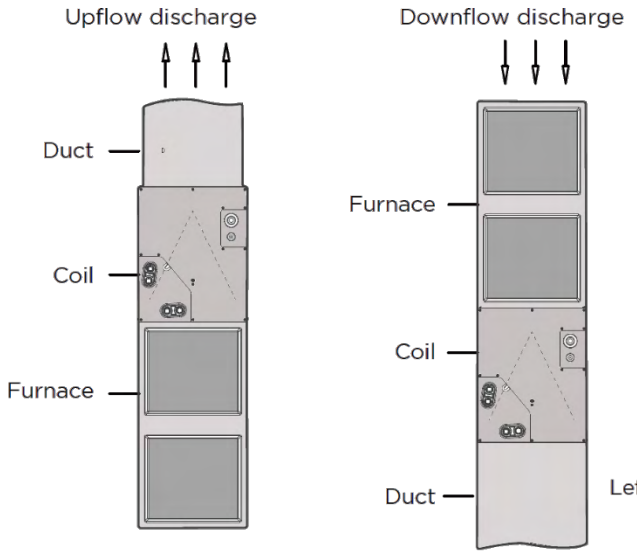
Dial Sentinel Series with Cased Coil EZ-Install Guide:

All steps should be completed before applying high voltage. Read all steps before installation.

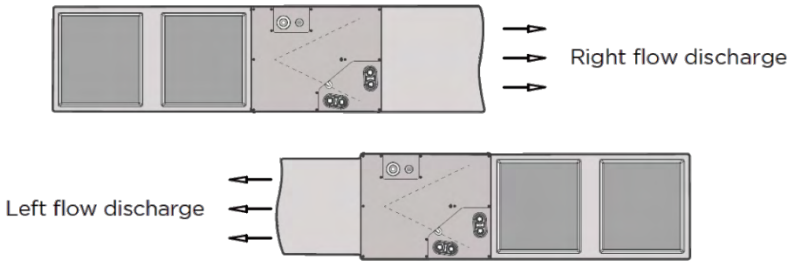
Step 1. Confirm Proper Charge, Airflow, and System Orientation:

- To reach full AHRI-Rated Efficiency, Sentinel Series inverter Heat Pumps and Air Conditioners must be properly matched with compatible indoor coils and air handlers. Mismatched equipment risks lower efficiency, premature system failure, and potential service issues. When installing with cased coils and furnaces, airflow matching nominal CFM rates should be verified (see chart on pg. 5).
- Dial Sentinel systems are pre-charged for 25' of line set. For longer line sets, add 0.69oz. of refrigerant per foot beyond 25' of length. Minimum line set length is 10' with at least 15' preferred.
- Sentinel Cased Coils are factory-assembled for true multi-position applications – review orientation diagrams below for proper installation.
- Coil should be installed using the integral flanges (fold out) and/or field-fabricated plates. Coil should be level and all gaps between cabinets sealed with tape or mastic.

DAP1824 / 3036 Cased Coils

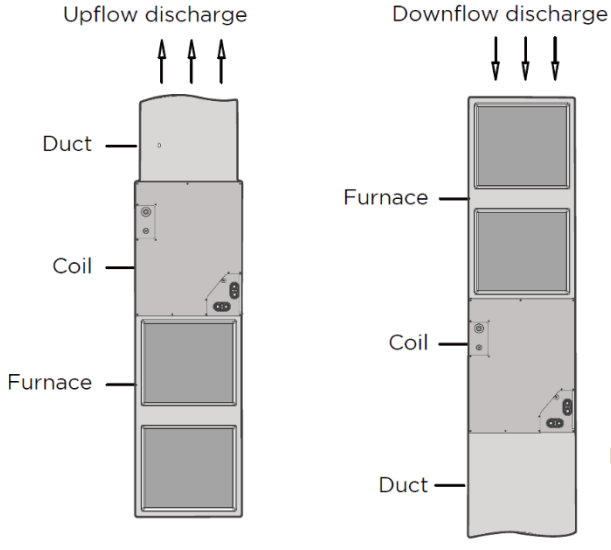


Vertical Upflow & Downflow Installation

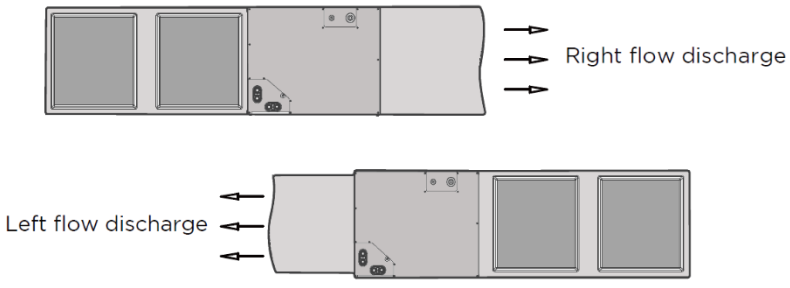


Horizontal Right & Left Installation

DAP4860 Cased Coils



Vertical Upflow & Downflow Installation

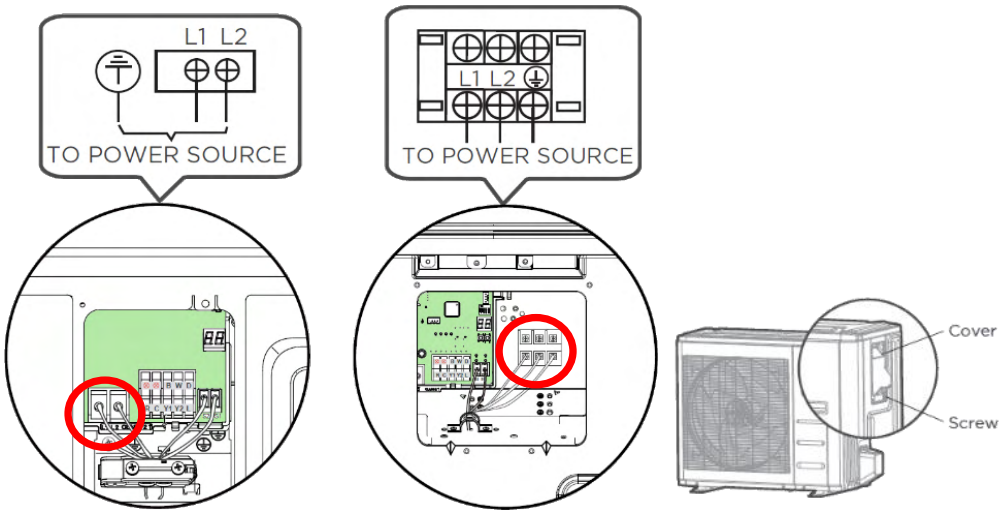


Horizontal Right & Left Installation

Step 2. Establish High-Voltage Supply:

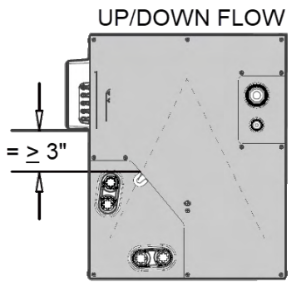
- *Sentinel Series outdoor units* require either a dedicated 208/230V; check the specifications, submittals, or IOM manual for exact minimum circuit ampacity (MCA) and maximum overcurrent protection (MOP).

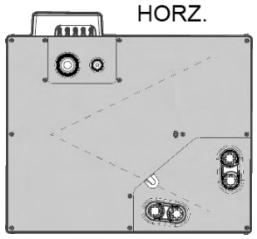
Outdoor AC or HP Unit
Note: Termination may vary by model.

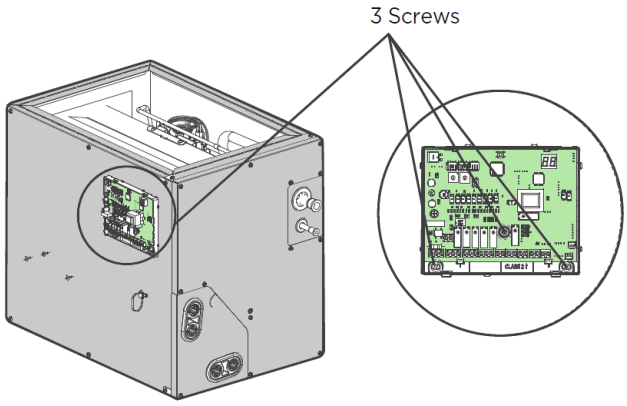


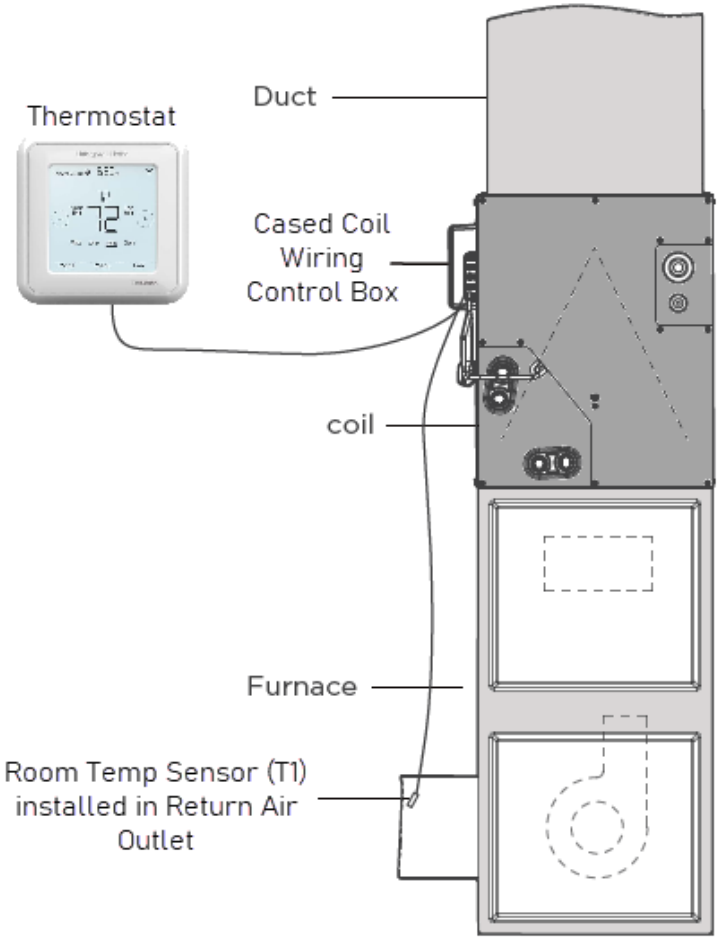
Step 3. Installing and Wiring Control Box

- Coil Control Box can be mounted on front of coil, side of coil, or on nearby walls. Note suggested locations below, but ALWAYS look before drilling or driving screws to eliminate any potential damage to coils or refrigerant piping.

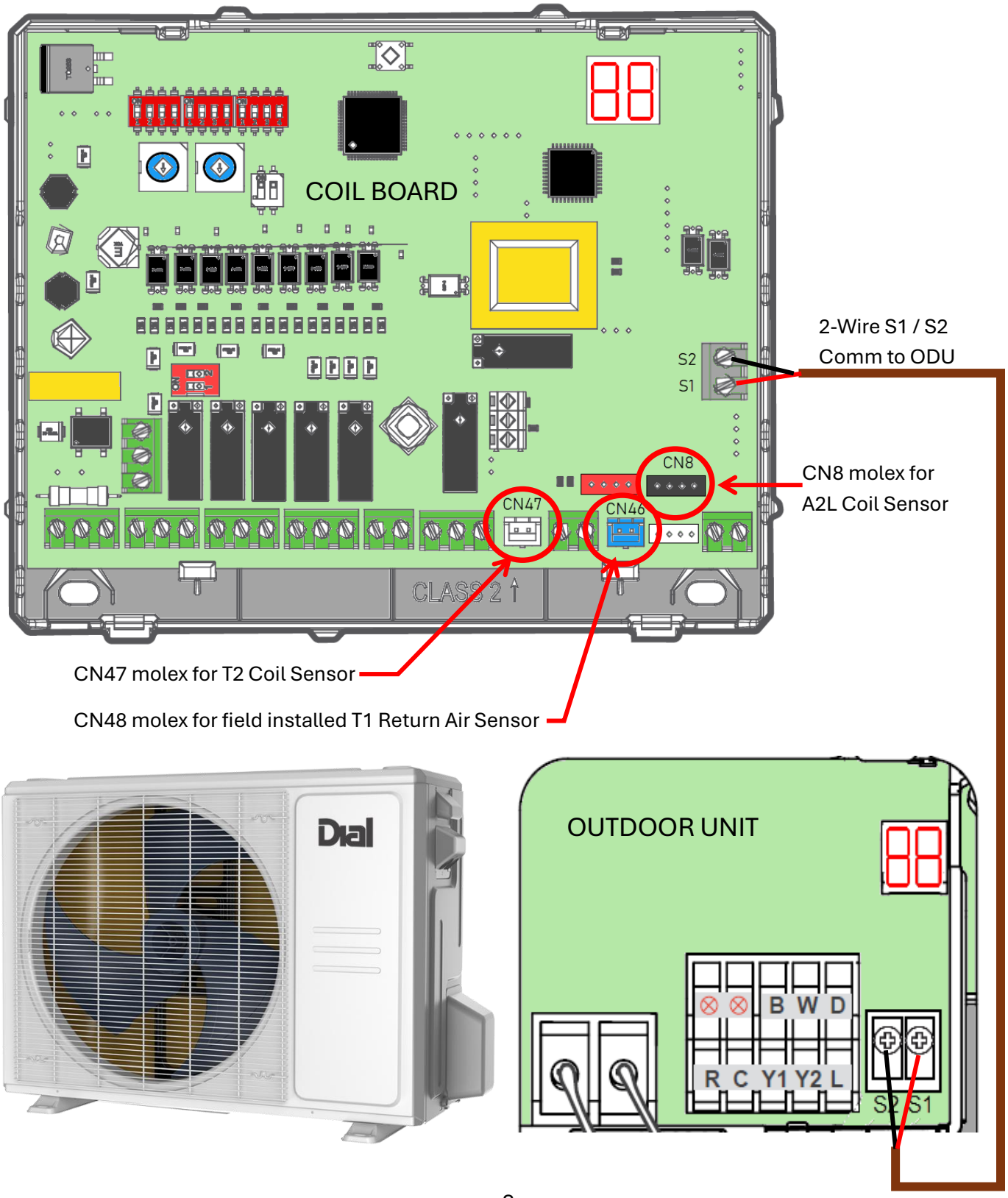








- Connect provided cable for A2L Sensor to black CN8 molex on control board.
- Connect provided cable for T2 Coil Sensor to beige CN47 molex on control board.
- Connect field installed T1 Return Air Sensor to blue CN46 molex on control board.
- Connect S1 and S2 (polarity sensitive) to outdoor unit with 18ga. Standard 2-wire or shielded stranded cable (preferred).

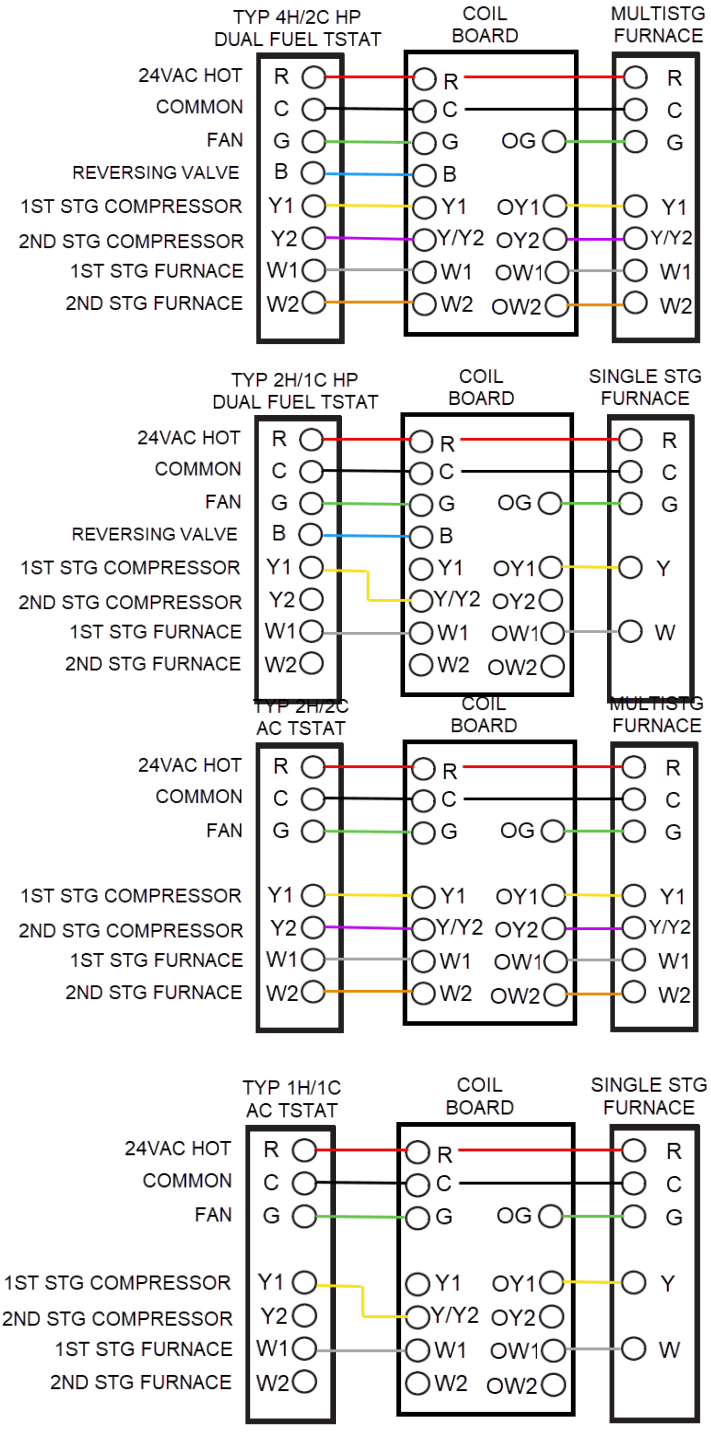


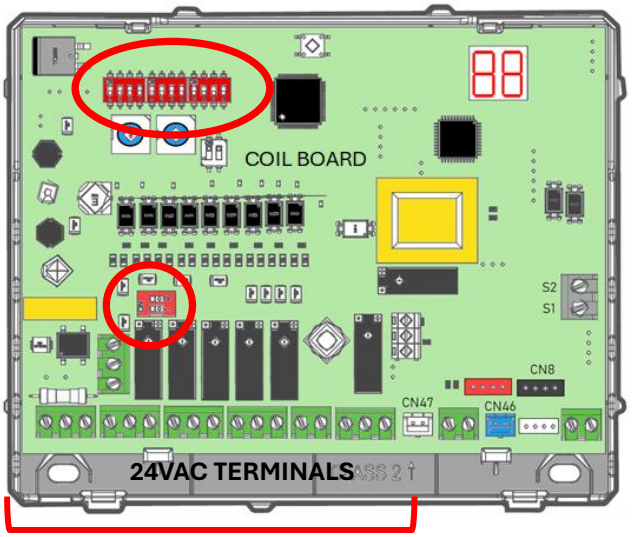
Typical Control Scenario: 24V Thermostat + Sentinel Coil + Furnace + Sentinel Outdoor Unit

18 ga. Solid Conductor – all power removed

- Connect thermostat terminals to corresponding Air Handler 24VAC terminals on Control Board
- Connect S1/S2 Terminals on Air Handler control board to Outdoor Unit Control Board
- Verify dipswitches on Coil Board and Outdoor unit

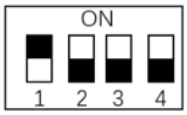
Heat Pump & Cooling Only 24VAC Connections:





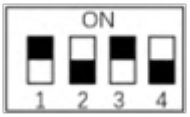
COIL BOARD DIPSWITCHES

Heat Pump **SW1 Dipswitches**



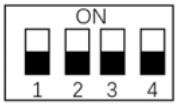
1 ON (2,3,4 OFF)
DEFAULT ALL OFF

Air Conditioner



1,3 ON (2,4 OFF)
DEFAULT ALL OFF

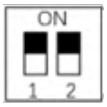
All Applications **SW2 and SW3 Dipswitches**



ALL OFF (DEFAULT)

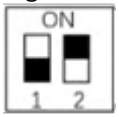
S4 Dipswitches

Sngl-Stg Furnace



ALL ON (DEFAULT)

2-Stg Furnace



1 OFF (2 ON)
W1 and W2 activate separately.

NOTES:

1. Not all 24V thermostats work with inverter systems, some bleed voltage causing erratic behavior.
2. Thermostats used for heat pump operation + furnace must be dual-fuel capable.

OUTDOOR Dipswitches (Default: All Off)

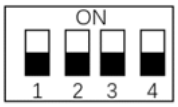
SW-1: Not used **OFF**

SW-2: ON for 3rd Party Air Handler or Coil
OFF for standard 2-Wire Control

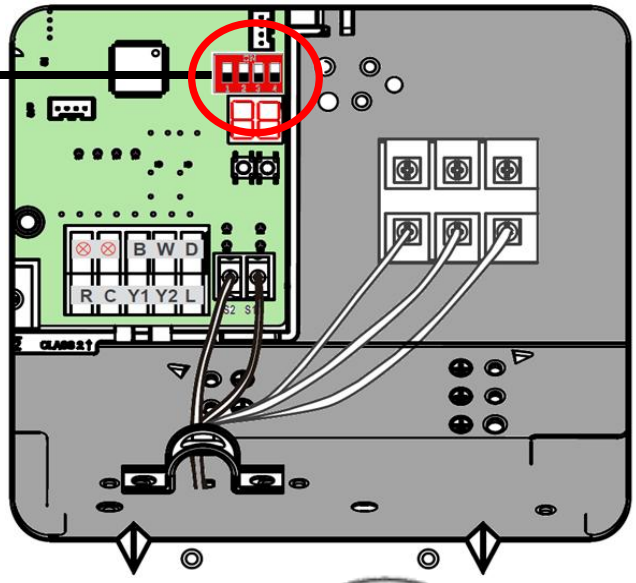
SW-3: ON for Enhanced performance when Single-stage thermostat is used.
OFF for any other type of Tstat or control.

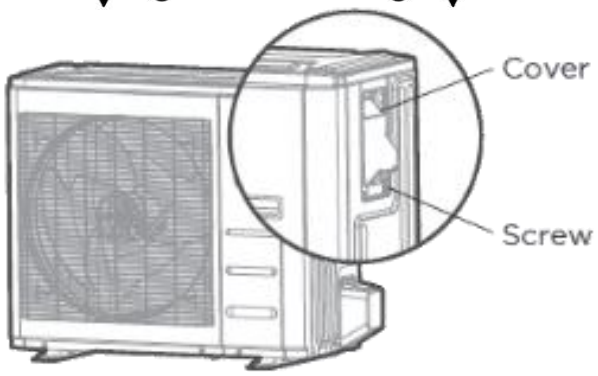
SW-4: ON for Enhanced defrost – for extreme climate locations
OFF for mild or moderate climates

All Applications



ALL OFF (DEFAULT)





AIRFLOW PERFORMANCE CHART:

COIL MODEL	OUTDOOR UNIT	CFM MINIMUM	CFM MAXIMUM
DAP1824(A,B)TA1	1.5T	525	600
DAP1824(A,B)TA1	2.0T	700	800
DAP3036(A,B,C)TA1	2.5T	875	1000
DAP3036(A,B,C)TA1	3.0T	1050	1200
DAP4860CTA1	4.0T	1400	1600
DAP4860CTA1	5.0T	1575	1800

***NOTE:** if airflow is high due to ductwork or other causes, there is a chance for condensate to blow off in a downflow application. A 4" minimum field-supplied adapter be placed between the coil and the furnace to allow even air distribution across both coil slabs when airflow is too high.