

Datasheet

Wideband BOP Acoustic Valve Controller



Description

Sonardyne's acoustic Blow Out Prevention (BOP) Control System is a self-contained, high security acoustic command and control backup system. In the event of loss of normal communications with a BOP stack, the system is used to execute emergency shutdown and riser disconnect procedures.

Features of the system which ensure reliability and security include Wideband™ signal technology, forward error correction techniques and directional subsea transducers.

The type 8135-000-01 Acoustic Valve Controller is installed permanently on the drilling rig and operates a hull mounted acoustic transciever. The control unit is a 19" rack mounted panel containing large push-buttons to initiate an emergency disconnect sequence. A multi-line

LCD display provides operating instructions and status information.

The Acoustic Valve Controller generates acoustic commands in response to operator intervention and transmits them via a hull mounted transducer to the subsea acoustic transceivers.

Once decoded and validated, the acoustic commands from the surface are forwarded to the Subsea Electronics Module (SEM), which in turn activates solenoid valves which operate the hydraulic rams and close the stack down. Up to 12 function outputs operate the solenoid valves which control the hydraulic operation of BOP rams.

A single command cycle which initiates a pre-defined sequence of valve operations, considerably speeding the BOP shut-in and disconnect operations in emergency.

Key Features

- Full dual redundancy option
- Offline closed loop valve closure and simulation system testing
- Full error detection control of up to 12 valves
- Highly secure command structure
- Frequencies outside normal operating bands
- Full integration with rig's existing Sonardyne acoustic positioning system
- Incorporates Sonardyne's highly reliable Wideband signal technology
- Single command cycle initiates pre-defined sequence of operation
- Backlit LCD display

Specifications

Wideband BOP Rack-mountable Acoustic Valve Controller



Feature	Wideband BOP Rack-mountable Acoustic Valve Controller (Type 8135-000-01)
Main Input	100-240V AC, 50-60 Hz (input), 150VA max.
Panel connectors	1 x IEC Main Socket 1 x USB (Type B) 1 x TCVR Port 1 x NAV PROC Port 1 x AUX RS232 Serial Port (8-pin Souriau) 2 x Remote Push Button (In) 2 x Contact Closure (Out)
Display	Backlit LCD

Mechanical Specification

Dimensions	Length	482 mm
	Height	133 mm
	Width	287 mm
Rack Mounting		3U
Weight		5 kg

Environmental Specification

Operating Temperature	0 to +50°C
Storage Temperature	-10 to +60°C