



K2WLIGHTSMARITIM

LED Navigationlights Serie S64

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LED Navigationlights S64

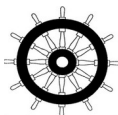
More light, less energy consumption

The small things make the difference

The LED-Navigation lights Series S64 from K2W Lights are leading the market in both rivers and oceans. With its small size and its extremely low energy consumption, the product is adequate not only for professional vessels but also for small boats and yachts with smaller battery capacity. Due to high performance LED, all our navigation lights develop nautical reach of over two or three nautical miles, while the masthead light can reach even five or six nautical miles.



Our navigation lights S64 have been tested, approved and certified by DNV according to the EU and UK regulations. It corresponds in range, beam angle and colors to the international requirements of the COLREG 1972.



0098



0097

The Series S64 belongs to the most efficient navigation lights of the market, and also the most robust and durable. Here the clients can choose between the two versions "Standard" and "Base", and also the two materials hard anodized aluminum or bronze. If you did not find a navigation lamp that suits your application, do not hesitate to contact us, we also deliver unique designs.

Standard - Seawater resistant aluminium with hard anodized coating;

Classic - Body in bronze, a beautiful design made of noble materials;

Base - For direct installation over horizontal surfaces;

Base Bronze - The classic version of the base lamp.

Double lanterns are available for vessels over 50m.

Navigation lights of the Series S64 are also available in explosion protected version and therefore also applicable in Zones 2 and 22.

Ex classification:






















II 3G EX ec IIC T4 Gc X



II 3D Ex tc IIC T130 °C Dc X

S64 Standard for vessels up to 50 m






















Type (Item-No.)	Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (100.01)	 330	0,8	2	64 / 54	12 / 24
Starboard (101.02)	 330	0,7	2	64 / 54	12 / 24
Stern (102.00)	 330	0,7	2	64 / 54	12 / 24
Stern Suez red (102.01)	 330	2,1	3	64 / 54	12 / 24
Stern Kiel canal green (102.02)	 330	1,7	3	64 / 54	12 / 24
Towing yellow (102.03)	 330	0,7	2	64 / 54	12 / 24
Masthead 3 nm (103.00)**	 310	1,8	3	64 / 54	12 / 24
Masthead 5 nm (104.00)	 310	5	5	64 / 54	24
All-round, white (105.00)	 300	1	2	64 / 54	12 / 24
All-round, red (105.01)	 300	1,1	2	64 / 54	12 / 24
All-round, green (105.02)	 300	1	2	64 / 54	12 / 24
All-round, yellow (105.03)	 300	1	2	64 / 54	12 / 24
Signal light, white, 180° (105.00-180)	 370	0,9	2	64 / 54	12 / 24
Signal light, red, 180° (105.01-180)	 370	1	2	64 / 54	12 / 24
Signal light, green, 180° (105.02-180)	 370	0,9	2	64 / 54	12 / 24
Signal light, yellow, 180° (105.03-180)	 370	0,9	2	64 / 54	12 / 24
Bicolor (106.08)**	 330	1,2	2	64 / 54	12 / 24
Tricolor (107.08)**	 330	1,6	2	64 / 54	12 / 24
Tricolor / Anchor (108.08)**	 330	1,6/1,2	2	64 / 54	12 / 24

* Voltage tolerance +/-10%, short-term 20%

** for vessel up to 20 m

S64 Base for vessels up to 50 m



Type (Item-No.)	Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (130.01)	 480	0,8	2	64 / 65	12 / 24
Starboard (131.02)	 480	0,7	2	64 / 65	12 / 24
Stern (132.00)	 480	0,7	2	64 / 65	12 / 24
Stern Suez red (132.01)	 480	2,1	3	64 / 65	12 / 24
Stern Kiel canal green (132.02)	 480	1,7	3	64 / 65	12 / 24
Towing yellow (132.03)	 480	0,7	2	64 / 65	12 / 24
Masthead 3 nm (133.00)**	 460	1,8	3	64 / 65	12 / 24
Masthead 5 nm (134.00)	 460	5	5	64 / 65	24
All-round, white (135.00)	 450	1	2	64 / 65	12 / 24
All-round, red (135.01)	 450	1,1	2	64 / 65	12 / 24
All-round, green (135.02)	 450	1	2	64 / 65	12 / 24
All-round, yellow (135.03)	 450	1	2	64 / 65	12 / 24
Signal light, white, 180° (135.00-180)	 520	0,9	2	64 / 65	12 / 24
Signal light, red, 180° (135.01-180)	 520	1	2	64 / 65	12 / 24
Signal light, green, 180° (135.02-180)	 520	0,9	2	64 / 65	12 / 24
Signal light, yellow, 180° (135.03-180)	 520	0,9	2	64 / 65	12 / 24
Bicolor (136.08)**	 480	1,2	2	64 / 65	12 / 24
Tricolor (137.08)**	 480	1,6	2	64 / 65	12 / 24
Tricolor / Anchor (138.08)**	 480	1,6/1,2	2	64 / 65	12 / 24

* Voltage tolerance +/-10%, short-term 20%

** for vessel up to 20 m

S64 Classic for vessels up to 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (150.01)		540	0,8	2	64 / 54	12 / 24
Starboard (151.02)		540	0,7	2	64 / 54	12 / 24
Stern (152.00)		540	0,7	2	64 / 54	12 / 24
Stern Suez red (152.01)		540	2,1	3	64 / 54	12 / 24
Stern Kiel canal green (152.02)		540	1,7	3	64 / 54	12 / 24
Towing yellow (152.03)		540	0,7	2	64 / 54	12 / 24
Masthead 3 nm (153.00)**		520	1,8	3	64 / 54	12 / 24
Masthead 5 nm (154.00)		520	5	5	64 / 54	24
All-round, white (155.00)		510	1	2	64 / 54	12 / 24
All-round, red (155.01)		510	1,1	2	64 / 54	12 / 24
All-round, green (155.02)		510	1	2	64 / 54	12 / 24
All-round, yellow (155.03)		510	1	2	64 / 54	12 / 24
Signal light, white, 180° (155.00-180)		580	0,9	2	64 / 54	12 / 24
Signal light, red, 180° (155.01-180)		580	1	2	64 / 54	12 / 24
Signal light, green, 180° (155.02-180)		580	0,9	2	64 / 54	12 / 24
Signal light, yellow, 180° (155.03-180)		580	0,9	2	64 / 54	12 / 24
Bicolor (156.08)**		540	1,2	2	64 / 54	12 / 24
Tricolor (157.08)**		540	1,6	2	64 / 54	12 / 24
Tricolor / Anchor (158.08)**		540	1,6/1,2	2	64 / 54	12 / 24

* Voltage tolerance +/-10%, short-term 20%

** for vessel up to 20 m

S64 Base Bronze for vessels up to 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (180.01)		940	0,8	2	64 / 65	12 / 24
Starboard (181.02)		940	0,7	2	64 / 65	12 / 24
Stern (182.00)		940	0,7	2	64 / 65	12 / 24
Stern Suez red (182.01)		940	2,1	3	64 / 65	12 / 24
Stern Kiel canal green (182.02)		940	1,7	3	64 / 65	12 / 24
Towing yellow (182.03)		940	0,7	2	64 / 65	12 / 24
Masthead 3 nm (183.00)**		930	1,8	3	64 / 65	12 / 24
Masthead 5 nm (184.00)		930	5	5	64 / 65	24
All-round, white (185.00)		910	1	2	64 / 65	12 / 24
All-round, red (185.01)		910	1,1	2	64 / 65	12 / 24
All-round, green (185.02)		910	1	2	64 / 65	12 / 24
All-round, yellow (185.03)		910	1	2	64 / 65	12 / 24
Signal light, white, 180° (185.00-180)		980	0,9	2	64 / 65	12 / 24
Signal light, red, 180° (185.01-180)		980	1	2	64 / 65	12 / 24
Signal light, green, 180° (185.02-180)		980	0,9	2	64 / 65	12 / 24
Signal light, yellow, 180° (185.03-180)		980	0,9	2	64 / 65	12 / 24
Bicolor (186.08)**		940	1,2	2	64 / 65	12 / 24
Tricolor (187.08)**		940	1,6	2	64 / 65	12 / 24
Tricolor / Anchor (188.08)**		940	1,6/1,2	2	64 / 65	12 / 24

* Voltage tolerance +/-10%, short-term 20%

** for vessel up to 20 m

S64 Standard for vessels over 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (100.31)		330	1,9	3	64 / 54	24
Starboard (101.32)		330	2,0	3	64 / 54	24
Stern (102.30)		330	1,7	3	64 / 54	24
Stern Suez red (102.31)		330	2,1	3	64 / 54	24
Stern Kiel canal green (102.32)		330	1,7	3	64 / 54	24
Towing yellow (102.33)		330	2,1	3	64 / 54	24
Masthead 6 nm (104.30)		400	9,8	6	64 / 70	24
All-round, white (105.30)		300	2,9	3	64 / 54	24
All-round, red (105.31)		300	3,3	3	64 / 54	24
All-round, green (105.32)		300	3,1	3	64 / 54	24
All-round, yellow (105.33)		300	2,9	3	64 / 54	24
Signal light, white, 180° (105.30-180)		370	2,4	3	64 / 54	24
Signal light, red, 180° (105.31-180)		370	2,8	3	64 / 54	24
Signal light, green, 180° (105.32-180)		370	2,7	3	64 / 54	24
Signal light, yellow, 180° (105.33-180)		370	2,4	3	64 / 54	24
Anchor-manoevre (105.50)		300	4,5	5	64 / 54	24
All-round, white, flash (105.20)		300	2,9	3	64 / 54	24

* Voltage tolerance +/-10%, short-term 20%

S64 Base for vessels over 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC) *
Port (130.31)		480	1,9	3	64 / 65	24
Starboard (131.32)		480	2,0	3	64 / 65	24
Stern (132.30)		480	1,7	3	64 / 65	24
Stern Suez red (132.31)		480	2,1	3	64 / 65	24
Stern Kiel canal green (132.32)		480	1,7	3	64 / 65	24
Towing yellow (132.33)		480	2,1	3	64 / 65	24
Masthead 6 nm (134.30)		550	9,8	6	64 / 81	24
All-round, white (135.30)		450	2,9	3	64 / 65	24
All-round, red (135.31)		450	3,3	3	64 / 65	24
All-round, green (135.32)		450	3,1	3	64 / 65	24
All-round, yellow (135.33)		450	2,9	3	64 / 65	24
Signal light, white, 180° (135.30-180)		520	2,4	3	64 / 65	24
Signal light, red, 180° (135.31-180)		520	2,8	3	64 / 65	24
Signal light, green, 180° (135.32-180)		520	2,7	3	64 / 65	24
Signal light, yellow, 180° (135.33-180)		520	2,4	3	64 / 65	24
Anchor-manoevre (135.50)		450	4,5	5	64 / 65	24
All-round, white, flash (135.20)		450	2,9	3	64 / 65	24

* Voltage tolerance +/-10%, short-term 20%

S64 Classic for vessels over 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (150.31)		540	1,9	3	64 / 54	24
Starboard (151.32)		540	2,0	3	64 / 54	24
Stern (152.30)		540	1,7	3	64 / 54	24
Stern Suez red (152.31)		540	2,1	3	64 / 54	24
Stern Kiel canal green (152.32)		540	1,7	3	64 / 54	24
Towing yellow (152.33)		540	2,1	3	64 / 54	24
Masthead 6 nm (154.30)		890	9,8	6	64 / 70	24
All-round, white (155.30)		510	2,9	3	64 / 54	24
All-round, red (155.31)		510	3,3	3	64 / 54	24
All-round, green (155.32)		510	3,1	3	64 / 54	24
All-round, yellow (155.33)		510	2,9	3	64 / 54	24
Signal light, white, 180° (155.30-180)		580	2,4	3	64 / 54	24
Signal light, red, 180° (155.31-180)		580	2,8	3	64 / 54	24
Signal light, green, 180° (155.32-180)		580	2,7	3	64 / 54	24
Signal light, yellow, 180° (155.33-180)		580	2,4	3	64 / 54	24
Anchor-maneuvre (155.50)		510	4,5	5	64 / 54	24
All-round, white, flash (155.20)		510	2,9	3	64 / 54	24

* Voltage tolerance +/-10%, short-term 20%

S64 Base Bronze for vessels over 50 m



















Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC) *
Port (180.31)		940	1,9	3	64 / 65	24
Starboard (181.32)		940	2,0	3	64 / 65	24
Stern (182.30)		940	1,7	3	64 / 65	24
Stern Suez red (182.31)		940	2,1	3	64 / 65	24
Stern Kiel canal green (182.32)		940	1,7	3	64 / 65	24
Towing yellow (182.33)		940	2,1	3	64 / 65	24
Masthead 6 nm (184.30)		1170	9,8	6	64 / 81	24
All-round, white (185.30)		910	2,9	3	64 / 65	24
All-round, red (185.31)		910	3,3	3	64 / 65	24
All-round, green (185.32)		910	3,1	3	64 / 65	24
All-round, yellow (185.33)		910	2,9	3	64 / 65	24
Signal light, white, 180° (185.30-180)		980	2,4	3	64 / 65	24
Signal light, red, 180° (185.31-180)		980	2,8	3	64 / 65	24
Signal light, green, 180° (185.32-180)		980	2,7	3	64 / 65	24
Signal light, yellow, 180° (185.33-180)		980	2,4	3	64 / 65	24
Anchor-manoevre (185.50)		910	4,5	5	64 / 65	24
All-round, white, flash (185.20)		910	2,9	3	64 / 65	24

* Voltage tolerance +/-10%, short-term 20%

S64 Double Standard for vessels over 50 m


















Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (100.61)		330	1,9	3	64 / 54	24
Starboard (101.62)		330	2,0	3	64 / 54	24
Stern (102.60)		330	1,7	3	64 / 54	24
Stern Suez red (102.61)		330	2,1	3	64 / 54	24
Stern Kiel canal green (102.62)		330	1,7	3	64 / 54	24
Towing yellow (102.63)		330	2,1	3	64 / 54	24
Masthead 6 nm (104.60)		400	9,8	6	64 / 70	24
All-round, white (105.60)		300	2,9	3	64 / 54	24
All-round, red (105.61)		300	3,3	3	64 / 54	24
All-round, green (105.62)		300	3,1	3	64 / 54	24
All-round, yellow (105.63)		300	2,9	3	64 / 54	24
Signal light, white, 180° (105.60-180)		370	2,4	3	64 / 54	24
Signal light, red, 180° (105.61-180)		370	2,8	3	64 / 54	24
Signal light, green, 180° (105.62-180)		370	2,7	3	64 / 54	24
Signal light, yellow, 180° (105.63-180)		370	2,4	3	64 / 54	24

* Voltage tolerance +/-10%, short-term 20%

S64 Double Base for vessels over 50 m


















Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (130.61)		480	1,9	3	64 / 65	24
Starboard (131.62)		480	2,0	3	64 / 65	24
Stern (132.60)		480	1,7	3	64 / 65	24
Stern Suez red (132.61)		480	2,1	3	64 / 65	24
Stern Kiel canal green (132.62)		480	1,7	3	64 / 65	24
Towing yellow (132.63)		480	2,1	3	64 / 65	24
Masthead 6 nm (134.60)		550	9,8	6	64 / 81	24
All-round, white (135.60)		450	2,9	3	64 / 65	24
All-round, red (135.61)		450	3,3	3	64 / 65	24
All-round, green (135.62)		450	3,1	3	64 / 65	24
All-round, yellow (135.63)		450	2,9	3	64 / 65	24
Signal light, white, 180° (135.60-180)		520	2,4	3	64 / 65	24
Signal light, red, 180° (135.61-180)		520	2,8	3	64 / 65	24
Signal light, green, 180° (135.62-180)		520	2,7	3	64 / 65	24
Signal light, yellow, 180° (135.63-180)		520	2,4	3	64 / 65	24

* Voltage tolerance +/-10%, short-term 20%

S64 Double Classic for vessels over 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (150.61)		540	1,9	3	64 / 54	24
Starboard (151.62)		540	2,0	3	64 / 54	24
Stern (152.60)		540	1,7	3	64 / 54	24
Stern Suez red (152.61)		540	2,1	3	64 / 54	24
Stern Kiel canal green (152.62)		540	1,7	3	64 / 54	24
Towing yellow (152.63)		540	2,1	3	64 / 54	24
Masthead 6 nm (154.60)		890	9,8	6	64 / 70	24
All-round, white (155.60)		510	2,9	3	64 / 54	24
All-round, red (155.61)		510	3,3	3	64 / 54	24
All-round, green (155.62)		510	3,1	3	64 / 54	24
All-round, yellow (155.63)		510	2,9	3	64 / 54	24
Signal light, white, 180° (155.60-180)		580	2,4	3	64 / 54	24
Signal light, red, 180° (155.61-180)		580	2,8	3	64 / 54	24
Signal light, green, 180° (155.62-180)		580	2,7	3	64 / 54	24
Signal light, yellow, 180° (155.63-180)		580	2,4	3	64 / 54	24

* Voltage tolerance +/-10%, short-term 20%

S64 Double Base Bronze for vessels over 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (180.61)		940	1,9	3	64 / 65	24
Starboard (181.62)		940	2,0	3	64 / 65	24
Stern (182.60)		940	1,7	3	64 / 65	24
Stern Suez red (182.61)		940	2,1	3	64 / 65	24
Stern Kiel canal green (182.62)		940	1,7	3	64 / 65	24
Towing yellow (182.63)		940	2,1	3	64 / 65	24
Masthead 6 nm (184.60)		1170	9,8	6	64 / 81	24
All-round, white (185.60)		910	2,9	3	64 / 65	24
All-round, red (185.61)		910	3,3	3	64 / 65	24
All-round, green (185.62)		910	3,1	3	64 / 65	24
All-round, yellow (185.63)		910	2,9	3	64 / 65	24
Signal light, white, 180° (185.60-180)		980	2,4	3	64 / 65	24
Signal light, red, 180° (185.61-180)		980	2,8	3	64 / 65	24
Signal light, green, 180° (185.62-180)		980	2,7	3	64 / 65	24
Signal light, yellow, 180° (185.63-180)		980	2,4	3	64 / 65	24

* Voltage tolerance +/-10%, short-term 20%



S64 Base explosion protected for vessels over 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC)*
Port (130.31ex)		480	1,9	3	64 / 65	24
Starboard (131.32ex)		480	2,0	3	64 / 65	24
Stern (132.30ex)		480	1,7	3	64 / 65	24
Stern Suez red (132.31ex)		480	2,1	3	64 / 65	24
Stern Kiel canal green (132.32ex)		480	1,7	3	64 / 65	24
Stern Towing yellow (132.33ex)		480	1,8	3	64 / 65	24
Masthead 6 nm (134.30ex)		550	9,8	6	64 / 81	24
All-round, white (135.30ex)		450	2,9	3	64 / 65	24
All-round, red (135.31ex)		450	3,3	3	64 / 65	24
All-round, green (135.32ex)		450	3,1	3	64 / 65	24
All-round, yellow (135.33ex)		450	2,9	3	64 / 65	24
Signal light, white, 180° (135.30-180ex)		520	2,4	3	64 / 65	24
Signal light, red, 180° (135.31-180ex)		520	2,8	3	64 / 65	24
Signal light, green, 180° (135.32-180ex)		520	2,7	3	64 / 65	24
Signal light, yellow, 180° (135.33-180ex)		520	2,4	3	64 / 65	24
Anchor-manoevre (135.50ex)		450	4,5	5	64 / 65	24
All-round, white, flash (135.20ex)		450	2,9	3	64 / 65	24

* Voltage tolerance +/-10%, short-term 20%

Ex classification:



II 3G Ex ec IIC T4 Gc X
II 3D Ex tc IIC T130 °C Dc X



S64 Double Base explosion protected for vessels over 50 m



Type (Item-No.)		Weight (g)	Energy consumption (W)	Visibility (nm)	Diameter / Height (mm)	Voltage (V DC) *
Port (130.61ex)		480	1,9	3	64 / 65	24
Starboard (131.62ex)		480	2,0	3	64 / 65	24
Stern (132.60ex)		480	1,7	3	64 / 65	24
Stern Suez red (132.61ex)		480	2,1	3	64 / 65	24
Stern Kiel canal green (132.62ex)		480	1,7	3	64 / 65	24
Towing yellow (132.63ex)		480	2,1	3	64 / 65	24
Masthead 6 nm (134.60ex)		550	9,8	6	64 / 81	24
All-round, white (135.60ex)		450	2,9	3	64 / 65	24
All-round, red (135.61ex)		450	3,3	3	64 / 65	24
All-round, green (135.62ex)		450	3,1	3	64 / 65	24
All-round, yellow (135.63ex)		450	2,9	3	64 / 65	24
Signal light, white, 180° (135.60-180ex)		520	2,4	3	64 / 65	24
Signal light, red, 180° (135.61-180ex)		520	2,8	3	64 / 65	24
Signal light, green, 180° (135.62-180ex)		520	2,7	3	64 / 65	24
Signal light, yellow, 180° (135.63-180ex)		520	2,4	3	64 / 65	24

* Voltage tolerance +/-10%, short-term 20%

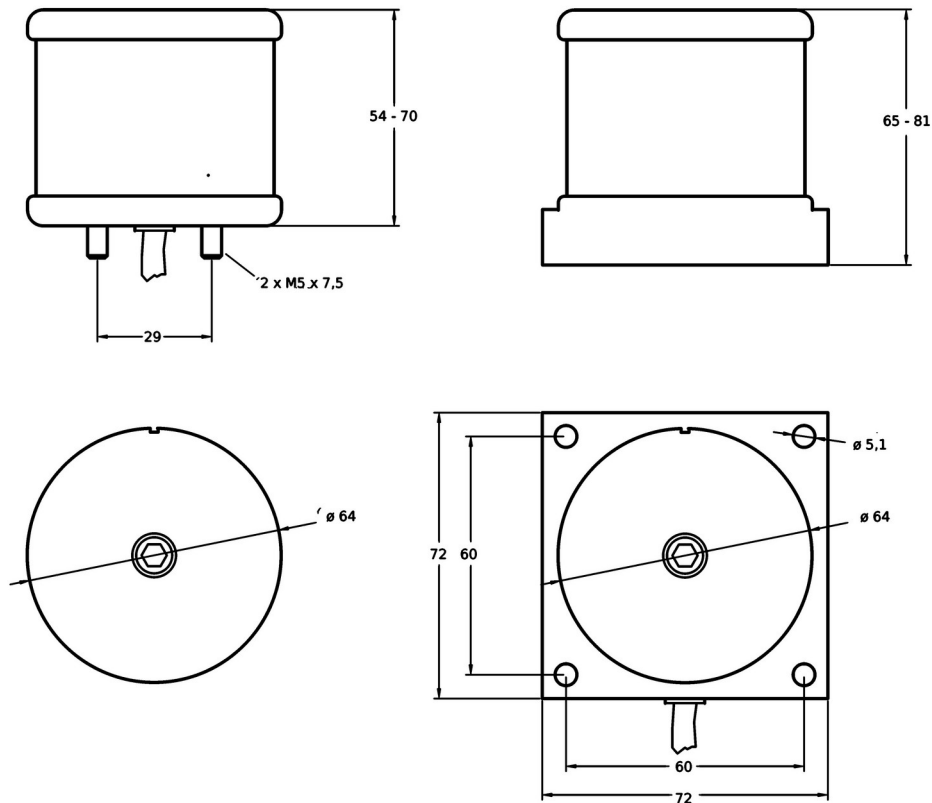
Ex classification:





II 3G Ex ec IIC T4 Gc X
II 3D Ex tc IIC T130 °C Dc X

Dimensions

Height changes for each lamp type
Dimensions in mm



General Technical specifications

light source	High Power LED
operating temperature	-50 °C to 55 °C
storage temperature	-50 °C to 80 °C
life time	> 100.000 h
maintenance	maintenance free
connection	two-core or four-core cable 1 mm ² , about 1,5 m
housing	anodized aluminum borosilicate glass stainless steel A316
protection class	IP 67 / 68
approvals	 0098  0097

Accessories of the version "Standard"



Lamp holder bow / stern
(960.00-AL)



Lamp holder starboard side
(960.01-AL)



(Lamp holder port side
960.02-AL)



Lamp holder mast
(960.03)



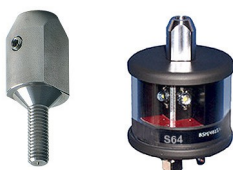
Lamp holder top
(960.04-AL)



Lamp holder mast-combi
(960.05)

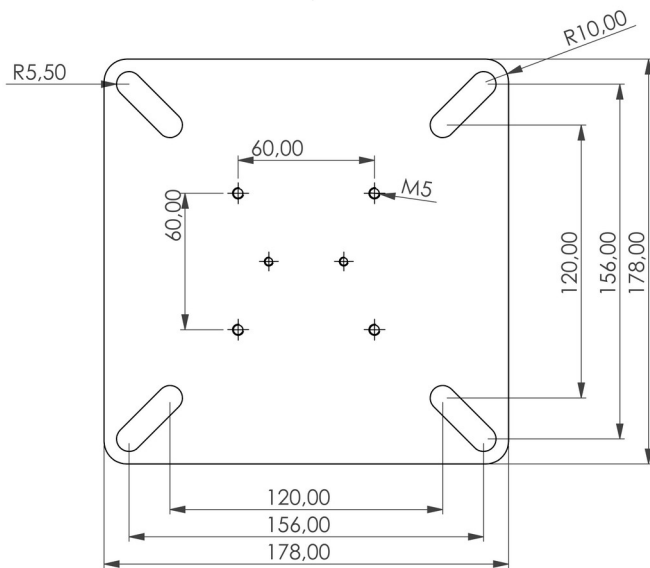


Mast-combi protection
(962.05)



Holder wind adaptor
(962.09)

Acessories of the version "Base"

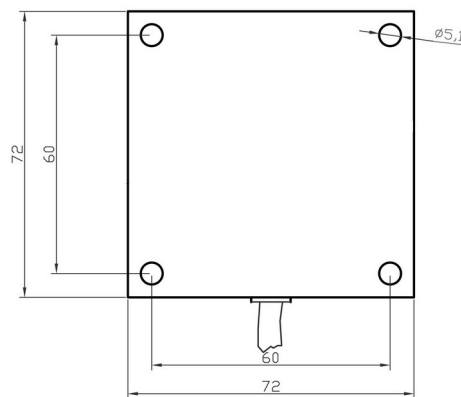


Adapter plate for the "Base" version

Now you can replace your navigation light with the pitch of 120 to 155 mm without tags. The plate is made of hard-anodized aluminum and is 8 mm thick.

(Article 130.97)

Heating platform for "Base" version




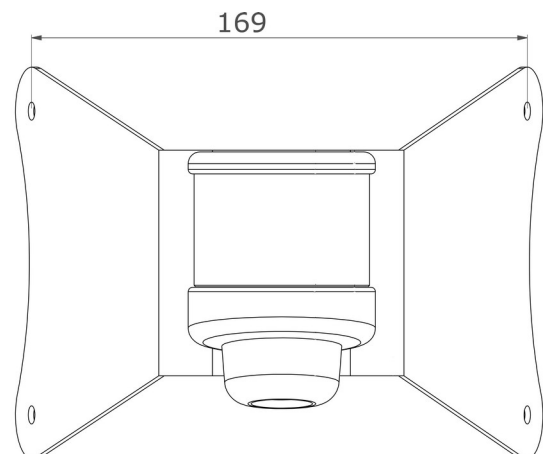
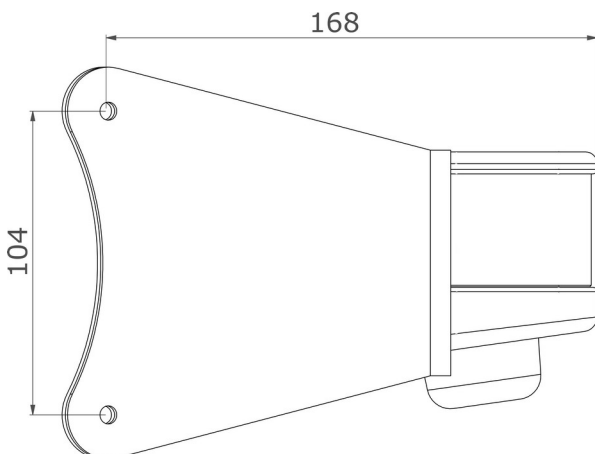
Item	130.99
Length/ Width/ Height	70 mm / 70 mm / 17 mm
Weight	190 g
Nominal voltage	24 V DC
Temperature measurement	PT1000 (brown, blue wire)
Energy consumption	24 W (red, black wire)
Operating temperature	-50 °C to 55 °C
Life time	> 60.000 h
Maintenance	maintenance free
Connection	four-core cable 1 mm ² , approx. 1.5 m
Housing	anodized aluminum
Protection class	IP 67 / 68

Combination of lanterns - specially for sailors

We have developed a combination of the LED Navigation light S64 and Spotlights, which is small, robust and efficient. The combination can be delivered with a steamer light with range of 3 and 5 sm (nautical miles) or a double colored sidelight. By default, we also deliver the lamp with 1,5 m cable. If required, we can also deliver a longer cable.



Variant	Topp 3 Combi	Topp 5 Combi	DFS Combi
Item	103.00-com	104.00-com	106.08-com
Range	3 sm	5 sm	2 sm
Angle	225°	225°	2 x 112,5'
Size of the vessel	< 20 m	< 50 m	< 20 m
Power consumption	1,8 W	4,5 W	1,6 W
Brightness navigation light	> 15 cd	> 65 cd	> 5,4 cd
Voltage	11 - 36 V DC	20 - 36 V DC	11 - 36 V DC
Power consumption spotlight	4 W		
Brightness spotlight	2200 cd		
Color temperature spotlight	4.000 K		
Beam angle spotlight	18°		
Light source	High Power LED		
Operating temperature	-50 °C bis 55 °C		
Storage temperature	-50 °C bis 80 °C		
Lifetime	> 100.000 h		
Maintenance	Maintenance free		
Connection	four-wired 1 mm ² , ca. 1.5 m Spotlights (red, black wire) Navigationlights (brown, blue wire)		
Case	anodized aluminium stainless steel steel V4A		
Degree of protection	IP 67 / 68		
Certificate for navigation light	 0098		



S64 General assembly instructions

LED Navigation Lights S64 comply with the International Rules for the Prevention of Collisions of Ships at Sea (COLREG 1972) in terms of the minimum range of visibility, the light intensity of the horizontal and vertical sectors and the color of lights, for ships with length of <20 m, 20-50 m or >50 m range. Correct operation of the LED that meets the norms and requirements of COLREG 1972 is ensured only if certain conditions are fulfilled during the installation and maintenance. A detailed discussion of these conditions is covered in this guide.

Requirements:

According to the rules set out in Appendix 1, COLREG 1972:

- The location and specifications of the LED must be strictly observed.
- The technical requirements related to horizontal and vertical position, as well as the location of the LED set forth in the instructions, must be met for all vessels, regardless of their flag.

General information on the installation of the LEDs:

The Light horizontal planes (A) must be parallel to the waterline (CWL). Light should not be obstructed by parts of the vessel or objects, or by personnel in the vertical sector of $\pm 10^\circ$ and the horizontal sector corresponding to the designation of the LED. Their position relative to the vessel during operation should not change.

Signal-distinctive lanterns of the S64 LED series satisfy the requirements of COLREG 1972 and have a Type Approval Certificate issued by Det Norske Veritas (DNVGL). The approval number and type are indicated by the manufacturer on the product.



S64 Installation instructions masthead

Masthead

The masthead lights should be installed on the keel line of the vessel, at a height of at least 6 m above the hull. If the width of the vessel exceeds 6 m, then the masthead light should be installed at a height equals to its width. However, there is no need to install the masthead at height greater than 12 m in relation to the hull.

If two masthead lights are installed, the one on the back must be at least 4,5 m higher than the one on the front.

For precise installation, see Figure 1.

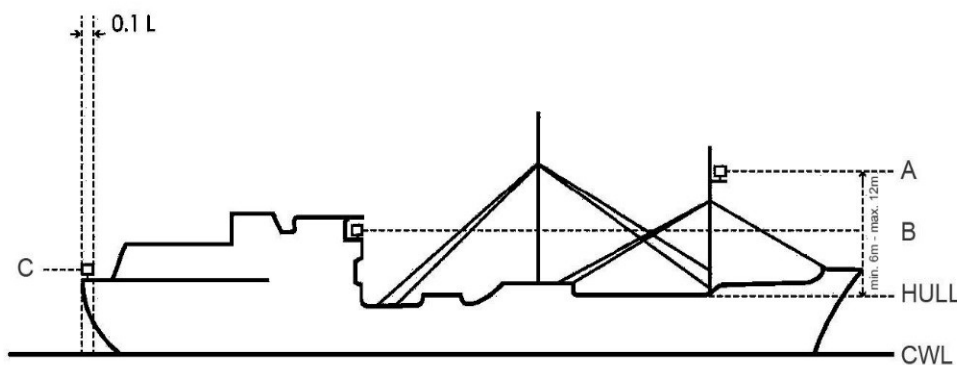


Figure 1

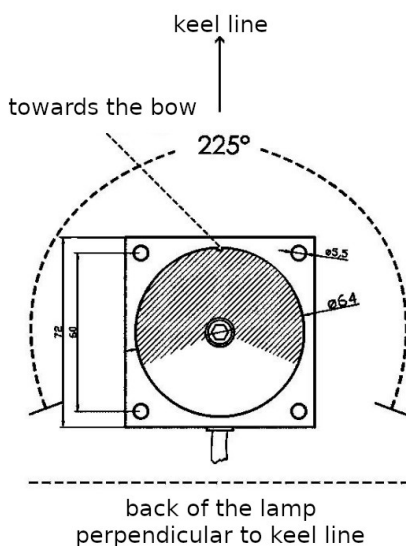


Figure 2

Masthead

When installing the lamp, its horizontal plane (A) should be parallel to the constructive waterline CWL (Fig. 1). The direction mark directly located on the LED (Fig. 3) should be aligned with the keel line of the ship. For accurate installation, see Fig. 2.

S64 Installation instructions of the side and stern lights

Side Lights

In a ship with length of 20 m or more, the side lights must be installed in a height below three quarters of the height of the previous masthead light (B). It also cannot be installed so low that the deck lights interfere with it.

The direction mark directly located on the LED should be aligned parallel to the keel line. For an exact installation see Figure 3. The goal is to ensure that the LED illuminates up to "x" centimeter at distance "a" (bow direction, straight forward). For accurate installation, the illumination threshold "x" should be measured as a function of the distance "a" and the LED angle relative to the bow of the vessel should be precisely adjusted so that the relation shown in the table below between "a" and "x" is respected.

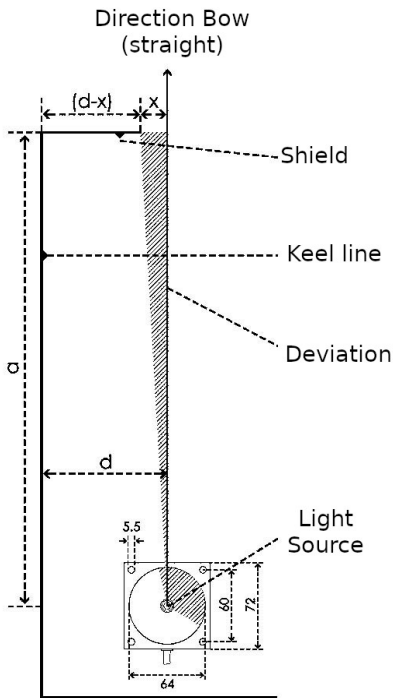
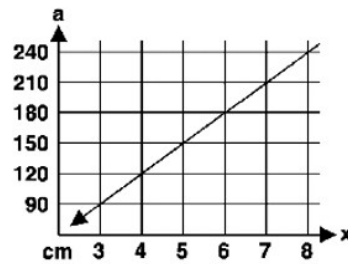


Figure 3



a	x
cm	cm
90	3
120	4
150	5
180	6
210	7
240	8

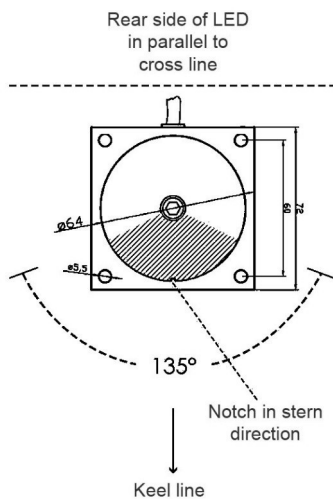
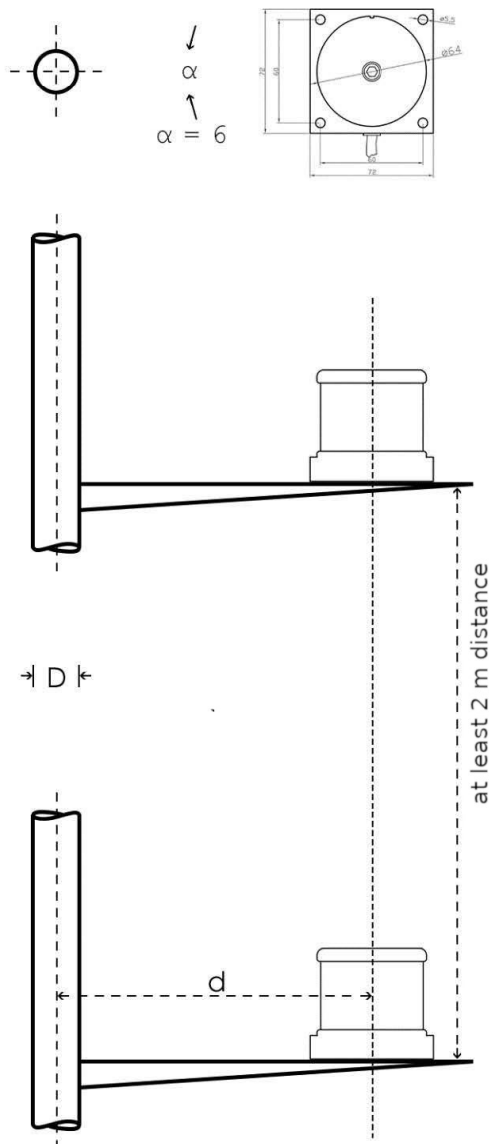


Figure 4

Stern Light

When installing the stern light, its horizontal plane (C) should be parallel to the constructive waterline CWL. The lamp should be installed within 0,1 "L" distance from the vessels stern, with "L" being the length of the Vessel. The direction mark directly located on the LED (Fig. 4) should be aligned with the keel line of the ship. For accurate installation, see Fig. 4.

S64 Installation instructions of signal and morse lights



Signal Lights

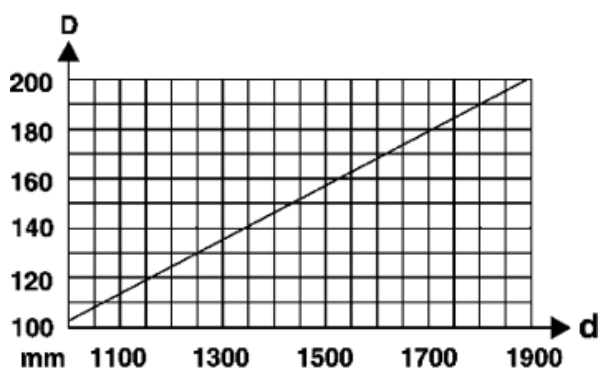
Signal lights can be installed as fixed or as detachable LED. The sector should not be blocked by parts of the vessel. If blocked, ensure that under no circumstances the overlapping sector is greater than 6° . If the overlapping sector is higher than 6° , two signal lights with 180° beam angle can be connected together as one signal light.

Morse Lights

This light must be operated via approved Morse code. The sector should not overlap parts of the vessel. Under no circumstances the overlapping sector should be more than 6° .

Fig. 5 shows the required relation between " d " and " D ", where " d " is the distance from the mast to the center of the LED and " D " is the diameter of the mast.

Two or more white signal lights can be installed in a horizontal line as anchor lights to ensure that at least one of them is visible from any side. By installing two or three Morse Signal Lights, the distance between them should be at least 2 meters.



S64 Installation instructions redundancy with single lamps

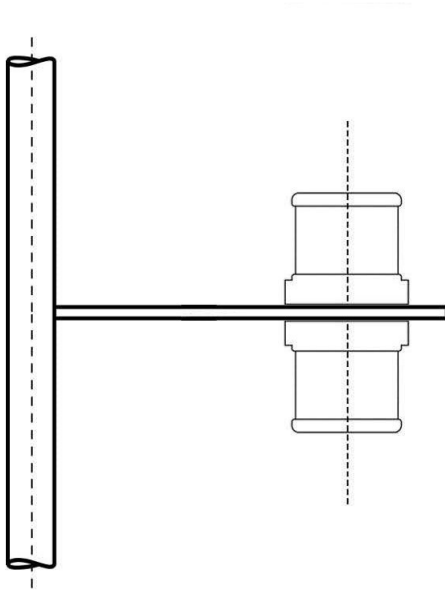


Figure 6

Over head

Two single navigation lamps can be installed replacing one double lamp. This can be useful in certain circumstances. For example, it is possible to install one of them over the head level, as shown in Figure 6. When ordering two single side lamps Port or Starboard, the client should inform within the order that those lamps will be used to replace a double lamp, because the field of view of the lamps should be adjusted for this application.

Maintenance

All parts of the S64-Housing are made of materials resistant to sea water and do not need regular service, except for their periodic cleaning. For cleaning, use fresh water and a soft rag or sponge. The use of solvents, abrasive cleaners, steel brushes or sand is strictly prohibited.

Important!



Avoid contamination of the lens, both from the inside and from the outside, this can affect the characteristics of the LED.

Important!



For proper operation of the LED, its body must not be painted. Paint should not fall on lens or on other part of the housing.

Warranty

Warranty Terms

Warranty obligations apply to all products of the company and are valid for five years from the date of its sale under the following conditions:

- The products were transported, stored, assembled and operated in compliance with the manufacturer's requirements set forth in the product passport, technical specifications, installation and operation instructions, delivery conditions, technical operation rules for electrical installations and other rules binding on the parties established additionally under the agreements set by the manufacturer.
- Mounting and installation of products was carried out by specialists with the appropriate qualifications.

Claims for changing the shades of painted surfaces and plastic parts of products during their operation cannot be recognized as warranty cases.

Warranty Fulfillment

If a justified complaint arises, the manufacturer accepts the defective product for a technical examination and decision making on the complaint. In a period exceeding the warranty, the company reserves the right to consider or not complaints and subsequent replacement or compensation for equipment that do not meet the technical parameters.

Warranty Claims

Claims (Complaints) for the product warranty are to be presented within the warranty period. The claim is presented to the manufacturer directly or through the distributor.



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