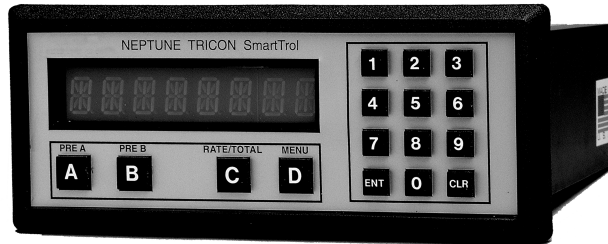




# TRICON® SMARTTROL™ INSTRUMENTATION



The SmartTrol™ is a remote instrument designed for flow rate monitoring, totalizing, and batching.



The SmartTrol is a remote instrument designed for flow rate monitoring, totalizing, and batching. It has an 8-digit, 0.55-in bright alphanumeric display. The two inputs (A and B) will accept up to 1,000 pulses per second (pps) of digital count. The two inputs are combined into a single count that can be used to provide a two-stage relay output for valve control.

The standard SmartTrol has two separate 8-digit floating decimal K-factors to convert the inputs to count and rate displays. The user, with the push of a button, can toggle back and forth to view the total, rate of flow, and grand totalization.

The SmartTrol may be thought of as two separate counters and a rate meter. The “batching” counter counts to pre-warn and preset set points entered by the user and enables separate control outputs. The “totalizing” counter gives a cumulative reading or grand total.

Additionally the rate meter counts the number of pulses per second and, with its scaling feature, provides gpm or any other units of rate measurement. At any time, the user may view the total, the grand total, or the rate while never interrupting the counting process.

The front panel keypad controls the menu-driven software used for system setup. A lockout feature prevents tampering.

The unit operates from 110VAC/12-27VDC. If AC power is used, two built-in regulated 12VDC @ 100mA power supplies are offered. They can be connected to provide +12VDC and -12VDC or 24VDC to drive external devices. CMOS logic is used to provide high noise immunity and low power consumption with EEPROM to hold data a minimum of 10 years if power is interrupted.

**APPLICATIONS**

The SmartTrol controls batching and totalizing of flow. The programmable K-factors make keying engineering units easy. Start/stop control in conjunction with pre-warn and preset relays provide two-stage batching capability.

The SmartTrol can be used with the T-10, Trident® Turbine, HP Turbine, TRU/FLO® Compound, and Fire Service meter lines for total, rate of flow, and grand totalization. Applications also include pump monitoring and chemical mixing applications. Through RS-232 serial communications, a computer can maintain a record of the daily events. The optional 4-20mA output may be used to interface with additional devices.

**KEY FEATURES**

- Displays total (of batch), rate of flow, or grand totalization of any current Neptune meter with one or two measuring elements using a TRICON®/E3 or TRICON/S
- Accepts digital pulse input (with totalization integration) or switch closures
- Integrated power supply for one or two TRICON/E3 transmitters
- Two-stage control
- Pulse input to 1,000 counts per second
- Separate scaling factor for each input for count and rate
- Security lockout prevents unauthorized access or inadvertent programming changes
- Nema 4-front panel (splash proof/moisture-resistant)
- Optional RS-232 two-way communications capability to link with a computer system
- Optional scaled 4–20mA output proportional to rate of flow
- K-Factor programmable to 8 places
- Scaled pulse output

**WARRANTY**

Neptune provides a limited warranty with respect to its SmartTrol for performance, materials, and workmanship.

**SPECIFICATIONS**

- Display
  - 8-digit, .55" high, 15 segment, red-orange LED
- Power
  - 120 VAC  $\pm$  15% at 3.2 VAC or 12 to 27 VDC at .25 amps
- Power Supply (For external devices)
  - 12 volts  $\pm$  5% at .1 amp, both supplies (for TRICON/E3)
- Temperature
  - Operating: 0°C to 54°C
  - Storage: -40°C to 93°C
- Input Impedance
  - 10KOhm (input A, input B, or reset input)
- Input Voltage
  - Low Input: 0 to 1 volt (input A, input B, or reset input)
  - High Input: 3 to 30 volts
- Input Frequency
  - 1000 Hz maximum, input A and input B (Digital pulse input version)
- Reset Input
  - Edge triggered, 5mSec minimum duration
- Relay Contacts
  - 10 amps, 120/240 VAC, 28 VDC
- Model Numbers
  - Digital Pulse Input (For TRICON/E3)
    - 8149-101 – Basic Unit
    - 8149-102 – RS232C Output
    - 8149-103 – 4–20mA Output
    - 8149-104 – RS232C and 4–20mA Output
  - Contact Input (For TRICON/S)
    - 8149-201 – Basic Unit
    - 8149-202 – RS232C Output
    - 8149-203 – 4–20mA Output
    - 8149-204 – RS232C and 4–20mA Output

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications without notice.

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