Accurate Airflow Measurement Solutions for your HVAC System

AIRFLOW MEASUREMENT

is a critical component of energy efficient HVAC systems performance. Airflow measurement is a key factor in assuring that HVAC systems are providing optimum occupant comfort, at the lowest possible energy cost.

Kyllor has developed technology, which provides:

– *Certified Installed System Accuracy*

– *Substantially lower Installed System Cost.*

Kyllor is dedicated to meeting the needs of building owners, BAS providers and mechanical contractors, as they endeavour to provide "greener" HVAC systems.

APPLICATION

Kyllor airflow measurement system applies to:

– Supply and return fans

– Compartment fans

– Building exhaust and ventilation fans.

Kyllor technology offers accurate airflow measurement for:

– Indoor air quality

– Demand-based ventilation control

– Other process control applications.

HVAC system Commissioning time…*Cost*…is significantly reduced.

Accurate real time airflow measurement of fan systems provides a solid base for verification of air balancing process.

Building operations are improved considerably with immediate access to airflow data;

Application engineering of the ***Kyllor*** system is quick and easy.

FEATURES

Certified Installed System Accuracy

Kyllor innovative airflow measurement technology provides ***Certified Installed System Accuracy of ±3%*** of design flow. This is unique in the HVAC industry. An optional ± 2% accuracy is available.

Kyllor technology offers an airflow measurement solution, which is not dependent on locating *Laminar flow*. Sensor location is easily established.

Reliability

Kyllor airflow measurement system's unique design assures long-term operating stability, even in the toughest environments. Airborne particulate is not an issue.

Reliability of competitive systems is substantially reduced by particulate contamination of the sensitive thermistor sensors.

Providing the highest standard components, the ***Kyllor*** system assures years of reliable operation.

Adaptability

Kyllor technology will accommodate the most complex duct systems. Laminar flow sections are not required. ***Kyllor*** easily accommodates multiple supply duct branches emanating from fan discharge.

Kyllor technology provides BAS network connectivity with major network protocols.

Simplified Operation

Digital display of airflow is operator selectable either in cubic feet per minute (cfm) or cubic meter per minute (cmm). The digital display presents airflow data in an understandable manner.

Kyllor airflow measurement system can be installed easily and integrated with various building automation systems. The shorter installation time puts ***Kyllor*** ahead of competitive systems.

Cost Effectiveness

The installed cost of ***Kyllor*** airflow measurement system is lower than competitive systems. When both supply and return airflows are measured by the ***Kyllor*** *Dual Airflow* station the installed system cost is substantially lower than competitive systems.

Commissioning time and costs are significantly reduced for all parties: Design Engineers, BAS contractors, and commissioning agents.

Kyllor system is maintenance free, which reduces operating expenses.

Where competitive systems use more sensors for greater accuracy, ***Kyllor*** requires only one set of sensors.

Warranty

A 24 months warranty applies from the date of shipment.

Replacement parts are shipped within 48 hours.

SAMPLE PROJECT SPECIFICATION

1. Airflow Measurement Technology shall be provided as manufactured by Kyllor. Alternate airflow measurement technology may be provided only if the *Installed System Accuracy* of ± 3% of design flow is site certified by supplier.
2. Airflow Measurement Station shall be located as indicated on the drawings.
3. The *Installed System Accuracy* must be certified by the manufacturer as to ± 3% of 100% design flow.
4. .1 Airflow Measurement Station shall operate on externally provided 24VAC, 40VA power supply.

   .2 Electronic components shall be housed in NEMA 4 enclosure for protection against water damage.

   .3 Digital display of airflow shall be operator selectable as either cubic feet per minute (cfm) or cubic meter per minute (cmm).
5. When alternative airflow measurement station is used, then maintenance service and installed calibration verification shall be provided by supplier for the first 2 years of operation.
6. Airflow Measurement Station interface to the BAS shall be as agreed to with BAS provider. The standard BAS hardware interface shall provide an analog signal for flow as 0-10 VDC and 4-20mA.

   Optional network protocols shall provide data points for airflow, fan head pressure and fan status. Selection may be any of the following:

   – BACnet ®
   – LonWorks ® Free Topology
   – TCP/IP
   – Modbus
7. The system shall operate continuously in temperature range of –25ºC to 85ºC (-13ºF to 185ºF) and humidity range of 0 – 99%.
8. Storage temperature range of 0ºC to 50ºC (+32ºF to 122ºF) shall apply.

Accurate Airflow Measurement Solutions for your HVAC System

PRODUCT SPECIFICATIONS

- ***Kyllor's Certified Installed System Accuracy*** is ±3% of design flow.
- Electronic components may be installed in an optional NEMA 4 enclosure to protect against water damage.
- Digital display of airflow is operator selectable in either cubic feet per minute (cfm) or cubic meter per minute (cmm).
- The system operates on externally provided 24VAC, 40VA power supply.
- The standard BAS hardware interface provides an analog signal for flow as 0-10 VDC and 4-20 mA. Optional network protocols listed below provide flow, fan head pressure and fan status via a serial digital interface:
  - BACnet ®
  - LonWorks ® Free Topology
  - TCP/IP
  - Modbus
- The system operates continuously in a temperature range of -25°C to 85°C (-13°F to 185°F), and humidity range of 0 to 99%.
- Storage temperature 0°C to 50°C (+32°F to 122°F).

ORDER INFORMATION *for Kyllor Airflow Measurement System Kit*

Example Order Selection	***KA–***	***S***	***3***	***3***	***S***	***–***	***1***	***1***	***2***

Total Installed System Accuracy
- Standard Accuracy (± 3% of Design Flow) **S**
- High Accuracy (± 2% of Design Flow) **H**
- Economic Accuracy (± 7% of Design Flow) **L**

Return Fan Volume
- Less than 13,500 cfm (382.28 cmm) **1**
- 13,501 to 27,000 cfm (382.29 to 764.55 cmm) **2**
- 27,001 to 45,000 cfm (764.56 to 1,274.26 cmm) **3**
- More than 45,000 cfm (1,274.26 cmm) **4**
- Without return fan **5**

Supply Fan Volume
- Less than 15,000 cfm (424.75 cmm) **1**
- 15,001 to 30,000 cfm (424.76 to 849.51 cmm) **2**
- 30,001 to 50,000 cfm (849.52 to 1,415.84 cmm) **3**
- More than 50,000 cfm (1,415.84 cmm) **4**

Fan Speed
- Single Speed Application **S**
- Variable Speed Application **V**

Length of 1/4" Tubing for Duct Pressure Probes
- **1** Standard 10 to 50 ft. (3.048 to 15.24m)
- **2** Optional 51 to 100 ft (15.5448 to 30.48 m)

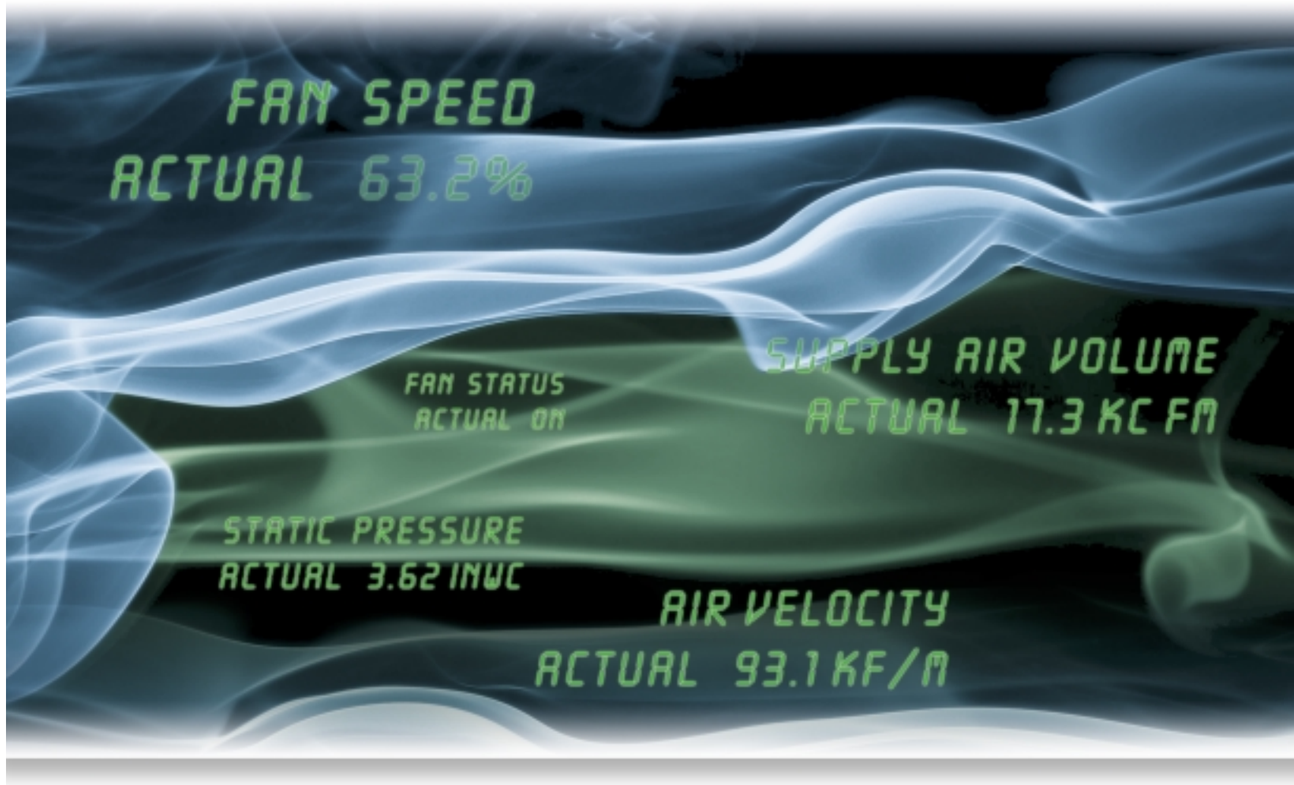
Material Selection for Duct Pressure Probes
- **1** Aluminum, 6063
- **2** Stainless Steel, 316

Monitor Output to B.A.S. *(Verify with B.A.S. provider)*
- **1** Flow as an analog, 0-10 VDC, 4-20mA
- **2** Optional BACnet ® *
- **3** Optional TCP/IP*
- **4** Optional LonWorks ® Free Topology*
- **5** Optional Modbus*

** Provides Flow, Fan Head Pressure and Fan Status*

1600 The Queensway, Toronto, ON Canada, M8Z 1V1
T: 416.252.5069 ~ F: 416.255.9585
E: sales@aea.on.ca ~ www.aea.on.ca

Kyllor



Accurate Airflow Measurement Solutions for your HVAC System