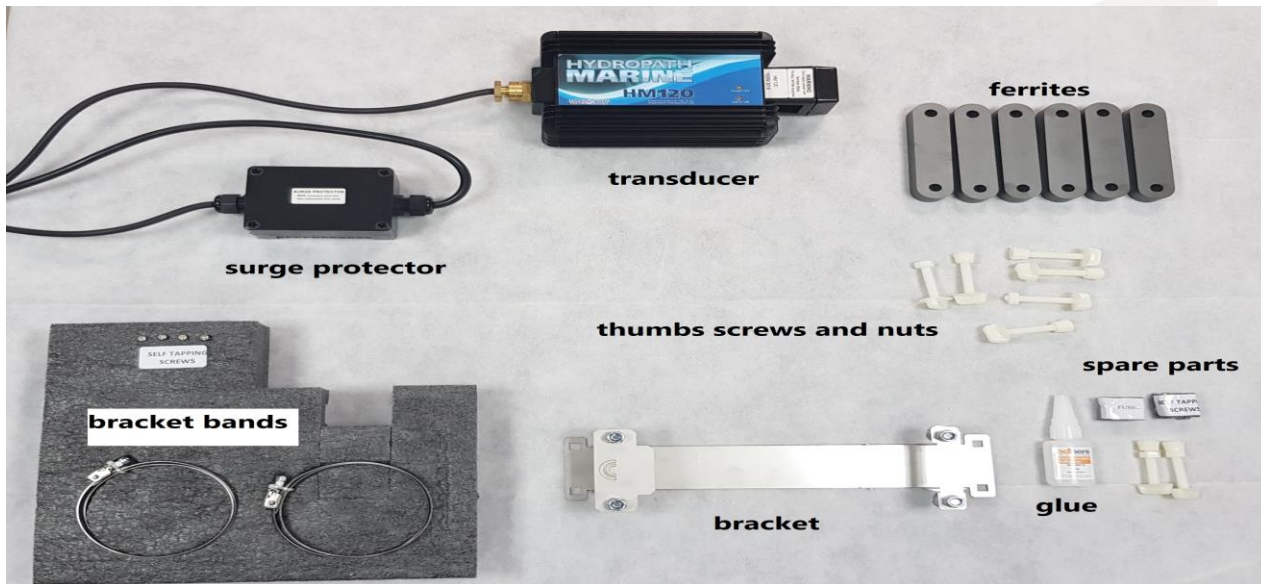


HydroPath Marine HM Range Installation Guide

Carefully read the supplied User Instructions before installing the HydroPath Marine unit

Step 1: Open the box and examine the parts for defects.

Please note that the ferrites are extremely fragile and make sure to handle them gently.



Step 2: Use the bracket bands to fasten the bracket to the pipe. Installation can be done horizontally or vertically as needed. Smaller units are secured to the pipe using steel clamps and bolts whit out steel bands.





Step 3: Place the transducer on the bracket. If installation is vertically make sure to place the transducer with the ferrite cage upwards and the electric cable at the bottom. Place the unit on the bracket and hold in place using the swinging plates. Secure by tightening the four steel nuts.



Step 4: Find two screws with hexagonal nut. Apply each hexagonal nut in its holding cage on both sides of the transducer head.



Step 5: Insert a long ferrite through the ferrite cage (at least one long ferrite is supplied). Attach another ferrite on top of the first ferrite and fasten with a screw to the hexagonal nut. The next ferrite should be fastened to the other side of the ferrite with a plain screw and nut. Keep on until all ferrites are connected. Close the ferrites ring around the pipe.





Step 6: Connect a standard plug to the electrical cable and connect the unit to a temporary power supply to check it is operating properly. The red and green led lights should be on.



WARNING

**DO NOT POWER UP UNIT
UNTIL ALL FERRITES SUPPLIED
ARE CONNECTED**



Step 7: When working with an oscilloscope for the first time you have to calibrate it. In case your oscilloscope was not calibrated, please use the **Oscilloscope Settings Configuration Guide** in order to do that. Take the oscilloscope and connect its cable. Close the top around the ferrites. Make sure to slide the button to X10.



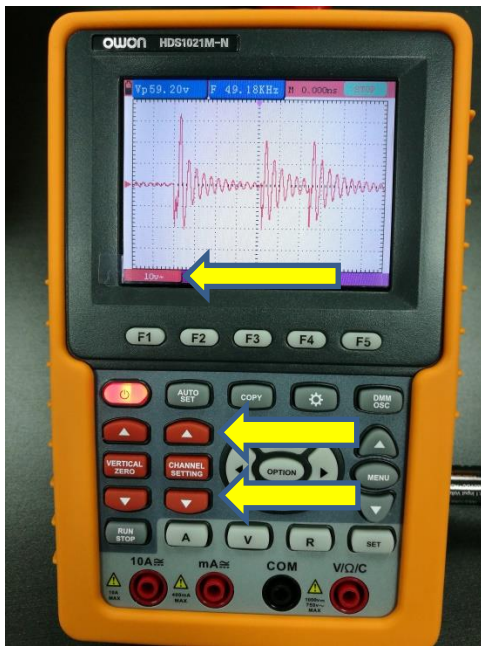


Turn on the oscilloscope. When you see the line "press any key to continue" press the bottom arrow.

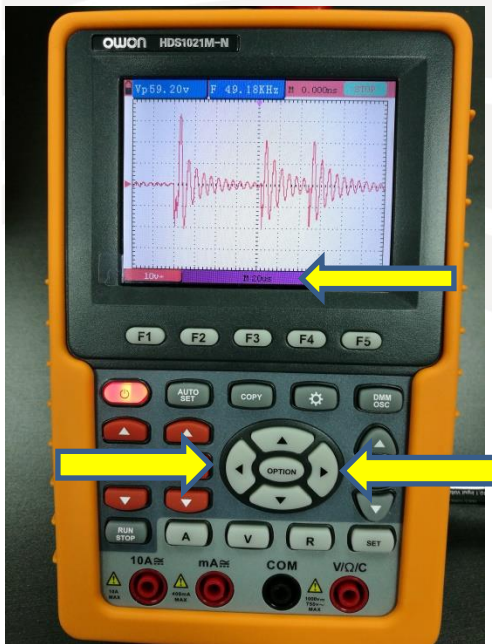




Press up/down arrow of CHANNEL SETTING until 10V shows up in bottom left red box.

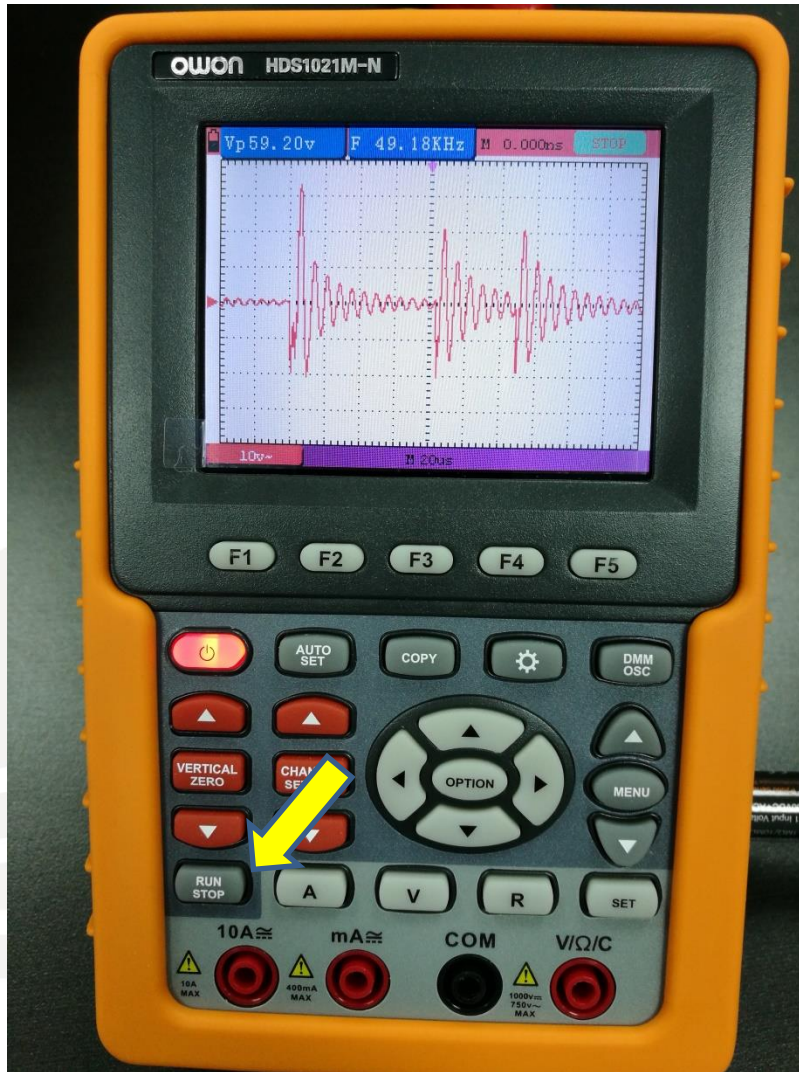


Press left/right arrow of OPTION until M 20 μ s shows up in the bottom right purple box (note: it looks like M 20us)





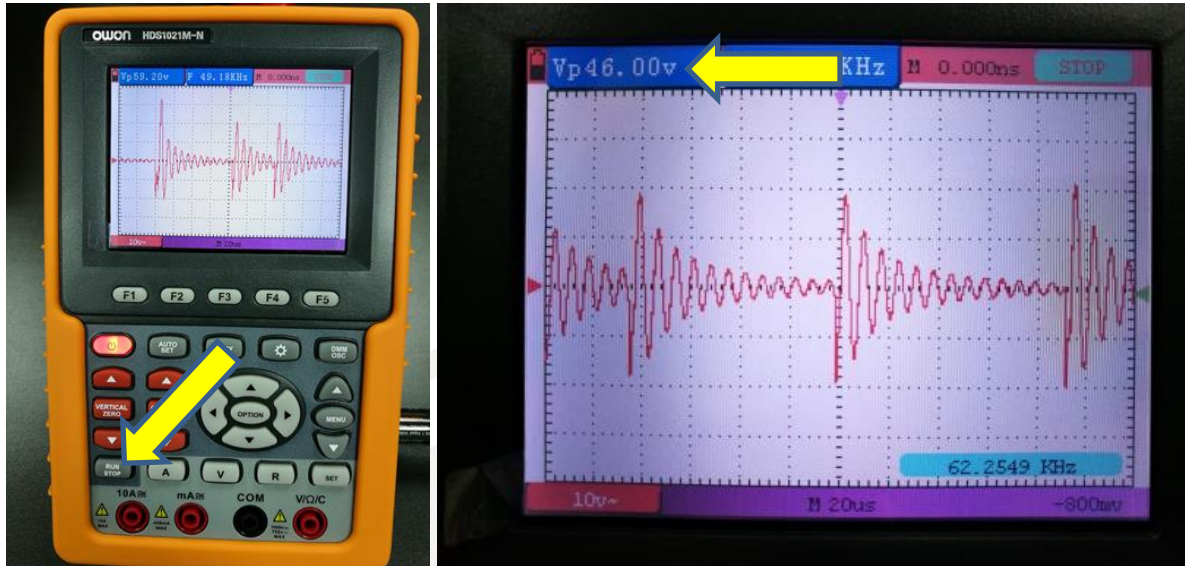
When you find the perfect signal press the RUN/STOP button and write down the number shown in the blue figure at the left top of the screen. Repeat this 3 times and assess the average result.



The final result

This is what the screen should look like when testing an HM unit. Note the voltage reading in the upper left blue box and the signature Hydropath sine wave.

Press the RUN/STOP button to freeze/unfreeze the reading.



The voltage for an HM unit is typically between 45 to 75 volts, according to the unit model. In order to check the proper operation of the HM unit you should test it both around the pipe and without the pipe. If the average voltage reading of the signal is 15-20% lower when around the pipe compared to when the unit is not around the pipe, it means there is an interference with the unit's signal. In this case we recommend insulating the nearest flange (before or after the unit).

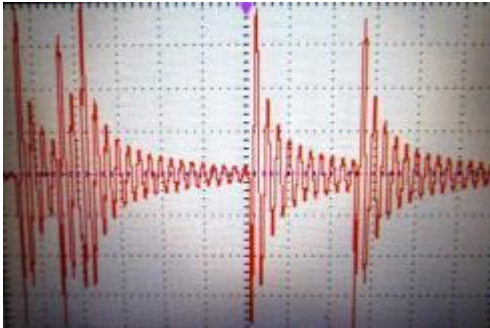
If the voltage reading shows a question mark, it means that the signal is exceeding the frame. Press up/down arrow of CHANNEL SETTING until 10V shows up in bottom left red box and until the question mark disappears.



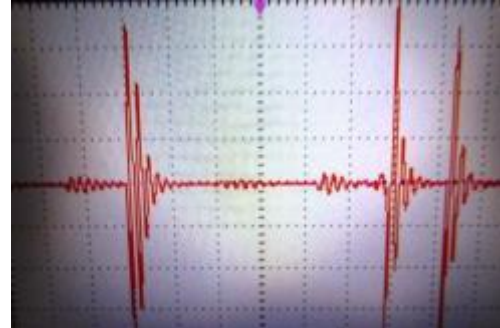


Note: An HM unit within an electrical loop would appear similar to the signal in the image below.

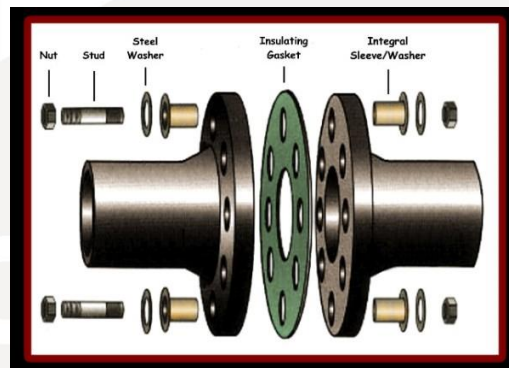
A good signal



The same unit within an electrical loop



In order to avoid electric loop which can affect the Performance of the unit, it is necessary to insulate on the nearest flange (before or after the unit). it is recommended to use a professional installation kit.



Flange and screws insulation

U clamp insulation
next to the HM unit



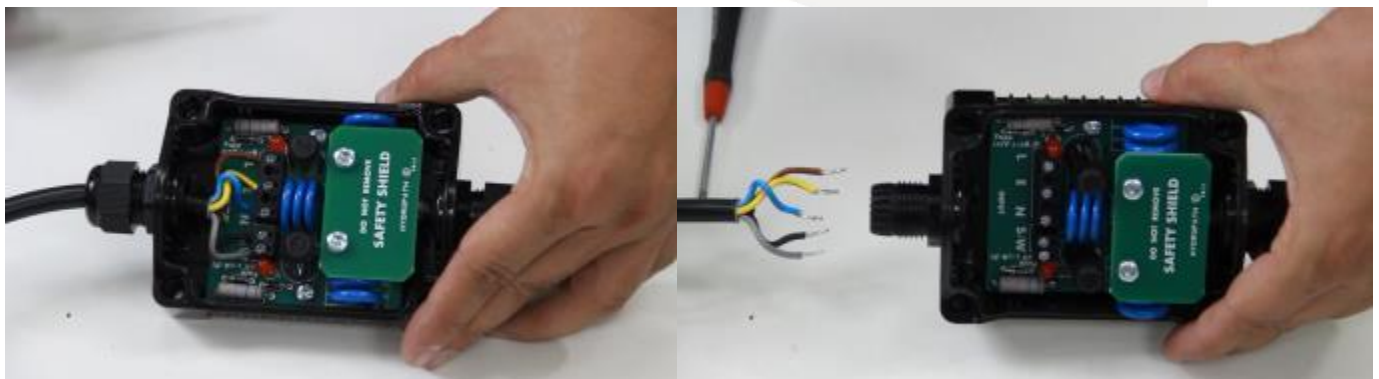
Step 8: After the unit was tested and is working properly, use a drop of the supplied glue on each of the screws in order to avoid loosening of the screws over time (caused by vibrations of the vessel). Apply a drop of glue on each nut and close the screw again. Make sure not to apply the glue directly on the ferrites.

Step 9: Take a simple plastic band and tie the metal band to the ferrite next to it (you can slightly unfasten the metal band in order to do so).



Step 10: After the unit is installed and tested you can permanently connect it to the power in the suitable way for you. Remove the surge protector cover and disconnect the wires of the cable.

Do not disconnect the cable connected to the transducer (under the safety shield).





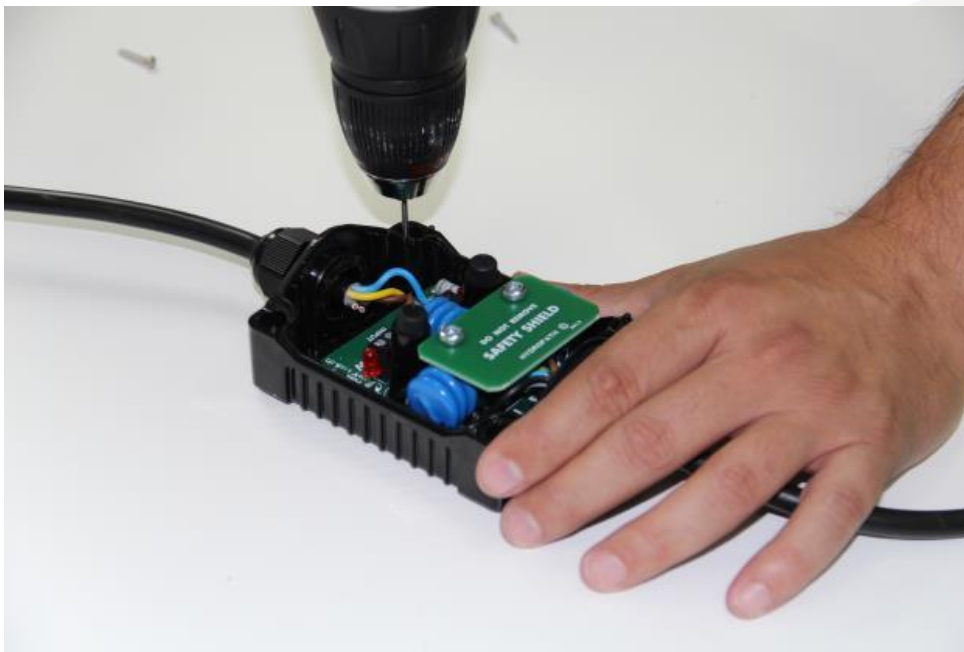
Take a cable of your required length and connect its three wires, leaving S/W disconnected.

Connect a new 3 wires standard cable.

In case you are required to connect the unit to an indicator light, computer or alarm, use a 5 wires cable and connect it to the S/W connection as well.

Make sure to take the rubber seal from the supplied cable and place it on the new cable before you close the gland on top of the connection.

Step 11: Find a suitable location for mounting the surge protector and mark the 4 holes for drilling. You can also drill directly through the 4 holes using a 2.2 mm drill bit. Mount the surge protector to its location with the 4 self tapping screws.



Close the cover and screw it back diagonally. Make sure there is no gap between the surge protector box and its cover. Lastly connect the cable to a permanent power supply.



Step 12: Fill the warranty card and send it to HydroPath Marine Ltd.



THREE-YEAR WARRANTY

MODEL TYPE SERIAL NUMBER APPLICATION.....

PURCHASE DATE/...../..... NAME OF THE VESSEL

COMPANY / DISTRIBUTOR

TELEPHONE EMAIL

HydroPath Marine Ltd offers a limited Three-Year Warranty against failure or defects in the Product or any component parts. If the product, or any part, fails during the first Three Years of operation (e.g. the red light stops glowing), and the failure is not caused by:

- Improper installation
- Physical damage to the Product – caused by the customer or the installer
- Misuse
- Act of god, Terrorism or Sabotage

the product will be repaired or replaced and returned to the Customer without charge. HydroPath Marine Ltd accepts no responsibility for water leaks or damage caused by the removal of limescale.

Send the completed Warranty to HydroPath Marine Ltd:
 Email: info@hydropathmarine.com
 Fax: +44-20-37347859

SEND THIS CARD WITHIN 30 DAYS OF PURCHASE TO ACTIVATE THE WARRANTY FOR YOUR PRODUCT

