GENERAL

The Model 380U Peak Picker Module provides an output signal that is maintained at the highest input level. A control input hold command maintains this level an indefinite period of time. Initiation of an enable command momentarily resets the output level to zero and the output again maintains the most positive input signal level.

The Peak Picker is especially useful in applications involving analyzers where peak output values must be measured. The hold circuit utilizes digital circuitry providing indefinite hold times with no decay.

The module accepts standard 1 to 5V dc input signals. However, the capability of the module permits the use of input signals of 0.2 to 6.0V dc. Process current signals may be used by placing precision resistors across the input terminals. This permits removal of the module without breaking the input current loop.

SPECIFICATIONS

Input Voltage Range: Nominal: 1 to 5V dc
Maximum: 0.2 to 6.0V dc

Input Impedance: 1M Ohm (min)

Control Input Voltage:
Enable: Open circuit or control voltage greater than 3.0V dc. Minimum pulse width, 12 mS.
Hold: Contact closure to common or control voltage less than 1.5V dc. Minimum pulse width, 12 mS.

Peak Detection Accuracy: ±0.1% of span

Tracking Resolution: ±0.1% of span

Sample Rate: 100 Hz. (at full scale input)

Output Range: Selectable, 4 to 20 mA or 10 to 50 mA

Output Current Limiting: 150% of full scale

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Output Current Load:  4 to 20 mA:  900 Ohms (max)
                    10 to 50 mA:  360 Ohms (max)

INSTALLATION

Using the Card Cage Enclosure Instructions as a reference (Service Instructions, SD3801), set the keys as follows:

Left Key:  V (vertical)
Right Key: V (vertical)

If the module is not factory calibrated, refer to the CALIBRATION section of this instruction. If the module is factory calibrated, insert the module into the proper slot of the card cage enclosure and make the electrical connections shown in the connection diagram.

If current input signals are to be used, refer to the Card Cage Enclosure Instructions, SD3801, for details on input signal conditioning resistors.

The control input sets the mode of operation, Enable or Hold. An open circuit on the positive terminal (7) or a logic voltage greater than 3.0V dc initiates the Enable mode. In this mode the output will track the most positive input signal.

Connecting terminal 7 to common (terminal 8) or a logic voltage less than 1.5V dc initiates the Hold mode. In this mode, the output will maintain the most positive input level presented prior to the hold command.

CALIBRATION

OUTPUT RANGE

Determine which output range is required in your application; 4 to 20 mA or 10 to 50 mA. Jumper wire (J1) determines the output range.

    4 to 20 mA:  J1 out
    10 to 50 mA:  J1 in

ADJUSTMENT PROCEDURE

1. Connect the unit as shown in the connection diagram. Your input source must be adjustable over the entire range of the unit and settable to an accuracy of 0.1% or better. Load the output within the limitations listed under OUTPUT of the specifications section. The output must be measured to 0.1% accuracy or better for best results.

2. Set your input source to a value below the minimum value for your application. Momentarily ground the ENABLE input.

3. Slowly increase the input source to the required minimum value (avoid overshooting the minimum value). Adjust the ZERO potentiometer for minimum output value.

4. Slowly increase the input to the maximum value for your application (again avoid overshooting) and adjust the SPAN potentiometer for maximum output value.

5. Repeat steps 2, 3 and 4 until readings converge.
MAINTENANCE

These instruments are solid state and require no maintenance on a regular basis, except for annual cleaning, blowing out dirt, and verifying calibration. If your transmitter is not operating properly, we suggest removing it and giving it a full bench check-out. We find most problems are in the field wiring or other circuits, not in the transmitter. If the problem is traced to the unit itself, conventional electronic troubleshooting methods suffice.

CONNECTION DIAGRAM

Terminal strip on Series 380 rack enclosures.

1 2 3 4 5 6 7 8 9

+ INPUT (Note 1 & 2)

+ OUTPUT

RL (Note 3)

NC

NC

NC

Notes:

1. 1-5V dc signals are standard inputs. For process current inputs, refer to Service Instruction, SD3801, for proper input conditioning resistors.

2. The negative input terminal is common with the cage DC power supply.

3. See output specifications for load limits.

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