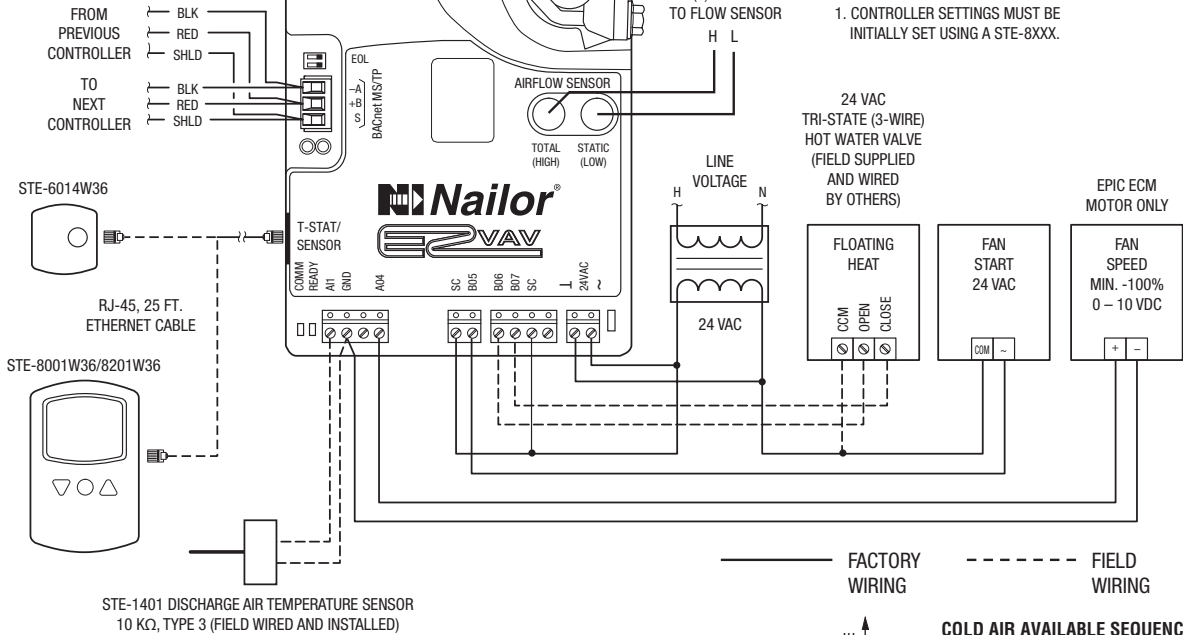# Nailor Industries Inc.

EZVAV DIGITAL CONTROLS
PARALLEL FAN POWERED (VAV) TERMINAL UNIT
COOLING WITH FLOATING HEAT
PRESSURE INDEPENDENT
MODELS: 35NW AND 37NW   N403

IF CONTROLLERS ARE TO BE NETWORKED TOGETHER, TURN ON EOL DIP SWITCHES ON THE CONTROLLERS AT BOTH PHYSICAL ENDS OF THE NETWORK. CONNECT SHIELD TO EARTH GROUND AT ONLY ONE POINT.

BAC-8005-36 CONTROLLER

EXTERNAL CONNECTIONS:
AI1 = DAT SENSOR
A04 = FAN SPEED
B05 = FAN ENABLE
B06 = OPEN VALVE
B07 = CLOSE VALVE

NOTES:
1. CONTROLLER SETTINGS MUST BE INITIALLY SET USING A STE-8XXX.

FROM PREVIOUS CONTROLLER — BLK / RED / SHLD
TO NEXT CONTROLLER — BLK / RED / SHLD

EOL — A / +B / S — BACnet MS/TP

1/4" (6) O.D. TUBING TO FLOW SENSOR H L
AIRFLOW SENSOR — TOTAL (HIGH) / STATIC (LOW)

24 VAC TRI-STATE (3-WIRE) HOT WATER VALVE (FIELD SUPPLIED AND WIRED BY OTHERS)

EPIC ECM MOTOR ONLY

STE-6014W36

T-STAT/SENSOR

RJ-45, 25 FT. ETHERNET CABLE

STE-8001W36/8201W36

COMM READY AI1 GND A04 SC B05 B06 B07 SC ⊥ 24VAC ~

LINE VOLTAGE H N
24 VAC

FLOATING HEAT — CCM / OPEN / CLOSE
FAN START 24 VAC — COM / ~
FAN SPEED MIN. -100% 0 – 10 VDC — + / −

STE-1401 DISCHARGE AIR TEMPERATURE SENSOR 10 KΩ, TYPE 3 (FIELD WIRED AND INSTALLED)

——— FACTORY WIRING   - - - - FIELD WIRING

Room Temperature Sensor Option:
- ☐ **TSD** Digital Display (STE-8001W36)
- ☐ **TSDO** Digital Display w/Occupancy Motion Sensor (STE-8201W36)
- ☐ **TSR** Rotary Dial (STE-6014W36)

CONTROL SEQUENCE N403
Sequence of Operation:

1. Changeover/Morning Warm-up (Central AHU Heat/Cool): If supply air as measured by the discharge air temperature (DAT) sensor is below 72°F (22.2°C), cool air is said to be available. If supply air is above 76°F (24.4°C), warm air is said to be available. Any time warm air is available, auxiliary heat is locked out.

2. Cool Air Available: As space temperature rises above the cooling setpoint, the controller increases primary airflow. At a space temperature of 2°F (1.1°C) above the cooling setpoint, maximum cooling airflow is maintained. On a decrease in space temperature, the controller reduces airflow. Below cooling setpoint, minimum airflow is maintained.

3. The fan is started only on a call for heat. The fan stops if there is no call for heat. During occupied mode, the fan runs at maximum fan speed. EPIC ECM Motor Only: During standby and unoccupied modes, the fan runs at minimum fan speed.

4. Supplemental Heat: As the space temperature drops below the heating setpoint, (heating loop is greater than 70%), the valve is driven open. As the space temperature rises back toward the heating setpoint (heating loop is less than 30%), the valve is driven closed. If the loop is in between, there is no valve action.

5. If DAT limiting is enabled and a DAT sensor is detected, the discharge air heating setpoint is determined based on the heating loop. The discharge temperature is limited to 15°F (8.3°C) above space temperature up to a maximum of 90°F (32.2°C).

6. Warm Air Available: The fan is locked out. As space temperature drops below the heating setpoint, the controller increases airflow. At a space temperature of 2°F (1.1°C) below the heating setpoint maximum heating airflow is maintained. On an increase in space temperature, airflow decreases. As space temperature rises above the heating setpoint, minimum heating airflow is maintained.

FAN OPERATION

COLD AIR AVAILABLE SEQUENCE

FLOATING HEAT OPERATION

WARM AIR AVAILABLE SEQUENCE
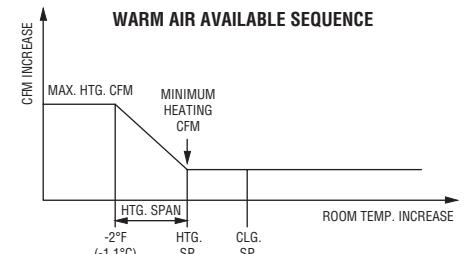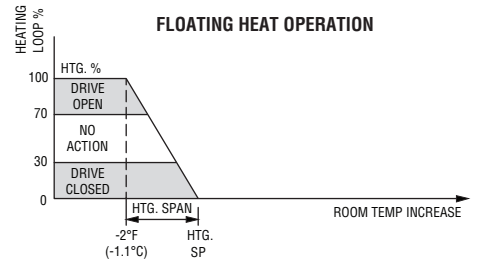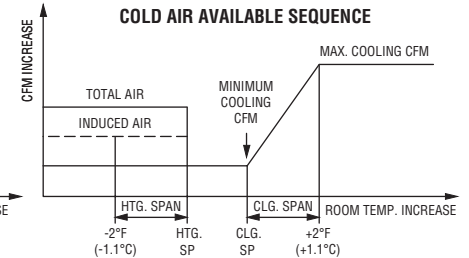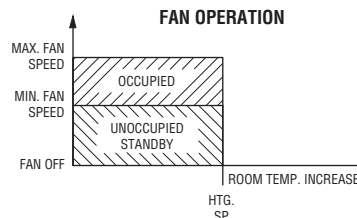
SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	2 - 22 - 23	3500	10 - 14 - 16	D35N403