

SSI Technologies – Application Note PS-AN15

MediaGauge™ Series MG-MD

User's Guide



Keypad Programmable Instructions

- **Change pressure reading units** by pressing the UNIT/SET button until the arrow point to the units of preference.
- **Check low pressure setting** by pressing and releasing the ► button (Displayed for 30 seconds)
- **Check high pressure setting** by pressing and releasing the ▲ button. (Displayed for 30 seconds)
- **See maximum peak pressure** by pressing and holding the ► button for 3 seconds. (Display will blink)
- **Reset maximum peak pressure** by pressing and holding the ▲ button for 3 seconds.
- **Return to pressure measurement mode** by holding the ► button for 3 seconds (Display will not blink)
- **Reference the MG-MD to the input port** by pressing and holding both the ► button and the ▲ button simultaneously for 3 seconds
- **Reset the MG-MD reference** by either disconnecting the input port or attaching a 0 psi input then press and hold down the ► button and the ▲ button simultaneously for 3 seconds

Typical Application Using High and Low Set Points

Programming the High and Low Pressure Set Points

- 1) **Enter Programmable Set Point Mode** by pressing and holding the **UNIT/SET** button for 3 seconds. The screen shows ▲ on the top, left hand side indicating high pressure setting, and the first digit will be flashing.
- 2) Set the first digit value by pressing the **▲ Button** (select from 0 to 9). Then press the **► Button**, which shifts to the second digit. Again use the **▲ Button** to select 0 thru 9 followed by the **► Button** to complete the third and forth digits.
- 3) After all 4 digits of the high pressure settings are done press the **► Button** one more time, the screen will show ▼ on the top, left hand side indicating low pressure setting. Repeat step 2 above to set the 4 digits of the low pressure settings.
- 4) After all 4 digits of the low pressure settings are done press the **► Button** one more time, the screen will show "Load", indicating your pressure settings have been saved into memory.
- 5) To make sure that the settings are correct, you can press the **► Button** to check the value of the low pressure setting and press the **▲ Button** to check the value of the high pressure setting.

Power to the unit: There is no ON/OFF button on the MediaGauge™ MG-MD model. The MG-MD unit is powered on and off via the external 12V supply voltage source.

Electrical Interface: (MG-MD harness connections)

White wire:	Power Lead for supply input (12 Vdc)
Black wire:	Return Lead
Brown wire:	Limit Switch output (NPN Transistor output)
Blue Wire:	4-20 mA output for meter. (Must be loop grounded with black wire)

Note: The 4-20mA (Blue Wire) must be connected directly to ground when not being used for monitoring purposes.

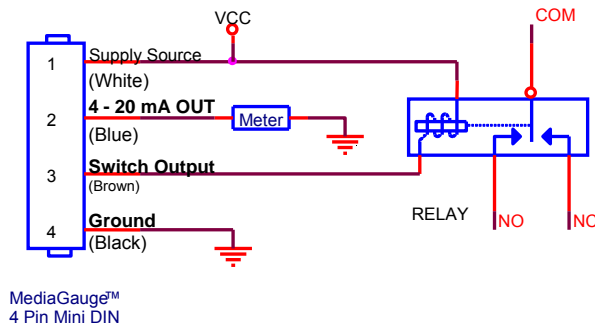


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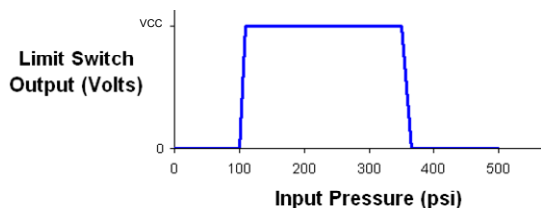
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To understand the high and low pressure set points functioning, let's look at a typical application where the MediaGauge™ MG-MD is used in a monitor and control system.



In the example shown above, the MediaGauge MG-MD is attached to an external power supply (Vcc), a current meter and a relay. The MG-MD has user programmable high and low pressure set points. We will assume the low set point has been set to 100 psi and the high set point has been set to 375 psi.

Limit Switch Operation



In the graph shown here, you can see how the user can use the high and low set points to control when the relay would turn on and off.

Input pressure values below the low limit set point or higher than the high limit set point will result in a limit switch output (Brown Wire) of 0 Vdc.

Input pressure values within the control set point limits (between the low and high set point values) will result in a limit switch output that follows the external power source (Vcc).

Note: The 4-20 mA output (Blue Wire) is proportional to the input pressure and operates independent of these low and high pressure set points.

Installation and Wiring

- 1) Mount the MediaGauge™ MG-MD digital pressure gauge on a suitable (1/4" NPT) female fitting. Use Teflon tape or pipe dope to seal the threads. Do not over tighten. Torque to 150 in lbs +/- 1 in lb.
- 2) Connect the supplied mating harness with Din connector to the mating connector on the back of the MediaGauge™ MG-MD digital pressure gauge.
- 3) Connect your relay and meter per the figure.
- 4) For **current meter**, connect the current meter in series with the 4-20 mA output. Connect the 4-20mA output (Blue Wire) to the + terminal of the current meter. Connect the - terminal of the current meter to ground.
- 5) For **voltage meter**, connect the 4-20mA output to an appropriate resistive load selected based on the value of your supply voltage. Connect the 4-20 mA output (Blue Wire) to one end of the resistive load. Connect the other end of the resistive load to ground.