

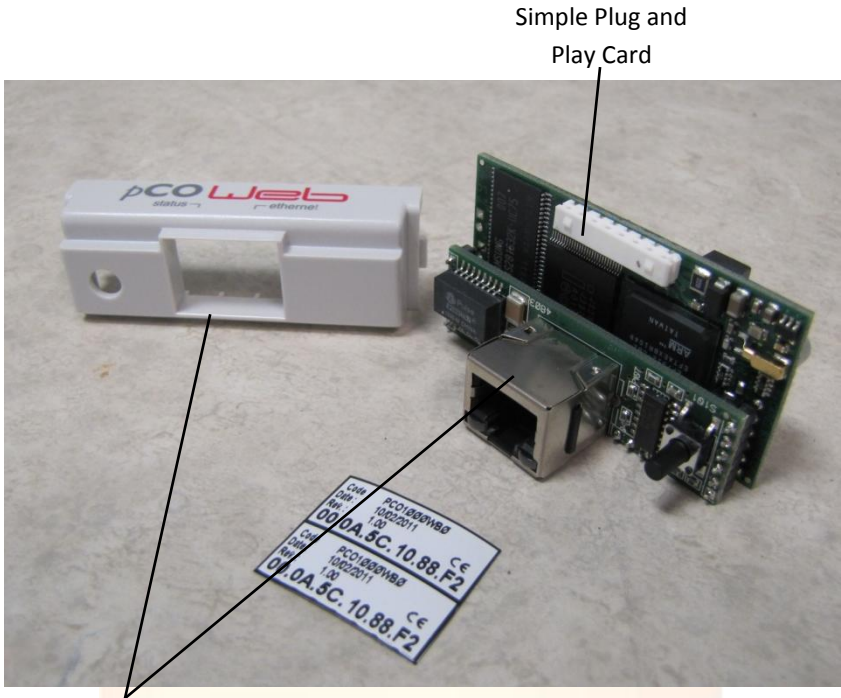
## SPECIFICATIONS

### General Information

- For Installation with SmartAir and PowerAir Multi-Sensor Units Only
- Compatible with Part Numbers 15052, 15059, 15060, 15061
- Three Available Interfaces
  - BACNET IP
  - BACNET MSTP
    - Includes Web and SNMP
  - LONWORKS

## REQUIRED COMPONENTS

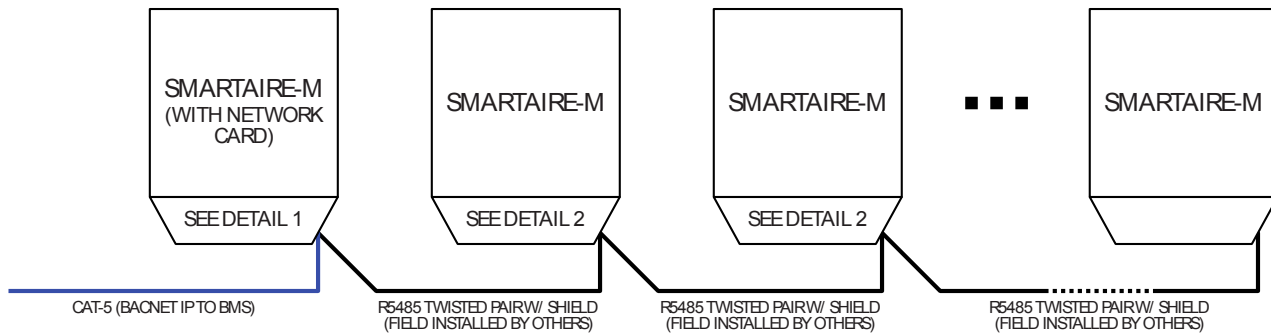
- SmartAir™ M or PowerAir™ M



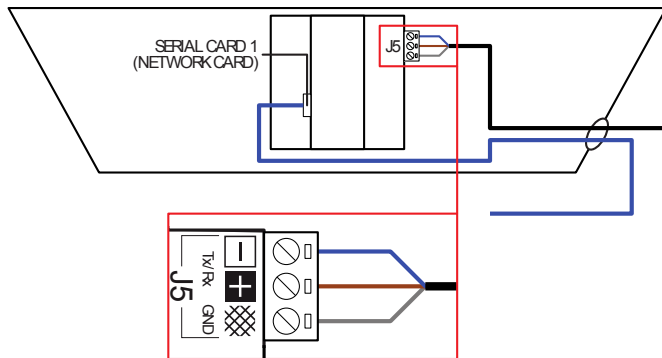
Simple Plug and Play Card

Interface to Customer BMS System

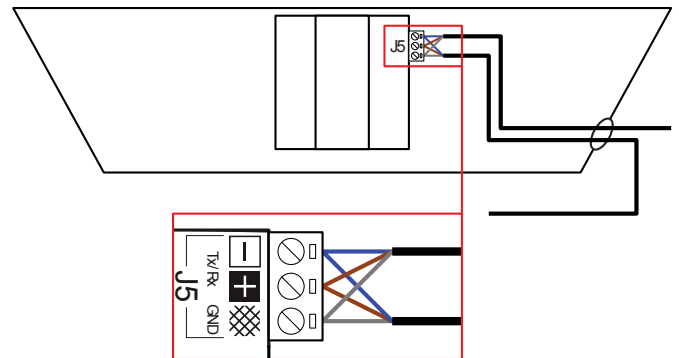
## SmartAire-M Networked Chain



DETAIL 1: SMARTAIRE-M (WITH NETWORK CARD)



DETAIL 2: SMARTAIRE-M



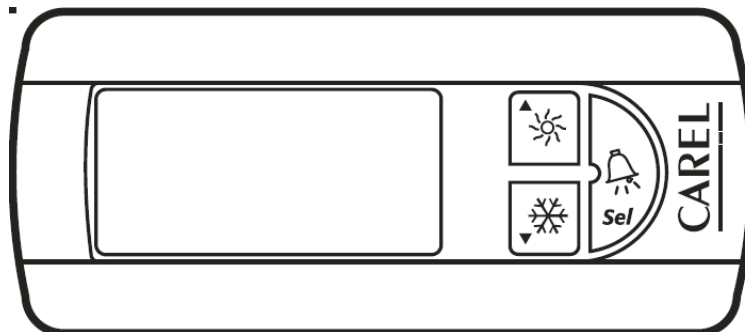
# SmartAire-M Users Menu

## Users Menu Display:

- Control Temperature
- "T1" - Probe 1 Temp
- "T2" - Probe 2 Temp
- "T3" - Probe 3 Temp
- "T4" - Probe 4 Temp
- "SP" - Setpoint
- "Out" - Control Output

## Setup Mode Display (Push and hold both up and down for 5 seconds):

- "UNT" - Unit Type: Fan/Damper (default Fan)
- "noS" - Number of sensors: 1-4 (default 3)
- "StP" - Start Point - Low Voltage Cutoff (default 1.5V)
- "Lo" - Minimum V out (default 0.0V)
- "Hi" - Maximum V out (default 10.0V)
- "Ctr" - Control Loop Type: P, PI, PID (default PI)
- "Pb" - Ctrl Loop Proportional Value (default 45.0)
- "It" - Ctrl Loop Integration Value (default 110)
- "Dt" - Ctrl Loop Derivative Value (default 0)
- "Db" - Deadband (default 1 degree)
- "add" - pLAN Address (default 1 = Master)
- "Sr" - Software Revision



# Networked SmartAire-M Setup Procedure

1. **Enter Setup Menu** (Push and hold both up and down for 5 seconds)
2. **Set pLAN Address :**
  - a. Use arrows to display "add"
  - b. Press Select – display shows "1"
  - c. Press Select again – arrow keys will blink
  - d. Press up arrow to select desired address
  - e. Press Select
  - f. Use address 1 for the SmartAire with the Bacnet Network Card
  - g. Use address 2 through 25 for the remaining SmartAire units in the chain
  - h. Each unit must have a unique address.
3. **Change Unit Type to Damper:**
  - a. Use arrows to display "Unt"
  - b. Press Select – display shows "Fan"
  - c. Press Select again – arrow keys will blink
  - d. Press down to display "dPr" for Damper mode
  - e. Press Select
4. **Change Start Point to 0V:**
  - a. Use arrows to display "StP"
  - b. Press Select – display shows "1.5"
  - c. Press Select again – arrow keys will blink
  - d. Press down to change to 0.0
  - e. Press Select

# SmartAire-M Bacnet Points for a chain of 25 Units

## Universal:

PropBand Damper	r/w Analog-1	Prop Band	(default = 45.0)
PropBand Fan	r/w Analog-2	Prop Band	(default = 45.0)
Integration Damper	r/w Integer-1	Integration	(default = 110)
Integration Fan	r/w Integer-2	Integration	(default = 110)
Derivative	r/w Integer-3	Derivative	(default = 0)
Loop Type	r/w Integer-5	0 = P, 1 = PI, 2 = PID	(default = 1 PI)
Dead Band	r/w Analog-200	Dead Band	(default = 1.0)

## Unit1:

High Temp	r Analog-3	Highest Temp Probe (deg F)
Temp1	r Analog-4	Temperature Probe 1 (deg F)
Temp2	r Analog-5	Temperature Probe 2 (deg F)
Temp3	r Analog-6	Temperature Probe 3 (deg F)
Temp4	r Analog-7	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-8	Cooling Setpoint (degF)
Cooling%	r Analog-9	Cooling Demand (%)

## Unit2:

High Temp	r Analog-10	Highest Temp Probe (deg F)
Temp1	r Analog-11	Temperature Probe 1 (deg F)
Temp2	r Analog-12	Temperature Probe 2 (deg F)
Temp3	r Analog-13	Temperature Probe 3 (deg F)
Temp4	r Analog-14	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-15	Cooling Setpoint (degF)
Cooling%	r Analog -16	Cooling Demand (%)

## Unit3:

High Temp	r Analog-17	Highest Temp Probe (deg F)
Temp1	r Analog-18	Temperature Probe 1 (deg F)
Temp2	r Analog-19	Temperature Probe 2 (deg F)
Temp3	r Analog-20	Temperature Probe 3 (deg F)
Temp4	r Analog-21	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-22	Cooling Setpoint (degF)
Cooling%	r Analog -23	Cooling Demand (%)

## Unit4:

High Temp	r Analog-24	Highest Temp Probe (deg F)
Temp1	r Analog-25	Temperature Probe 1 (deg F)
Temp2	r Analog-26	Temperature Probe 2 (deg F)
Temp3	r Analog-27	Temperature Probe 3 (deg F)
Temp4	r Analog-28	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-29	Cooling Setpoint (degF)
Cooling%	r Analog -30	Cooling Demand (%)

Unit5:

High Temp	r Analog-31	Highest Temp Probe (deg F)
Temp1	r Analog-32	Temperature Probe 1 (deg F)
Temp2	r Analog-33	Temperature Probe 2 (deg F)
Temp3	r Analog-34	Temperature Probe 3 (deg F)
Temp4	r Analog-35	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-36	Cooling Setpoint (degF)
Cooling%	r Analog-37	Cooling Demand (%)

Unit6:

High Temp	r Analog-38	Highest Temp Probe (deg F)
Temp1	r Analog-39	Temperature Probe 1 (deg F)
Temp2	r Analog-40	Temperature Probe 2 (deg F)
Temp3	r Analog-41	Temperature Probe 3 (deg F)
Temp4	r Analog-42	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-43	Cooling Setpoint (degF)
Cooling%	r Analog -44	Cooling Demand (%)

Unit7:

High Temp	r Analog-45	Highest Temp Probe (deg F)
Temp1	r Analog-46	Temperature Probe 1 (deg F)
Temp2	r Analog-47	Temperature Probe 2 (deg F)
Temp3	r Analog-48	Temperature Probe 3 (deg F)
Temp4	r Analog-49	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-50	Cooling Setpoint (degF)
Cooling%	r Analog -51	Cooling Demand (%)

Unit8:

High Temp	r Analog-52	Highest Temp Probe (deg F)
Temp1	r Analog-53	Temperature Probe 1 (deg F)
Temp2	r Analog-54	Temperature Probe 2 (deg F)
Temp3	r Analog-55	Temperature Probe 3 (deg F)
Temp4	r Analog-56	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-57	Cooling Setpoint (degF)
Cooling%	r Analog -58	Cooling Demand (%)

Unit9:

High Temp	r Analog-59	Highest Temp Probe (deg F)
Temp1	r Analog-60	Temperature Probe 1 (deg F)
Temp2	r Analog-61	Temperature Probe 2 (deg F)
Temp3	r Analog-62	Temperature Probe 3 (deg F)
Temp4	r Analog-63	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-64	Cooling Setpoint (degF)
Cooling%	r Analog-65	Cooling Demand (%)

Unit10:

High Temp	r Analog-66	Highest Temp Probe (deg F)
Temp1	r Analog-67	Temperature Probe 1 (deg F)
Temp2	r Analog-68	Temperature Probe 2 (deg F)
Temp3	r Analog-69	Temperature Probe 3 (deg F)
Temp4	r Analog-70	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-71	Cooling Setpoint (degF)
Cooling%	r Analog -72	Cooling Demand (%)

Unit11:

High Temp	r Analog-73	Highest Temp Probe (deg F)
Temp1	r Analog-74	Temperature Probe 1 (deg F)
Temp2	r Analog-75	Temperature Probe 2 (deg F)
Temp3	r Analog-76	Temperature Probe 3 (deg F)
Temp4	r Analog-77	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-78	Cooling Setpoint (degF)
Cooling%	r Analog -79	Cooling Demand (%)

Unit12:

High Temp	r Analog-80	Highest Temp Probe (deg F)
Temp1	r Analog-81	Temperature Probe 1 (deg F)
Temp2	r Analog-82	Temperature Probe 2 (deg F)
Temp3	r Analog-83	Temperature Probe 3 (deg F)
Temp4	r Analog-84	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-85	Cooling Setpoint (degF)
Cooling%	r Analog -86	Cooling Demand (%)

Unit13:

High Temp	r Analog-87	Highest Temp Probe (deg F)
Temp1	r Analog-88	Temperature Probe 1 (deg F)
Temp2	r Analog-89	Temperature Probe 2 (deg F)
Temp3	r Analog-90	Temperature Probe 3 (deg F)
Temp4	r Analog-91	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-92	Cooling Setpoint (degF)
Cooling%	r Analog -93	Cooling Demand (%)

Unit14:

High Temp	r Analog-94	Highest Temp Probe (deg F)
Temp1	r Analog-95	Temperature Probe 1 (deg F)
Temp2	r Analog-96	Temperature Probe 2 (deg F)
Temp3	r Analog-97	Temperature Probe 3 (deg F)
Temp4	r Analog-98	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-99	Cooling Setpoint (degF)
Cooling%	r Analog-100	Cooling Demand (%)

Unit15:

High Temp	r Analog-101	Highest Temp Probe (deg F)
Temp1	r Analog-102	Temperature Probe 1 (deg F)
Temp2	r Analog-103	Temperature Probe 2 (deg F)
Temp3	r Analog-104	Temperature Probe 3 (deg F)
Temp4	r Analog-105	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-106	Cooling Setpoint (degF)
Cooling%	r Analog -107	Cooling Demand (%)

Unit16:

High Temp	r Analog-108	Highest Temp Probe (deg F)
Temp1	r Analog-109	Temperature Probe 1 (deg F)
Temp2	r Analog-110	Temperature Probe 2 (deg F)
Temp3	r Analog-111	Temperature Probe 3 (deg F)
Temp4	r Analog-112	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-113	Cooling Setpoint (degF)
Cooling%	r Analog -114	Cooling Demand (%)

Unit17:

High Temp	r Analog-115	Highest Temp Probe (deg F)
Temp1	r Analog-116	Temperature Probe 1 (deg F)
Temp2	r Analog-117	Temperature Probe 2 (deg F)
Temp3	r Analog-118	Temperature Probe 3 (deg F)
Temp4	r Analog-119	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-120	Cooling Setpoint (degF)
Cooling%	r Analog -121	Cooling Demand (%)

Unit18:

High Temp	r Analog-122	Highest Temp Probe (deg F)
Temp1	r Analog-123	Temperature Probe 1 (deg F)
Temp2	r Analog-124	Temperature Probe 2 (deg F)
Temp3	r Analog-125	Temperature Probe 3 (deg F)
Temp4	r Analog-126	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-127	Cooling Setpoint (degF)
Cooling%	r Analog-128	Cooling Demand (%)

Unit19:

High Temp	r Analog-129	Highest Temp Probe (deg F)
Temp1	r Analog-130	Temperature Probe 1 (deg F)
Temp2	r Analog-131	Temperature Probe 2 (deg F)
Temp3	r Analog-132	Temperature Probe 3 (deg F)
Temp4	r Analog-133	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-134	Cooling Setpoint (degF)
Cooling%	r Analog -135	Cooling Demand (%)

Unit20:

High Temp	r Analog-136	Highest Temp Probe (deg F)
Temp1	r Analog-137	Temperature Probe 1 (deg F)
Temp2	r Analog-138	Temperature Probe 2 (deg F)
Temp3	r Analog-139	Temperature Probe 3 (deg F)
Temp4	r Analog-140	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-141	Cooling Setpoint (degF)
Cooling%	r Analog -142	Cooling Demand (%)

Unit21:

High Temp	r Analog-143	Highest Temp Probe (deg F)
Temp1	r Analog-144	Temperature Probe 1 (deg F)
Temp2	r Analog-145	Temperature Probe 2 (deg F)
Temp3	r Analog-146	Temperature Probe 3 (deg F)
Temp4	r Analog-147	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-148	Cooling Setpoint (degF)
Cooling%	r Analog -149	Cooling Demand (%)

Unit22:

High Temp	r Analog-150	Highest Temp Probe (deg F)
Temp1	r Analog-151	Temperature Probe 1 (deg F)
Temp2	r Analog-152	Temperature Probe 2 (deg F)
Temp3	r Analog-153	Temperature Probe 3 (deg F)
Temp4	r Analog-154	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-155	Cooling Setpoint (degF)
Cooling%	r Analog-156	Cooling Demand (%)



Unit23:

High Temp	r Analog-157	Highest Temp Probe (deg F)
Temp1	r Analog-158	Temperature Probe 1 (deg F)
Temp2	r Analog-159	Temperature Probe 2 (deg F)
Temp3	r Analog-160	Temperature Probe 3 (deg F)
Temp4	r Analog-161	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-162	Cooling Setpoint (degF)
Cooling%	r Analog -163	Cooling Demand (%)

Unit24:

High Temp	r Analog-164	Highest Temp Probe (deg F)
Temp1	r Analog-165	Temperature Probe 1 (deg F)
Temp2	r Analog-166	Temperature Probe 2 (deg F)
Temp3	r Analog-167	Temperature Probe 3 (deg F)
Temp4	r Analog-168	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-169	Cooling Setpoint (degF)
Cooling%	r Analog -170	Cooling Demand (%)

Unit25:

High Temp	r Analog-171	Highest Temp Probe (deg F)
Temp1	r Analog-172	Temperature Probe 1 (deg F)
Temp2	r Analog-173	Temperature Probe 2 (deg F)
Temp3	r Analog-174	Temperature Probe 3 (deg F)
Temp4	r Analog-175	Temperature Probe 4 (deg F)
Setpoint	r/w Analog-176	Cooling Setpoint (degF)
Cooling%	r Analog -177	Cooling Demand (%)