BLUE SEA SYSTEMS
Marine Electrical Products

Analog DC Ammeter

0-15 Amperes PN 8038
0-25 Amperes PN 8005

Meter Specifications

Input Voltage:	8 Volts DC to 16 Volts DC		
Amperage Draw:	1 Milliamp at full scale		
Display:	Analog scale		
Accuracy:	3% of scale range		
	PN	**Inches**	**Millimeters**
Face Width:	8038	2	50.80
	8005	2-1/2	63.50
Mounting Hole:	8038	1-1/2	38.10
	8005	1-7/8	47.60

Guarantee

Any Blue Sea Systems product with which a customer is not satisfied may be returned for a refund or replacement at any time.

Blue Sea Systems Inc.
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E-mail conduct @ bluesea.com
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Document 9289 Rev.D

Installation

Warning

It is not possible within the scope of these instructions to fully acquaint the installer with all the knowledge of electrical systems that may be necessary to correctly install this product. If the installer is not knowledgeable in electrical systems we recommend that an electrical professional be retained to make the installation.

1. Disconnect all AC and DC power

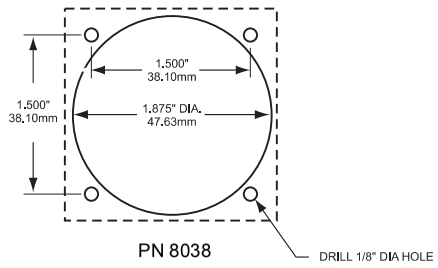
Before starting, disconnect the main positive cable from all batteries to eliminate the possibility of a short circuit while installing the meter. Also disconnect the AC shore power cord from the boat to eliminate the possibility of electrocution from AC wiring near the DC ammeter.

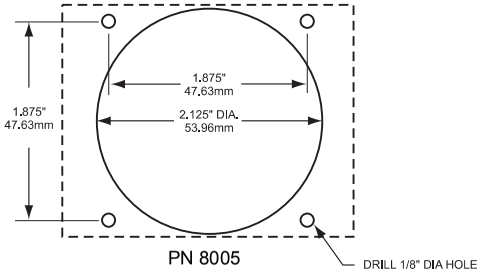
2. Select mounting location

Select a mounting location which is protected from water on the meter front and back and is not in an area where flammable vapors from propane, gasoline or lead acid batteries accumulate. The meter is not ignition protected and may ignite such vapors. There are two mounting methods for the 8038 and 8005 ammeters, surface mount or panel mount.

Installation (continued)

Surface Mount: Drill five clearance holes a shown below. The part number of the meter will determine the size and location of the clearance holes. Use the nuts and washers supplied in the accessory package to secure the four mounting studs to the mounting surface. This method will work on mounting surfaces up to 5/8” thick.





Panel Mount: For thicker mounting surfaces, the meter can be mounted into a 0.125” thick panel. Blue Sea Systems offers meter mounting panels for our standard size meters only. For part number 8005 use part number 8013 to mount a single meter or part number 8014 to mount two meters.

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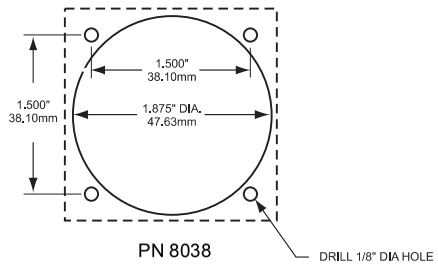

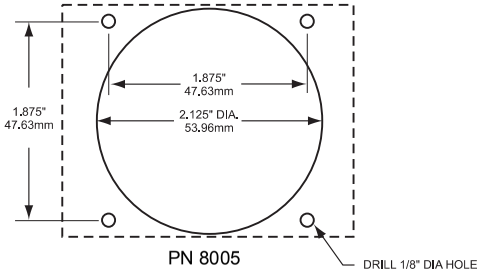

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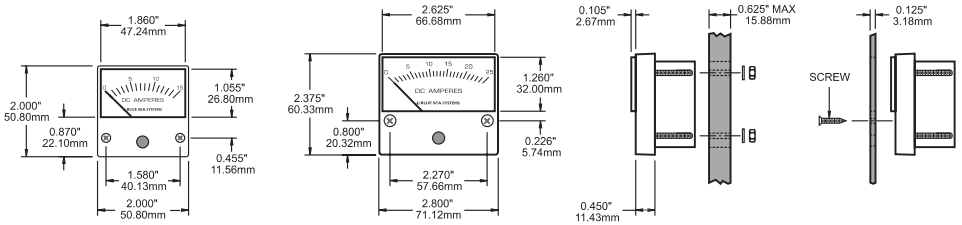


3. Wire Selection

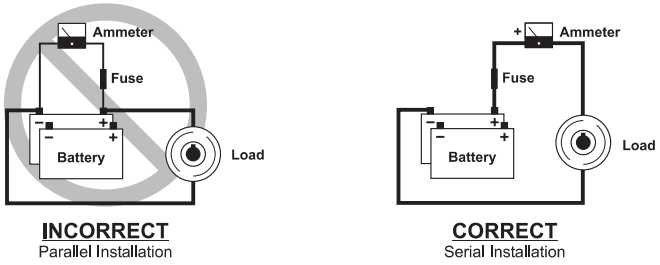
The 8005 and 8038 ammeters utilize an internal shunt as their current sensing device. The nature of current measurement is that the full current to be measured must flow through the sensing device. Therefore it is necessary to run wire to the meter of sufficient size to carry the current to be measured. The wire size will vary depending on the total distance of the wire run, the TOTAL length of the positive and negative wires. There must be a fuse or circuit breaker in the positive wire lead to the meter. Choose a wire and fuse based on the table below.

Wire Run (Feet)	10	15	20	25	30	35	40	50	60	70	80
Wire Size (AWG)	10	10	8	6	6	6	4	4	2	2	2
Maximum Fuse (A)*	60	60	80	120	120	120	160	160	210	210	210

* These maximum allowable fuse sizes (Maximum allowable wire amperages) are for wires outside of engine spaces. Wires inside engine spaces have a maximum allowable wire amperage of 15% less, therefore maximum allowable fuse sizes must be reduced by 15%.

4. Connection

Notice the difference between a serial connection and a parallel connection in the diagram below. Internal shunt ammeters are mounted in a serial configuration.



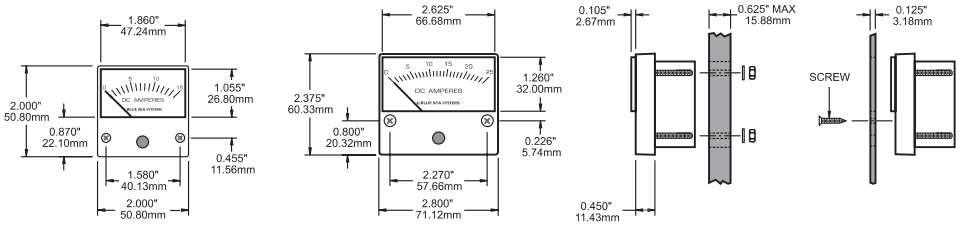
Choose the site in the circuit to be measured where the meter is to be installed. It may be either in the positive or negative side of the circuit.

Break the circuit at this point and install the meter. Be certain to attach the wire end nearest the positive side of the circuit to the meter terminal marked + (positive). Attach the wire nearest the negative side of the circuit to the meter terminal marked - (negative)

5. Calibration

The 8005 and 8038 ammeters are calibrated at the factory and recalibration should never be necessary. However, if adjustment does become necessary the needle may be reset to the zero mark. In the center of the black area on the meter front is an adjustment screw. This screw activates a small cam that deflects the meter needle slightly to adjust the needle position. Using a small screw driver, turn the screw no more than 90 degrees right or left, as necessary. DO NOT ROTATE THE ADJUSTMENT SCREW THROUGH 360 DEGREES.

Installation (continued)



PN 8038 PN 8005 Surface Mount Panel Mount

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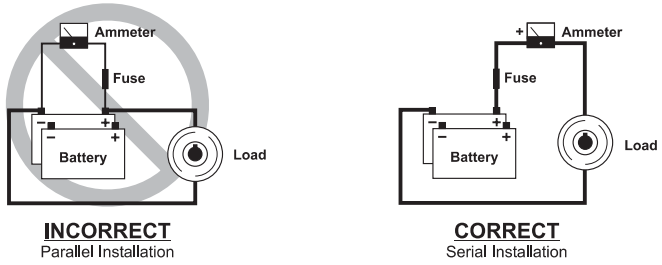

INCORRECT Parallel Installation CORRECT Serial Installation

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