

Operating manual

X-Light-F, X-Light-E



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IMPORTANT!

Before taking the product into operation, these operating instructions must be read and applied with care.

In case of incorrect use of the product, no warranty is given.

Please keep the manual carefully for future reference.

Pesch Marinescheinwerfer reserves the right to make technical changes to the products described here.



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Introduction

These operating instructions inform you about the safe operation of the product. The product has been designed, constructed and manufactured according to the applicable safety guidelines. Despite compliance with these regulations, hazards to persons and objects may arise. Therefore, these instructions point out the dangers.

For this reason, it is very important to read and use the operating instructions in order to minimize the risks and to deal with the dangers. These operating instructions are only intended for the X-Light product line. To avoid later demands, keep the instructions carefully. If instructions are lost, contact the address indicated on the cover sheet. Reproduction is prohibited here.

If a change made by the operator takes place on the product, the warranty expires and no liability takes place. Changes to the product must be approved in writing by the manufacturer.

Safety instructions

General


The searchlight was developed in its construction according to the current state of the art. Nevertheless, the headlamp can be dangerous. If the headlamp is operated by untrained personnel, is not used according to the intended use or is not properly maintained, unpredictable situations may occur. Therefore, the following safety instructions must be read and taken note of. The text marked with the symbols in the following chapters must also be observed. Furthermore, the operator is responsible for the compliance with the protective regulations and the intended use. Thus, the operation is at your own risk. As long as the manufacturer is not accused of gross negligence, there is no liability.

Symbol – and notes X-Light searchlight

The following symbols can be recognized on the searchlight:

Type label








The type label must always be easy to read. Unreadable or destroyed signs must be replaced immediately.

Pesch Marinescheinwerfer	XLight-F	
Ortsring 2		
D-21423 Winsen/Luhe	Serial No.: XXXXXXX	
Tel: +49 4171 5684	08/19	

230VAC • 50-60HZ • 720VA • IP 66

Symbol – and notes operating manual



Please note the meaning of the following symbol and note explanations

 Note	
	<p>Indicates general instructions, useful user tips and work recommendations, which, however, have no influence on the safety and health of the personnel.</p>
 ATTENTION	
	<p>Indicates a potentially dangerous situation. Failure to follow the instructions will result in property damage and minor or moderate personal injury.</p>
 WARNING	
	<p>Indicates a potentially dangerous situation. If the information is not followed, death or serious bodily injury (disability) will result.</p>
 DANGER	
	<p>Indicates an imminent situation. If the information is not followed, death or serious bodily injury (disability) will result.</p>

Intended use

The faultless operation is only given when used as intended. The intended use is only present if the searchlight is mounted on the existing holes on the foot at a defined place. Installation must be carried out by trained specialist personnel in accordance with the current safety guidelines. When assembling, a second person should help because of the weight of the searchlight.

The product is used to illuminate the system environment up to the maximum specified range.

 Danger	
	In the event of improper use, death or serious bodily injury (disability) will result. Likewise, substantial property damage can occur.

Not intended use

All deviations from the section "Intended use" are considered to be improper use.

Product description

Functional description

To ensure trouble-free operation, the input voltage must be maintained as described in chapter Technical data.

To prevent excessive heating of the X-Light, it must not be covered. Also, a monthly visual inspection of whether an exceptionally high pollution, must be carried out.

After the searchlight is powered, the vertical axis learns for about 10 seconds. Afterwards all functionalities are unlocked.



If this process does not work, the searchlight cannot be operated. Please contact the customer-service.

If the headlamp is not used but is powered, an automatic learning process takes place every 12h.

To control the X-Light searchlight, you have to use the X-Light panel.



- 1.) Power On/Off
- 2.) DIM -/+
- 3.) Lamp On/Off
- 4.) Focus -/+
- 5.) Up/Down - Left/Right
- 6.) Focus indicator
- 7.) Horizontal indicator
- 8.) Vertical indicator

 NOTE	
	The backlight can be switched off completely, then no visual feedback is displayed. But all functionalities are possible.

Backlight:

The backlight can be adjusted via the DIM button.

Turn on the searchlight:

To turn on the searchlight, the power button on the control panel must be pressed.

X-Light-Searchlight-Series

Headlamp with angle display:

-As soon as the searchlight is switched on, the horizontal and vertical angles are visually displayed

Turn off the searchlights:

To switch off the headlight, the power button on the control panel must be pressed.

Headlamp with angle display:

- As soon as the headlight is switched off, the horizontal and vertical angles are no longer displayed

Turn on the light:

Switch on the searchlight, then the lamp button on the joystick must be pressed.

Visual feedback is the focus indicator. Once this is displayed, the light is on.

Turn off the light:

Searchlight can be switched off via two ways:

1. Press the lamp button again.
2. Press the power button, then all functions are switched off

Visual feedback is the focus indicator. Once this is no longer displayed, the light is off.

Set focus:

The focus of the headlight can be adjusted via the rotary axis of the joystick. The focus can only be adjusted when the light is on. Visual feedback is the focus indicator.

Left = focused -> narrow beam; Right = out of focus -> wide beam

Between these angles, the searchlight lets you adjust continuously.

Set home position:

To set a home position, the searchlight must be on. Then a position can be stored via the lamp button. To do this, press the button for at least 3 seconds. Visual feedback gives the backlight. When the position is saved, the backlight

X-Light-Searchlight-Series

turns off. Now the button can be released. A slow flashing shows that a home position has been set. Each time the searchlight is switched off, it moves to the home position.

In case of power failure, the position must be readjusted.

Reset home position:

To reset the home position, the searchlight must be on. Then the previously stored position can be reset via the lamp button. To do this, press the button for at least 3 seconds. Visual feedback gives the backlight. When the position is reset, the backlight turns off. Now the button can be released. A quick flashing visualizes that the home position has been reset. Each time the headlight is switched off, the headlight remains in its previous position.

Horizontal driving:

To move the searchlight horizontally, the joystick must be moved to the left or right. The horizontal axis can be moved 360 ° and has no stops.

As soon as the searchlight is switched on, the horizontal display gives a visual feedback. The actual angle is displayed.

Vertical driving:

To move the headlight vertically, the joystick must be moved up or down. The vertical axis can be moved by $\pm 35^\circ$.





As soon as the headlamp is switched on, the vertical display gives a visual feedback. The actual angle is displayed.

Technical data

description	unit	X-Light
dimensions	mm	455x400x365
weight	kg	23
power	VA	320 o. 640*
voltage AC	V	180-277
frequency	Hz	47-63
protection class	IP	66
LED	PCS.	90
Angle	°	3-12
temperature range	°C	-30 bis +55

*with heating element

Installation

 DANGER	
	When working on the searchlight, it must be switched off. Furthermore, the 5 safety rules must be observed. Work may only be carried out by qualified personnel.
 Attention	
	If you look directly into the glowing LED's it can cause considerable damage to the eyes. Always switch off the appliance when working on the headlight.

Attachment searchlight

The searchlight may only be attached to the base by the three mounting holes. The technical drawing for the fixing holes can be found in chapter Annex Figure 3.







The following screws are recommended for mounting the searchlight:

- 3x ISO4017 M12 1.4401
- 3x ISO7089 Form A polyamide
- 3x ISO7089 Form A 1.4401

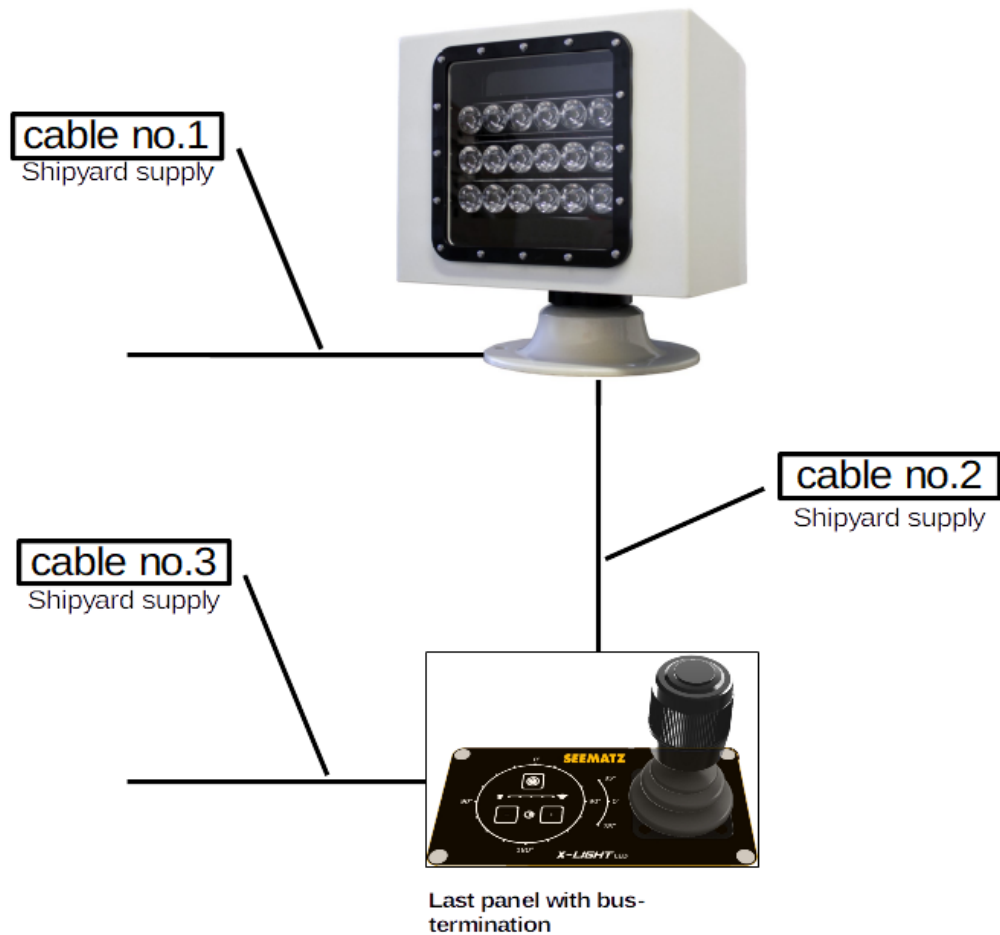
Connection of searchlight

Before starting the connection, the safety regulations and, in any case, the five safety rules must be observed.

When connecting the searchlight, no connection box needs to be opened. Only the supplied connectors must be wired.

 WARNING	
	Only plug in and disconnect the power connector power-free. The cable must also be released without power.
 DANGER	
	When selecting the connection cable, reference must be made to the applicable regional regulations for the connection of electrical systems. Using too small cable cross sections can cause serious consequences for people and the environment. CAUTION!! Acute fire hazard !!
 NOTE	
	Pay attention to markings on the counterpart when tightening the plug. Observe the enclosed instructions of the plug

X-Light installation overview



Cable no.	type	destination	comment
1	3x1,5mm ²	X-Light searchlight ↔ supply 230VAC/6A	Max. cable outer diameter: 14mm
2	2x0,5mm ² , twisted pair, shielded	X-Light searchlight ↔ X-Light panel	max. cable length 250m, wave impedance 120Ω, max. cable outer diameter: 8mm
3	2x0,75mm ²	X-Light searchlight ↔ supply 24VDC/0,5A	24 VDC supply for X-Light panel

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In order to install the searchlight, it must be supplied with 230VAC (cable no.1). For this, the cable must be provided with the power connector. Furthermore, the X-Light searchlight is connected to the X-Light control panel via cable no.2. In this case, the cable on the headlight must be provided with the bus connector and on panel side with the panel connector (Can). There are two 2-pin connectors on the control panel. The X-Light control panel must be supplied with 24VDC (cable 3) with the 24V-conector.

Power-connector X-Light

NOTE	
	max. outer cable diameter 14mm

The following steps must be followed (Figure 1 Power connector connection):

1. The cable must be stripped 60mm
2. Use the PE- conductor to wrap the other wires so that the PE is pulled out last in the event of a violent ripping out
3. Insert the cable into the connector
4. Insert the wires into the designated terminal points
 - a. Terminal point 1 -> L1
 - b. Terminal point 2 -> N
 - c. Terminal point 3-> frei
 - d. Terminal point -> PE

		X-Light searchlight		
		1	2	PE
Shipyard supply	L1	Cable no.1/1	x	x
	N	x	Cable no.1/2	x
	PE	x	x	Cable no.1/3

5. Cut the overhanging wire
6. Screw the plug with the counterpart provided on the searchlight

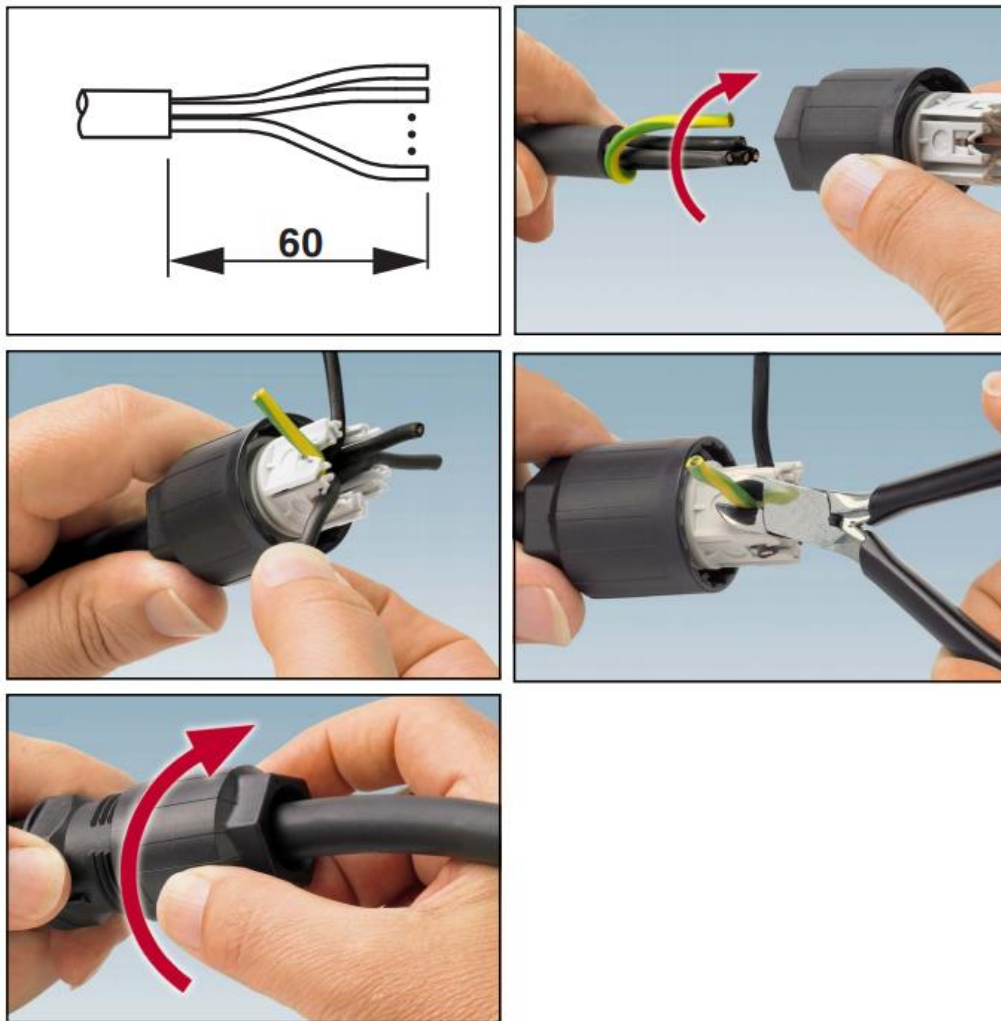




Figure 1 connection Power-connector

If the line has e.g. If the connection is incorrectly disconnected from the terminal point, it is essential to make sure that there is no voltage. Then the connector can be loosened. Now you can use a flat-bladed screwdriver (blade width approx. 3-4mm) to remove the wire from the terminal point. After successful assembly, connect the power connector to the X-Light headlight. Subsequently, the line can be placed on the ship. The following electrical specifications must be observed:

- 230VAC
- 1.4A/2,8A
- 320VA / 640VA with heating element

Bus-connector X-Light

 NOTE	
	max. outer cable diameter 8mm, max. cable length 250m, Wave impedance 120 Ω

The following steps must be followed (Figure 1 Bus connector connection):

1. Slide pressure nut and grommet housing onto the cable
2. Strip the cable 29mm and shorten the shield to 12mm
3. Strip single wires 7mm and connect as follows

		X-Light panel	
		Can H	Can L
X-Light searchlight	X2.1	Cable no.2/1	x
	X2.2	x	Cable no.2/2

4. Glue the creen foil around the shortened screen
5. Screw the sleeve housing to the connector insert
6. Tighten the pressure nut

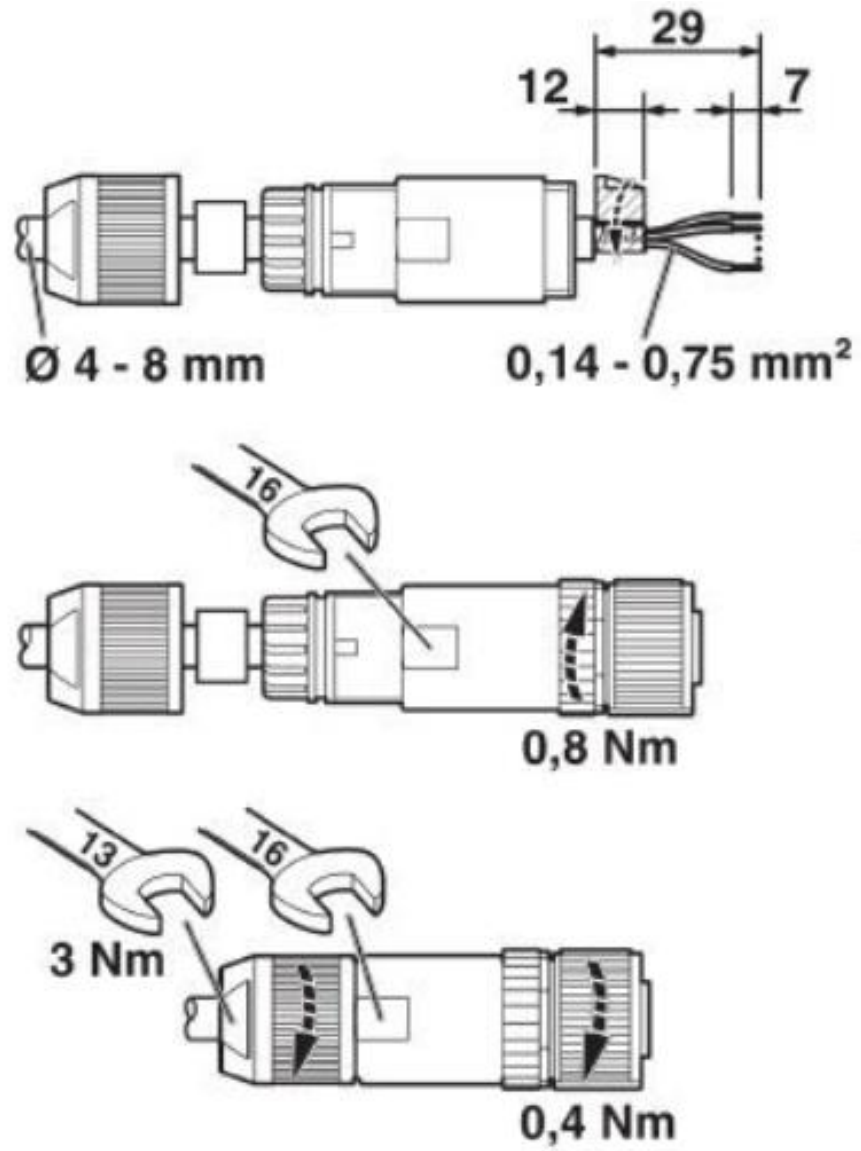


Figure 1 connection Bus-connector

X-Light-Searchlight-Series

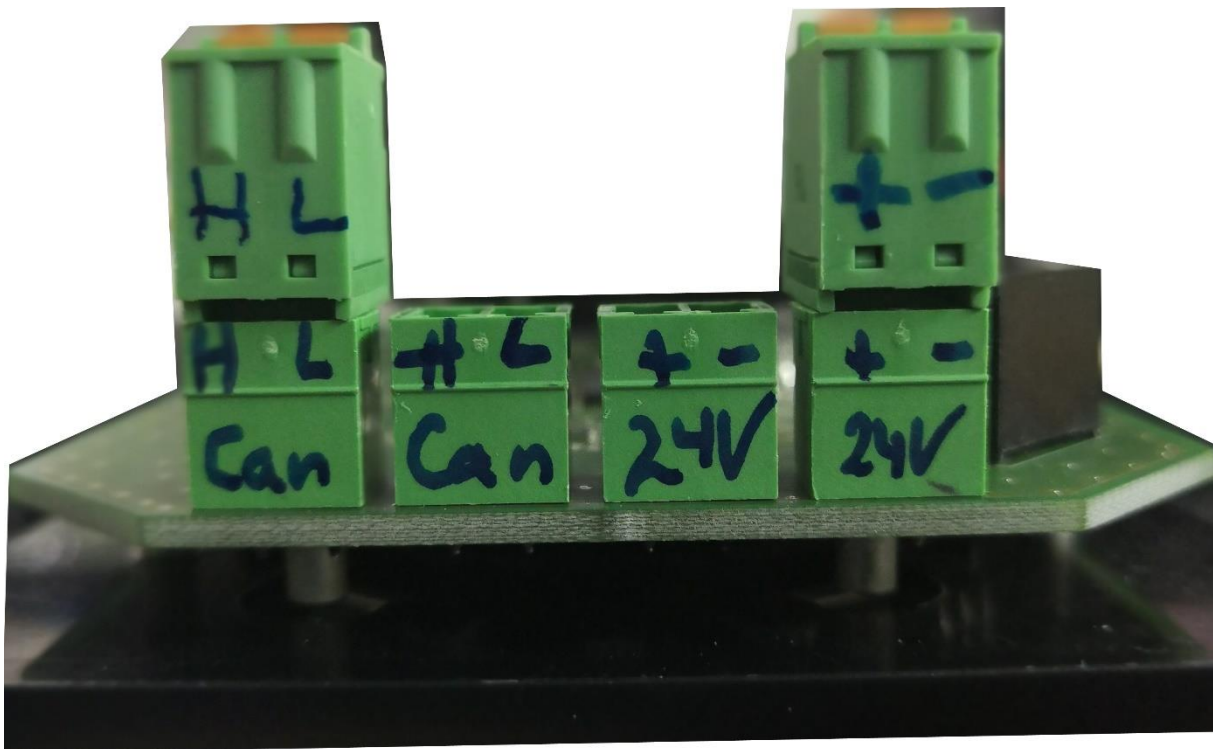
Panel X-Light

To connect the XLight panel, the following steps must be followed:







1.strip wires 9mm and collect as follows:

		X-Light panel		X-Light panel	
		24V+	24V-	Can H	Can L
Shipyards supply	24V+	Cable no.3/1	x		
	24V-	x	Cable no.3/2		
X-Light searchlight	X2.1			Cable no.2/1	x
	X2.2			x	Cable no.2/2

2.connect the connectors



Maintenance

 DANGER	
	When working on the searchlight, this must be switched off. Furthermore, the 5 safety rules must be observed. Work may only be carried out by qualified personnel.
 Danger	
	The searchlight must be checked twice a year. Care must be taken to avoid excessive contamination, damage and seals.
 ATTENTION	
	When looking directly into the luminous LED's it can cause severe damage to the eyes. When working on the searchlight always switch off the device.

The searchlight requires no special cleaning. He can be washed off with a damp cloth. If there is a rust attack, immediately coat the affected area with a cloth soaked in oil.

To ensure compliance with the protection class (IP 66), the seals must be replaced every 2 years. Furthermore, a visual inspection of the seal must be performed at each visual inspection. The order numbers of the seals can be found in chapter spare parts.

Customer service

When ordering spare parts, technical questions, as well as repair work, please contact the customer service:

Pesch Marinescheinwerfer

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Appendix

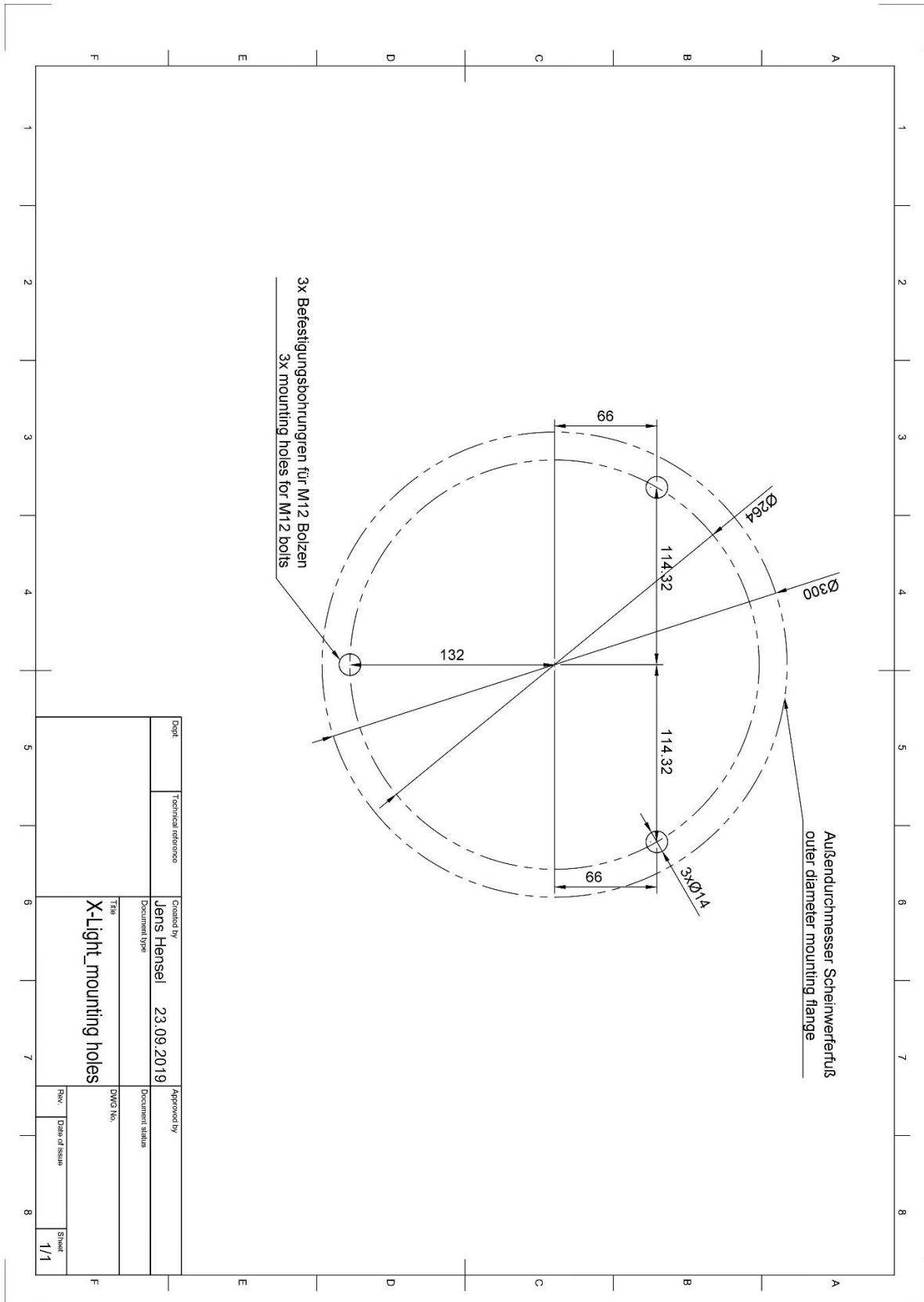


Abbildung 2

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