



# Series = FanMon™ Primary and Booster Fan Monitoring System

## FM =

FanMon™ fan monitoring system;  
Web Page configurable;  
Digital communications;  
IP65/NEMA 4X enclosure, c/w SS mounting tabs;  
Universal power supply (24VDC, 120-240 VAC, 50/60 Hz);  
Discovery Tool software.

## 1 = Fan HP

**A =**  
Less than 1000 HP  
(750 kW).

**B =**  
1000 to 4000 HP  
(750 to 3000 kW).

**C =**  
4000 to 10,000 HP  
(3000 to 7500 kW).

## 2 = Drive Arrangement (AMCA Centrifugal 99-2404-08 & Axial 99-3404-03 Standards)

**A1 =** Arrangement 1

**A2 =** Arrangement 2

**A3 =** Arrangement 3

**A4 =** Arrangement 4

**A7 =** Arrangement 7

**A8 =** Arrangement 8

**A9 =** Arrangement 9

**A10 =** Arrangement 10

## 3 = Fan and Inlet type

**A =** Axial or Tube Fan  
(Arrangements 1, 3, 4 or 9 only).

**CSWSI =** Centrifugal Fan with a Single Width and Single Inlet.

**CDWDI =** Centrifugal Fan with a Double Width and Double Inlet (Centrifugal Drive Arrangements 3 or 7 only).

## 4 = Communications

**MB =** Modbus Ethernet TCP/IP; RJ45 connection, all values, inputs and outputs and diagnostics are available through the digital registers.

**AB =** Allen Bradley EtherNet/IP™, same registers as above.



Series

Fan HP

Drive Arrangement

Fan Type

Communications Measurement Options





## 5+ = Measurement options (Extend matrix as required with the option codes)

**PF** = Airflow and air temperature monitoring; Maximum of one airflow measurement per FanMon™ System.

**RTD12** = Twelve (12) 3-wire, PT100 ohm RTD temperature inputs for stator and bearing monitoring; Maximum of two RTD12 modules FanMon™ System.

**PT** = Static pressure monitoring; 1-1/2" NPT flush mounted process connection, LCD Display, 0-40" W.C. range (can be ranged 0-4" to 0-40" W.C. in field).

**DP** = Differential pressure monitoring; LCD Display, 0-40" W.C. range (can be ranged 0-1" to 0-40" W.C. in field).

**VM4** = Vibration monitoring; includes four accelerometers, cables, visualization and configuration software for each fan arrangement. The vibration system will monitor bearings (inner raceway, outer raceway and rolling elements) along with total fan imbalance. The system will alarm on high vibration and allow a vibration specialist the tools to diagnose exact issues leading to the increase in vibration through visualization software. Additionally, an analog output signal is available for vibration level and a relay is available for high vibration interlocks or emergency shut down.

**VM8** = Vibration monitoring; as above except includes eight accelerometers and eight cables.

**AD4** = Four (4) analog inputs and four (4) analog outputs, Four (4) discrete inputs, Four (4) discrete outputs. This module is used to connect to pressure transmitters, and limit switch inputs for either primary fan damper open-closed input limit switches or booster fan air-lock door open-closed input limit switches; Discrete inputs, 120-240 VAC, can connect to dry contact relays or solid state output circuits; Maximum of two (2) AD4 modules per FanMon™ System.

**RGxxx** = Remote gas sensor, where **xxx** is three digit code from Gas Sensor Table 2.

**OPC** = OPC Server software for vibration monitoring

**HTR** = Heater and Thermostat installed in enclosure for cold climates



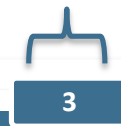
Series

Fan HP

Drive  
Arrangement

Fan Type

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Measurement  
Options





## Airflow sensor arrangement types



### DR – Universal airflow sensor mounting

- Universal airflow sensor mounting for drift, tunnel, heater house and shaft mounting installations for applications with a maximum width of 10 m (33 feet).
- Easy airflow sensor alignment with built-in optical alignment lasers.
- Includes two ultrasonic airflow sensors; two mounting brackets; two sensor cord sets both 25 metres (82') & one junction box on an aluminum mounting plate
- Heavy duty 316L Stainless Steel tilt and swivel mounting bracket with 18-8 SS hardware. Built in 1/2" (13 mm) mounting holes.



### LR – Long range tunnel or drift airflow sensor mounting

- Long range airflow sensor mounting for wide drift or tunnel installations normally found in potash or salt mines and road or railway tunnels with a maximum width of 20 m (66 ft.)
- Easy airflow sensor alignment with built-in optical alignment lasers.
- Includes two ultrasonic airflow sensors; two mounting brackets; two sensor cord sets both 25 metres (82') & one junction box on an aluminum mounting plate
- Heavy duty 316L Stainless Steel tilt and swivel mounting bracket with 18-8 SS hardware. Built in 1/2" (13 mm) mounting holes.



## Airflow sensor arrangement types



### DM – Universal Duct Mounting

- Includes two ultrasonic airflow sensors; two flexible, gasketless, corrosion resistant polyurethane mounting brackets for rigid duct installations from 36" to 60" (900 to 1500 mm) diameters; two sensor cord sets both 25 metres (82') & one junction box on an aluminum mounting plate



### PF – Primary or Booster Fan (inlet cone) Mounting

- Includes two ultrasonic airflow sensors; two corrosion resistant polyurethane adjustable, ball & socket mounting brackets & two gaskets for the mounting to the inlet duct work of a primary fan; two sensor cord sets both 25 metres (82') & one junction box on an aluminum mounting plate
- NOTE: If the sensors are to be installed on the discharge side of the fan, the flow profile will need to be fully developed for all variable speed or variable pitch applications



## Gas Sensor Option Codes



Integral mounted gas sensor  
(mounted on Vigilante AQS™  
or Zephyr AQS™)



Remote gas sensors and/or  
remote mounted humidity sensor  
(mounted remotely to  
Vigilante AQS™)

### Table 2 - Gas sensor option codes

INTEGRAL GAS SENSOR CODE	REMOTE GAS SENSOR CODE	GAS, TYPE & RANGE
•G000	•RG000	•CO; EC; 25 PPM
•G001	•RG001	•CO; EC; 100 PPM
•G002	•RG002	•CO; EC; 500 PPM
•G003	•RG003	•CO; EC; 1000 PPM
•G004	•RG004	•NO <sub>2</sub> ; EC; 10 PPM
•G005	•RG005	•NO; EC; 100 PPM
•G006	•RG006	•NO; EC; 500 PPM
•G007	•RG007	•NO; EC; 1000 PPM
•G008	•RG008	•O <sub>2</sub> ; EC; 0-25%
•G009	•RG009	•H <sub>2</sub> S; EC; 50 PPM
•G010	•RG010	•H <sub>2</sub> S; EC; 100 PPM
•G011	•RG011	•SO <sub>2</sub> ; EC; 10 PPM
•G012	•RG012	•SO <sub>2</sub> ; EC; 1000 PPM
•G013	•RG013	•ClO <sub>2</sub> ; EC; 0.5 PPM
•G014	•RG014	•Cl <sub>2</sub> ; EC; 4 PPM
•G015	•RG015	•NH <sub>3</sub> ; EC; 100 PPM
•G016	•RG016	•CO <sub>2</sub> ; IR; 0.5%
•G017	•RG017	•CO <sub>2</sub> ; IR; 2%
•G018	•RG018	•CO <sub>2</sub> ; IR; 5%
•G019	•RG019	•LEL Methane; IR; 0-100%
•G020	•RG020	•LEL Propane; IR; 0-100%
•G021	•RG021	•HCN; EC; 10 PPM

EC = Electrochemical sensor (approximate 1 year sensor life)  
IR = Infrared sensor (approximate 5 year sensor life)



## Pressure and DP Transmitters



### Digital Pressure Transmitter Model # PT-A-B-NR

- 0 to 0.1 Bar (0 to +40" W.C);  $\leq 0.5\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 0.5 Bar (200" W.C.) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 1- $\frac{1}{2}$ " NPT (male) 316L SS process connection; FKM (Viton) seal
- -25 to +85°C (-13 to +185°F) temperature range



### Digital Pressure Transmitter Model # PT-B-B-NR

- -0.1 to 0 Bar (-40 to 0" W.C);  $\leq 0.5\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 0.5 Bar (200" W.C.) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 1- $\frac{1}{2}$ " NPT (male) 316L SS process connection; FKM (Viton) seal
- -25 to +85°C (-13 to +185°F) temperature range



### Digital Pressure Transmitter Model # PT-C-B-NR

- 0 to 1 Bar (0 to 14.5 psig);  $\leq 0.35\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 5 Bar (72 psig) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 1- $\frac{1}{2}$ " NPT (male) 316L SS process connection; FKM (Viton) seal
- -25 to +85°C (-13 to +185°F) temperature range



## Pressure and DP Transmitters



### Digital Pressure Transmitter Model # PT-D-B-NR

- 0 to 10 Bar (0 to 145 psig);  $\leq 0.35\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 40 Bar (580 psig) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 1- $\frac{1}{2}$ " NPT (male) 316L SS process connection; FKM (Viton) seal
- -25 to +85°C (-13 to +185°F) temperature range



### Digital Pressure Transmitter Model # PT-E-B-NR

- 0 to 100 Bar (0 to 1450 psig);  $\leq 0.35\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 600 Bar (8700 psig) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 1- $\frac{1}{2}$ " NPT (male) 316L SS process connection; FKM (Viton) seal
- -25 to +85°C (-13 to +185°F) temperature range



### Digital Paste Fill & Back Fill Pressure Transmitter Model # PT-E-C-NR

- 0 to 100 Bar (0 to 1450 psig);  $\leq 1.0\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 600 Bar (8700 psig) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 2" NPT (male) 316L SS process connection; FKM (Viton) seal; silicon oil fill; heavy duty  $\frac{1}{2}$ " thick plate seal for abrasive applications
- -25 to +85°C (-13 to +185°F) temperature range



## Pressure and DP Transmitters



### Digital Paste Fill & Back Fill Pressure Transmitter Model # PT-F-C-NR

- 0 to 400 Bar (0 to 5800 psig);  $\leq 1.0\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 1000 Bar (14500 psig) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 2" NPT (male) 316L SS process connection; FKM (Viton) seal; silicon oil fill; heavy duty  $\frac{1}{2}$ " thick plate seal for abrasive applications
- -25 to +85°C (-13 to +185°F) temperature range



### Digital Differential Pressure Transmitter Model # DPT-A-B-NR

- 0 to 0.1 Bar (0 to +40" W.C.);  $\leq 0.5\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 0.5 Bar (200 " W.C.) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 1- $\frac{1}{2}$ " NPT (male) 316L SS process connection; FKM (Viton) seal
- -25 to +85°C (-13 to +185°F) temperature range



### Digital Differential Pressure Transmitter Model # DPT-B-B-NR

- -0.1 to 0 Bar (-40 to 0" W.C.);  $\leq 0.5\%$  of full scale accuracy;  $\pm 0.5\%$  repeatability; 0.5 Bar (200 " W.C.) maximum over-load pressure
- Modbus RS-485 communication to Vigilante AQS, 4 wire connection; M12, male, 4 pin connector
- Flush mounted 1- $\frac{1}{2}$ " NPT (male) 316L SS process connection; FKM (Viton) seal
- -25 to +85°C (-13 to +185°F) temperature range