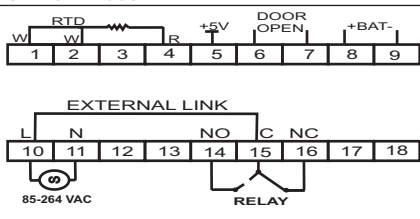
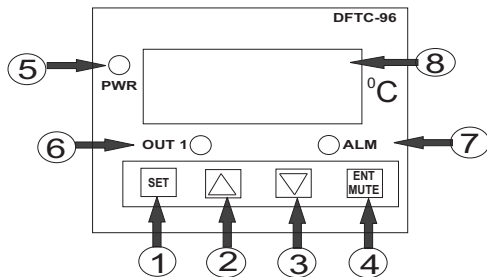


MODEL: DFTC-96 I/P: RTD
Sr. No.: 219081



- 1: WHITE WIRE OF PT-100 SENSOR
- 2: WHITE WIRE OF PT-100 SENSOR
- 4: RED WIRE OF PT-100 SENSOR
- 5: +5 VOLT
- 6: DOOR OPEN
- 7: DOOR OPEN
- 8: +VE WIRE OF 12V BATTERY
- 9: -VE WIRE OF 12V BATTERY
- 10: LIVE (PHASE)
- 11: NEUTRAL
- 14: NORMALLY OPEN CONTACT OF RELAY
- 15: COMMON CONTACT OF RELAY
- 16: NORMALLY CLOSE CONTACT OF RELAY

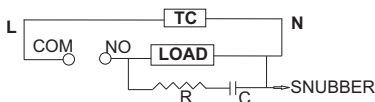


- 1:- SET KEY & ALARM MODE KEY
- 2:- UP KEY
- 3:- DOWN KEY
- 4:- ENTER / MUTE KEY
- 5:- POWER INDICATION
- 6:- OUTPUT ON INDICATION
- 7:- ALARM ON INDICATION
- 8:- DISPLAY FOR TEMPERATURE

Trouble Shooting :

- 1) No display: check input connection & mains supply.
- 2) Time is not proper: set it as per given in operating manual. If the problem is still there then contact our service person.
- 3) Proper earthing is necessary for proper operation of the unit.
- 4) OPEN : check sensor OR sensor connection
- 5) Relay do not operate : check mains supply, relay will not work if it is on battery.

**If load is inductive,
connect snubber across load**



R=56 OHMS / 2 WATT.
C=0.1 MFD / 250 V AC
TC=TEMPERATURE CONTROLLER

Defrost controller

Specifications:

Supply	: SMPS 85 ~ 267VAC output 15vdc / 1Amp.
Input sensor	: Pt 100 (RTD)
Logic	: Heating/cooling/off
Real time clock	: Date, month, year, hrs, min.
Defrost time	: Real time based with enable/disable function.
door open delay	: adjustable up to 300 sec. with enable /disable function
hysteresis (diff.)	: adjustable up to 10.0°C
controlling delay	: adjustable 4 to 254 sec.°C
temperature offset	: adjustable -9.9 to 9.9 °C
Display	: .0.5inch,7-seg,4digit red led display for indication
Control range	: -99°C to 400°C -99.9°C to 400.0°C
Size (in mm.)	: 96 (L) X 96 (W) X 110 (D)
Accuracy	: +/-0.1°C / 1°C
Mounting	: Panel mounting
Power Consumption	: 10 VA max.
Relay / SSR output	: Potential free. 10 Amp. Resistive load at 230 VAC

Features:

- Temperature control.
- Password protected setting mode.
- Real time based Defrost controller with enable / disable option.
- Door open indication with delay and enable / disable option.
- Last 24hrs data acquisition with min & max temp. and with no of counts.
a) low/high value of PV in last 24 hrs.
b) low /high count in last 24 hrs.
- Selection of unit available either °C / °F.
- Temperature high/low alarm with disable facility.
- Battery back-up is given with trickle charging."12V"rechargeable battery.
(Rechargeable battery for charge to be connected externally by customer.)

HOW TO SET DATE & TIME ?

Press "UP & SET" keys for 3 sec. and release. "dAtE" and "present date" will flash alternately on display. Set it by up or down key in 24 hrs format. to desired value. Press "ENT" key to store value.

Press "SET" key and release to go to the next parameter. "Pon" and "present month" will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and release to go to the next parameter. "YEAr" and "present year" will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and release to go to the next parameter. "Hour" and "present hours" will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and Release. Go to the next parameter. It will "Min" and "present minute" will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

If press "SET" key to go to the NORMAL mode. If no key is pressed in "DATE & TIME" mode then display will flash 8 times & it will go to **NORMAL mode**.

HOW TO CHECK LAST 24 HRS MODE ?

Press "DOWN & SET" keys for 3 sec. and release. "PVLo" and "low value of PV in last 24 hrs" will flash alternately on display.

Press "SET" key to go to the next parameter. "PVHi" and "high value of PV in last 24 hrs" will flash alternately on display.

Press "SET" key to go to the next parameter. "Loc" and "low count in last 24 hrs" will flash alternately on display.

Press "SET" key to go to the next parameter. "Hic" and "high count in last 24 hrs" will flash alternately on display.

Press "SET" key to go to the next parameter. "rSt" and "no" will flash alternately on display. Use up or dn key to select "Yes" and press "ENT" key to reset all parameters related 24hrs.

reset value given below.

PVLo =999.9

PVHi =999.9

Loc =0

Hic =0

Press "SET" key go to the **NORMAL** mode.

If no key is pressed in "LAST 24 HRS" mode then display will flash 8 times & it will go to **NORMAL mode**.

HOW TO CHECK DATE & TIME ?

press "DOWN" key for 3 sec and release.

"dt01" will show present DATE.

Again press "DOWN" key. "Pn01" will show present MONTH.

Again press "DOWN" key. "Yr19" will show present YEAR.

Again press "DOWN" key. "Hr10" will show present HOUR.

Again press "DOWN" key. "Pi30" will show present MINUTES.

Again press "DOWN" key. "Sc10" will show present SECONDS.

To press "ENT" key go to the **NORMAL** mode.

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आयन इलेक्ट्रिकल्स प्रा. लि.



Operating manual

Check all the connections & Switch on the mains supply.

DISPLAY WILL FLASH "rtd.1" AND THEN WILL INDICATE PROCESS TEMP.

HOW TO ADJUST SET / ALARM POINT ?

Press "SET" key for 3 seconds and release. "SET" with "previous set value" will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and Release. "ALLo" with previous alarm low value will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and Release. "ALHi" with previous alarm high value will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key to go the NORMAL mode. If no key is pressed in set mode then display will flash 8 times & it will go to NORMAL mode by saving the change previous values.

HOW TO SET LOGIC MODE ?

ONE HAS TO ENTER PASSWORD

PROVIDED TO SET LOGIC MODE (8421)

Press "UP & DN" keys and release "PASS" password & 1st digit will flash "0" alternately on display.

Set it "0 to 9" by using "up" key.(8)

Use "Down" key to shift next digit.

Set it "0 to 9" by using "up" key.(4)

Use "Down" key to shift next digit.

Set it "0 to 9" by using "up" key.(2)

Use "Down" key to shift last digit.

Set it "0 to 9" by using "up" key.(1)

Press "SET" key and release.

Now "SEn" and "rtd.1" will flash alternately on display. Use UP or DOWN key to select rtd or rtd.1. rtd for 1°C resolution and rtd.1 for 0.1°C resolution. Press "ENT" key to store value.

Press "SET" key and release to Go to the next parameter "temperature offset". "oFF" and "000" will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

NOTE: DO NOT CHANGE THIS PARAMETER FROM "000". THIS HAS TO BE "000" OTHERWISE CALIBRATION WILL DISTURB.

Press "SET" key and release to go to the next parameter "range low lock". "rnLo" and "-99.9" (previous value) will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and release to go to the next parameter "range high lock". "rnHi" and "400.0" (previous value) will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and release to go to the next parameter "temperature unit". "unit" and "c" (previous unit) will flash alternately on display. Use UP or DOWN key to select "C" & "F". C for degree Celsius and F for degree Fahrenheit. Press "ENT" key to store value.

If set °F temperature will show in Fahrenheit.

Press "SET" key and release to go to the next parameter "control action". "con1" and "cool" (previous action) will flash alternately on display. Use up or down key to select cool, HEAt, oFF. Press "ENT" key to store action.

Con1 use for relay1 only

If set it cool --- cooling mode

HEAt----- heating mode

oFF-- no controlling action only indicate temp.

Press "SET" key and release to go to the next parameter "hysteresis". "HYSt" and "0.2" (previous value) will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

If set 0.2 °C relay cutoff at below set point

Ex. Set =4.0 °C hyst = 0.2 °C relay cutoff----- 3.8°C

Press "SET" key and release to go to the next parameter "delay". "dLY" and "60" (previous value) will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

NOTE: DELAY TIME IN SECONDS.

Press "SET" key and release to go to the next parameter "control action 2". "con2" and "oFF" (previous action) will flash alternately on display. Use up or down key to select cool, HEAt, oFF. Press "ENT" key to store action.

Con1 use for relay2 only

If set it cool --- cooling mode

HEAt----- heating mode

oFF-- no controlling action only indicate temp.

Press "SET" key and release to go to the next parameter "control action 3". "con3" and "oFF" (previous action) alternately on display. Use up or down key to select cool, HEAt, oFF. Press "ENT" key to store action.

Con1 use for relay3 only

If set it cool --- cooling mode

HEAt----- heating mode

oFF-- no controlling action only indicate temp.

Press "SET" key and release to go to the next parameter "slave id for 485 communication". "S-id" and "1" (previous value) will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Press "SET" key and release to go to the next parameter "door enable/disable function". "door" and "YES" (previous function) will flash alternately on display. use up or down key to select "YES", "no" desired function. Press "ENT" key to store value.

NOTE: YES--enable function

No-- disable function

Press "SET" key and release to go to the next parameter "door delay". "ddLY" and "60" (previous value) will flash alternately on display. Set it by up or down key to desired value. Press "ENT" key to store value.

Ex: when the door is opened, it will take delay. After complete delay display will flash "door" and "temp"(process value) alternately flash on display with audio sound.

Press "SET" key and release to go to the next parameter "defrost". "dfst" and "YES" (previous function) will flash alternately on display. Use up or down key to select "YES", no desired function.

Press "ENT" key to store function.

yes--enable function

No-- disable function

Press "SET" key and release to go to the next parameter defrost start time in hours. "st.hr" and "12"(previous time) will flash alternately on display. Set it by up or down key to desired value.

Press "ENT" key to store value.

Note: Defrost time RTC base in 24 hrs format.

Press "SET" key and release to go to the next parameter defrost start time in minutes. "st.Πi" and "00"(previous time) will flash alternately on display. Set it by up or down key to desired value.

Press "ENT" key to store value.

Note: Defrost time RTC base in 24 hrs format.

Press "SET" key and release to go to the next parameter defrost end time in hours. "En.hr" and "14"(previous time) will flash alternately on display. Set it by up or down key to desired value.

Press "ENT" key to store value.

Note: Defrost time RTC base in 24 hrs format.

Press "SET" key and release to go to the next parameter defrost end time minutes. "En.Πi" and "00" (previous value) will flash alternately on display. Set it by up or down key to desired value.

Press "ENT" key to store value.

Press "SET" key and release to go to the NORMAL running mode.

Actual defrosting start at the set real time with a single beep. After completion of defrost period, controller provide another audio beep and normal controlling cycle resumes.

Note: "IF YOU PRESS UP KEY WHILE DEFROST MODE, YOU WILL EXIT THE DEFROST MODE AND CONTROLLER WILL RESUME THE NORMAL MODE."