Winch Line-Out Monitor

Figure 1 - Line Out Monitor

Figure 2 - Drum calculation of Line Out

The Winch Line-Out Monitor is designed to give Operators a clear and unambiguous figure for how much wire or umbilical has been paid off from the winch drum or over an A-Frame. It is configurable for the following set-up variations:

- **Mode: Sheave**
  - Calculates line-out from sensor (encoder or pulse counter) mounted on one of the Over-Boarding Sheaves for the LARS system.

- **Mode: Winch Drum**
  - Calculates line-out from a sensor reading the winch drum rotation.
    (Note – the displayed figure is an estimate based on theoretical calculation)
  - Operator can retrim the umbilical length if an umbilical cut-back is performed

Without a consistent line-out measurement there's a degree of uncertainty around the depth paid-out and if the load might be about to contact the sea-bed. There are ways around this, such as a second person monitoring the descent say from inside an ROV control cabin, however this increased complexity adds operational risk.

With the DME Winch Line-Out Monitor the Operator is provided with a real-time length-out measurement which is repeatable and consistent. In consequence operations become more reliable and down-time risk through Operator error is reduced.

Line Out Monitor - Specification

Mechanical Interface	
PLC	Mounted in client enclosure. DIN rail mounted. 200mm length required.
HMI	High definition outdoor IP65 display and touch-screen Mounted within client enclosure door. (197 x 144mm)
Operating temperature	-10°C → +40°C
Storage temperature	-40°C → +60°C
Electrical	
Supply Voltage (Vcc)	24V DC; 1Amp (tbc)
Encoder Interface	Either Encoder or Proximity Switches (2 off) Client to mechanically mount encoder to winch as required. Non-slip drive type preferred (not friction wheel).
Communication protocols	Self-contained unit. Option: Output string available to feed to other control systems
DME PN:	A4463-EL – Electrical Interface Drawing

For custom applications email initial requirements to: sales@dme-systems.com