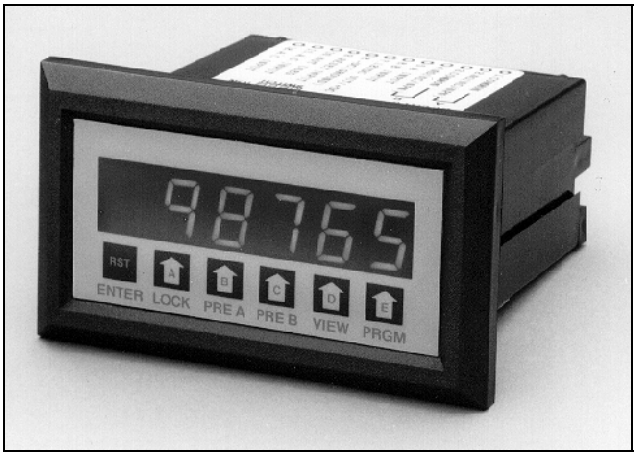
Preset Timer / Counter / Rate Meter

PS2 CR, CP & RP Series



FEATURES:

- Simple front panel programming of presets, scaling, rate/count modes, count speed, outputs, lockout code etc.
- Two 5-digit presets with 5 A relay or NPN transistor outputs
- Two simultaneous inputs with independent scaling
- Add, subtract or separate inputs in up or down count modes
- Quadrature and up /down direction control inputs
- NEMA 4X / IP65 front panel
- CSA approved, CE Compliant
- Optional RS232 or RS422 serial port
- Optional 4-20mA or 0-20mA analog output

APPLICATION:

Counting/controlling cycles, parts, length, distance, flow, batching, position, feed rate, RPM, speed, etc.

DESCRIPTION:

The PS2 Programmable Electronic Counter & Ratemeter displays count rate or total in several operating modes. Two preset outputs can control rate, count, batching, positioning, length, distance, flow, etc. All three versions CR, CP & RP have presets and scaling.

CR is a 6 digit counter and 5 digit floating decimal ratemeter. It has two 5 digit presets and independent scaling of inputs A and B. The counter is programmable for “net” A + B, A - B; or “SEP” A & B as separate counts in up or down count modes. Rate of input A can be scaled into engineering units and displayed per seconds, minutes or hours. Simply push the view button to display either rate or totals. The two output relays operate on count or rate presets in a latch to reset or auto cycle mode with programmable latch times (0.1 to 99 seconds).

CP is a 6 digit, programmable, two preset, scaleable counter version.

RP is a 5 digit, programmable, two preset, scaleable ratemeter version.

SPECIFICATIONS:

Display: 6 digit, 0.55" high LED
Input Power: 110, 220 VAC ± 15% or 12 to 15 VDC
Current: 250 mA DC max. or 6.5 VA AC
Output Power: (AC powered units only) +12 VDC @ 50 mA, unregulated -10 + 50%
Temperature: Operating: +32ºF (0ºC) to +130ºF (+54ºC) Storage: -40ºF (-40ºC) to +200ºF (93ºC) Humidity: 0-90% Non-condensing
Memory: EEPROM stores data for 10 yrs. if power is lost.

Inputs A & B:

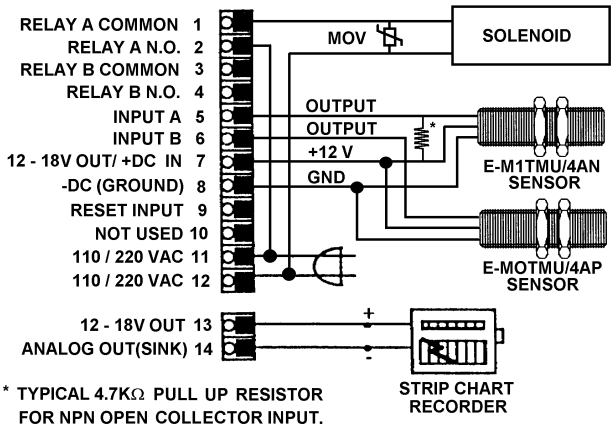
1: Standard High Impedance DC pulse input. Open or 0-1 VDC (low), 4-30 VDC (high), 10k Ω imp. 10k Hz max. speed. Accepts simultaneous inputs. (For open collector (NPN) sinking inputs, use external pull up resistor 2.2k to 10k Ω.).
2: Standard pulses on input A, Direction Control standard input B. Counter only.
3: Magnetic pickup input. inputs A & B, accepts 30mV input (50 V max. P/P) signals 10k Ω imp. 5k Hz max.
4: Mag. input A, standard input B.
5: Mag. input A, Direction Control standard input B.
6: Quadrature, accepts standard pulses with 90º phase shift for direction detection.
7: Quadrature, accepts Mag. pulses with 90º phase shift for direction detection.

Count speed: Programmable 10k Hz high speed or 40 Hz low speed with debounce filtering.
Reset: Front Panel: displayed value and control output. Remote: 4-30 VDC negative edge resets count "A" and control output.
Scaling Factor: The programmable 5 digit divider, with decimal, allows easy division from 0.0001 to 99999 for engineering units. Each input has independent scaling.
Presets: A 5 digit value can be entered for both presets. The A and B outputs can be assigned to the ratemeter (high/low), one preset for rate and one for count, or two presets (2 stage shut off) on the A and B count. The outputs can be set to energize from 0.1 to 99.9 seconds with auto reset at preset or latch (0.0) until reset.
Control Outputs: Two relays: N.O., 5 A 120/240 VAC or 28 VDC. (N.C. relay contacts and NPN transistor output available. Transistor, sinks 10 VDC to .5 V @ 100 mA)
Analog Output: An optional 4-20mA (0-20mA) output is available. The output can be programmed to track rate or total. Programmable by using the front panel and rear dip switches. Accuracy: ±.25% FS worst case. Compliance Voltage: 3 to 30 VDC non inductive.
Lockout: Prevents unauthorized program changes (5 digit code). The front panel can be completely locked out or presets and reset can remain accessible.
Ratemeter: Accurate to 4 1/2 digits (±1 display digit). The rate display updates once per second with a programmable delay factor of 2 to 24 seconds before default to 0. Scaling permits rate display in almost any unit of measurement, and auto-range up to 5 digits of significant information. In the "RPS" mode, the ratemeter displays in units per second, and the "scale" mode displays in units per hour or per minute. The unit will display the rate of input A only.
Counter: The two 6-digit counters count at 10k Hz max. Each has a 5-digit dividing scale factor. The counter

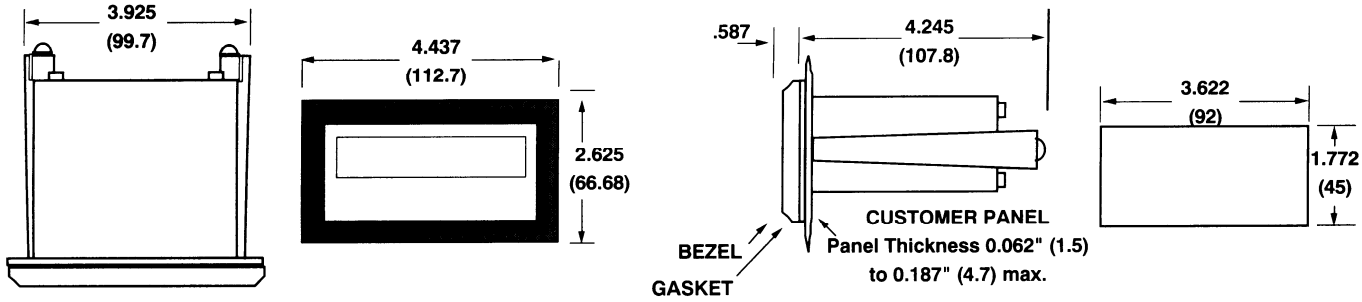
advances on the positive edge of each pulse. Up or down count modes are available, as are quadrature inputs from encoders for position or flow measurement. The unit can be programmed to view the net value of "A + B" or "A - B", or A and B as separate totalizers.

RS232/RS422 Serial Interface: If the serial interface option is supplied, up to 99 units can be linked together. (The terminal addressing the unit must be capable of driving all loads in the loop.) Unit status and new set points can be communicated by serial communication. Mode changes, however, must always be made on the front panel. Data is received and transmitted over standard EIA RS232 or RS422 levels.

TYPICAL WIRING:



DIMENSIONS: inches (mm)



Ordering Information:

MODEL	PS2	CR	A	1	A
CODE	1	2	3	4	5

CODE:

1 SERIES: PS2

2 FUNCTION:
CR = Preset, Counter & Ratemeter
CP = Preset, Counter
RP = Preset, Ratemeter

3 SUPPLY VOLTAGE:
A = 110 VAC ± 15% or 11-15 VDC
B = 220 VAC ± 15% or 11-15 VDC

4 INPUT A & B
1 = Both standard 4-30 VDC
2 = Standard A, standard direction B
3 = Both magnetic pickup 30mV
4 = Mag A, standard B
5 = Mag A, standard direction control B
6 = Quadrature standard
7 = Quadrature mag.

5 OPTIONS:
A = Analog output (4-20mA/0-20mA)
1 = RS232 Communications
2 = RS422 Communications

Accessories
FP Front panel without keyboard