INSTALLATION & USER MANUAL

SEARCHLIGHTS XENON R60

NORSElight

Technical Manual for Xenon searchlight

☐ XS 1000 R60

☐ XS 2000 R60

☐ XS 3000 R60

☐ 1 x 230 VAC 50/60 Hz

This manual refers to product:
Serial no.: _____
Controlled by: _____
Date: _____

Table of contents:

Introduction:

For more than 90 years, Norselight have designed and manufactured lighting products for marine vessels.

Through ongoing customer focused product development, Norselight continue to deliver quality products as demanded both at sea and on the rugged coastlines of Norway.

This commitment to quality and expertise provides the foundation for Norselight to be possibly the world's leading supplier of maritime lighting.

However, in order to stay in front, Norselight would very much appreciate all comments that you may have regarding our quality products or services.

Customer Service:
The Customer Service department of GLAMOX NT sp. z o.o. will be pleased to help you when ordering spare parts, for maintenance and repair work as well as in case of problems and questions.

Manufacturer:
GLAMOX NT sp. z o.o.
Jagiellońska 51
32-410 Dobczyce
Poland

We would also like to use this opportunity to thank you for choosing **Norselight.**

Note:
These searchlights are intended exclusively for use on watercraft / ships.
They are therefore subject to special regulations which differ significantly from the relevant EU regulations and standards.
For use in Inland applications, additional EU directives may apply, which must then be observed for compliance.

1.0 General description:

Searchlight

The R60 searchlights XS 1000-2000 and XS 3000 are made from seawater resistant aluminium, welded and finished with white powder coat.
The forks are made of stainless steel

- The lamp housing contains one lamp, ignitor, silverplated glass-reflector, hardened frontglass, noise filters and a focus-motor for adjustment of the light beam.
- The motor housing contains a complete gear with motors for horizontal and vertical movement, a thermostat driven heating element and the electronic control system.

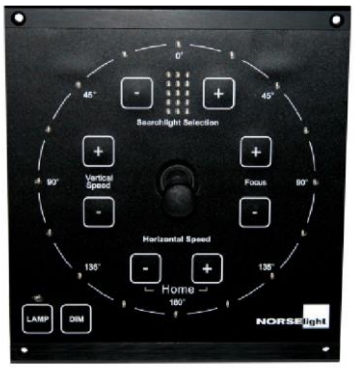
Control Panel

Main Operation Panel G2 R60

it contains the following functions:
· BUS communication
· Lamp On/Off
· Joystick for horizontal and vertical movement
· Speed regulator for horizontal and vertical movement
· Focus +/- (light beam adjustment)
· Horizontal indicator for searchlight position 360° and vertical +/-30°
· Backlight intensity adjustable on Main Panel
· Adjustable limits for horizontal and vertical sectors
· Alarm menu
· Trouble shooting menu
· Help menu
· Hardware installation settings menu
· Designed for console or bulkhead mounting
· User defined sweep and two home functions

Main Operation Panel R50/R60

it contains the following functions:
· Ready for max. 2 Slave Operation Panels (option)
· BUS communication
· Lamp On/Off
· Joystick for sweep and tilt, horizontal and vertical movement
· Speed regulator for sweep and tilt
· Focus +/- (light beam adjustment)
· LED Indication for searchlight position 360°
· Searchlight ID-number
· End position function
· Designed for console or bulkhead mounting from front
· DIM LED intensity on Main Operation Panel



Slave Operation Panel

It contains:
· Joystick and a button for lamp On/Off
· Designed for console or bulkhead mounting

High Sensitive Receiver

The Access Point is a high sensitive receiver for the wireless panel build for maximum range and durability. The Access Point communicate with the wireless bus, witch remotely controls the searchlights with R50 motor unit. The control system is based on TCP/IP technology were several different Operator Panel can control separately up to 9 searchlights of Xenon or Halogen. The system is connected to the same network through LAN switch to connect to a network of searchlights. Control panels both hard wired and wireless, are fitted into a standard solution.

Features and Benefits

· Wireless receiver for SCS wireless Bus
· Bolt-on to Norselight´s network of searchlights
· Weatherproof Aluminium Casing, Compact and new design
· Based TCP/IP technology (Plug and play)
· Waterproof, quick disconnect RJ-45 connector
· Customer made for Offshore
· Supports masts from 1 to 2” diameter
· 200m Area wireless coverage
· IP66, RoHs, FCC, CE, IC Complaint · -40 to +80° operation temperature

Package Include

· 1x Wireless receiver unit
· 1x PoE Power supply
· 1x 7dBi wireless Antenna
· (Network cables, not included)

Wireless Operation Panel

It contains:
· Power On/Off Button
· Lamp On/Off
· Touch buttons for horizontal and vertical movement
· Speed regulator for horizontal and vertical movement
· Focus +/- (light beam adjustment)
· LED Indication for searchlight position 16 positions for 360°
· Display for searchlight ID-number
· End position indication · Battery charger

1.1 Options

Software:

- Programmable dimming function of the panel
- Focus indicator
- Temperature alarm in drum- Panel built in box or cabinet

Hardware:

- Other RAL colours
- Upside down mounting
- Pedestal standard and custom sizes on request
- Special cable glands on request

2.0 Technical data and dimensions

General specifications searchlight unit:

Technical data – all XS models:	
IP classification	56
Maximum ambient temperature (°C)	50
Minimum ambient temperature (°C)	-50
Horizontal movement	360º
Vertical movement	+22° / -27°
Colour	RAL 9016

Forks stainless steel

Article no:	Model	Watt	Voltage	Main body material
600201338	XS1000 R60 230V	1000	230 VAC	Seawater resistant aluminium
600201339	XS1000 R60 230V integr.PSU	1000	230 VAC	Seawater resistant aluminium
600201538	XS2000 R60 230V	2000	230 VAC	Seawater resistant aluminium
600209538	XS3000 R60 230V NR	3000	230 VAC	Seawater resistant aluminium

Specifications Main Panel G2:

IP classification	IP65 (front)
Ambient temperature (°C)	0 - 50ºC
Input Voltage	24 VDC (10 to 32 VDC)
Connection 24V	2x max. 2,5mm²
Connection Bus	2x LAN RJ45
Dimensions	230 x 230 x 54mm
Weight	1,7kg
Power consumption	max24W

Specifications Slave Panel:

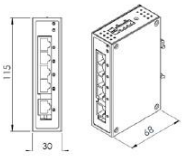
IP classification	IP65 (front)
Connection signals	6x max. 4mm²
Dimensions	96 x 96 x 44mm
Weight	40g

Specifications Wireless Panel:

IP classification	IP67

Specifications LAN switch:

IP classification	IP66
Input voltage	9,6 – 60 VDC
	18 – 30 VAC
	(redundant dual inputs



2.1 Specifications power supply

NP-0725 500-1000W
Art No. 1009158 / 8SL0018800 (with heat sink)

IP classification	IP20
Temperature ambient	-30 ... 50 ºC
Input Voltage	90 - 264 VAC; single phase
Dimensions	180 x 254 x 82,5mm / 507 x 305 x 114mm (with heat sink)
Weight	3,35kg / 8,4kg (with heat sink)

N3-80E 1600-2000W
Art No. 1009160

IP classification	IP20
Temperature ambient	0 - 40 ºC
Input Voltage	208 - 242 VAC; 3-phase
Cable input max Ø	27mm
Cable output (DC) max Ø	27mm
Cable remote signal max Ø	27mm
Dimensions	320 x 380 x 770mm
Weight	105kg

N3-150E 3000W
Art No. 1009166

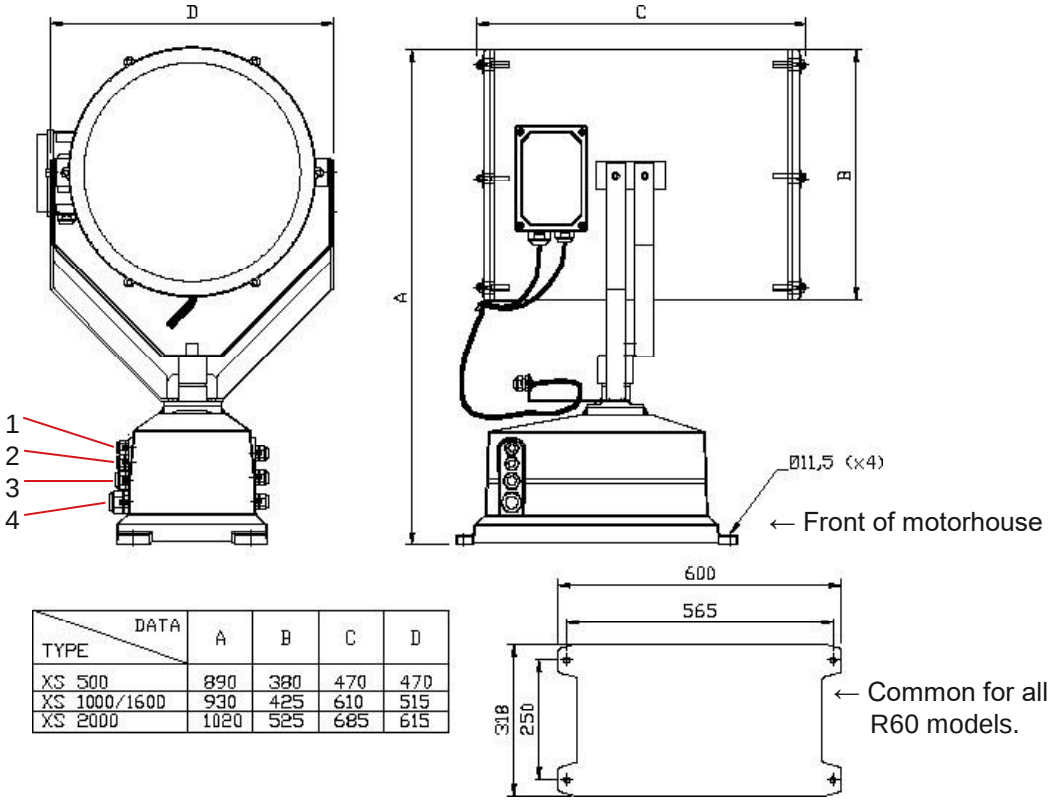
IP classification	IP20
Temperature ambient	0 - 40 ºC
Input Voltage	208 - 242 VAC; 3-phase
Cable input max Ø	27mm
Cable output (DC) max Ø	27mm
Cable remote signal max Ø	27mm
Dimensions	320 x 380 x 770mm
Weight	123kg

EX-100D/1 1000-3000W
Art No. 1009165

IP classification	IP20
Temperature ambient	-5 - 45 ºC
Input Voltage	185 - 265 VAC; single phase or double phase (for 115V)
Cable input max Ø	8/20 mm
Cable output (DC) max Ø	2 x 20mm
Cable remote signal max Ø	20mm
Dimensions	265 x 436 x 440mm
Weight	19,5kg

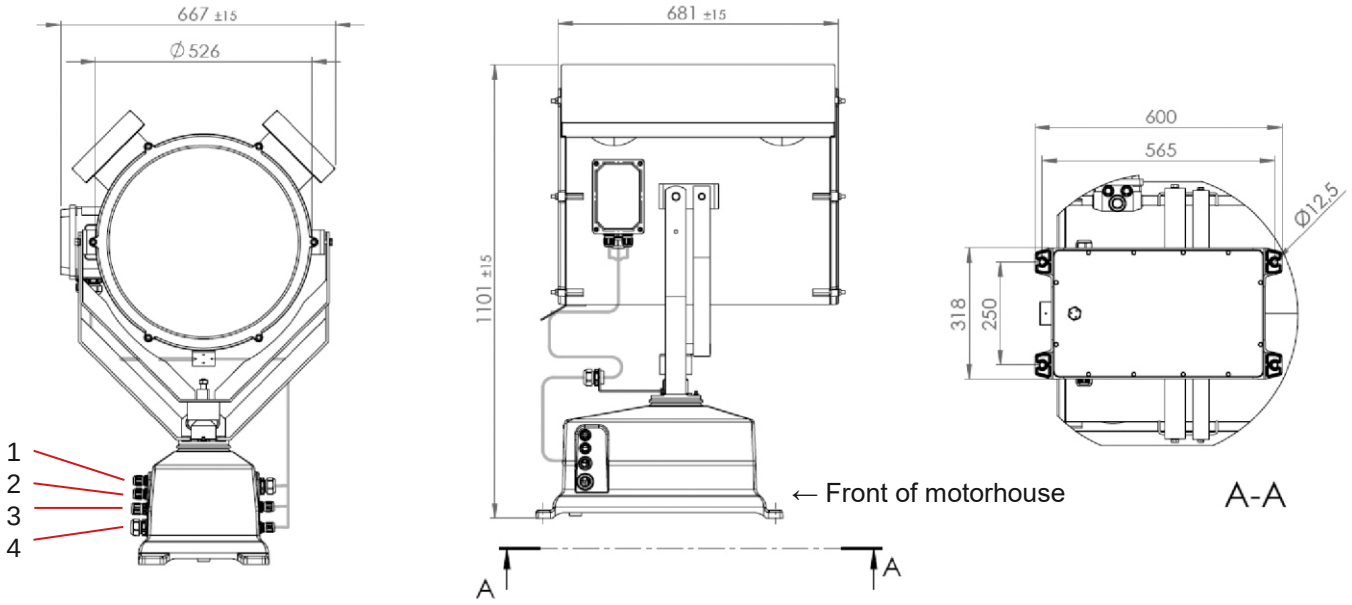
2.2 Overall searchlight dimensions & electrical cable dimensions

XS 500-2000:



DATA / TYPE	A	B	C	D
XS 500	890	380	470	470
XS 1000/1600	930	425	610	515
XS 2000	1020	525	685	615

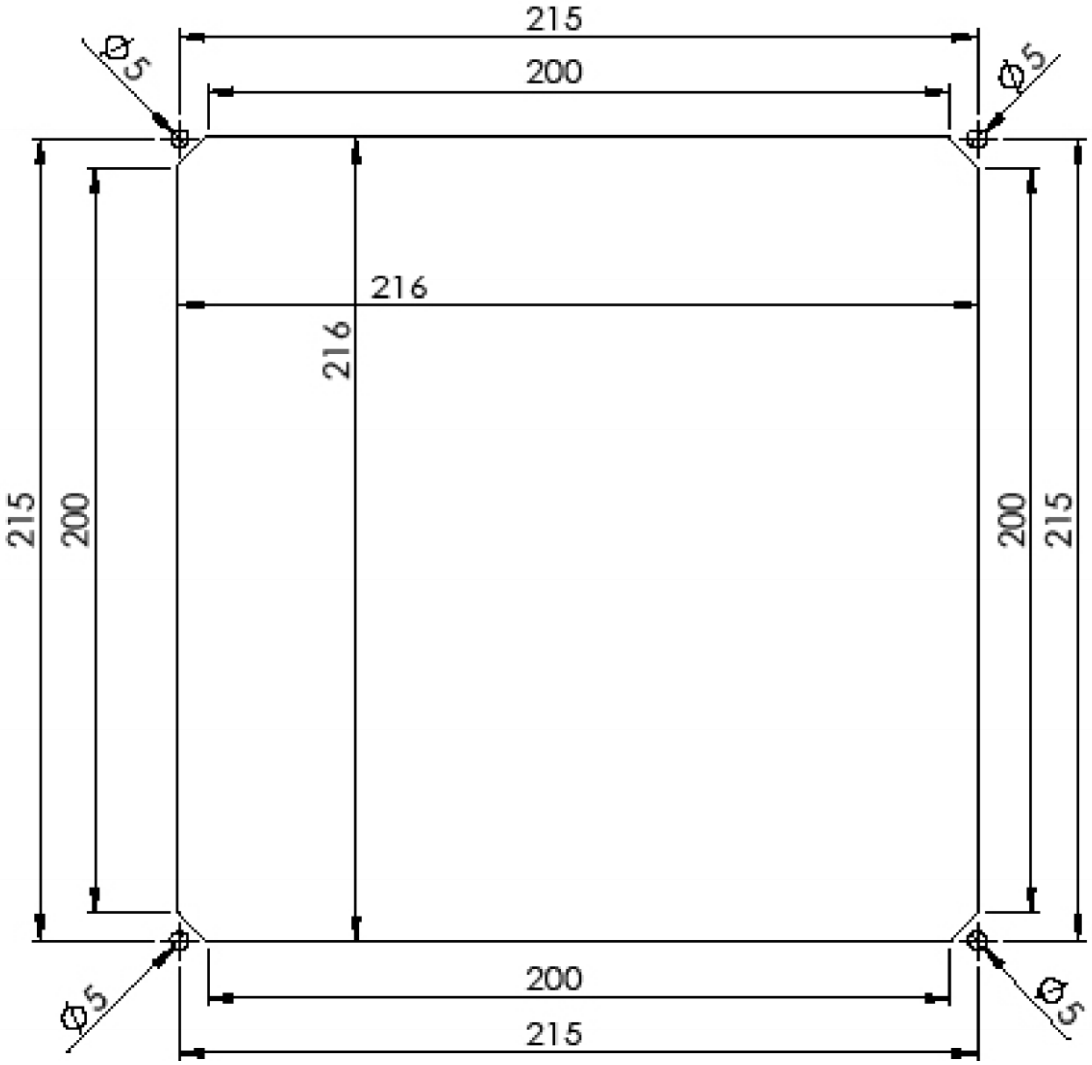
XS 3000:



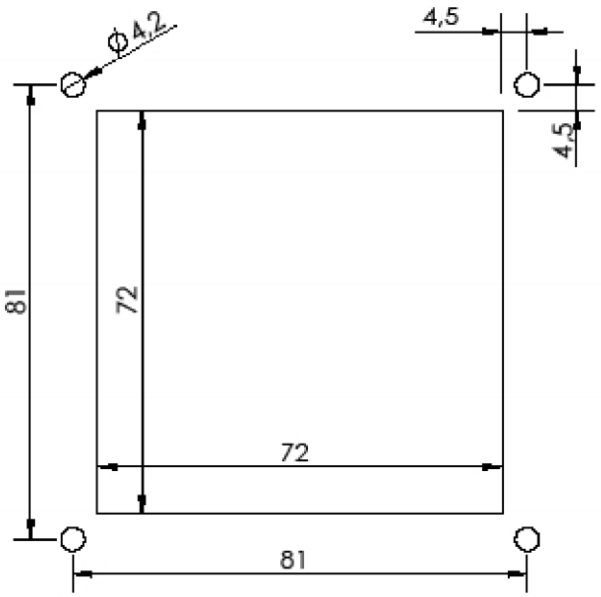
Entry#/ Description	1	2	3	4
Cable Gland	M20	M20	M25	M32
Cable Ø min/max	6-13mm	6-13mm	9-17mm	15-25mm
Cable entry (* Options are available)	Remote signal to rectifier *	LAN	24V DC / 115V AC / 230V AC *	DC from Xenon rectifier

2.3 Cut / out main / slave Panel

Hole dimensions for installing joystick main panel:



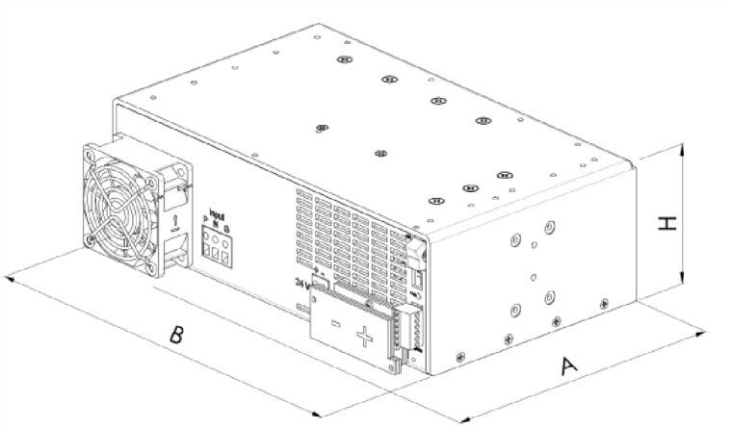
Hole dimensions for installing slave panel:



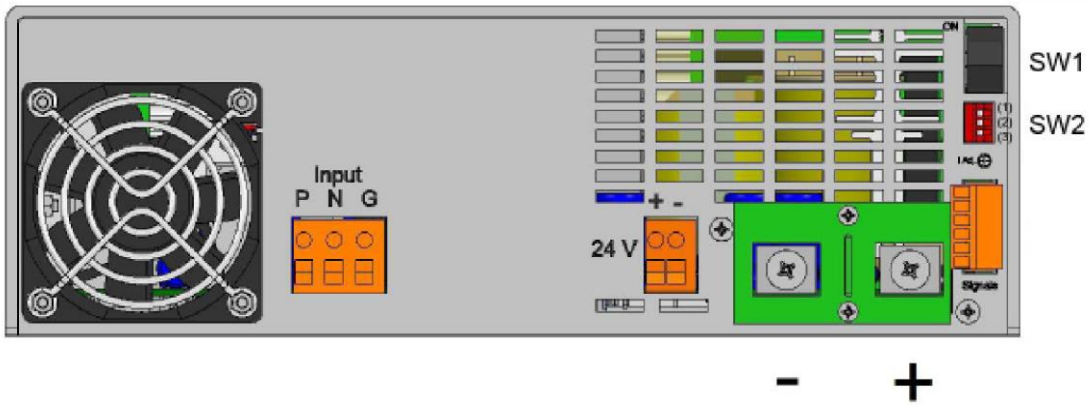
For 1000W

NP-0725 (for mounting in the motor-house)

This single-phase rectifier has been designed to ensure correct operation and long life to short arc Xenon lamps up to 1000W. It is characterized by galvanic insulation, a soft inrush current, allow residual ripple value and a stable output current. Weight 3,35kg. Further instructions in Installation guide for Rectifier see page 24.



A:180 mm
B:254 mm
H:82,5 mm



Note (1) The switch SW1 must remain in OFF position when the remote ON/OFF signal is used.

SW1	ON	OFF (1)
	Lamp ON	Lamp OFF

Setting 1000W

	ON (2)	OFF
SW2 (1)	-	0.5kW
(2)	1kW	-
(3)	-	3kW

Note (2) Put the switch in the ON position to select the lamp power. The rest of switches must remain in the OFF position.

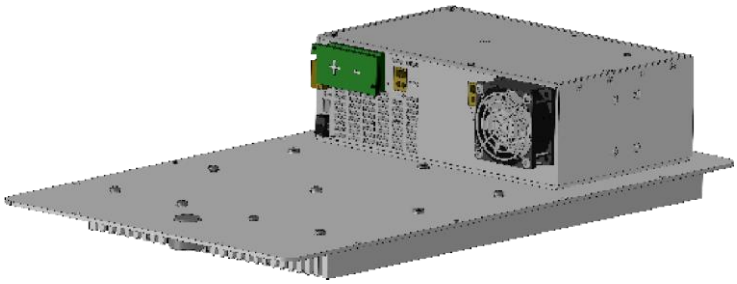
Note: After an automatic safety shutdown of the power supply due to overheating, the input power of the search light (L,N) has to be interrupted and connected again for a reset of the power supply.
(Keep the unit with the fan running for a few minutes and disconnect the mains input for >5 seconds).

If Power Supply is integrated in motor house (Art. No. 600201339):

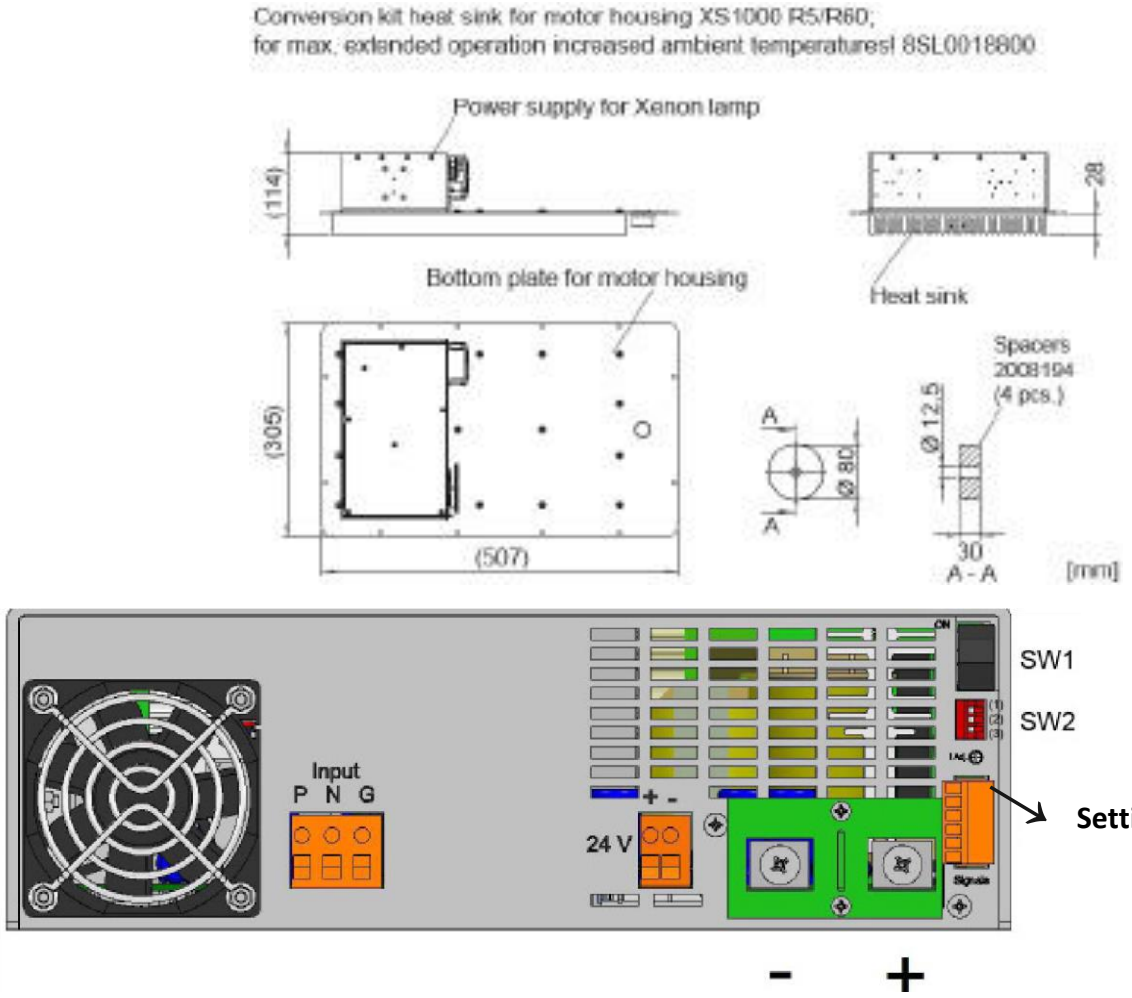
1. **Ta 50°C max running time until the searchlight will switch off is 2 hours.**
2. **Ta 45°C max running time until the searchlight will switch off is 6 hours.**
3. **Ta 35°C and less the searchlight is continuously running.**

For 1000W

NP-0725 with heat sink (for mounting in the motor-house)



This single-phase rectifier has been designed for higher temperature ensure correct operation and long life to short arc Xenon lamps up to 1000W.
It is characterized by galvanic insulation, a soft inrush current, allow residual ripple value and a stable output current. Weight 8,4kg. Further instructions in Installation guide for Rectifier see page 24.



Note: Current adjustments when the bulb is switched on.

The switch SW1 must remain in OFF position when the remote ON/OFF signal is used.

SW1	ON	OFF [1]
	Lamp ON	Lamp OFF

Setting 1000W

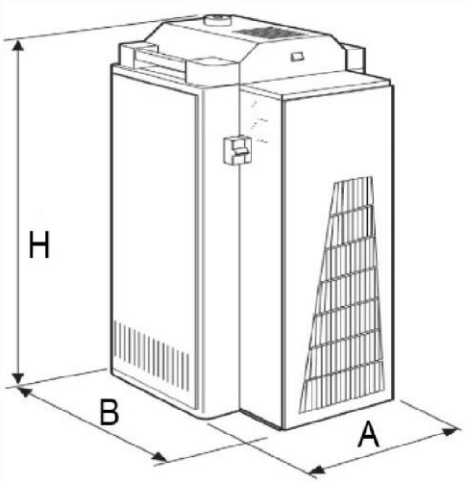
		ON [2]	OFF
SW2	(1)	-	0.5kW
	(2)	1kW	-
	(3)	-	3kW

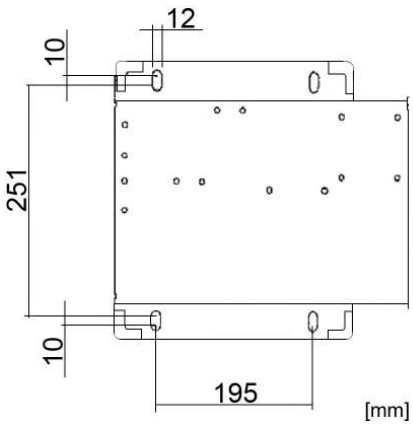
For 1600-2000W / 3000W

N3-80E (1600-2000W) / N3-150E (3000W)

These high quality rectifier power supplies have been expressly designed to ensure the correct operation and long life of short arc Xenon lamps.
These units, developed to meet the recommendations of Xenon lamp manufacturers, are fitted with special IREM transformers with adjustable magnetic shunt for continuous output regulation over the entire operating range.
The new and peculiar design guarantees a low acoustical noise, i.e. less than 55dB(A).
The special design, including an auxiliary filter unit, ensures a low ripple with a negligible starting energy. Weight N3-80E 105kg and N3-150E 123kg.
Further instructions in Installation guide for Rectifier see page 25.

Adjust current by turning hand wheel. Current applied to the lamp should be for.





A:320 mm
B:380 mm
H:770 mm

Lamp set-point see page 25.

*To be able to turn off the searchlight from the main panel, the switch on top of the power supply N3-80 must be in position “0” (Zero).

For 1000-3000W

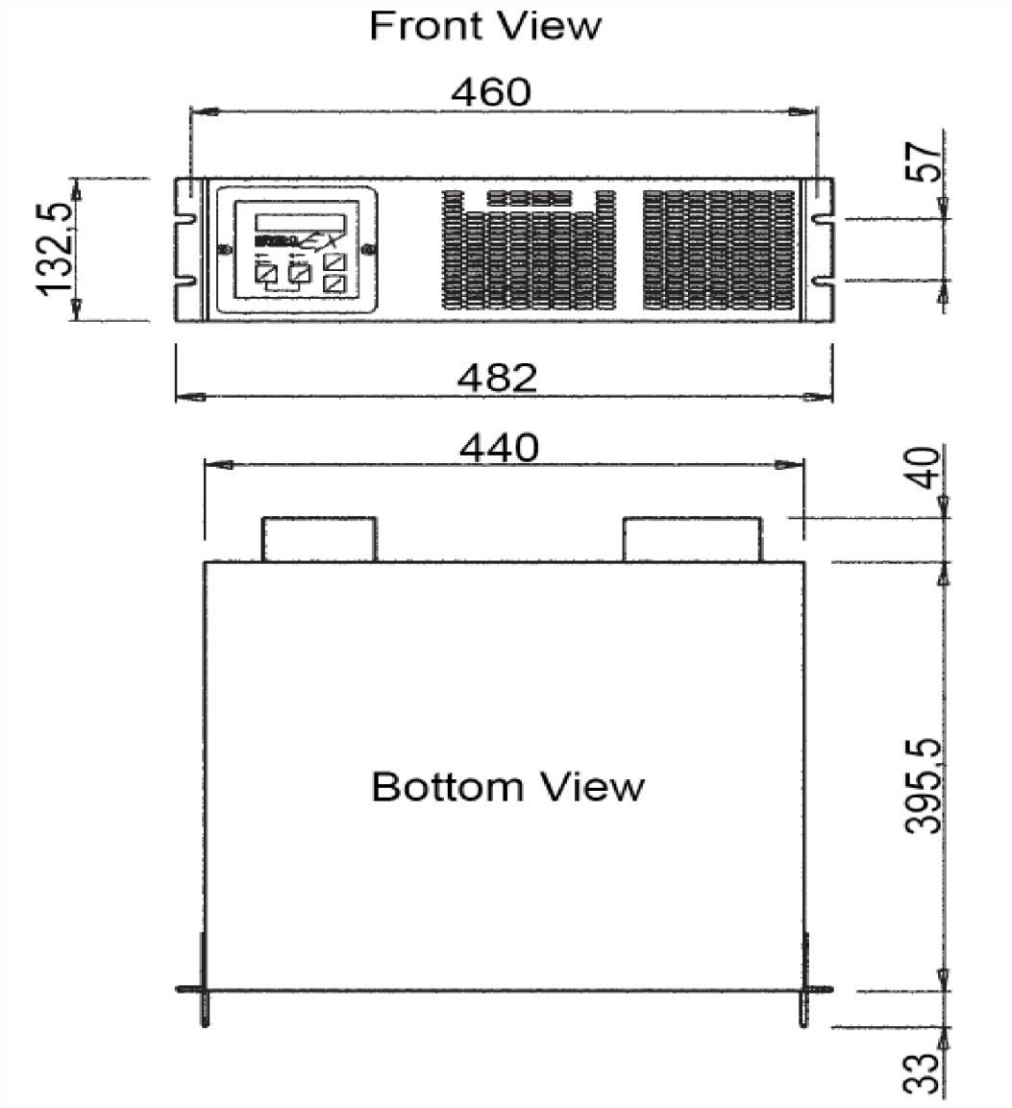
EX-100 D/1

This electronic power supply for single phase (230V) or double phase (115V + earth) input has been designed to feed from 1000W to 3000W short arc Xenon lamps, meeting all the requirements of lamp manufacturers to ensure correct operation, long life to the lamp, and high reliability.

Weight 19,5 kg. Further instructions in Installation guide for Rectifier see page 26.

Control devices

- Synoptic panel
- Output terminal block
- Input terminal block
- RS232 connector
- Auxiliary connector



3.0 Directions for use

Parameter setting for xbo HTP OFR (only for: **EX-100 D/1** with factory settings)

Lamp **P_{max}** (operating range: 1000 - 3000W): max: power of the lamp.
When entered, an automatic control will avoid exceeding this value. Factory setting: is on 1000W.

Lamp **I_{max}** (operating range: 55A - 110A): max. admitted current of the lamp.
When entered, an automatic control will avoid exceeding this value. Factory setting: 55A.

Lamp **I_{max}** (operating range: 40 - 60A): min. admitted current of the lamp.
When entered, an automatic control will avoid exceeding this value. Factory setting: 40A.

Lamp **stand-by** (operating range I_{max} - I_{min}): lamp stand-by current when contacts 11 and 12 of J/P2 have been closed. When the contacts are closed, an automatic control will be change the current according to the admitted operating range. Factory setting: 40A.

Lamp **set-point** (operating range: I_{max} - I_{min} : value of the current delivered in output. Factory setting: 40A.

Remarks:

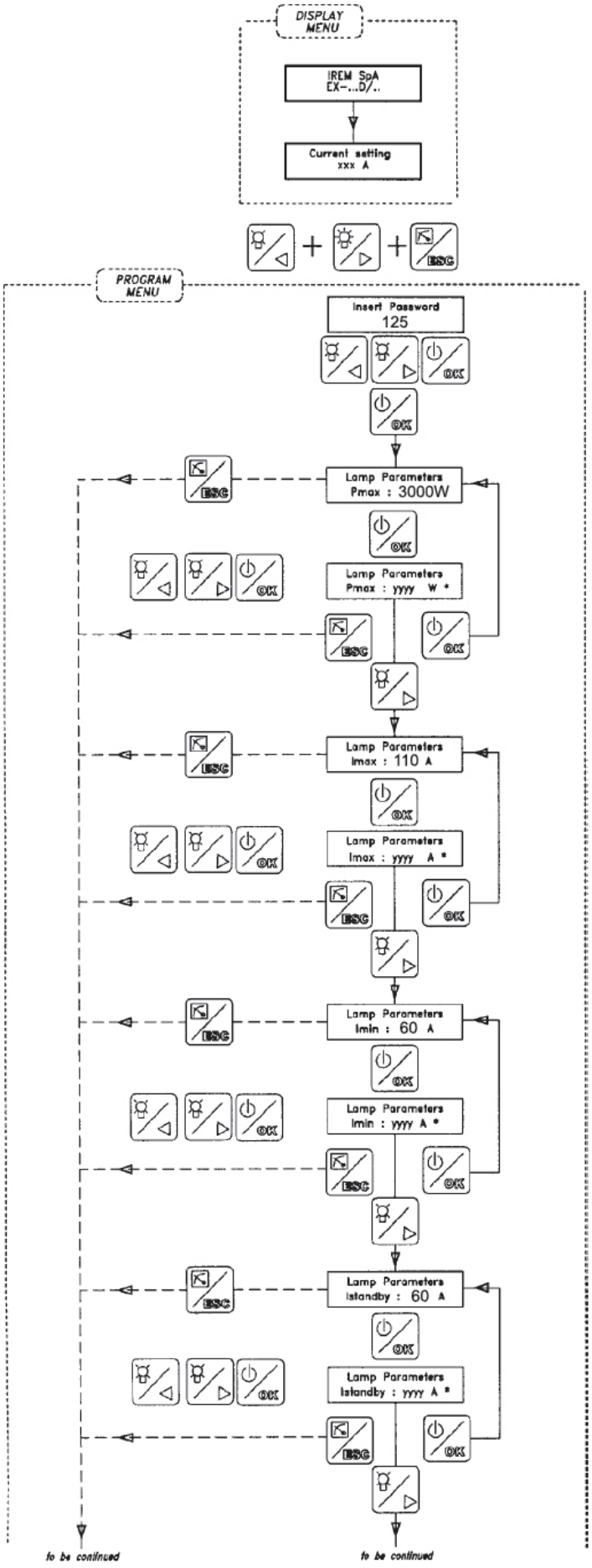
1) When entering an I_{max} value lower than I_{min} , I_{min} will be set to I_{max} . Enter a new I_{min} value.

2) When entering a I_{max} exceeding I_{max} value, I_{min} will correspond to I_{max} .

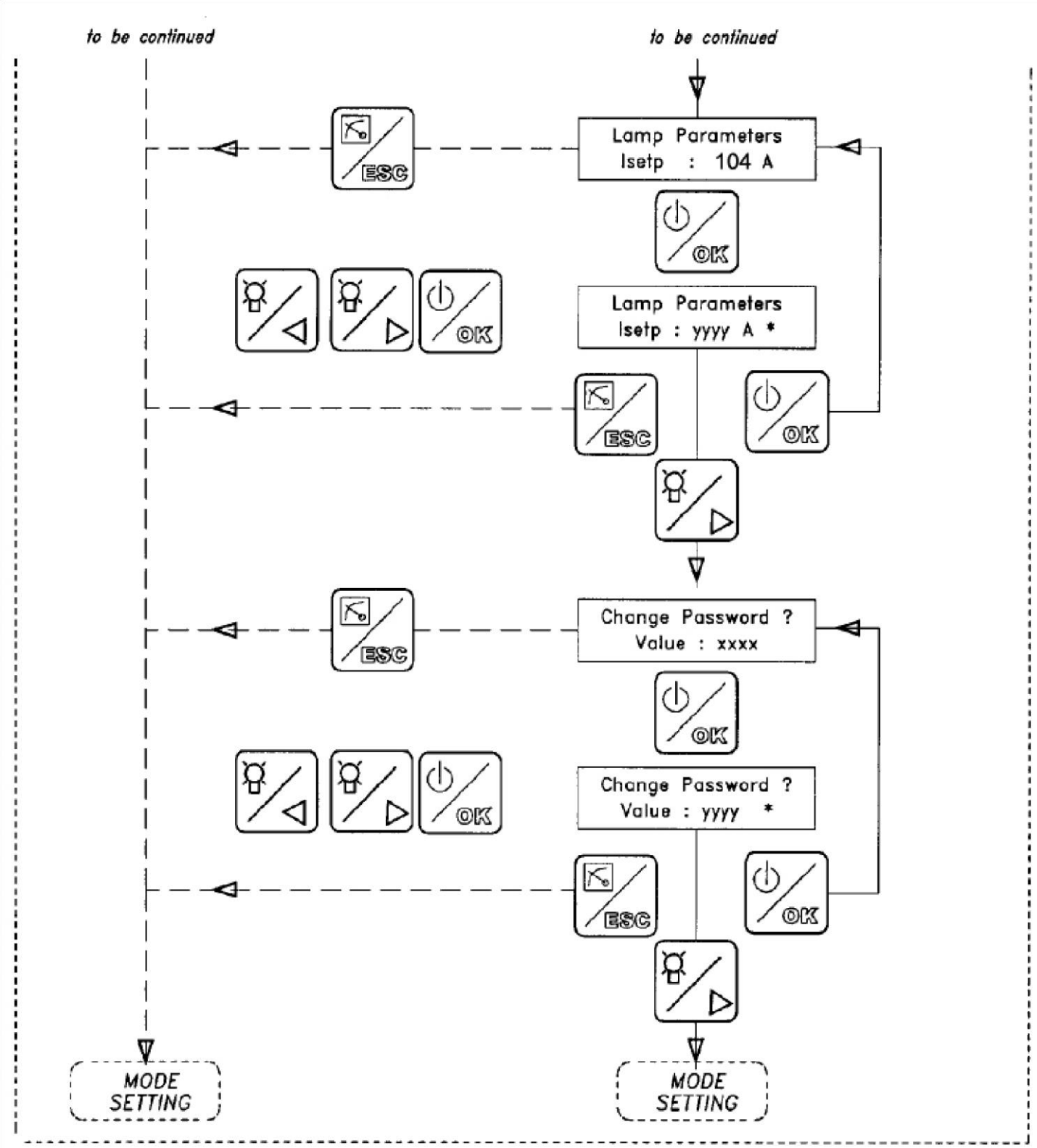
Lamp P_{max}	3000W	2000W	1000W
Lamp I_{max}	110A	85A	55A
Lamp I_{min}	60A	50A	40A
Lamp stand-by	60A	50A	40A
Lamp set-point	104A	70A	50A

3.1 Program menu - Parameter setting

Example for 3000W Xenon



3.2 Program menu - Parameter setting



3.3 Operation modes

The tree operation modes can be used alternately but not all at the same time.
Act on the keys of the synoptic panel to shift from one mode to the other. The default mode is: manual mode from synoptic panel.
When the RS232 serial line is ON, the operating parameters will be sent through this line.

From any mode, press the keys 

to change the operation mode.

Manual mode

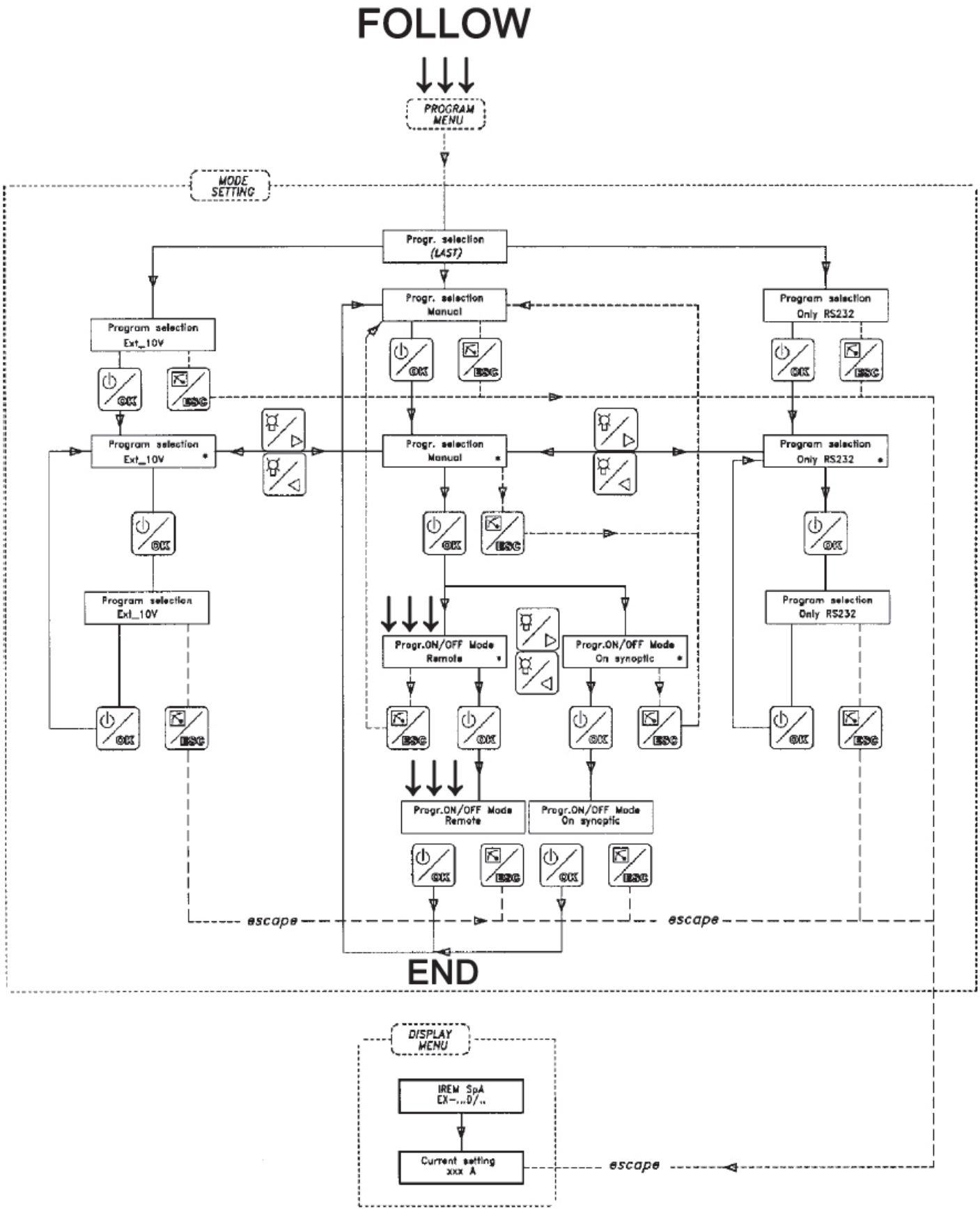
Under this condition the lamp current setting is managed through the synoptic panel (press left -decreasing- key and right -increasing- key). Press and hold one of the two setting keys for at least 2 seconds, then enter the password within 30 seconds. The current setting is now enable (a question mark is present on the right side of the current value). The lamp current range has to be within 40A and 110A.

Press The ON/OFF key 

to switch on/off the lamp.

Note: under manual mode from remote control, the switching on must be forced by shorting contacts 3 and 4 of J/P2 connector. Please check the contacts 5 and 6 (set jumper), see page 26.
Under this operating condition the synoptic panel is no longer active.

3.4 Program menu - Parameter mode setting



4.0 Electric installation

Note: Disconnect the power when working on the equipment!

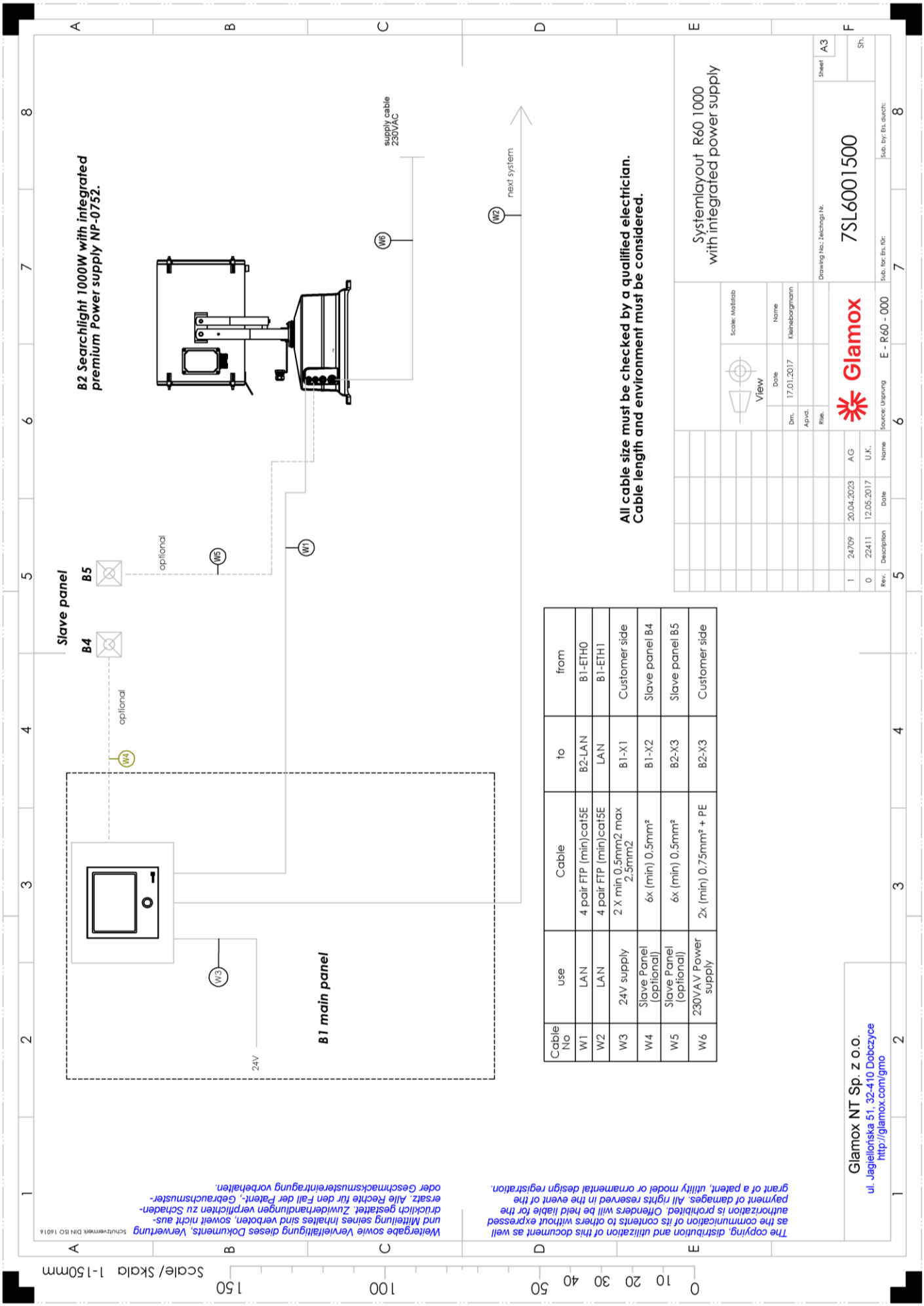
Electrical equipment must be installed by authorized personnel!
Check the polarity when connecting 24V DC!
All searchlight system equipment MUST BE connected to ground/earth!

The main operation panel requires 24V DC connected in series with a 3A slow fuse to the positive (+) conductor.

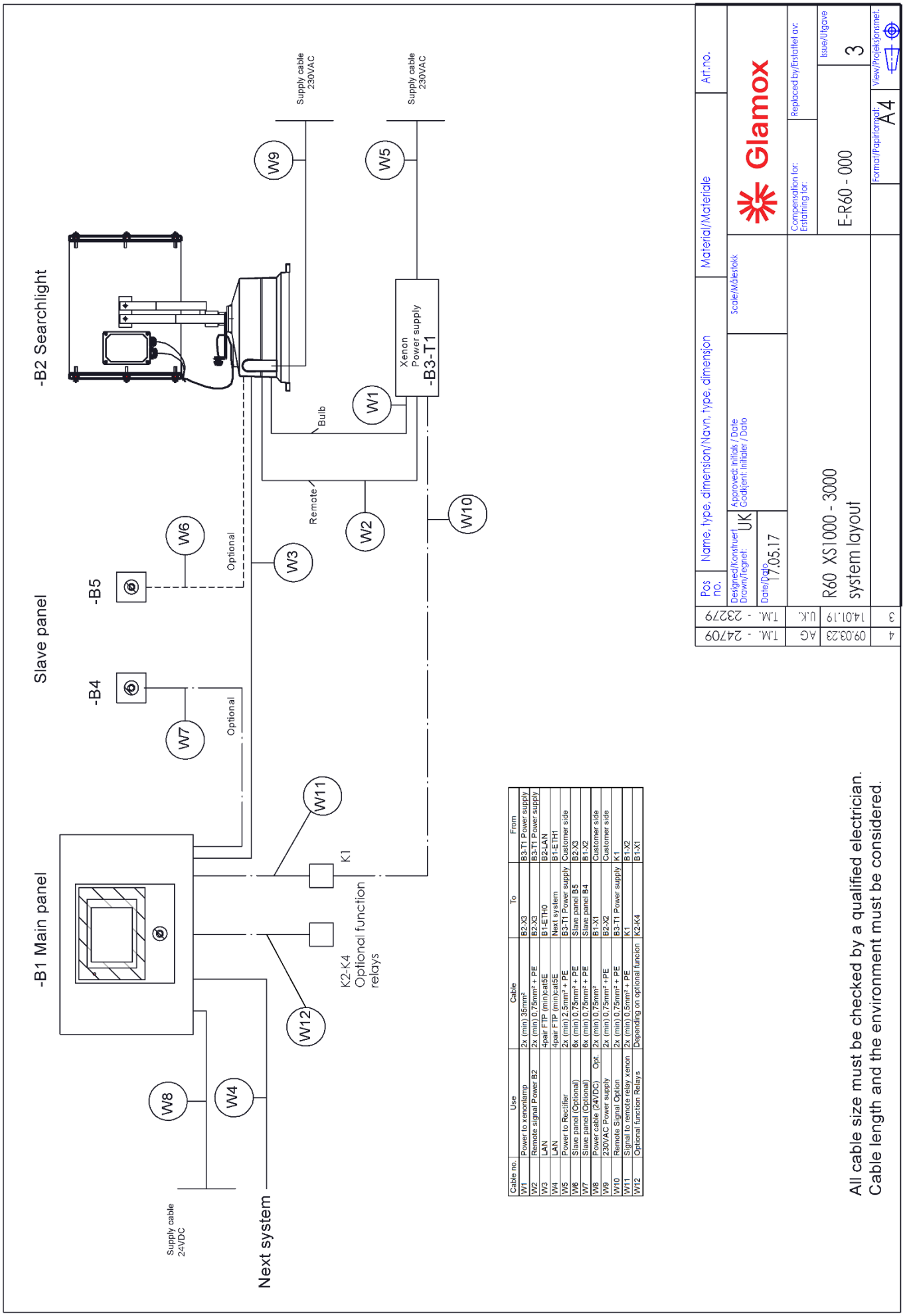
- The switch requires 24V DC in addition to grounding.
- Depending on the searchlight model it requires 115V AC or 230V AC.
- Power supplied to the power supply unit must be 2 or 3-phase.
- Current supplied to the lamp unit must be specific, (see Technical data for specific type).

Current applied to the lamp unit see page 26. EX100 D/1 is pre. programmed.

4.1 R60 XS1000 with integrated Power Supply - System Layout



4.2 R60 XS1000 - 3000 System Layout



Cable no.	Use	Cable	To	From
W1	Power to xenonlamp	2x (min) 35mm²	B2-X3	B3-T1 Power supply
W2	Remote signal Power B2	2x (min) 0,75mm² + PE	B2-X3	B3-T1 Power supply
W3	LAN	4pair FTP (min)cat5E	B1-ETH0	B2-LAN
W4	LAN	4pair FTP (min)cat5E	Next system	B1-ETH1
W5	Power to Rectifier	2x (min) 2,5mm² + PE	B3-T1 Power supply	Customer side
W6	Slave panel (Optional)	6x (min) 0,75mm² + PE	Slave panel B5	B2-X3
W7	Slave panel (Optional)	6x (min) 0,75mm² + PE	Slave panel B4	B1-X2
W8	Power cable (24VDC) Opt.	2x (min) 0,75mm²	B1-X1	Customer side
W9	230VAC Power supply	2x (min) 0,75mm² +PE	B2-X2	Customer side
W10	Remote Signal Option	2x (min) 0,75mm² + PE	B3-T1 Power supply	K1
W11	Signal to remote relay xenon	2x (min) 0,5mm² + PE	K1	B1-X2
W12	Optional function Relays	Depending on optional funcion	K2-K4	B1-X1

All cable size must be checked by a qualified electrician.
Cable length and the environment must be considered.

Pos no.	Name, type, dimension/Navn, type, dimensjon	Material/Materiale	Art.no.
	Designed/Konstruert UK Drawn/Tegnet: Date/Dato 17.05.17	Scale/Målestokk	

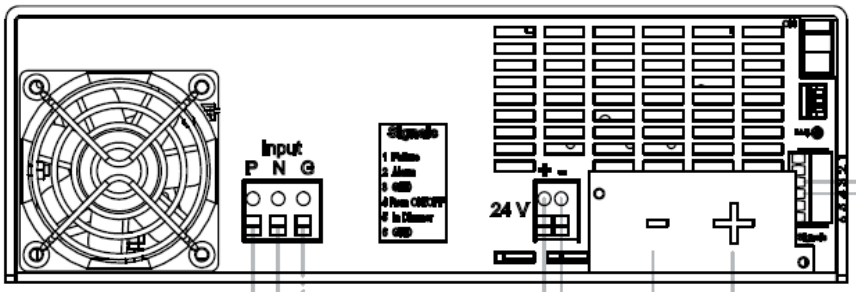
Glamox

3	14.01.19	U.K.	T.M. - 23279	Compensation for: Erstatning for:	Replaced by/Erstattet av:	Issue/Utgave 3
4	09.03.23	AG	T.M. - 24709	R60 XS1000 - 3000 system layout	E-R60 - 000	

Format/Papirformat: A4 View/Projeksjonsmet.

4.3 Power supply NP-0725 for 1000W

Premium Power supply
NP-0725 (Spare part No 1009698)



K7.2 K7.4
drw 7SL6001800

X3.L1 X3.PE
X3.L2/N

\- + B2-X3
drw E-R60-018

\+ -
X4.1 X4.2
drw 7SL6001700

Glamox Production GmbH & Co. KG
Glasower Weg 5 - 17166 Teterow
http://glamox.com/gmo

Rev.	Description	Date	Name
0	22411	11.07.2018	U.K.
0	22411	09.05.2017	U.K.

View

Scale: Maßstab 1:5

	Date	Name
Drn.	09.05.2017	Kleineborgmann
Apvd.		
Rlse.		

Source: Ursprung

Nomenclature: Benennung

Connection PSU NP-0725
(for XS 500/1000W with in Motorhouse integrated PSU)

Anschluß PSU NP-0725
(für XS 500/1000W mit Power Supply im Motorgehäuse)

Drawing No.: Zeichngs Nr.

7SL6001900

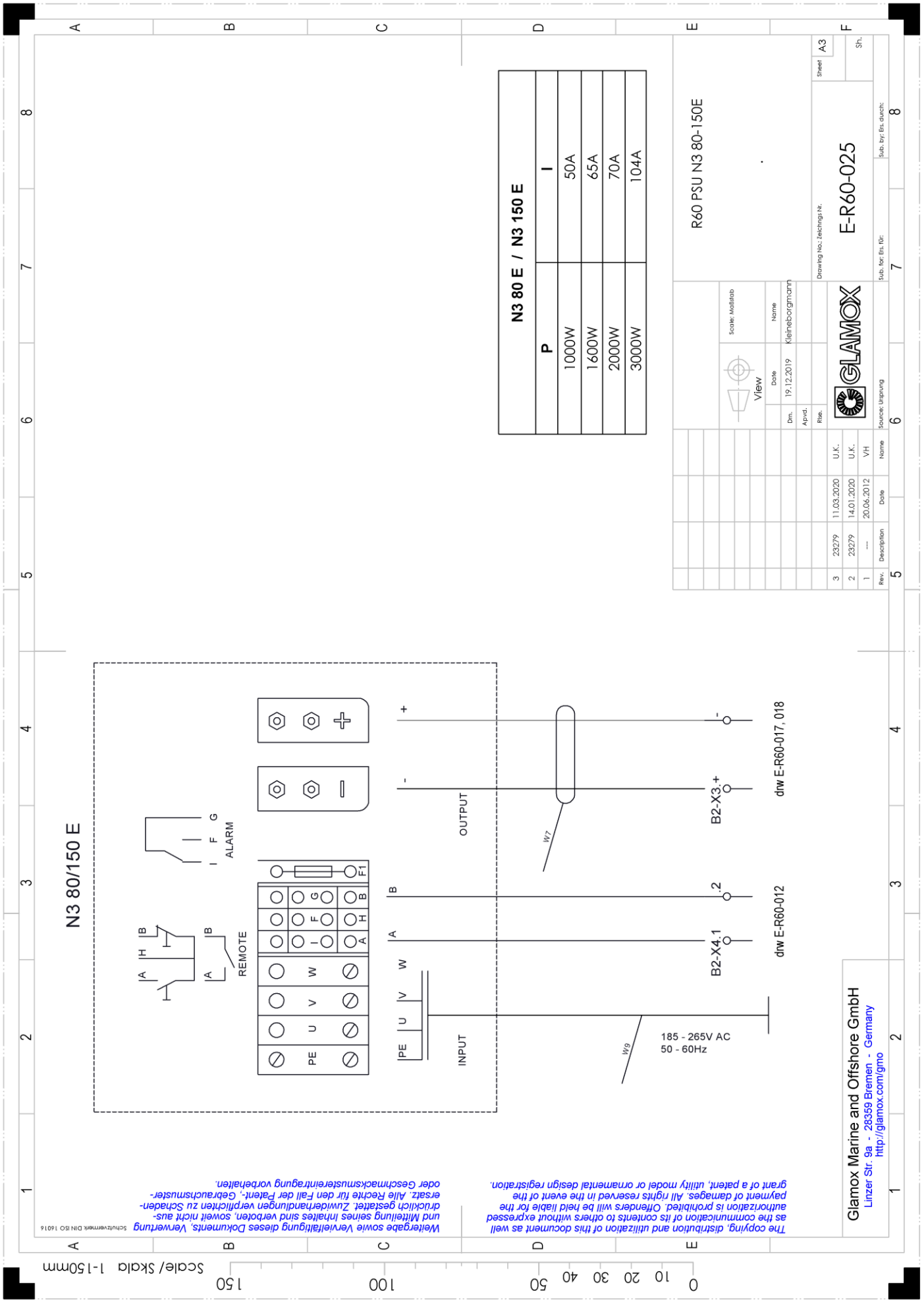
Sheet 1 A4

1 Sh.

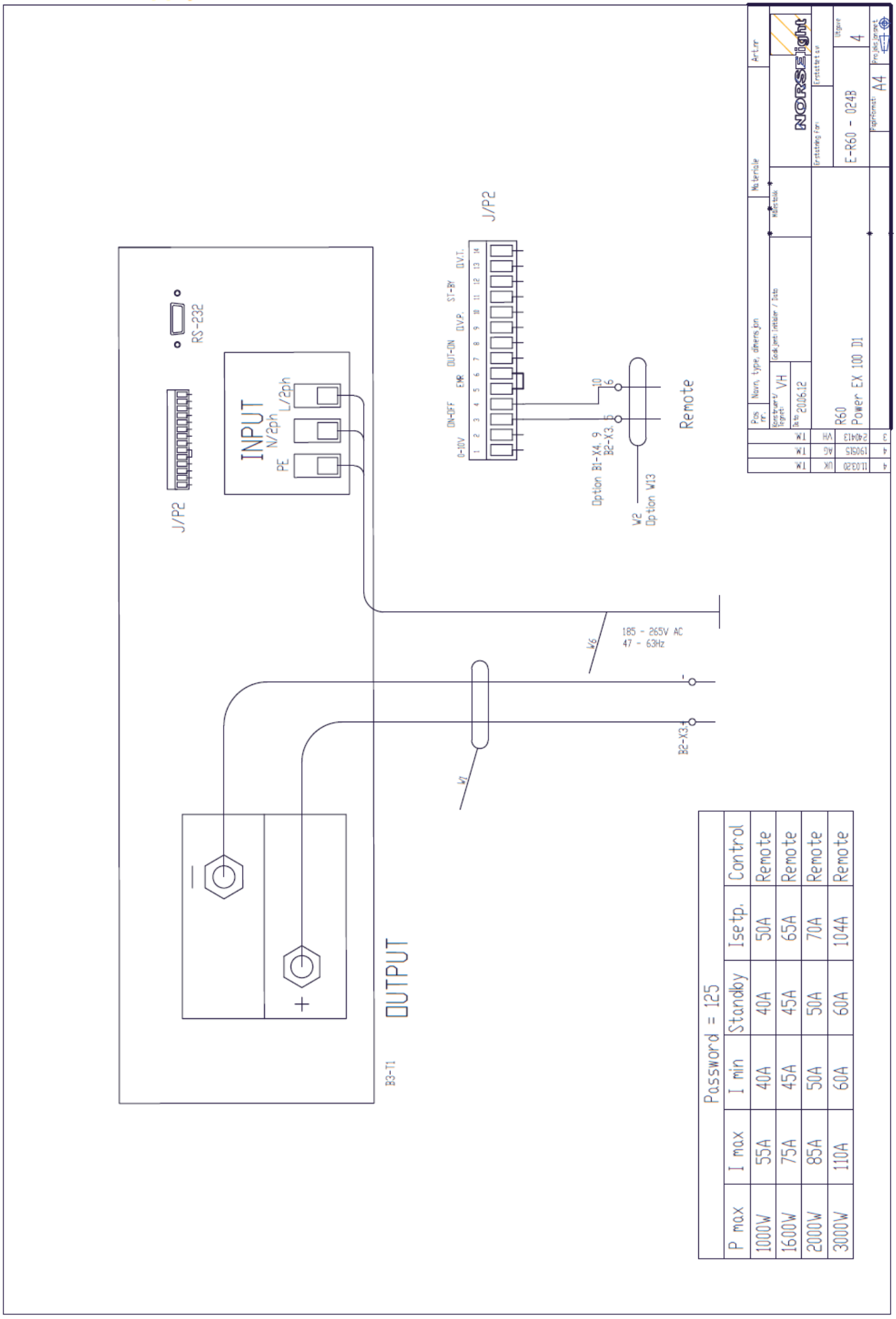
Sub. for: Ers. für:

Sub. by: Ers. durch:

4.4 Power supply N3-80E for 2000W / N3-150E for 3000W



4.5 Power supply EX 100-D/1 for 1000-3000W



Password = 125				
P max	I max	I min	Standby	Isetp.	Control
1000W	55A	40A	40A	50A	Remote
1600W	75A	45A	45A	65A	Remote
2000W	85A	50A	50A	70A	Remote
3000W	110A	60A	60A	104A	Remote

5.0 Installation, software settings

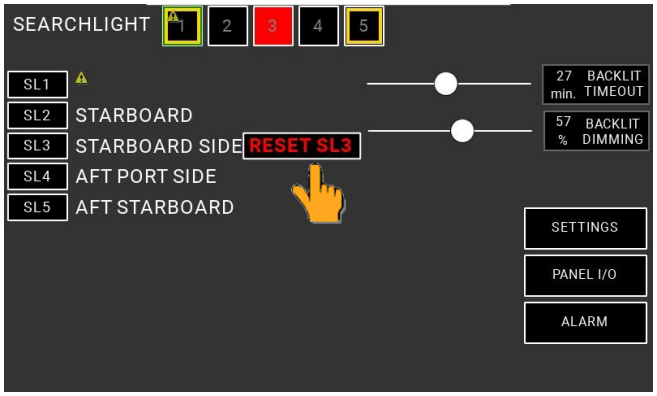
First start-up and after power loss

1. When all cabling and mechanical installation is done turn on the power.

With every power loss of the searchlight, it need to be initialized.

Be sure the searchlight can move 360 ° horizontal and +22°/-27° vertical.

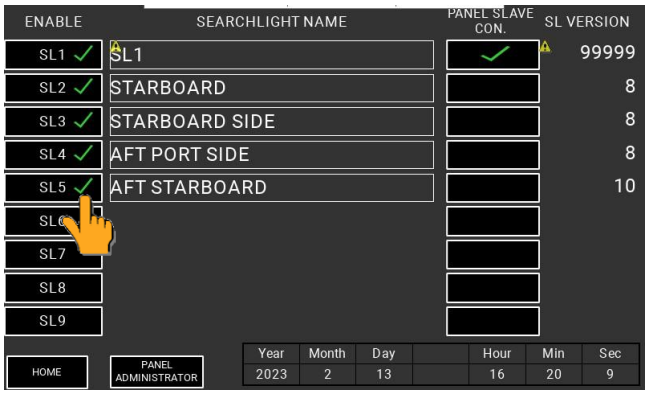
2.



The searchlight will now run all motors to calibrate its position.

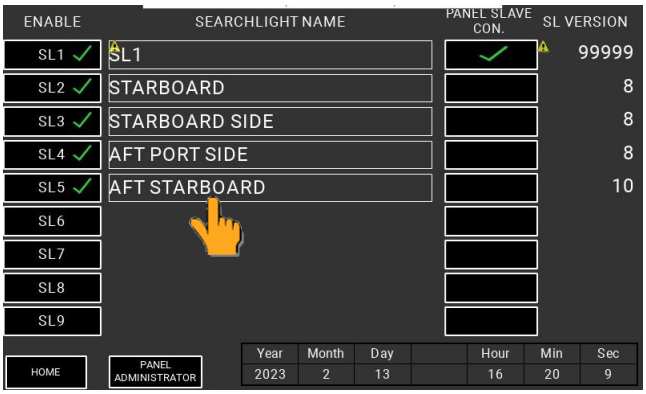
Do the same procedure for all searchlights in the system.

3.



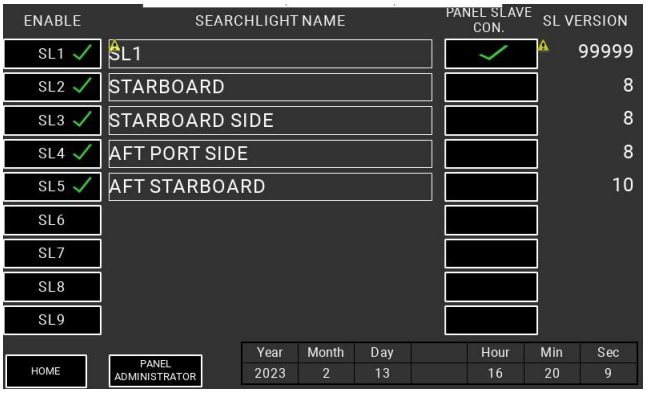
Select all searchlights in the system. The searchlight is labeled with ID number on the motorhouse and on the inside of the back cover to the motorhouse.

4.



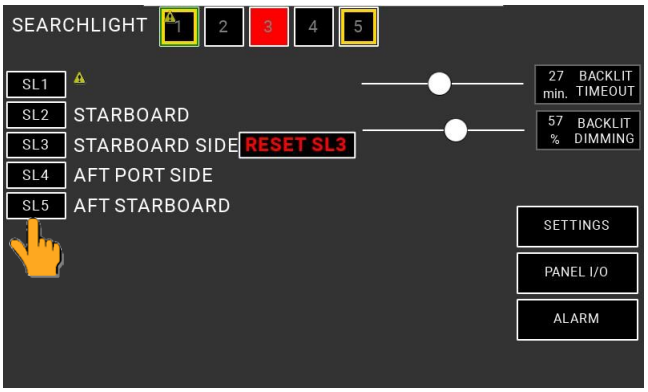
Names for each searchlight can be entered
If no new name is entered the default name is SL1 ---SL9

5.



One or more slave panels in parallel can be connected to the main panel. Select the searchlight it should control

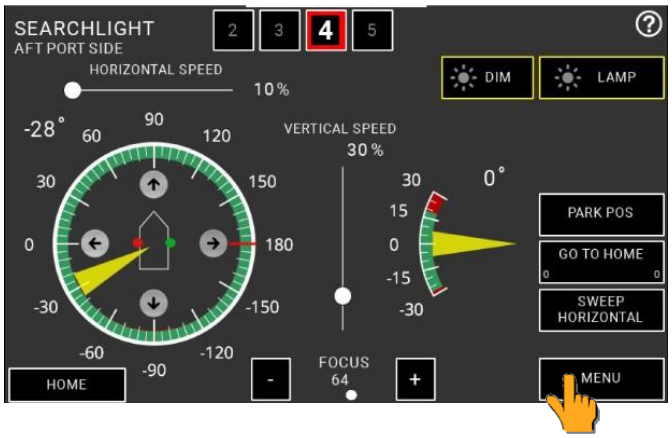
6.



Select actual searchlight
Continue with hardware settings on page 28.

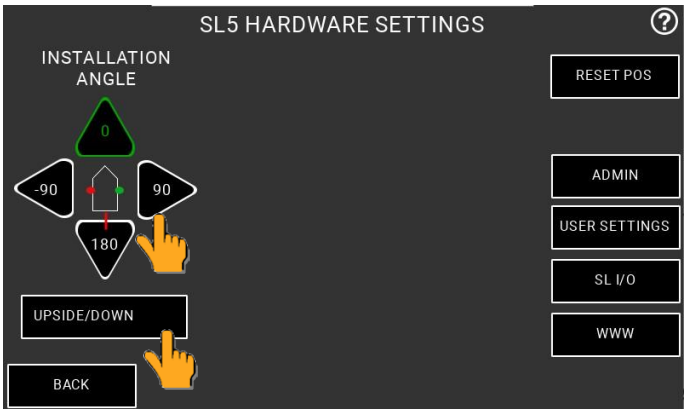
5.1 Hardware settings

7.



Press menu

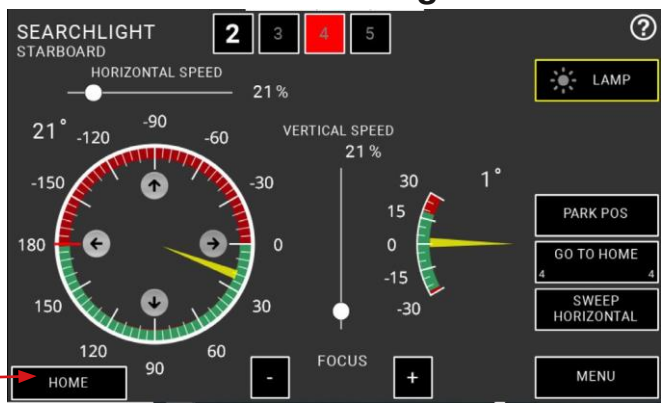
8.



Select mounting position. The symbol in the middle is the reference of the vessel

Example. The front of the motorhouse is in the same direction as the bow of a ship.

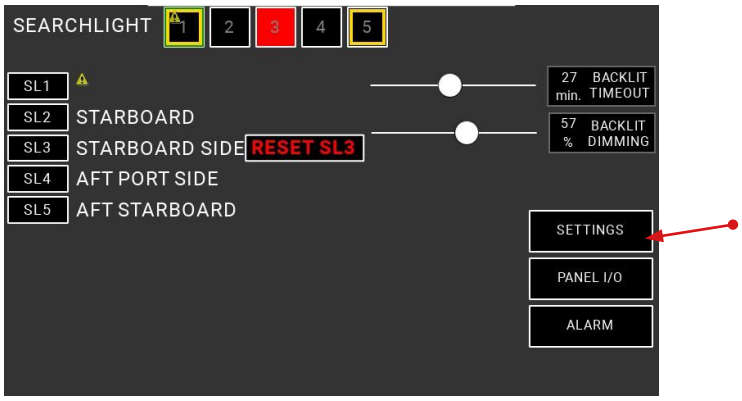
5.2 Panel IP-address setting

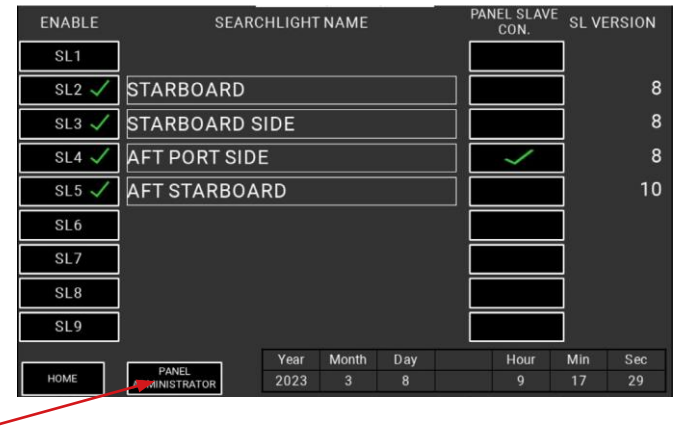


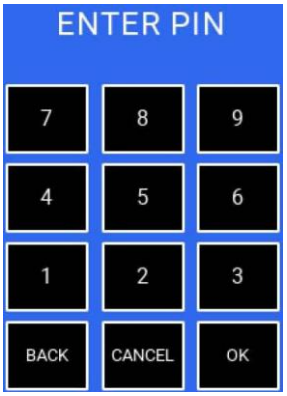
If the panel is not preset with correct IP address it can be done from the Panel administrator.

Each panel must have a unique address in the range 31-39.

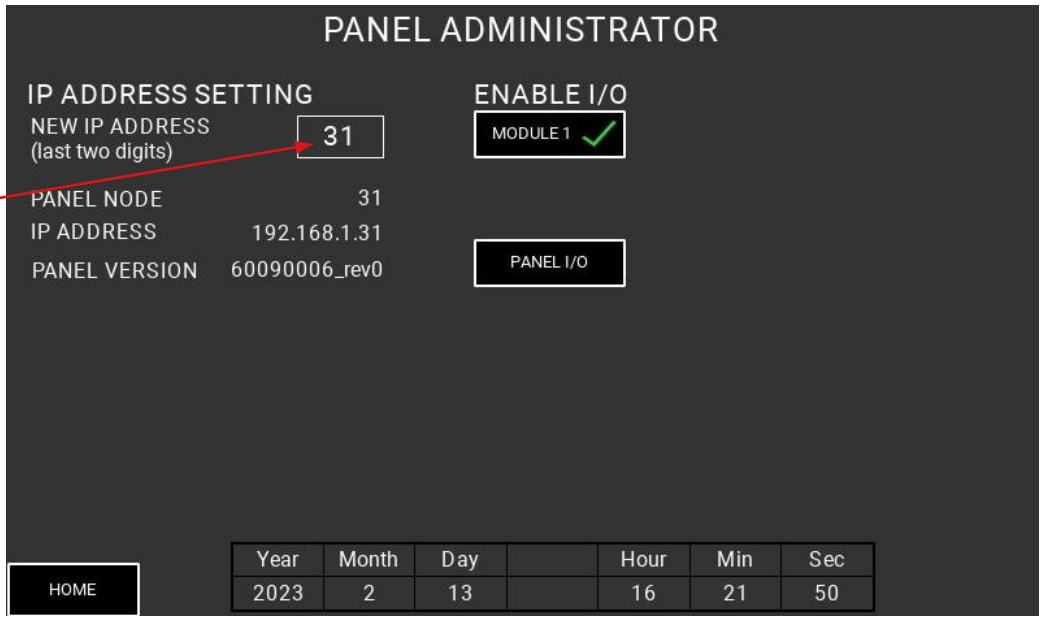
After changing of the address power Off/On



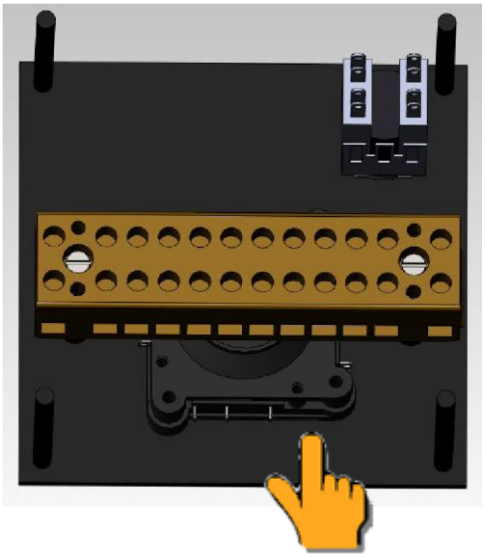




PIN 1234

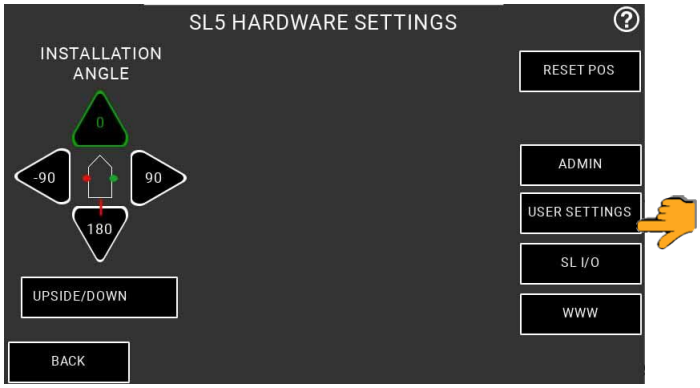


5.3 Slave Panel

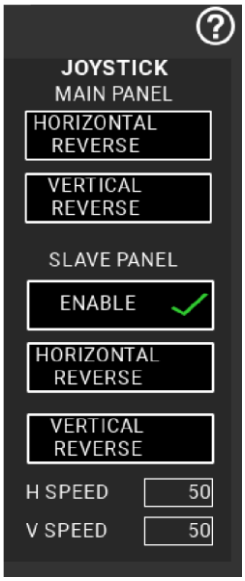


Connect the wires according to the drawing E-R60-027, see page 54. It is possible to connect unlimited slave panels

1.



2.

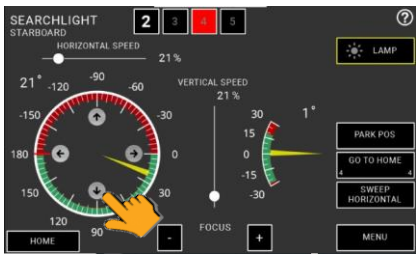


Settings for the slave panel can be selected:

Reverse direction for both horizontal and vertical direction
Speed for horizontal and vertical movement
Enable panel on/off

5.4 Settings / Joystick

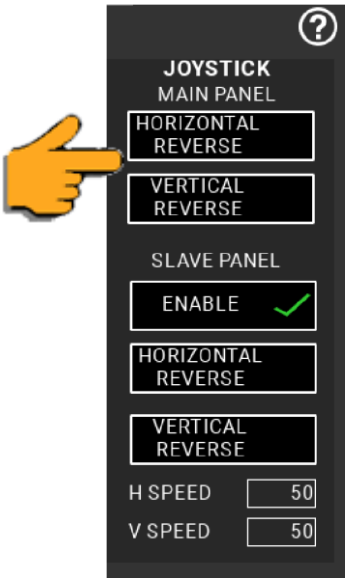
The searchlight can be operated from 3 different types joysticks.



1. Software joystick in the touch-screen main menu.
   Settings for the joystick described in pos.1

2. Hardware joystick on the main panel.
   The joystick controls the selected searchlight in the main menu
Settings for the joystick described in pos. 4

3. Hardware joystick on the slave panel.
   Settings for the joystick described on page 30

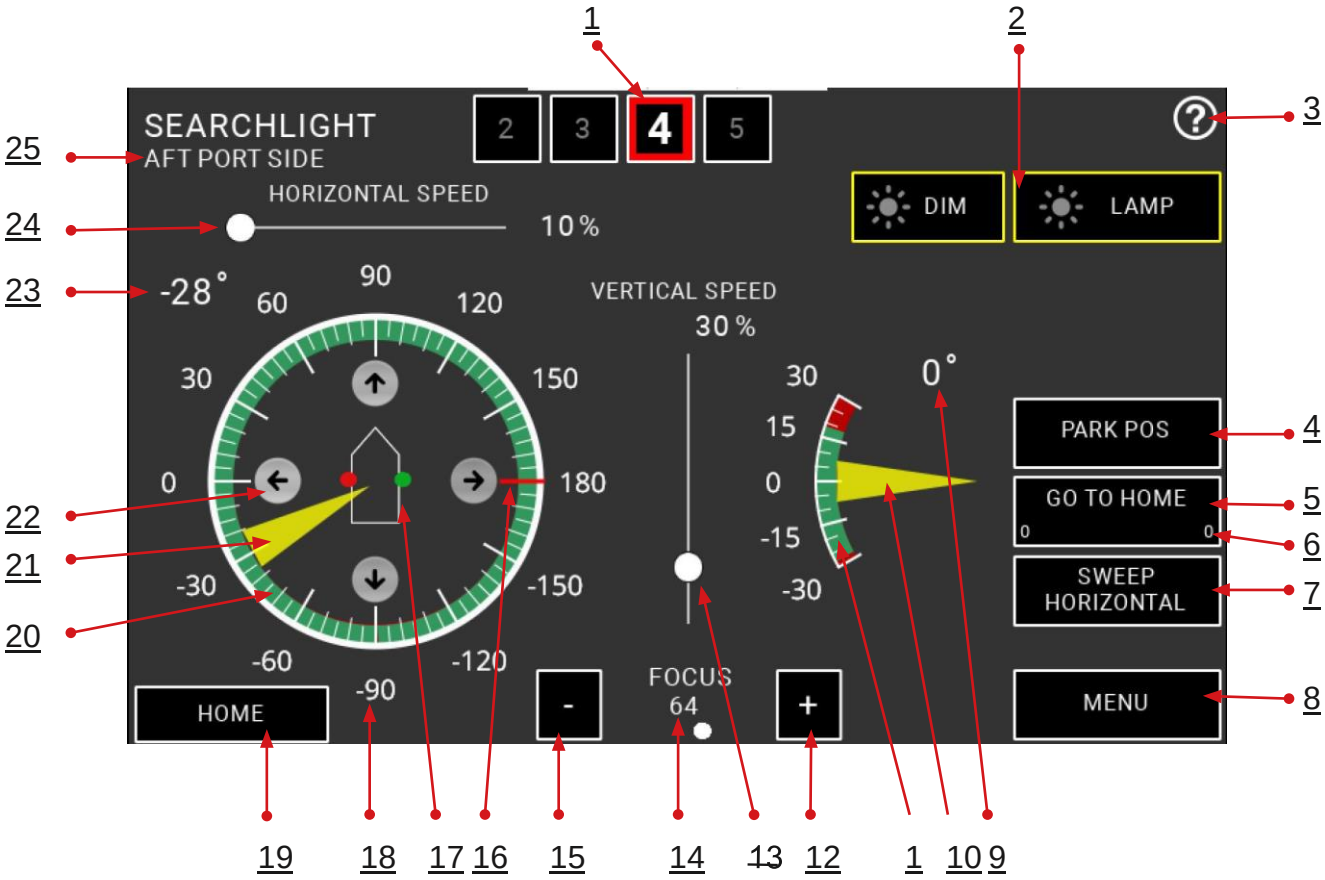


The movement of the searchlight from the joystick can be reversed. Settings affect both software and hardware joystick on the main panel

Troubleshooting see page 43.
More information is also available in the help menu.

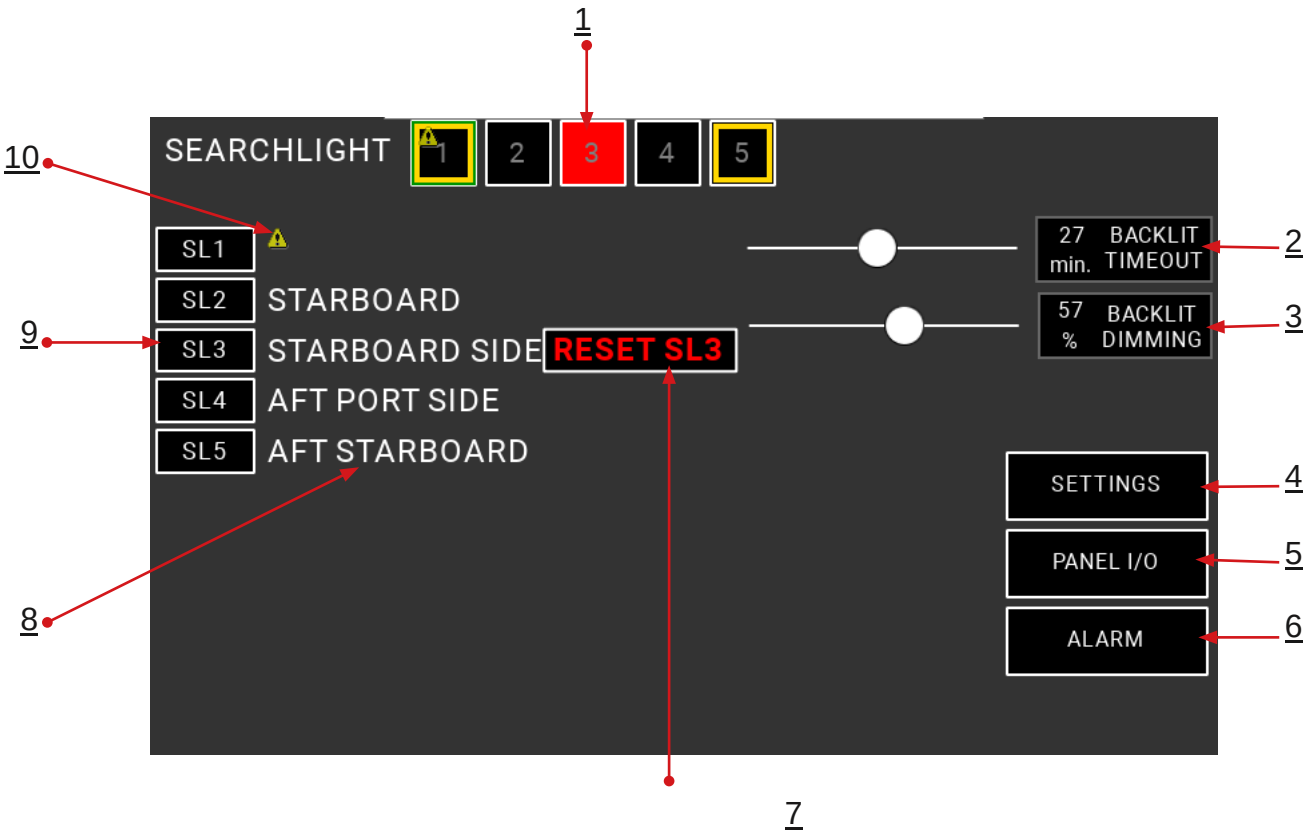
5.5 Main menu

Menu for controlling all basic searchlight functions and position feedback.



1. Searchlight selector. Bold number display selected searchlight.
Frame colour: Red=Alarm, Yellow=Light On, Green=Moving
2. Lamp button and indicator On/Off. Dim function button
3. Help Menu
4. Button for moving the SL to preprogrammed position and turn Off the lamp
5. Button for moving the SL to preprogrammed position
6. Indicator for preprogrammed Home position
7. Button for start horizontal sweep, preprogrammed limits
8. Menu for settings
9. Vertical position indicator
10,21 Position pointer, the width of the yellow sector follows the beam width on XS3000
11. Indicator for vertical sector, green sector OK, red stops
12,15. Focus button for narrow and wide beam.
13. Vertical speed slide with indicator
14. Focus position indicator, only for XS3000
16. Indicator for horizontal mechanic stop
17. Symbol for vessel as reference for 0 degree position
18. Scale for position of 0 degree, depends on mounting
19. Home button to select other SL and panel settings
20. Indicator for horizontal sector, green sector OK, red stops
22. Software joystick horizontal and vertical movement
23. Horizontal position indicator
24. Vertical speed slide with indicator
25. Name of searchlight, default SL1-SL9 can be changed

5.6 Home menu

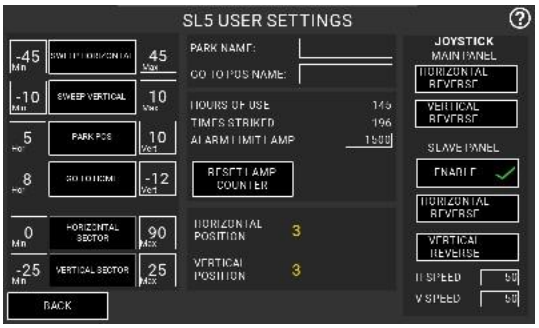


1. Searchlight selector. up to 9 searchlights can be controlled
2. Time before turning off the panel light after last action 0= always On
3. Backlit dimming
4. Settings menu for setup of system
5. Information about panel digital Input/Output
6. Alarmmenu
7. Reset pop-up if the SL needs to be reset
8. Name of searchlight, can be changed in settings menu
9. Searchlight selector.
10. Warning if the connection is lost with the searchlight

5.7 Settings / Sector limits / Sweep / Home

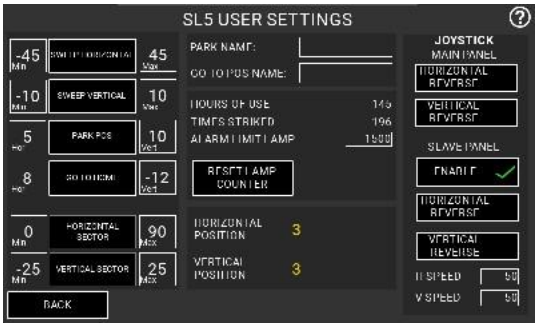
The searchlight movements can be limited by setting a sector for horizontal and vertical movements.
The settings will have the same function as a mechanical stop unless for the reset/initializing routine.

Main menu/Settings/Hardware Installation/Searchlight limits



Do not exceed -180 and 180 degrees
Do not set the limit lower than the sweep sector

Main menu/ Searchlight limits /



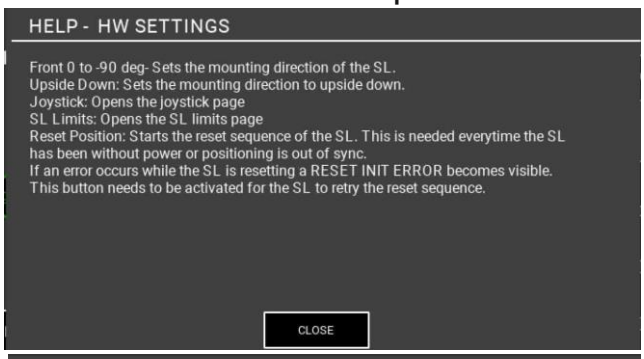
1. Start sweep horizontal, this is the same button as in main menu
   Set the min/max sweep degrees in pop-up menu
2. Start sweep vertical, can be operated at the same time as for horizontal
   Set the min/max sweep degrees in pop-up menu
3. Home position 1, same as button in main menu
   Set the position for horizontal and vertical parking in pop-up menu
4. Home position 2
   Set the position for horizontal and vertical parking in pop-up menu

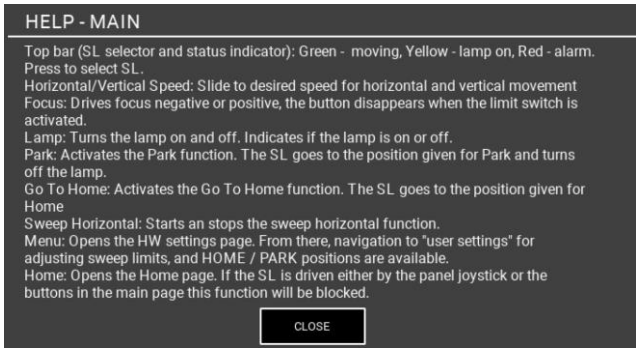
Min and max degrees/position is limited by sector limits, described above

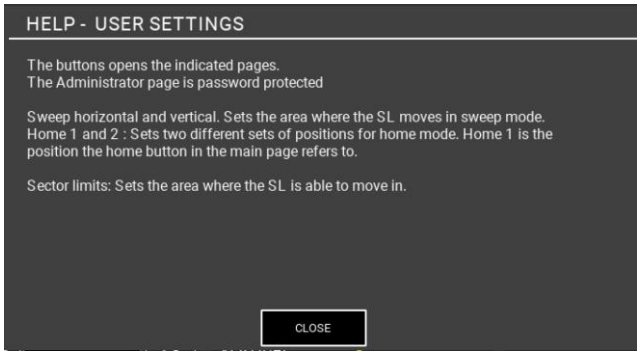
5.8 Searchlight help and information

Help menu

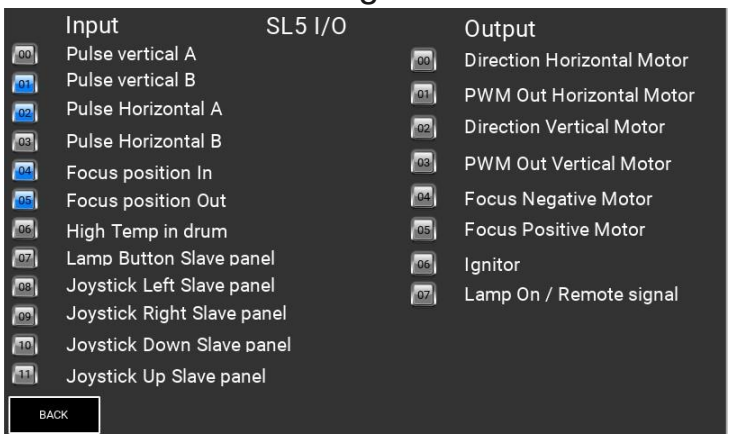
In most of the menues Help is available



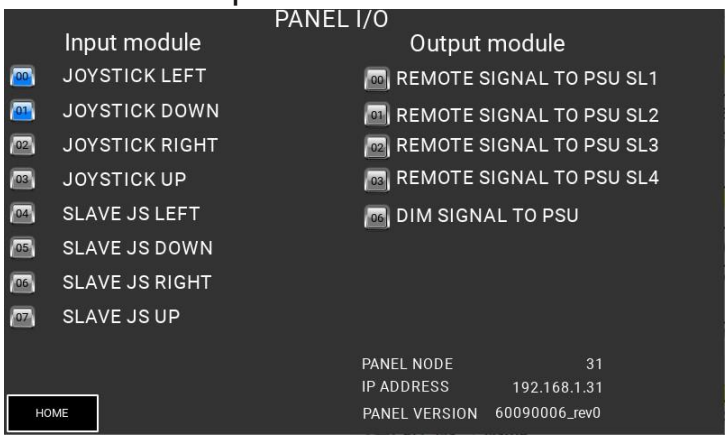




I/O status for searchlight



I/O status for panel



5.9 Alarm handling

Alarms will be displayed for each searchlight
Red is active not acknowledged
Yellow active acknowledged
Green inactive not checked out
A code light will not work
B Important , motor problem
C Less important

The timestamp is according to the clock setting

6.0 Maintenance

The guarantee is only valid against production faults. It do not cover damage caused by transportation, damage due to disregard of this technical Manual or adverse external effects. Guarantee regarding the bulb, please look at the guarantee papers following the bulb and batteries.
This must be filled in and returned to **GLAMOX Production GmbH & Co. KG**.

Before installation, maintenance and repair work (also cleaning), disconnect searchlight from power supply and secure against reactivation by third parties.
Servicing and maintenance work may only be carried out by qualified and electrically skilled personnel.
Use safety equipment, face cover and gloves all times!
Do not clean the searchlight with the high pressure!

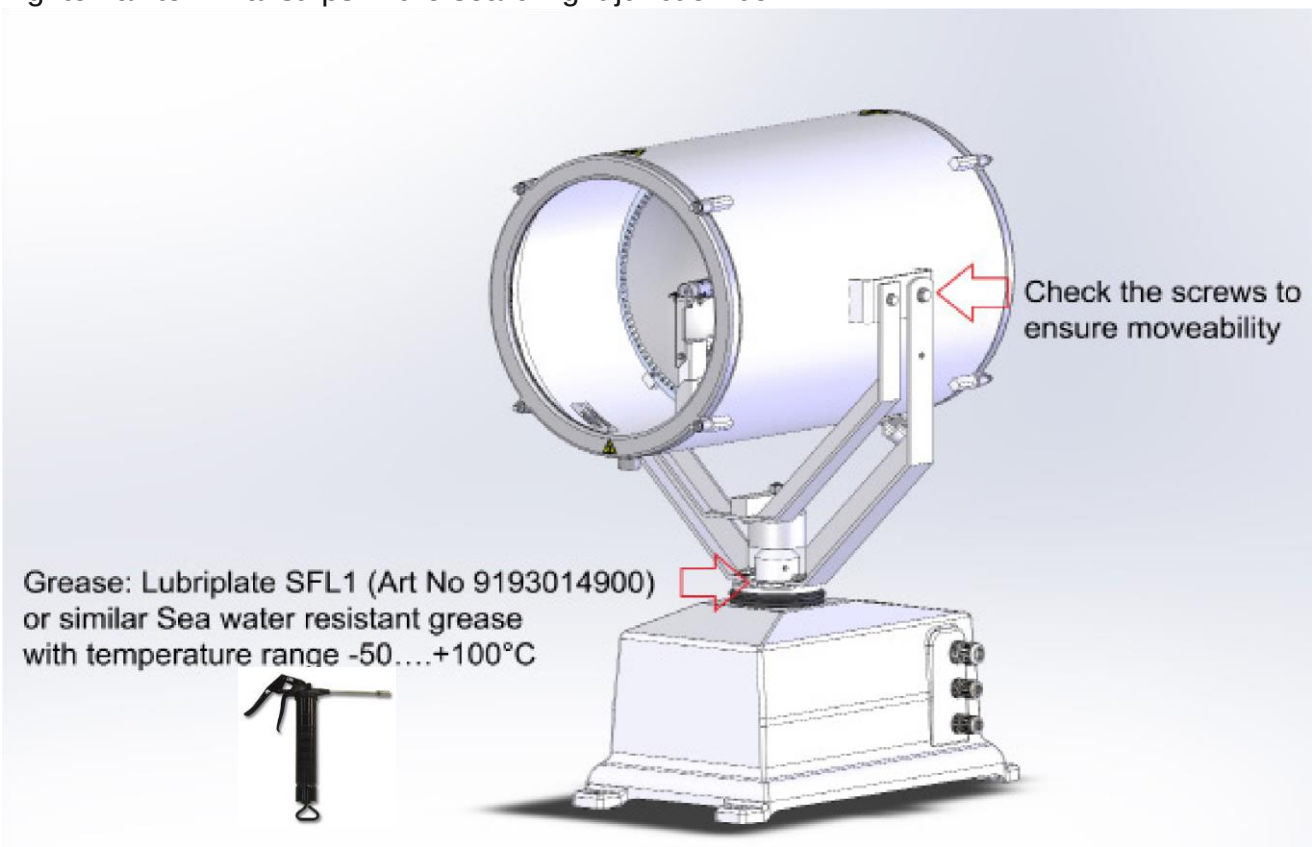
General Searchlight Maintenance

Recommended intervals not exceeding:

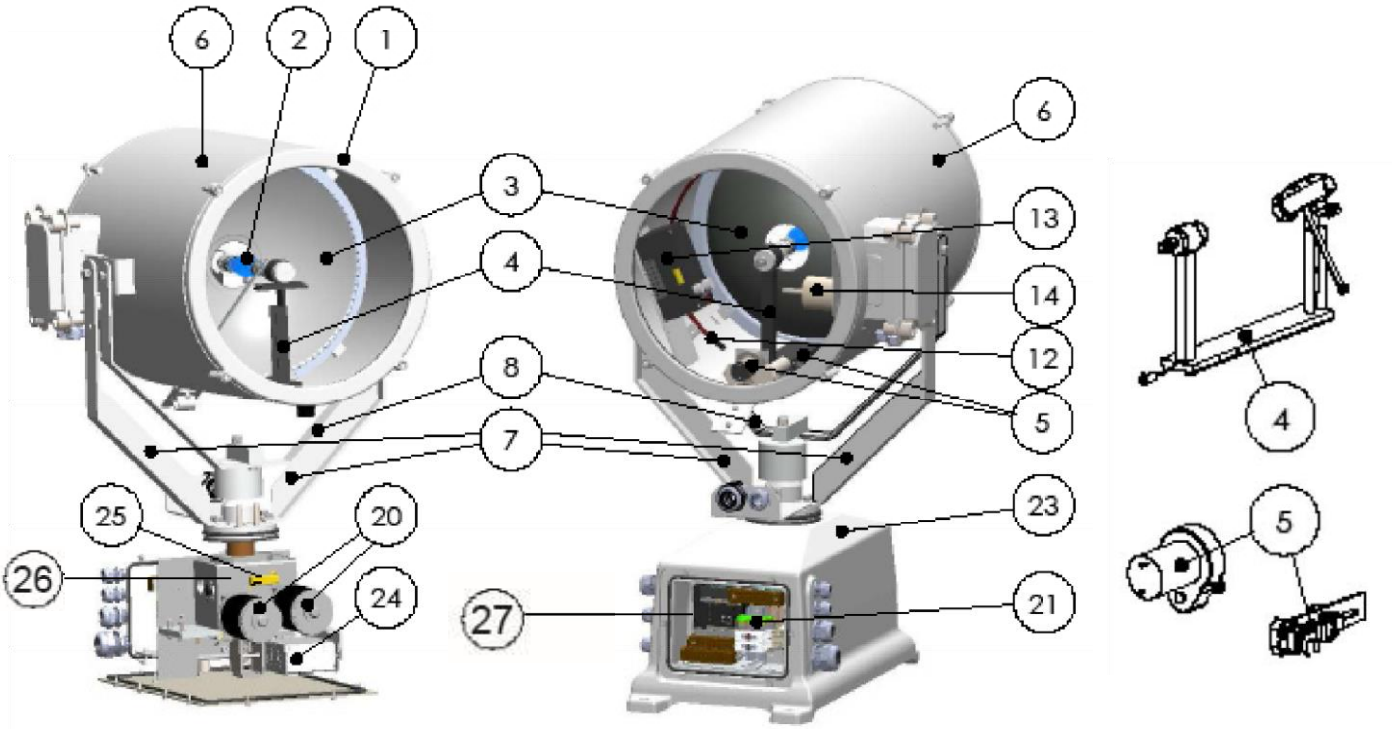
6 months:
Visual inspection of gasket and glands.
Control of **all screws** and **nuts connections.**
Check the level of grease and refill when needed in glider for lamp holder.
Reflector and front glass to be cleaned with a soft cloth and ethanol or similar.

1 year:
Fill up the grease-niple on the top of the motorhouse with a grease-gun.

3 year:
Tighten all terminal strips in the searchlight junction box.



6.1 Spare Parts List



Pos.	Spareparts Xenon R60	XS1000	XS2000	XS3000 NR
1.	Front ring cpl., white	1009169	1009149	1009149
2.	Lamp Xenon	1009207	1009210	1009213
3.	Reflector cpl.	1009172	1009179	1009180
4.	Lampholder cpl. w/focus	1009296	1009189	1009192
5.	Focus unit Xenon cpl.	1009168	1009168	OR
6.	Drum cpl.	OR	OR	OR
7.	Forks, white	1009314	1009313	1009313
8.	Manouver fork	OR	OR	OR
9.	Seal kit, Drum	OR	OR	OR
10.	Cable kit, Drum	OR	OR	OR
11.	Cable external, Xenon	OR	OR	OR
12.	Heat element Drum 115V	1009135	1009136	1009136
12.	Heat element Drum 230V	1009173	1009118	1009118
13.	Ignitor 230V	1009239	1009239	1009237
13.	Ignitor 115V	1009241	1009241	1009236
14.	Noise filter kit cpl.	OR	OR	OR
20.	Motor Vertical/Horizontal	1009224	1009224	1009224
21.	PLC-Module	1009689	1009689	1009689
22.	Seal kit, Motorhouse	OR	OR	OR
23.	Motorhouse cpl.	OR	OR	OR
24.	Power supply, Motorhouse	1009642	1009642	1009642
25.	Heat element 230V	1009433	1009433	1009433
26.	Gear cpl.,	2008183	2008183	2008183
27.	Battery for PLC and Control	2008190	2008190	2008190

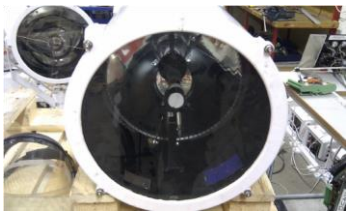
OR = On Request

6.2 Lamp replacement

1. Turn off the fuse to the power-supply/rectifier and make sure nobody can turn it on during the replacement of the lamp.

Allow the lamp to cool down.
Use safety equipment. Face cover and gloves are a minimum.
Caution! Because of its high internal pressure, there is a risk that this lamp will explode in either the hot or cold state.

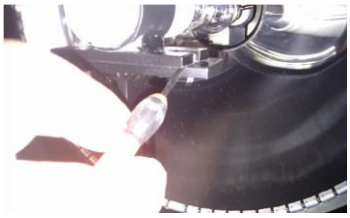
2. Remove the 4 nuts (6 for the bigger lamps) that are holding the front glass



3. Loosen one bolt, and remove the other bolt fixing the lamp holder bracket.

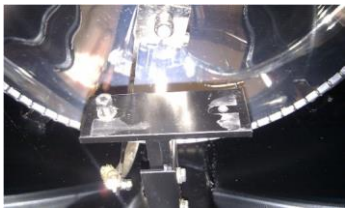
Note! It is not necessary to loosen the white lampholder from the bracket.
If this have been loosened or adjusted, it is important that the lamp has approximate 1 to 1,5mm of free running space.
See the picture on part number 12 in this document.

4. It might be necessary to use a small screwdriver to loosen the bracket.

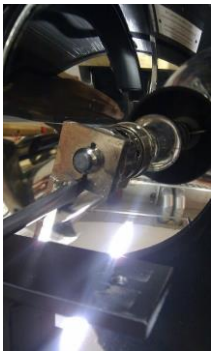


5. Remove the bracket

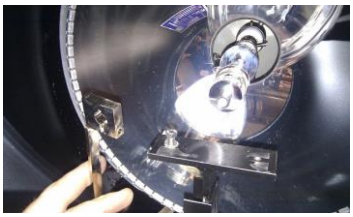
It is very easy to see were the bracket was mounted, make sure to put it back in the same position when the lamp is replaced.



6. Loosen the bolt holding the positive (+) lamp connector



7. Use a flat screwdriver to release the connector



8. Unscrew the lamp using hand force.

9. Replace the lamp, tighten by hand force.

10. Re-install the positive connector

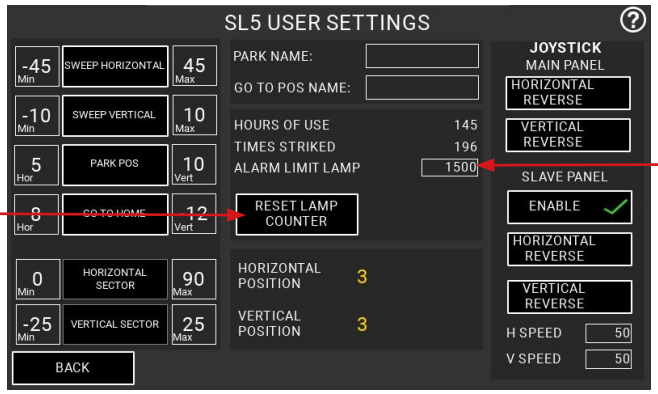
Must be pushed in as far as possible, and the bolt tightened firmly.

11. Re-install the lamp holder bracket

12. Re-install the front glass on the searchlight, and you are done.
Note! It is not necessary to loosen the white lamp holder from the bracket when doing a normal bulb change. If this have been loosened or adjusted, it is important that the light bulb has approximate 1 to 1,5mm of free running space because it is expanding when warm.
Check this by pushing the bulb backwards in the lamp holder using light force, the spring holder in the back shall give you the necessary space when installed correctly.

13. User settings

After changing the lamp reset the lamp counter



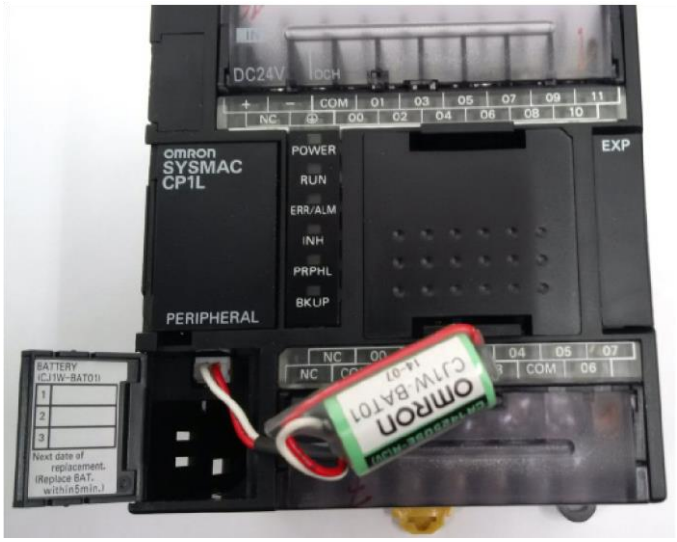
Alarm-limit can be changed . Example if the lamp is changed to longlife the time can be in-creased

14. Safety
During operation it emits intense UV radiation which is harmful to the eyes and skin.
Keep light beam and hot components away from flammable materials!

15. Disposal
Read attached operating instruction for the lamp

6.3 Battery replacement in the searchlight

Pull the white connector from the board. Dispose battery professionally



Connect new battery with the white-coded connectors on the board

Note:
The battery is used exclusively for securing the firmware.

5. Data sheets for the battery available on request

6.4 Troubleshooting

Searchlight don't move on horizontal or vertical:

In case of Alarm Horizontal blocked or Vertical blocked, check that cables is not restricting movement.
In case of too much ice around the forks it can be blocked.
Sensor fault, check I/O-signals on the panel searchlight.

The light does not turn on
Check on the lamp that get the ignition spark
Check that the power supply is on
Check fuses on the power-supply
Check On/Off switch for remote signal on the power-supply.
Correct position is Off

Focus does not work:
Check that limit switches are work
Yellow indicator for switches cannot be On at the same time

Com error in main menu:
Check power to the ethernet-switch
Check power to the searchlight
Check LAN-cables

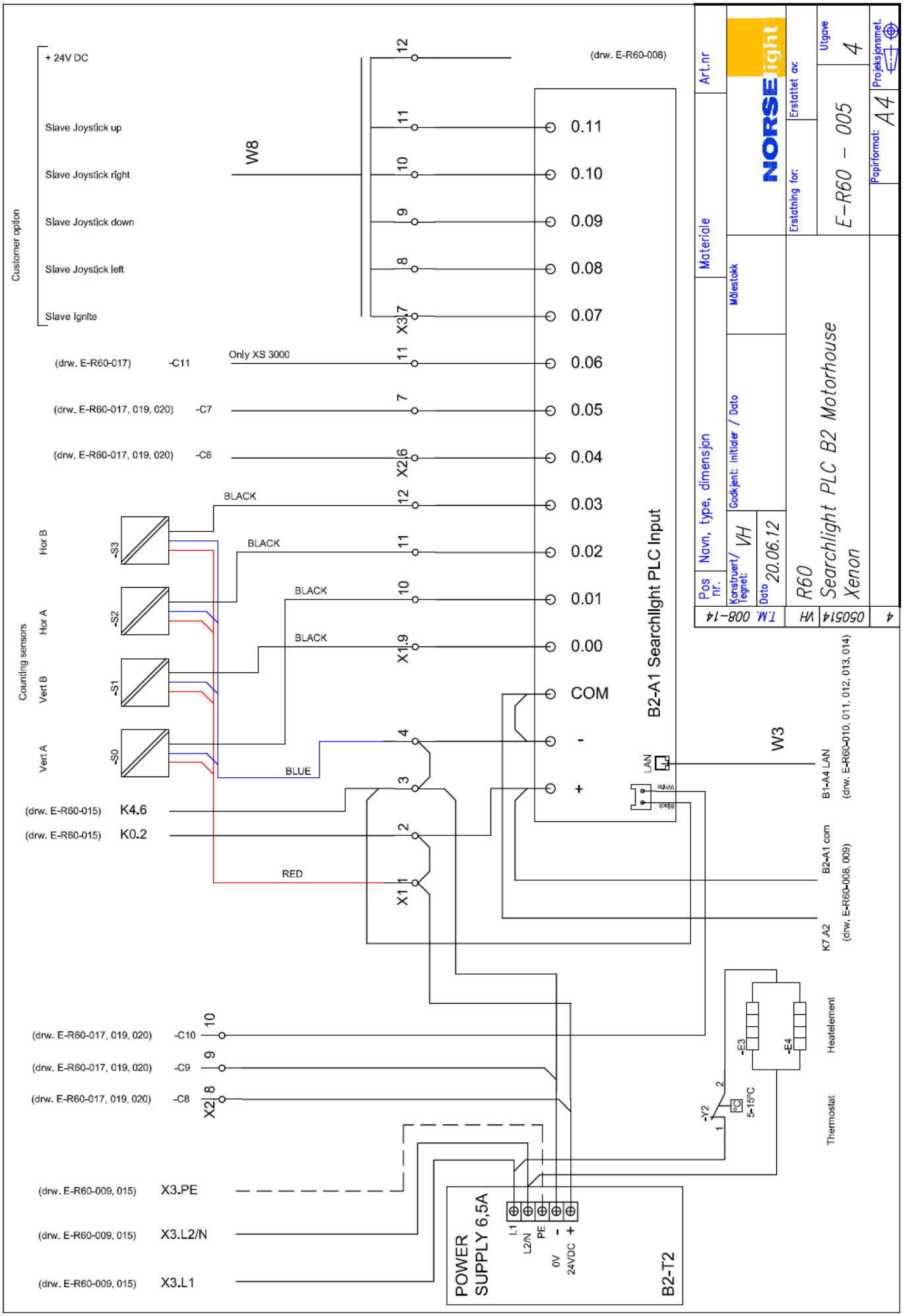
Joystick double command:
Two persons is trying to control the same searchlight

7.0 Warranty

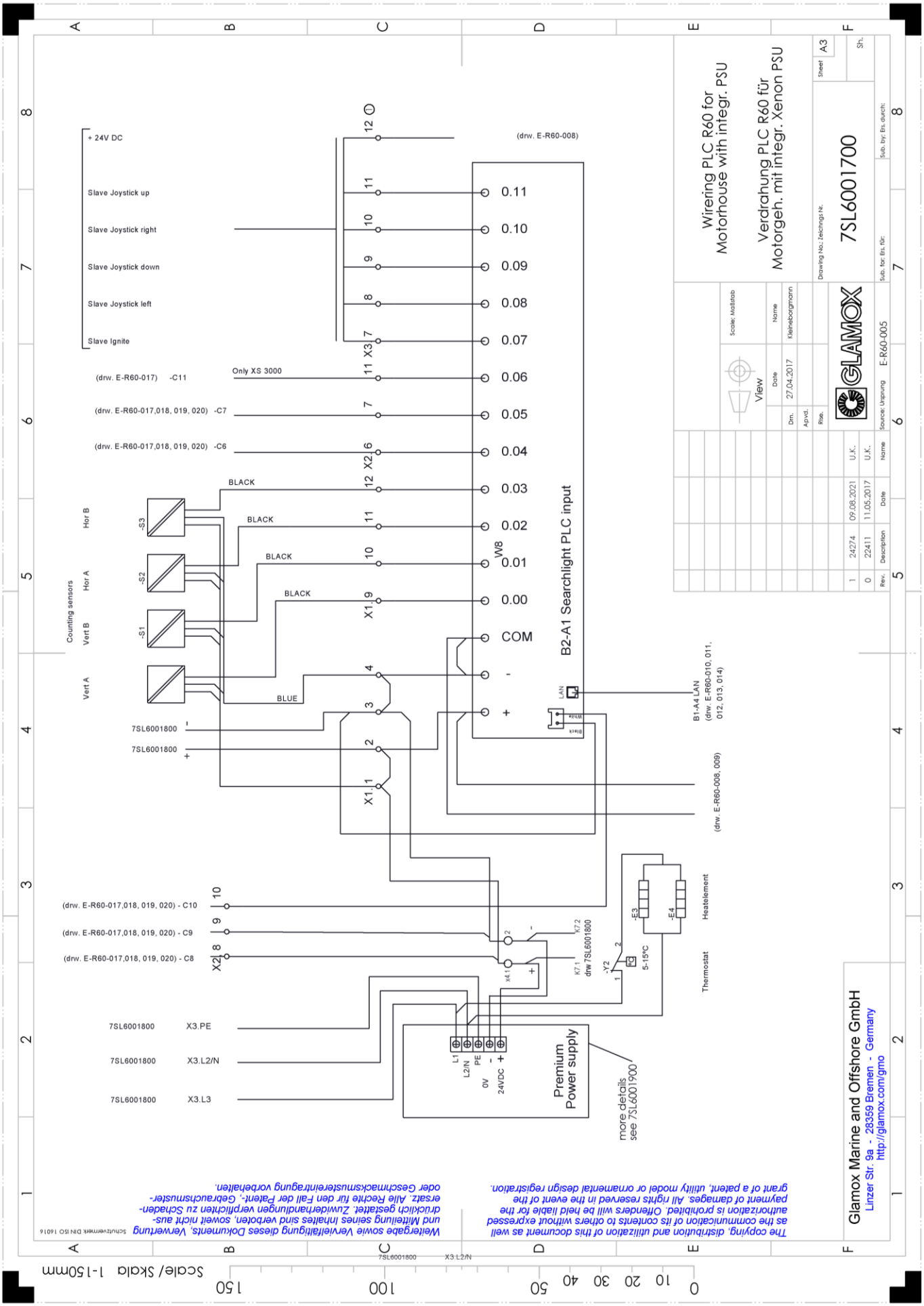
The warranty does not cover damage due to disregard of specified operating parameters.
Claimhandling: **Contact your customer service, see page 5**.
The lamp must be sent back in its original box together with the guarantee card.

8.0 Dimensions

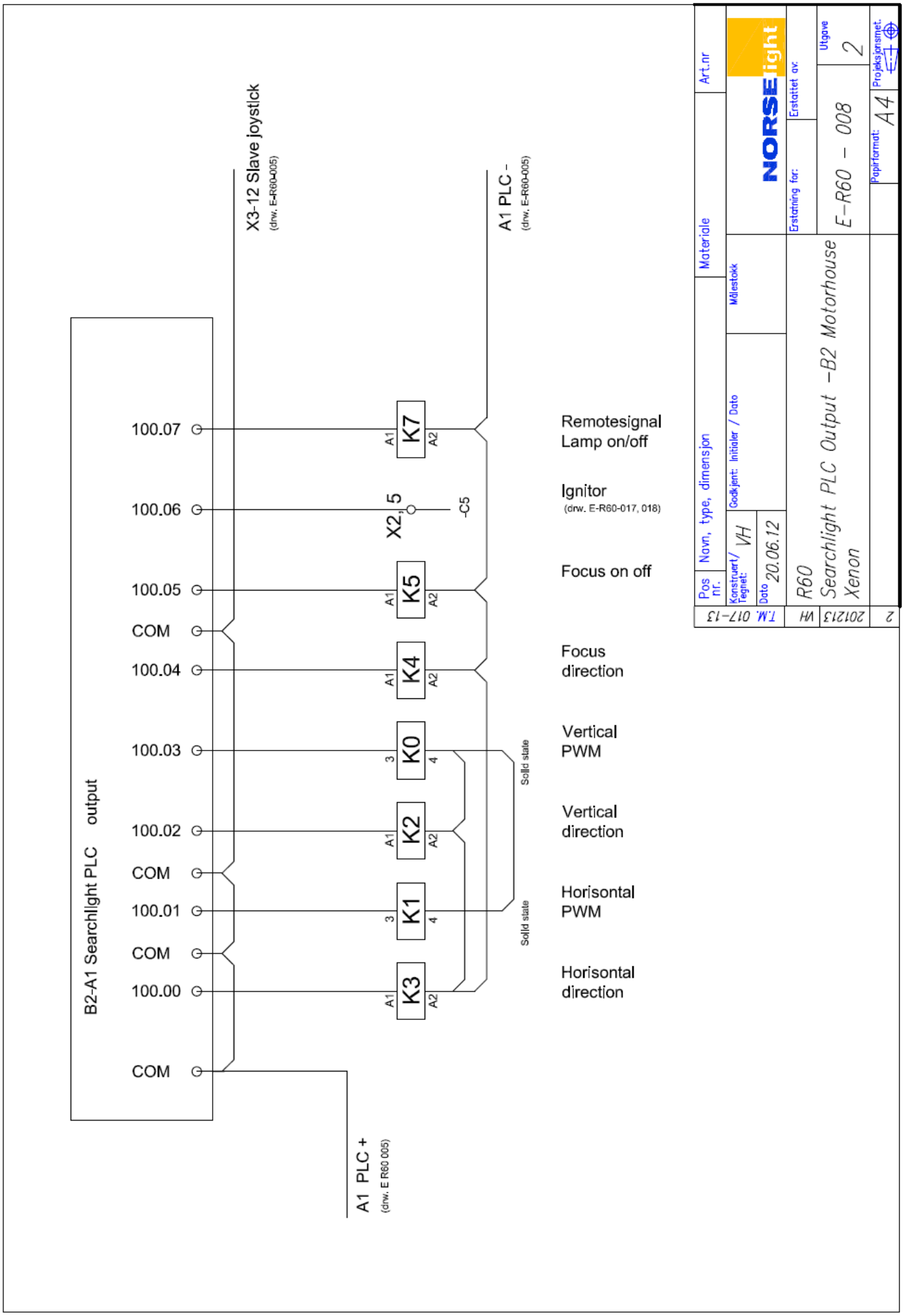
8.1 R60 Searchlight PLC B2 Motorhouse



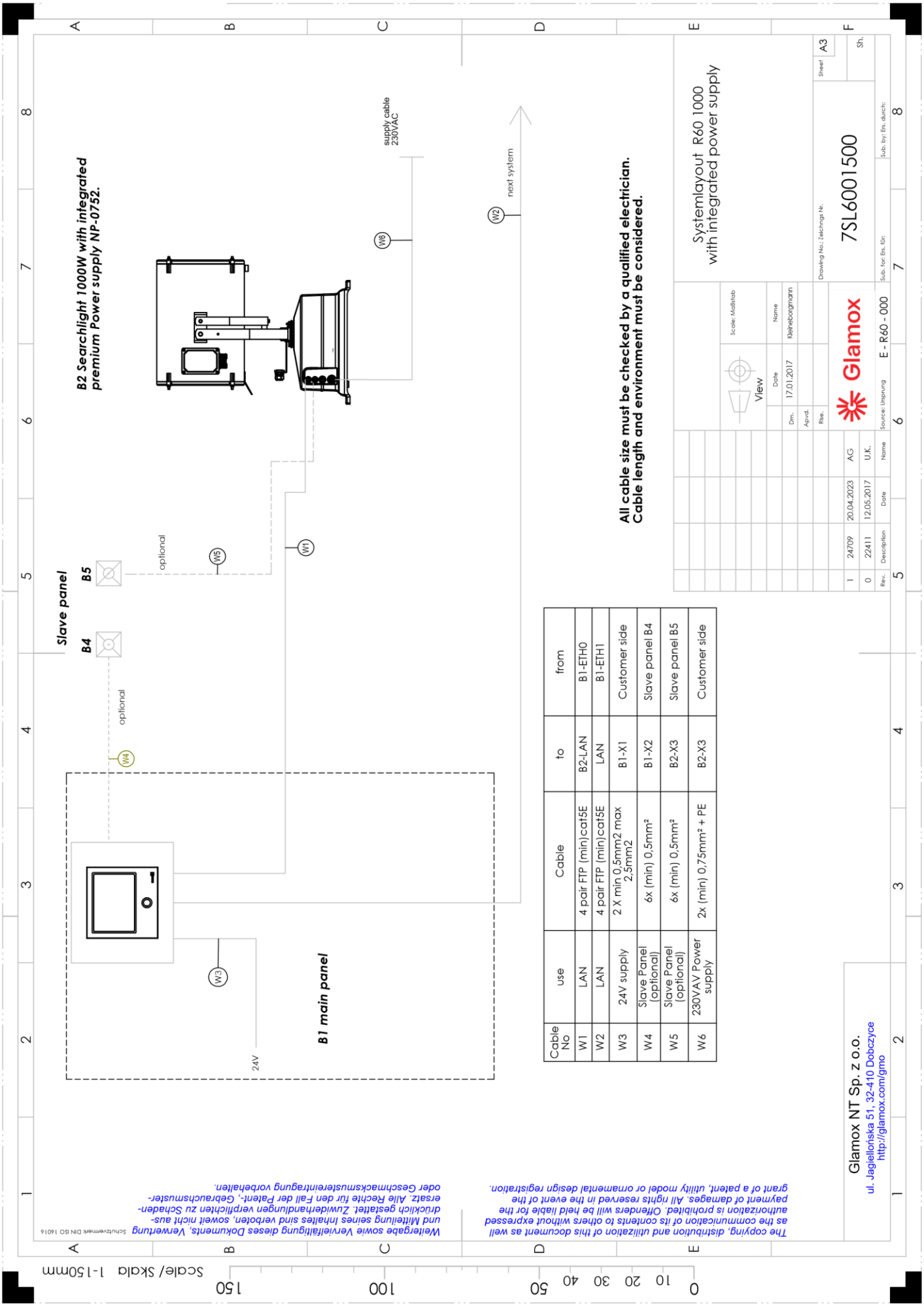
8.2 Wiring PLC R60 for Motorhouse with integrated Power supply



8.3 R60 Searchlight PLC Output - B2 Motorhouse

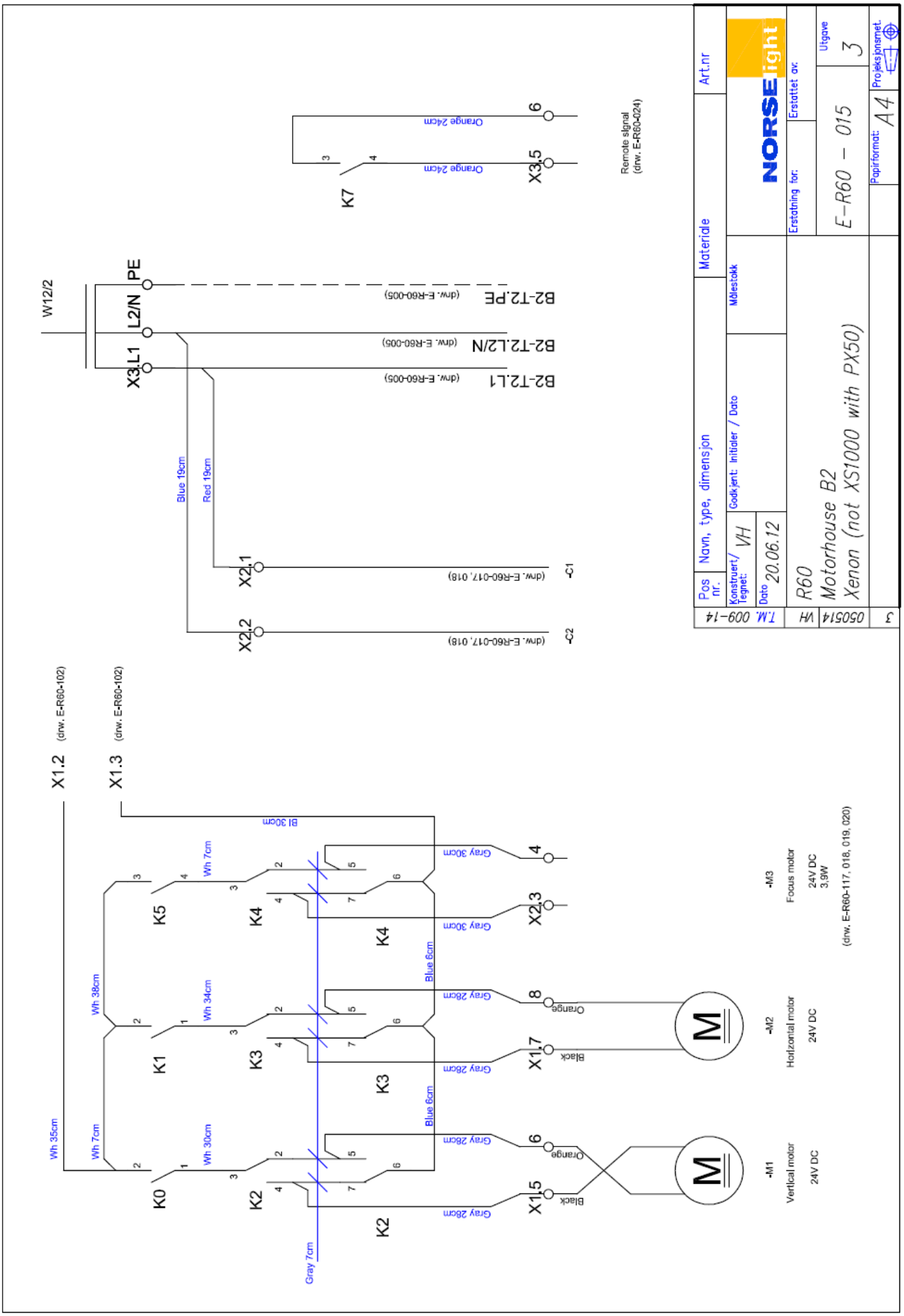


8.4 Panel G2 R60, remote

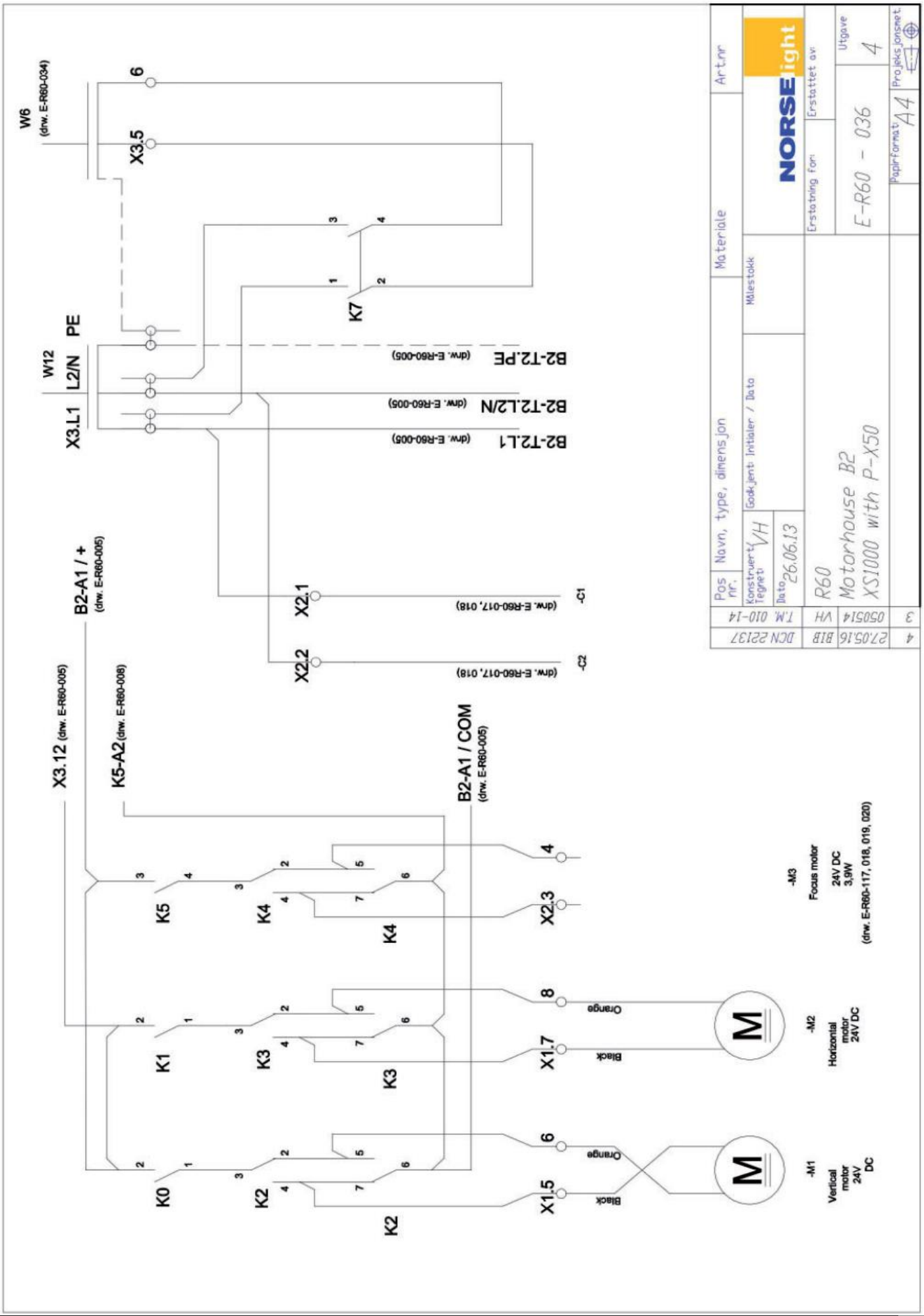


Cable No	use	Cable	to	from
W1	LAN	4 pair FTP (min)cat5E	B2-LAN	B1-ETH0
W2	LAN	4 pair FTP (min)cat5E	LAN	B1-ETH1
W3	24V supply	2 X min 0,5mm2 max 2,5mm2	B1-X1	Customer side
W4	Slave Panel (optional)	6x (min) 0,5mm²	B1-X2	Slave panel B4
W5	Slave Panel (optional)	6x (min) 0,5mm²	B2-X3	Slave panel B5
W6	230VAV Power supply	2x (min) 0,75mm² + PE	B2-X3	Customer side

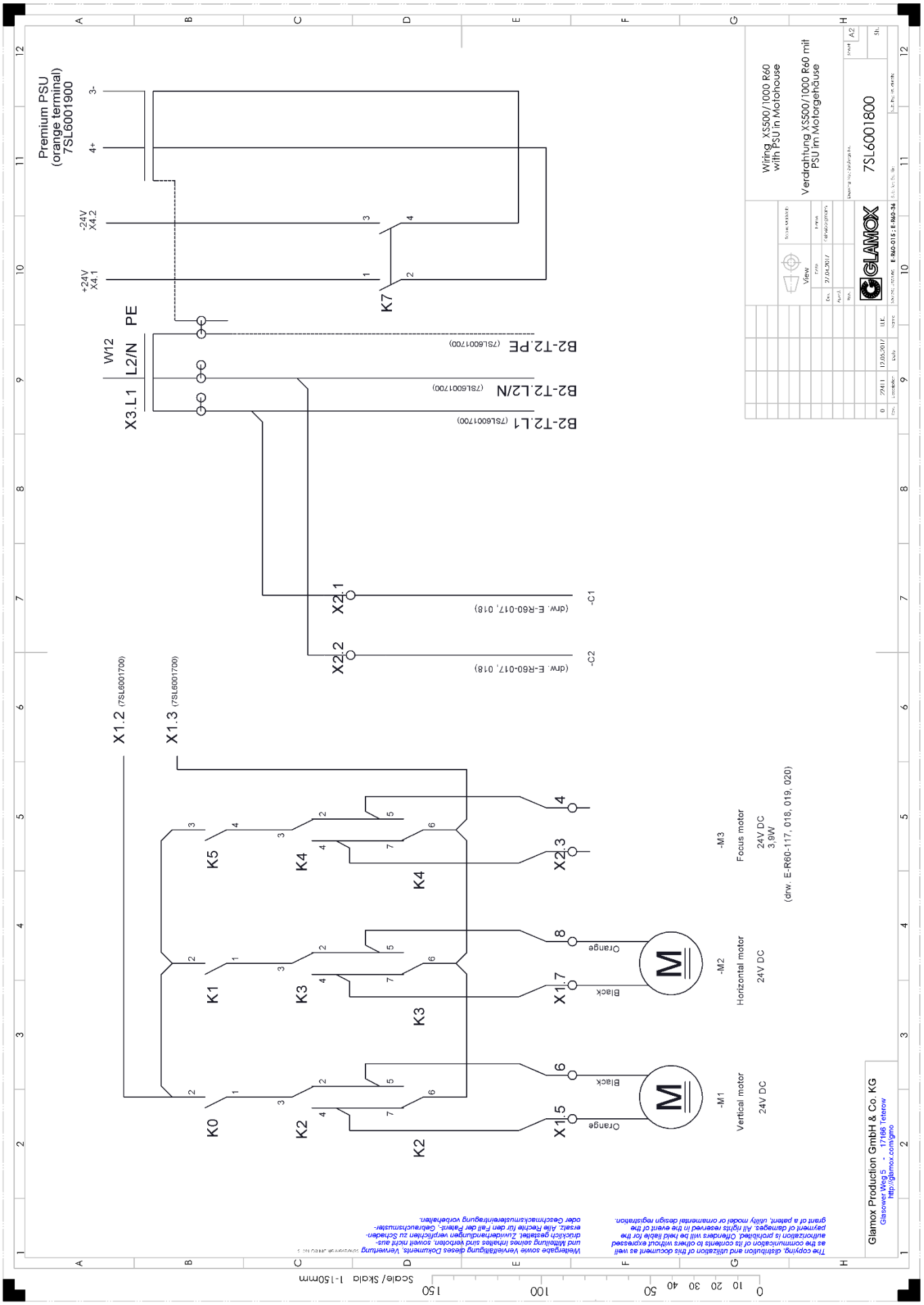
8.5 R60 Motorhouse B2



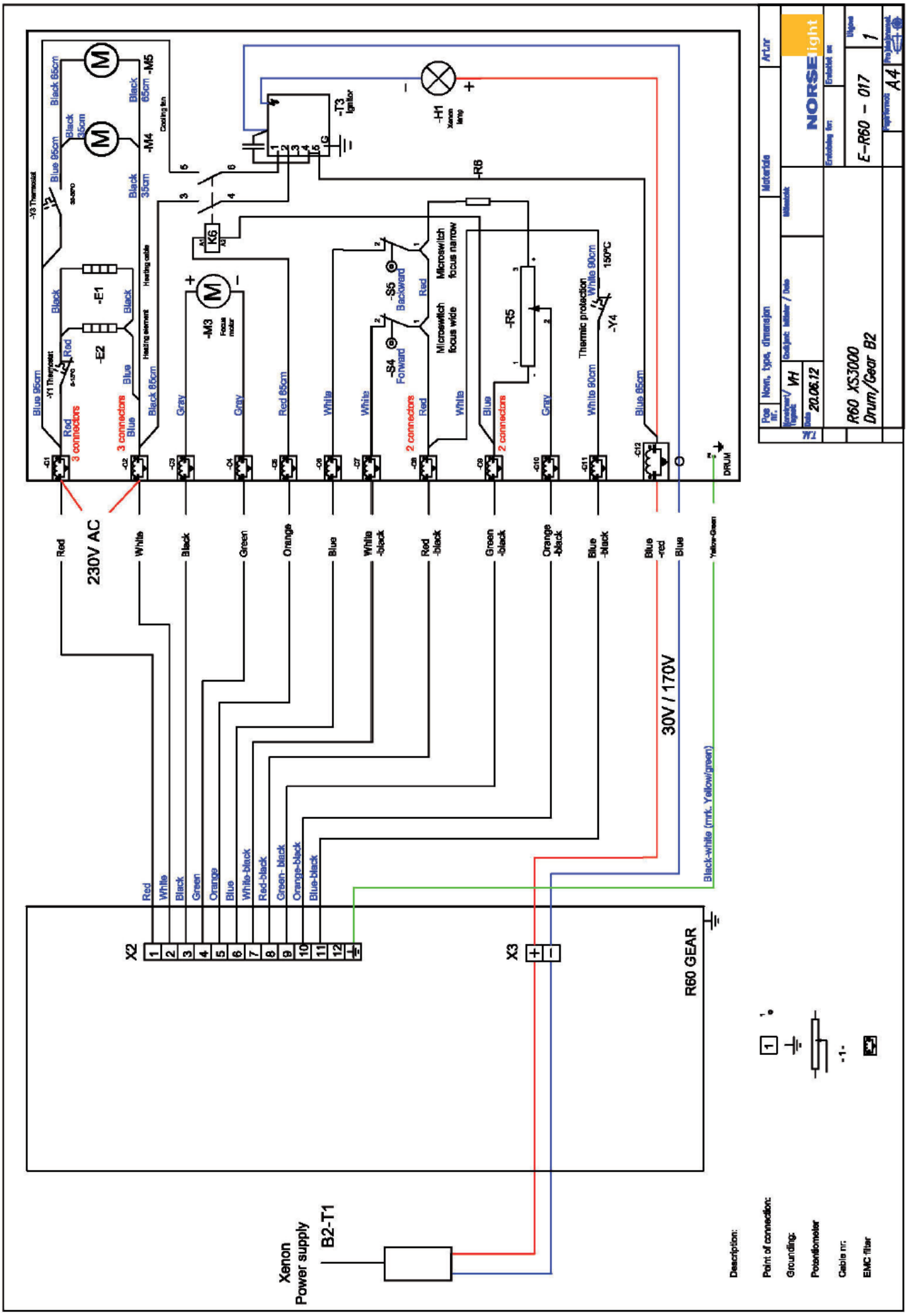
8.6 R60 Motorhouse B2 with PX-50 (1000W)



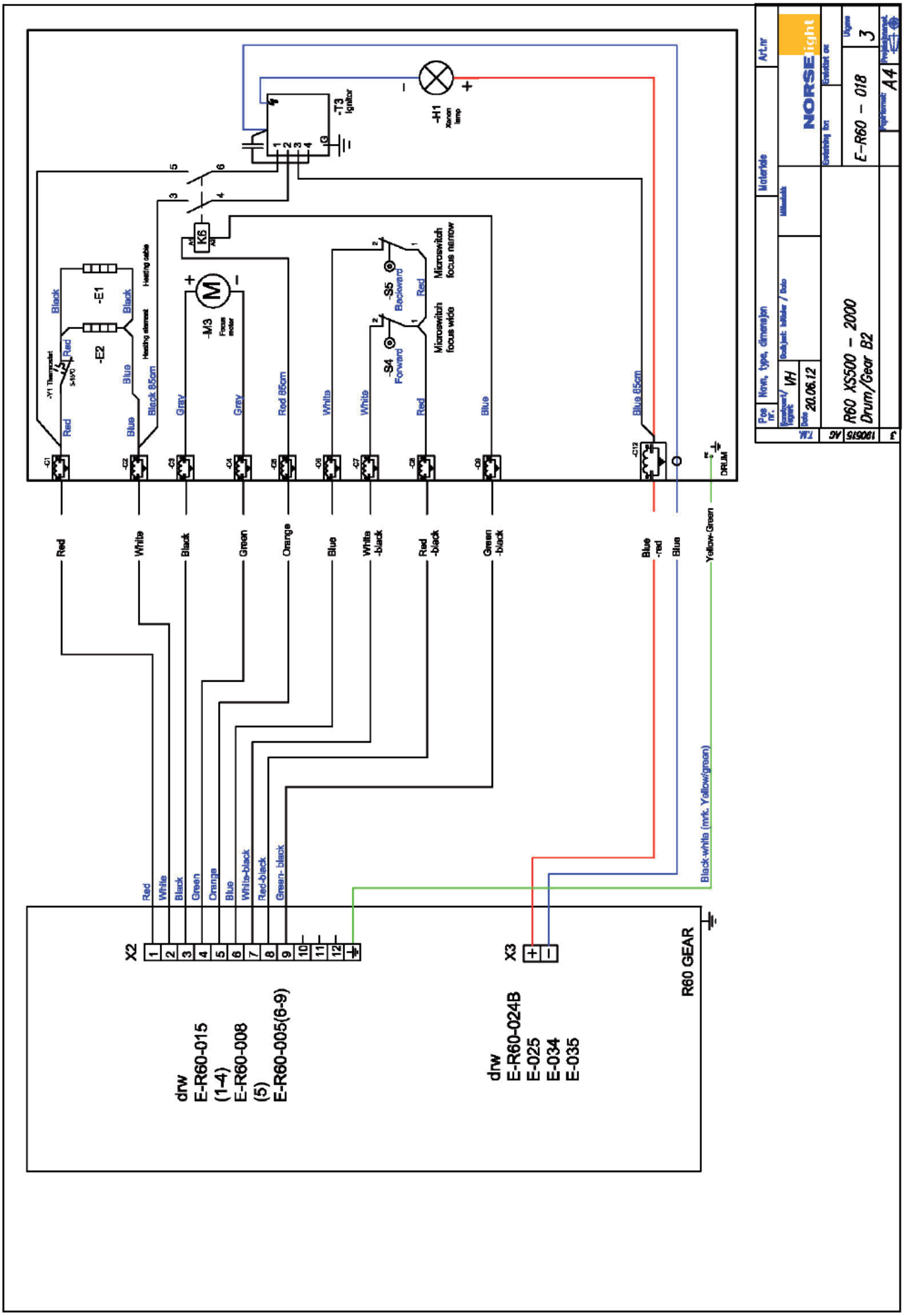
8.7 Wiring XS 500/1000 R60 with Power supply in Motorhouse



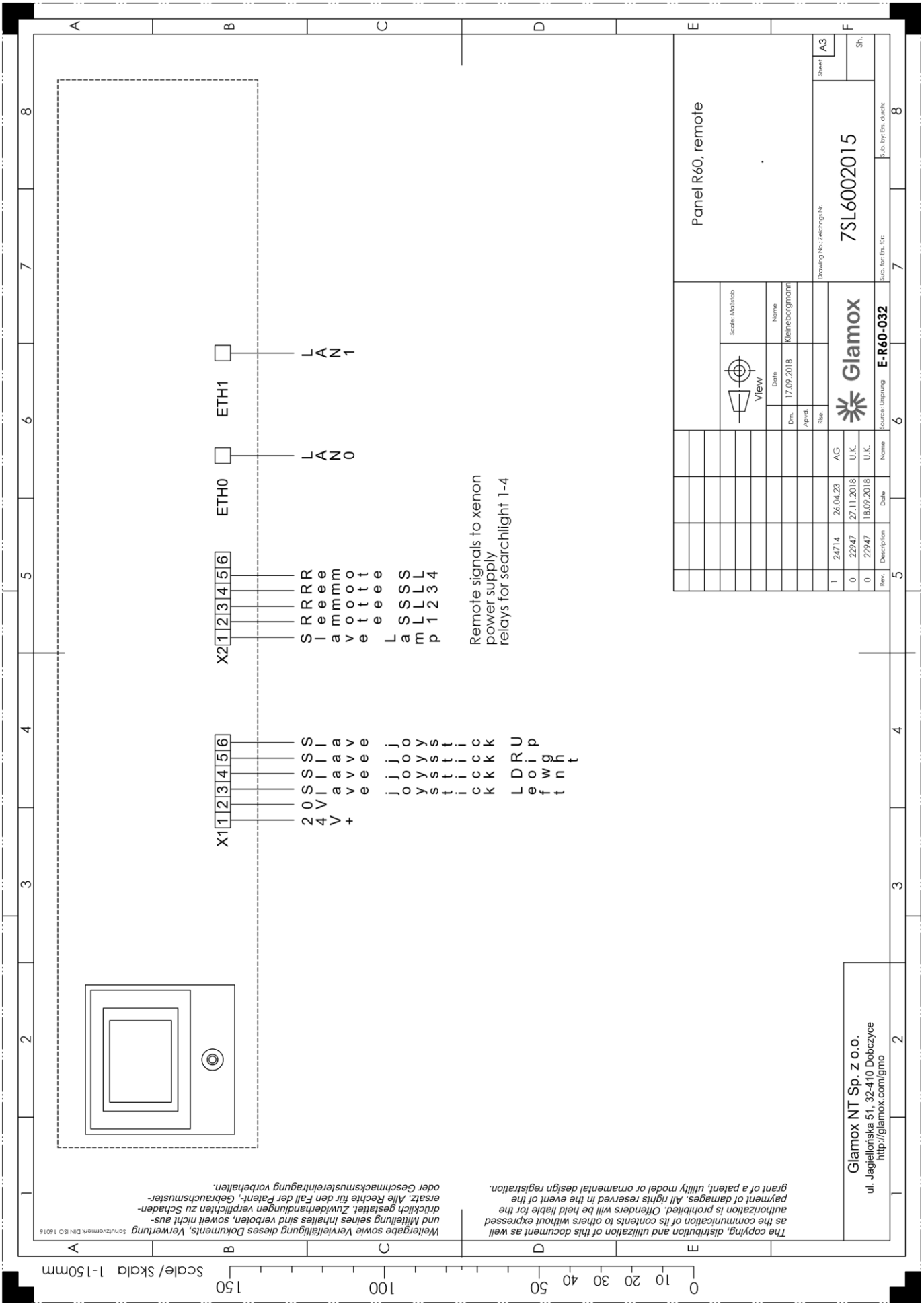
8.8 R60 XS3000 Drum / Gear B2



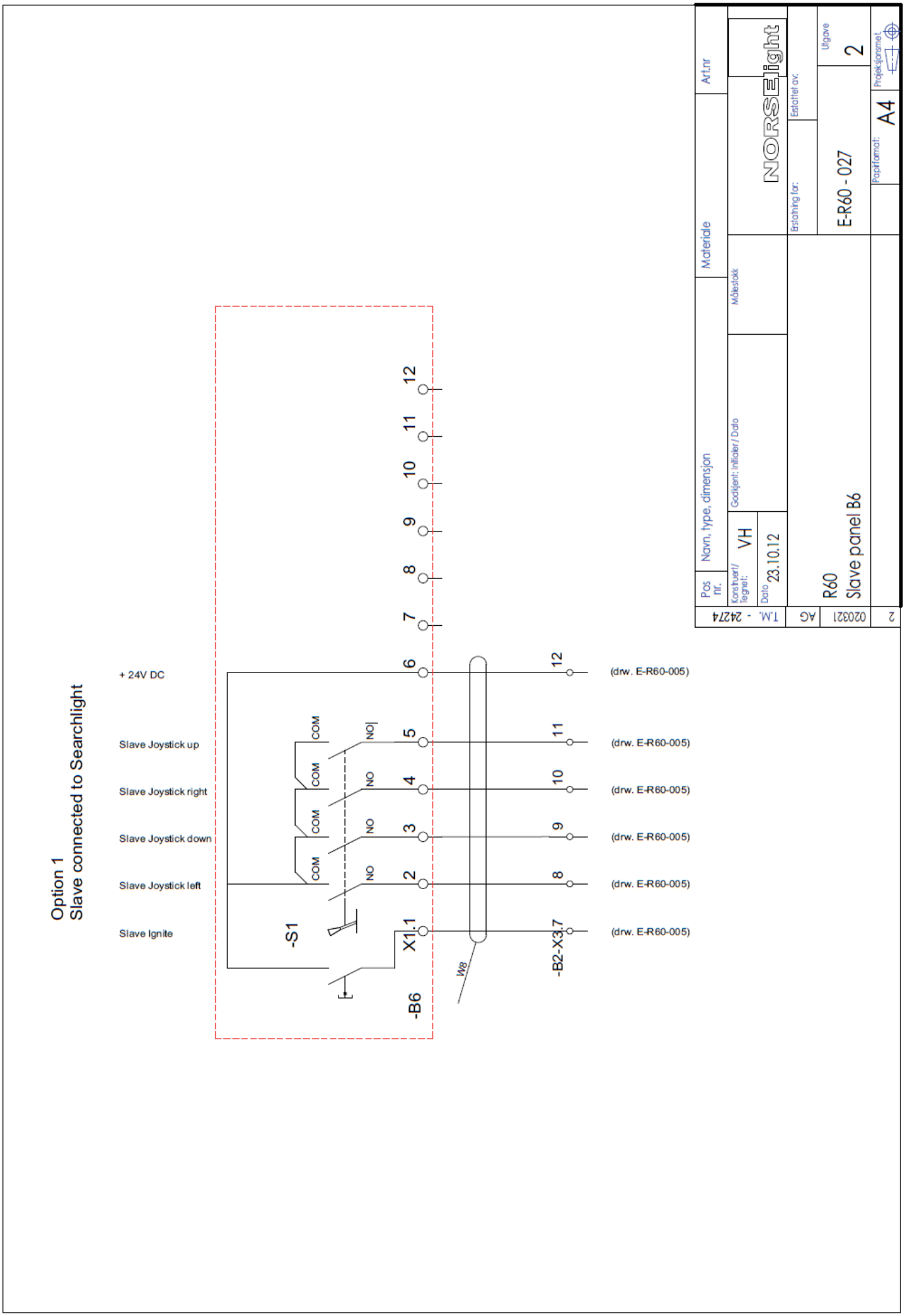
8.9 R60 XS500 - 2000 Drum / Gear B2



8.10 Main panel G2 B1



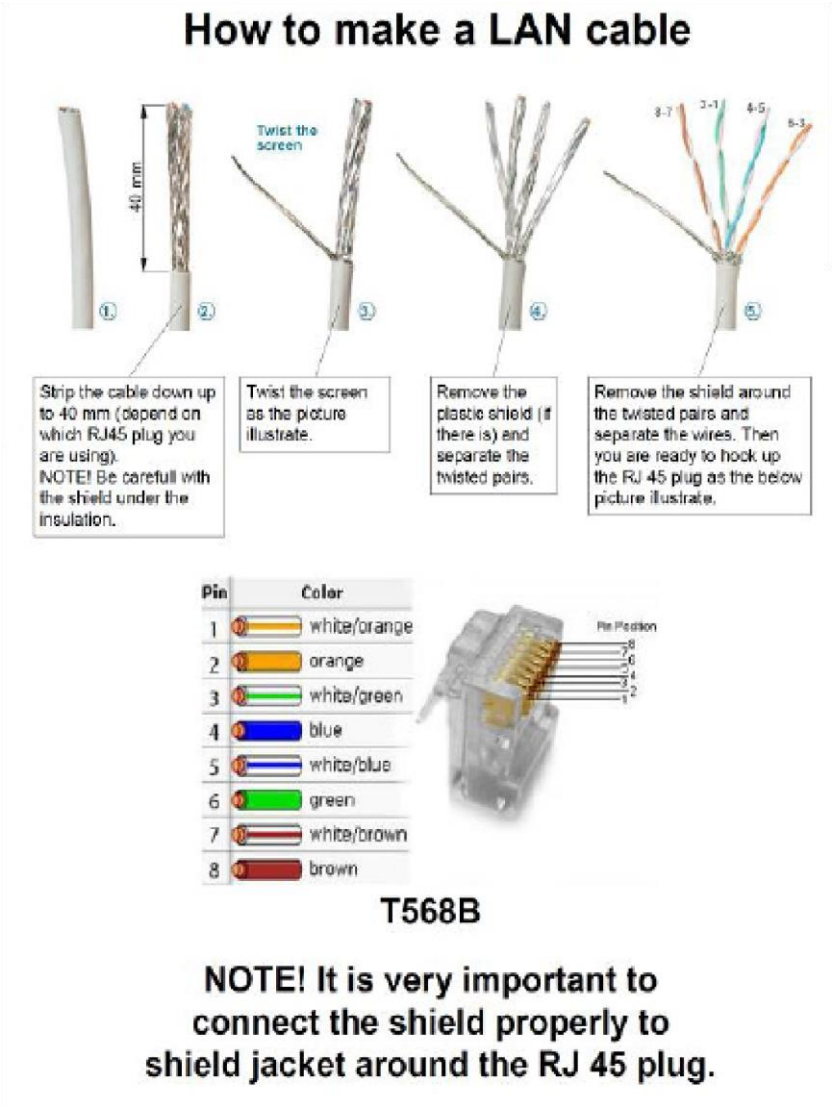
8.11 R60 Slave Panel B6



9.0 Network / IP addresses

IP-adresses

Searchlight 1:	192.168.1.11	Wireless remote control 1 :	192.168.1.61
Searchlight 2:	192.168.1.12	Wireless remote control 2 :	192.168.1.62
Searchlight 3:	192.168.1.13	Wireless remote control 3 :	192.168.1.63
Searchlight 4:	192.168.1.14	Wireless remote control 4 :	192.168.1.64
Searchlight 5:	192.168.1.15	Wireless remote control 5 :	192.168.1.65
Searchlight 6:	192.168.1.16	Wireless remote control 6 :	192.168.1.66
Searchlight 7:	192.168.1.17	Wireless remote control 7 :	192.168.1.67
Searchlight 8:	192.168.1.18	Wireless remote control 8 :	192.168.1.68
Searchlight 9:	192.168.1.19	Wireless remote control 9 :	192.168.1.69
Panel 1 :	192.168.1.31	PC-controller 1 :	192.168.1.81
Panel 2 :	192.168.1.32	PC-controller 2 :	192.168.1.82
Panel 3 :	192.168.1.33	PC-controller 3 :	192.168.1.83
Panel 4 :	192.168.1.34	PC-controller 4 :	192.168.1.84
Panel 5 :	192.168.1.35	PC-controller 5 :	192.168.1.85
Panel 6 :	192.168.1.36	PC-controller 6 :	192.168.1.86
Panel 7 :	192.168.1.37	PC-controller 7 :	192.168.1.87
Panel 8 :	192.168.1.38	PC-controller 8 :	192.168.1.88
Panel 9 :	192.168.1.39	PC-controller 9 :	192.168.1.89
Panel PLC 1 :	192.168.1.41		
Panel PLC 2 :	192.168.1.42		
Panel PLC 3 :	192.168.1.43		
Panel PLC 4 :	192.168.1.44		
Panel PLC 5 :	192.168.1.45		
Panel PLC 6 :	192.168.1.46		
Panel PLC 7 :	192.168.1.47		
Panel PLC 8 :	192.168.1.48		
Panel PLC 9 :	192.168.1.49		
Antenna 1 :	192.168.1.51		
Antenna 2 :	192.168.1.52		
Antenna 3 :	192.168.1.53		
Antenna 4 :	192.168.1.54		
Antenna 5 :	192.168.1.55		
Antenna 6 :	192.168.1.56		
Antenna 7 :	192.168.1.57		
Antenna 8 :	192.168.1.58		
Antenna 9 :	192.168.1.59		



LAN-cable specifications
4pair STP/FTP (min)cat5E

Manufactured by

Glamox NT Sp. z o.o.
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POLAND