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WATER SWITCH

User Guide

The water switch is a device to cut off power to a device should water enter the switch. It is specifically designed for the DRYSTIK model ADS-2. It consists of a reed switch surrounded by a float that contains a magnet. If the float rises it will turn off the switch.



It is essential that the switch remain airtight, otherwise fresh air will enter the sample path and dilute the sample. There is a groove in the lid that seals it to the jar, but to make sure it remains tight, a little vacuum grease is used. If the switch is taken apart, to empty it, and reassembled it may need additional grease.

If in any doubt, the airtightness of the assembly may easily be checked. A metre of tubing, half full of water and hung like a U-tube forms a manometer. Connect it to one of the hose connectors on the switch. Connect a hand pump (bicycle pump, say) to the other hose connector, with plastic tubing with a hose clip in it. Pump the pressure up to around 50cm of water and apply the clip to seal the switch. Watch the manometer. After relaxing as the air cools back to room temperature, the pressure should drop by no more than 2.5 cm in 10 minutes.

If the switch is found to be leaking, place it under water while pressurized to see where it is blowing bubbles. If the leak is occurring around the rim, add grease to the inside groove in the lid. If at one of the fittings, remove the fitting and add RTV or other sealant, to seal it.

The switch is placed in the power supply to the ADS-2. If water enters the switch it will turn off the power to the ADS-2, so stopping the pump. Please note that it will not work with an unmodified RAD7 because the internal batteries will take over if the external power is interrupted.

Water Switch Configuration

