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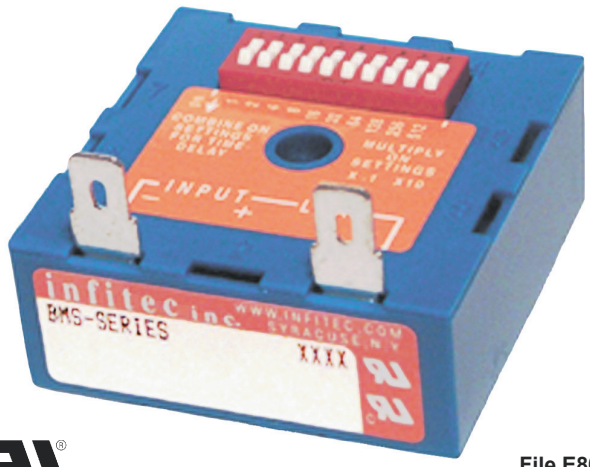
B SERIES
BINARY DIGITAL ENCAPSULATED TIME DELAY MODULES



c UL us
UL/cUL Recognized

File E80165
UL Guide NKCR2
cUL Guide NKCR8

FEATURES

- C/MOS Digital Circuitry
- Time Delays to 170.5 Minutes (3 Ranges)
- No First Cycle Effect
- Fully Solid State and Encapsulated
- 0.5% Repeat Accuracy
- Eight Different Modes of Operation
- Output Rated at 1 Ampere Continuous, 10 Amperes Inrush
- Rocker Type Time Delay Adjustment Switches for Positive Switch Settings
- Small Size
- UL/cUL Recognized

SPECIFICATIONS

1. Time Delay
1.1 Type: C/MOS Digital Circuitry
1.2 Range: Three Ranges Available. Setting of the delay is accomplished via a 10 position dip switch located on the control's top surface. The required delay is selected by the addition of individual switch delays set in the ON position. (See Ordering Information)
1.3 Repeat Accuracy: ±0.5% Under Fixed Conditions
1.4 Setting Accuracy: ±10%
1.5 Reset Time: 50 Milliseconds Maximum
1.6 Recycle Time: 100 Milliseconds During Timing
50 Milliseconds After Timing
1.7 Time Delay vs. Voltage and Temperature: ±2%

2. Input
2.1 Operating Voltage: 24, 120, & 250 VAC, 12 & 24/28 VDC
2.2 Tolerance ±20% of Nominal
2.3 Frequency: 50-60 Hertz

3. Output
3.1 Type: Solid State
3.2 Form: SPST
3.3 Rating: 1 Amp Steady State, 10 Amp Inrush, 20 mA Min.
3.4 Life: 100,000,000 Operations Minimum Under Full Load

4. Protection
4.1 Transient: ±1500 Volts for 150 Microseconds
4.2 Polarity: DC Units are Reverse Polarity Protected
4.3 Dielectric Breakdown: 1500 Volts RMS Minimum

5. Mechanical
5.1 Mounting: One #8 or #10 Screw
5.2 Termination: 1/4" Quick Connect Terminals
5.3 Style: Surface Mount Encapsulated

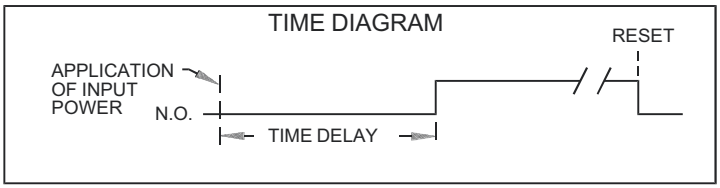
6. Time Delay
6.1 Operating Temperature: -20°C to +80°C
6.2 Storage Temperature: -30°C to +85°C
6.3 Humidity: 95% Relative Non-Condensing

MODE OF OPERATION — SERIES

DELAY ON MAKE — BMS

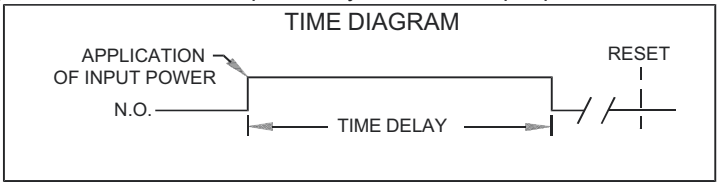
Upon application of power to the input terminals, the time delay begins. At the completion of the pre-selected time delay, the output contact transfers. Reset is accomplished by removal of input power. There is no false output when reset during timing.

DELAY ON MAKE CONT'D — BMS



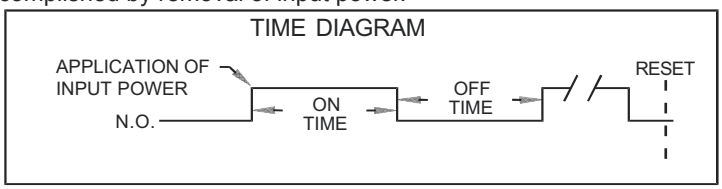
INTERVAL — BIS

Upon application of power to the input terminals, the output contact immediately transfers and the time delay begins. at the completion of the pre-selected time delay, the output contact reverts to its original positon. Reset is accomplished by removal of input power.



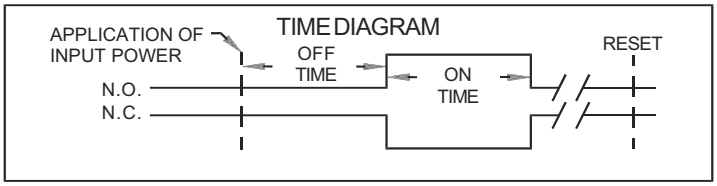
ON/OFF RECYCLE — BRS

Upon application of power to the input terminals, the ON time delay begins and the output contact transfers. Upon completion of the ON time delay, the output contact reverts back to its original position and the OFF time delay begins. Upon completion of the OFF delay, the output contact again transfers and the cycle repeats. Reset is accomplished by removal of input power.



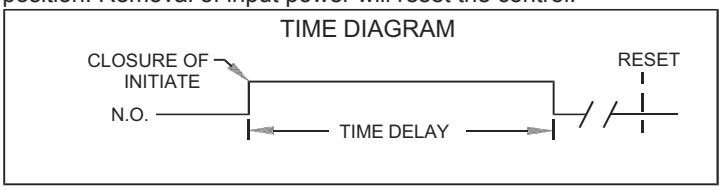
OFF/ON RECYCLE — BRS

Upon application of power to the input terminals, the OFF time delay begins. Upon completion of the OFF time delay, the output contact transfers and the ON time delay begins. Upon completion of the ON delay, the output contact reverts to its original position and the cycle repeats. Reset is accomplished by removal of input power.



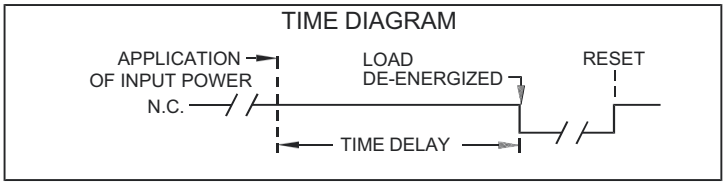
SINGLE SHOT BSS

Power must be applied to the input at all times prior to and during timing. Upon closure of the initiate switch (momentary or maintained) the output contact transfers and the time delay begins. At the completion of the pre-selected delay period, the output contact reverts to its original position. Removal of input power will reset the control.



DELAY ON MAKE, NORMALLY CLOSED BCS

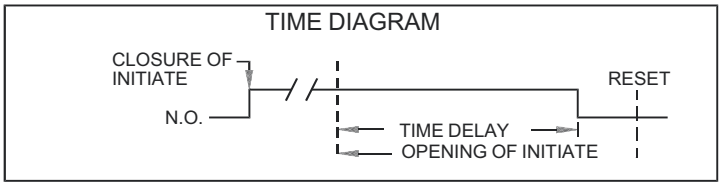
The output is in a normally closed state. Upon application of power to the input terminals, the output contact transfers and the time delay begins. At the completion of the time delay the output contact drops out. Removal of input power from terminal 3 resets the delay and the output contact reverts to its original closed position.



DELAY ON BREAK BBS/BTS*

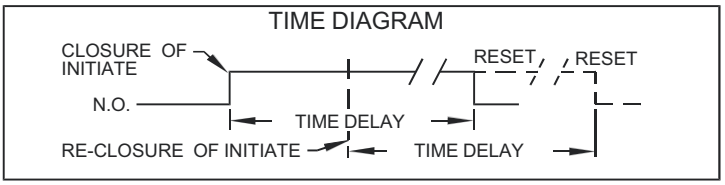
Power must be applied to the input at all times prior to and during timing. Upon closure of the initate switch, the output contact transfers and remains transferred if no further action is taken. When the initiate switch is opened the time delay begins. At the completion of the pre-selected delay poeriod the output contact reverts to its original position. Closure of initiate during timing will reset the delay period. Removal of input power will reset the control.

***BTS** is the same except it is trailing edge triggered. Load energizes when initiate switch is opened.

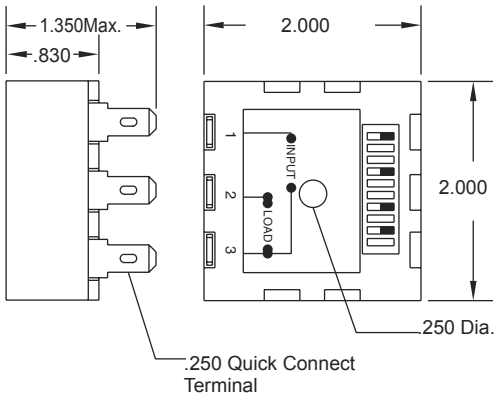


RETRIGGERABLE ONE-SHOT BOS

Power must be applied to the input at all times prior to and during timing. Upon closure of the initiate switch (momentary or maintained) the output contact transfers and the time delay begins. At the completion of the pre-selected delay period, the output contact reverts to its original position. Removal of input power will reset the control.

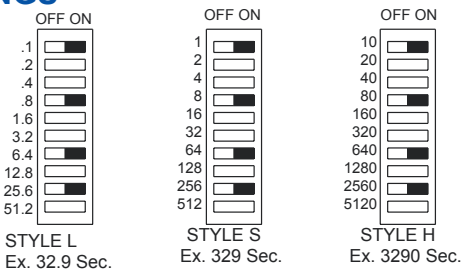


DIMENSIONS

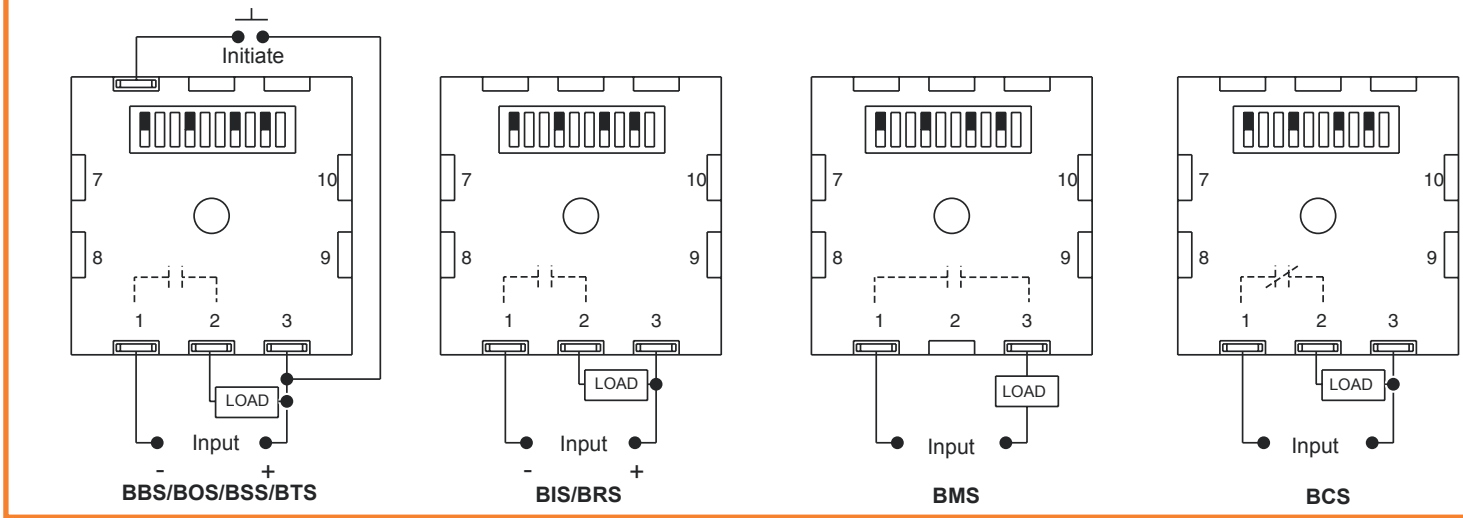


DELAY SETTINGS

Combine "ON" switches to set time delay.



CONNECTION DIAGRAMS



ORDERING INFORMATION

SERIES	INPUT VOLTAGE	CYCLE	TIME DELAY RANGE
BBS **BCS** **BIS** **BMS** **BOS** **BRS** **BSS** **BTS**	**1 -** 12 VDC **2 -** 24/28 VDC **3 -** 5 VDC **4 -** 24 VAC **5 -** 120 VAC **6 -** 230 VAC **9 -** 36 VDC	**BRS SERIES ONLY** **1 -** On Time First **2 -** Off Time First	**L -** Low Range, 0.1 to 102.3 Seconds **S -** Standard Range, 1 to 1023 Seconds **H -** High Range, 10 to 10230 Seconds