

SmartMeter™ II

Microprocessor Based Digital Monitor/Controller



SmartMeter® II Microprocessor Based Digital Monitor/Controller

Gardner Denver's new SmartMeter II microprocessor based digital monitor/controller is designed to provide protection for single blowers in constant speed applications. This next generation monitor replaces the original SmartMeter with a smaller size and greater flexibility.

The SmartMeter II monitor includes three digital displays, two inputs and four alarm relay outputs. SmartMeter II can be factory configured for a variety of blower protection applications, including the monitoring of any one of the following variables: motor amperage/airflow, vibration, temperature or pressure. The standard product offering includes SmartMeter II panels designed to monitor one, two or three protection features for a single blower.

Blower Surge/Overload SmartMeter II panels monitor motor amperage and provide airflow indication. The Smartmeter II will alert the operator of impending surge/overload conditions and will shut down the blower when the warning set point is reached. Standard designs are also available to prevent surge/overload conditions by controlling a discrete or analog inlet valve. Inlet air temperature compensation of the blower surge point is an optional feature that provides better surge protection and a greater blower operating range.

Blower Bearing Vibration SmartMeter II panels monitor the inlet/ outlet bearing vibration to ensure safe operation of the blower. Operators are alerted of impending high vibration conditions and will shut down the blower when the warning set point is reached. The SmartMeter II also notifies the operator when vibration sensors are defective. Blower Bearing Temperature SmartMeter II panels monitor blower inlet/outlet bearing temperature and function in a similar way.

Common Features include:

- An operator adjustable start delay set point to prevent nuisance shutdown on startup of the blower
- Coast down timer to prevent the blower from automatically restarting after shutdown or power failure
- Optional 4-20 mA output card are available for some models to retransmit one or two inputs



SmartMeter II

The digital based controller monitors:

- Surge/Overload
- Blower Bearing Temperatures
- Inlet/Outlet Air Temperatures
- Blower Bearing Vibrations
- Motor Bearing Vibrations
- Pressure
- Protection for Single Blower Constant Speed Applications

Smartmeter II Combination panels provide monitoring of more than one variable.

Standard combination panels include:

- Surge/Overload/Blower Bearing Temperature
- Surge/Overload/Blower Bearing Vibration
- Motor/Blower Bearing Vibration
- Blower Bearing Temperature/Vibration
- Surge/Overload/Blower Bearing Temperature and Vibration

Monitoring and Special Function for Single Blower Applications

Digital readouts display information in a concise, easy-to-read format

Message display for operating status

In the event of a blower alarm, the display freezes at the tripped value and system reverts to a fail-safe mode

Data is stored in a non-volatile EEPROM memory to prevent data loss in the event of power failure

Timing functions for start delay and nuisance trips are performed by the microprocessor (field adjustable)

LED indicators alert operator to potential equipment or operational problems



Strong and durable case
1/8 DIN (3.78" x 1.89")

Temperature Monitoring

- Blower bearing temperature
- Motor bearing temperature
- Inlet/outlet air temperature

Pressure Monitoring

- Filter differential pressure
- Outlet pressure
- Inlet vacuum

Specifications

Power

- 85-265 Vac / 95-370 Vdc @ 4 watts - maximum 5 watts (standard),
- 14-48 Vac / 10-72 Vdc (optional)

Displays

- Three digital displays, 7 segment, red, .32" LEDs

Outputs

- Provides 2-4 independent setpoints for control.
- SPST relays rated at 5A, 240 Vac.

Standard Surge Controls

- Surge/overload warning shutdown
- Surge prevention modulating (blowoff or inlet)
- Surge prevention bleed (solenoid)
- Surge overload protection with PID intake valve control

Vibration Monitoring

- Blower bearing vibration
- Motor bearing vibration

Enclosure

- NEMA 12 standard
- NEMA 3R, 4, 4X, 7 and 9 are available
- Meters may be combined in a common enclosure
- Standard Combination SmartMeterII Panels
- Surge/Overload/Blower Bearing Temperature
- Surge/Overload/Blower Bearing Vibration
- Motor/Blower Bearing Vibration
- Blower Bearing Temperature/Vibration
- Surge/Overload/Blower Bearing Temperature and Vibration

Acceptable input signals include 100 ohm platinum RTD, 4-20 mA DC, 0-5A AC current transformer. Optional UL listing of control panels is available.