



Kessler-Ellis Application Note F040

## Ten KEPtrol R/T 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 unit of time desired.

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 250 gal. per min. The rate K - Factor to key into the unit for gal. per min. is 40 (10000 divided by 250).

Counter K-Factor: =  $10,000/R/Sec$ , where R = High output rating (20mA or 5V) of transmitter factored to rate per second. Eg. 20mA rating of transmitter is 500 gal. per min. Rate per sec. is 8.3333333 (500 divided by 60). Counter K-Factor to key into unit is 1200 (10000 divided by 8.3333333).

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

A3: The Factory back door code for the Keptrol R/T can be obtained by contacting the factory.

### Q4: How do I remotely reset the Keptrol R/T?

A4: Wiring a switch between Terminal 13 and Terminal 5 can remotely reset the unit.

The Remote Reset is positive edge triggered; once it is reset by a 3 -30Vdc signal the unit will reset. If the reset is then held high the unit will continue to count until the signal is removed and applied again.

**Q5: What function do Preset A and Preset B perform?**

A5: Preset A and Preset B activate Relay A and Relay B at a given setpoint. When entering a value into either one of these Presets it will cause the corresponding relay to change state at that setpoint. The Relays can also be programmed to follow Rate or Total.

**Q6: Is the Keptrol R/T Nema 4X rated?**

A6: Yes, the Keptrol R/T front panel is Nema 4X rated. This rating is also comparable to the European standard IP65.

**Q7: What can I view with the Keptrol R/T?**

A7: The user can view the Rate and Total of flow by toggling between the two 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 Keptrol R/T Have?**

A8: The Keptrol R/T 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 Keptrol R/T.

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.

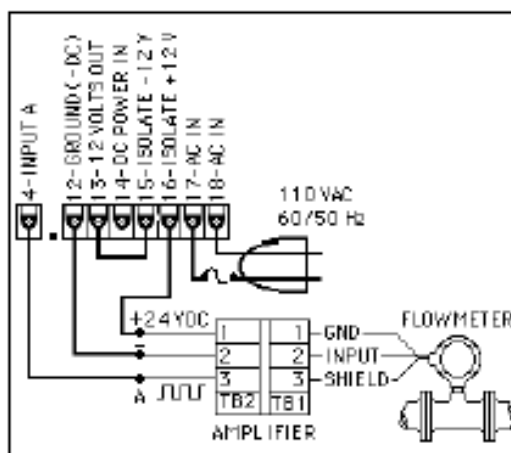


Figure 2-2  
Typical Digital Wiring Connections

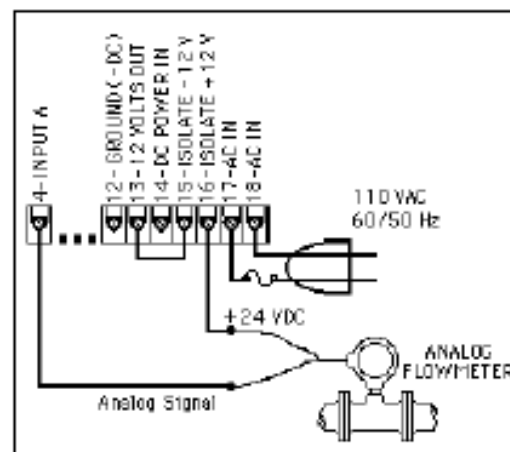


Figure 2-3  
Typical Analog Wiring Connections