

SV27 Underwater Camera



Introduction:

Congratulations on the purchase of your new underwater camera. Underwater Lights® USA, LLC takes pride in providing well designed, high quality and thoroughly tested products that allow you to “enhance your boating experience”. This product can be installed in your vessel for remote viewing, security and safety.

General Operating Information:

The commercial grade camera used in this product will provide robust and reliable operation under normal operating conditions.

A single video output cable can be connected from the camera junction box to most any television or remote monitor.

The camera can be operated while the vessel is underway.

Depending upon water clarity and lighting conditions, the camera can see up to 12 meters (40 feet).

General Safety Information:

This product is intended for use on fiberglass and wood hulled vessels.

Never try to install or remove product main body from vessel hull while the vessel is in the water (camera proper can be removed).

The camera junction box proper should be kept out of potentially explosive gas environments.

The main body must be electrically joined to the vessels grounding and cathodic protection system to prevent corrosion.

Always disconnect and lock-out power before working on this product.

The operating condition of all product components and electrical cabling should be visually inspected every six months.

Marine growth should be removed from the “viewport” glass using a soft brush for optimum camera performance.

Technical Specifications:

Camera = 520TVL resolution - Pyrex lense - 64° field of view - NTSC video output - Auto focus - Hermetically sealed body

Camera = Operating temperature -10°C (14°F) minimum to +40°C (104°F) maximum - Waterproof to 300 feet (91 meters)

Thru hull fitting glass = Borosilicate glass - 9.5mm (0.38”) thick - 42mm (1.65”) diameter net aperture (viewport)

Thru hull fitting dimensions = 80mm (3.15”) diameter x 144mm (5.67”) long - 1000 grams (2.2 pounds) with camera installed

Thru hull fitting construction = Marine bronze - Black delrin

Camera junction box dimensions = 149mm (5.87”) long x 65mm (2.56”) wide x 55mm (2.17”) tall - 270 grams (0.6 pounds)

Camera junction box power = 12VDC nominal (7-14VDC range) - 300mA nominal (1 Amp maximum)

Troubleshooting:

Please contact our technical support staff in Florida at 1-954-760-4447, Monday to Friday from 8:00 am to 5:00 pm EST.

Warranty:

Underwater Lights® USA, LLC warrants this product to be free from defects in workmanship and materials for a period of one year from the date of original purchase. Further, misuse, abuse, improper installation, neglect, improper shipping, damage caused by disasters such as fire, flood and lightning, unauthorized repair or modifications will void said warranty. Should your product prove defective during the warranty period, promptly contact Underwater Lights® USA, LLC for an RMA number and then return the product freight prepaid with the RMA number clearly marked on the outside of the shipping container.

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DOC:020606-2

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Installation:

This product should be installed at least 152mm (6") below the water line by qualified/approved personnel using proper tools and materials. The minimum hull thickness is 10mm (0.4") and maximum is 70mm (2.75") with an access area of at least 100mm (3.9") left behind the product for camera access.

After selecting a flat surface, cut a 60mm (2-3/8") diameter hole through the vessel hull in the desired location. Caution! Check that no electrical wiring, fuel lines, oil lines, water lines etc., pass near or through the intended hole location.

Loosen number (12) and remove numbers (6), (5) + (4) from number (1). Carefully coat the Main Body (1), Front Flange (2) and inner surface of above cut hole with 3M 5200 Marine Adhesive or equivalent. Caution! Avoid placing adhesive on main body threads. Note: Exposed inner hole surface must be properly sealed before product installation to prevent potential water intrusion into the hull proper.

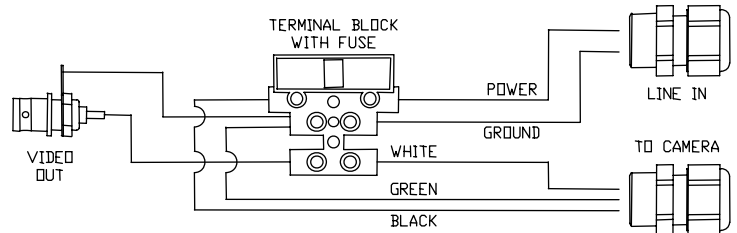
Holding the Front Flange (2), push the product through hull hole, slide the Compression Ring (4) over the Main Body (1) and then tighten the Locking Ring (5) hand tight. Note: Ensure that the tips of all three screws (14) are NOT touching the Compression ring (4). After the 3M 5200 Marine Adhesive is fully cured, tighten the three screws (14) to 9 Nm (7 ft/lb) using a 5mm allen wrench.

Orient and install Camera (15) into Main Body (1), screw Projector Lid (6) onto Main Body (1) hand tight then tighten Cable Strain Relief (12). Upon completing product installation, it is highly recommended that the Front Flange (2) be coated with antifouling paint and a wire lead be connected from the Locking Ring (5) M4 x 0.7 tapped hole to the vessels grounding and cathodic protection system.

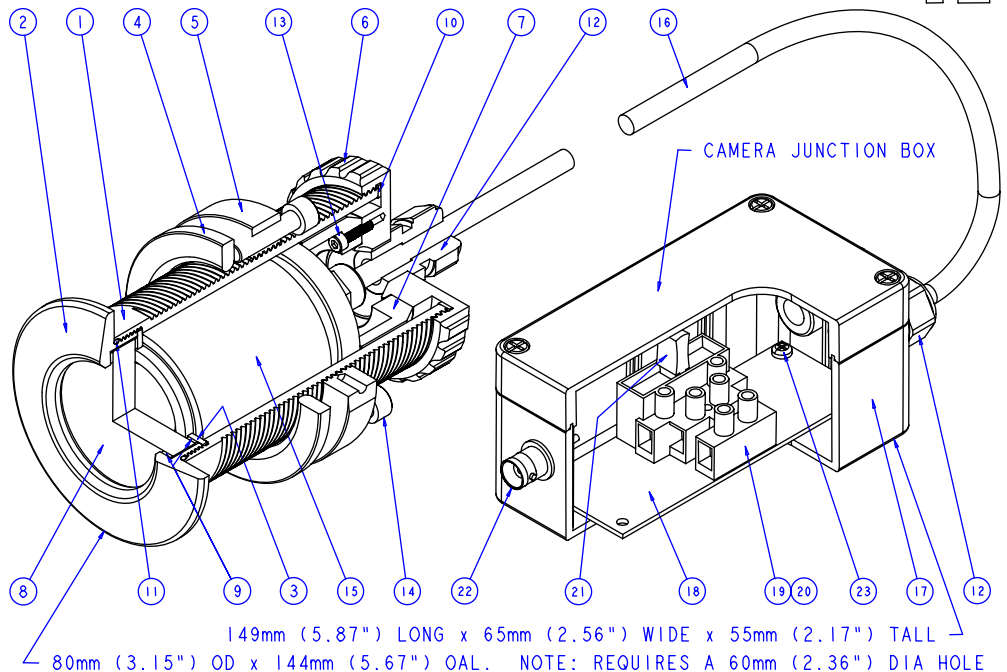
Mount the Camera Junction Box (17) in a dry location and route Camera Cable (16) accordingly. Caution! Avoid making tight bends and/or passing electrical cables over sharp edges/surfaces. Make remaining electrical connections per wiring diagram below.

Serviceable Parts:

Camera replacement is done by loosening (12) unscrewing (6), removing (15) then unscrewing (16) from (15). Reverse said procedure to assemble product and hand tighten (6). Note! Ensure camera is properly oriented "up" and the camera lens is clean. Additionally, Glass (8) and Glass Gasket (9) replacement are not field serviceable on this light.



| MODEL D11A11B99 12VDC | | |
|-----------------------|-------|--------------------------|
| BALLOON | PART | DESCRIPTION |
| 1 | 27002 | MAIN BODY |
| 2 | 27004 | FRONT FLANGE |
| 3 | 27007 | GLASS RETAINING RING |
| 4 | 27009 | COMPRESSION RING |
| 5 | 27012 | LOCKING RING |
| 6 | 27014 | PROJECTOR LID |
| 7 | 27026 | CAMERA SPACER |
| 8 | 27016 | GLASS |
| 9 | 27017 | GLASS GASKET |
| 10 | 27018 | PROJECTOR LID GASKET |
| 11 | 27020 | FRONT FLANGE O-RING |
| 12 | 27021 | CABLE STRAIN RELIEF |
| 13 | 27024 | M3 x 0.5 x 12LG SST SHCS |
| 14 | 27022 | M6 x 1.0 x 25LG SST SHCS |
| 15 | 27025 | CAMERA WITH CABLE |
| 16 | 27035 | CAMERA CABLE ONLY |
| 17 | 27027 | CAMERA JUNCTION BOX |
| 18 | 27028 | MOUNTING PLATE |
| 19 | 27029 | FUSED TERMINAL BLOCK |
| 20 | 27032 | M3.5 x 0.6 x 12LG PPHS |
| 21 | 27030 | FAST BLOW FUSE |
| 22 | 27031 | VIDEO OUT CONNECTOR |
| 23 | 27033 | M3 x 0.5 x 5LG SST PPHS |



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