



Notes

Power

- The power consumption of a HydroC™ Sensor is:
- max. 250mA for the sensor only (+350mA during zeroing)
- + max 1A / typ. 250mA (@10°C / 12 V) with temperature stabilization (standard)
- + 150mA external pump (SeaBird 5M) *optional*
- + 700mA external pump (SeaBird 5T) *optional*

Data Format

- The native HydroC™ data stream is binary or ASCII with the Internal SmartDI™ Datalogger option. 19200, 8 databits, no parity, 1 stopbit, no flowcontrol.

Sensor interface

- All grounds are connected together inside the HydroC™
- There is no isolation for any input / output

RS-232

- Connect the RS-232 cable direct 1:1 to the Host / PC.

RS-232/ RS485 Adapter

- The +5V power pin for the RS-485 adapter is only necessary if you use a 3-wire connection without handshake lines. The handshake lines must drop on a positive level to power the adapter

What is the best power supply?

- Power supply must be able to support the high current during the warming-up (15- 30min), approx. 2A@12 VDC. Any power supply is suitable, as the voltage is internally regulated.
- For the performance of the heater, a 12V DC supply voltage is optimal. A 24V DC supply voltage speed up the warm-up process. Voltages below 12V are possible, but the heater performance is lower, and could be too low for very deep temperatures.

What should I do before deployment?

- Check proper function of the sensor and all cables. Be sure, that membrane has no damages (scratches, puncture).
- Test the performance of the sensor with the gas of a cigarette lighter without fire.

What should I do after recovering?

- Wash the sensor with fresh / tap water, dry it and store it in the offshore case.

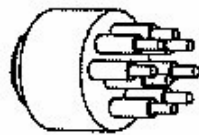
Must I recalibrate after a long pause?

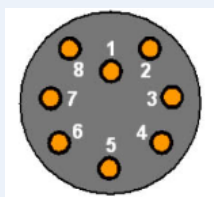
- No, the calibration is not affected by a long pause period.

What is the life expectancy of the system?

- The lifetime is approx. 1 year with continuous using, because the internal pumps must be replaced. We recommend changing the membranes every 3-4 months.
- If the instrument is only used in short periods of time, the lifetime extends. The cumulated usage time should not exceed one year.

Interface Cables

HydroC™ Connector		Interface Cable			Lab Connector	
Subconn MCBH-8M		MCIL-8F	RS232	RS485	Sub-D9 F + 4mm Banana	
						
Function	Pin	Code			Pin	Function
Power 0V	1	Black			A	Power 0V
Power 12V (10-30V)	2	White			5	SubD9 Ground
RS232 Tx (optional RS485) → Rx PC	3	Red			B	Power +12V (10-30V, 2A)
RS232 Rx (optional RS485) ← Tx PC	4	Green			2	SubD9 Rx PC
Auxiliary Signal	5	Orange			3	SubD9 Tx PC
Auxiliary Ground	6	Blue			-	
CH ₄ Signal 0-5V	7	White/Black	optional	Yellow	-	
CH ₄ Signal Ground	8	Red/Black	optional	Blue	Sig+	Banana 4mm Analogue +
					Sig-	Banana 4mm Analogue -

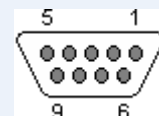


SUBCON®
male face view

RS-485 Pins (Cable)



SubD9 - Female



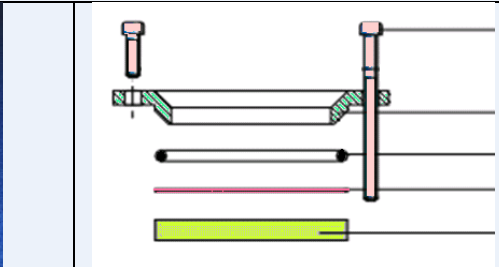
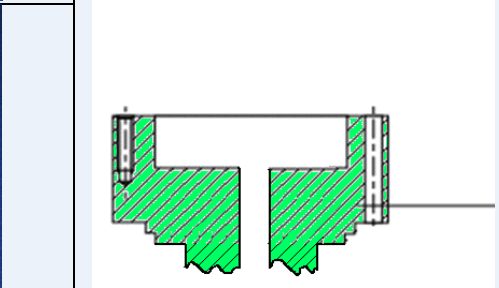
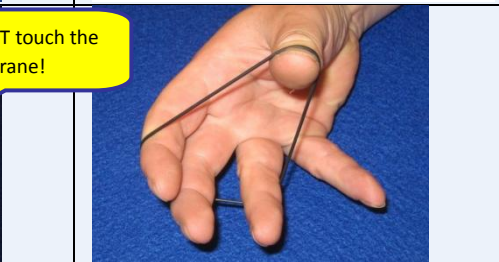
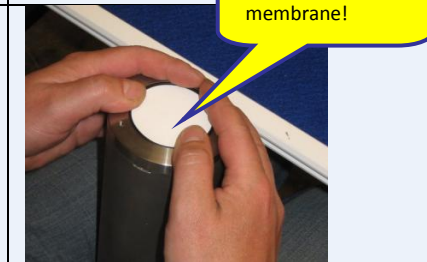
Sensor Maintenance by the User

- The sensor is delivered with a set of 3 spare membranes. Replace the membrane in the case of heavy fouling or if it gets damaged during handling.
- Replace the membrane in a dry and dust-free environment.
- It is not necessary to open the sensor to clean the membrane. Although the membrane surface is quite robust, please be extreme careful to not scratch its surface; it is advised to rinse it and eventually use a soft tip swab; compressed air may be used.

To replace the membrane:

1. Unscrew the screws to remove the flange. Be careful that the sintered metal plate behind the membrane does not fall out.
Note: bolts and threads use the metric system.
2. Handle the membrane with care by holding it only by the edge.
3. The membrane should be mounted with the shiny surface facing the water. In case of any apparent damage (scratches, puncture, etc.) replace the membrane. Gouges left by the seal rings are normal.
4. After replacing the membrane, screw the flange crosswise. For better handling, place the sensor upright; to ease the centering of the membrane and preventing the metallic support plate to fall out.

How to change the membrane

		Screw Sensor head clamping ring O-Ring Membrane Sinter metal plate
		Sensor head Housing
		
	Attention: • Avoid touching the membranes silicone surface ("shiny side"). • Do NOT use any (silicone) grease or oil for lubrication purposes of the o-ring sealing the membrane. • Any damage to any membrane or the sensor head can lead to a leak - this leads to total failure of the HydroC™ system.	Attention: • In case of failures / connection problems disconnect and reconnect your USB-RS232 adapter first. Then check if the USB driver is properly installed. • You need a warm-up time of 15-30 minutes depending on the environmental conditions.