Datasheet

# Uniblitz® NS35B

## 35 mm Bi-Stable Optical Shutter



## Overview

The Uniblitz® NS35B is a 35 mm-aperture bi-stable optical shutter using our patented N-CAS® technology. Its simple design gives maximum clearance around the aperture, and a machined flat surface makes it easy to integrate into virtually any system. The NS35B has an overall diameter of 3.18 in, and an electronic sync is available.

Bi-stable shutter devices, like the NS35B, require no power to hold the blades in either the open or closed state.

### Key features

- ✓ 35 mm aperture
- ✓ Only two unique moving parts
- ✓ Can be configured for the VED24, ED12DSS or VDM1000 drivers
- ✓ Transfer time: 12.0 ms opening, 12.0 ms closing
- ✓ RoHS compliant

## Specifications

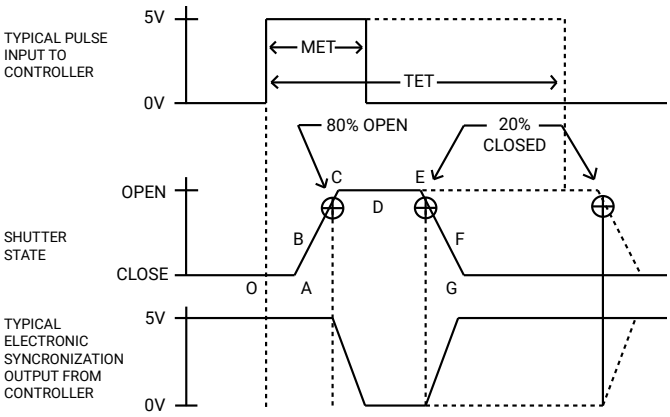
| Electrical | |
|---|---|
| Coil resistance[1] | 6 Ω |
| Voltage to open[2] | +10.7 VDC |
| Hold voltage (nominal) | N/A |

| Mechanical | |
|---|---|
| Weight, un-housed | 70.0 g |
| Operating temperature | 0–80 °C |
| Max. opening bounce | 15% |
| Max. closing bounce | 5% |
| Max. frequency[3] | 2 Hz / 5 Hz |
| Number of shutter blades | 5 |

1 Two 12 Ω coils wired in parallel.
2 Peak voltage, as provided by the VED24 driver.
3 Continuous: at the shutter's minimum exposure pulse. Burst: 4 s maximum, with at least 1 min between bursts.


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## Shutter timing data[2]




1 Measured with the VDM1000 and Teflon® blades.

2 Never lubricate the blade area. It slows the shutter and can make it inoperable.

| Segment | Description | ms[1] |
|---|---|---|
| O–A | Delay time on opening after current is applied | 6.5 |
| A–C | Transfer time on opening | 12.0 |
| O–C | Total opening time | 18.5 |
| C–E | Min. dwell time with min. input pulse | 7.0 |
| B–F | Min. equivalent exposure time | 4.0 |
| D–E | Delay time on closing after current is applied | 19.0 |
| E–G | Transfer time on closing | 12.0 |
| A–G | Total window time | 31.0 |
| MET | Minimum exposure time | 20.0 |
| TET | Typical exposure time | >20.0 |

## Product options

**NS35B** **2** **3** **4** **5** – **6** – **7**

Example: **NS35B1T0L-EC-VED**

| | |
|---|---|
| **2** | **Housing** |
| 1 | Un-housed |
| **3** | **Blades**[1] |
| T | Low energy (Teflon®) |
| ZM | High energy ($AlMgF_2$)[2] |
| **4** | **Electronic sync** |
| 0 | Omitted |
| 1 | Included |

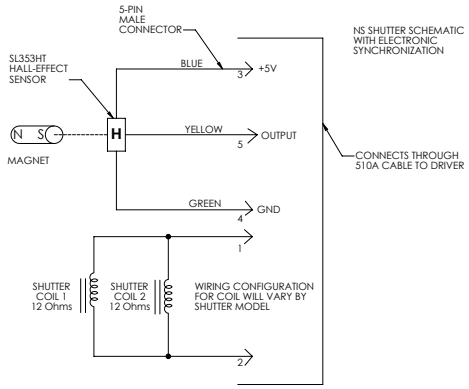
| | |
|---|---|
| **5** | **Connector** |
| L | 18 in (457 mm) flying leads |
| — | Leave blank for 5-pin Switchcraft® connector with 6 in harness |
| **6** | **Encapsulated coil** |
| EC | Included |
| — | Leave blank if not required |
| **7** | **Driver compatibility** |
| ED | ED12DSS compatibility |
| VED | VED24 compatibility |
| — | Leave blank for VDM1000 compatibility |

1 Other blade coatings may be available by special order.
2 Input side only; the Teflon® coating on the opposite side protects the blade surface. Light must enter on the reflective side.

## Electronic sync

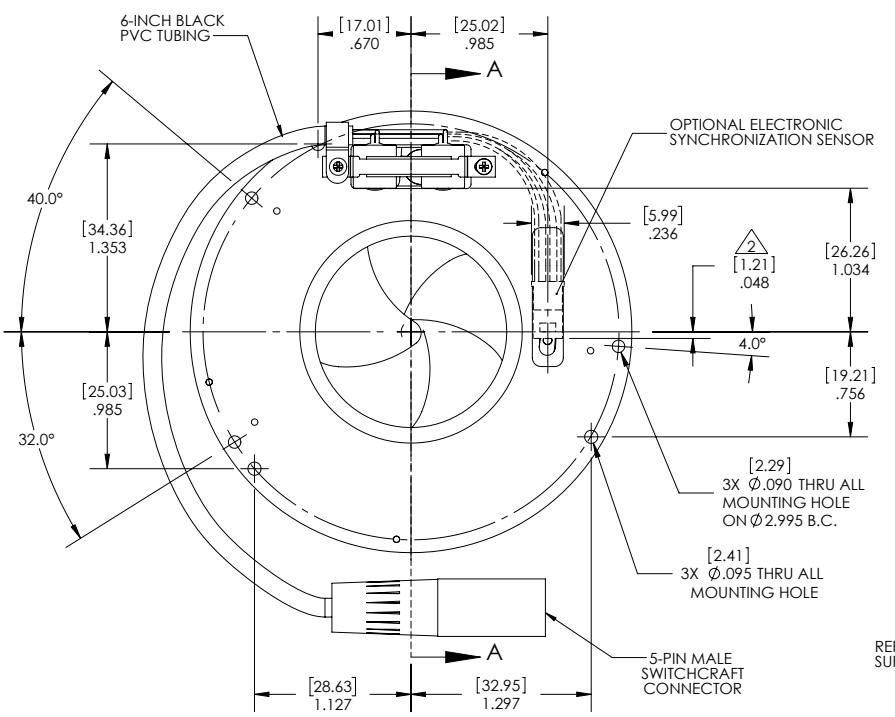
The NS35B's electronic sync uses a small magnet on the drive mechanism and a Hall Effect sensor. At about 80% open, the sensor changes state and signals that the shutter is open.

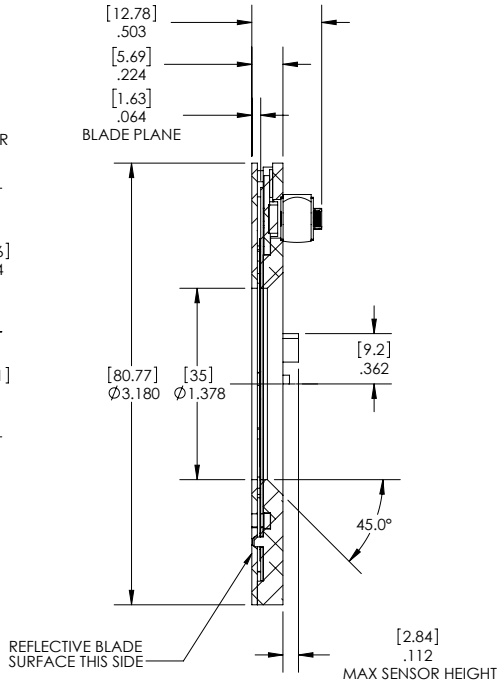
**With the sync omitted, the sync pins are not connected.**



# Technical drawings

## NS35B shutter layout




SECTION A-A