

Modulating Set Point Controls

MCA-Elite: Modulates 4-20mA, 0-5V, 0-10V, 1-5V, and 2-10V Actuators

MCP-Elite: Modulates 0-135 Ohm Actuators

MCF-Elite: Modulates Floating Actuators

DiGi-SPAN®

MC Series



Description:

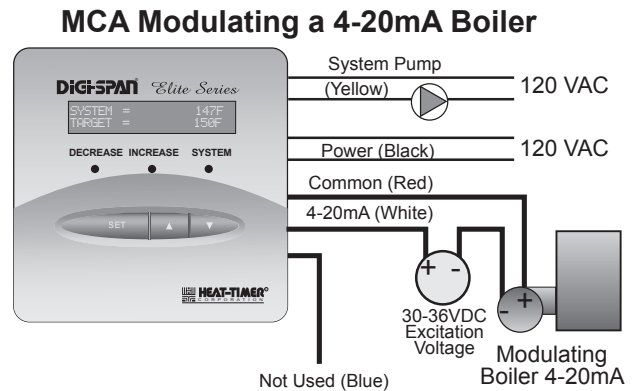
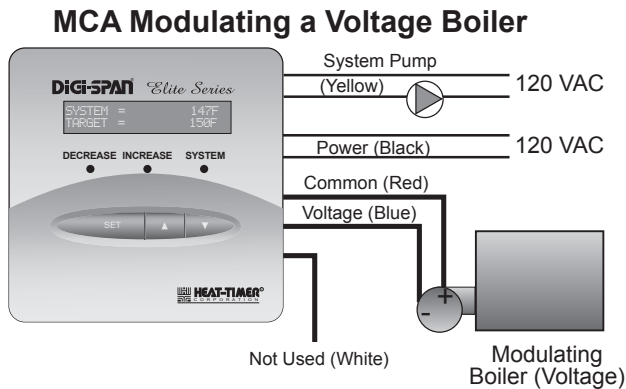
Simple Affordable Modulating Set Point or Reset Controls for Temperature or Pressure. Well suited for radiant and process applications, the MC-Elite changes the position of a valve, burner, or variable speed drive in response to changes in sensor readings.

- **Temperature, Pressure, Vacuum, or Humidity.** The same MC-Elite control can be connected to an array of temperature, pressure, vacuum, and humidity sensors. This makes stocking MC-Elite easier than ever. Each MC-Elite is field selectable for a broad range of parameters. Just select or stock the sensors you need with your control.
- **Standard and Customizable Reset Ratios.** Utilizing the standard outdoor reset ratios or set point is built-in the MC-Elite. In addition, the controls come with a customizable reset ratio for applications where a standard reset ratio would not suffice.
- **Enable/Disable.** No Need to turn the control power off. The Enable/Disable terminals allow the use of external devices or switches to activate/deactivate the control operation.
- **Simplified Menus on an Easy-to-Read 2-Line Digital Display.** Now, with two 16 alphanumeric line display and easy-to-ready menus makes setting and understanding control operation a snap.
- **Sensor Fault Output Status Selection.** A feature that allows the user to select the output status when the sensor is disconnected or its reading is faulty.
- **Can be Powered by 120VAC or 24VAC.** The Elite Series is normally powered by 120VAC. However, it has an alternative 24VAC power inputs. No transformers are required.

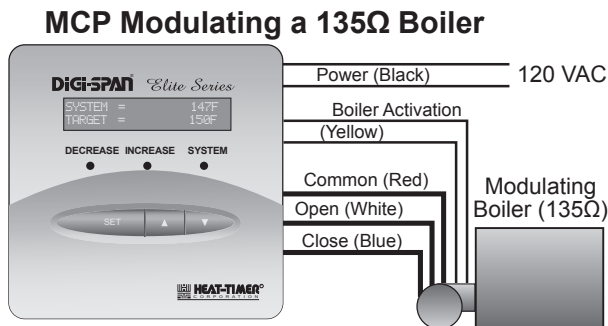
Applications:

- **Radiant Heating.** The MC-Elite Series can control a mixing valve to regulate the temperature of the water entering the radiant tubing.
- **Hydronic Heating or Cooling Loops.** The MC-Elite Series can control either a mixing valve or a diverting valve to regulate the temperature of a hydronic loop.
- **Steam to Water Heat-Exchangers.** The MC-Elite Series provides precise temperature control of water by controlling the amount of steam entering the heat exchanger.
- **Variable Speed Drive.** The MC-Elite Series can be used to control the speed of a fan or pump to maintain a desired system temperature or pressure.
- **Modulating Burner Control.** The MC-Elite Series controls the firing rate of a modulating boiler to maintain a desired system temperature or pressure.
- **Air Damper Control.** The MC-Elite Series adjusts the opening of an air damper to control the space temperature or humidity.

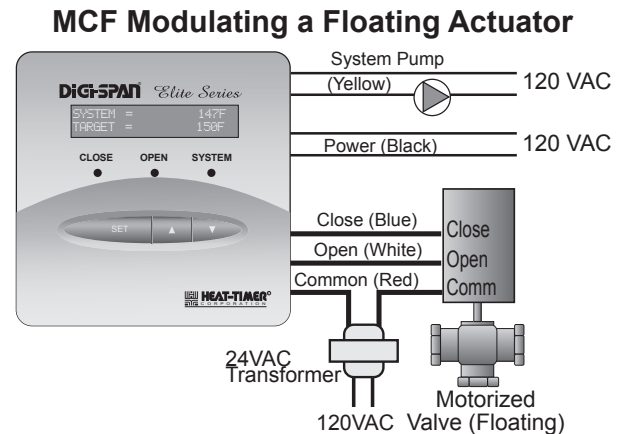
MCA-Elite: Analog Signals: 4-20mA, 0-5V, 0-10V, 1-5V, 2-10V



MCP-Elite: Proportional 135Ω Signal.



MCF-Elite: Floating Signal.



HT# 056066-00B

MCA-Elite Specifications:

Voltage Input:	120 VAC 60 Hz(2 Black wires) /24VAC 60 Hz (24VAC <i>terminals</i>) (Only One Power Source)
Power Consumption:	.5 VA Max
Operating Temperature:	from 20°F to 120°F
Operating Humidity:	from 20% to 80%
Dimensions:	4"W x 4"H x 2½"
Weight:	1 pound
Display:	Back Lite 2 Line Alphanumeric LCD Display
Standard:	English or Metric
Output Relay Ratings:	1 Amp inductive (Maximum of 1/8 HP), 6Amp resistive at 120 VAC 60 Hz
Control Modes:	Outdoor Reset, Set Point
Reset Ratios:	12 Standard ranging from 8:1 to 1:4 (Outdoor: System), and one Custom
Setback:	from 0°F (0°C) to 80°F (44°C)
Boost:	Yes (30Min), No
Sensor Fault Operating Options:	Output On or Output Off
Sensor Operating Range:	from -35°F (-37°C) to 250°F (121°C)
Offset:	from -40°F (-22°C) to 40°F (+22°C)
Minimum Target:	from 70°F (21°C) to 170°F (77°C)
Maximum Target:	from 90°F (32°C) to 240°F (116°C)
Set Point:	from -10°F (-23°C) to 230°F (110°C)
Setback Input:	<i>Terminals T3+, T3-</i>
Buttons:	3 (Set, Up, Down)
Enable/Disable:	<i>Terminals EXT+, EXT-</i>
Pump Run-On:	from 0 to 60 minutes
LED:	3 LEDs (Left=Decrease/Close Middle=Increase/Open Right=System Relay)
MCA System Relay Output:	1 S.P.S.T (Yellow = Output 1)
MCA Modulating Output:	4-20mA (Requires External Excitation) (Red=Com, White=Signal) Voltage (0-10VDC, 2-10VDC, 0-5VDC, 1-5VDC) (Red=Com, Blue=Voltage)
Purge Delay:	from 0.0 to 10.0 minutes

MCP-Elite Specifications:

Voltage Input:	120 VAC 60 Hz(2 Black wires) /24VAC 60 Hz (24VAC <i>terminals</i>) (Only One Power Source)
Power Consumption:	.5 VA Max
Operating Temperature:	from 20°F to 120°F
Operating Humidity:	from 20% to 80%
Dimensions:	4"W x 4"H x 2½"
Weight:	1 pound
Display:	Back Lite 2 Line Alphanumeric LCD Display
Standard:	English or Metric
Output Relay Ratings:	1 Amp inductive (Maximum of 1/8 HP), 6Amp resistive at 120 VAC 60 Hz
Control Modes:	Outdoor Reset, Set Point
Reset Ratios:	12 Standard ranging from 8:1 to 1:4 (Outdoor: System), and one Custom
Setback:	from 0°F (0°C) to 80°F (44°C)
Boost:	Yes (30Min), No
Sensor Fault Operating Options:	Output On or Output Off
Sensor Operating Range:	from -35°F (-37°C) to 250°F (121°C)
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Set Point:	from -10°F (-23°C) to 230°F (110°C)
Setback Input:	<i>Terminals T3+, T3-</i>
Buttons:	3 (Set, Up, Down)
Enable/Disable:	<i>Terminals EXT+, EXT-</i>
Pump Run-On:	from 0 to 60 minutes
LED:	3 LEDs (Left=Decrease/Close Middle=Increase/Open Right=System Relay)
MCP System Relay Output:	1 S.P.S.T (Yellow = Output 1)
MCP Modulating Output:	(Red=Common, White=Open, Blue=Close)
Purge Delay:	from 0.0 to 10.0 minutes
MCA System Relay Output:	1 S.P.S.T (Yellow = Output 1)

MCF-Elite Specifications:

Voltage Input:	120 VAC 60 Hz(2 Black wires) /24VAC 60 Hz (24VAC <i>terminals</i>) (Only One Power Source)
Power Consumption:	.5 VA Max
Operating Temperature:	from 20°F to 120°F
Operating Humidity:	from 20% to 80%
Dimensions:	4"W x 4"H x 2½"
Weight:	1 pound
Display:	Back Lite 2 Line Alphanumeric LCD Display
Standard:	English or Metric
Output Relay Ratings:	1 Amp inductive (Maximum of 1/8 HP), 6Amp resistive at 120 VAC 60 Hz
Control Modes:	Outdoor Reset, Set Point
Reset Ratios:	12 Standard ranging from 8:1 to 1:4 (Outdoor: System), and one Custom
Setback:	from 0°F (0°C) to 80°F (44°C)
Boost:	Yes (30Min), No
Sensor Fault Operating Options:	Output On or Output Off
Sensor Operating Range:	from -35°F (-37°C) to 250°F (121°C)
Offset:	from -40°F (-22°C) to 40°F (+22°C)
Minimum Target:	from 70°F (21°C) to 170°F (77°C)
Maximum Target:	from 90°F (32°C) to 240°F (116°C)
Set Point:	from -10°F (-23°C) to 230°F (110°C)
Setback Input:	<i>Terminals T3+, T3-</i>
Buttons:	3 (Set, Up, Down)
Enable/Disable:	<i>Terminals EXT+, EXT-</i>
Pump Run-On:	from 0 to 60 minutes
LED:	3 LEDs (Left=Decrease/Close Middle=Increase/Open Right=System Relay)
MCF System Relay Output:	1 S.P.S.T (Yellow = Output 1)
MCF Modulating Output Relay Wire Colors:	2 S.P.S.T (Red=Common, White=Open, Blue=Close)

Item Description	Part #
MCA-Elite (4-20mA, 0-5V, 0-10, 1-5V, 2-10V) Modulating signals (Sensors ordered separately)	929160-UA
MCP-Elite (135Ω Modulating signal) (Sensors ordered separately)	929165-UA
MCF-Elite (Floating Modulating signal) (Sensors ordered separately)	929190-UA
Brass Tube Temperature Sensor	904250-00
3-In-1 Immersion Temperature Sensor	904220-00
Humidity Sensor	904035-00
Vacuum Sensor (0 - 30 Hg)	904317-00
Pressure Sensor (0 - 30 PSI)	904310-00
Pressure Sensor (0 - 100 PSI)	904312-00
Pressure Sensor (0 - 200 PSI)	904311-00
Pressure Sensor (0 - 300 PSI)	904313-00

HT# 056066-00B



ISO 9001:2008
CERTIFIED



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