M1000 Set Point Controller


Features

- Analog Input
- Dual Sensor Control
- Temp. Compensation
- Communication Port RS485
- Thickness Measuring
- Sealed Front Panel (Nema) 4
- Program Lock Access Code
- Enclosure 1/8 DIN
- Scaling of DisplayPower Supply 110
- mA at 24 VDC

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The M-1000 analog controller is a multipurpose dual sensor controller with a wide range of uses in the process control field. It was designed to work with any of our analog output sensors as well as a temperature probe for temperature compensation. Its easy program modes allow instruction entry and review of previously programmed values. It accepts a standard 0-20 mA, 4-20 mA, 0-5V, 2-10V, 0-10V analog input. The microcontroller digitally scales the inputs with near and far scaling points, then this information is displayed on a 4 1/2 digit digital display. This attribute is also contained in an optional second channel input for added expandability. The controller can also supply 24 volts up to 110 mA to the sensors. The outputs consist of four solid state relays for use as outside limit monitors. These outputs can be programed as either normally open or normally closed and can switch 2-130 VAC or VDC 100 mA DC or 50 mA AC continuous. A RS485 serial communications port is also supplied. Communication can take place for baud rates of 300, 1200, 2400, 4800, and 9600. Each controller can be configured to transmit standard ASCII code up to a maximum distance of 10,000 feet. The M-1000 samples its inputs at a rate of 25 times per second, and includes autozeroing. Its analog to digital converter is accurate to +- .05 mV and its converter is also rated as having a drift rating of 50 ppm per degree Celsius. The M-1000 is powered by 120 VAC, 8 watts and all of the inputs and outputs are tightly secured with reliable screw clamp cable connect.

METER CONTROL PANEL   LEVEL CONTROL
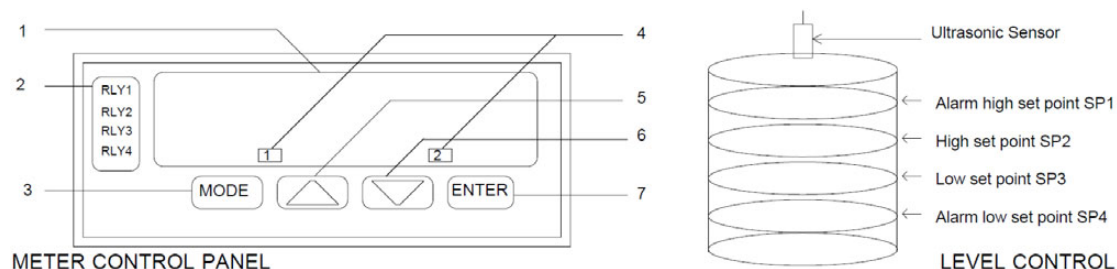
1) 4 1/2 Digit Display, used to display the data to the user, and to display the set values while programing.
2) Relay Indicator L.E.D.s, to indicate which outputs are on, and flicker when in the program state.
3) Program Mode selector when pressed displays program choices.
4) L.E.D. Indicators for channel 1 and channel 2.
5) Up Cursor increases numerical value.
6) Down Cursor decreases numerical value.
7) Enter button puts program choices into memory.

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WIRING DIAGRAM

CUT OUT 90 mm X 44 mm

MOUNTING DIMENSIONS
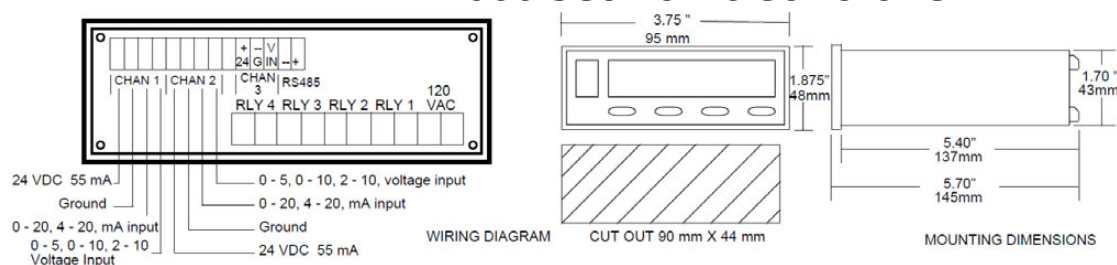
Single Channel Programming

1. Wire power to terminals marked 115 VAC.

2. Wire sensor to terminals marked channel 1.

3. Wire temperature probe to terminals marked channel three if temperature compensation is desired.

4. To program enter program code "58", or enter "25" to go directly to steps 16 & 17.

5. Six factory presets are avaliable. Factory preset 1 4 to 40" with 4 - 20mA input, 2 8 to 80" with 4 - 20mA input, 3 4 to 40" with 0 - 10volt input, 4 8 to 80" with 0 - 10volt input, 5 0 to 20 to display current input, 6 0 to 10 to display voltage input. If one of these is not desired press MODE to skip this step.
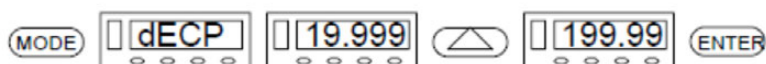

6. Set meter for single channel operation.

7. Temperature compensation and display are available by programing "F" for fahrenheit or "C" for centigrade or "-" for no temperature compensation.

8. Decimal point selection

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9. Lowest sensor output value. (Example: when a 4-20mA sensor is used 4 would be entered here).

(MODE) | Lo 0 | △ | Lo 4 | (ENTER)

10. Scaling value for "Lo" setpoint, or the value the meter will display when the sensor is giving a 4mA output.

(MODE) | 00.00 | △ | ▽ | 4.00 | (ENTER)

11. Highest sensor output value. (Example: when a 4- 20mA sensor is used "20" would be entered here.)

(MODE) | HI 4 | △ | HI 20 | (ENTER)

12. Scaling value for "HI" setpoint, or the value the meter will display when the sensor is giving a 20mA output.

(MODE) | 00.00 | △ | ▽ | 40.00 | (ENTER)

13. If temperature compensation has been selected, the distance that the sensor is away from the target when the sensor is outputing its lowest value needs to be entered after the display flashes "LDSt". (Example: if a 4-20mA sensor is 4 inches away when it generates a 4mA output enter "4.00" here.) This step will not appear if temp. comp. has not been selected in step 7.

(MODE) | LdSt | 00.00 | △ | ▽ | 4.00 | (ENTER)

14. If temperature compensation has been selected, the distance that the sensor is away from the target when the sensor is outputing its highest value needs to be entered after the display flashes "HDSt". (Example: if a 4-20mA sensor is 40 inches away when it generates a 20mA output enter "40.00" here.) This step will not appear if temp. comp. has not been selected in step 7.

(MODE) | HdSt | 00.00 | △ | ▽ | 40.00 | (ENTER)

15. To set up display the meter will flash "dISP". For channel 1 enter CH1. To display channel 1 and temperature enter "ALtt". The display will automatically alternate every 3 seconds between channel 1 and temperature. This step will not appear if temp. comp. has not been selected in step 7.

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(MODE) | dISP | | ALtt | △ | CH1 | (ENTER)
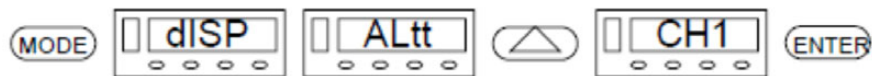
16. Polarity allows the state of the relay to be changed from N.O. to N.C. At this time the LED indicator of the chosen relay will flicker. This step needs to be repeated for each of the four relays.

(MODE) | PoLC | △ | PoLo | (ENTER)

17. Set point is the numerical preset value at which point the relay changes state. At this time the LED indicator of the chosen relay will flicker. This step needs to be repeated for each of the four relays.

(MODE) | SEt | | 00.00 | △ ▽ | 10.00 | (ENTER)

All electrical equipment should be installed by a qualified/certified electrician.
Deeter Electronics Ltd follows a policy of continual development of its products and reserves the right to change specifications and/or features without notice

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