Firmware Update Notification

Urgent Action Required ☐
Information Only ☒

NEW FIRMWARE VERSION	EFFECTIVE DATE: NOVEMBER 2023
TC LAB *REVISIONS A - C* TC5 LAB, TC10 LAB, TC15 LAB → Firmware Version 1.99	**TC LAB** *REVISION D* TC10 LAB, TC15 LAB → Firmware Version 2.01

UPDATED COMMAND - *CONST:THERM*

Subject: TC LAB Firmware Update

The TC LAB Instrument firmware has received an update to include the ability to manually select a fixed and persistent bias current for a thermistor-type sensor. This update is tied to the remote command *CONST:THERM* and allows for an auto-ranging bias current or a fixed and persistent bias current when creating a custom sensor. The selected bias current will be automatically recalled and set to the active bias current from memory by the firmware in the event that the TC LAB is power cycled from the front or rear panel or if the sensor load is removed/disconnected.

CHANGES AND FEATURES INCLUDE:
  • Fixed bias currents available for custom thermistor

REMOTE COMMAND - *CONST:THERM* (see page 63 of the LAB Series Command Set)

To create a sensor with a fixed bias current, append a suffix to the name of the sensor when it is created. The format of the suffix is:

Table 1

INPUT	BIAS CURRENT
1	10 µA
2	100 µA
3	1 mA
4	10 mA

    <sensor name>.F*n*

where <sensor name> is the symbolic name of the new sensor, and n indicates the bias current value, as would be passed to the *TEC:BIAS* command. For the *TEC:BIAS* command, the inputs are shown in Table 1.

To create a sensor that will used a fixed bias, use *CONST:THERM* remote command. For example, the command to create a 50kΩ @ 25ºC thermistor with a fixed 100µA bias current is:

    CONST:THERM My50k.F2, 9.6911E-04, 2.1014E-04, 8.8019E-08

This creates a new sensor named "My50k" that, when selected, will set a fixed and persistent 100µA bias current. Once created, the custom sensor can be selected from the front panel touchscreen. Additionally, the *TEC:SENSOR* command can be used to select this sensor.

REVIEW THE DATASHEET AND COMMAND SET FOR DETAILED INFORMATION ON THE UPDATED CUSTOM SENSOR SPECIFICATIONS AND OPERATION.

Action Required: Update Firmware Version - follow updating firmware instructions on page 19 of the TC LAB Instrument Datasheet found here: **www.teamwavelength.com/download/Datasheets/tc_lab.pdf**

NOTE: INSTALLING THE WRONG REVISION OF FIRMWARE WILL REQUIRE RECALIBRATION AT THE FACTORY.

Please contact Sales at 406-587-4910 or email sales@teamwavelength.com for details