



MS-2100 Series Controllers are designed in single point (MS-2101) or dual point (MS-2102) microprocessor based heat trace controllers for use in Class I, Division 2 / Zone II areas. The MS-2100 Series provides the control and monitoring you require for any type of heat tracing applications.

### The Best In Monitoring

The MS-2100 Series controllers continuously monitor all important heat trace variables - temperature, heater current, voltage and ground fault levels - detecting and alerting operators of potential problems before they occur avoiding costly frozen pipes or processing problems. All user settable alarm levels are independent of the trip levels and the MS-2100 Series controllers also perform a self-check and monitoring of the RTD's and switches. To ensure that your heat tracing system operates 24 hours a day, 365 days a year, TraceCheck periodically energizes and checks for alarm conditions on all dormant signals.

### Energy Management

Operators have many reasons to reduce their environment impact, yet may be missing substantial opportunities to become greener without making significant investments. Opportunities for energy savings are in perhaps the most obvious of places - the plant.

MS-2100 Series controllers log minimum and maximum values and energy usage providing an opportunity for operators to recognize energy savings in the plant.

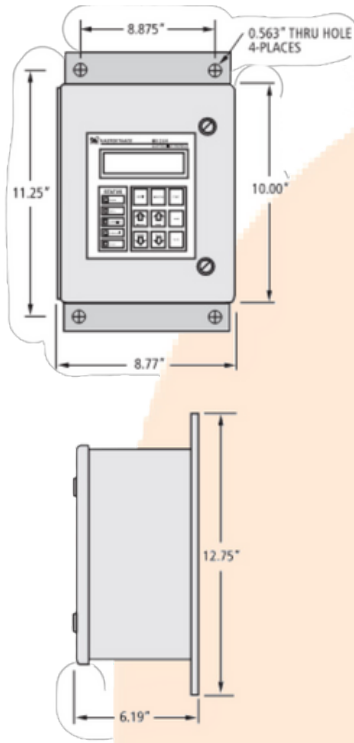
## ADVANTAGES

The MS-2101 was developed to control a single line of electrical heat tracing based on pipe temperature, measured by one or both of the user-settable, fail-safe RTD inputs. RTD inputs can be configured to operate using one pipe-mounted temperature sensing RTD with the second used as redundant for fail-safe operation. Alternatively, both can be used to control heat tracing based on the highest, lowest, or average of the two readings, or one RTD can be configured to act as a high temperature cut out. In any case, these user-settable configurations allow for the most flexible, cost-effective and comprehensive heat trace control.

The MS-2102 is designed for measuring two heat trace circuits and offer the same quality and features of the MS-2101.

Both the MS-2101 and MS-2102 controllers provide ON/OFF controls with adjustable deadband or proportional control maximizing the performance and reliability of self-regulating, mineral-insulated and other types of heat trace. The Master override Input provides external control for load shedding or ambient temperature override. The Power Limit feature reduces high in-rush current typical with self-regulating cable applications.

## EASY INSTALLATION & SYSTEM INTERFACING



The MS-2101 and MS-2102 come ready to install. Mounted in a rugged NEMA 4X enclosure, no field assembly is required. All come with a solid-state alarm contact that can be configured normally open or closed by the user, and an alarm output.

The MS-2101 and MS-2102 are available with three types of interface Modules. The Local Interface Module communicates with a single controller and comes mounted on the front door allowing user-friendly interrogation and programming, local or remote. The Easy to read 32-character alphanumeric LCD displays alarms identifying the heater circuit by a user defined name - no codes to decipher. The Group Interface Module communicates with multiple controllers up to 1,200 meters (4,000 feet) away.

Our Central Computer interface is the heart of a plant-wide network using Modbus protocol. The MSS-2101 and MS-2102 support one RS 485 serial port to connect to a group Interface module or central computer interface.

The advanced features of the MS-2101 and MS-2101 make them the choice for your application. For more information on this and our other products, contact your local HTS representative.

### Typical MS-2101 Installation

