

SIO OBS CONNECTORS



Ocean Bottom Seismology Laboratory
Institute for Geophysics and Planetary Physics

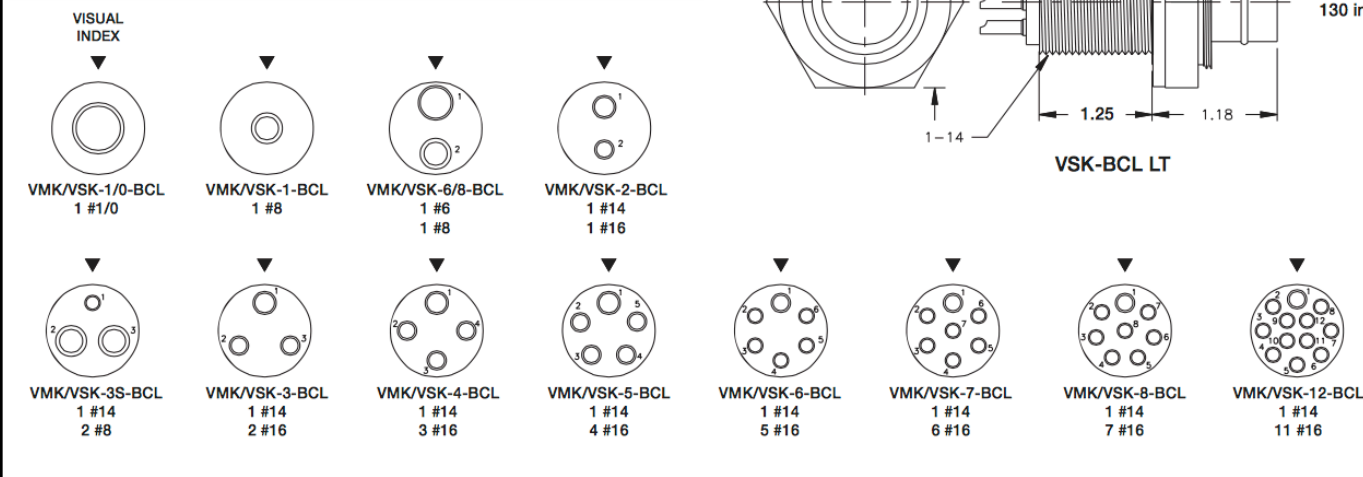
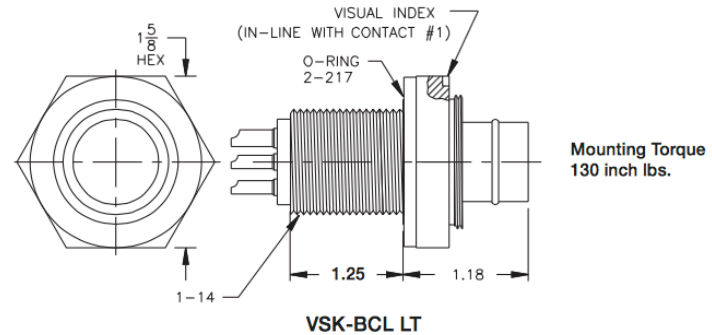
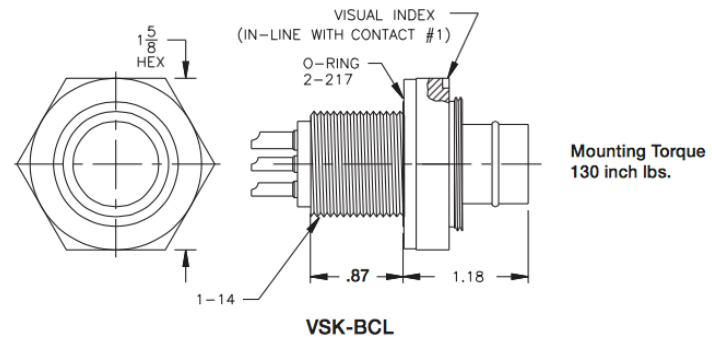
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CONNECTOR TYPES



- 4x4 GENERATION LOGGER (7 IN OD)



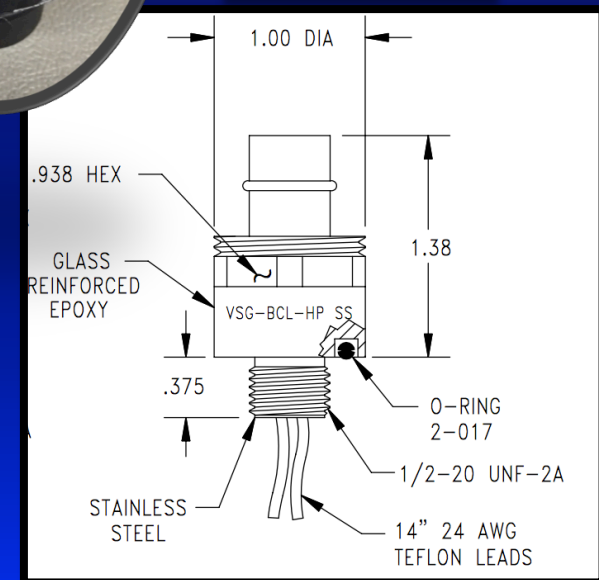
CONNECTOR TYPES



- ABA GENERATION LOGGER (5.25 IN OD)



CONTACT CONFIGURATION (BCL FACE VIEWS)



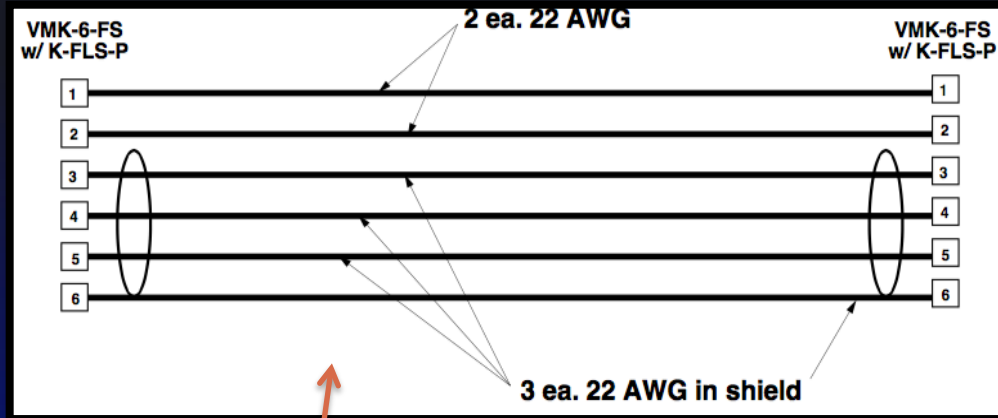
CONNECTOR TYPES



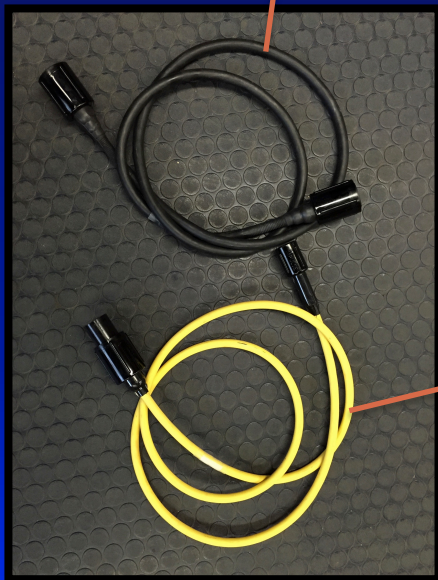
- COMM PORT, MINI USB SOLUTIONS



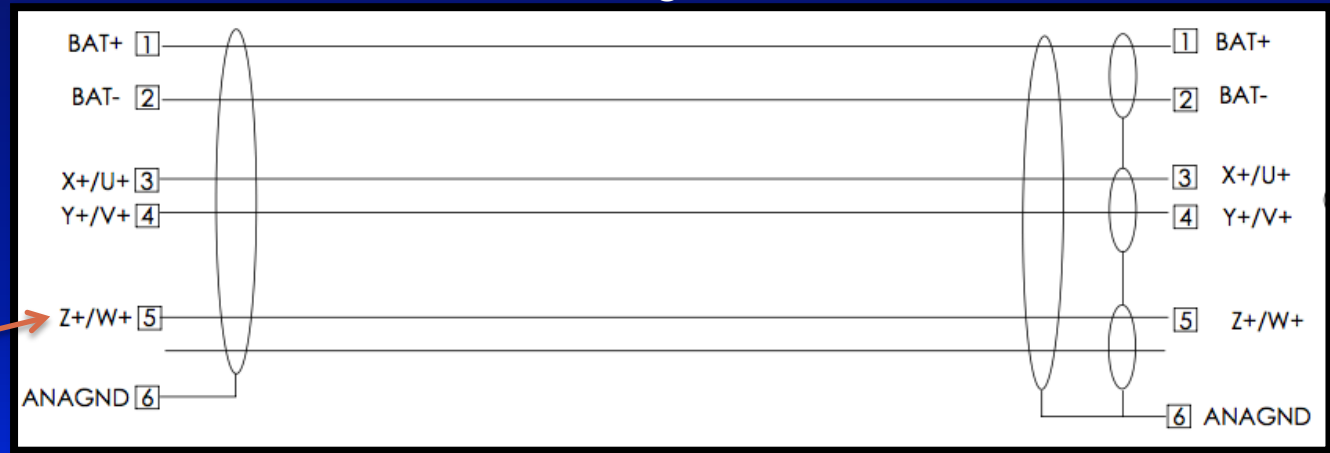
CABLE TYPES



- T240/40, Single Sided Neoprene cable



- T240/40, Single Sided PU cable

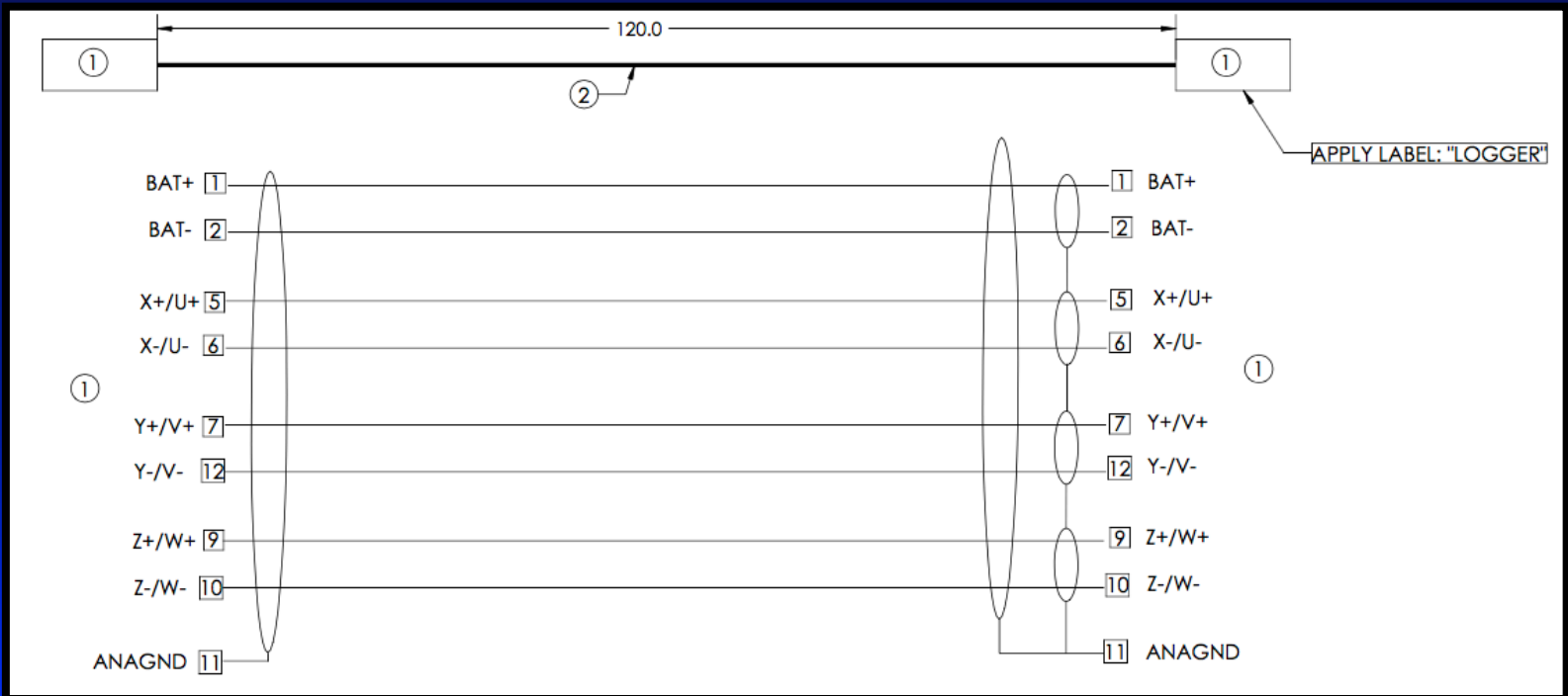


★ Substantial effort to convert all broad band sensors to differential... begins 2017.

CABLE TYPES



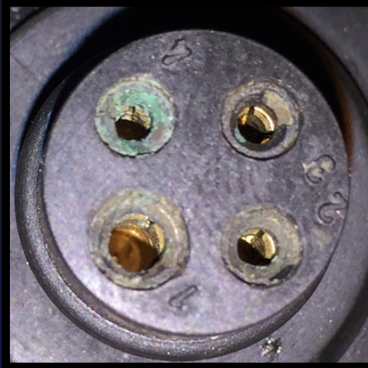
- Trillium, Differential PU cable



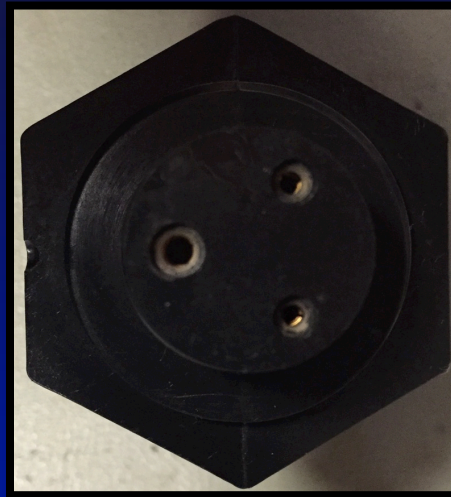
CONNECTOR FAILURE MODES



- Seawater Intrusion



- Female Fatigue



- Excessive Torque





CABLE FAILURE MODES



- Sea Water Intrusion – Failure typically occurs around the end mold resulting in wicking down the length of the cable on the interior of the jacket. This is not always an obvious failure mode.
- Neoprene – Hardening of the neoprene jacket and end mold over time increasing the minimum bend radius and the potential for cracks and leaks.
- Polyurethane – Hardening of end mold at extremely low temperatures making it difficult to plug into the bulkhead and bleed all excess air out of the boot. The boot can become dislodged prior to deployment.



SUMMARY



Connector/Cable	Up Side	Down Side
VSK series	higher pin density, low cost, robust, readily available	large penetration, potential female socket fatigue
VSG series	low cost, robust, small penetration, readily available	low pin density, potential female socket fatigue
Polyurethane	shieleded pairs, longevity, uv resistance	higher cost, longer lead time, rigid in extreme cold
Neoprene	low cost, readily available, shorter lead time	UV sensitive, no shielded pairs,