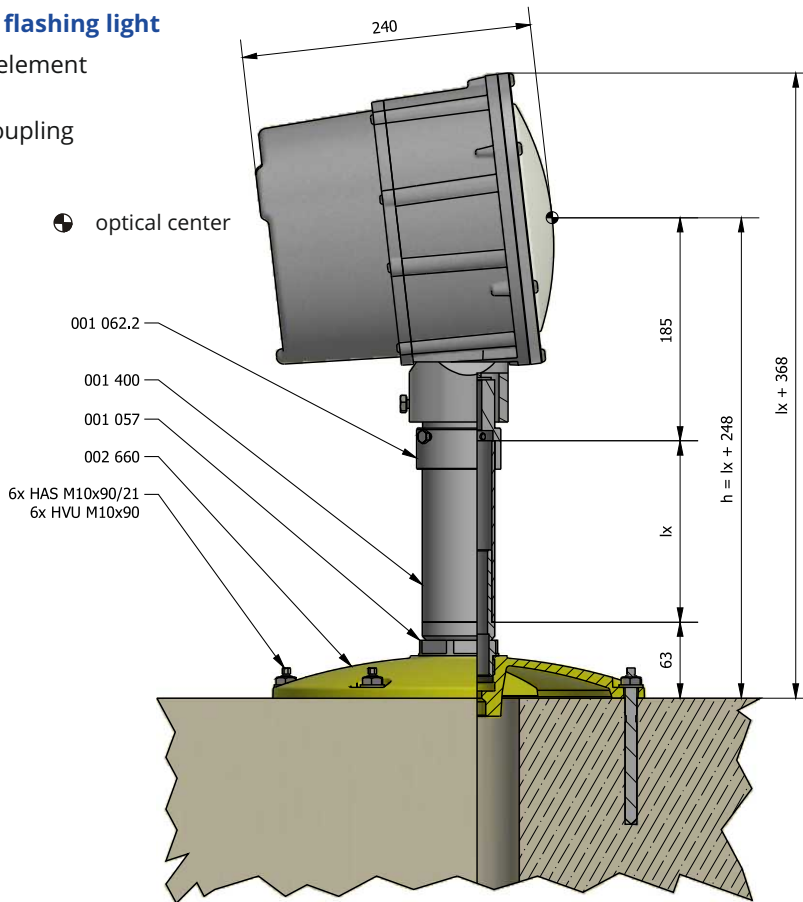


Assembly of TFL-32.XE flashing light

- 001 062.2 coupling element
- 001 400 tube
- 001 057 frangible coupling
- 002 660 base plate

⊕ optical center

h - optical height
 $h = lx + 248$
 $308 \leq h \leq 630$
 lx - tube length
 $lx = h - 248 \text{ mm}$
 $(60 \leq lx \leq 382)$

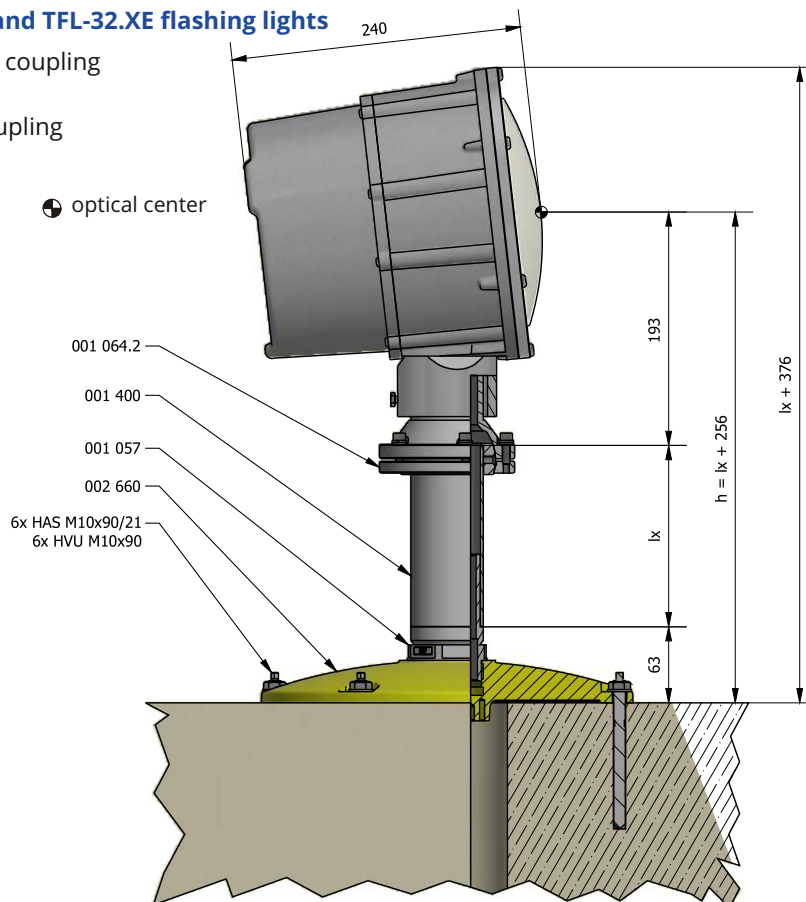


Assembly of TFL-32.LE and TFL-32.XE flashing lights

- 001 064.2 adjustable coupling
- 001 400 tube
- 001 057 frangible coupling
- 002 660 base plate

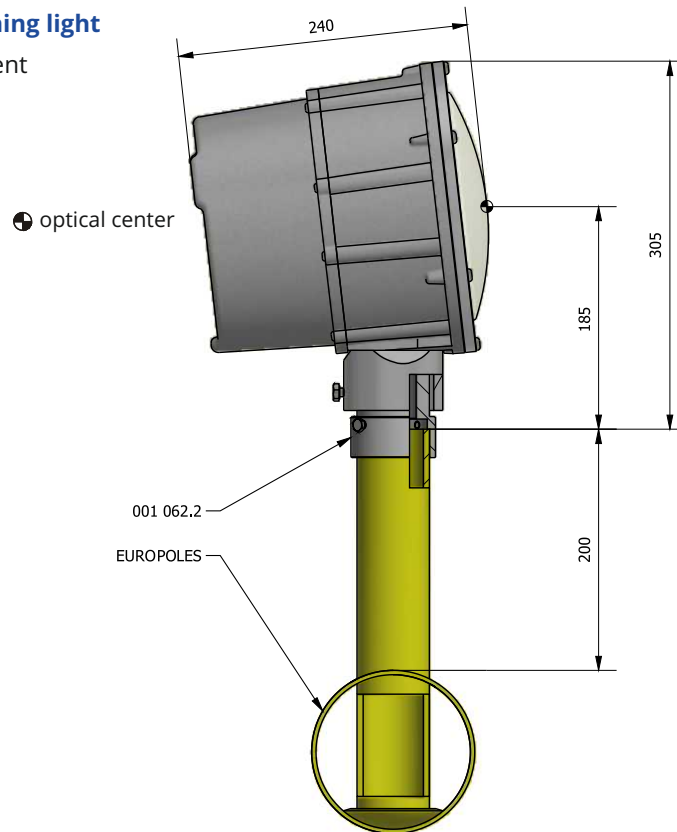
⊕ optical center

h - optical height
 $h = lx + 254$
 $316 \leq h \leq 630$
 lx - tube length
 $lx = h - 256 \text{ mm}$
 $(60 \leq lx \leq 374)$



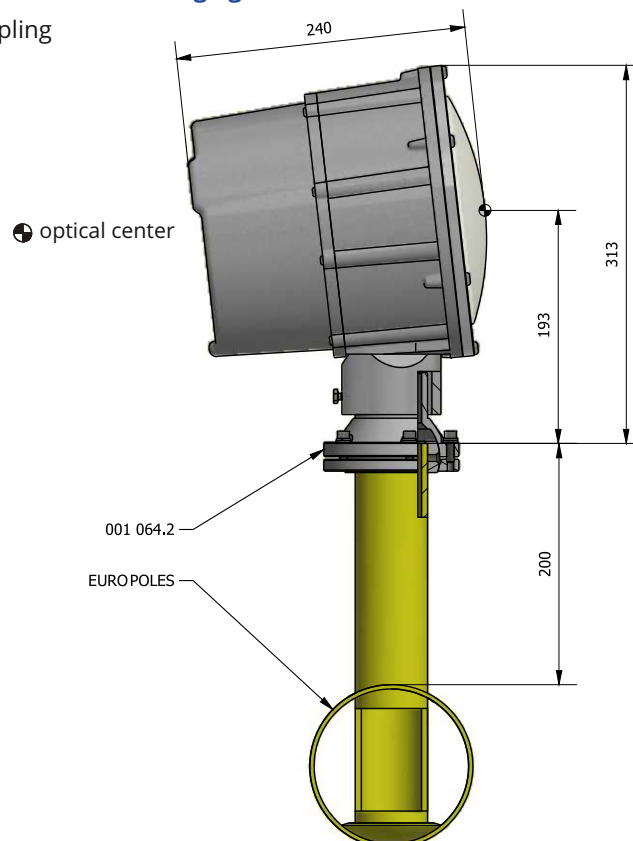
Assembly of TFL-32.XE flashing light

- 001 062.2 coupling element
- EUROPOLES crossbar



Assembly of TFL-32.LE and TFL-32.XE flashing lights

- 001 064.2 adjustable coupling
- EUROPOLES crossbar



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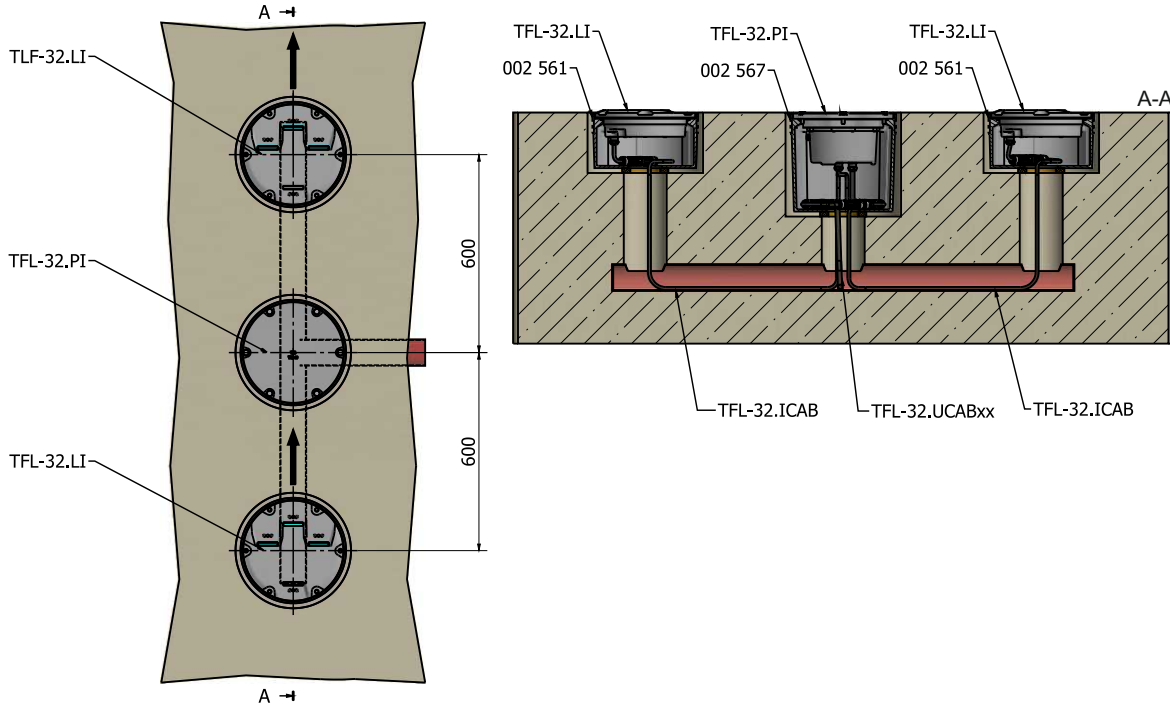
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TFL-32



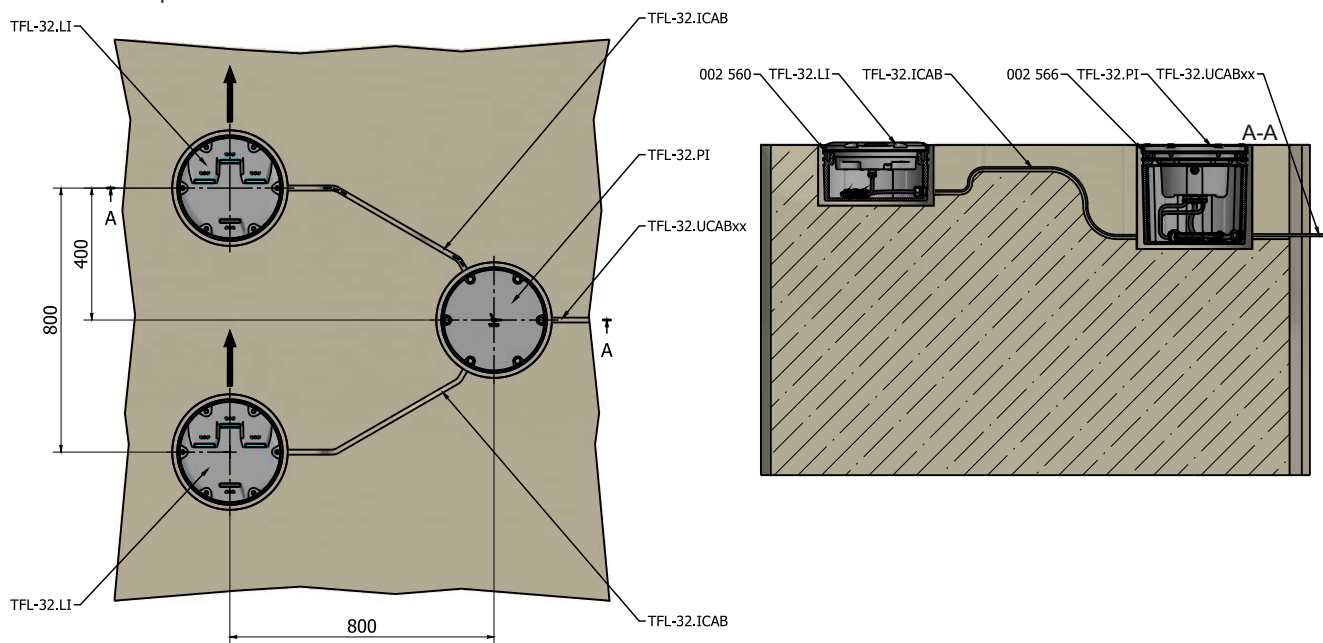
Assembly of inset flashing lights (cables in the cable duct)

- a pair of TFL-32.LI inset flashing lights
- TFL-32.PI power electronics

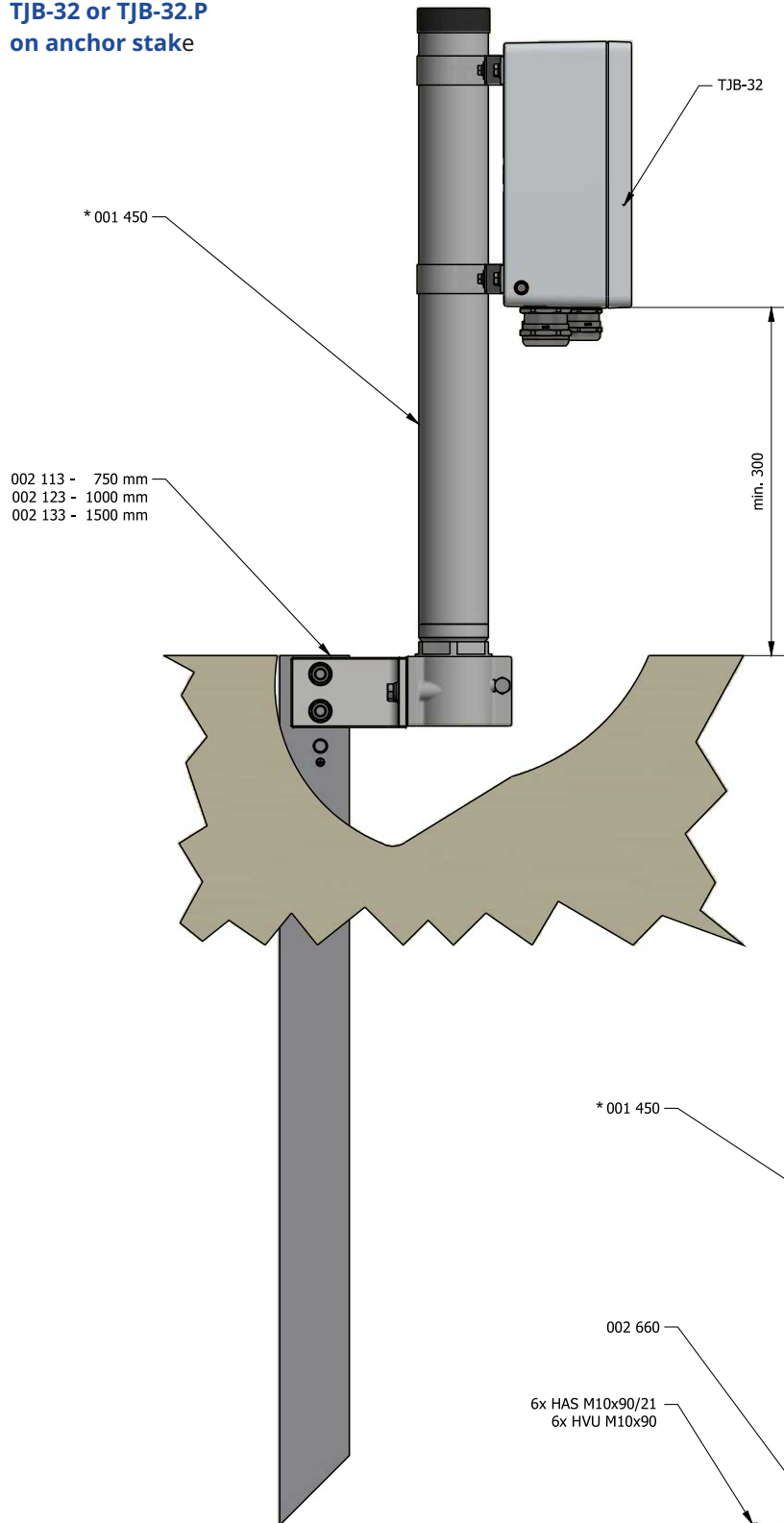


Assembly of inset flashing lights (cables in the groove)

- a pair of TFL-32.LI inset flashing lights
- TFL-32.PI power electronics



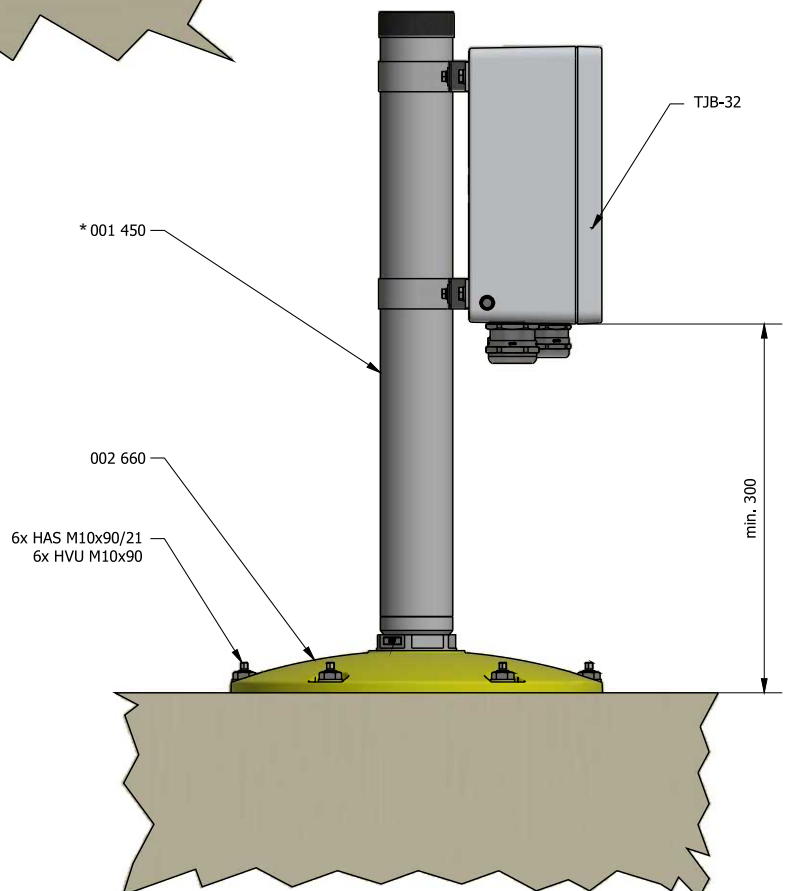
**Assembly of junction box
TJB-32 or TJB-32.P
on anchor stake**



* 001 450 - assembly set for mounting the junction box

- tube 530 mm
- frangible coupling
- sealing cap

**Assembly of junction box
TJB-32 or TJB-32.P
on base plate**



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5.6.1**TFL-32**

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