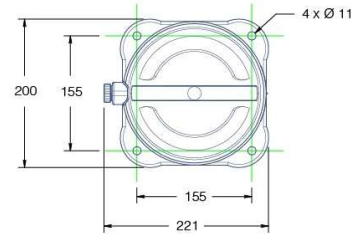
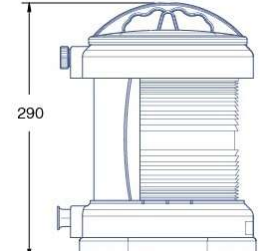


Navigation Lights DHR

Navigation lights DHR type 70N

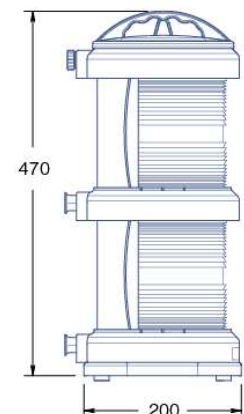
Application: Sea-going vessels over 50 meter in length.
 NATO codification.
 Materials: Matt black polyamide and polycarbonate, reinforced with fibreglass.
 Corrosion free, seawater resistant and non-magnetic.
 Polycarbonate Fresnel lens, shock resistant and interchangeable.
 Wiring: 1.5 meter neoprene cable H07RN-F 2x1.5mm².
 PG13 Cable gland.
 Mounting: Base, conversion kit for hoisting available.
 Weight: Sector lights and 180° screened lights 2.6kg.
 All-round lights 2.3kg.
 Approval: MED 2014/90/EU, RMRS approval, CCS Approval.
 Visibility: 3 to 6 N.M.
 Protection Class: IP56.
 For voltage **230Vac 60/65W, 115Vac 60/65W, 24Vdc 60/65W.**
 Ambient temperatures -25°C to +55°C (MED) and -40°C to +55°C (RMRS).
 Lampholder P28S.
 Light bulb has to be ordered separate.



Article No.	Description	Radius	Min. visibility	Approval
7721338	DHR 70N Starboard Green	112.5°	3 N.M.	COLREG'72-RPR/BPR
7721351	DHR 70N Port Side Red	112.5°	3 N.M.	COLREG'72-RPR/BPR
7721364	DHR 70N Masthead White	225°	6 N.M.	COLREG'72
7721377	DHR 70N Stern White	135°	3 N.M.	COLREG'72-RPR/BPR
7721390	DHR 70N Towing Yellow	135°	3 N.M.	COLREG'72
7721378	DHR 70N Stern Suez-light Red	135°	3 N.M.	Suez Canal
7721403	DHR 70N All-Round White	360°	3 N.M.	COLREG'72-RPR/BPR
7721404	DHR 70N All-round Manouvring White	360°	5 N.M.	COLREG'72
7721416	DHR 70N All-round Red	360°	3 N.M.	COLREG'72-RPR/BPR
7721417	DHR 70N All-round Green	360°	3 N.M.	COLREG'72-RPR/BPR
7721418	DHR 70N All-round Yellow	360°	3 N.M.	COLREG'72
7721403K	DHR 70N Screened White	180°	3 N.M.	COLREG'72-RPR/BPR
7721416K	DHR 70N Screened Red	180°	3 N.M.	COLREG'72-RPR/BPR
7721417K	DHR 70N Screened Green	180°	3 N.M.	COLREG'72-RPR/BPR
7721418K	DHR 70N Screened Yellow	180°	3 N.M.	COLREG'72

Navigation lights DHR type 70N DUPLEX

Application: Sea-going vessels over 20 meter in length.
 NATO codification.
 Materials: Matt black polyamide and polycarbonate, reinforced with fibreglass.
 Corrosion free, seawater resistant and non-magnetic.
 Polycarbonate Fresnel lens, shock resistant and interchangeable.
 Wiring: 1.5 meter neoprene cable H07RN-F 2x1.5mm².
 PG13 Cable gland.
 Mounting: Base, conversion kit for hoisting available.
 Weight: Sector lights and 180° screened lights 4.1kg.
 All-round lights 3.6kg.
 Approval: MED 2014/90/EU, RMRS approval, CCS Approval.
 Visibility: 3 to 6 N.M.
 Protection Class: IP56.
 For voltage **230Vac 60/65W, 115Vac 60/65W, 24Vdc 60/65W.**
 Ambient temperatures -25°C to +55°C (MED) and -40°C to +55°C (RMRS).
 Lampholder P28S.
 Light bulb has to be ordered separate.



Article No.	Description	Radius	Min. visibility	Approval
7721429	DHR 70N Duplex Starboard Green	112.5°	3 N.M.	COLREG'72-RPR/BPR
7721442	DHR 70N Duplex Port Side Red	112.5°	3 N.M.	COLREG'72-RPR/BPR
7721445	DHR 70N Duplex Masthead White	225°	6 N.M.	COLREG'72
7721468	DHR 70N Duplex Stern White	135°	3 N.M.	COLREG'72-RPR/BPR
7721481	DHR 70N Duplex Towing Yellow	135°	3 N.M.	COLREG'72
7721494	DHR 70N Duplex All-Round White	360°	3 N.M.	COLREG'72-RPR/BPR
7721501	DHR 70N Duplex All-round Red	360°	3 N.M.	COLREG'72-RPR/BPR
7721508	DHR 70N Duplex All-round Green	360°	3 N.M.	COLREG'72-RPR/BPR
7721509	DHR 70N Duplex All-round Yellow	360°	3 N.M.	COLREG'72
7721510	DHR 70N Duplex Red over Green	360°	3 N.M.	COLREG'72-RPR/BPR
7721511	DHR 70N Duplex Green over Red	360°	3 N.M.	COLREG'72-RPR/BPR
7721512	DHR 70N Duplex White over Red	360°	3 N.M.	COLREG'72-RPR/BPR
7721513	DHR 70N Duplex Red over White	360°	3 N.M.	COLREG'72-RPR/BPR
7721494K	DHR 70N Screened White	180°	3 N.M.	COLREG'72-RPR/BPR
7721507K	DHR 70N Screened Red	180°	3 N.M.	COLREG'72-RPR/BPR
7721508K	DHR 70N Screened Green	180°	3 N.M.	COLREG'72-RPR/BPR
7721509K	DHR 70N Screened Yellow	180°	3 N.M.	COLREG'72

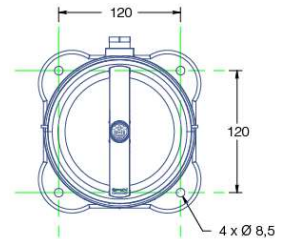
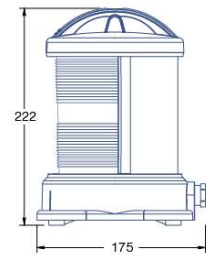
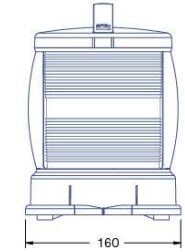
Navigation Lights DHR

Navigation lights DHR type 55N

Application: Sea-going vessels less than 50 meter in length.
 Inland navigation vessels above 20 meters.
 NATO codification.
 Materials: Matt black polyamide and polycarbonate, reinforced with fibreglass.
 Corrosion free, seawater resistant and non-magnetic.
 Polycarbonate Fresnel lens, shock resistant and interchangeable.
 Wiring: PG13 Cable gland from below or side.
 Mounting: Base, conversion kit for hoisting available.
 Weight: Sector lights and 180° screened lights 1.0kg, All-round lights 0.8kg.
 Approval: MED 2014/90/EU
 Visibility: 2 to 5 N.M.
 Protection Class: IP56 **For voltage 12/24Vdc 25W**
 Ambient temperatures -25°C to +55°C (MED)
 Lampholder Bay15d, Light bulb has to be ordered separate.

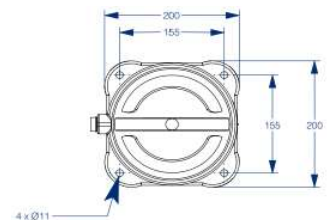
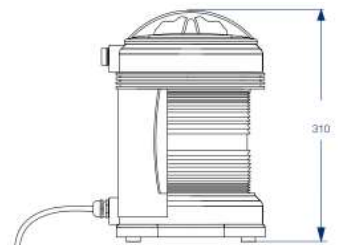


Article No.	Description	Radius	Min. visibility	Approval
775521338	DHR 55N Starboard Green	112.5°	2 N.M.	COLREG'72-RPR/BPR
775521351	DHR 55N Port Side Red	112.5°	2 N.M.	COLREG'72-RPR/BPR
775521364	DHR 55N Masthead White	225°	5 N.M.	COLREG'72-RPR/BPR
775521377	DHR 55N Stern White	135°	2 N.M.	COLREG'72-RPR/BPR
775521390	DHR 55N Towing Yellow	135°	2 N.M.	COLREG'72-RPR/BPR
77551005	DHR 55N Panama Steering Blue	N.A.	3 N.M.	No MED Approval
775521360	DHR 55N All-Round White	360°	2 N.M.	COLREG'72-RPR/BPR
775521494	DHR 55N All-round Manouvring White	360°	5 N.M.	COLREG'72
775521416	DHR 55N All-round Red	360°	2 N.M.	COLREG'72-RPR/BPR
775521429	DHR 55N All-round Green	360°	2 N.M.	COLREG'72-RPR/BPR
775521442	DHR 55N All-round Yellow	360°	2 N.M.	COLREG'72-RPR/BPR
775521445	DHR 55N All-round Blue	360°	1 N.M.	RPR/BPR
775521361K	DHR 55N Screened White	180°	2 N.M.	COLREG'72-RPR/BPR
775521417K	DHR 55N Screened Red	180°	2 N.M.	COLREG'72-RPR/BPR
775521430K	DHR 55N Screened Green	180°	2 N.M.	COLREG'72-RPR/BPR
7755CONV	DHR 55N Conversion set bracket mounting	-	-	-



Navigation lights DHR type 70N POLAR

Application: Sea-going vessels navigating in Arctic regions more than 50 meter in length.
 Materials: housing, matt black high-grade polycarbonate reinforced with fibre glass.
 Matt black polyamide and polycarbonate, reinforced with fibreglass.
 Polycarbonate Fresnel lens, shock resistant polycarbonate.
 Screen seawater resistant aluminum-hard anodized 70 µm black.
 Mounting materials stainless steel 316, seawater resistant and non-magnetic.
 Gaskets, silicone rubber.
 Wiring: THERFLEX 180 EWKF-C 5G1-1,5 meter, PG13 Cable gland.
 Bulb Normalized P28s bulb **230Vac 50/60Hz Max. 65W** (EU standard EN 14744).
 Heating element, Transparent heater 70W and build-in thermostat.
 Mounting: Base mounting only.
 Weight: Sector lights and 180° screened lights 4.0kg, All-round lights 3.8kg.
 Approval: MED 96/98/EC, RMRS.
 Visibility: 3 to 6 N.M. the flashing lights provide 120 flashes per minute.
 Protection Class: IP56 with membrane vent. Light bulb to order separate.
 Ambient temperatures tested down to minus 52°C, approved -52°C to +55°C (MED)

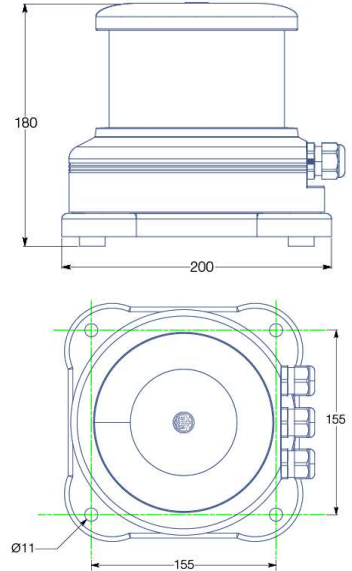


Article No.	Description	Radius	Min. visibility	Approval
7711100	DHR 70N POLAR Starboard Green	112.5°	3 N.M.	COLREG'72-RMRS
7711200	DHR 70N POLAR Port Side Red	112.5°	3 N.M.	COLREG'72-RMRS
7711300	DHR 70N POLAR Masthead White	225°	6 N.M.	COLREG'72-RMRS
7711400	DHR 70N POLAR Stern White	135°	3 N.M.	COLREG'72-RMRS
7711417	DHR 70N POLAR Stern Red	135°	3 N.M.	COLREG'72-RMRS
7711500	DHR 70N POLAR Towing Yellow	N.A.	3 N.M.	Suez Canal
7711600	DHR 70N POLAR All-Round White	360°	3 N.M.	COLREG'72-RMRS
7711610	DHR 70N POLAR All-round Manouvring White	360°	6 N.M.	COLREG'72 RMRS
7711700	DHR 70N POLAR All-round Red	360°	3 N.M.	COLREG'72-RMRS
7711800	DHR 70N POLAR All-round Green	360°	3 N.M.	COLREG'72-RMRS
7711900	DHR 70N POLAR All-round Yellow	360°	3 N.M.	COLREG'72-RMRS
7711417	DHR 70N POLAR Suez light Red	135°	3 N.M.	COLREG'72-RMRS
7711601	DHR 70N POLAR All-round White	180°	3 N.M.	COLREG'72-RMRS
7711701	DHR 70N POLAR All-round Red	180°	3 N.M.	COLREG'72-RMRS
7711801	DHR 70N POLAR All-round Green	180°	3 N.M.	COLREG'72-RMRS
7711901	DHR 70N POLAR All-round Yellow	180°	3 N.M.	COLREG'72-RMRS
7711417	DHR 70N POLAR Red stopping flash	135°	3 N.M.	N.A
7711790	DHR 70N POLAR All-round Red flash	360°	3 N.M.	N.A.
7711890	DHR 70N POLAR All-round green flash	360°	3 N.M.	N.A.

Navigation Lights DHR

Navigation lights DHR type 80LED

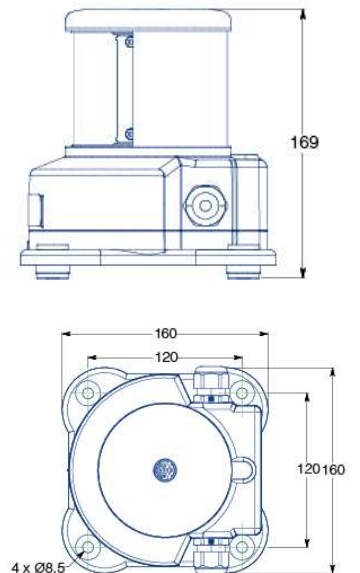
Application: Sea-going vessels less than 50 meter in length
 The use of automotive LED's and high quality components assures the most robust and durable product in its class.
 Interference noise does not occur.
 Life time over 50.000 hours reduces maintenance costs to a minimum.
 Materials: black hard anodised seawater resistant aluminum. POM base to prevent galvanic corrosion. Borosilicate glass lens.
 Epoxy potted LED driver for maximum protection.
 Cable entry: Two cable glands M20x1.5 for cable diameter 6-9mm.
 Weight: Sector lights and 180° screened lights 3.5kg All-round lights 3.4kg
 Approval: MED 2014/90/EU, RMRS, USCG.
 Visibility: 3 to 6 N.M.
 Base mounting. Spare LED kits available.
 Protection Class: IP66.
For voltage 24 Vdc -20% +30%, electrical insulation class I, (grounded) III.
 Ambient temperatures -30°C to +55°C (MED).



Article No.	Description	Radius	Min. visibility	Approval
77800100	DHR 80LED Starboard Green 3W	112.5°	3 N.M.	COLREG Annex I/14
77800200	DHR 80LED Port Side Red 4.5W	112.5°	3 N.M.	COLREG Annex I/14
77800300	DHR 80LED Masthead White 16W	225°	6 N.M.	COLREG Annex I/14
77800400	DHR 80LED Stern White 3W	135°	3 N.M.	COLREG Annex I/14
77800409	DHR 80LED Towing Yellow 4.5W	135°	3 N.M.	COLREG Annex I/14
77800407	DHR 80LED Stern Suez light 4.5W	135°	3 N.M.	COLREG Annex I/14
77800600	DHR 80LED All-Round White 3W	360°	3 N.M.	COLREG Annex I/14
77800610	DHR 80LED All-round Manouvring White 10W	360°	5 N.M.	COLREG Annex I/14
77800700	DHR 80LED All-round Red 4.5W	360°	3 N.M.	COLREG Annex I/14
77800800	DHR 80LED All-round Green 3W	360°	3 N.M.	COLREG Annex I/14
77800900	DHR 80LED All-round Yellow 4.5W	360°	3 N.M.	COLREG Annex I/14
77801000	DHR 80LED All-round Blue 3W	360°	2 N.M.	COLREG Annex I/14
77800601	DHR 80LED Screened White 3W	180°	3 N.M.	COLREG Annex I/14
77800701	DHR 80LED Screened Red 4.5W	180°	3 N.M.	COLREG Annex I/14
77800801	DHR 80LED Screened Green 3W	180°	3 N.M.	COLREG Annex I/14
77800901	DHR 80LED Screened Yellow 4.5W	180°	3 N.M.	COLREG Annex I/14

Navigation lights DHR type 60LED

Application: Sea-going vessels from 20 to 50 meter in length and inland vessels from 20 meters and longer.
 The use of automotive LED's and high quality components assures the most robust and durable product in its class. Interference noise does not occur.
 Life time over 50.000 hours reduces maintenance costs to a minimum.
 Materials: black hard anodised seawater resistant aluminum. POM base to prevent galvanic corrosion. Borosilicate glass lens.
 Epoxy potted LED driver for maximum protection.
 Cable entry: Two cable glands M20x1.5 for cable diameter 6-9mm.
 Weight: 2.1 kg.
 Approval: MED 2014/90/EU, USCG.
 Visibility: 2 to 5 N.M.
 Base mounting. Spare LED kits available.
 Protection Class: IP X6.
For voltage 24 Vdc -20% +30%, electrical insulation class I, (grounded) III.
 Ambient temperatures -30°C to +55°C (MED).



Article No.	Description	Radius	Min. visibility	Approval
77600100	DHR 60LED Starboard Green 3W	112.5°	2 N.M.	COLREG Annex I/14
77600200	DHR 60LED Port Side Red 4.5W	112.5°	2 N.M.	COLREG Annex I/14
77600300	DHR 60LED Masthead White 8.5W	225°	5 N.M.	COLREG Annex I/14
77600400	DHR 60LED Stern White 3W	135°	2 N.M.	COLREG Annex I/14
77600409	DHR 60LED Towing Yellow 3W	135°	2 N.M.	COLREG Annex I/14
77600410	DHR 60LED Convoy light Blue 3W	135°	1 N.M.	COLREG Annex I/14
77600407	DHR 60LED Stern Suez light 4.5W	135°	2 N.M.	COLREG Annex I/14
77600600	DHR 60LED All-Round White 3W	360°	2 N.M.	COLREG Annex I/14
77600610	DHR 60LED All-round Manouvring White 9W	360°	5 N.M.	COLREG Annex I/14
77600700	DHR 60LED All-round Red 4.5W	360°	2 N.M.	COLREG Annex I/14
77600800	DHR 60LED All-round Green 3W	360°	2 N.M.	COLREG Annex I/14
77600900	DHR 60LED All-round Yellow 4.5W	360°	2 N.M.	COLREG Annex I/14
77601000	DHR 60LED All-round Blue 3W	360°	1 N.M.	COLREG Annex I/14
77600601	DHR 60LED Screened White 3W	180°	3 N.M.	COLREG Annex I/14
77600701	DHR 60LED Screened Red 4.5W	180°	3 N.M.	COLREG Annex I/14
77600801	DHR 60LED Screened Green 3W	180°	3 N.M.	COLREG Annex I/14
77600901	DHR 60LED Screened Yellow 4.5W	180°	3 N.M.	COLREG Annex I/14

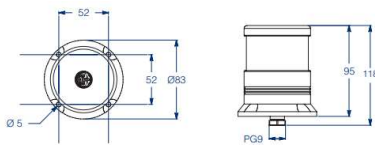
Navigation lights DHR type 40LED

The most compact navigation light with LED technology. Ideally suited for small boats and agile vessels, because of its excellent visibility characteristics at high vertical angles.
 Base and side mounting models for all sea-going vessels of more than 12m in length but less than 50m.
 As navigation light for all vessels in Rhine and European inland navigation. As general signalling light for all types of sea-going vessels with a length up to 50m.
 As general signalling light for all vessels in Rhine and European inland navigation.
 Availability of a flashing option.
 The use of automotive LED's and high quality components assures the most robust and durable product in its class.
 Interference noise does not occur.
 Life time over 50.000 hours reduces maintenance costs to a minimum.
 The DHR 40LED is available with base, side mounting, hoistable.
 Materials: black hard anodised seawater resistant aluminum.
 POM base to prevent galvanic corrosion.
 Borosilicate glass lens.
 Epoxy potted LED driver for maximum protection.
 Cable entry: cable gland PG9 for cable diameter 4-8mm. Membrane vent.
 Weight: 0.5 kg.
 Approval: MED 2014/90/EU, USCG.
 Visibility: 2 to 3 N.M.
 Protection Class: IP66. **For voltage 24 Vdc -20% +30%**, electrical insulation class III, extra low voltage (SELV).
 Ambient temperatures -25°C to +55°C (MED).

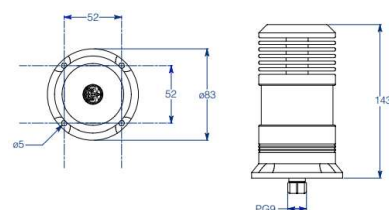


Article No.	Description	Radius	Mounting	Min. visibility	Approval
77400100	DHR 40LED Starboard Green 4.2W	112.5°	Base	2 N.M.	Wheelmark/UL1104
77400200	DHR 40LED Port Side Red 3.2W	112.5°	Base	2 N.M.	Wheelmark/UL1104
77400300	DHR 40LED Masthead White 4.1W	225°	Base	3 N.M.	Wheelmark/UL1104
77400310	DHR 40LED Masthead Intense 11.4W	225°	Base	5 N.M.	UL1104 pending
77400400	DHR 40LED Stern White 4.1W	135°	Base	2 N.M.	Wheelmark/UL1104
77400409	DHR 40LED Towing Yellow 3.1W	135°	Base	2 N.M.	Wheelmark/UL1104
77401005	DHR 40LED Panama Steering 4.1W	135°	Base	N.A.	N.A.
77400101	DHR 40LED Starboard Green 4.2W	112.5°	Side	2 N.M.	Wheelmark/UL1104
77400201	DHR 40LED Port Side Red 3.2W	112.5°	Side	2 N.M.	Wheelmark/UL1104
77400301	DHR 40LED Masthead White 4.1W	225°	Side	3 N.M.	Wheelmark/UL1104
77400401	DHR 40LED Stern White 4.1W	135°	Side	2 N.M.	UL1104 Pending
77400491	DHR 40LED Towing Yellow 3.1W	135°	Side	2 N.M.	Wheelmark/UL1104
77400600	DHR 40LED All-round White 4.1W	360°	Base	2 N.M.	Wheelmark/UL1104
77400700	DHR 40LED All-round Red 3.2W	360°	Base	2 N.M.	Wheelmark/UL1104
77400800	DHR 40LED All-round Green 4.2W	360°	Base	2 N.M.	Wheelmark/UL1104
77400900	DHR 40LED All-round Yellow 3.1W	360°	Base	2 N.M.	Wheelmark/UL1104
77401000	DHR 40LED All-round Blue 4.1W	360°	Base	1 N.M.	Wheelmark
77400603	DHR 40LED All-round White 4.1W	360°	Hoistable	2 N.M.	Wheelmark/UL1104
77400703	DHR 40LED All-round Red 3.2W	360°	Hoistable	2 N.M.	Wheelmark/UL1104
77400803	DHR 40LED All-round Green 4.2W	360°	Hoistable	2 N.M.	Wheelmark/UL1104
77400903	DHR 40LED All-round Yellow 3.1W	360°	Hoistable	2 N.M.	Wheelmark/UL1104
77401003	DHR 40LED All-round Blue 4.1W	360°	Hoistable	1 N.M.	Wheelmark
77400602	DHR 40LED All-round White 4.1W	360°	Retrofit	-	Wheelmark
77400702	DHR 40LED All-round Red 3.2W	360°	Retrofit	-	Wheelmark
77400802	DHR 40LED All-round Green 4.2W	360°	Retrofit	-	Wheelmark
77400902	DHR 40LED All-round Yellow 3.1W	360°	Retrofit	-	Wheelmark
77401002	DHR 40LED All-round Blue 4.1W	360°	Retrofit	-	Wheelmark

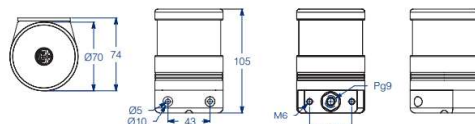
Dimensions Base mounting in mm.



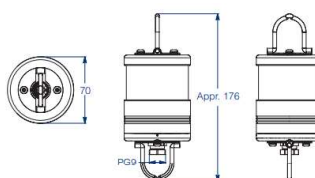
Dimensions Base mounting 5N.M. in mm.



Dimensions Side mounting in mm.



Dimensions Hoistable in mm.



Navigation Lights Control panels DHR

Navigation lights Control panel NLS3000

NLS 3000 is an easy to use navigation lantern control and monitoring system, with up to 48 channels which is type approved by DNV-GL. It can alternatively be operated with power supplies 24Vdc, 115Vac or 230Vac. Function keys allow standard settings such as "at sea", "at anchor", "Ram" or "Reversal of heading" to be activated by a single button or even automatically by an external contact. Due to the modular concept a versatile application according to the requirements on board is possible. The lantern modules can be mounted either in a central control cabinet or in the vicinity of the respective lanterns.

Up to two conventional and/or graphical control panels can be connected to control and monitor the lantern status. A terminal box then contains the in- and output terminals as well as the power supply module with the automatic main/emergency switch-over. The dimensions of the terminal box are according to the equipment. Equipped with potential free alarm contacts the connection of external sirens or the activation of external alarm systems are possible.

As optional modules are available NMEA 0183 interface to VDR and a Modbus-RTU interface used for external control and monitoring e.g. by the ship's automation system.

Available with 8, 16, 24, 32, 40 or 48 outputs

Application: To operate LED or incandescent bulb navigation lights.

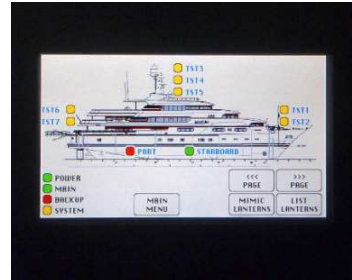
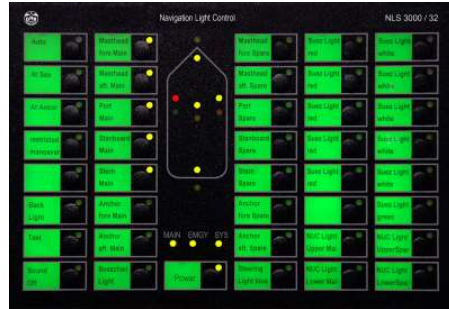
Protection: Frontside IP44

Features: Dimmable illuminated push-buttons, Optional with a graphic touch screen, Optional connection to VDR (NMEA 0183)

Size: 112x144x60mm WxHxD

Voltage: 24Vdc or 115/230Vac

Color: Black, anti glare finish.



Width	120mm	
Height	95mm	
Depth	50mm (±130mm with connector)	
Mounting Method	Front Panel Mounting	
Weight	0.4 kg	
Connection NLS Bus in	15-pin Dsub Male	JP1
Connection NLS Bus out	15-pin Dsub Female	JPT1
Supply	24VDC (from NLS Bus)	
Power consumption	0.3A	

Navigation lights Control panel NLCS

To operate LED or incandescent bulb navigation lights. (19 ~32VDC Max 60W).

Features: Each lamp has its own on/off button.

A number of lamps can be grouped together for simultaneous on/off control.

Spare lamp is automatically activated in case of failure main lamp.

Main and back-up power supply indication.

USB port to upload configuration.

Ethernet port to connect to other Mega-guard operator panels.

Dimming push-buttons.

Versions: There are two versions of the NCLS Mega-guard system.

The TFT Display version and the push-button version.

Both are connected with an I/O module which has output for main and spare lamps.

Approval: Meets ColReg'72 Requirements.

Type approval Lloyd's Register and BV.

TFT-NLCS: 8.4" TFT Screen with 12 corresponding buttons

Size 240x160mm, flush panel mounting, supports up to 48 lamps with 4 I/O Modules

Push-Button NLCS: Panel with 12 push-buttons and navigation mast.

Size 144x144mm, flush panel mounting, support up to 12 lamps with I/O Module.

I/O Module: Size 127x198x29mm (WxHxD).

Support 12 Navigation lights main output, 12 navigation lights spare output, LED or incandescent bulb (19~32VDC Max 60W).

Switches: 12 manual switches with 3 positions; Main lamp On, Remote or Spare lamp On.

In Remote position the navigation lights are controlled by the NLCS.
Power: Main power input: 19~32VDC, Back-up power input: 19~32VDC, Power output 19~32VDC (Connect with te NLCS).

Wiring: Connects with the 3 or 5 meter long I/O cable to the NLCS.

Mounting: DIN-rail mounting, I/O module needs to be installed in a cabinet.

The Module needs to be mounted so it can be reached without using tools in order to fulfill class requirements.

