Act-Pak® Electronic Instrumentation

Model 1100 Series

Act-Pak® (Automatic Control Translator Package) is a line of electronic instruments can be used for recording, totalizing and actuating controls based on meter throughput. The Act-Pak device accepts pulses for contact closures from metering devices and provides a variety of outputs displaying consumption, rate of flow data, process control and data transmission.

FEATURES

- Two available enclosures.
- Front Panel Indicators for input pulse, power, and totalizer/flow rate.
- Non-volatile E2PROM memory retains all programming parameters and the count value when power is removed.
- Multiple optional outputs.

BENEFITS

- Continuous meter monitoring in the field.
- Converts data into output signal for use in other utility systems.
- Captures consumption, rate of flow and process control.

Front Panel Indicators

- INPUT PULSE INDICATOR: A red LED that blinks on and off to display each pulse received from the meter.
- POWER INDICATOR: An “on/off” red LED, located below the Input Pulse Indicator, indicating the instrument’s power supply is functional.
- TOTALIZER/FLOW RATE INDICATOR: An eight-digit transmissive red LCD backlighted 0.46” display. Displays both the total consumed and flow rate. Reflective readouts are supplied for outdoor or high ambient light conditions. A single display indicates flow rate designated by an R. The display can be toggled manually with the front panel SELECT switch or automatically to display total consumed. The display may be left in either mode. The number of active digits depends on the parameters of the input signal.

Standard Output

All instruments are supplied with a 4-20 mA DC output proportional to the flow rate through the metering device. This signal has the capability of driving external equipment with impedance from 0 to 500 ohms without recalibration.

Optional Outputs

A number of options are available.

Available Models

- 1100D in a standard free standing or panel mountable package that meets NEMA1 requirements.
- 1100DN in a NEMA4X wall mountable fiberglass enclosure.

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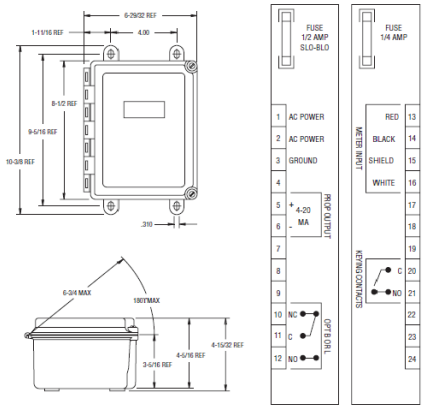
Models 1100D and 1100DN

Specifications

Input Signals General Requirements	Input frequency (full scale): 1-1000 Hz Maximum loop resistance: 40 ohms Duty Cycle: 50/50 + 20%
Contact Closure Inputs	Type: SPST (contact bounce less than 5.5ms) Interrupting current: 50 ma (max.)
Solid State Inputs	An open collector design conforming to switch specifications listed above.
Electrical	117 VAC +10%, 60 Hz, 1 Phase, 3 wire circuit Power Consumption: 10 Volt amps (watts), maximum
Environmental Operating Conditions	Ambient Temperature: 0° F to 120° F Relative Humidity: Non-condensing
Memory	Non-volatile E2PROM memory retains all programming parameters and the count value when power is removed.
Front Panel Buttons	**Select**: Toggle display and advances menu selection in the programming mode. **Reset**: Reset counter to zero if enabled and changes display in programming mode. **Count Display**: 8-digit, display flashes for an overflow condition. **Rate Display**: 6-digit with an enunciator "R" on the left side.



Wiring & Physical Connections

Optional Outputs

Option A	Dual 4-20 mA Output Signals. Two (2) 4-20 mA signal outputs proportional to the flow rate through the metering device. With the standard 4-20 mA output, this option provides for a total of three (3) 4-20 mA signals. If isolation between devices is necessary, an analog isolator is recommended.
Option B	Totalized Output. A 50 millisecond SPDT contact closure representing a metered volume. If a value is not specified, the output closure is set to the same increment as the totalizer.
Option Bb	Totalized Output. A front panel programmable SPDT compact closure that may be set to smaller increments than option B without the option I. Option uses one of the electronic totalizers available on the readout.
Option C1	Keying Output. A SPST mercury-wetted contact closure synchronous with the input to the instrument. Used to retransmit meter pulses to other instruments or telemetry equipment.
Option C1(SS); C2(SS)	Solid State Keying Outputs. A single C1 (SS) open collector solid state output synchronous with the input to the instrument.
Option I	Input Compensator. An input signal multiplier used when totalization of quantities smaller than the standard increments are specified.
Option L	Low Flow Output. A SPDT contact closure that is actuated when the flow rate exceeds a preset limit. Rate limit is programmable from the front panel. Contact ratings are the same as Option B.
Option M	Multiplier. An input frequency field adjustable binary coded decimal (BCD) multiplier circuit with a range of 0.0001 to 0.9999. Used to scale input signals to various units of measure and to scale different sizes of meters in accumulation applications.
Option P	Panel Mounting. Instrument is supplied with panel mounting brackets.
Option TT	Specifies the components and circuitry required for Slot Sensor Amplifier type transmitters. This option is required where intrinsic safety is required and current must be limited.

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