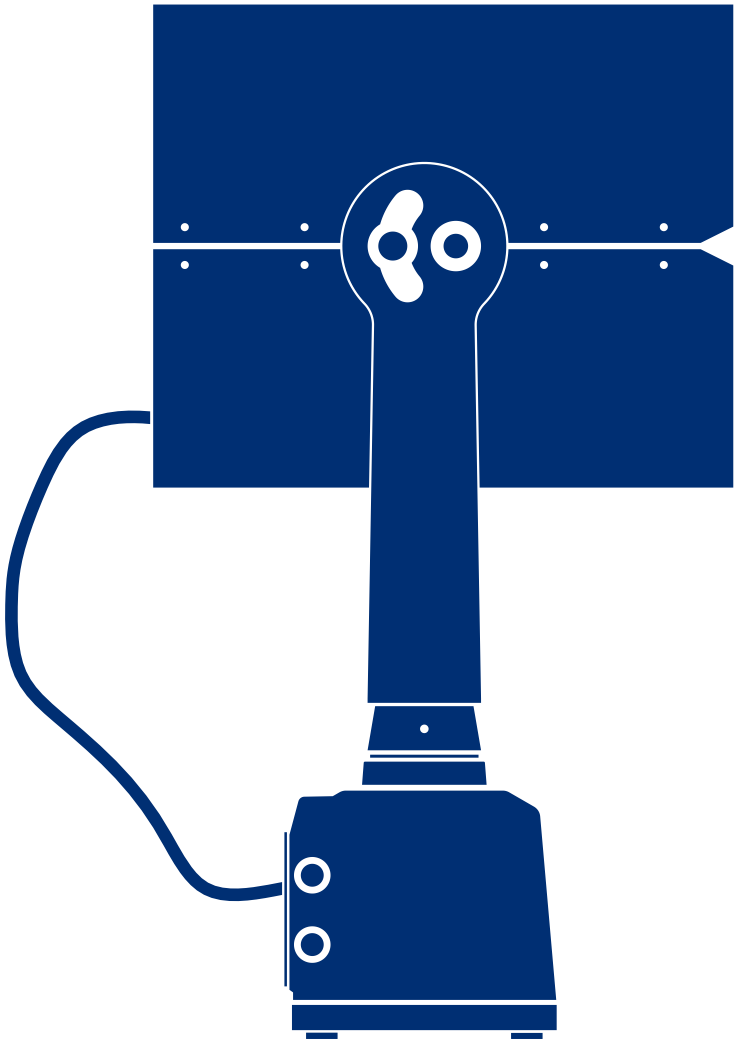
TECHNICAL MANUAL

DHR **320RC-**SERIES

Remote Controlled Searchlight



Den Haan Rotterdam

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SAFETY NOTES

- Turn power off before inspection, installation or removal
- Don't stare directly into the LEDs, Always use eye protection when handling LEDs
- This product can be damaged by electrostatic discharge, ESD. When handling take close care before opening the drum to avoid damaging the LEDs.
- Allow lamp/fixture to cool before handling
- Do not use the searchlight if outer glass is scratched or broken

DAMAGE DUE TO INAPPROPRIATE HANDLING IS NOT COVERED BY THE WARRANTY.

Version 0.95 June 2023

PREFACE

Den Haan Rotterdam is a family-owned company established in 1922. Started as a small tinsmith, it has evolved into a globally respected producer of navigation lights, searchlights, air horns and a wide range of nautical lamps made from copper and brass. By introducing products with advanced LED-technology, DHR has safe-guarded a visibly safe future for marine vessels in all weather conditions.

Den Haan Rotterdam manufactures halogen searchlights for over 30 years and are known for their robustness, quality and reliability: key values for marine equipment. The RC-series is the second generation of DHR remote controlled type of searchlights introduced in 2019. This product range is very popular, because of its compact size and its simplicity in installation and operation. The RC-series includes two types of light sources, such as: halogen bulbs and LEDs. Also the optical performance is top-notch, thanks to the use of silver plated mirror reflectors.

The application of the 230-, 320- and 420-series searchlights is limitless. Mostly they are benificial for work boats, tugs, fishing vessels, dredgers and even watch towers for land based solutions.

DEN HAAN ROTTERDAM B.V.

D.M. Den Haan
Managing Director

QUALITY STANDARDS

- LED Technology
- Remote control
- Excellent Optics
- Maintenance Friendly
- Adjustable Focus
- Light Weight Construction
- IP66 Water Ingress Protection

TABLE OF CONTENTS

1. MOUNTING INSTRUCTIONS

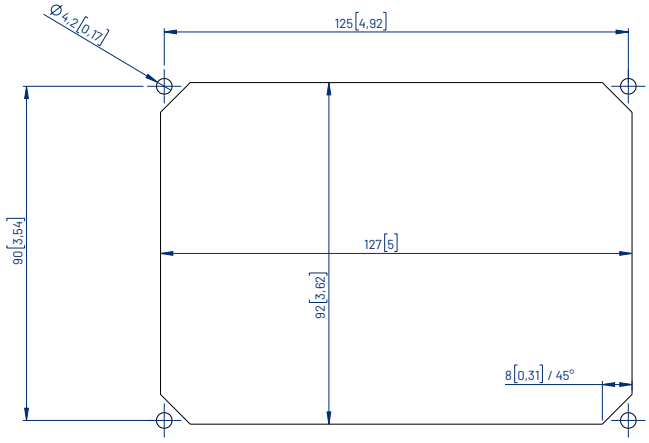
WARNING!

Den Haan Rotterdam does not accept responsibility for any damage if the searchlight is installed incorrectly and/or used improperly. When in doubt consult a qualified electrical technician.

MOUNTING THE PANEL

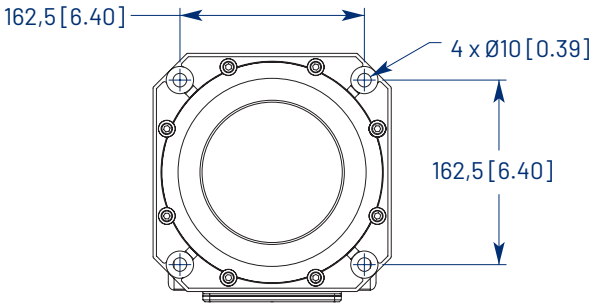
Place the control panel inside the wheelhouse, where it is protected against weather influences. The housing is especially constructed to be flush mounted in an instrument cabinet according the illustration on the right.

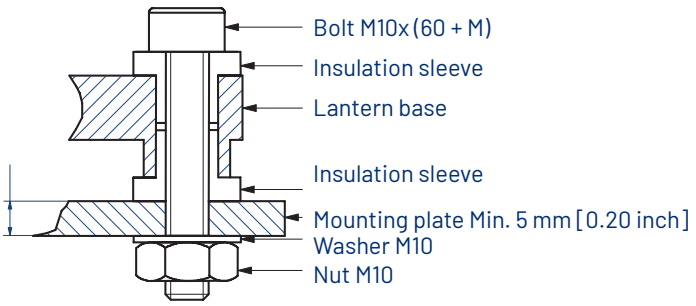
The minimum required depth for the panel inside the console is 50 mm [4.33 inch].



SEARCHLIGHT INSTALLATION

Install the searchlight in a horizontal upright position with sufficient space around the head of the searchlight to ensure it can move freely. The dimensions can be found on page 9.





All sizes are in mm [inch]

FASTENERS

- The permissible torque should be 8 Nm
- Use only A4-grade stainless steel

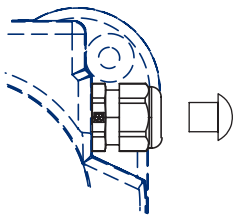
CAUTION!

Even though the housing is made of corrosion resistant materials, galvanic corrosion may still occur. To prevent galvanic corrosion use the supplied insulation sleeves to isolate the aluminium housing from other metal parts.

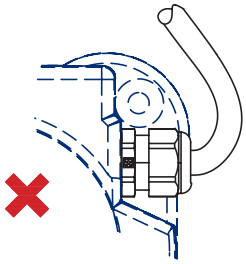
ELECTRICAL INSTALLATION

Install the electrical wiring according to the wiring diagrams showed on pages 11 - 14. Keep the distance between the power supply and halogen lamp as short as possible. Long wires will increase a voltage drop near the halogen lamp, which affects the light output.

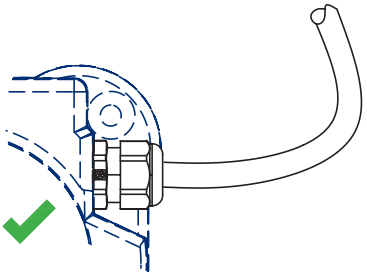
CABLE GLANDS



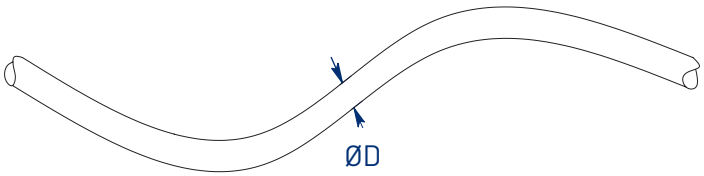
Remove the plug before placing the cable.
If no cable is connected, leave the plug in place!



Cable too tight!
This gives unwanted stress at the sealing of the cable gland and water ingress will occur.

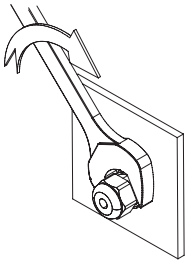


Include cable slack at the entering point of the cable gland



CABLE

- Preferred diameter D is 7 - 12 mm
- Material: Neoprene H07RN-F



REPLACING CABLE GLAND

- Use gasket between housing and cable gland
- Tighten firmly (6Nm) with wrench

NOTE

The cable glands on the searchlight prevent water ingress. Do not use (electrical) tape to cover the cable where it enters the cable gland as this will cause water ingress. Do not use a rubber or shrinkable cover on the cable gland to improve water tightness.

2. SPECIFICATIONS

CONTROL PANEL

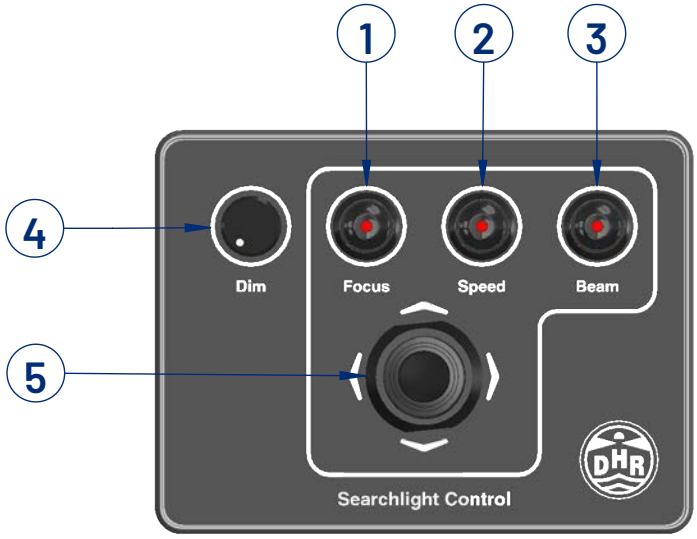
Model	PAN2019F
Dimensions	
Depth	105 mm
Width	140 mm
Weight	0,25 kg
Electrical	
Voltage	24 VDC
Maximum wattage	5 W
Fuse (2x)	Resettable fuse
Electrical insulation class	III
Housing	
Front	Aluminium / Acrylic black - IP65
Back	Acrylic blue
Operating temperature	0 - 40 °C [32 - 104 °F]

Searchlight

Model	320RCL22	320RCP22
Dimensions		
Height	820 mm	
Width	377 mm	
Weight	16,6 Kg	
Electrical		
Mains voltage	115/230VAC	
Maximum wattage	150W	250W
Preferred cable type	H07RN-F	
Cable diameter	Ø 6-12 mm	
Optics		
Parabolic mirror reflector	Ø 320 mm	
Range at 1 lux	1200 m	1700 m
Adjustable Focus	Yes (4-20°)	
Minimum beam angle at 50%	4° x 4°	4°x 5°
Luminous intensity	1.500.000 cd	3.000.000 cd
LED		
Model	COB-LED	LED-matrix
Luminous flux	13.000 lm	18.000 lm
Wattage	80 - 90 W	170 W
Average life-time	10.000 h	
Color temperature	6500 K	5700 K
Heater		
Type	PTC	
Voltage	100-240V	
Maximum wattage	50 Watt	
Motor Unit		
Tilt	+ 25° / - 40°	
PAN	340°	
Max. speed left / right approx.	34°/ sec	
Max. speed up / down approx.	3,2° / sec	
Housing		
Material	Chromated seawater resistant aluminium	
Finish	UV resistant powder coating - White RAL9016	
Front glass	Hardened glass	
Seals	Silicone / Neoprene, black	
Cable gland	M25x1.5	
Operating temperature	- 25° / + 40° C	
Ingress protection class Head	IP66 c/w Membrane vent	

3. DIMENSIONS

CONTROL PANEL

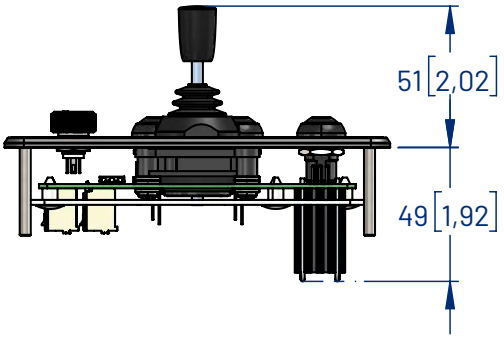


SWITCHES

1. FOCUS In combination with joystick controls the beam width
2. SPEED To select two speed settings: slow / fast
3. BEAM Switching the light source on/off
5. JOYSTICK To control the direction of movement

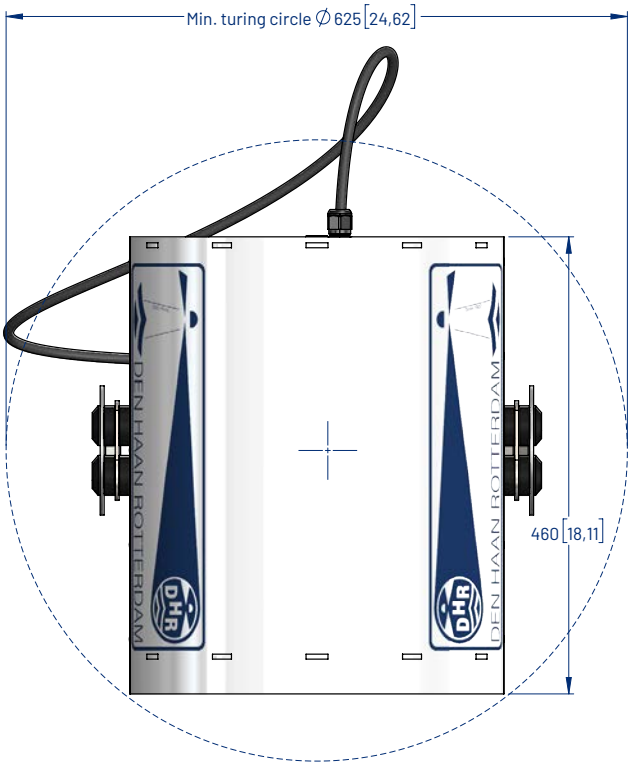
POTENTIOMETER

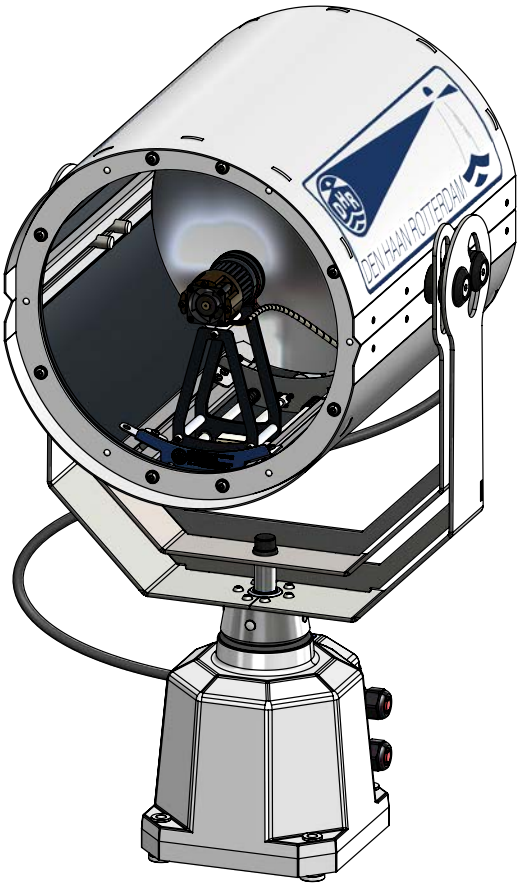
4. DIM To adjust the light intensity of the illuminated buttons

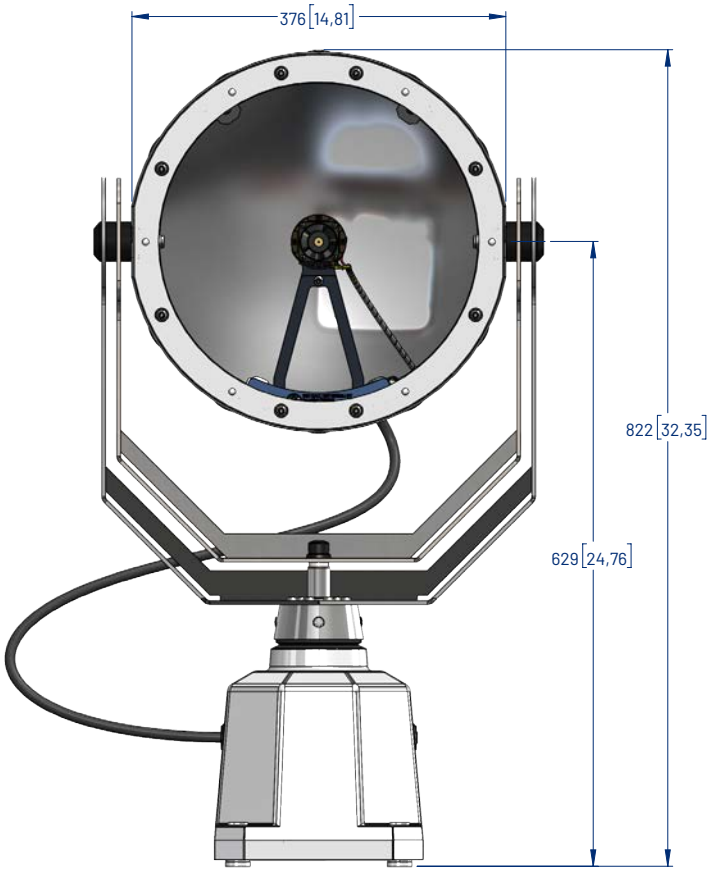


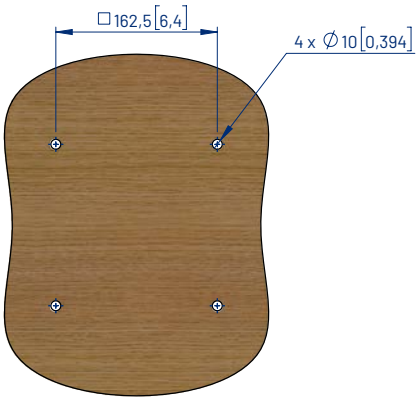
All sizes are in mm [inch]

SEARCHLIGHTS









DRILL HOLES

Fasteners

- The permissible torque should be 8 Nm
- Use only A4-grade stainless steel

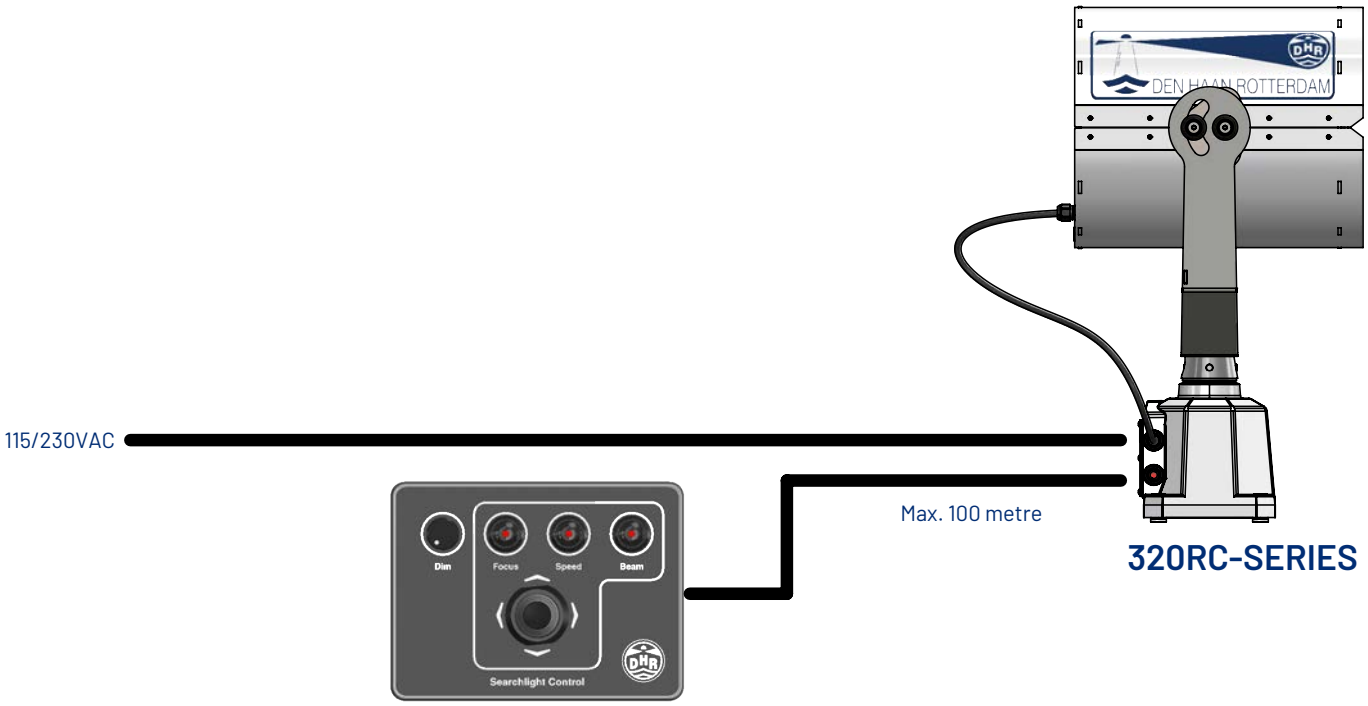
All sizes are in mm [inch]

4. PHOTOS


DEN HAAN ROTTERDAM

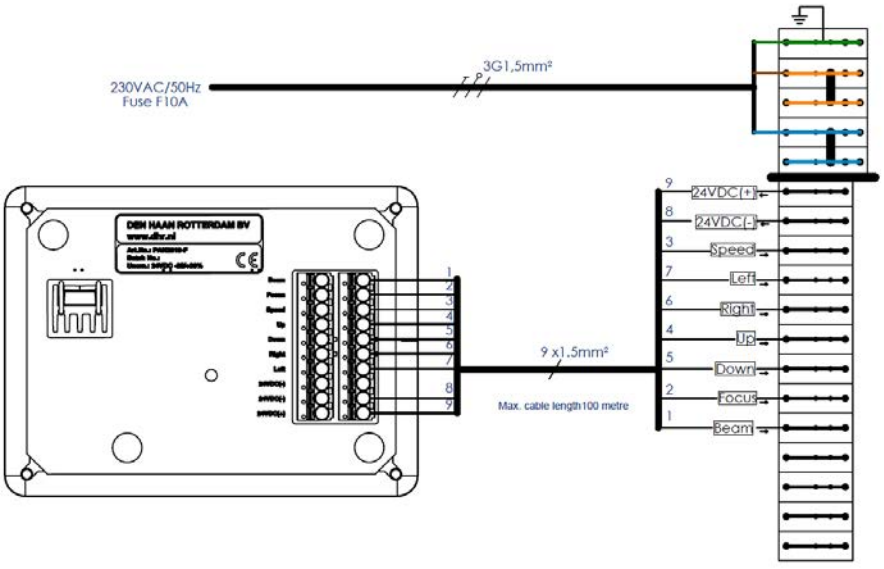
5. WIRING DIAGRAMS

CONTROL PANEL



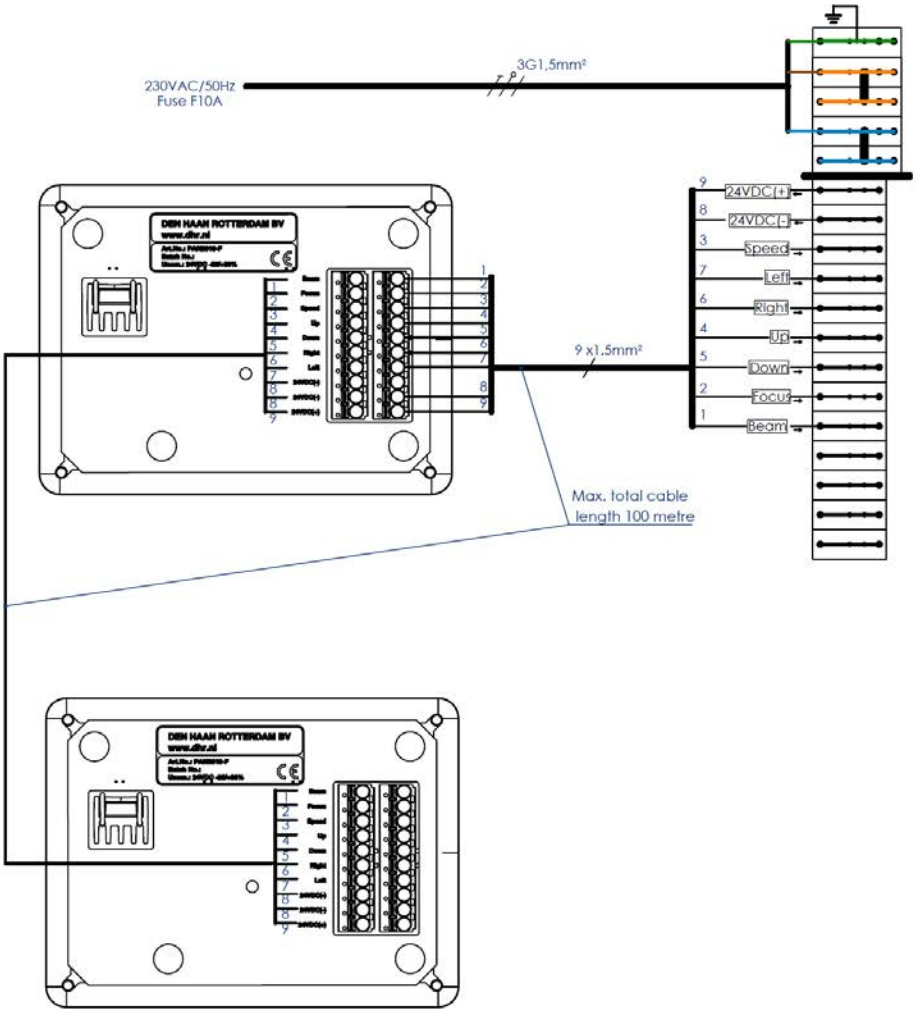
320RC-SERIES

PAN2019F



Single Panel

DUAL PANEL



Dual Panel

6. SAFETY, MAINTENANCE AND CORRECT USE

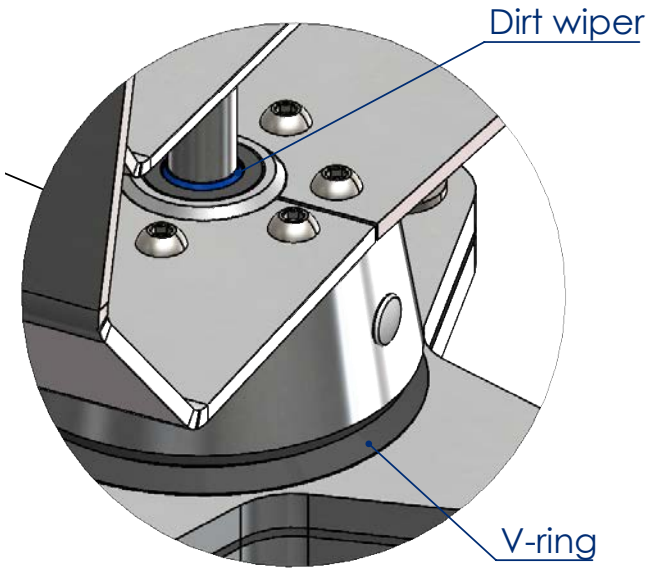
ESD
This product, like all LED searchlights, uses semi-conductors that can be damaged by electrostatic discharge (ESD). When handling, take close care before opening the drum to avoid damaging the LEDs.

THE FOLLOWING PRECAUTIONS MUST BE TAKEN:
- Always disconnect the power from the light before any maintenance.
- Use a conductive wrist strap attached to a good earth ground.
- Always discharge yourself by touching grounded bare metal.
- Use an approved anti-static mat to cover your work surface.
- When in doubt always consult a qualified electrician.

DON'T STARE DIRECTLY INTO THE LEDS.
All cool white LEDs (5000 Kelvin and higher) contain a lot of blue and can be harmful to our eyes. Always use eye protection when handling LEDs

TIPS FOR CORRECT USE
- Switch off the searchlight immediately after use, this increases the life expectancy of the COB - LED
- Do not light-up objects closer than 2 metres
- Do not point the light beam at the eyes of humans or animals

PREVENTIVE MAINTENANCE
Clean the searchlight with fresh water regularly. Do not use any aggressive cleaning agents. At least twice a year rub the V-ring and dirt wiper in with silicone grease.



ADVANCED MARITIME SIGNALLING SOLUTIONS

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