# Nexus<sup>®</sup> Combustion Efficiency Systems NXM2G Efficiency Control



## Intelligent Boiler Load Optimizer NXM2G

Intelligent microprocessor-based system designed to reduce energy costs by providing optimum thermal efficiency of low-temperature hot water boilers

The Intelligent Boiler Load Optimizer (NXM2G) efficiency control measures the supply and return temperature via digital sensors and monitors the "call for heat."

- On first firing, the boiler will reach the normal temperature set point and turn off
- On the next stage, the Intelligent Boiler Load Optimizer (NXM2G) will check:
  - · For the "call to heat"
  - If the boiler supply and return temperatures are within the designed temperature differential settings, and
  - If the boiler is required to fire, based on control algorithms

When this occurs, the Intelligent Boiler Load Optimizer (NXM2G) will hold off the boiler firing (save mode) based on temperature and time, which are both adaptive. This control function will also inhibit the burner from firing on high fire if the boiler load demand is low, thus helping to ensure the best efficiency for the current system demand. This helps eliminate the wasted energy caused by standby cycling.

# <image>

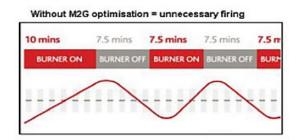
### **Specifications**

| Supply Voltage              | 120VAC / 60 Hz              |
|-----------------------------|-----------------------------|
| Rated Current               | 50mA                        |
| Relay Switch Cap            | 2A at 120VAC (resistive)    |
| Fuse Rating                 | 1.6A at 120VAC              |
| Dimensions (WxHxD)          | 6.9 in. x 7.9 in. x 2.1 in. |
| Sensors                     | Plug in digital therm (2)   |
| Sensor Range                | 131°F to 257°F              |
| Weight                      | 3.6 lbs                     |
| Environment                 | NEMA 1/IP11                 |
| Minimum/Maximum Temperature | 32°F to 125°F               |



### **Boiler Standby Cycling**

Standby cycling on boilers occurs throughout the year, even if the boilers are just providing hot water generation during the summer months. This can be reduced by fitting the Intelligent Boiler Load Optimizer (NXM2G) to each boiler. The system identifies and removes standby cycling therefore reducing energy costs and CO<sub>2</sub> emissions.





### **Applicable Systems**

- Closed loop commercial boilers that use gas, oil propane and/or LPG for building or process heating
- Single or multiple boiler configurations
- Compatible with existing controls and operations; operates with existing BMS
- · Dynamic and self-adjusting
- · Single stage, multi-stage or modulating boilers

### **Value Delivered**

- Clients are observing energy and carbon savings of 10% to 20%
- Controlling boiler short-cycling can help provide significant energy and maintenance savings
  - Reducing the amount of boiler cycles (the number of times the boiler turns on and off) minimizes the energy input needed to reheat the boiler
- · Fast payback or ROI with low capital investment





For more information, please contact your local Fireye Distributor.

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