

Replacing the Thermal Snap Switch

This procedure outlines the steps necessary to replace the thermal snap switch in the ACQUITY PDA^a.

The thermal snap switch and cable assembly mount on the rear of the lamp housing. The function of the switch is to shut off the deuterium lamp if the temperature of the lamp housing assembly gets too hot. The switch is normally closed and opens when the temperature reaches 70 °C.

NOTE: Except where noted, the term “ACQUITY PDA Detector” refers to two detectors:

- ACQUITY UPLC Photodiode Array (PDA) Detector
- ACQUITY UPLC PDA Extended Wavelength (eλ, or eLambda) Detector

Table 1: Thermal Snap Switch Temperature Operating Temperatures

Switch Position	Temperature
Closed	62 °C +/- 2.8 (143 +/- °F)
Open	70 °C +/- 2.8 (158 +/- °F)

Parts Required

Table 2: Parts Required

Part Number	Description	Quantity
700002778	Thermal Snap Switch and Cable Assy.	1

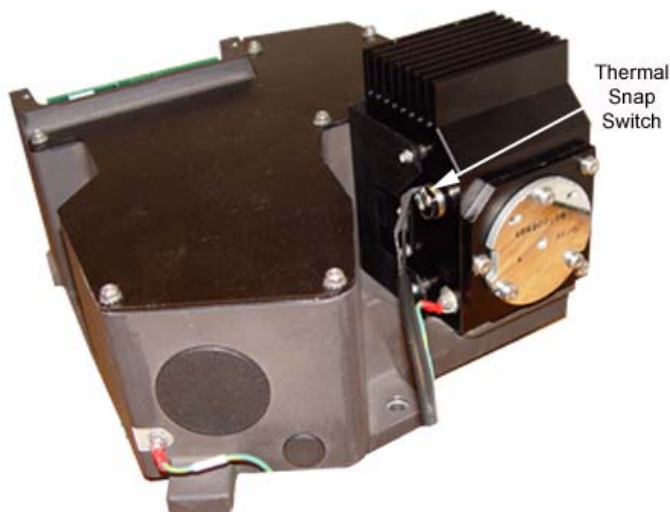


Figure 1 - Location of Thermal Snap Switch

a. To be certain you have the latest version of this procedure, please visit the Waters Support Center at Waters.com.

NOTE: Some of the illustrations show only one type of PDA detector. However, the physical differences between the PDA detector and PDA eλ detector are insignificant for this procedure.

Tools / Materials Required

- T20 Torx screwdriver

Removing the Thermal Snap Switch

1. Power off the detector, and then unplug the power connector.
2. Remove the two T20 Torx screws that secure the filler panel bracket to the rear of the chassis. Then, slide the filler panel off the two pin guides at the front of the unit.
3. Remove the four T20 Torx screws (two on each side) securing the top cover, and then lift it off.
4. Disconnect the thermal snap switch cable from its connector that goes to the Lamp Power Supply Board (Figure 2).

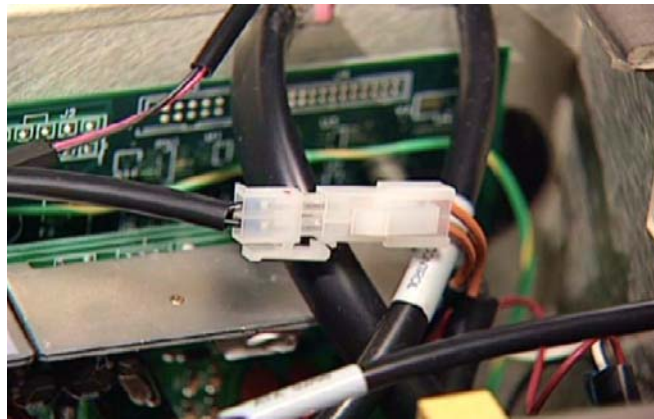


Figure 2 - Thermal Snap Switch Connector

5. Unthread the thermal snap switch counter-clockwise from the rear of the lamp housing assembly (Figure 3). Discard the defective thermal snap switch and cable assembly.

NOTE: You may cut off the soldered cable assembly from the thermal switch to make it easier to remove the thermal snap switch.

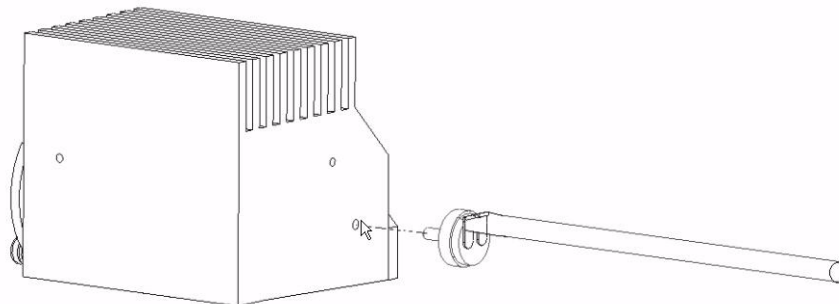


Figure 3 - Thermal Snap Switch and Cable Assy.

Installing the Thermal Snap Switch

1. Thread a new thermal snap switch (in a clockwise direction) into the rear of the lamp housing.

NOTE: *Rolling the cable assembly into a small loop will allow the thermal snap switch to be more easily threaded into the lamp housing.*

2. Reconnect the thermal snap switch cable to its connector that goes to the Lamp Power Supply Board.
3. Replace the detector's top cover and secure it with the four T20 Torx screws (two screws on each side).
4. Replace the filler panel by sliding the panel over the two pin guides at the front of the chassis. Secure the filler panel bracket to the rear of the chassis using the two T20 Torx screws.