

SHIFT-TROL

Low Cost, Pulse Input Productivity Shift Monitor

Features

- Monitor Up to 4 Separate Shifts
- Separate 5 Digit Preset Counter
- Separate 5 Digit Scaling Factors For Shifts and Preset Counter
- Pulse Input - 10 kHz Maximum
- EEPROM Memory Stores All Program & Data Values For 10 Yrs.
- 1/8 DIN Cutout
- NEMA 4X / IP65 Sealed Front Panel

Application:

Any piece-work application where several production shifts must be monitored. The Shift-trol shift monitor is especially useful in the Textile industry.

Description:

Featuring 6 digits of bright, 7-segment LED displays, the Shift-trol is a shift monitor which accepts signal inputs up to 10 kHz. The 5 digit dividing scale factors allow readouts in true engineering units. The unit has two, programmable alarm set points. These setpoints control two 5 Amp relays. A two stage panel lock prohibits menu changes from unauthorized personnel.

Specifications:

Display: 6 digit, .55" high, 7 segment, red orange, LED.

Input Power:

- A) 110VAC \pm 15% or 12 to 15VDC.
- B) 220VAC \pm 15% or 12 to 15VDC.
- C) 24VAC \pm 15% or 12 to 15VDC.

Current: maximum 300 mA DC or 8.0 VA at rated AC voltage.

Output Power: (AC powered units only)
+12VDC @ 50mA **unregulated** -10 +50%

Temperature:

Operating: +32°F (0°C) to +130°F (+54°C).
Storage: -40°F (-40°C) to +200°F (93°C).

Shift Counters: 5 digit display with a 5 digit dividing scale factor. The unit can monitor up to 4 separate shifts and can be ordered with a selectable fifth shift, grand total of shifts or a run time meter. Pressing the view button allows the operator to alternately view each shift, the preset counter, the ratemeter and the selected fifth shift, grand total or run time.

Input Signals:

4 to 30 VDC pulses (open or 0-1V low; 4-30V high).
MIN. ON/OFF PULSE WIDTH: (Pin 5)
High CPS: .05 msec. 10 kHz max.)
Low CPS: 12.5 msec. (40 Hz max.)



PRESET COUNTERS

Preset Counter: 5 digit display with a 5 digit dividing scale factor. Two, 5 digit, programmable setpoints are available for output control. Display flashes when either output is active.

Ratemeter: Accurate to 4 1/2 digits. The ratemeter displays the RPM (rate per minute) of the raw input data.

Memory: EEPROM stores data for ten years if power is lost.

Reset:

Front Panel: resets displayed value and updates averaged rate to new sample.

Two Level Remote: 4-30VDC positive edge (Min. on: 12 msec.);
1. (Pin 9) Resets preset counter and control output only. 2. (Pin 6)-"Input B": Resets displayed value and updates averaged rate to new sample.

Lockout: Unauthorized front panel changes can be prevented by entering a user selected, 5 digit code. The lockout feature can be programmed to lock the entire front panel or lock the menu items and leave the presets and reset accessible. In either mode the shifts can be changed and the locked items can be viewed but not changed.

Serial Communications: RS232 or RS422 serial communication options are available. Up to 99 units can be networked to a computer and individually accessed. Information can be retrieved as well as sent to any single unit in the loop. A programmable print list is provided for strobed data transmission to printers and other peripheral devices.

Control Outputs:

2 each N.O. Relays - 5 Amp @ 120/240 VAC or 28 VDC. (N.C. Relay contacts or NPN sink from 10 VDC to .5 VDC @ 100 mA available with solder jumpers). The output will activate when the display is equal to or greater than the set point.

Shipping Weight: 2 pounds.

Approvals: CE Approved

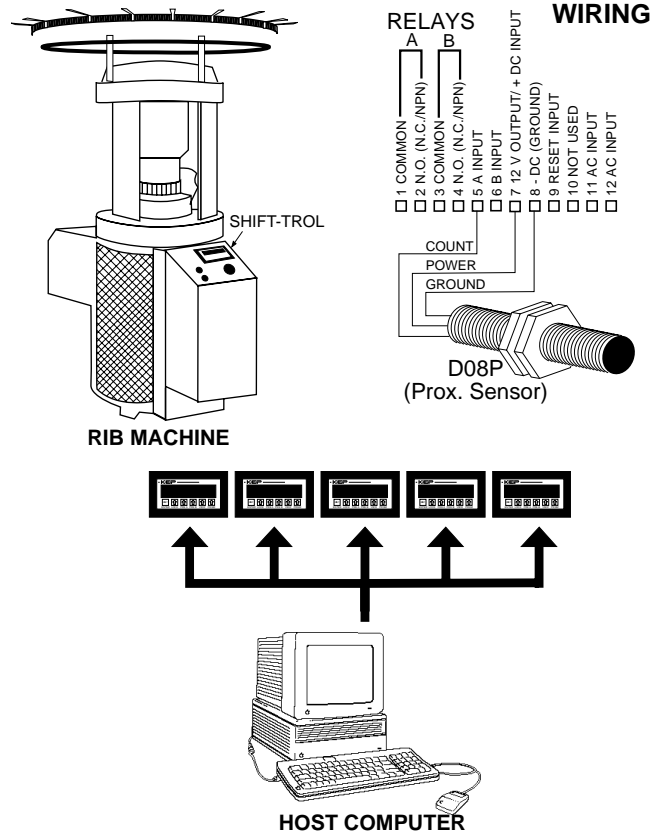
TYPICAL APPLICATION:

NEED:

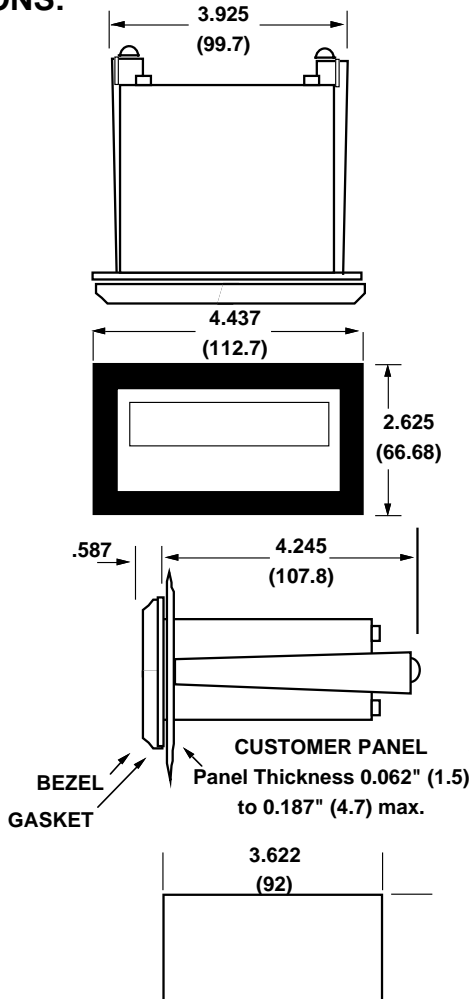
A company in the textile industry has a rib machine for which four shifts and machine run time must be monitored. To achieve optimum production, the monitoring system must also include the speed of the machine as well as a preset counter (doff counter). This system will be installed in several rib machines. The individual systems must be networked together allowing a host computer to access processing and data information.

SOLUTION:

The company purchased the Shift-trol (ST3A1) and the D08P proximity sensor. The prox. sensor was mounted to sense each rotation of the machines shaft. It takes 579 rotations of the shaft for one yard of material to be produced. Therefore the scaling factor for the shifts was set at 579. The preset counter (doff counter) is to read in tenths of hanks. Therefore the scaling factor for the preset counter was set at 27792 (579 x 48; "48 yards in a tenth of a hank"). The Shift-trols were ordered with RS232 communication and were linked to a host computer. Each Shift-trol was assigned a unique ID number so each work station can be individually addressed. All of the process and data information can be accessed and recorded by the host computer.



DIMENSIONS:



How To Order:

EXAMPLE: ST3	A	1
Series _____		
ST0: 3 shifts, no scaling, 1 separate preset counter with 1 control output		
ST1: 3 shifts, scaling, 1 separate preset counter with 1 control output		
ST2: 3 shifts, scaling, 1 separate preset counter with 2 control outputs		
ST3: 4 shifts, scaling, 1 separate preset counter with 2 control outputs, 1 separate RPM ratemeter of unscaled input data, selectable: Grand Total, 5th Shift or Run Time.		
ST4: 3 shifts, scaling, 1 separate preset counter with 2 control outputs, 1 separate ratemeter with separate scaling, selectable: Grand Total, 4th Shift or Run Time.		
Operating Voltage _____		
A= 110 VAC ± 15% or 12 to 15 VDC B= 220 VAC ± 15% or 12 to 15 VDC C= 24 VAC ± 15% or 12 to 15 VDC		
Options _____		
1 = RS232 Communications 2 = RS422 Communications		

Accessories

- Separate non keyboard panel order #34235
- Separate keyboard panel - order #34237