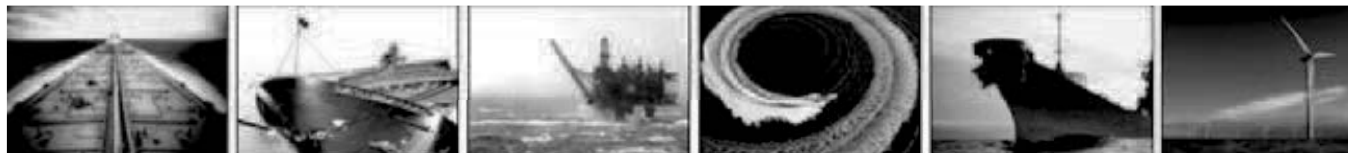




INSTALLATION & USER MANUAL

SEARCHLIGHTS XENON R60



R60

NORSElight



Technical Manual for Xenon searchlight

- ☐ XS 500 R60
- ☐ XS 1000 R60
- ☐ XS 1600 R60
- ☐ XS 2000 R60
- ☐ XS 3000 R60

- ☐ 1 x 230 VAC 50/60 Hz
- ☐ 1 x 115 VAC 50/60 Hz

This manual refers to product:

Serial no.: _____

Controlled by: _____

Date: _____

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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 as the Norwegian.

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.

Therefore, if you have any technical or other questions, Norselight would be pleased to assist.

Our Technical Department can be contacted as follows:

Tel: +47 69 17 99 99

Fax: +47 69 17 99 89

E.mail: office@norselight.no

We would also like to use this opportunity to thank you for choosing Norselight as your supplier of marine searchlights.

Glamox ASA, BU Norselight is a registered trade name.

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Glamox ASA, BU Norselight operates a policy of continuous development.

On this basis we reserve the right to make changes and improvements to all of our products and documentation.

1. General description:

Searchlight

The R60 searchlights XS 500-1000-1600-2000 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 front-glass, 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.

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 deg. and vertical +/-30 deg.
- 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.



Slave Operation Panel .

It contains:

Joystick and a button for lamp On/Off

Designed for console or bulkhead mounting.



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 deg.
- Display for searchlight ID-number
- End position indication
- Battery charger



1.1 Options

Software:

Programmable dimming function of lamp.
Focus indicator
Open for 3-d party system integration.
Temperature alarm in drum.
Proportional joystick
Panel built in box or cabinet
Alarm zones for landbased applications
Tailormade solutions for your need
(Contact Norselight)

Hardware:

Other RAL colours
Upside down mounting
Pedestal standard and custom sizes
Additional cooling
Morse shutter
Special cable glands on request
Spread filter
UV-filter
IR-filter
Colour-filter
Fibre cable for Ethernet Bus

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	360 °
Vertical movement	+/- 30 °
Colour	RAL 9016

Forks stainless steel

Article no:	Model	Watt	Voltage	Main body material
600201638	XS 500 R60 230V	500	230VAC	Seawater resistant aluminium
600201338	XS 1000 R60 230V	1000	230VAC	Seawater resistant aluminium
600201438	XS 1600 R60 230V	1600	230VAC	Seawater resistant aluminium
600201538	XS 2000 R60 230V	2000	230VAC	Seawater resistant aluminium
600209538	XS 3000 R60 230V NR	3000	230VAC	Seawater resistant aluminium

Specifications Main Panel:

IP classification IP65 (front)

Ambient temperature (°C)	0-50 °
Input Voltage	24VDC (20,4 to 27,6 VDC)
Connection 24V	2x max 2,5 mm ²
Connection Bus	LAN RJ45
Dimensions	230x230x54
Weight	1,6 kg
Power consumption	15W



Specifications Slave Panel:

IP classification IP65 (front)
 Connection signals 6x max 4mm²
 Dimensions 96x96x44mm
 Weight 40g



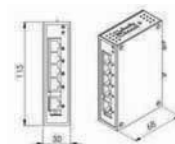
Specifications Wireless Panel:

IP classification IP67



Specifications LAN switch:

IP classification IP66
 Input Voltage 9,6-60VDC
 18-30 VAC
 (redundant dual inputs)



2.0 Technical data and dimensions

2.1 Specifications Power supply:

EX-30 500W

IP classification	IP20
Temperature ambient	0-40 °C
Input Voltage	90-265VAC 1 phase 50/60Hz
Cable input max Ø	8,5mm
Cable output (DC) max Ø	8,5mm
Cable remote signal max Ø	8,5mm
Weight	8 kg

PX-50 1000W

IP classification	IP20
Temperature ambient	0-40 °C
Input Voltage	208-230VAC 1 phase 50/60Hz
Cable input max Ø	24mm
Cable output (DC) max Ø	24mm
Cable remote signal max Ø	24mm
Weight	63 kg

N3-80E 1000-2000W

IP classification	IP20
Temperature ambient	0-40 °C
Input Voltage	208-242VAC 1 phase 50/60Hz
Cable input max Ø	27mm
Cable output (DC) max Ø	27mm
Cable remote signal max Ø	27mm
Weight	90 kg

EX-100 1000-3000W

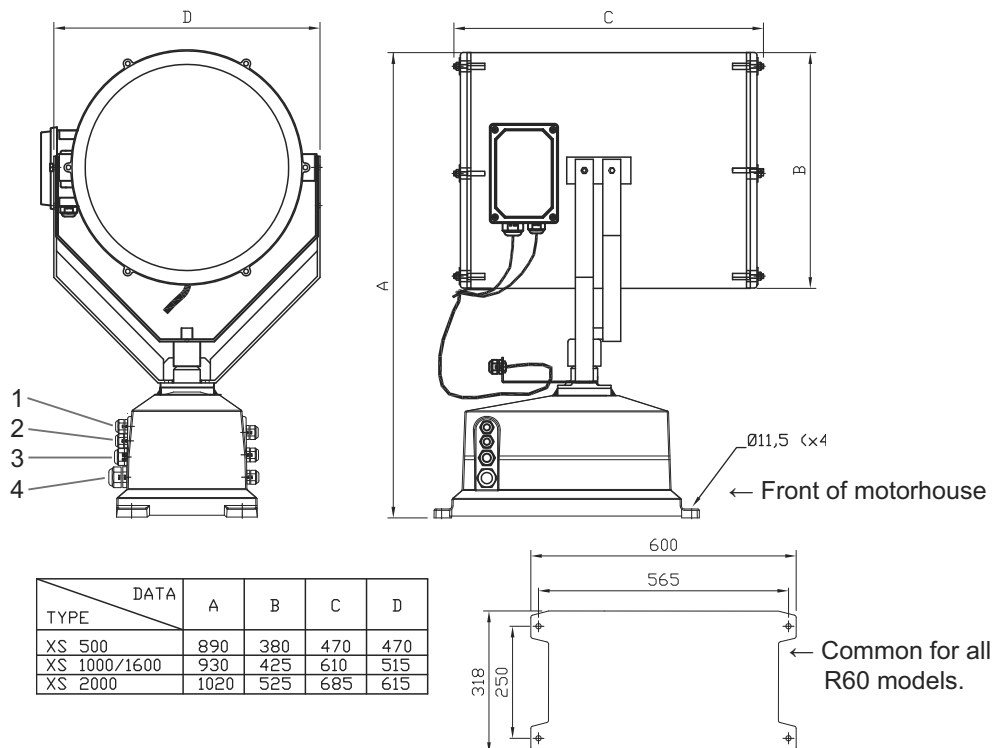
IP classification	IP20
Temperature ambient	-5-45 °C
Input Voltage	185-265VAC 1 phase 50/60Hz
Cable input max Ø	8/20 mm
Cable output (DC) max Ø	2x 20mm
Cable remote signal max Ø	20mm
Weight	18 kg

N3-150E 3000W

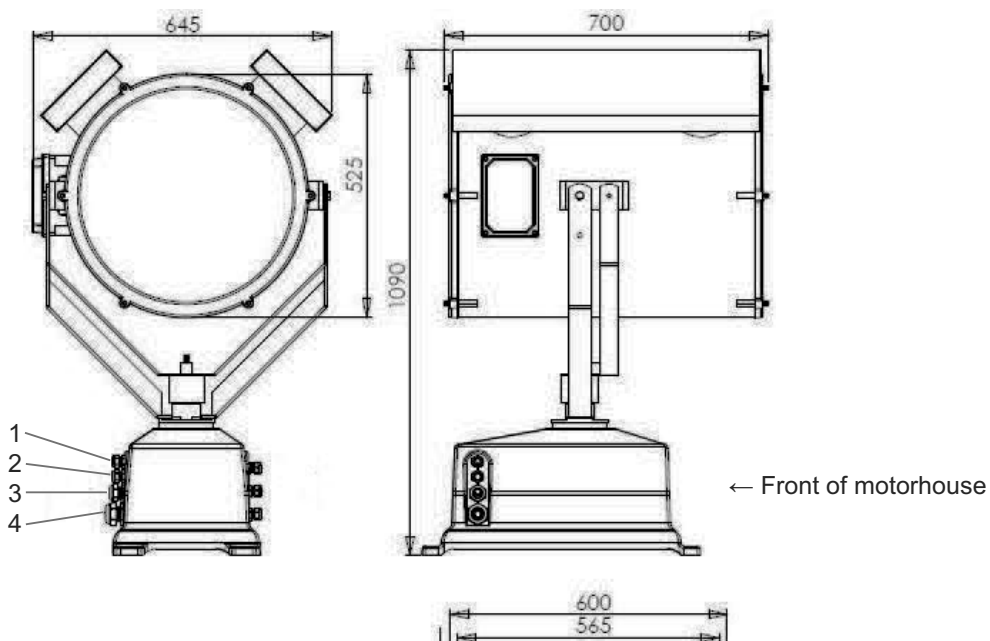
IP classification	IP20
Temperature ambient	0-40 °C
Input Voltage	208-242VAC 1 phase 50/60Hz
Cable input max Ø	27mm
Cable output (DC) max Ø	27mm
Cable remote signal max Ø	27mm
Weight	130 kg

2.2 Overall searchlight dimensions & electrical cable dimensions

XS 500-2000:



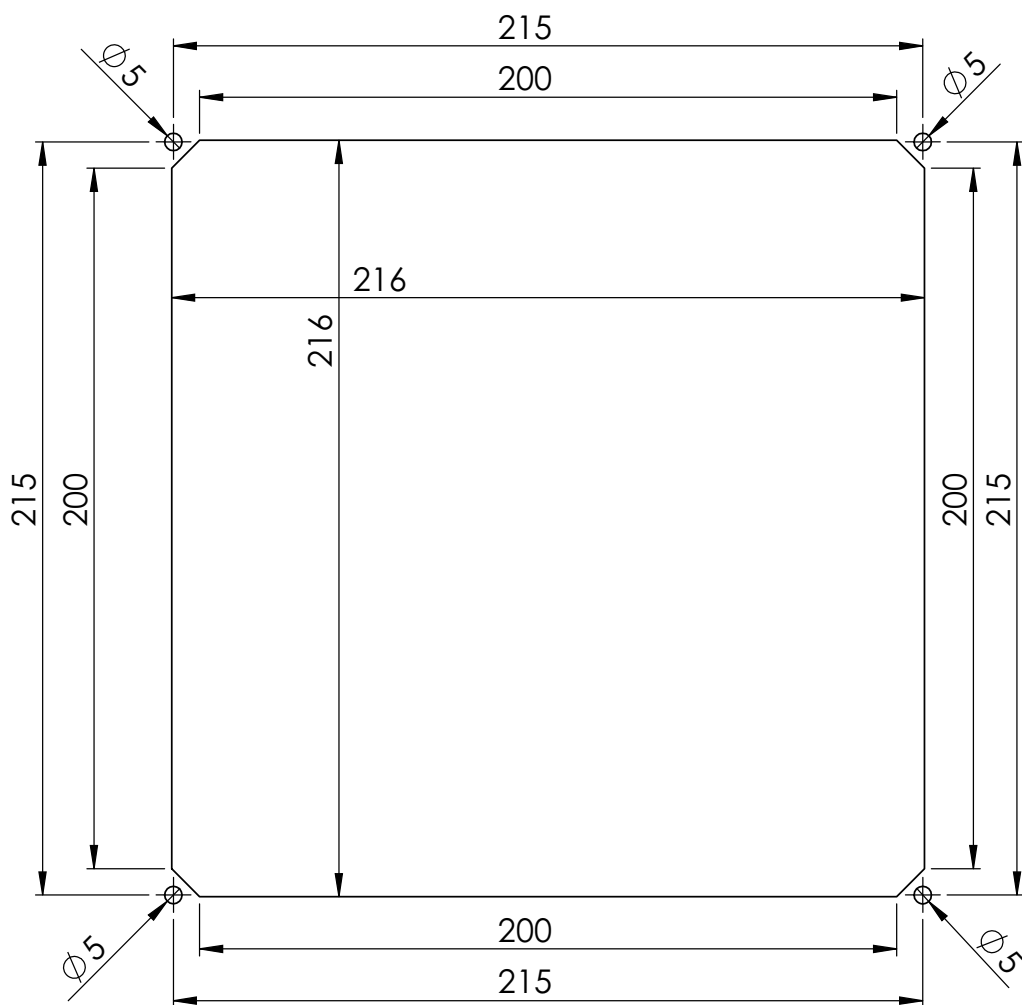
XS 3000:



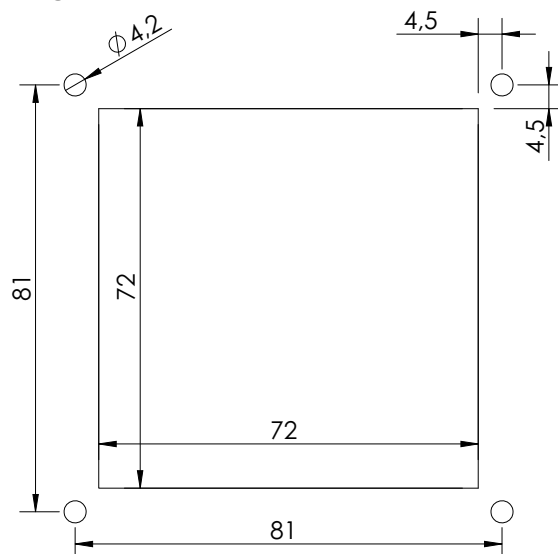
Entry#/ Description	1	2	3	4
Cable Gland	M20	M20	M25	M32
Cable Ø min/max	6-13mm	6-13mm	9-17mm	15-25mm
Cable entry (* Options are available)	Remote signal to rectifier *	LAN	24V DC / 115V AC / 230V AC *	DC from Xenon rectifier

2.3 Cut/out main/slave panel

Hole dimensions for installing joystick main panel:



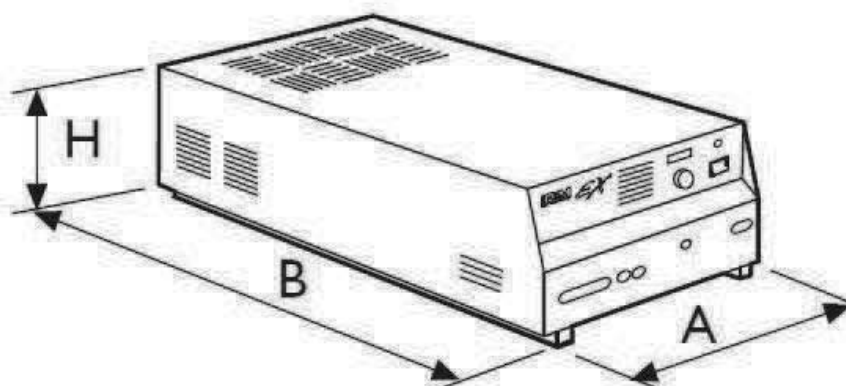
Hole dimensions for installing slave panel:



2.4 Overall dimensions Powersupply

EX-30 G/1 For 500W

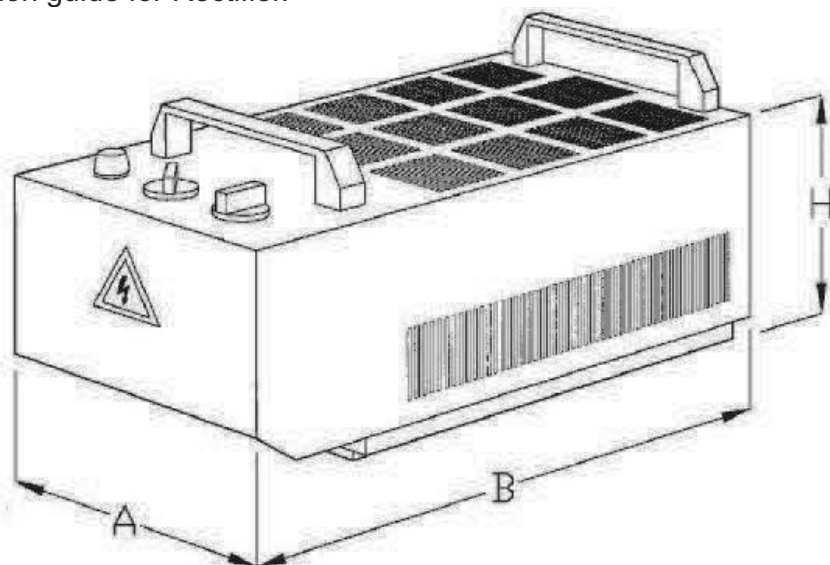
EX30-G/1, single phase 90-265V 50/60Hz electronic power supply is specifically suitable for feeding 250 to 500W short arc Xenon lamps. Weight 8kg. Further instructions in Installation guide for Rectifier.



A:265mm
B:335mm
H:135mm

PX-50 N For 1000W

These extremely compact rectifiers for single-phase inputs have been designed to feed 1000W Xenon lamps, meeting the requirements of lamps manufacturers to ensure correct operation and long life of the lamp. The units are fitted with a transformer with taps for output lamp power regulation and a special circuit to avoid the lamp turn off during the tap switching. The cabinet, equipped with carrying handles, permits an easy inspection of the inside components. Weight 63 kg. Further instructions in Installation guide for Rectifier.



A:245mm
B:595mm
H:238mm

2.4 Overall dimensions Powersupply

For 1000-3000W

EX-100 D/1

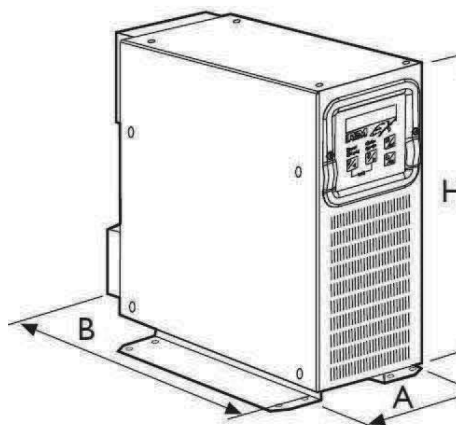
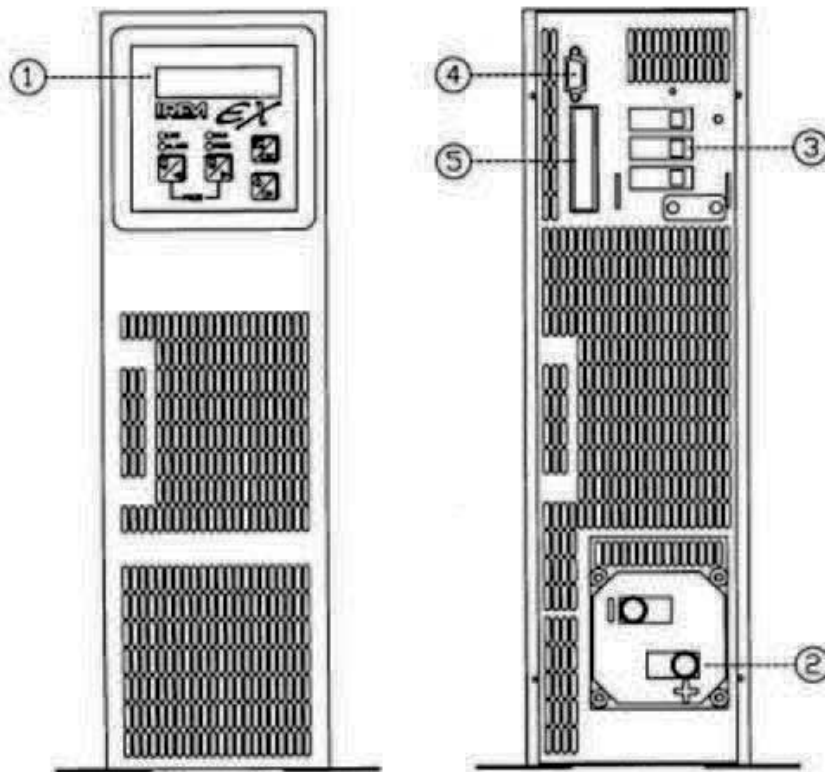
This electronic power supply for single phase or double phase 230Vac 50/60Hz input has been designed to feed from 1000W to 3000W short arc Xenon lamps, meeting all the requirements of lamp manufacturers to ensure correct operation, long life to the lamp, and high reliability.

Weight 18 kg. Further instructions in Installation guide for Rectifier.



Control devices

1. Synoptic panel
2. Output terminal block
3. Input terminal block
4. RS232 connector
5. Auxiliary connector



A:265mm
B:436mm
H:440mm

2.4 Overall dimensions Powersupply

For 1600-2000W /3000W

N3-80E / N3-150E

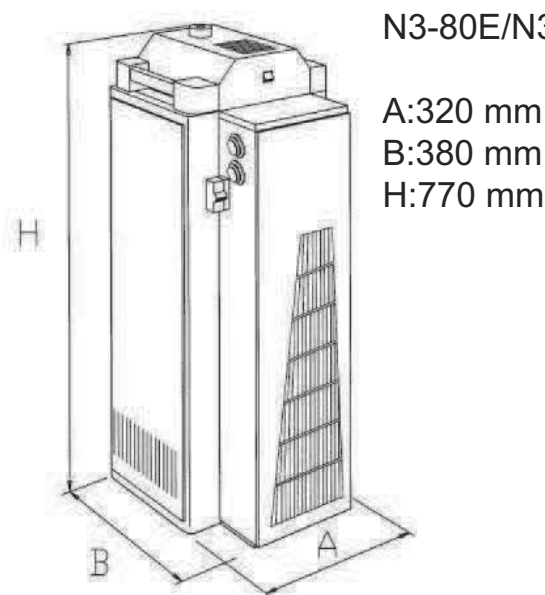
These high quality rectifier power supplies have been expressly designed to ensure the correct operation and long life of short arc Xenon lamps.

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 90 kg and N3 - 150E 130 kg.

Further instructions in Installation guide for Rectifier.

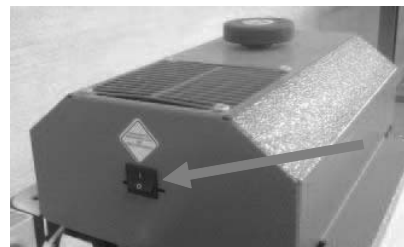


N3-80E/N3-150E

A:320 mm

B:380 mm

H:770 mm



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!



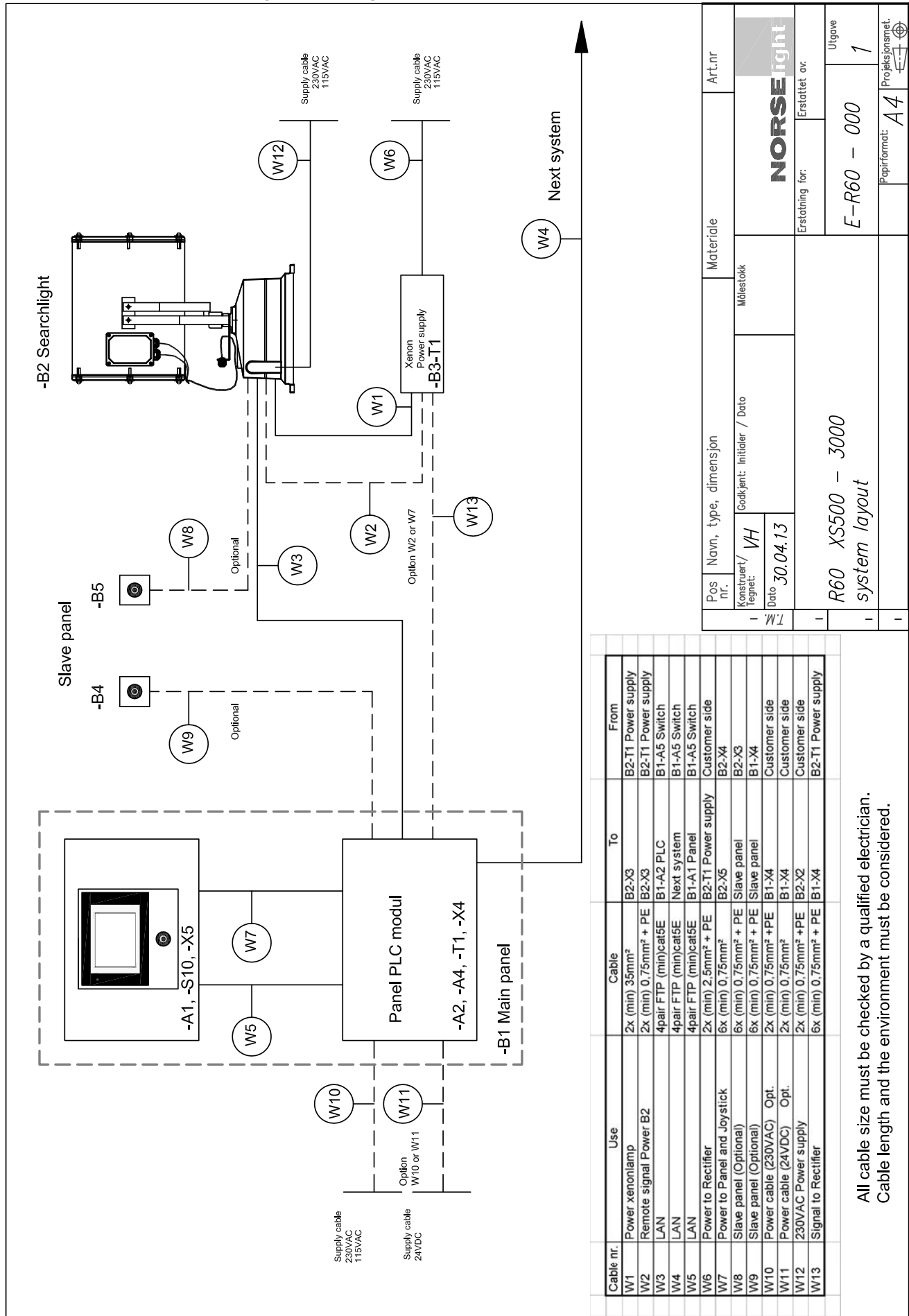
The main operation panel requires 24V DC connected in series with a 3A slow fuse to the positive (+) conductor.

- 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 must be 65A DC for 1600W, 70A DC for 2000W and 100A DC for 3000W. * EX100 D/1 is pre. programmed.

To be able to turn off the searchlight from the main panel, the switch on top of the power supply N3-80 or N3-150 must be in position "0" (Zero). See picture 1.

3.1 R60 XS500 - 3000 System Layout

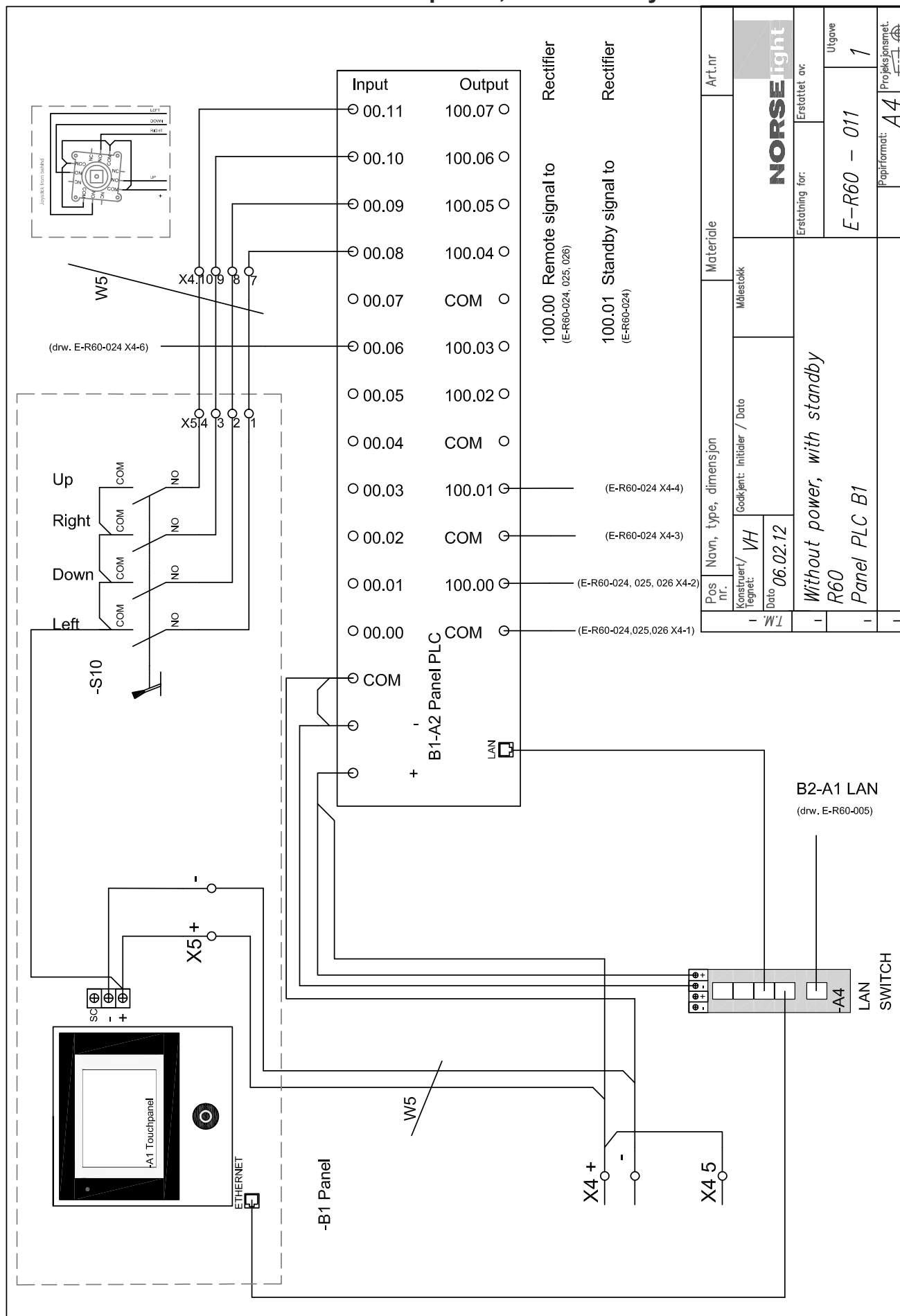


Cable nr.	Use	Cable	To	From
W1	Power xenonlamp	2x (min) 35mm ²	B2-X3	B2-T1 Power supply
W2	Remote signal Power B2	2x (min) 0.75mm ² + PE	B2-X3	B2-T1 Power supply
W3	LAN	4pair FTP (min)cat5E	B1-A2 PLC	B1-A5 Switch
W4	LAN	4pair FTP (min)cat5E	Next system	B1-A5 Switch
W5	LAN	4pair FTP (min)cat5E	B1-A1 Panel	B1-A5 Switch
W6	Power to Rectifier	2x (min) 2.5mm ² + PE	B2-T1 Power supply	Customer side
W7	Power to Panel and Joystick	6x (min) 0.75mm ²	B2-X5	B2-X4
W8	Slave panel (Optional)	6x (min) 0.75mm ² + PE	Slave panel	B2-X3
W9	Slave panel (Optional)	6x (min) 0.75mm ² + PE	Slave panel	B1-X4
W10	Power cable (230VAC) Opt.	2x (min) 0.75mm ² + PE	B1-X4	Customer side
W11	Power cable (24VDC) Opt.	2x (min) 0.75mm ²	B1-X4	Customer side
W12	230VAC Power supply	2x (min) 0.75mm ² + PE	B2-X2	Customer side
W13	Signal to Rectifier	6x (min) 0.75mm ² + PE	B1-X4	B2-T1 Power supply

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

Pos nr.	Navn, type, dimension	Materiale	Art.nr
Konstruert/ Tegnet: <i>VH</i>	Godkjent: Initiator / Dato	Målestokk	
Dato: <i>30.04.13</i>			
Erstatning for: NORSElight			
Erstattet av:			
Utgave			
<i>E-R60 - 000</i>			
Projeksjonsmet.			
Papirformat: <i>A4</i>			

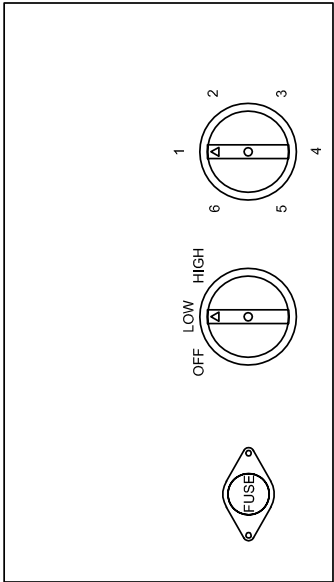
3.2 Panel R60: Panel PLC B1 without power, with standby



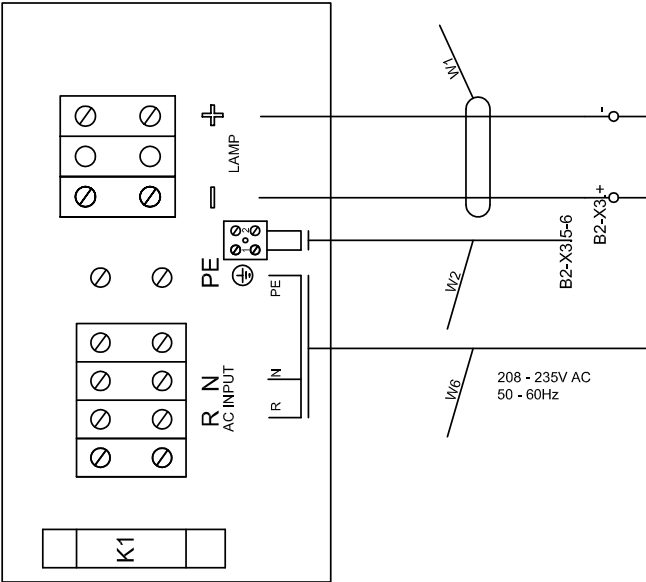


3.3 Power supply PX-50 N for 1000W

P-X50



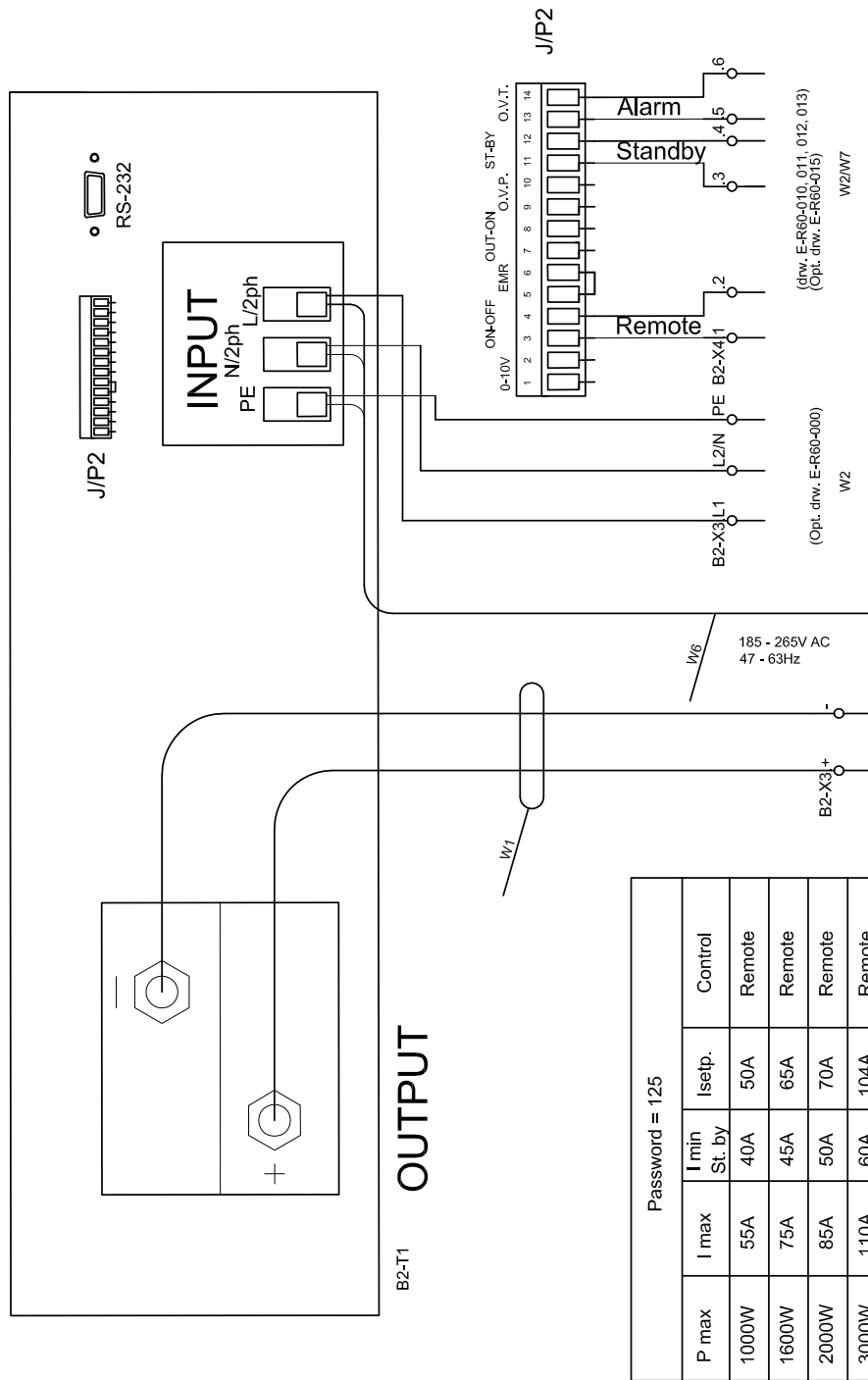
Set the right switch to 3.
Set the left switch to LOW, (normal position)
and turn the light on.
Then measure the current with an ammeter.
Adjust right switch until you reach 50A



P max	I max	I Init	Control
1000W	50A		Direct

Pos nr	Norm, type, dimension	Materiale	Art.nr
Konstruktør / VH	Godkjent: Initiator / dato	Målestokk	
Dato 25.06.13			
R60			
Power P-X50			
E-R60 - 034			
Utgave 1			
Prosjekt: A4			

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

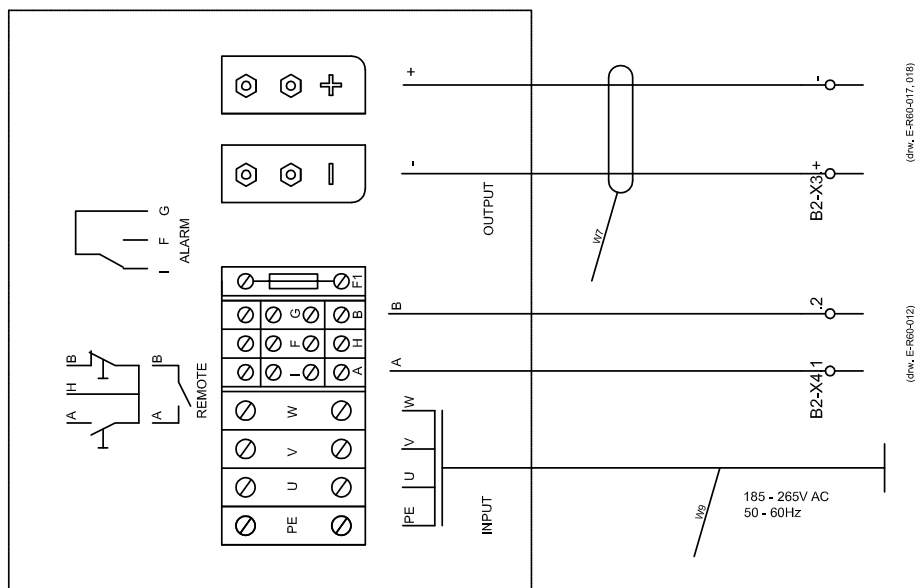


Password = 125				
P max	I max	I min	I setp.	Control
1000W	55A	40A	50A	Remote
1600W	75A	45A	65A	Remote
2000W	85A	50A	70A	Remote
3000W	110A	60A	104A	Remote

Pos	Novn, type, dimension	Materiale	Art.Nr
1	Conductor / Wire	W1	
2	Conductor / Wire	W2	
3	Conductor / Wire	W6	
4	Conductor / Wire	W7	
5	Conductor / Wire	W8	
6	Conductor / Wire	W9	
7	Conductor / Wire	W10	
8	Conductor / Wire	W11	
9	Conductor / Wire	W12	
10	Conductor / Wire	W13	
11	Conductor / Wire	W14	
12	Conductor / Wire	W15	
13	Conductor / Wire	W16	
14	Conductor / Wire	W17	
15	Conductor / Wire	W18	
16	Conductor / Wire	W19	
17	Conductor / Wire	W20	
18	Conductor / Wire	W21	
19	Conductor / Wire	W22	
20	Conductor / Wire	W23	
21	Conductor / Wire	W24	
22	Conductor / Wire	W25	
23	Conductor / Wire	W26	
24	Conductor / Wire	W27	
25	Conductor / Wire	W28	
26	Conductor / Wire	W29	
27	Conductor / Wire	W30	
28	Conductor / Wire	W31	
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33	Conductor / Wire	W36	
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41	Conductor / Wire	W44	
42	Conductor / Wire	W45	
43	Conductor / Wire	W46	
44	Conductor / Wire	W47	
45	Conductor / Wire	W48	
46	Conductor / Wire	W49	
47	Conductor / Wire	W50	
48	Conductor / Wire	W51	
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63	Conductor / Wire	W66	
64	Conductor / Wire	W67	
65	Conductor / Wire	W68	
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77	Conductor / Wire	W80	
78	Conductor / Wire	W81	
79	Conductor / Wire	W82	
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83	Conductor / Wire	W86	
84	Conductor / Wire	W87	
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91	Conductor / Wire	W94	
92	Conductor / Wire	W95	
93	Conductor / Wire	W96	
94	Conductor / Wire	W97	
95	Conductor / Wire	W98	
96	Conductor / Wire	W99	
97	Conductor / Wire	W100	
98	Conductor / Wire	W101	
99	Conductor / Wire	W102	
100	Conductor / Wire	W103	

3.3 Power supply N3-80-150E for 1600- 2000W / 3000W

N3 80/150 E



P max	I max	I _{St, by} ^{min}	I Init	Control
1000W	55A	40A	50A	Remote
1600W	75A	45A	65A	Remote
2000W	85A	50A	70A	Remote
3000W	110A	60A	104A	Remote

Pos nr.	Navn, type, dimension		Materiale		Art.nr
Konstruktør/ Tegner	VH	God-jent: Initialet / Dato		<div style="background-color: #cccccc; padding: 5px; text-align: center;">NORSEIGHT</div>	
Dato	20.06.12				
R60 Power N3 80 – 150 E			Erstatning for:		Udgave
					E-R60 – 025 1
			Regiformat:		Projektforsmet.
					A4

3.4 Installation, software settings

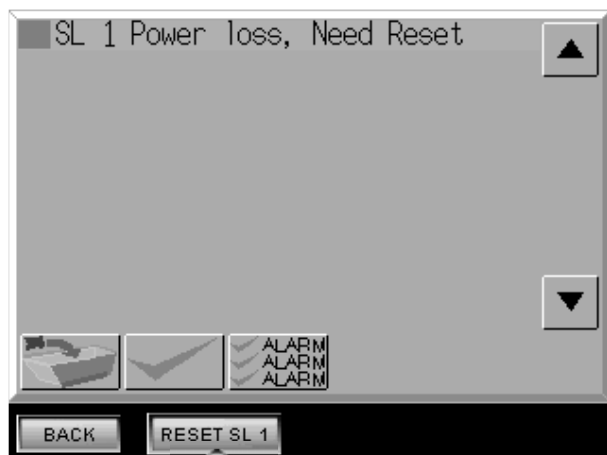
First start-up and after power loss

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

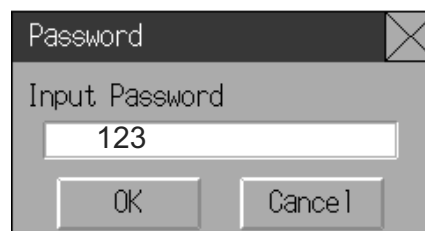
Be sure the searchlight can move 360 ° horizontal and and +/-30 ° vertical



- 2.



- 4.



- 5.

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.

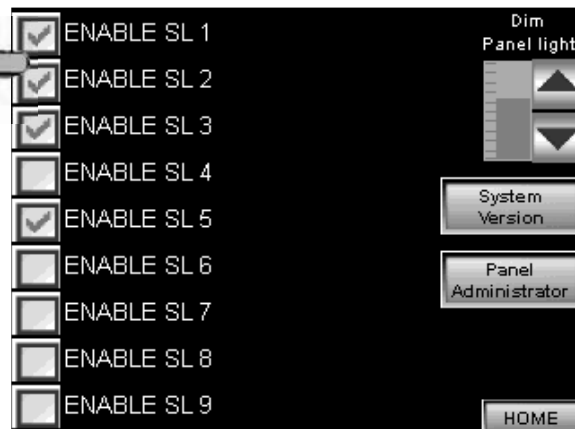
The searchlight will now run all motors to calibrate its position.

Do the same procedure for all searchlights in the system

The reset do also have to be done after power loss



- 3.



6. Continue with hardware settings on page 24

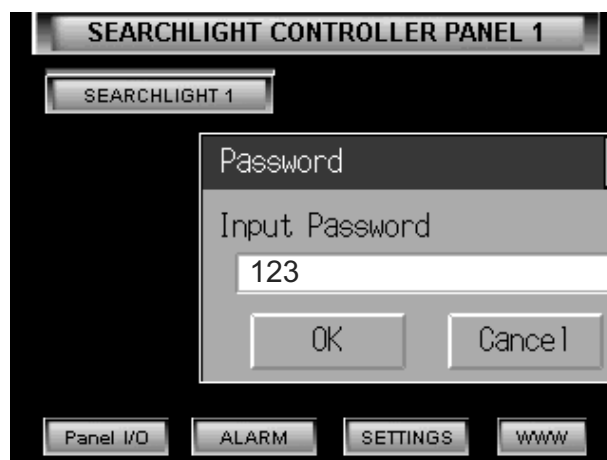
3.4 Hardware settings

1.

Start in Home menu

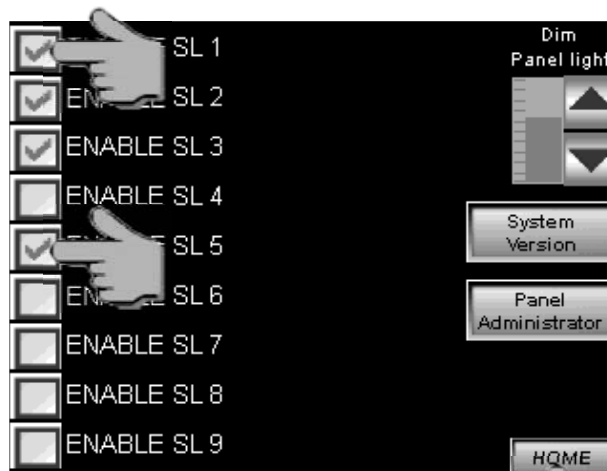


2.



3.

Select all wanted searchlights in the system



After selection



4.

Select each searchlight in the home menu

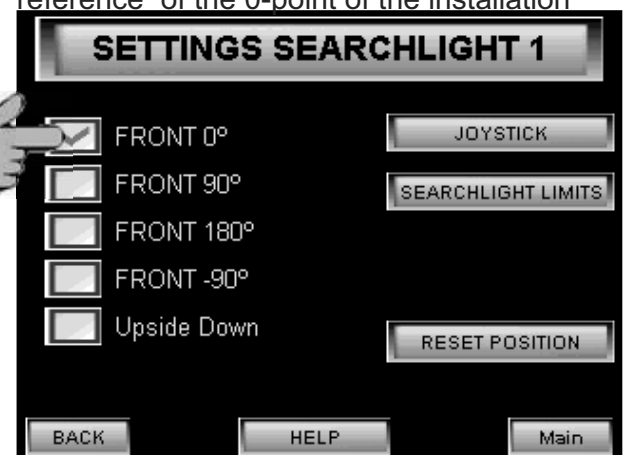


5.



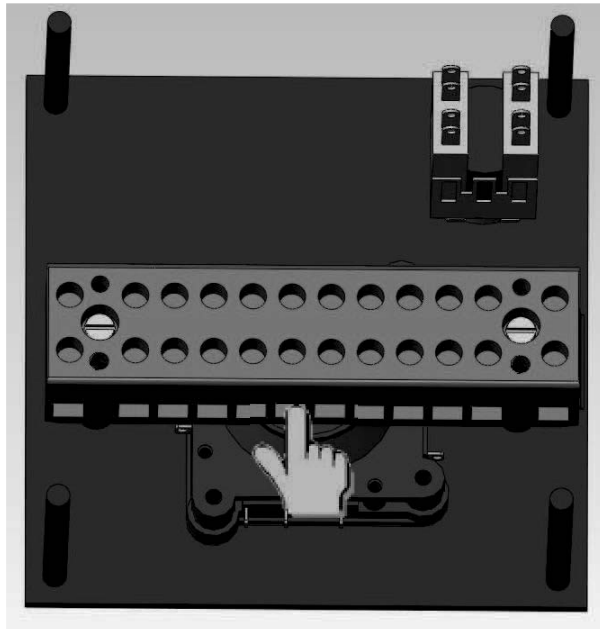
6.

Select how the searchlight is installed with reference of the 0-point of the installation



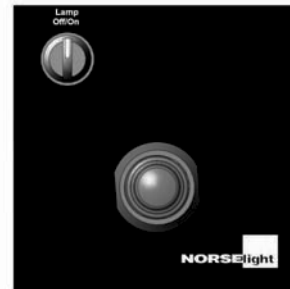
Example. The front of the motorhouse is in the same direction as the bow of a ship.

3.4 Slave panel



Connect the wires according to drawing E-R60-027

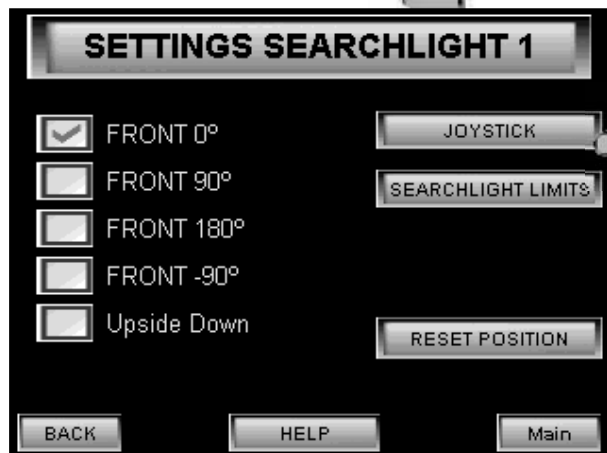
It is possible to connect unlimited slave panels.



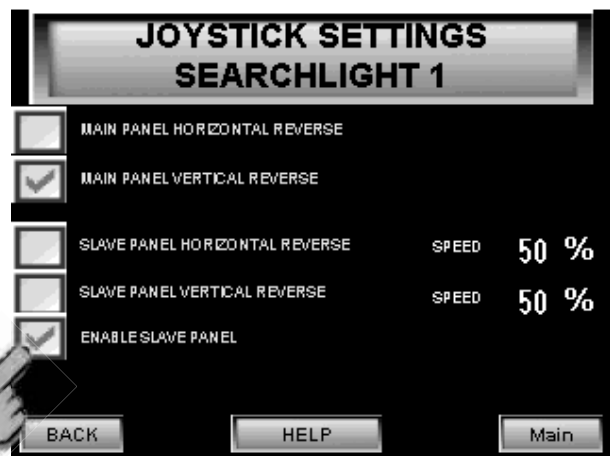
1.



2.



3.



3.Settings for the slave panel can be selected:

Reverse direction for both horizontal and vertical direction

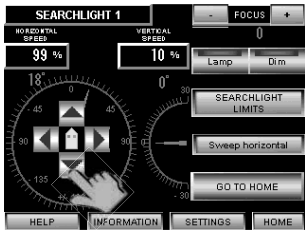
Speed for horizontal and vertical movement

Enable panel on/off

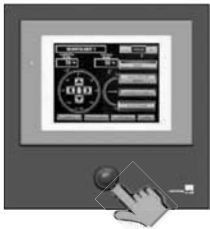
3.5 Settings /Joystick

The searchlight can be operated from 4 different types joysticks.

- 1. Software joystick in the touch-screen main menu.
Settings for the joystick described in pos. 5



- 2. Hardware joystick on the main panel.
The joystick controls the selected searchlight in the main menu
Settings for the joystick described in pos. 5



- 3. Hardware joystick on the slave panel.
Settings for the joystick described in pos. 6



- 4. Analog proportional joystick. (Optional)
Function described in separate manual.

Settings for joystick is found in Settings/Hardware Installation for each searchlight

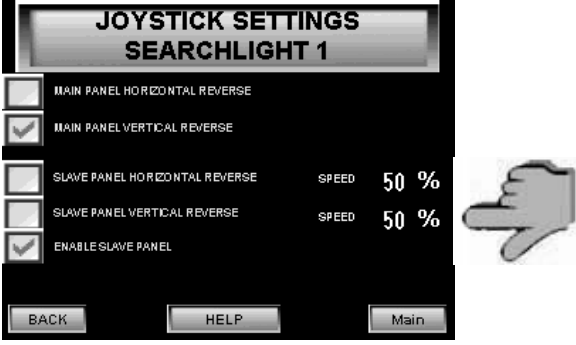


5. Main panel



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

6. Slave panel



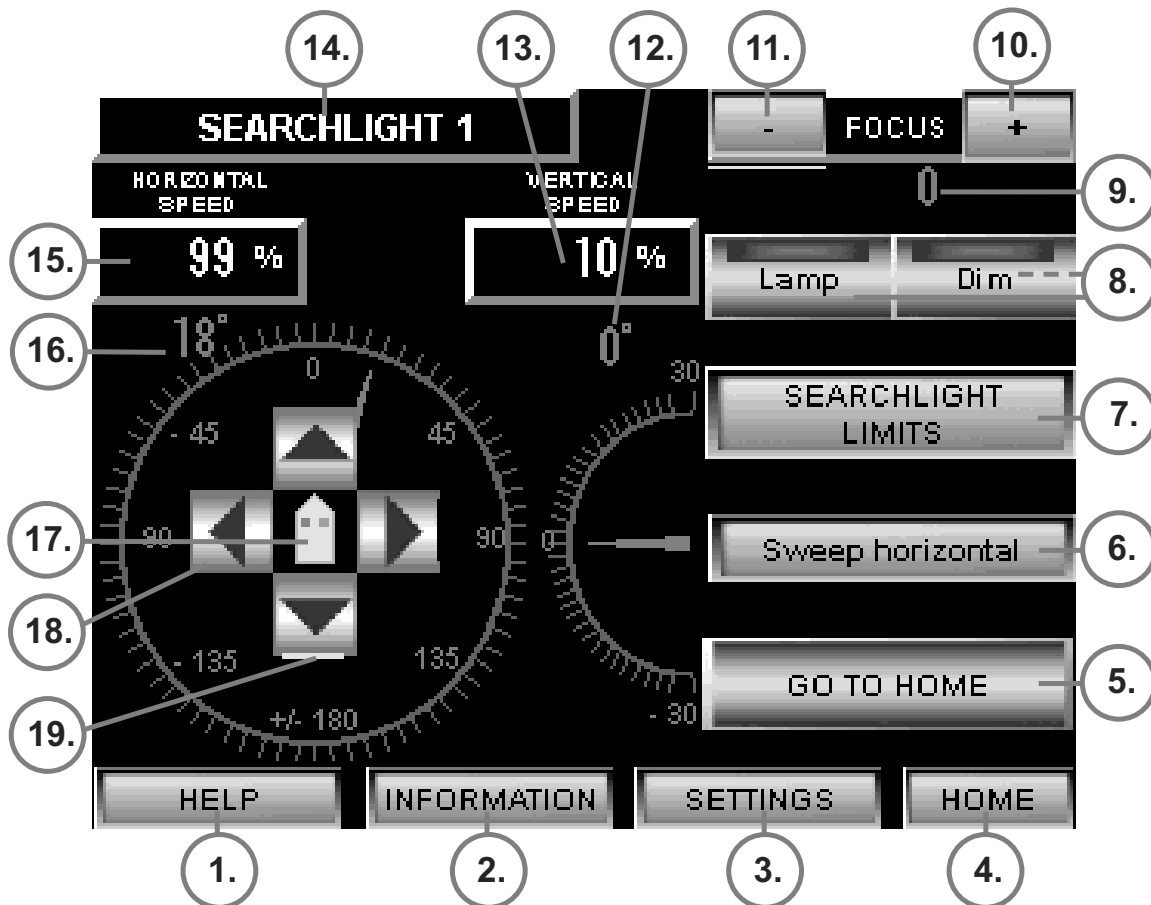
The movement of the searchlight from the joystick can be reversed. Settings affect all slaves connected to the searchlight. Default speed can be set for Horizontal and Vertical speed.

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



4 Software userguide

Menu for controlling all basic searchlight functions and position feedback.



1. Help menu page 27
2. Information about searchlight signals,
3. Settings for the searchlight
4. Home menu page 25
5. Move the SL to Home1 position settings, page 26
6. Sweep the SL, settings, page 26
7. Limits for sweep, page 26
8. LampOn/Off (Option:DIM-function)
9. Focus position indicator 0-100 (Option)
- 10,11. Focus In/Out
12. Indicator for vertical angle, settings on page 22
13. Vertical speed, see pop-up
14. Chosen searchlight
15. Horizontal speed, see pop-up
16. Horizontal position indicator, settings on page 21
17. Symbol for ship as reference
18. Joystick, settings on page 23
19. Indicator for mechanical stop, settings on page 21

4.1 Home menu



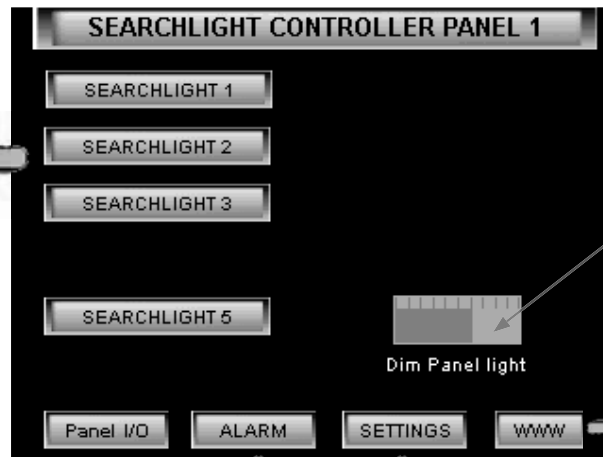
Press the Home button for Home menu



The panel can be dimmed in 32 levels in the pop-up menu

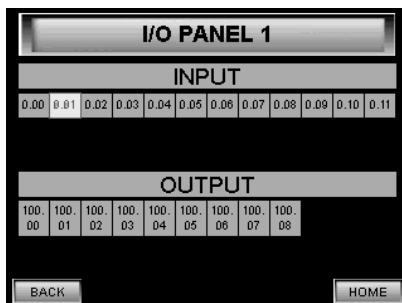


Searchlight selector. Up to 9 searchlights can be controlled



See page 29 See page 20

Input/Output information on panel PLC. Yellow colour indicates logic On.



08=Joystick Left
09=Joystick Down
10=Joystick Right
11=Joystick Up

4.2 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

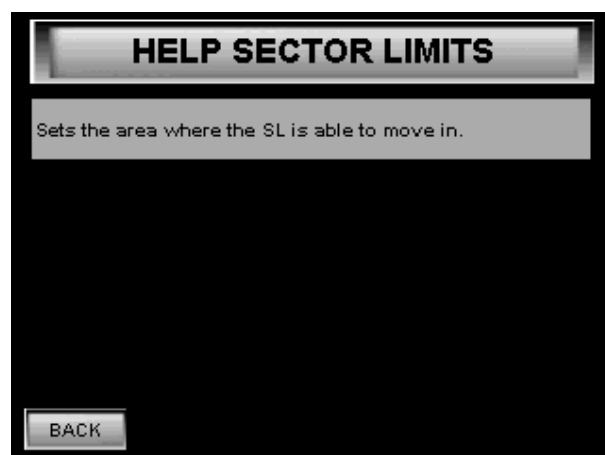
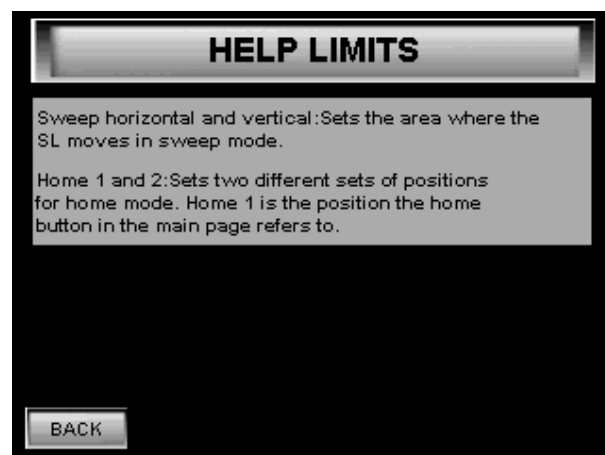
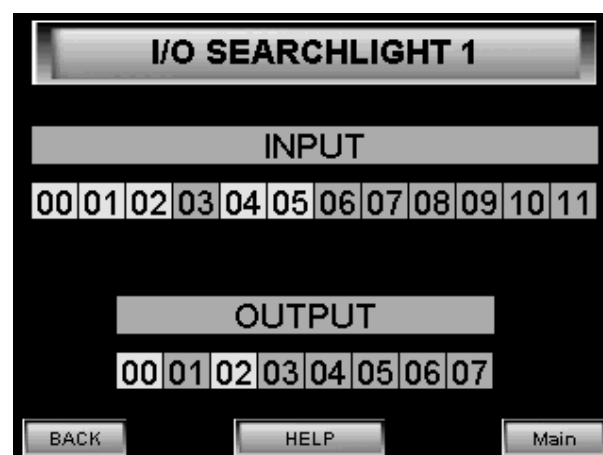
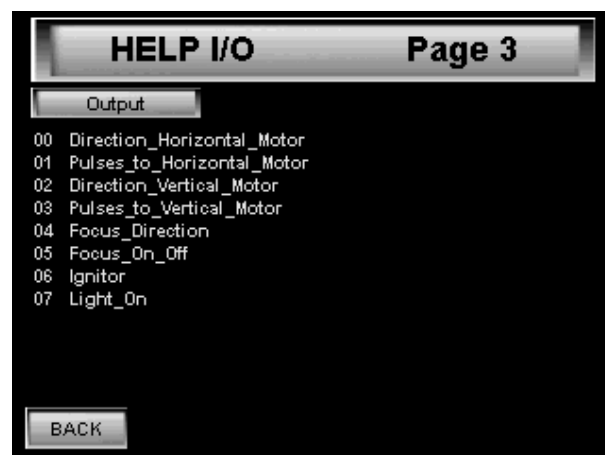
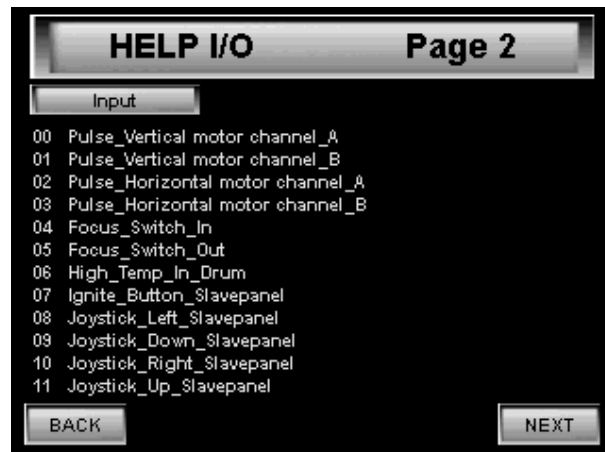
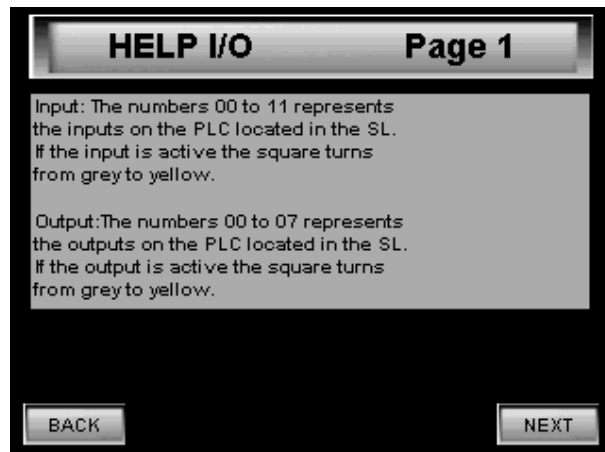


Min and max degrees/position is limited by sector limits, described above

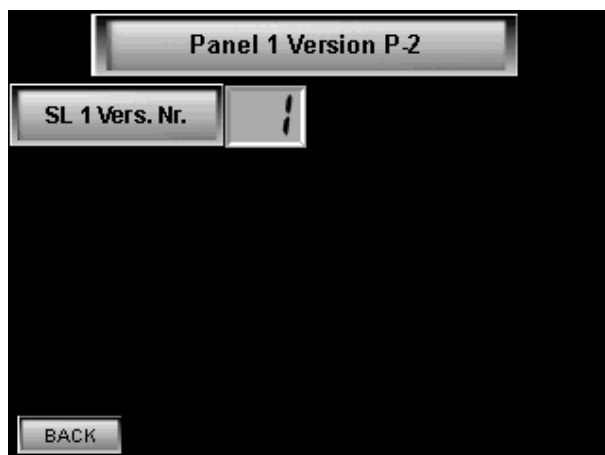
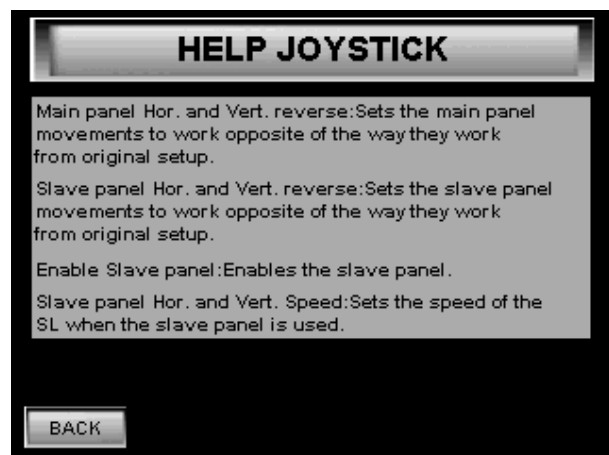
4.3 Searchlight help and information

Help menu

In most of the menues Help is available

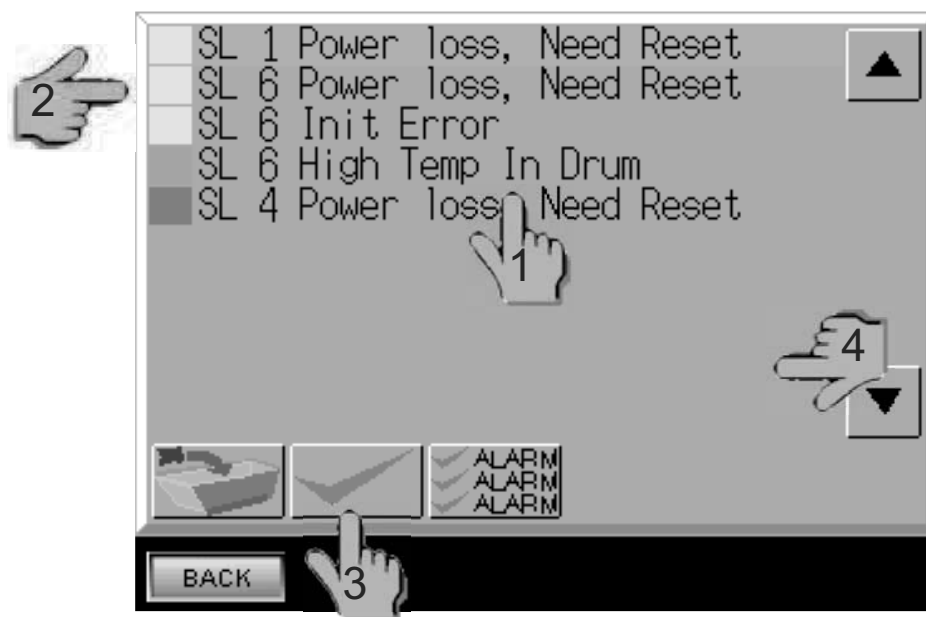
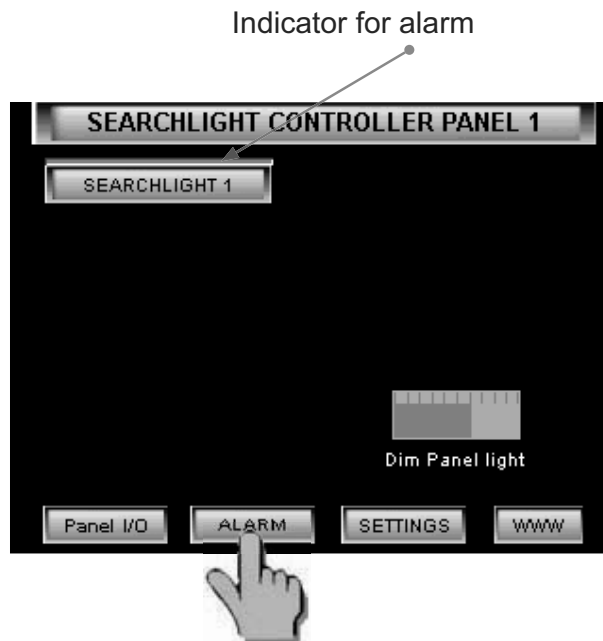


4.3 Searchlight help and information



4.4 Alarm handling

Home menu



1. Alarmtext
Searchlight nr. and alarmtext.
25 different alarms for each searchlight
2. Alarm status:
Red= active alarm unacknowledged
Green= active alarm unacknowledged
Yellow= not active alarm acknowledged
3. Acknowledge and delete unactive alarms
4. Scrollbar

5 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.

This must be filled in and returned to Glamox ASA BU Norselight.



Use safety equipment, face cover and gloves at all times !

Cut the power to the searlight and the power-supply before working inside the drum.

General Searchlight Maintenance

Recommended intervals not exceeding:

6 months:

Visual inspection of gasket and glands.

Control of all screw and nut connections, except the screws that connect the forks to the drum.

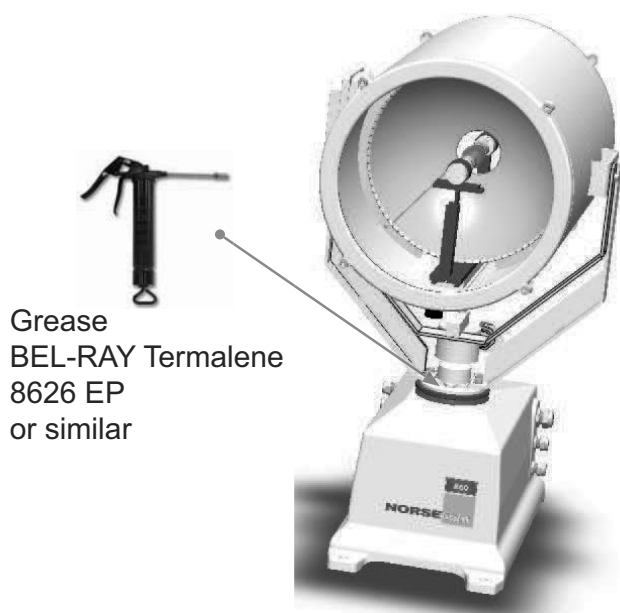
Check the level of grease and refill when needed in glider for lamp holder.

Reflector and front glass to be cleaned with a soft cloth and ethanol or similar.

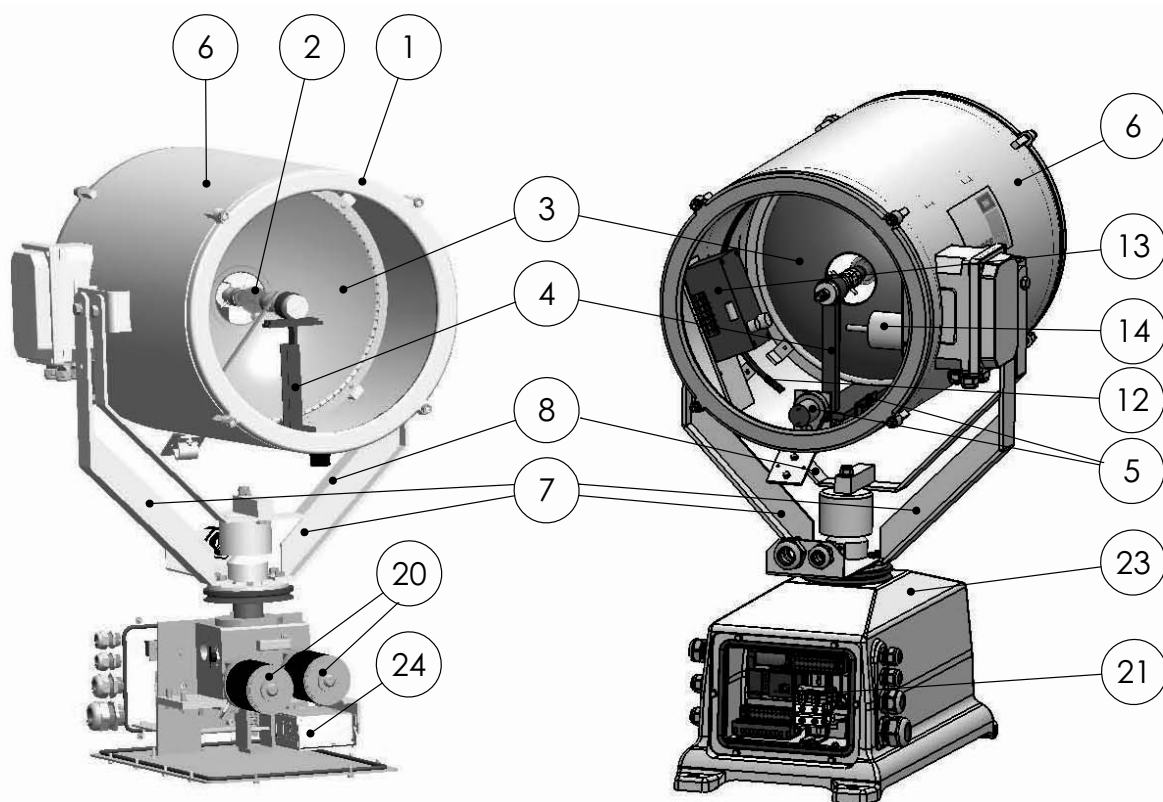
3 year:

Tighten all terminal strips in the searchlight junction box.

Fill up the grease-niple on the top of the motorhus with a grease-gun.

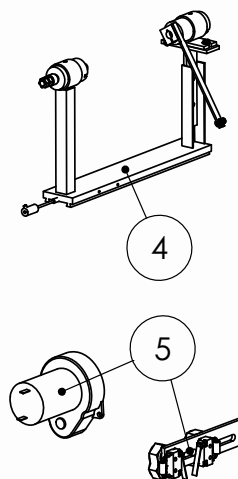


5.1 Spare Parts List



Pos	Spareparts Xenon R60	XS500	XS1000	XS1600	XS2000
1	Front ring complete	1009175	1009169	1009169	1009149
2	Lamp Xenon	1009211	1009207	1009209	1009210
3	Reflector complete	1009193	1009172	1009172	1009179
4	Lamp holder complete w/focus	1009188	1009171	1009171	1009189
5	Focus unit Xenon, complete	1009168	1009168	1009168	1009168
6	Drum complete	OR	OR	1009137	OR
7	Forks	1009315	1009314	1009314	1009313
8	Manouver Fork	OR	OR	OR	OR
9	Seal kit, Drum	OR	OR	OR	OR
10	Cable kit, drum	OR	OR	OR	OR
11	Cable external, xenon	OR	OR	OR	OR
12	Heat element Drum 115V	1009135	1009135	1009135	1009136
12	Heat element Drum 230V	1009173	1009173	1009173	1009118
13	Ignitor, 230V	1009240	1009239	1009239	1009239
13	Ignitor, 115V	1009235	1009241	1009241	1009241
14	Noise filter kit complete	OR	OR	OR	OR
20	Motor Vertical/Horizontal	1009224	1009224	1009224	1009224
21	PLC-module	OR	OR	OR	OR
22	Seal kit, motorhouse	OR	OR	OR	OR
23	Motorhouse complete	OR	OR	OR	OR
24	Power supply, motor house	1009642	1009642	1009642	1009642

OR=On Request



5.2 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



5.2 Lamp replacement

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.



5.2 Lamp replacement

13. Panel settings

After changing the lamp reset the lamp counter



LAMP SEARCHLIGHT 1

Hours of use:	935h
Times striked:	458
Alarm-limit lamp (hours):	1500h

☐ RESET LAMPCOUNTER

BACK

HELP

Main



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

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

5.3 Troubleshooting.

Searchlight dont 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 limitswitches is 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

Battery error:

Change battery in PLC in searchlight or panel.



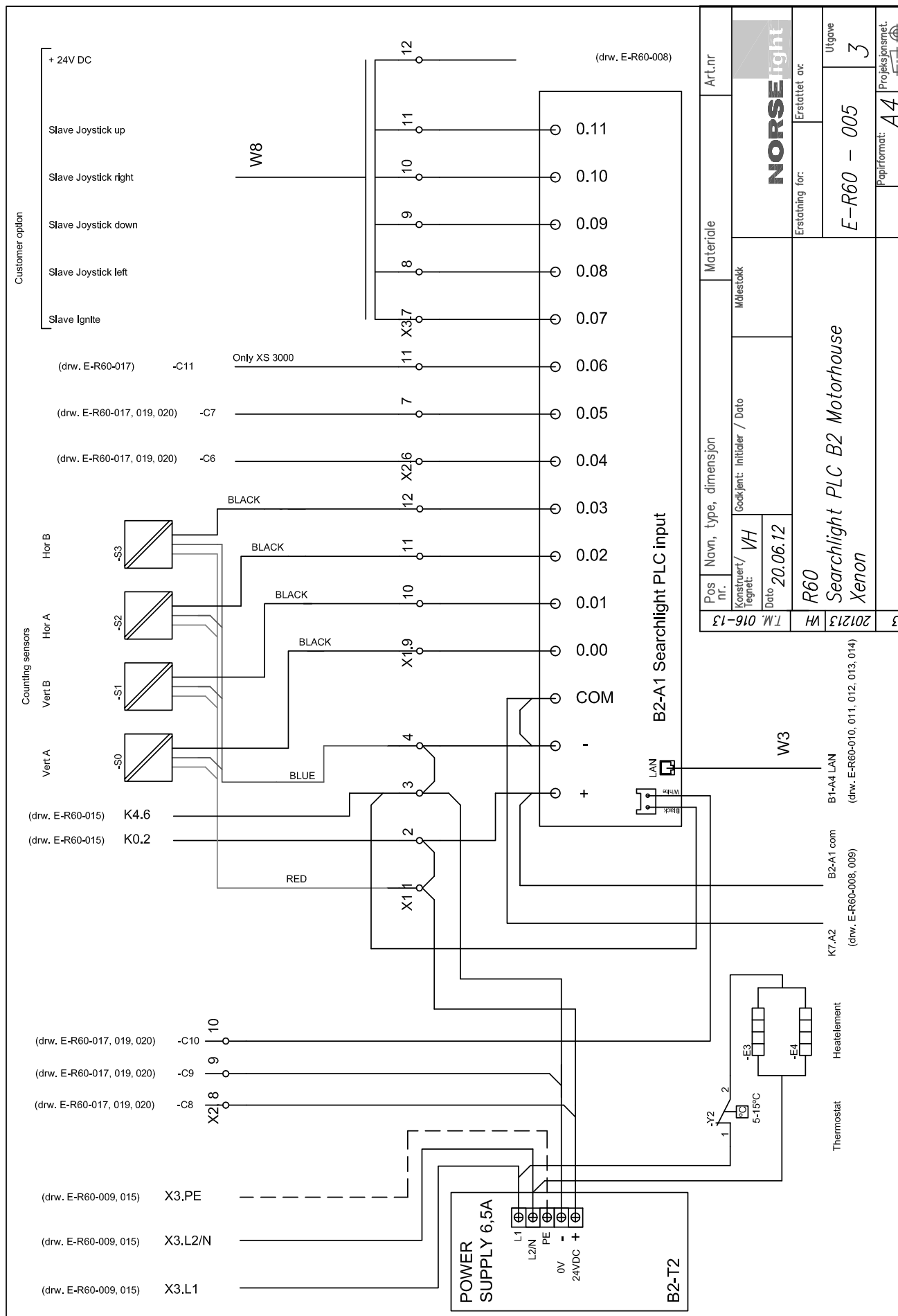
6 Warranty

The warranty does not cover damage due to disregard of specified operating parameters.

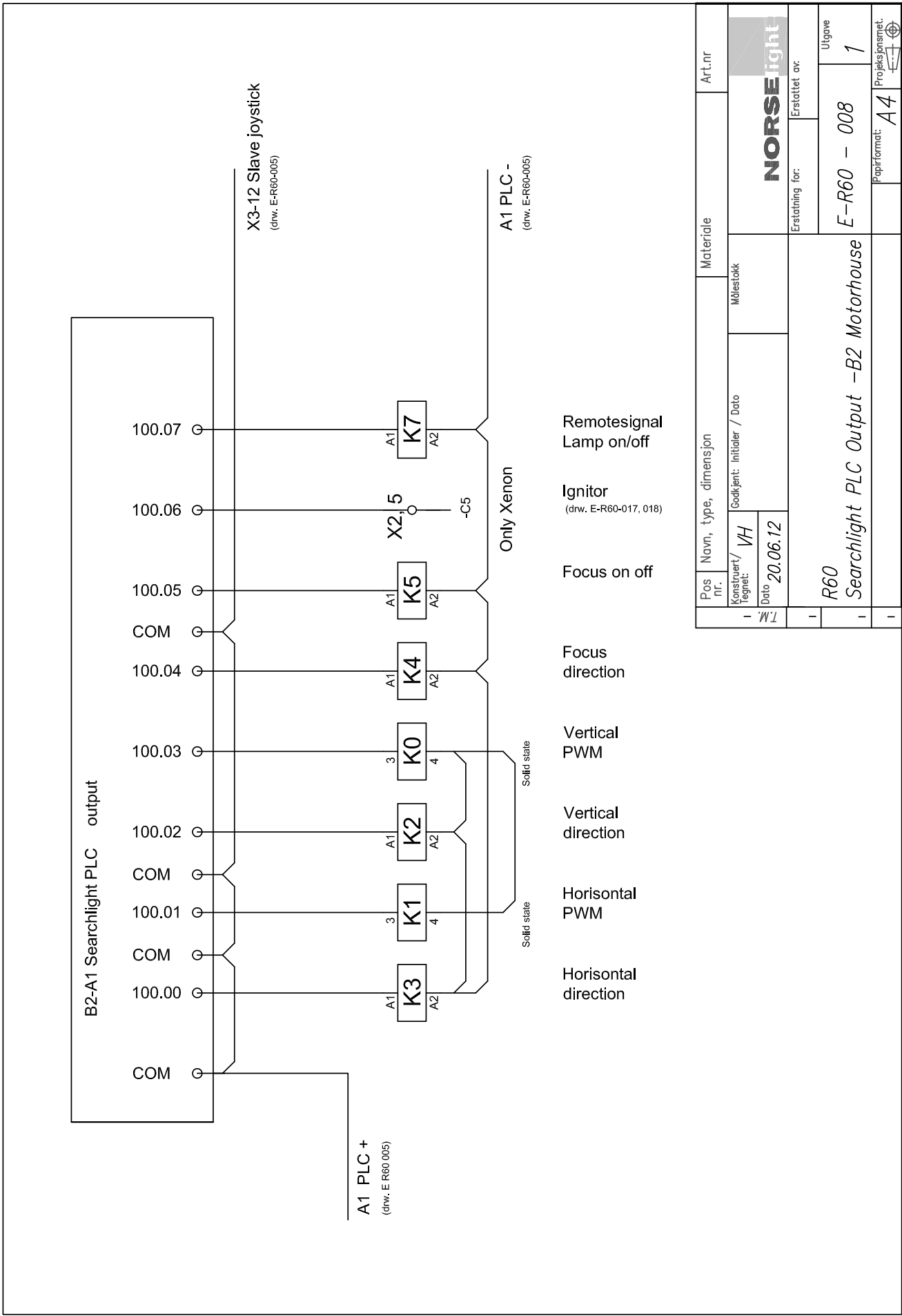
Claimhandling: Contact your sales-office, see page 47

The lamp must be sent back in its original box together with the guarantee card.

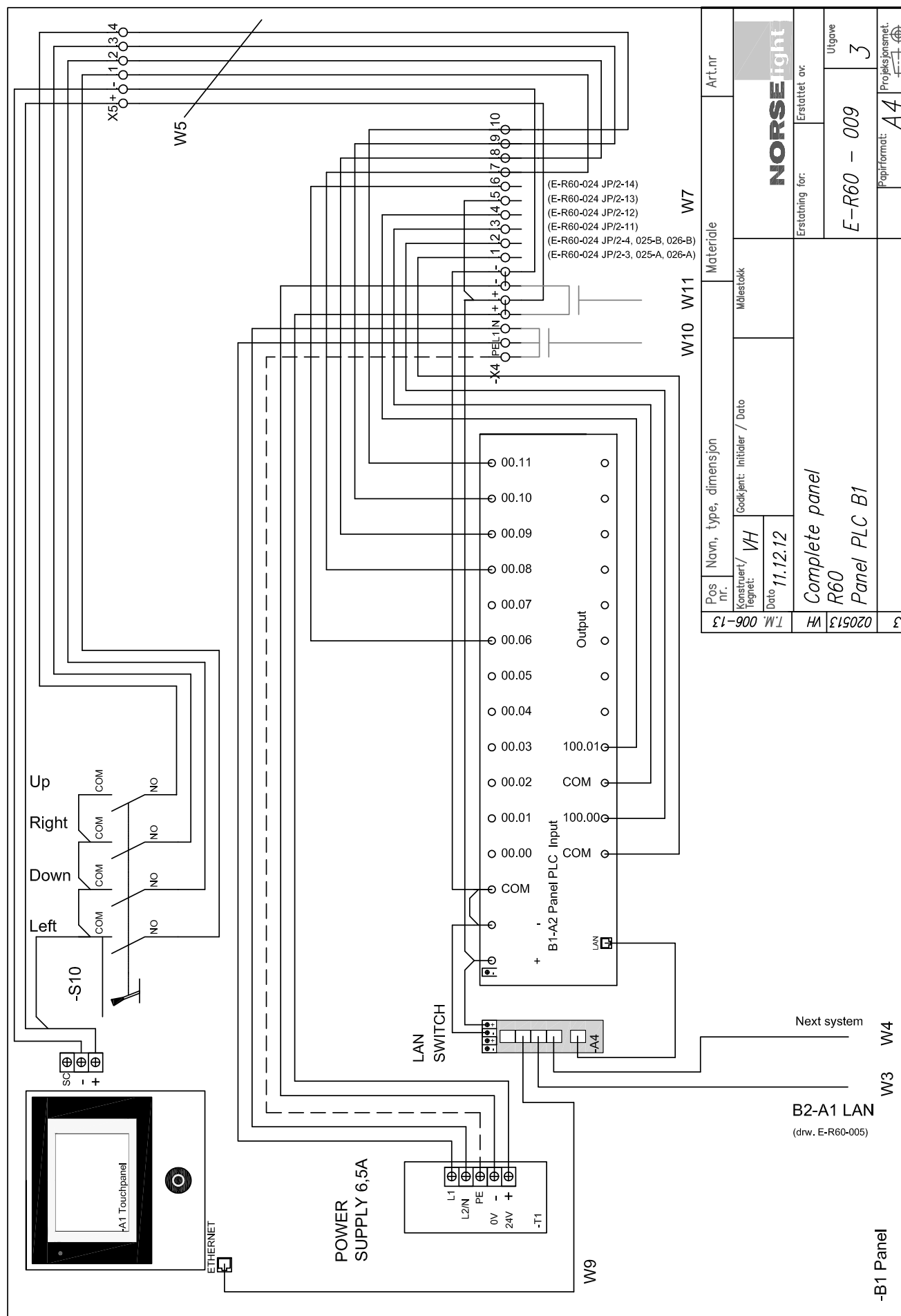
7. R60 Searchlight PLC B2 Motorhouse





7. R60 Searchlight PLC Output - B2 Motorhouse

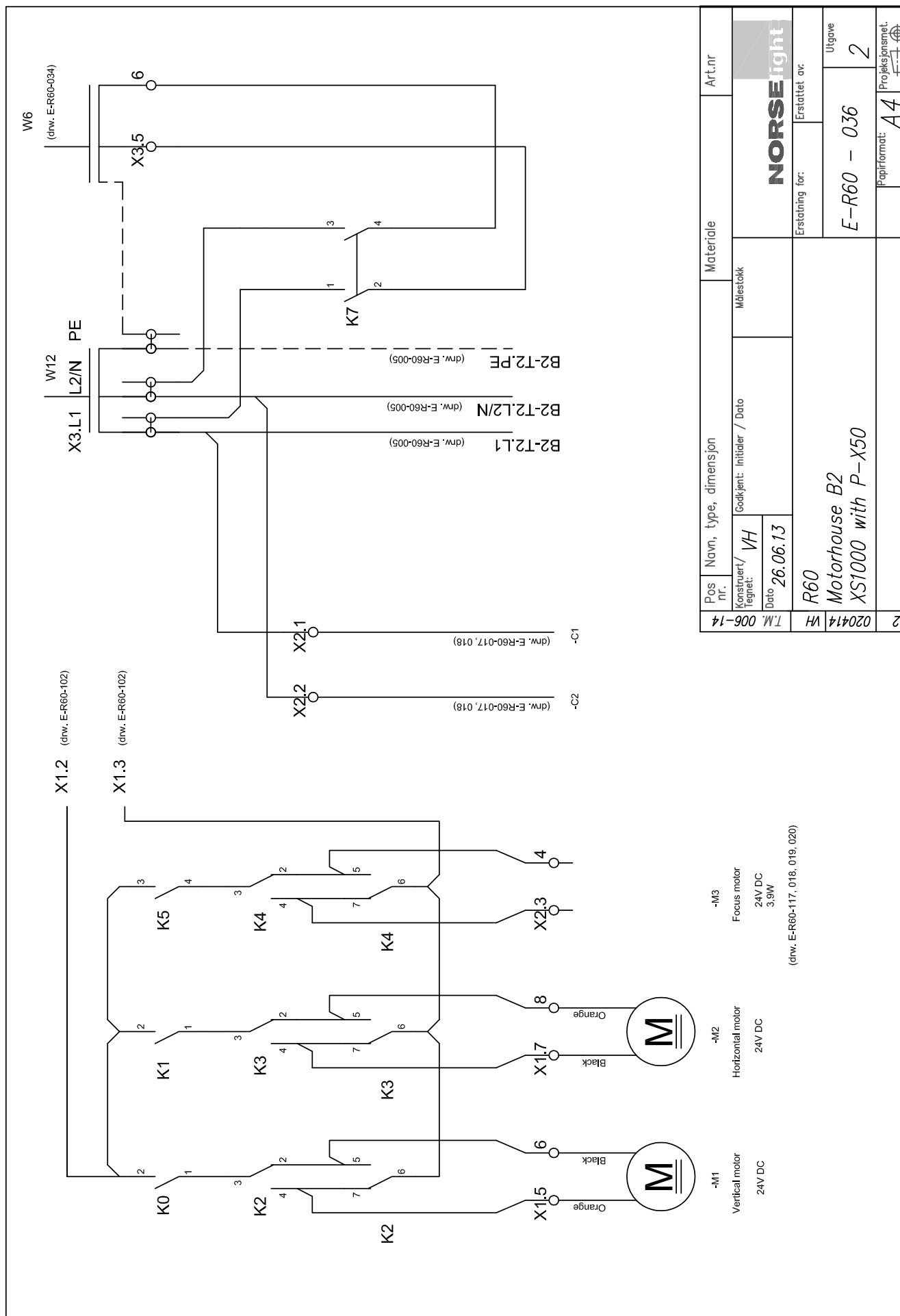


7. Panel R60: Panel PLC B1

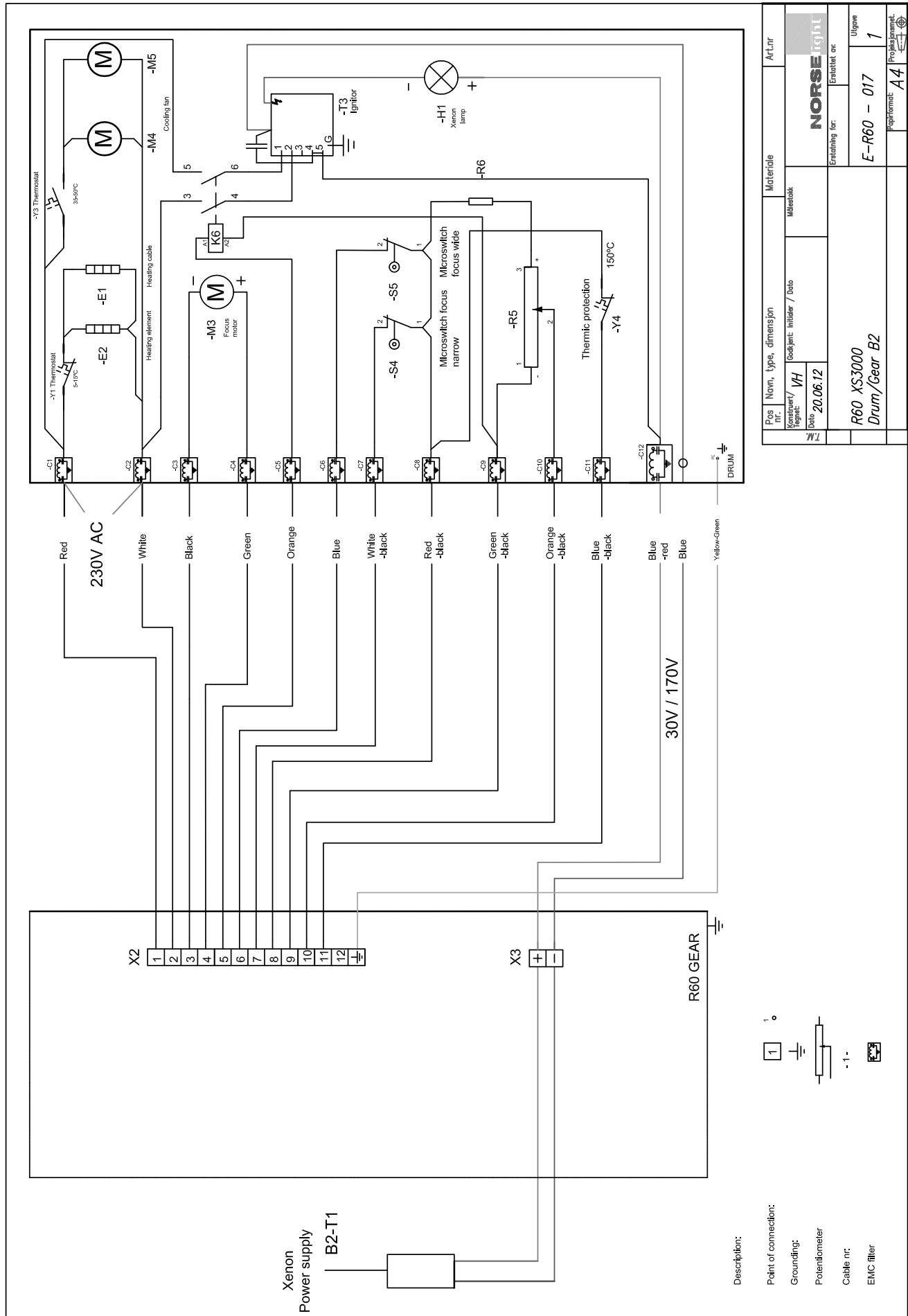




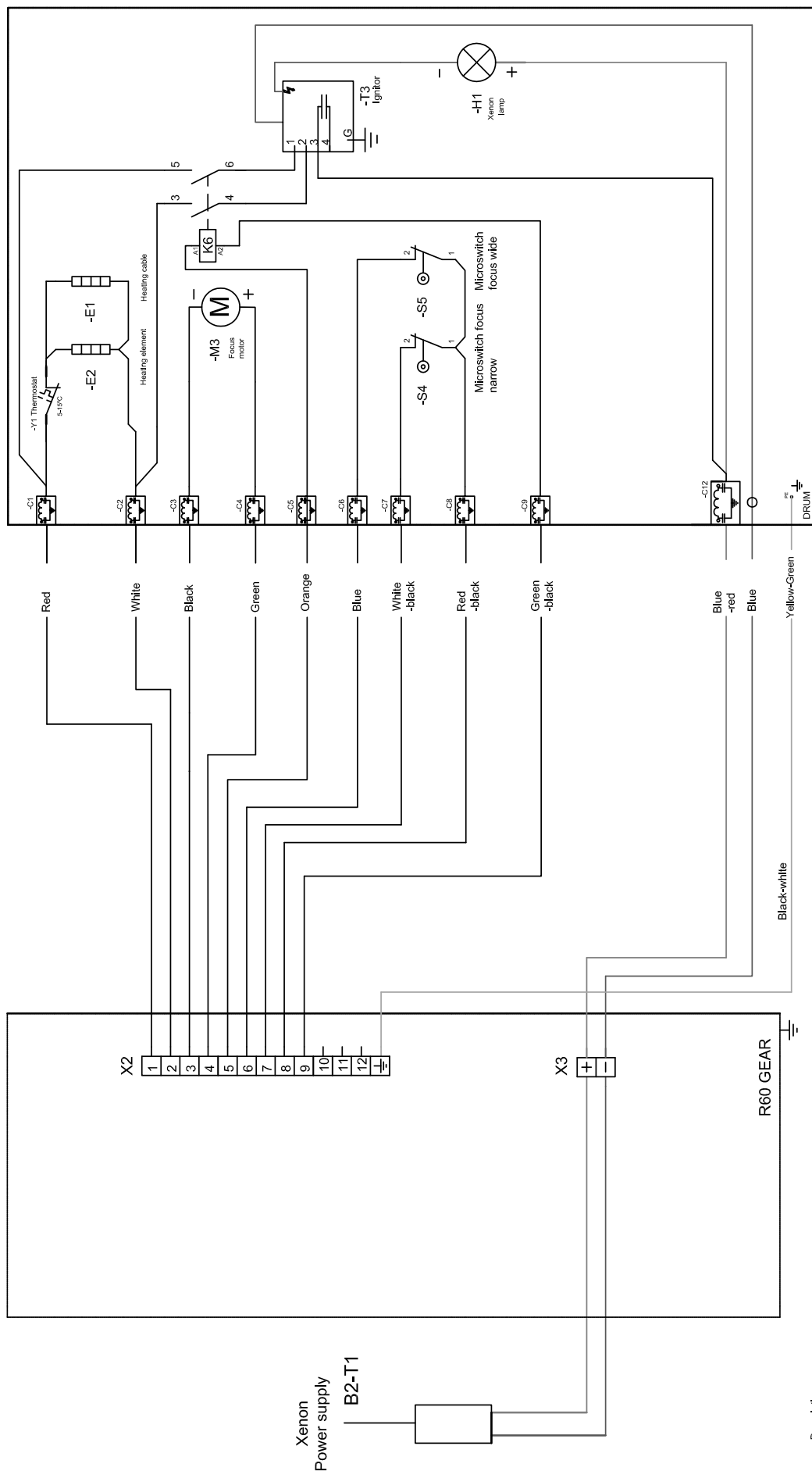
201213	WH	R60		Motorhouse B2		Xenon (not XS1000 with PX50)		E-R60 - 015		Ulgave		2	Papirformat: A4		Projektskissemet. 	
201213	WH	R60		Motorhouse B2		Xenon (not XS1000 with PX50)		E-R60 - 015		Ulgave		2	Papirformat: A4		Projektskissemet. 	



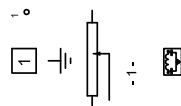
7. R60 XS3000 Drum / Gear B2



7. R60 XS3000 Drum / Gear B2



Description:

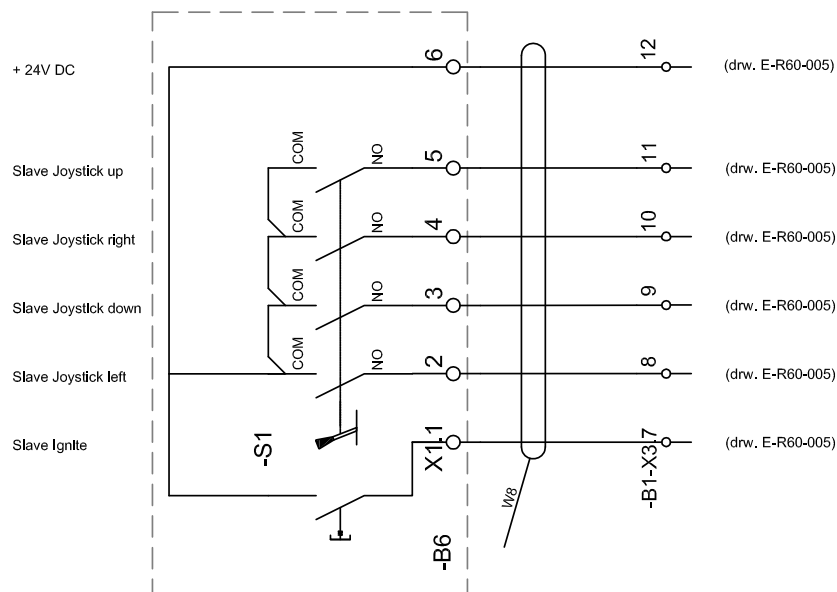


Point of connection:
Grounding:
Potentiometer
Cable nr.:
EMC filter

Pos. nr.	Navn, type, dimension	Materiale	Art.nr.
Komponent / V.H.	Gadjet: Initiator / Dato	Målestok	
Dato	20.06.12		
T.M.			
	R60 XS500 - 2000 Drum/Gear B2		
		Erstatet af:	Udgave
		E-R60 - 018	1
		Projektant:	A4

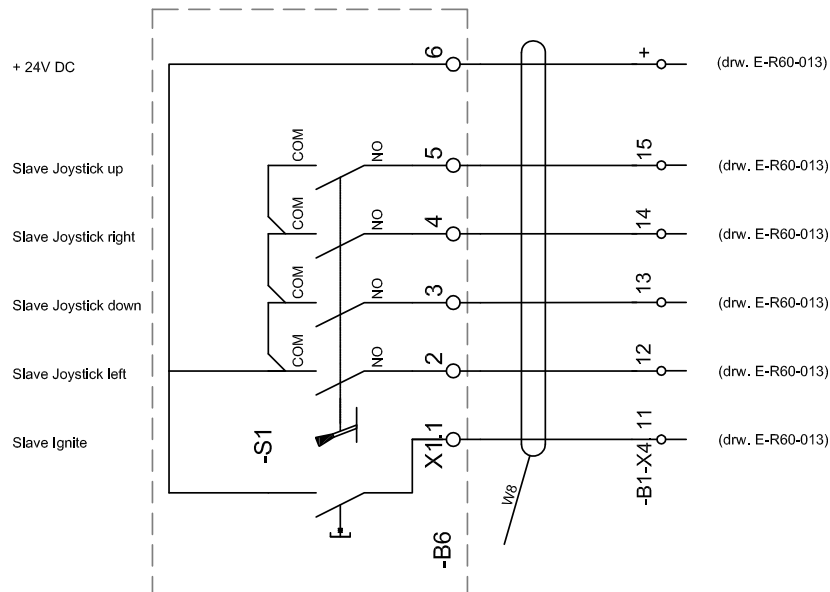
Option 1

Slave connected to Searchlight



Option 2

Slave connected to Main panel



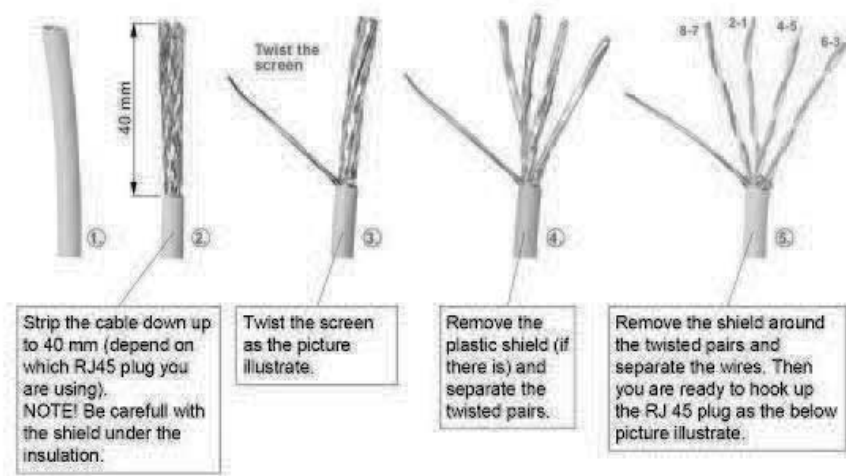
	Pos nr.	Navn, type, dimension	Materiale	Art.nr
	Konstruert/ Tegnet:	Godkjent: Initialer / Dato	Målestokk	
	VH			
T.M.	Dato	23.10.12		NORSElight
-				Erstattet av:
-	R60			Utgave
-	Slave panel B6		E-R60 - 027	1

8 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		

How to make a LAN cable



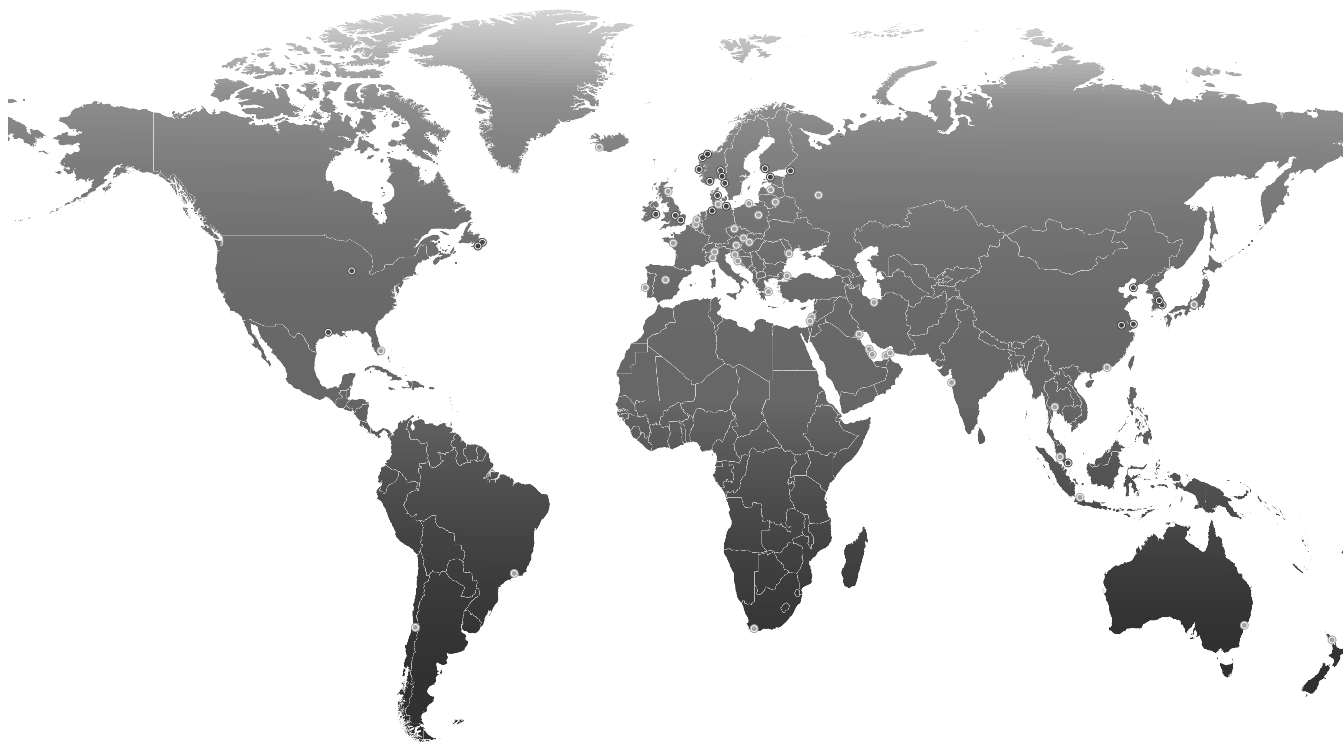
Pin	Color
1	white/orange
2	orange
3	white/green
4	blue
5	white/blue
6	green
7	white/brown
8	brown

T568B

NOTE! It is very important to connect the shield properly to shield jacket around the RJ 45 plug.

LAN-cable specifications

4pair STP/FTP (min)cat5E



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Fax +47 71 21 85 40
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sales@aquasignal.de

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