r i m e

downhole technologies

sensei

pressure emulator

sensei is a pressure emulator that converts the actuation of the **slick-hd** and **direct-hd** rotary servo valve to a pressure signal that can be connected directly to an mwd surface system to allow for complete testing of the tool string in an assembled state and eliminates the need to install additional equipment or partially disassemble the tool.

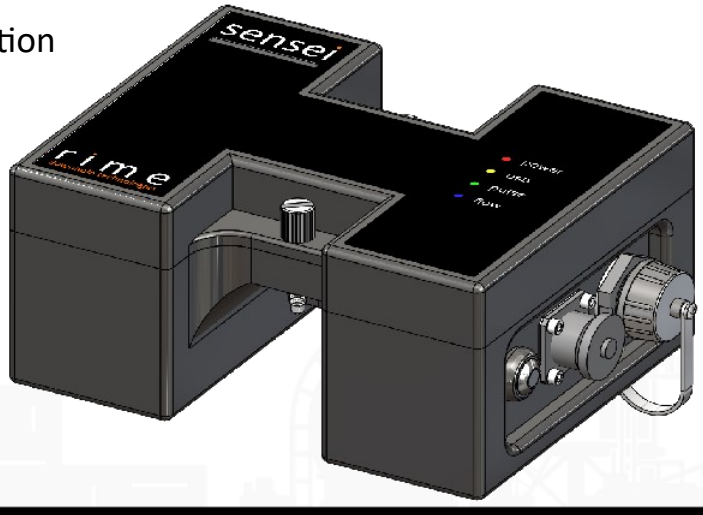
unlike other pressure emulators or simulators, **sensei** does not rely on a digital pulse line or flow line signal to generate a pressure waveform. instead it measures the rotation of the servo shaft on **rime** pulsers using a non-contact optical sensor, and together with a flow switch built into the **sensei** module, generates a 4-20mA signal independently.

sensei is battery powered and requires just a standard transducer cable to connect it to the surface system, and as it measures valve rotation, it is fully compatible with any mwd system that uses a **rime slick-hd** or **direct-hd** pulser regardless of the telemetry protocol being used.

sensei is integrated tightly with **rime's pulser interface program** which can be used to monitor multiple data streams including the pressure waveform being sent to the surface system, the time taken to actuate the rotary servo valve and the angle of valve rotation. the **pulser interface program** can also be used to configure the amplitude of the pulses being generated and adjust **sensei's** flow switch settings.

specifications	
dimensions	6.50" x 4.75" x 3.12" (165mm x 121mm x 79mm)
output	4-20mA current loop
battery life	8-10 hours continuous, unlimited when charger plugged in
operating temperature	32° to 122°F (0° to 50°C)
flow switch	integrated three axis, solid state with high configurability

- simulates 4-20 mA pressure signals upon valve rotation
- tests fully assembled tool string
- non-contact optical sensor
- rugged and field ready
- battery powered
- software monitoring and configurability



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