



## Wire Draw Encoders for Harsh Environments

This is the ultimate in robust position detection for wire draw encoders and absolute positioning encoders that are required to endure harsh ambient conditions.

Horizontal and vertical drills for onshore and offshore applications must withstand the harshest of ambient conditions. Wire draw (also called rope length or cable retractor) encoders, are well suited for position detection within mobile and portable machinery used in a wide range of working environments. The rope length encoder only needs a small installation footprint even when long measurement lengths are required. It is therefore also suitable for telescopic axis applications as well.

Variations in temperature, moisture, dust, salt water, and salt fog, all have the potential for damaging equipment of any type. In this case, additional requirements must be met. Explosive environments, for example, pose difficulties in finding the right measurement system which supports the desired interface and appropriate level of protection. TR-Electronic, the specialist for outstanding solutions, can provide an exceptional option for these challenging applications.

The explosion-proof cable retractor with rotary encoder (AEW70M) meets the requirements of EX category 2, i.e., it may be used in explosive atmospheres with gaseous substances in zone 1, and atmospheres with dust in zone 21.

The rotary encoder is encapsulated in a stainless steel housing. The metal parts of the cable retractor drum are protected against the aggressive effect of the saltwater air with a hard metal coating. The cable retractors of this series are true endurance runners with a long service life-span, even when cycled continuously. Optional external

stripping brushes prevent dirt from adhering to the aircraft grade measuring cable and being drawn into the drum housing. It is also used in cold environments to ensure that any ice that may stick to the measuring cable, is removed from the cable prior to entering the drum. Optional deflection pulleys allow a large pivoting range for the cable pulling angle for hard to align applications.

By skillfully combining various well-proven technologies, TR-Electronic can provide the ultimate robust and reliable sensor system for demanding applications.

[www.tr-electronic.com/s/S010840](http://www.tr-electronic.com/s/S010840)

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