



EXPRESS-EH SeaLink subsea control unit

The Subsea Control Unit is the low-power data acquisition and valve actuation subsystem of the SeaLink™ Actuator Module. The Subsea Control Unit acts as a remote slave to the Surface Control Unit, receiving, acknowledging, and performing tasks requested via the serial modem interface.

The Subsea Control Unit sustains low-power operation by maintaining a powered-down state between communications sessions with the uphole electronics. Specialized hardware and firmware-based power management algorithms allow the uphole device to "wake up" the Subsea Unit, initiating a communications session. Upon receiving the command, the Subsea Control Unit actuates the selected valve to quickly close or disconnect the Subsea Test Tree and Retainer Valve.

Features & Benefits:

The Subsea Control Unit performs the following primary system functions:

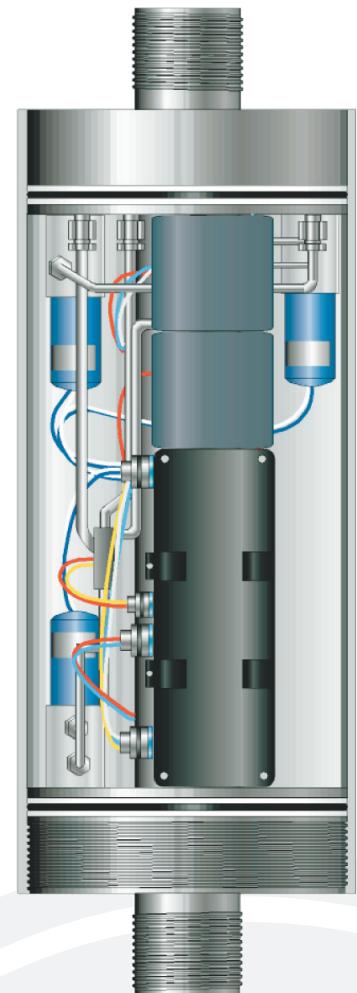
Acquisition and digital conversion (12-bit) of four external analog data channels consisting of three external pressure transducers and one external temperature transducer (RTD)

Transmission of digitized analog data and Subsea system status upon request from uphole electronics

Actuation/deactuation of MOSFET valve drivers based on commands received from uphole electronics

Performance of continuous self-diagnostics to trap hardware or firmware related fault conditions; diagnostics include status of the DC input power

Master hydraulic manifold for Subsea Test Tree and Retainer Valve



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Technical Specifications:

Electrical

Input Power	+24V DC at 1 W (fused at 1 A)
Serial Interface	2400 baud CCITT V .24bis 4-wire (8 data bits, one stop bit, no parity)
Transducer Type	Paine transducer (strain gauge type)
Pressure Transducer Interface	Differential input designed to accept resistive bridge-style transducer; excitation voltage provided at 10V, 10mA
Temperature Transducer Interface	Designed to accept RTD-type transducer
Solenoid Rating	3 A at 24 V DC
Battery Life	2,000 hours

Mechanical/Environmental

OD	13 in. (33.02 cm)
ID	3 in. (7.62 cm)
Length	40.5 in. (102.87 cm)
Working Pressure	15,000 psi
Tensile Rating	400,000 lb (181 437 kg)
Service	Sour service per NACE MR0175
Operating Temperature	32 to 158° F
Weight	650 lb (295 kg)
Humidity	90% relative noncondensing