INSTRUCTIONS FOR MODEL 1000
DIGITAL PROCESS
INDICATOR AND ALARM

LOVE CONTROLS DIVISION
Dwyer Instruments, Incorporated
PO Box 338  Michigan City, IN 46361-0338
(800) 828-4588  (219) 879-8000  FAX (219) 872-9057
www.love-controls.com

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INSTALLATION

Mount the instrument in a location that will not be subject to excessive temperature, shock, or vibration. All models are designed for mounting in an enclosed panel.

Select the position desired for the instrument on the panel.

Prepare the panel by cutting and deburring the required opening.

From the front of the panel, slide the housing through the cut out. The housing gasket should be against the housing flange before installing.

From the rear of the panel slide the mounting collar over the housing. Hold the housing with one hand and using the other hand, push the collar evenly against the panel until the spring loops are slightly compressed. The ratchets will hold the mounting collar and housing in place.
WIRING

Wire instrument per the drawing below. Class two wire may be used for the input. See the illustration below for wiring two-wire transmitters.

FOR RELAY OUTPUTS:
TYPE MDA OR 3AB 3.5A MEDIUM LAG FUSE RECOMMENDED

SET POINT 1
TYPE MDA OR 3AG 1/4 AMP 250 VAC MEDIUM LAG FUSE.

SET POINT 2
15 VDC @ 30mA ISOLATED

INPUT WIRING: Do not run input wiring in the same conduit as power leads.

TYPICAL WIRING FOR 2-WIRE TRANSMITTER
INPUT SELECTION

The instrument is factory set for an input of 4 to 20 mA. If your input is 0 to 100 mV, 0 to 1 V, or 0 to 10 V then make the appropriate change to the input DIP switch as shown in the figure below. Calibrate instrument per instructions on the next page.

DECIMAL POINT SELECTION

To set the decimal point position turn on the appropriate switch on the decimal point DIP switch. If no decimal point is desired, turn all switches off.

INPUT ACTION SELECTION

The Model 1000 is shipped with the input set for direct action. This means that the low end of the scale corresponds to the low end of the input. If reverse action is desired, move the Input Action jumper to the REV position. Note that the reverse acting input can only be scaled for 0 to 1000 counts.

If the input action selection switch is changed, the instrument must be recalibrated.

Note: Reverse acting input will only work with a displayed range of 0 to 1000 with the decimal point located in any position.
SET POINT SETUP
Select the action desired for set point 1 and set point 2 as shown in the diagram below. Direct action means that the output is energized above set point. To change a set point to reverse action move the set point action jumper to the REV position. To set a set point press the SP1 or SP2 button on the front, and turn the screw above the button until the display shows the desired value.

INPUT CALIBRATION PROCEDURE
Connect a precision current or voltage source (as appropriate for the selected input) to terminals 1 (+) and 2 (-). You must be able to read the value of the source to an accuracy of ±0.1% or better.

Apply power to the instrument. Allow a few minutes warm up before proceeding.

Adjust the source to the low end of the input scale range (4mA or 0V, as appropriate). Adjust the "ZERO" potentiometer (see drawing below for location) until the display reads the proper value (0 or the low scale value). Acceptable values range from 0 to 250 counts.

Adjust the input source to the high end of the input scale range (20mA, 10V, 1V, or 100mV, as appropriate). Adjust the "SPAN" potentiometer (see drawing below for location) until the display reads the proper value (1000 or the high scale value). Acceptable values range from 500 to 1999 counts.

Repeat the two above steps until no further adjustment is required.
SPECIFICATIONS

Accuracy: ±0.25% of span ±1 count.
Conversion Rate: 3 readings per second.
Display: 0.3 inch high, 3 1/2 digits.
Input Impedance: Current, 62 ohms; Voltage, 1 Megohm
Supply Voltage: 100 to 240 VAC nominal, +10% -15%, 50 to 400 Hz, single phase. 132 to 240 VDC nominal, +10% -20%.
Power Consumption: 5VA.
Transmitter Power supply: 15VDC at 30mA maximum, unregulated.
Set Points (optional): Two form A contacts (normally open), 3A at 250 VAC resistive; 1.5A at 250 VAC inductive. Pilot duty rating 250VA.
Input Ranges: Selectable, 4 to 20 mA/DC, 0 to 100 mVDC, 0 to 1 VDC, 0 to 10 VDC.
Zero Adjust Range: 0 to 250 counts.
Span Adjust Range: 500 to 1999 counts.
Operating Ambient Temperature Range: 0° to 50°C (32° to 121°F).
Storage Ambient Temperature Range: -40° to 80°C (-40° to 175°F).
Weight: 185 grams (6.5 ounces).
DIMENSIONS

Panel cutout for all models 45 mm x 45 mm (1.775” x 1.775”) allow for 13 mm (0.5”) clearance at the rear of instrument.

(All dimensions in mm with inches in parenthesis)