

# Uniblitz® NS25B

25mm Bi-Stable Optical Shutter



## Overview

The Uniblitz NS25B is a 25mm-aperture bi-stable optical shutter utilizing our patented N-CAS® technology. The NS25B's simple design provides maximum clearance around the aperture, and a machined flat surface makes for its easy integration into virtually any system. The NS25B has an overall diameter of 2.250 inches, and an electronic synchronization is available.

Bi-stable shutter devices, like the NS25B, require no power to hold the blades in either the open or closed state.

**Need Support?** Please [visit our website](#) or email us at [info@uniblitz.com](mailto:info@uniblitz.com).

Tel: 585-385-5930 | Toll-Free: 800-828-6972 | Fax: 585-385-6004 | 803 Linden Ave. Rochester, NY 14625

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## Key Features

- 25mm aperture
- Bi-stable operation
- Only two unique moving parts
- **RoHS Compliant**
- Transfer time on opening:  
**5.0 milliseconds**
- Total opening time:  
**8.0 milliseconds**
- Can be configured for the **VED24**, **VDM1000**, or **ED12DSS** shutter drivers.

# Product Options

NS25B 2 3 4 5 - 6 - 7

Ex: NS25B1T0L-EC-VED

## 1 Shutter Series:

- **NS25B**

## 2 Housing:

- **1:** Un-housed

## 3 Blade Coating: <sup>1</sup>

- **T:** Low Energy (Teflon®)
- **ZM:** High Energy (AlMgF<sub>2</sub>) <sup>2</sup>

## 4 Electronic Sync:

- **0:** Omitted
- **1:** Included

## 5 Connector:

- **L:** 18" flying leads
- Leave blank for 5-pin Switchcraft® connector with 6" harness

## 6 Encapsulated Coil:

- **EC:** Included
- Leave blank if not required

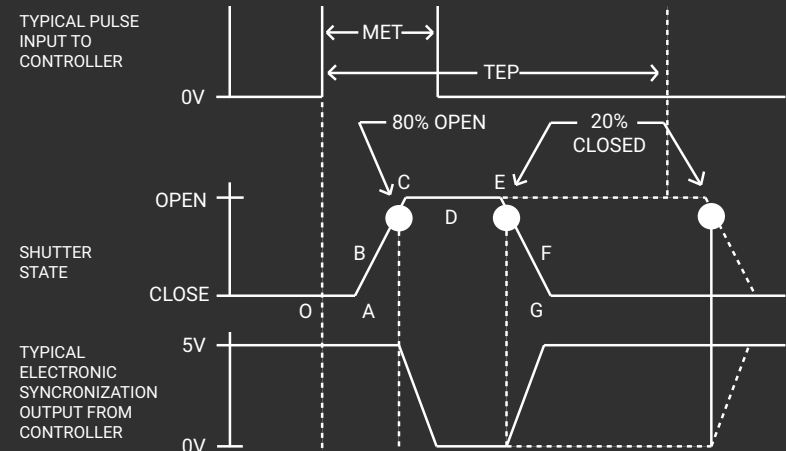
## 7 Driver Compatibility:

- **ED:** ED12DSS Compatibility
- **VED:** VED24 Compatibility
- Leave blank for VDM1000 compatibility

<sup>1</sup> Other blade coating options may be available by special order.

<sup>2</sup> Input side only; Teflon® coating is on opposite side to protect shutter blade surface. Light source must be input to the reflective side only.

# Shutter Timing



## NS25B (w/ VDM1000 driver and Teflon® coated blades) Time (msec.)

| Interval | Description                                 | Time (msec.) |
|----------|---|--------------|
| O - A    | Delay time on opening after current applied | 3.0          |
| A - C    | Transfer time on opening                    | 5.0          |
| O - C    | Total opening time                          | 8.0          |
| C - E    | Min. dwell time with min. input pulse       | 6.0          |
| B - F    | Min. equivalent exp. time                   | 11.0         |
| D - E    | Delay on closing after current applied      | 3.0          |
| E - G    | Transfer time on closing                    | 5.0          |
| A - G    | Total window time                           | 16.0         |
| MET      | Min. exposure time                          | 13.0         |
| TEP      | Typical exposure pulse                      | >13.0        |

# Technical Specifications

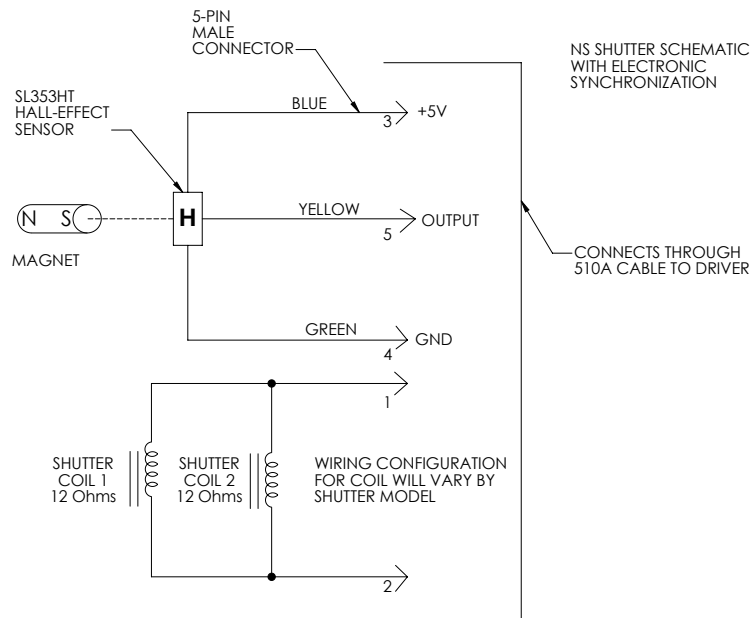
| Coil Resistance         | Voltage to Open        | Hold Voltage |
|-------------------------|------------------------|--------------|
| 6 $\Omega$ <sup>1</sup> | +10.7 VDC <sup>2</sup> | N/A          |

<sup>1</sup> Two 12  $\Omega$  coils wired in parallel

<sup>2</sup> Peak voltage as provided by the **VED24 Driver**

<sup>3</sup> (Continuous/Burst) Continuous frequency rating specified at shutter's minimum exposure pulse. Burst frequency rating specified for four (4) seconds maximum with one (1) minute minimum between bursts.

| Series | Weight            | Operating Temp. | Max. Opening Bounce | Max. Closing Bounce | Max. Freq. of Operation <sup>3</sup> | Number of Shutter Blades |
|--------|-------------------|-----------------|---------------------|---------------------|--------------------------------------|--------------------------|
| NS25B  | 1.33 oz (0.04 kg) | 0 - 80 °C       | 15%                 | 5%                  | 5 Hz / 30 Hz                         | 5                        |



The synchronization system for NS shutter devices incorporates a small magnet mounted to the driving mechanism and a Hall effect sensor. When the device achieves approximately 80% of full open, the magnet causes the Hall effect sensor to change state, producing a signal to indicate that the shutter has switched to the active state. Shown to the left is the NS series shutter schematic which incorporates the electronic synchronization system. **There is no connection to the designated synchronization pins when an electronic sync. is not selected.**

# Technical Drawings - NS25B

