

Water Corporation: Alliance iS Column Heater Cooler, (CHC)

Theory of Operation

Near field communications (NFC)/RFID aspects:

The Alliance iS Column Heater Cooler (CHC) is used with the Alliance iS HPLC System. The CHC can be equipped with NFC/RFID technology. The national approvals associated with this RF feature apply only to the CHC and not with other sections of the system or the system in its entirety. The 13.56-MHz NFC/RFID reader is located on the door of the CHC. It performs a read cycle when the door is closed. The duration of the read cycle is less than one second. It is inactive until the next door open/door close event. The power is less than 2 W.

Intended use of the Alliance iS CHC

The Alliance iS Column Heater Cooler (CHC) is an AC-powered device that houses the fluidics column used to perform HPLC (High Pressure Liquid Chromatography) separations for the Alliance iS system. The CHC assembly can provide temperature to the column from 4 °C to 90 °C. When the LC column is equipped with a passive NFC tag (13.56 MHz), it is read when the front door of the CHC is closed. The antenna circuitry is normally not active until the door closure service event. Data from the tag is stored in the system.