

RAS™ Reservoir Analysis Sonde Safety Sub

Ensures safe operation of RAS neutron generator

Applications

- Reservoir monitoring
- Formation evaluation
- Wellbore performance and integrity
- Primary reservoir description where openhole logging is constrained

Features and Benefits

- Ensures safe operation of RAS neutron generator
- Onboard pressure and temperature sensors monitor environment conditions. Switch-on only possible once programmable thresholds are met
- Onboard power switch to disable power in case of tool failure
- Watchdog feature monitors memory tool. Initiates restart after 45 seconds in the event of communication failure or reboot request

Tool Description

The Weatherford RAS reservoir analysis sonde safety sub is a mandatory component in a memory-RAS string.

Positioned between the battery and the memory logging tool (MLT), the RAS safety sub is equipped with pressure and temperature sensors to monitor borehole conditions against user-programmable thresholds. A power switch is included in the RAS safety sub to disable battery power to the MLT (and all attached tools) in case of tool failure.

In memory-RAS operation, the RAS safety sub serves as a watchdog for the MLT's health (via handshaking in a designated communication link) and periodically reporting instantaneous pressure and temperature measurements to the MLT.

In case of a communication failure or MLT requesting a reboot, the RAS safety sub enters a reset cycle that cuts off power to the MLT and RAS, re-enabling the power downstream after 45 seconds. This operation automatically puts the RAS into idle mode and allows the MLT to re-initialize and to recover from a failure.



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Specifications

Ratings and Dimensions

Outside diameter	1.69 in. (43 mm)
Length	18.3 in. (464 mm)
Weight	9.3 lb (4.2 kg)
Maximum temperature	320°F (160°C)
Maximum pressure	15,000 psi (103.4 MPa)
Materials	Corrosion-resistant materials used throughout

