## Introduction

Your Eagle-Signal brand B506 1/16 DIN timer is a powerful instrument which can be field configured to fit a wide variety of applications. The secondary setpoint can be used for a second time output, combining the function of two timers in a single package, or as a batch counter to track the amount of completed cycles. 1 ms resolution with transistor outputs make this unit well suited for high speed processes.

Inside this manual you will find complete information on the Control mode, which deals with viewing and changing the available setpoints, and Program Mode which is used to configure the basic operation of the timer, as well as set a variety of other useful features.

Also found in this manual are detailed timing diagrams and descriptions of the available operating functions to aid you in determining how to properly configure the unit to solve your application. Additionally included are key product specifications, warranty procedures and ordering information should you require additional units or accessories.

Should you require any additional assistance with the installation and operation of this product, please call our toll free application support line at 1-800-234-8731.

## Technical Manual 702118-0001

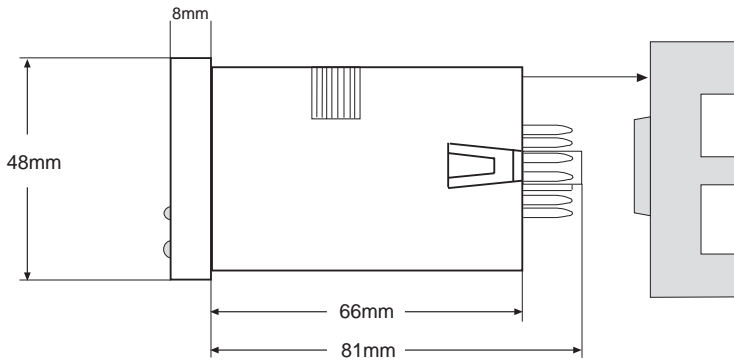## Eagle Signal brand B506 High Performance LED Timer

## Features

- 17 Different, field programmable, modes of operation
- Batch Count function with timed or latched output
- Dual setpoints in many modes
- Simple button per digit interface
- Timing resolution down to 1 ms
- Programmable security levels prevent unauthorized setpoint or program changes
- High Visibility LED display of both time value and setpoint
- Available with relay or solid state outputs
- IEC IP65 rated front panel
- Repeatability of 0.01%
- Inhibit input halts timing without resetting the cycle

## Index

## INSTALLATION



To wire the unit, an 11 pin socket is required. The unit can either be DIN rail mounted or panel mounted using the supplied mounting bracket. For panel mounting, place the unit in the cutout, then slide the bracket forward over the rear of the unit so that the tabs catch in the grooves on the housing and the bracket is as far forward as possible. Tighten the panel mount screws until there is a snug fit against the panel. Do not overtighten.

## WIRING

**B506-2001/2**
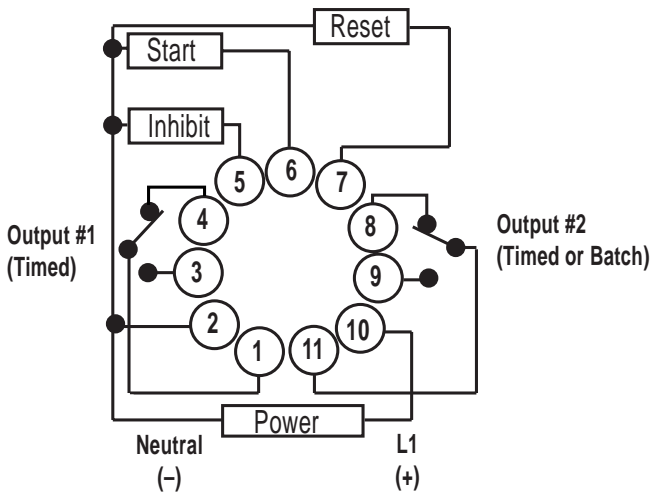


**B506-2051/2**
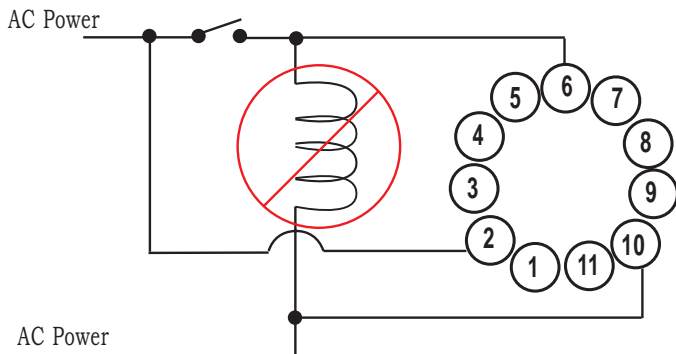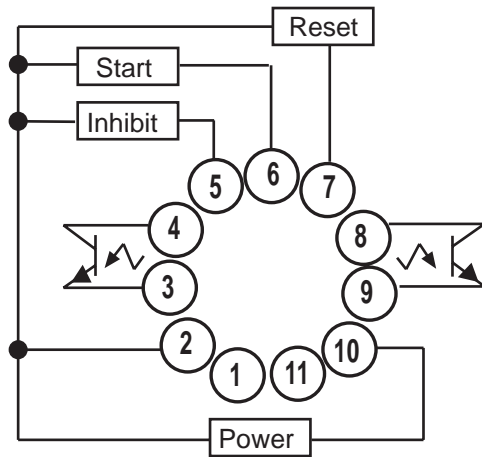




**Warning: Do Not connect a coil in parallel with the start signal for the B506, as pictured at left. Such a connection will cause the start signal to be continuously active. This situation also applies to the Reset and Inhibit inputs.**

# O P E R A T I O N

## FRONT PANEL OPERATION

**Primary Display**

*In Control Mode:* Displays the current time value associated with the displayed preset or the batch value (if configured).

*In Program Mode:* Displays the Parameter Description.

**Time Range Indicator**

Illuminates to show the time base: H for hours, M for minutes, S for seconds. Multiple indicators will be illuminated when the time base is Hours:Minutes or Minutes:Seconds. During timing operation the illuminated LED will flash.

**Batch Indicator**

Illuminates to indicate that the Batch Count Value and Batch Preset are being displayed.

**I/O Status Indicators**

Illuminates to display when an input or output is active: "IN' for the start input, "O1" and "O2" for the timed outputs.

**Preset 2 Indicator**

Illuminates to indicate that Preset 2 is being shown on the lower display.

**Set Value**

*In Control Mode:* Displays the settable value used to trigger the timed output(s) and the batch count (if configured).

*In Program Mode:* Displays the current selection for the chosen parameter.

**Numeric Keys**

Each of the number keys is used to increment the value of the corresponding digit of the preset or parameter value.

**Edit Key**

*In Control Mode:* With "P" key, resets the displayed value.

*In Program Mode:* Scrolls between the applicable choices for the currently displayed parameter.

**Program Key**

*In Control Mode:* Depressing the key will scroll the display among the preset and batch displays. Holding the key down for 3 seconds will shift the unit into Program Mode. With the "E" key, resets the displayed value

*In Program Mode:* Depressing the key will scroll the display from one parameter to the next. Holding the key down for 3 seconds will shift the unit to Control Mode.

## CONTROL MODE

### Preset 1 Display

*Top display:* Time Value for P1 Operation
*Bottom display:* Preset 1
*Annunciators:* Time Range

Pressing the numeric keys will cause the corresponding digit to increment by a value of one (i.e. the "1" key increments the rightmost digit, the "2" key the 2nd digit from the right, etc.). It is not necessary to press any other keys to enter the change, the new set point value will become effective immediately.

**P** Please Note that based on the Operating Mode and Output 2 selection, Preset 2 may not be an available display.
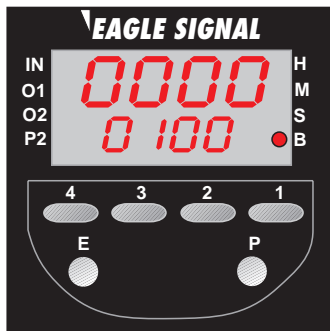
### Preset 2 Display

*Top display:* Time Value for P2 Operation
*Bottom display:* Preset 2
*Annunciators:* Time Range & P2

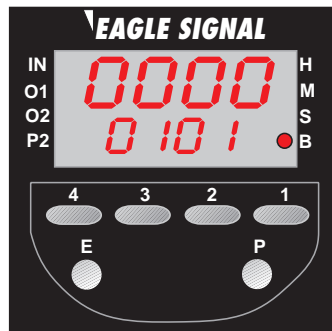Changes are made in the same manner as for Preset 1 (detailed above).

**P** Please Note that based on the Operating Mode and Output 2 selections, Batch may not be an available display.

### Batch Display

*Top display:* Batch Count Value
*Bottom display:* Batch Count Preset
*Annunciators:* Batch

Changes are made in the same manner as for Preset 1 (detailed above).

# CONFIGURATION

• Enter the Program Mode by holding down the "P" key for 3 seconds
• Press the "P" key to move the top display from one parameter to the next
• Press the "E" key to scroll the bottom display through the available choices for that parameter
• While in Program Mode, the unit will halt operation.  Changes only become effective after return
  ing to Control Mode by holding down the "P" key for 3 seconds

P

○    For 3 Seconds

```
F u n c
  P E r C
```

P

○

**Operating Function:** Determines how output 1 will operate in relation to the Preset 1.  Choices are:

 • On Delay (*OndL*)
 • Off Delay (*OFdL*)
 • Interval 1 (*int 1*)
 • Interval 2 (*int2*)
 • On/Off Delay (*OnOF*)
 • Delay/Interval (*d int*)
 • Accumulative (*ACC*)

**A complete explanation, with timing diagrams, of each function can be found on page 8.**

```
o u t 2
     P 2
```

P

○

**Note:  The following parameter will not appear if "Operating Function" is set to Off Delay, Delay/Interval or On/Off Delay.  In these instances Output 2 automatically defaults to Batch Count.**

**Output 2 Operation:**  Determines the functionality of the 2nd output.  Choices are:

 • Preset 2 (*P2*):  The unit will function as a dual setpoint timer, with output 2 linked to Preset 2.

 • Batch Count (*bC*): Output 2 will be activated after a preset amount of Operations is completed.  The preset value is input in the Batch Count screen in Control Mode.

```
P 2 0
  A b S
```

**Note:  The following parameter will only appear if "Output 2" is set to Preset 2.**

**Preset 2 Operation:**  Determines how Preset 2 will operate in relation to Preset 1.  The available choices vary based upon the selected "Operating Function":

**For On-Delay and Accumulative:**

• Absolute (*AbS*):  Preset 2 is input as an absolute value, and the unit operates like two independent On-Delay timers.

• Prewarn (*PrE*):  Preset 2 is set as a value relative to Preset 1.  The input value for P2 is equal to the amount of time that Output 2 will activate prior to Output 1.  Ex:  If P1 = 20 seconds, and P2 equals 5, then output 2 will activate 15 seconds (20 - 5), after the timing cycle is initiated.

**For Interval 1 and Interval 2:**

Begin Together (bt): Preset 2 is set as an independent time interval which will begin timing and activate Output 2 upon initiation of the start signal .

End Together (Et): Preset 2 is set as a value relative to Preset 1. The timing sequence for P2 will initiate at the appropriate time so that the timing sequences for P1 and P2 will end simultaneously and Output 1 and Output 2 will deactivate together.

Sequential (SE): Preset 2 is set as an indepedent time interval which will begin its timing sequence upon completion of the P1 interval.

P
○

```
 b  c  t
 0 0 0 0
```
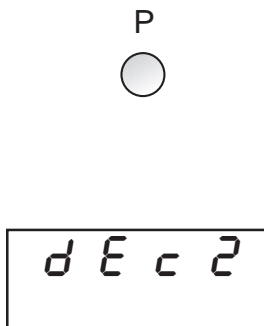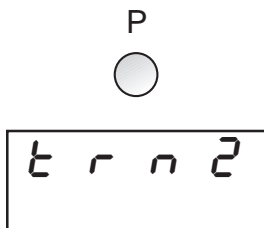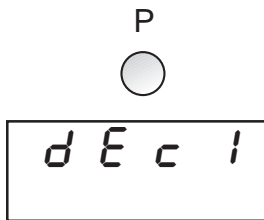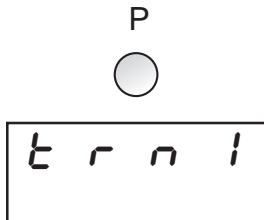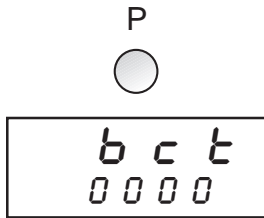
**Note: The following parameter will only appear if "Output 2" is set to Batch Count.**

**Batch Count Output:** Sets the duration of Output 2, within a range from 1 second to 9999 seconds. A setting of 0000 will latch the output until a reset signal is received

P
○

```
 t  r  n  1
```

**Time Range 1 :** Sets the unit of measure for the time values that will be used for Preset 1. The choices will not appear on the bottom display, but will be signified with the annunciator lights. Choices are:

- Seconds
- Minutes
- Hours
- Minutes:Seconds
- Hours:Minutes

P
○

```
 d  E  c  1
```

**Note: The following parameter will not appear if "Minutes:Seconds" or "Hours:Minutes" is chosen for Time Range 1.**

**Decimal Position for Time Range 1:** Determines the resolution of the selected time range. Settable from 0000 to 0.000

P
○

```
 t  r  n  2
```

**Note: The following parameter will only appear for those configurations that provide a Preset 2 display.**

**Time Range 2 :** Sets the unit of measure for the time values that will be used for Preset 2. The choices will not appear on the bottom display, but will be signified with the annunciator lights. Choices are:
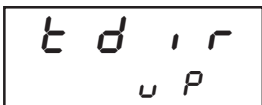
- Seconds
- Minutes
- Hours
- Minutes:Seconds
- Hours:Minutes

P
○

```
 d  E  c  2
```

**Note: The following parameter will not appear if "Minutes:Seconds" or "Hours:Minutes" is chosen for Time Range 2.**

**Decimal Position for Time Range 2:** Determines the resolution of the selected time range. Settable from 0000 to 0.000.
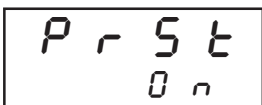
P

$$t \ d \ i \ r$$
$$u \ P$$

**Timing Direction:** Determines whether the time values for Preset 1 and 2 will increment from zero and change the state of the output at the set value (uP) or decrement from the set value and change the state of the output at zero (dn).

P

$$P \ r \ S \ t$$
$$O \ n$$

**Power Reset Enable:** After a loss of power, the unit can be programmed to either reset upon reapplication of power ($On$) or continue from the point of power interruption ($OFF$).

P

$$F \ r \ S \ t$$
$$O \ n$$
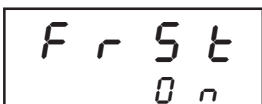
**Front Panel Reset Enable:** When active ($On$), the timing operation can be reset in Control Mode by simultaneously pressing the "E" and "P" keys. If inactive ($OFF$), the timing operation can only be reset through the remote input.

P

$$S \ L \ u \ L$$
$$O$$
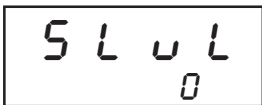
**Security Level:** 4 different levels of security are available:

  0 = Full Access

  1 = SP Locked Out

  2 = Access to Program Mode only by holding the "P" key for 10 seconds

  3 = SP Locked Out and access to Program Mode only by holding the "P" key for 10 seconds

# C O N F I G U R A T I O N

## *TIMING DIAGRAMS*

**On Delay - Absolute**



| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1 or Reset |
| Preset 2 Timing | On leading edge of start signal | On completion of P2 or Reset |
| Output 1 | Upon completion of P1 | On Reset |
| Output 2 | Upon completion of P2 | On Reset |

An Inhibit input will halt all timing functions, but leave the outputs in their current state.  If the start input is applied during Reset, a new timing cycle will begin on the trailing edge of the Reset signal.
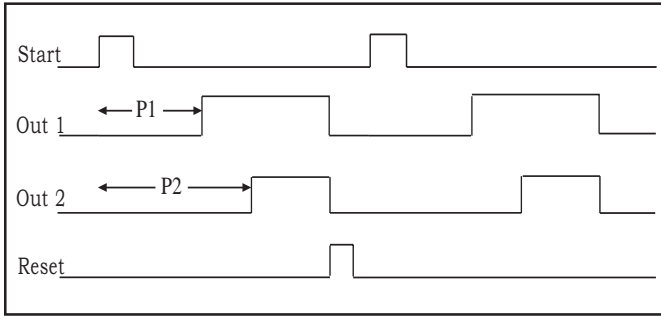
**On Delay - Prewarn**
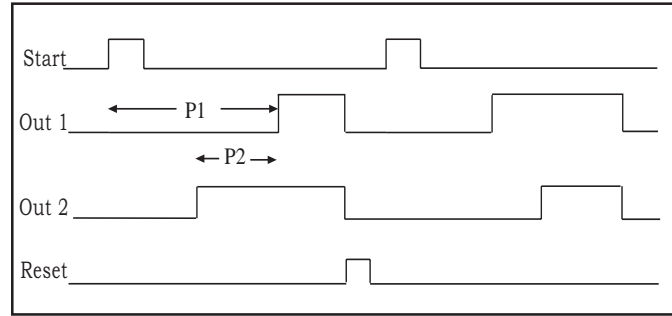


| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1 or Reset |
| Preset 2 Timing | Prior to completion of P1 by the amount of time set in P2 | On completion of P2 or Reset |
| Output 1 | Upon completion of P1 | On Reset |
| Output 2 | Prior to completion of P1 by the amount of time set in P2 | On Reset |

P1 must be set  to a value greater than P2.  An Inhibit input will halt all timing functions, but leave the outputs in their current state.  If the start input is applied during Reset, a new timing cycle will begin on the trailing edge of the Reset signal.

## On Delay w/Batch



|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1 or Reset |
| Batch Count | Accumulates on activation of Output 1 | On Reset, only after the Batch Count Preset is reached |
| Output 1 | On completion of P1 | On completion of P1 or Reset |
| Output 2 | When the Batch Count value equals the Batch Preset | On completion of Batch Output time or Reset |

An Inhibit input will halt all timing functions, but leave the outputs in their current state. If the start input is applied during Reset, a new timing cycle will begin on the trailing edge of the Reset signal. The Remote Reset will only reset the Batch Count value after the Batch Preset has been reached, however, the Batch Count value can be reset at anytime via Front Panel Reset.

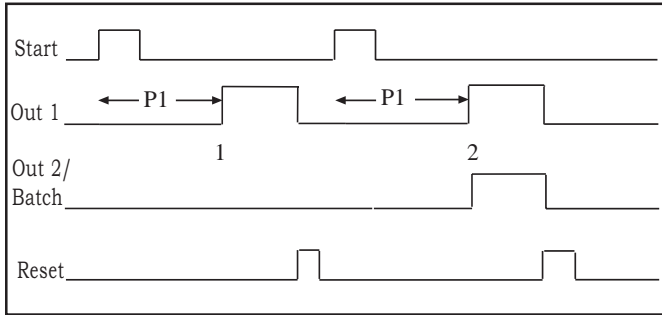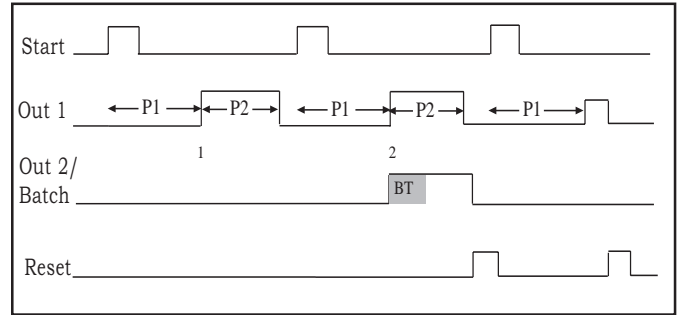## On Delay/Interval w/Batch



|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1 or Reset |
| Preset 2 Timing | On activation of Output 1 | On completion of P2 or Reset |
| Batch Count | Accumulates on falling edge of Output 1 | On Reset, only after the Batch Count Preset is reached |
| Output 1 | On completion of P1 | On completion of P1 or Reset |
| Output 2 | When the Batch Count value equals the Batch Preset | On completion of Batch Output time or Reset |

An Inhibit input will halt all timing functions, but leave the outputs in their current state. A reset signal is not required to start a new P1 cycle. The Remote Reset will only reset the Batch Count value after the Batch Preset has been reached, however, the Batch Count value can be reset at anytime via Front Panel Reset.
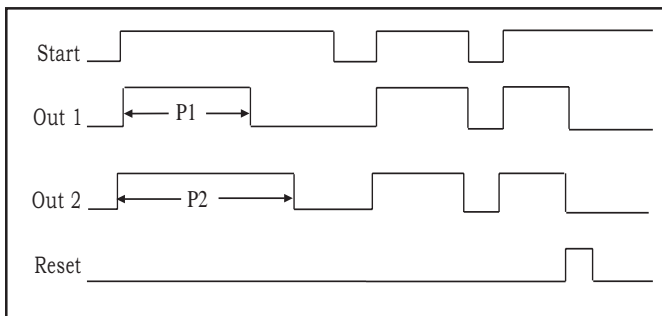
## Interval 1 - Begin Together



|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Preset 2 Timing | On leading edge of start signal | On completion of P2, deassertion of the Start Signal or Reset |
| Output 1 | On leading edge of start signal | On completion of P2, deassertion of the Start Signal or Reset |
| Output 2 | On leading edge of start signal | On completion of P2, deassertion of the Start Signal or Reset |

An Inhibit input will halt all timing functions, but leave the outputs in their current state.

## Interval 2 - Begin Together



|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1, or Reset |
| Preset 2 Timing | On leading edge of start signal | On completion of P2 or Reset |
| Output 1 | On leading edge of start signal | On completion of P1 or Reset |
| Output 2 | On leading edge of start signal | On completion of P2 or Reset |

Operates the same as the Interval 1- Begin Together mode, except the start input does not have to be sustained to continue operation. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

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## Interval 1 - End Together



| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Preset 2 Timing | Prior to completion of P1 by the amount of time set in P2 | On completion of P2, deassertion of the Start Signal or Reset |
| Output 1 | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Output 2 | Prior to completion of P1 by the amount of time set in P2 | On completion of P2, deassertion of the Start Signal or Reset |

An Inhibit input will halt all timing functions, but leave the outputs in their current state.
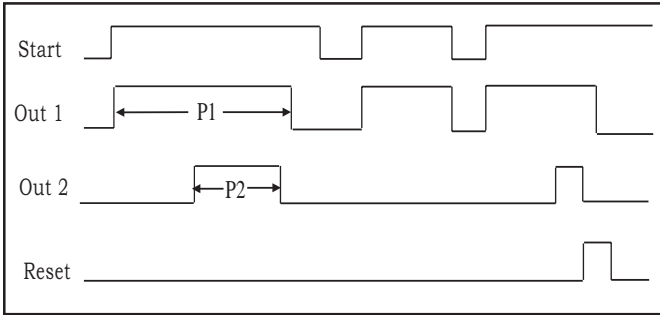
## Interval 2 - End Together



| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Preset 2 Timing | Prior to completion of P1 by the amount of time set in P2 | On completion of P2, deassertion of the Start Signal or Reset |
| Output 1 | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Output 2 | Prior to completion of P1 by the amount of time set in P2 | On completion of P2, deassertion of the Start Signal or Reset |

Operates the same as the Interval 1-End Together mode, except the start input does not have to be sustained to continue operation. An Inhibit input will halt all timing functions, but leave the outputs in their current state.
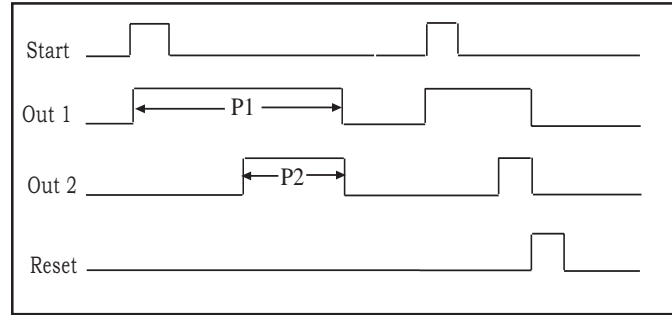
## Interval 1 - Sequential



| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Preset 2 Timing | On completion of P1 | On completion of P2, deassertion of the Start Signal or Reset |
| Output 1 | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Output 2 | On completion of P2 | On completion of P2, deassertion of the Start Signal or Reset |

An Inhibit input will halt all timing functions, but leave the outputs in their current state.
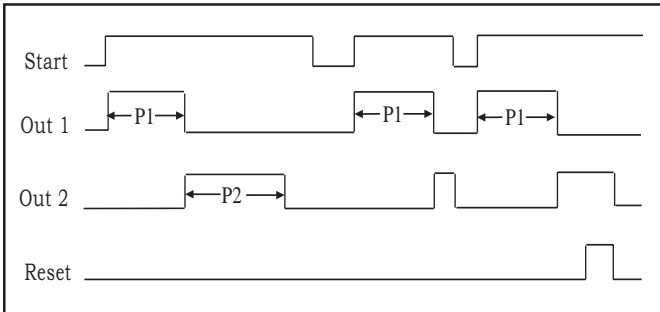
## Interval 2 - Sequential



| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1, or Reset |
| Preset 2 Timing | On completion of P1 | On completion of P2, or Reset |
| Output 1 | On leading edge of start signal | On completion of P1 or Reset |
| Output 2 | On completion of P2 | On completion of P2, or Reset |

Operates the same as the Interval 1-Sequential mode, except the start input does not have to be sustained to continue operation. An Inhibit input will halt all timing functions, but leave the outputs in their current state.
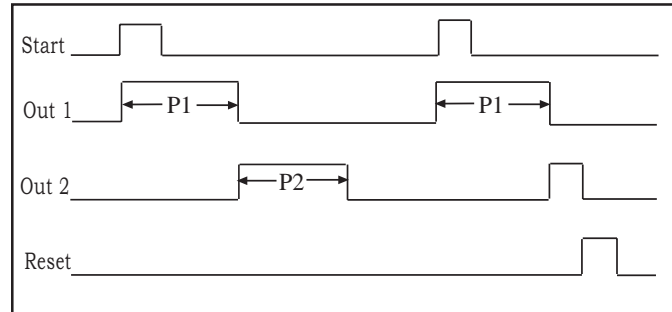
### Interval 1 - Batch



| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Batch Count | On trailing edge of Output 1 | On Reset |
| Output 1 | On leading edge of start signal | On completion of P1, deassertion of the Start Signal or Reset |
| Output 2 | When the Batch Count Value equals the Batch Preset | On completion of the Batch Count Time or Reset |

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

### Interval 2 - Batch



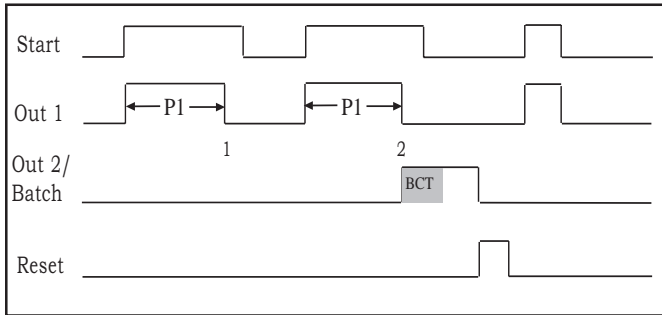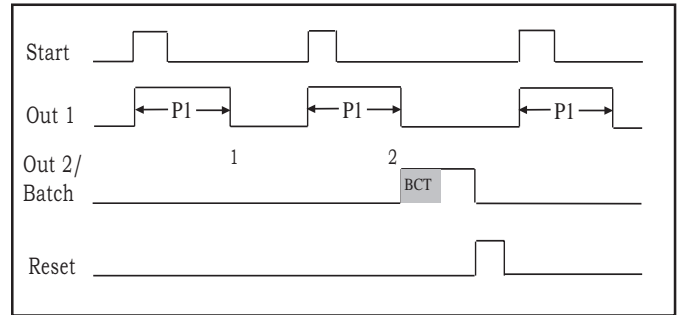| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of start signal | On completion of P1 or Reset |
| Batch Count | On trailing edge of Output 1 | On Reset |
| Output 1 | On leading edge of start signal | On completion of P1 or Reset |
| Output 2 | When the Batch Count Value equals the Batch Preset | On completion of the Batch Count Time or Reset |

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

### Off Delay - Batch Count
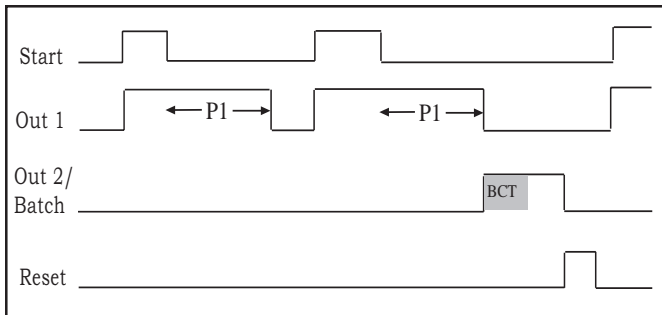


| | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On trailing edge of start signal | On completion of P1 or Reset |
| Batch Count | On trailing edge of Output 1 | On Reset |
| Output 1 | On leading edge of start signal | On completion of P1 or Reset |
| Output 2 | When the Batch Count Value equals the Batch Preset | On completion of the Batch Count Time or Reset |

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state. Start signals will be accepted while the Batch Count Output is active.

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## On/Off Delay - Batch Count



|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On change of state of the start signal | On change of state of the start signal or reset |
| Preset 2 Timing | On change of state of the start signal after P1 has elapsed | On change of state of the start signal after P2 is active, or Reset |
| Batch Count | Accumulates on falling edge of Output 1 | On expiration of the Batch Count Time or Reset |
| Output 1 | On completion of P1 | On completion of P2 or Reset |
| Output 2 | When the Batch Count value equals the Batch Preset | On completion of Batch Output time or Reset |

Any transition of the start signal will effect the timing operation: During the timing cycle for P1 a transition will cause P1 to restart. A transition of the start signal after P1 has completed will cause P2 to begin. Any transition of the start signal prior to the completion of P2 (and the deactivation of Output 1) will cause P2 to restart. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

## Accumulative - Prewarn
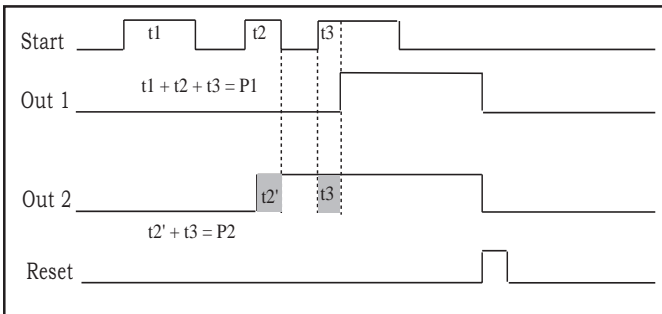


|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of each start signal | On completion of P1 or Reset |
| Preset 2 Timing | Prior to completion of P1 by the amount of time set in P2 | On completion of P2 or Reset |
| Output 1 | On completion of P1 | On Reset |
| Output 2 | Prior to completion of P1 by the amount of time set in P2 | On Reset |

## Accumulative - Absolute
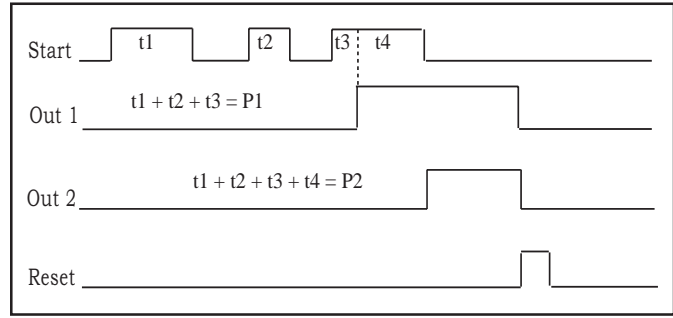


|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of each start signal | On completion of P1 or Reset |
| Preset 2 Timing | On leading edge of each start signal | On completion of P2 or Reset |
| Output 1 | On completion of P1 | On Reset |
| Output 2 | On completion of P2 | On Reset |

## Accumulative - Batch
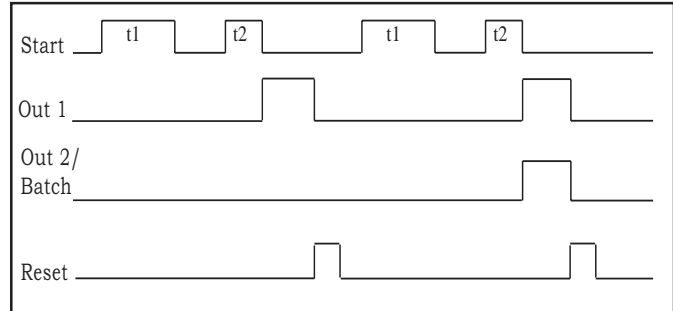


|  | Activates | Deactivates |
|---|---|---|
| Preset 1 Timing | On leading edge of each start signal | On completion of P1 or Reset |
| Batch Count | On leading edge of Output 1 | On Reset, only after the Batch Count Preset is reached |
| Output 1 | On completion of P1 | On Reset |
| Output 2 | When the Batch Count Value equals the Batch Preset | On Reset, only after the Batch Count Preset is reached |

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state. Start signals will be accepted while the Batch Count Output is active
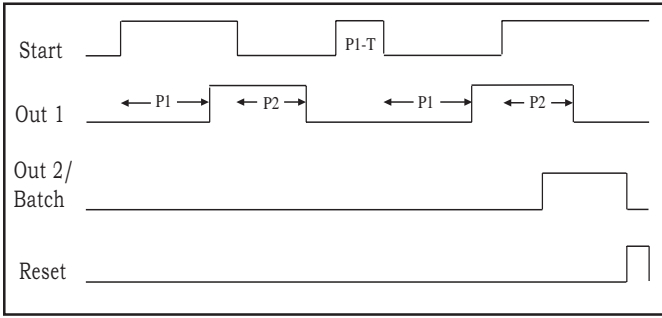
# *C O N F I G U R A T I O N*

**PROGRAMMING OVERVIEW**

```
            ┌──────┐   OFdL, OnOF, d int
            │ Func │────────────────────┐
            └──────┘                     │
                │                        ▼
            ┌──────┐  bc         ┌──────┐
            │ out2 │────────────▶│ bct  │
            └──────┘             └──────┘
                │ P2                  │
            ┌──────┐                  │
            │ P2O  │                  │
            └──────┘                  │
                │                     │
   H:M or M:S ┌──────┐◀───────────────┘
         ◀────│ trn1 │
            └──────┘
                │
            ┌──────┐
            │ dEc1 │
            └──────┘
                │
         ◀──────┤
            ╱────────╲      No*
           ╱  out2    ╲──────────┐
           ╲   = P2   ╱          │
            ╲────────╱           │
              │ Yes**            │
   H:M or M:S ┌──────┐           │
         ◀────│ trn2 │           │
            └──────┘           │
                │               │
            ┌──────┐           │
            │ dEc2 │           │
            └──────┘           │
                │               │
         ◀────┌──────┐◀─────────┘
              │ td ir│
            └──────┘
                │
            ┌──────┐
            │ PrSt │
            └──────┘
                │
            ┌──────┐
            │ FrSt │
            └──────┘
                │
            ┌──────┐
            │ SLuL │
            └──────┘
```
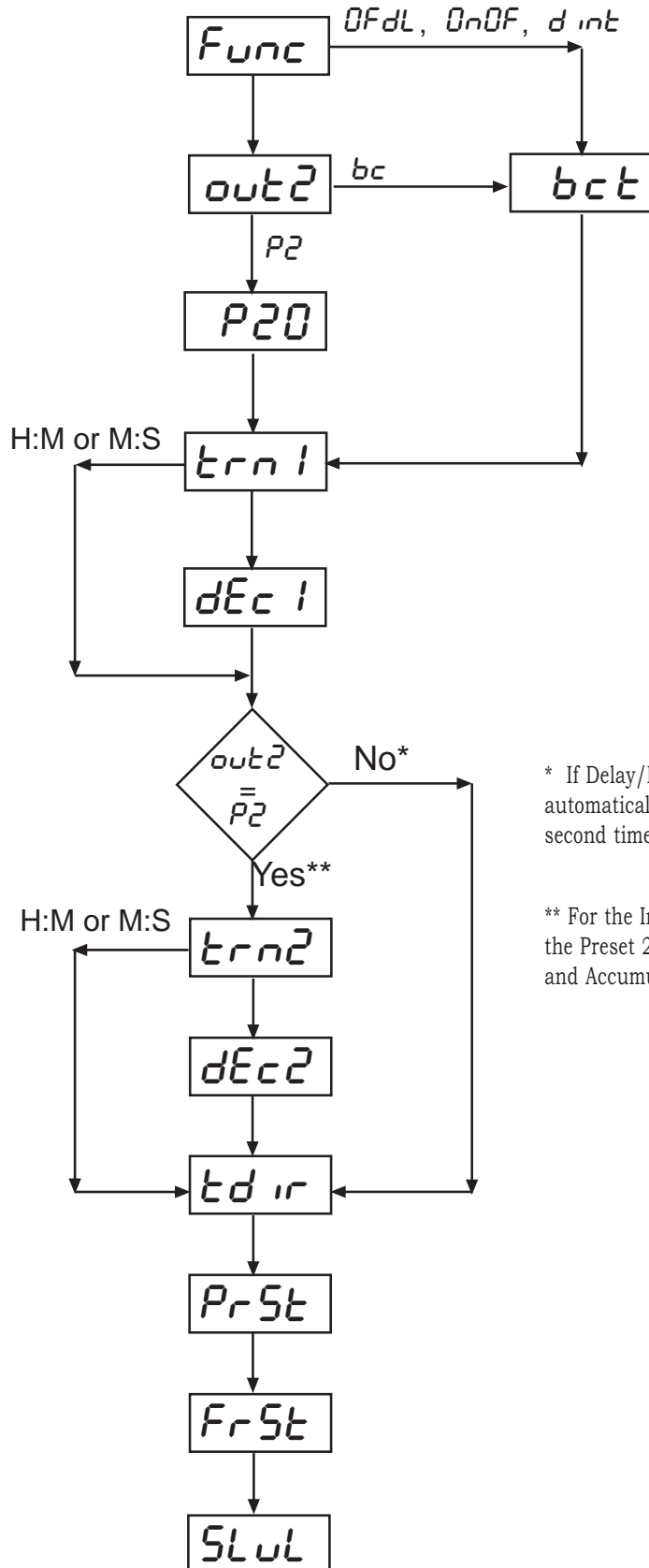
\* If Delay/Interval or On/Off are selected as the Operating Function, Out2 is automatically set to Batch. However, the P2 setting is still available, and the second time range is available.

\*\* For the Interval 1 & Interval 2 modes, a second time range will not appear if the Preset 2 operation is set to End Together. This is also true for the On Delay and Accumulative Modes if Prewarn is the selection for Preset 2 Operation.

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## SPECIFICATIONS

### Inputs

| | |
|---|---|
| Start: | NPN or Dry Contact |
| Reset: | NPN or Dry Contact |
| Inhibit: | NPN or Dry Contact |
| Activation Time: | 4 ms (B506-2XX2), 21 ms (B506-2XX1) |
| Impedance: | 10 KΩ |

### Outputs

| | |
|---|---|
| Relay (B506-200X): | 2 SPDT (5 amp) - 15 ms max latency |
| Transistor (B506-205X): | NPN Open Collector - 30 VDC, 30 mA max, opto isolated |

### Physical

| | |
|---|---|
| Dimensions: | 48mm x 48mm, 85mm deep |
| Mounting: | Panel Mounting 45mm x 45mm cutout or DIN rail |
| Wiring Connection: | Via 11 pin plug in socket |
| Weight: | 100 grams (3.5 ounces) |

### Operation

| | |
|---|---|
| Supply Voltage: | 85 - 264 VAC 50/60Hz, or 24 VAC/VDC |
| Power Consumption: | < 10 VA max @ 240 VAC, 200 mA @ 24 VDC |
| Time Ranges: | Hours, Minutes, Seconds, Hours:Minutes, Minutes:Seconds |
| Resolution: | Settable from XXXX to X.XXX for Hours, Minutes, and Seconds ranges |
| Repeat Accuracy: | $\pm$ 0.01% |
| Display: | Dual line, 4 digit, 7 segment LED - 8mm high |
| Memory: | Nonvolatile retains settings when power is disengaged |
| Electrical Service Life: | 100,000 cycles at full load |
| Mechanical Service Life: | 10 million cycles at min. load |

### Environmental

| | |
|---|---|
| Front Panel Rating: | IEC IP65 |
| Operating Temperature: | 0° to 55° C (32° to 131° F) |
| Storage Temperature: | -40° to 90° C (-40° to 194° F) |
| Humidity: | 5% to 95% RH non-condensing |
| Approvals: | UL, CUL recognized - File #97337, CE certified |

## ORDERING INFORMATION

| Description | Model # |
|---|---|
| High Performance Timer, Relay Out, 90-240 VAC | B506-2001 |
| High Performance Timer, Relay Out, 24 VDC/AC | B506-2002 |
| High Perf Timer NPN trans Out, 90-240 VAC | B506-2051 |
| High Perf Timer, NPN trans Out, 24 VAC/DC | B506-2052 |

| Description | Model # |
|---|---|
| 11 Pin Socket - DIN Rail Mount | 60SR2P06 |
| 11 Pin Socket - Outward facing terminals | PBT-03172 |

## NOTES

## *WARRANTY*

Standard B506 products manufactured by the Company are warranted to be free from defects in workmanship and material for a period of two years from the date of shipment, and products which are defective in workmanship or material will be repaired or replaced, at the option of the Company, at no charge to the Buyer. Final determination as to whether a product is actually defective rests with the Company. The obligation of the Company hereunder shall be limited solely to repair and replacement of products that fall within the foregoing limitations, and shall be conditioned upon receipt by the Company of written notice of any alleged defects or deficiency promptly after discovery within the warranty period, and in the case of components or units purchased by the Company, the obligation of the Company shall not exceed the settlement that the Company is able to obtain from the supplier thereof. No products shall be returned to the Company without its prior consent.

Products which the Company consents to have returned shall be shipped F.O.B. the Company's factory. The Company cannot assume responsibility or accept invoices for unauthorized repairs to its components, even though defective. The life of the products of the Company depends, to a large extent, upon the type of usage thereof, and THE COMPANY MAKES NO WARRANTY AS TO FITNESS OF ITS PRODUCTS FOR SPECIFIC APPLICATIONS BY THE BUYER NOR AS TO PERIOD OF SERVICE UNLESS THE COMPANY SPECIFICALLY AGREES OTHERWISE IN WRITING AFTER THE PROPOSED USAGE HAS BEEN MADE KNOWN TO IT.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

**Danaher Controls**