

IAQ ENFORCER™ Product Data Sheet

The IAQ Enforcer SPC panel serves as the system processing station and transmitter for a variety of **EBTRON** sensors. Each panel has its own dedicated microprocessor and an optional four line, 80 character, alpha-numeric display. The panel is fully programmable from a PC running Windows95® or Windows NT®.

A single low voltage (24 VAC) power connection to the SPC panel supplies all of the system sensors. Satellite sensors require only a single, unshielded, 3-conductor cable which can be "daisy chained" between sensors for simple field installation. All sensor analog signals are output from this central panel. Besides individual sensor output, sensors can be summed or a differential signal between sensors (for a single tracking signal) can be output.

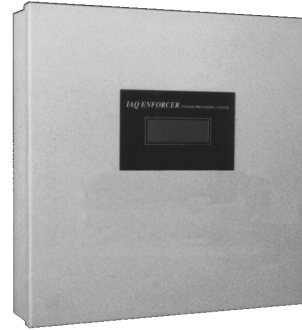
The programmable nature of the device allows the user to assign and change factory ordered parameters (see IAQ Enforcer Panel System Guide). Complete sensor diagnostics are also performed at this central panel.

Use with IAQ Enforcer Satellite Sensors to:

- Combine all of the sensors required for AHU airflow control into a single sensor package.
- Limit your IAQ liability by measuring and recording outside airflow rates over time.
- Provide all of the instrumentation required for the control of laboratory and clean room airflow and pressurization.

Features:

- Simple 3 conductor wiring bus to remote sensors can be "daisy chained" together for significant installation cost savings.
- Adjustable digital filter eliminates transient wind effects on outside air intakes and unwanted "noise" in duct systems or on fan inlets for improved system control.
- RS-232, PC Interface, fully field programmable.
- Built in datalogger.
- Sensor system can be diagnosed from the factory with any laptop PC that has a modem and nearby phone line.
- Isolation Transformer



General Construction & Features

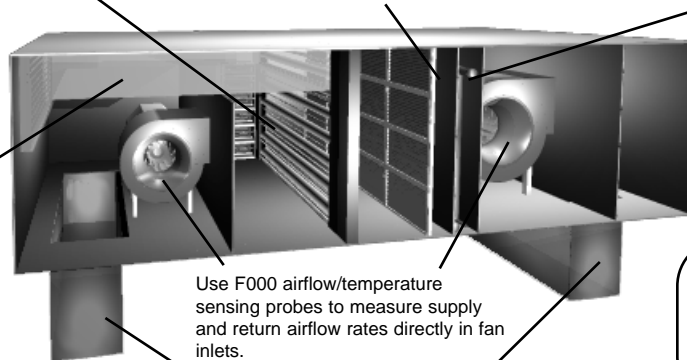
DISPLAY	
Display (optional)	20 char. x 4 row alpha-numeric backlighted LCD
SATELLITE SENSOR INPUT PORTS	
Number of Terminal Connections	4
Maximum Satellites per Panel	See 'Maximum Satellite Table'
PLUG IN CARDS	
Maximum Number of I/O Cards	12
ANALOG OUTPUT CARD OPTION	
Output Signal	0-5 VDC 0-10 VDC 4-20 mA
Output Resolution	0.1% of F.S.
Measurement Options	D000 Airflow and/or Temperature P000 Airflow and/or Temperature F000 Airflow and/or Temperature BDBD Diff. Airflow and/or Pressure T00D Temperature T00P Temperature
Output Scaling	Defined at Order Entry
DATA LOGGING CAPABILITY	
Storage Capacity	4096 Measurements approx. 6 months @ 1 hr. intervals
Interface	Serial RS-232
POWER REQUIREMENT	
AC Power Input	24 VAC @ 2.3 Amp Max See 'Transformer Sizing Table'
OPERATING RANGES	
Operating Temperature Range	30° to 120° F
Operating Humidity Range	0 to 95% RH
ENCLOSURE	
Type	Powder Coated Steel
Size	13"(w) x 13.5"(h) x 3"(d)

Use BDBD sensors to maintain constant positive pressure across relief air dampers and assure positive relief airflow.

Use D000 or P000 airflow/temperature sensing probes to measure supply airflow rates downstream of filters.

Use D000 or P000 airflow/temperature sensing probes to measure supply airflow rates downstream of coils. Precise temperature measurement will improve discharge air temperature control and reduce energy costs.

Use D000 or P000 airflow/temperature sensing probes to directly measure outside air intake flow rates.



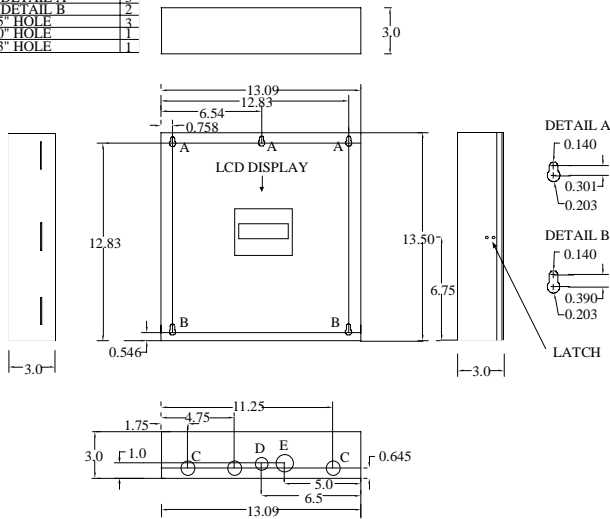
Use F000 airflow/temperature sensing probes to measure supply and return airflow rates directly in fan inlets.

Use D000 airflow/temperature sensing probes to directly measure ducted supply and return airflow rates for fan tracking.

Combine any of these sensors with an IAQ Enforcer SPC Panel using a single 3 conductor "daisy chain"!

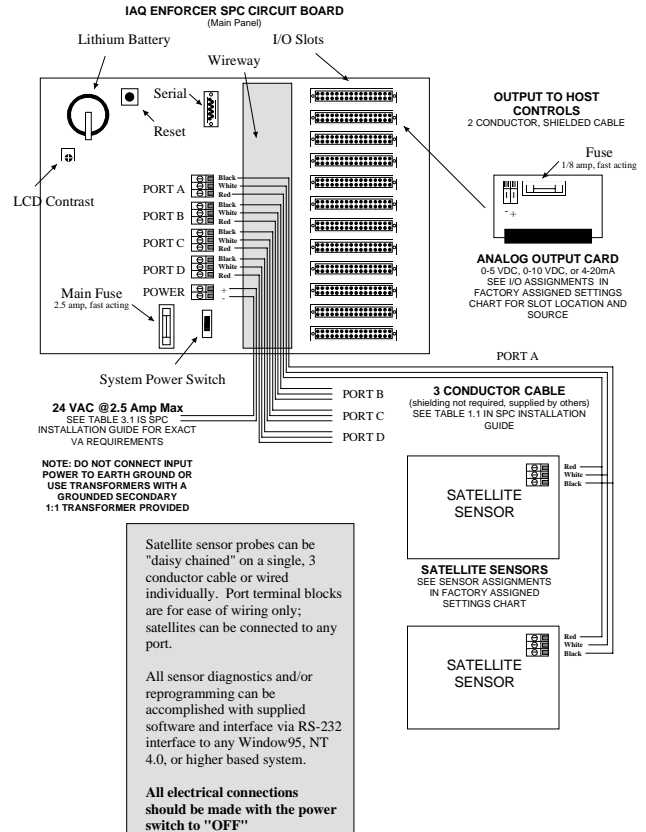
DIMENSIONS

SYM	HOLE SIZE	QTY
A	SEE DETAIL A	3
B	SEE DETAIL B	2
C	0.875" HOLE	2
D	0.750" HOLE	1
E	1.063" HOLE	1



WIRING

IAQ ENFORCER SYSTEM WIRING DIAGRAM



Suggested Engineers Guide Specification

Insert under the following headings, depending on the satellite sensors used, in the Temperature Control Section of the Specification [optionally, satellite sensors can also appear in the AHU section of the specification]: Air Flow Measurement, Bidirectional Bleed Sensors, Temperature Measurement

A. General: Provide electronic measuring devices to measure [insert one or more of the following: airflow rates, bidirectional airflow (differential pressure) and/or temperature]. All sensors shall communicate to a central processing panel that will produce individual analog output signals to the host control system.

1. Base Bid: **EBTRON** Inc., IAQ Enforcer SPC Panel System
2. Display: Backlighted 80 Character, multi-line, alpha numeric
3. Analog Outputs: 0-5 or 0-10 VDC, 4-20 mA, 0.1% F.S. resolution
4. Power Requirement: 24 VAC, isolated from other devices and not grounded. Multiple SPC Panels wired from a single transformer must be wired in phase.
5. Datalogger: Provide datalogging capability.
 - a) Readings: up to 4096 events, first in, first out
 - b) Frequency of events: User programmable
 - c) Download Method: RS-232 with factory provided software
6. Panel Operating Ranges:
 - a) Temperature: 45 to 120 F
 - b) Humidity: 0-95% RH

7. User Programmable Options:
 - a) User selectable scaling and location naming
 - b) Multi-point recalibration routine
 - c) Adjustable digital output filter
 8. Diagnostics: Complete sensor hardware
 9. Power Loss Protection:
 - a) Program Memory: EEPROM
 - b) Log: Lithium Battery
 10. Electronics Enclosure: Powder Coated Steel, Indoor Use Only
- C. Sensors:
1. **EBTRON** IAQ Enforcer satellite sensor, insert appropriate specification from product data sheet based on application
 - D. Warranty
 1. 36 months from shipment, parts and factory labor as described in the **EBTRON** or vendor's Standard Terms & Conditions of Sale

Ordering Information

SPC-a

- a- Display: 0=no display, 1*=display installed
 * Optional configuration, may require additional charges

Additional Analog Outputs:

AOUT-ab

- a- Output Card Type: 1=Airflow, 2= Delta CFM, 3=Temperature, 4=Pressure
 b- Output Signal: 1=0-5 VDC, 2=0-10 VDC, 3*=4-20 mA
 c- Signal Range (card types 1,2 & 4): 1=Custom FPM, 2=Custom CFM, 5=Custom in.wg.
 Signal Range (card type 3): 1=Custom F, 2=Custom C
 * Optional configuration, may require additional charges

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