

DFT-880

Electronic Defrost Timer

Making Life Comfortable

General Description

Smart Temp has manufactured a powerful yet easy to use electronic defrost control board perfect for use on all reverse cycle air conditioning systems.

The DFT-880 defrost module is a perfect replacement part for older mechanical or electronic defrost controllers that may be damaged or fatigued. The DFT-880 is a lower cost alternative than replacing complicated control boards from the original equipment supplier.

The DFT-880 uses a powerful microprocessor to accurately monitor and control all functions of the de-ice process. Further, the DFT-880 indicates the current status via 2 clearly marked LEDs. This advanced control logic helps ensure the de-ice process is accurately controlled to ensure best HVAC equipment performance.

De-Ice Process

In heating mode, the reverse cycle air conditioner condenser coil temperature is monitored by the DFT-880 coil temperature sensor. When the coil is temperature is detected at the de-ice initiation temperature, the de-ice cycle will automatically begin.

The de-ice cycle consists of the following stages

- Pending stage (Green LED flashes rapidly)
- De-ice stage - (Green LED on steady)
- Termination stage (Green LED slow flash)

Defrost is terminated by either the condenser coil reaching and holding above the termination temperature or the maximum permitted de-ice time expiring.

In the unlikely event that you wish to change the factory default settings, the DFT-880 has a set of DIP switches that permits the installer to adjust the de-ice initiation temperature, the de-ice termination temperature or the de-ice inhibit time (time before subsequent de-ice cycles are permitted).



LED status indication.

10A relay.

Adjustable control parameters.

Test mode.

Force de-ice mode.

DIN mounted.

Small footprint.

Full product support

12 Month warranty

Advanced Capabilities

To offer the most value for your investment the DFT-880 operational parameters can be easily tuned to suite the demands of the particular reverse cycle unit the DFT-880 is servicing. Simply by changing some DIP switch settings the de-ice initiation temperature, the de-ice termination temperature as well as the de-ice inhibit time.

Switch Functions (all OFF is default)

Sw1	Off	Normal Mode
	ON	Cyclic De-Ice Test
Sw2	Off	De-Ice initiate at -2c
	On	De-ice initiate at -5c
Sw3	Off	De-ice terminates at 10c
	On	De-ice terminates at 15c
Sw4&5	4Off/5Off	De-ice termination in 10 min max
	4On/5Off	De-ice termination in 5 min max
	4Off/5On	De-ice termination in 15 min max
	4On/5On	De-ice termination in 20 min max
Sw 6&7	6Off/7Off	Inhibit for 30 minutes
	6On/7Off	Inhibit for 15 minutes
	6Off/7On	Inhibit for 10-60 minutes
	6On/7On	Inhibit for 11-90 minutes
Sw 8	Off	Normal
	On	Hold in De-Ice Mode (test mode)

Testing & commissioning

To make the testing and commissioning of the DFT-880 as simple as possible Smart Temp has provided two test methods.

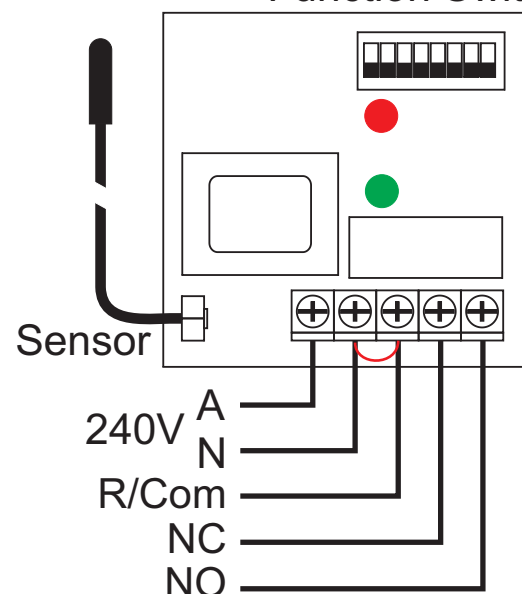
Enabling the cycle test function by turning Sw 1 ON will force the DFT-880 into a de-ice function test that will automatically step the DFT-880 through all stages of the de-ice process in a continuous loop. In this test the timing is multiplied by a factor of 10 so you are able to quickly observe the DFT-880 operation and prove correct operation.

As the test progresses the indicator LEDS will show the DFT-880 status.

For quick confirmation of correct wiring etc, turn switch 8 on and the DFT-880 is held into permanent de-ice mode for as long as Sw8 is On. To warn you that this mode is active the diagnostics LEDS flash a "Panic" code to remind you to reset Sw8 to OFF when testing is complete.

Hardware Layout

Function Switches



A factory link is shown in red. In this example the DTF-880 is shown switching the 240N through the relay. Should you wish you can swap the 240V A&N terminals so that you switch 240V A if necessary.

If you wish to switch a separate phase or voltages other than 240, simply remove the factory link.

Specifications

Power Supply	240VAC +/- 5% @ 50Hz
Relay Rating	10A @240VAC (max)
Size	75 x 75 x 50mm
LEDS	Green - (De-Ice indication) Red - (Errors & coil temp)
De-Ice Initiation	- 2c or - 5c selectable
De-Ice Confirmation	Automatic on coil temp
De-Ice Termination	+10c or +15c 5min, 10min, 15min or 20min
Sensor Type	10K NTC Type II
Sensor Length	1.8 meters typically
Range	-30c ~ 50c
Storage conditions	-20 + 70c <95% non condensing
Operational Cond.	-15 + 60 < 95% non condensing
Warranty	12 Months

