



Kessler-Ellis Application Note F041

## Ten BATCHrol II Frequently Asked Questions and Best Kept Secrets

### Q1: How do I calculate a Pulse Input type K-Factor?

A1: For Pulse Inputs the Count K-Factor is equal to the number of pulses per unit of measure which is determined by the flowmeter. (This Information is typically on the flowmeter calibration sheet or stamped on the flowmeter itself).

The Rate K-Factor is calculated by dividing the Count K-Factor by the time conversion factor.

Example:

Count K-Factor = pulses per unit of measure (gallon, foot, revolution etc....).

Rate K-Factor (rate per second) = pulses per unit / 1

Rate K-Factor (rate per minute) = pulses per unit / 60

Rate K-Factor (rate per hour) = pulses per unit /3600

### Q2: How do I calculate an Analog Input K-Factor?

A2: Rate K- Factor:  $10000/R$ , where R = high output rating (20mA or 5V) of transmitter. 10000 divided by 20mA or 5V rating of transmitter. Eg. 20mA rating of transmitter is 1500 gal. per min. The rate K - Factor to key into the unit for gal. per min. is 6.6666667 (10000 divided by 1500).

The Count K-Factor can be calculated by modifying the Rate K-Factor to reflect the rate in units per second. If the Rate is set for rate per minute, multiply the Rate K-Factor by 60; if rate per hour, multiply the rate K-Factor by 3600.

Counter K-Factor: =  $6.6666667 \times 60 = 400$

### Q3: What is the factory code to unlock the unit should I forget my password?

A3: The Factory back door code for the BT-II can be obtained by contacting the factory.

### Q4: How do I remotely Stop / Reset the Batchrol II?

A4: Terminal 5 (Stop/Reset Input) has two functions. When activated during a batch, the unit will STOP. When the unit is STOPPED or after a batch is complete, activating this input will reset the Batch Total. If terminal 5 is held high (4-30Vdc), all start inputs will be inhibited. Wiring a push button switch between Terminal 13 and Terminal 5 will accomplish these functions.

**Q5: What function do Preset and Prewarn perform?**

A5: Preset and Prewarn activate the Preset Relay and the Prewarn Relay at a given Batch amount. When entering a value into either one of these setpoints it will cause the corresponding relay to change state at that batch amount.

**Q6: Is the Batchtrol II Nema 4X rated?**

A6: Yes, the Batchtrol II front panel is Nema 4X rated. This rating is also comparable to the European standard IP65.

**Q7: What can I view with the Batchtrol II?**

A7: The user can view the Rate, Total and Preset Number by toggling between the three displays with the Rate/Total button on the front of the unit. The user can also view the Grand Total by pushing the "Enter" button once while viewing the Total. The Grand Total will be the flashing Totalizer. Pushing the "Enter" button again will return you to the Total.

**Q8: What type of memory does the Batchtrol II Have?**

A8: The Batchtrol II has a EEPROM memory and is capable of storing program and count data for a minimum of 10 years. This is also referred to as non-volatile memory.

**Q9: What is the maximum current rating of the D.C. outputs?**

A9: The D.C. outputs are rated at 100ma maximum current draw.

**Q10: How do I Wire the Flow Inputs?**

A10: Below you will find typical wiring diagrams to help you wire a flowmeter to the Batchtrol II.

Figure 2-2 is a typical digital wiring diagram for a turbine flowmeter with a 30mV P-P magnetic output .

Figure 2-3 is a typical analog wiring diagram for a two wire analog type flowmeter.

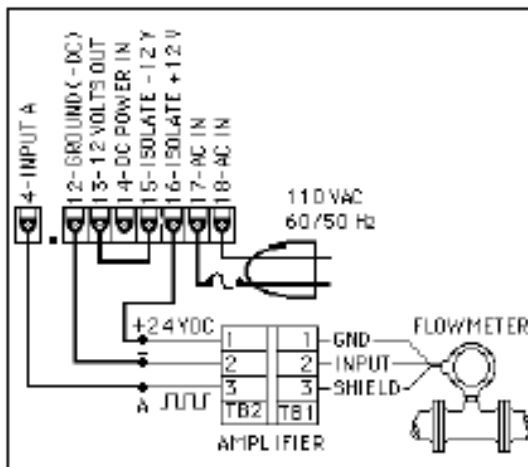


Figure 2-2  
Typical Digital Wiring Connections

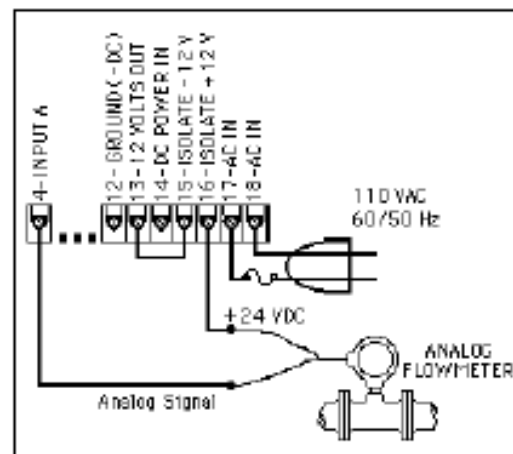


Figure 2-3  
Typical Analog Wiring Connections