

FlexTC

D-type User Guide



Using D-Type connector

The **D-Type** option makes it possible to set FlexTC temperature or to change the actual temperature reading according to a 0-10 (V).

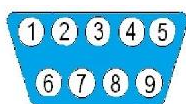
This option can be used when

- You have the junction feedback from the DUT
- You want to make sure your DUT readings is calibrated
- Power dissipation of the DUT is changing during test.

For that, the FlexTC needs to adapt to the junction temperature changes and constantly modifies the PID controller's values in order to minimize junction temperature fluctuations.

Currently there are 4 activated pins on the D-Type connector (At the rear panel of the FlexTC)

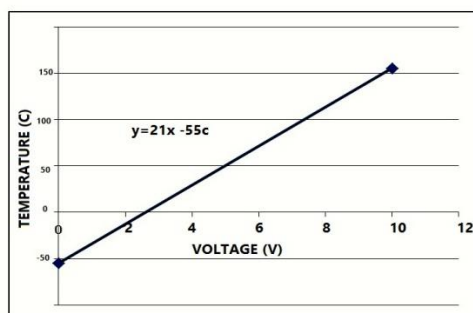
- A. By the user setting the temperature to a certain value (Pin 3 must be activated)
- B. By the diode in the DUT giving an analog signal from 0 to 10V (Pin 4 must be activated)



- **Pin 1** : com (-) .
- **Pin 2** : 0-10 [VDC] – analog value .
- **Pin 3** : 24[VDC] – trigger for "**Junction Control**" .
When Pin 3 is triggered, 0[Vdc] set the "actual control value" to -55[C],
10[VDC] set the "actual control value" to 155[Vdc].
- **Pin 4** : 24 [VDC] - trigger for "**Setpoint Control**".
When Pin 4 is triggered, 0[Vdc] set the "Set Point" to -55[C] ,
10 [Vdc] set the "set point" to 155[C]

(This pin allows continuous change of the temperature of the FlexTC from -55C to 155C. Changes are mainly operated

Offset Graph - Temperature VS Voltage

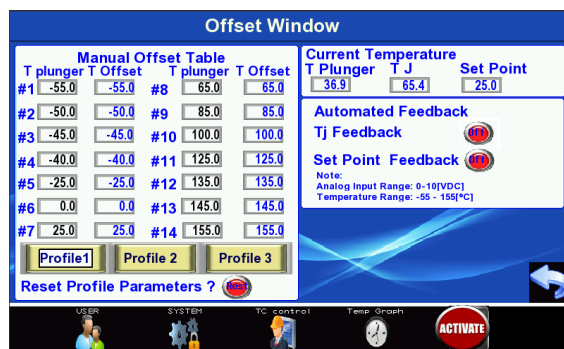


- 1 On the main FlexTC screen Press **TC CONTROLL**
Press **Offset Table**



- 2 **Offset Table** window is displayed
On this screen you will see 3 panels:

1. The Manual Offset Table.
2. The Current Temperature Panel
3. Automated Feedback Panel



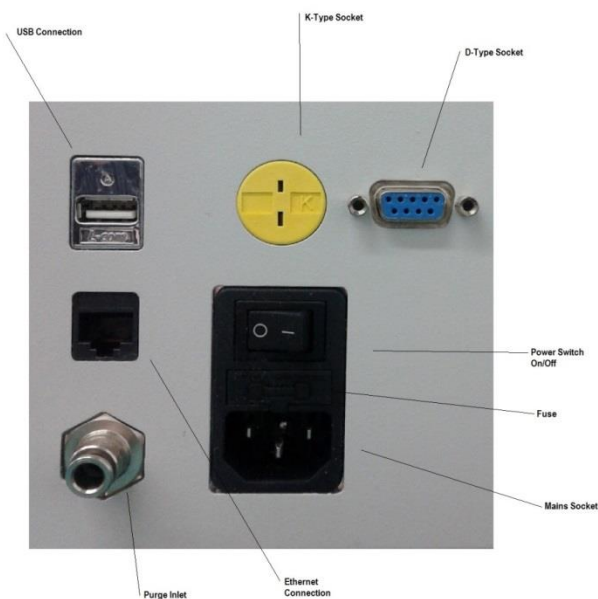
- 3 Appliances required for testing
- FlexTC / MaxTC
 - Laboratory power supply
 - 24V power supply
 - D-type male connector



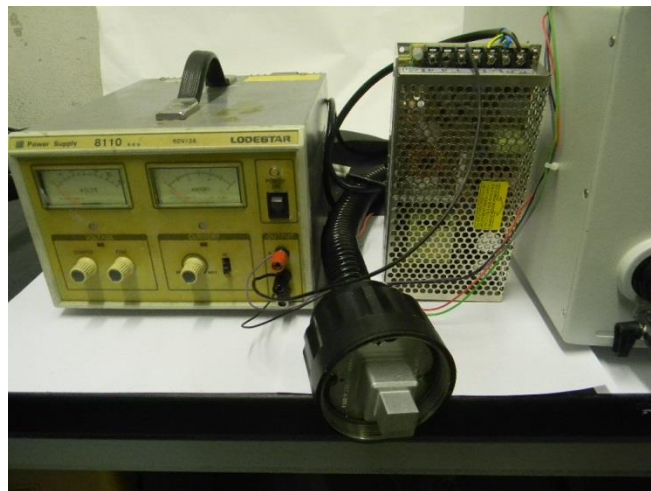
- 4 Wiring D-type male connector
- Pin no 1 – Black wire
 - Pin no 2 – Purple wire
 - Pin no 3 – Green wire
 - Pin no 4 – Red wire

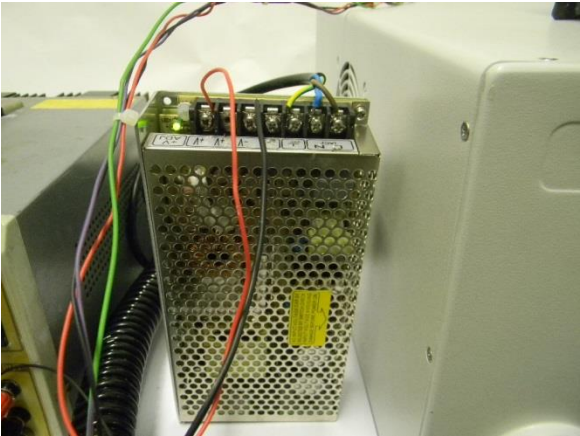
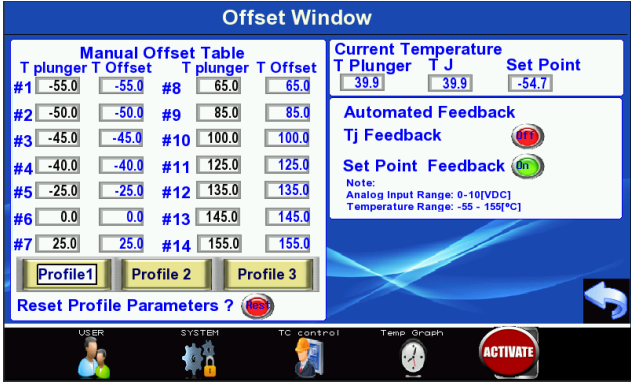
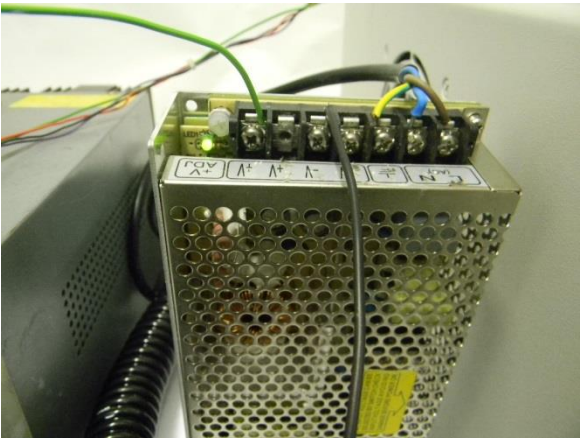
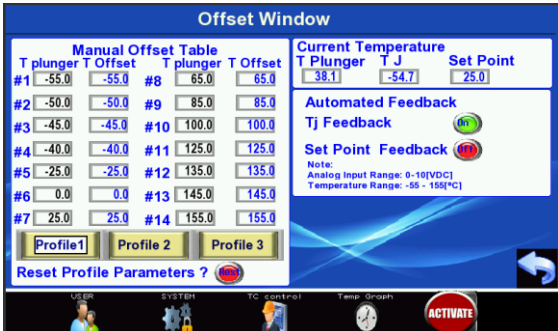


- 5 Connect the D-type male connector in to the D-type female connector on the Rear panel of the system



- 6 Connect the Black wire from the D-type in to the (-) of the Laboratory power supply
Connect the purple wire from the D-type in to the (+) of the Laboratory power supply
Connect black wire between the (-) of the Laboratory supplier to (-) of the 24V power supply



7	Plug in 24V power supply and Laboratory power supply Set the Laboratory power supply to 0 V	8 Connect the Red wire(Pin no 4) from the D-type to 24v power supply 
9	When Pin 4 is triggered, 24[VDC] The Set point Feedback green button turned on And you can set the desired set point temperature 0[Vdc] set the "Set Point" to -55[C] , 10 [Vdc] set the "set point" to 155[C] 	10 Connect the Green wire(Pin no 3) from the D-type to 24v power supply 
11	When Pin 3 is triggered 24[VDC] The TJ Feedback green button turned on And you can set the desired Junction Temperature 0[Vdc] set the "actual control value" (TJ) to -55[C], 10[VDC] set the "actual control value" (TJ) to 155[Vdc]. 	12 The following Table at the end shows the Temp against input voltage

Interpolated Temperature / Input Voltage Look-up Table

INTERPOLATED TEMP (C.)	INPUT VOLTAGE (V)	INTERPOLATED TEMP (C)	INPUT VOLTAGE (V)
COLUMN 1	COLUMN 2	continue column 1	continue column 2
-55	0	52,1	5,1
-52,9	0,1	54,2	5,2
-50,8	0,2	56,3	5,3
-48,7	0,3	58,4	5,4
-46,6	0,4	60,5	5,5
-44,5	0,5	62,6	5,6
-42,4	0,6	64,7	5,7
-40,3	0,7	66,8	5,8
-38,1	0,8	68,9	5,9
-36,1	0,9	71	6
-34	1	73,1	6,1
-31,9	1,1	75,2	6,2
-29,8	1,2	77,3	6,3
-27,7	1,3	79,4	6,4
-25,6	1,4	81,5	6,5
-23,5	1,5	83,6	6,6
-21,4	1,6	85,7	6,7
-19,3	1,7	87,8	6,8
-17,2	1,8	89,9	6,9
-15,1	1,9	92	7
-13	2	94,1	7,1
-10,9	2,1	96,2	7,2
-8,8	2,2	98,3	7,3
-6,7	2,3	100,4	7,4
-4,6	2,4	102,5	7,5
-2,5	2,5	104,6	7,6
-0,4	2,6	106,7	7,7
1,7	2,7	108,8	7,8
3,8	2,8	110,9	7,9
5,9	2,9	113	8
8	3	115,1	8,1
10,1	3,1	117,2	8,2
12,2	3,2	119,3	8,3
14,3	3,3	121,4	8,4
16,4	3,4	123,5	8,5
18,5	3,5	125,6	8,6
20,6	3,6	127,7	8,7
22,7	3,7	129,8	8,8
24,8	3,8	131,9	8,9
26,9	3,9	134	9
29	4	136,1	9,1
31,1	4,1	138,2	9,2
33,2	4,2	140,3	9,3
35,3	4,3	142,4	9,4
37,4	4,4	144,5	9,5
39,5	4,5	146,6	9,6
41,6	4,6	148,7	9,7
43,7	4,7	150,8	9,8
45,8	4,8	152,9	9,9
47,9	4,9	155	10
50	5	-	-