ANEMOSTAT®
SERIES FAN AIR TERMINAL

- ENERGY SMART EC MOTOR
- BACNET DIGITAL CONTROLS
- VAV COOLING & ELECTRIC HEAT (STEP CONTROL)
- DIGITAL SENSOR STE-8001W80

HEATER POWER SUPPLY
- VARIES FOR PROJECT REQUIREMENTS
- REFER TO HEATER WIRING DIAGRAM
  INSIDE HEATER ENCLOSURE

ELECTRIC DUCT HEATER ENCLOSURE

24 VAC (& HTR CONTACTOR COMMON)

24 VAC
(GROUNDED
PER CODE)

STAGE #3   STAGE #2   STAGE #1

FAN MOTOR CIRCUIT, 1Ø
○ 120 V	○ 208 V	○ 240 V	○ 277 V
N	L2	L2	N
L	L1	L1	L

WHITE

BLACK

NUMBER OF STAGES PER SPEC (1,2,3)

OPTIONAL MOTOR
FUSING
○ NONE
○ 1 POLE (L)
○ 2 POLE (L - L)

WHITE

BLACK

GREEN

BROWN   YELLOW   RED   PURPLE   ORANGE

JUMPER
CONFIG

4-PIN
CONNECTOR

GRAY — SIGNAL

— COMMON

— RPM

P   R   M   OPT

— NEUTRAL   AUX
— 24VAC

PINK   — 24VAC   XFMR
— NEUTRAL

YELLOW

A-PULSE MODULATING
ECM CONTROLLER
(#15-119)

GREEN LAMP
FLOW INDICATOR

BAC-8005
BACNET
CONTROLLER-ACTUATOR

~ T   B08   SC   B07   B06   B05   SC   AO4   AO3   GND   AI1

SimplyVAV

(HI)   (LO)

RED   YELLOW

AIRFLOW
SENSOR

PRIMARY
AIR

DAMPER ROTATION
CW = OPEN
CCW = CLOSE

CAT5e Ethernet Cable
(w/ RJ45 Connector)
75 FEET MAX

72.0°
12:12 AM

STE-8001W80
NETSENSOR

REFER TO USER
MANUAL FOR
CONFIGURATION

SET
POINT

16-PIN CONNECTOR

5-PIN CONNECTOR

ENERGY
SMART
MOTOR

——— FACTORY WIRING
----- FIELD WIRING
——— FACTORY PIPING

JOB NAME:
SUBMITTED BY:
DATE:

DWG #: ES-D-8004A.1
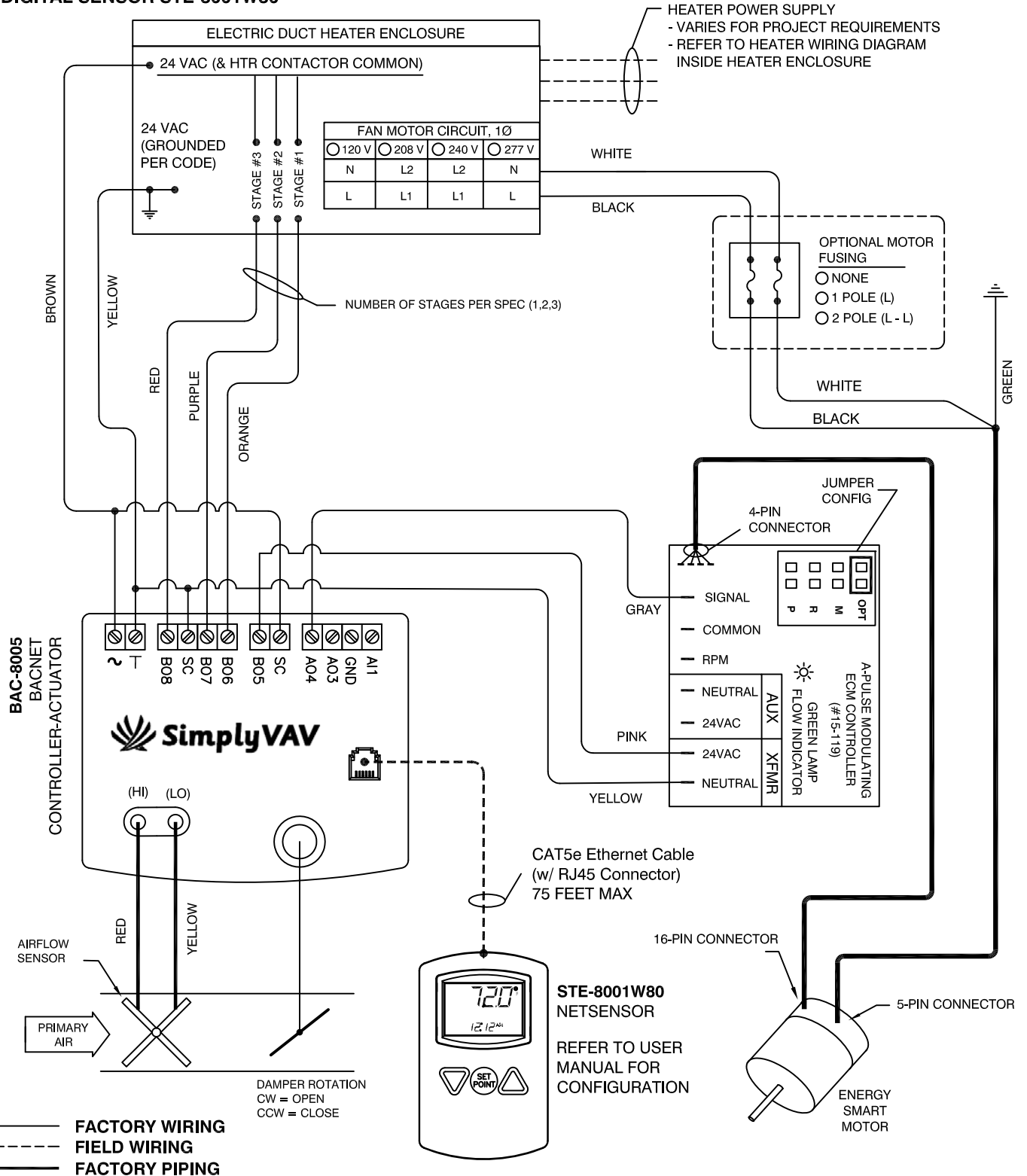REV: B
DATE: 03-24-17

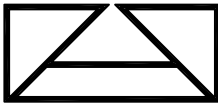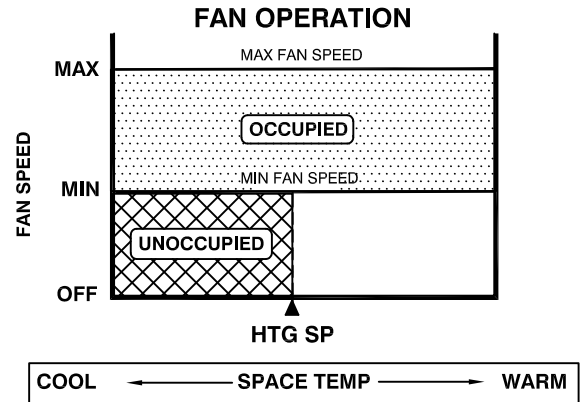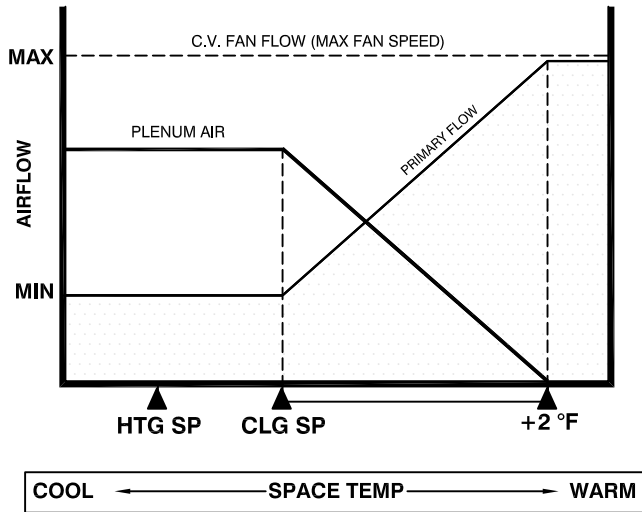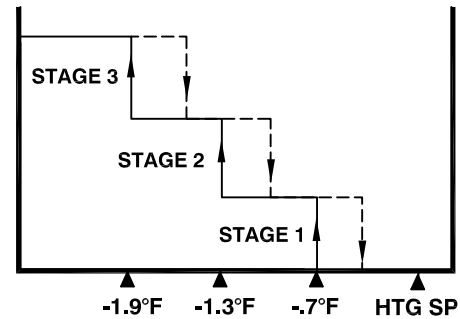# ANEMOSTAT
SERIES FAN AIR TERMINAL

Control Package
ES - D - 8004A

- ENERGY SMART EC MOTOR
- BACNET DIGITAL CONTROLS
- VAV COOLING & ELECTRIC HEAT (STEP CONTROL)
- DIGITAL SENSOR STE-8001W80

OCCUPIED MODE
(AHU ON)

FAN OPERATION

STEP HEAT SEQUENCE

SEQUENCE OF OPERATION

THE AIR TERMINAL FAN MUST BE RUNNING TO DELIVER AIR TO THE SPACE. THE CONSTANT VOLUME FAN CFM MUST BE GREATER THAN THE MAXIMUM PRIMARY CFM TO PREVENT SPILLING OF AIR INTO THE CEILING PLENUM. FAN CFM = PRIMARY CFM + INDUCED CFM

ALL SET POINTS ARE ADJUSTABLE AT THE WALL SENSOR. SEE SENSOR USER MANUAL FOR DETAILS.

OCCUPIED MODE (AHU ON)

1. THE CONTROLLER RECOGNIZES AIR FLOW (AT LEAST 30% OF FLOW DEMAND) TO PUT THE CONTROLS INTO THE OCCUPIED MODE. THE FAN SPEED IS INDEXED TO THE MAX FAN SPEED SETTING. THE WALL SENSOR SIGNALS THE CONTROLLER IN RESPONSE TO THE SPACE TEMPERATURE.
2. AS THE SPACE TEMP INCREASES FROM THE COOLING SET POINT TO +2° F ABOVE THE SET POINT, THE DAMPER OPENS FROM MIN TO MAX AIR FLOW. OVER +2° F ABOVE THE SET POINT, THE DAMPER MAINTAINS MAX FLOW. BELOW SET POINT, MIN AIR FLOW IS MAINTAINED.
3. AS THE SPACE TEMP DECREASES BELOW HEATING SET POINT TO -2° F BELOW THE SET POINT , UP TO 3 STAGES OF ELECTRIC HEAT (1,2,3) ARE ENERGIZED RESPECTIVELY. AS THE SPACE TEMPERATURE RISES BACK TOWARD THE HEATING SET POINT, HEATING STAGES (3,2,1) ARE TURNED OFF RESPECTIVELY.

UNOCCUPIED MODE (AHU OFF)

1. UNOCCUPIED MODE OCCURS WHEN THE CONTROLLER DELIVERS LESS THAN 25% OF FLOW DEMAND FOR AT LEAST 5 MINUTES.
2. THE FAN STARTS @ MIN FAN SPEED SETTING ON A CALL FOR HEATING BASED ON THE HEATING SET POINT TEMPERATURE.
3. AS THE SPACE TEMP DECREASES BELOW HEATING SET POINT TO -2° F BELOW THE SET POINT , UP TO 3 STAGES OF ELECTRIC HEAT (1,2,3) ARE ENERGIZED RESPECTIVELY. AS THE SPACE TEMPERATURE RISES BACK TOWARD THE HEATING SET POINT, HEATING STAGES (3,2,1) ARE TURNED OFF RESPECTIVELY.
3. ABOVE THE HEATING SET POINT TEMPERATURE, THE FAN TURNS OFF.
4. THE PRIMARY DAMPER WILL REMAIN 100% OPEN IN THE UNOCCUPIED MODE.

UPON LOSS OF POWER, PRIMARY DAMPER FAILS IN PLACE. OCCUPANCY MODES CAN BE DISABLED IF DESIRED.

JOB NAME:	DWG #:	ES-D-8004A.2
SUBMITTED BY:	REV:	B
DATE:	DATE:	03-24-17