

# PRESIDENT SERIES COUNT / CONTROL

## 5 Digit , Dual - Preset Controls

MODEL 58831-400

- All Standard President Features
- Relay and Transistor Output for Each Preset
- Serial Communications
- NEMA 4 Front Panel
- DC Power Output for Sensors
- Count Scaling



Model 58831-400

If your application demands a predetermined count control that's compatible with high-speed production line use, this dual level control has the capability you need.

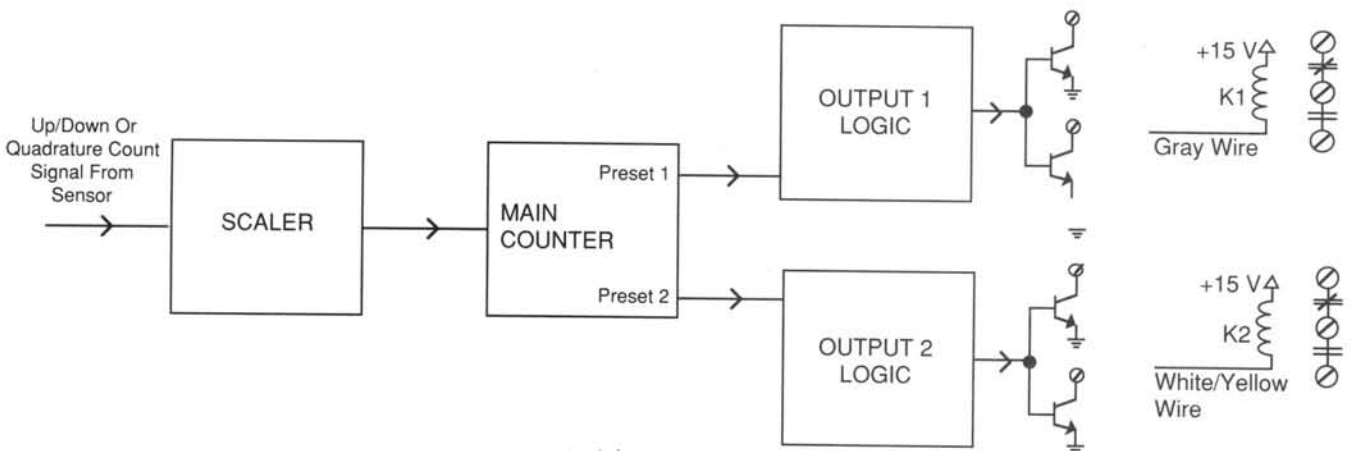
It has been specifically designed for all types of production counting and control where slowdown or pre-warn procedures are important operational requirements. The two levels of preset and complete programmability make it a versatile part of measuring systems for wire and cable processing, metal forming and cutting, paper and plastic

film processing as well as a host of other industrial applications.

The dual-preset feature also allows you to produce two different parts by using the bypass preset 1 input to select between the preset 1 and preset 2 as the control preset.

All the inherent features of the President Series combine to make this the control that puts the accent on ease of operation with precision and accuracy.

### OVERALL BLOCK DIAGRAM



**Specifications and Operation**

**Physical and Environment**

See President Series general specifications.

**Power Requirements**

AC Operation: 120/240 VAC (+10%, -20%) 47 to 63 Hz.  
DC Operation: 11 to 28 VDC.  
Power: 18 Watts.

**DC Power Output**

15 VDC (+1, -2).  
150 mA if powered from AC or less than 24 VDC.  
100 mA if powered from 24 VDC or greater.

NOTE: DC power output is only regulated if unit is powered by AC or greater than 18.5 VDC.

**Counter Modes**

Reset to zero and count up.  
Reset to preset and count down.  
Auto recycle.  
Bypass preset 1.

**Control Inputs**

Reset, output 1 and 2 unlatch, bypass preset 1, program in:  
print request/display latch.  
Front panel reset (may be disabled).

**Count Scaler**

Scale Factor Range: 0.0001 to 9.9999.

**Output Specifications**

2 Relays with two sets of Form C contacts.  
Type: FORM-C (SPDT).  
U.L./C.S.A. Contact Ratings:  
10 amps, resistive, @ 24 VDC or 240 VAC.  
1/3 HP @ 120 VAC or 240 VAC.  
150 VDC maximum switched voltage.  
Mechanical Life: 5,000,000 operations.  
Electrical Life: 100,000 operations at resistive rating.  
2 Transistor Outputs  
Type: Open collector NPN transistor with Zener diode transient surge protection.  
Load Voltage: 30 VDC maximum.  
Load Current: 300 milliamps maximum per transistor.  
480 milliamps total for all transistors. Use 90 milliamps per relay coil when calculating total transistor current.  
Programmable Output Modes: Reverse, timeout, unlatch at reset, latch until reset complete.  
Timeout: .01 to 99.99 Sec, ± 1% (±.01 Sec if <1 Sec).

**Count Input Modes (2 input signals)**

Add/subtract, add/count inhibit, count/direction control, quadrature. All modes except count/inhibit have count double function to count on both rising and falling edges of pulse.

**Count Input Signal Requirements**

Current sinking signal, must conduct to DC common. Must block 15 VDC in high state and sink 2.2 mA in low state. Current sourcing signals may be used with external resistor.

Maximum Count Speeds:

Model	SF=1	SF<1	SF>9	Low Speed
58831-400	7.5 kHz	5.0 kHz	1.5 kHz	150 Hz

SF= User programmable scale factor on models with scaling. Maximum input frequency is reduced by approximately 50% when count input doubling or quadrature mode is used.

**Serial Communication Interface**

20 mA current loop, 110, 300 or 1200 Baud.

**When Do You Need Dual Presets ?**

Dual presets increase the versatility of your machine control applications. This feature has many different uses. Two of the most common are: prewarn and two-part capability. When used for prewarn, preset 2 triggers an event such as firing a cut-to-length shear, closing a valve, etc. Preset 1 is set to cause a process slowdown to give more precision to the final action. The amount of prewarn is adjusted by setting preset 1. The two-part feature allows you to manufacture two different length parts without changing presets. You simply set preset 1 for the first part length and preset 2 for the second part length. Parts will normally be made to the preset 1 value, to make the second part, activate the bypass preset 1 input and parts will now automatically be made to the preset 2 value.

**ORDERING INFORMATION**

Model Number	Product Description
58831-400	5 Digit, Dual-Preset Control with Scaling

# PRESIDENT SERIES COUNT / CONTROL

## 6 Digit , Dual - Preset Controls with Pre - Settable Batch / Totalizer

### MODELS

58841-400 Dual Preset with Batch Counter  
 58851-400 Dual Preset with Batch /Totalizer

- Presettable Batch/Totalizer
- Crop-Cut Input
- Count Scaling
- Two Configurable Relay Outputs
- 5 Transistor Outputs



Model 58851-400

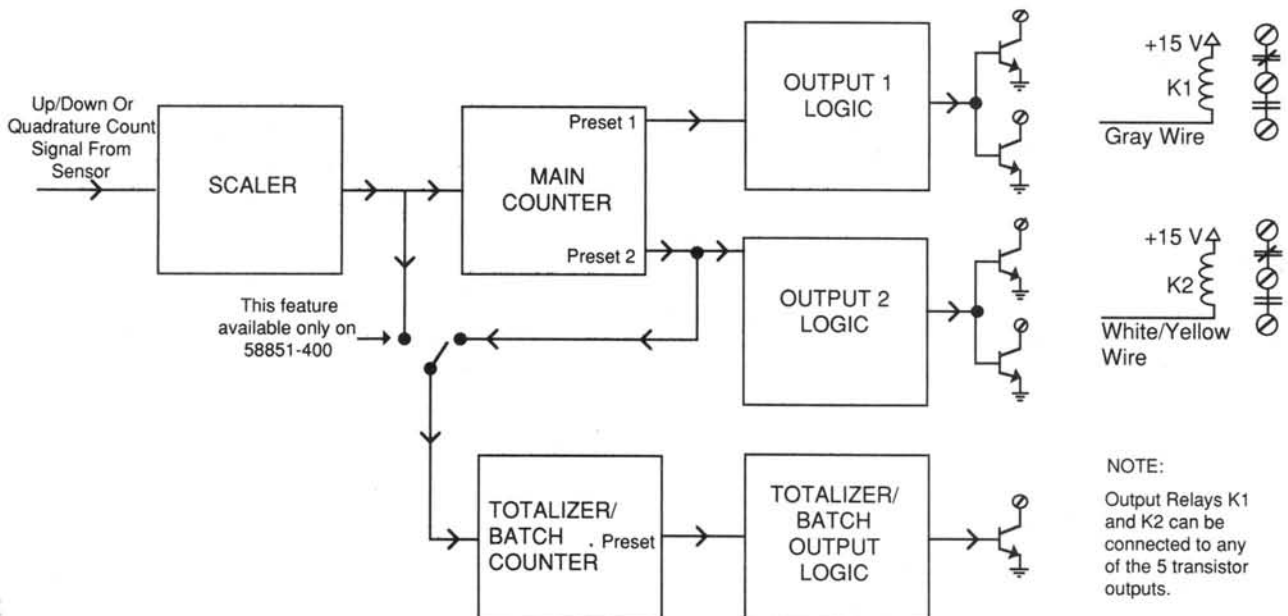
This President Series of dual-preset count controls brings several new functions that add versatility and value to your process. Of course the standard President features that you have come to expect like NEMA 4 rating, serial communications and easy programming are all included.

Model 58841-400 has a secondary count control register that has the ability to act as a batch counter. This counter receives a count pulse each time preset 2 is reached on the

main counter. This function is commonly used to count and control the number of machine cycles or parts made.

On the model 58851-400, the secondary register can be used as the aforementioned batch counter or as a totalizer. When programmed as a totalizer, it receives counts directly from the main count inputs. A typical application of this feature is to count material or parts used over longer periods of time such as shifts or days.

### OVERALL BLOCK DIAGRAM



# PRESIDENT SERIES COUNT / CONTROL

## Specifications and Operation

### Physical and Environment

See President Series general specifications.

### Power Requirements

AC Operation: 120/240 VAC (+10%, -20%) 47 - 63 Hz.  
DC Operation: 11 - 28 VDC.  
Power: 18 Watts.

### DC Power Output

15 VDC (+1, -2).  
150 mA if powered from AC or less than 24 VDC.  
100 mA if powered from 28 VDC or greater.

Note: DC power output is only regulated if unit is powered by AC or greater than 18.5 VDC.

### Counter Modes

Reset to zero and count up.  
Reset to preset and count down.  
Auto recycle.

### Control Inputs

Reset, output 1 and 2 unlatch, bypass preset 1, program inhibit, print request/display latch, crop cut.  
Front panel reset (may be disabled).

### Count Scaler

Scale Factor Range: 0.0001 to 9.9999.

### Output Specifications

2 Relays with one set of Form C contacts.  
Type: FORM-C (SPDT).  
U.L./C.S.A. Contact Ratings:  
10 amps, resistive, @ 24 VDC or 240 VAC.  
1/3 HP @ 120 VAC or 240 VAC.  
150 VDC maximum switched voltage.  
Mechanical Life: 5,000,000 operations.  
Electrical Life: 100,000 operations at resistive rating.  
5 Transistor Outputs  
Type: Open collector NPN transistor with Zener diode transient surge protection.  
Load Voltage: 30 VDC maximum.  
Load Current: 300 milliamps maximum per transistor.  
480 milliamps total for all transistors. Use 90 milliamps per relay coil when calculating total transistor current.  
Programmable Output Modes: Reverse, timeout, unlatch at reset, latch until reset complete, crop-cut.  
Timeout: .01 to 99.99 Sec,  $\pm 1\%$  ( $\pm 0.01$  Sec if  $< 1$  Sec).

### Count Input Modes (2 input signals)

Add/subtract, add/count inhibit, count/direction control, quadrature. All modes except count/inhibit have count double function to count on both rising and falling edges of pulse.

### Count Input Signal Requirements

Current sinking signal, must conduct to DC common. Must block 15 VDC in high state and sink 2.2 mA in low state. Current sourcing signals may be used with external resistor.

#### Maximum Count Speeds:

Model	SF=1	SF<1	SF>9	Low Speed
58841-400	7.5 kHz	6.2 kHz	2.0 kHz	150 Hz
58851-400	7.5 kHz	6.2 kHz	2.0 kHz	150 Hz

SF= User programmable scale factor on models with scaling. Maximum input frequency is reduced by approximately 50% when count input doubling or quadrature mode is used.

### Serial Communication Interface

20 mA current loop, 110, 300 or 1200 Baud.

### What is the Crop-Cut Input ?

A useful feature in this series is the *crop-cut* input which allows any combination of outputs to be turned on by activating the crop input. The combination of outputs that responds to this crop input is configured by the function code programming. The counter can also be configured to reset when the crop input is activated. This feature allows a machine or process to be re-synchronized with an external contact closure. The crop input can also be used to allow the removal of an inspection sample from the process. Output unlatch signals override the crop input.

## ORDERING INFORMATION

Model Number	Product Description
58841-400	6 Digit, Dual-Preset Control with Batch Control, Scaling and Crop-Cut Feature
58851-400	6 Digit, Dual-Preset Control with Presettable Batch Counter/Totalizer, Crop-Cut and Scaling