

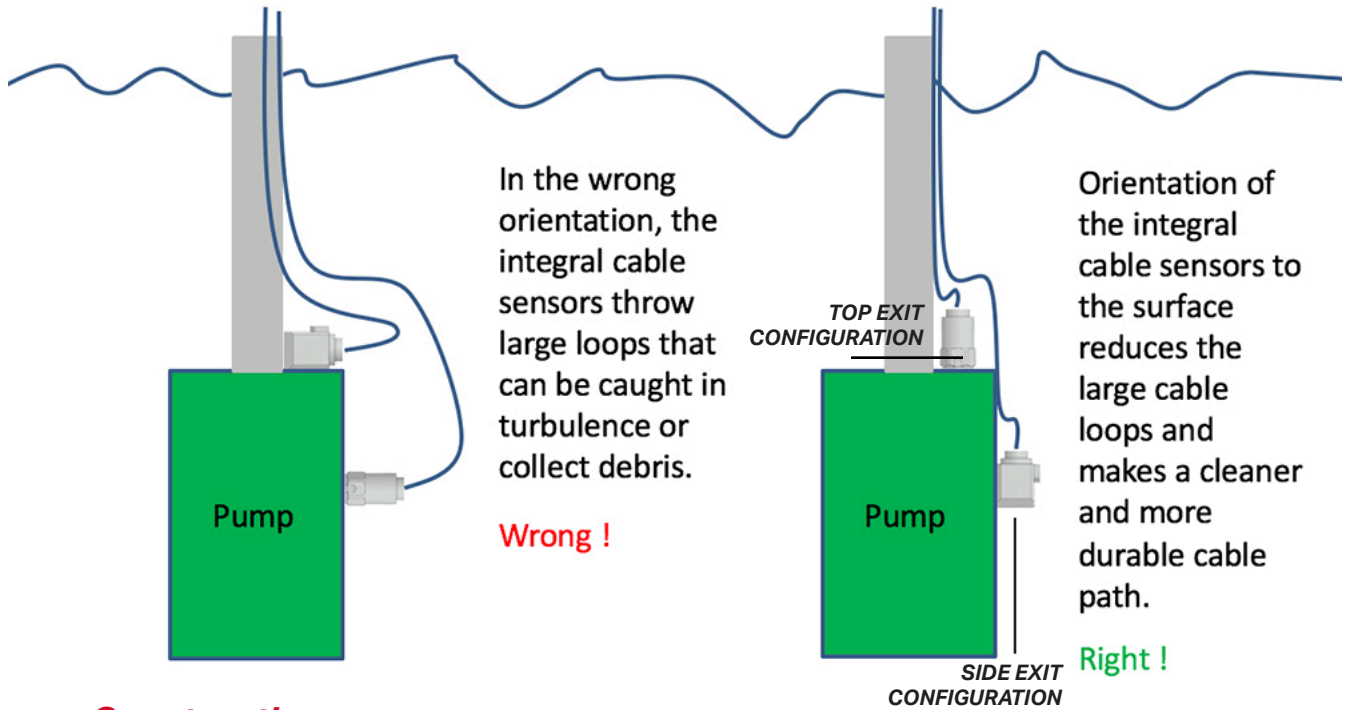
# *INTEGRAL CABLE SENSORS FOR Submersible Applications*



**WHEN RELIABILITY MATTERS  
CONNECT TO CONFIDENCE**

Many industrial processes have a requirement for sensors to be submerged. Whenever sensors are submerged they must be properly designed to meet certain requirements depending on the environmental conditions where they will be immersed.

## Underwater Sensors & Cables



### Sensor Construction

All of CTC's sensors are hermetically sealed and 100% of our sensors are helium leak tested to ensure against microscopic leaks that can form in improperly welded seams. Integral cables are soldered and molded to the sensor bodies after the leak testing.



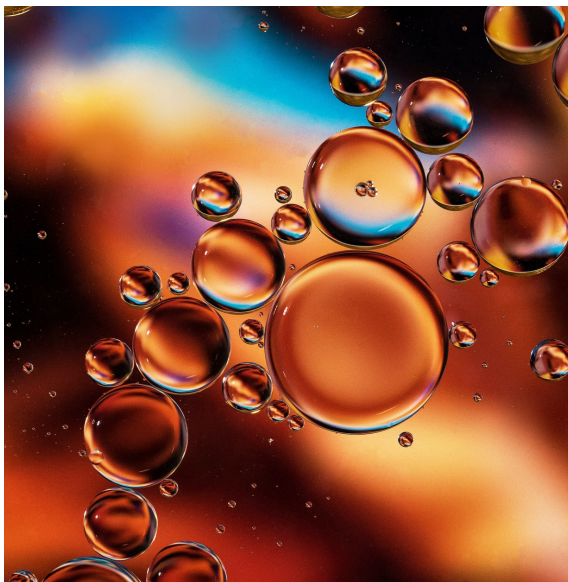
**AC102**



**AC104**

### ***Water Submersion***

In most situations involving water submersion, in either freshwater or salt water, as long as no other potentially damaging chemicals are present, polyurethane integral jacketed cables are the proper choice. For integral polyurethane jacketed cables, the cables are soldered to the glass insulated sensing element contacts and have an additional reinforcing stainless steel piece over which the cable and sensor receive a molded polyurethane strain relief.



### ***Submersion in Oils or Chemically Active Solutions***

When sensors are submerged in oils or solutions that involve chemicals present in potentially damaging concentrations, integral FEP jacketed cables are usually recommended. The integral FEP jacketed sensors use the same basic sensor body design as the polyurethane jacketed versions with a hermetically sealed, helium leak tested body. The integral FEP jacketed cables are highly resistant to damaging chemicals and can be submerged up to 200 ft or 60 m, the same depth as CTC's sensor line with integral polyurethane jacketed sensors.

### ***Other Abrasive Applications***

In other situations where extra durability is required, armor jacketed FEP cables are recommended. Manufactured with the same processes as the other integral cables above, the integral armored cables can be used in applications where there may be abrasive materials present, such as sand or gravel.

