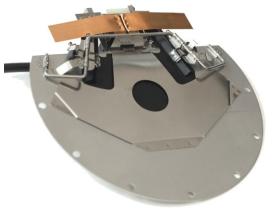
Datasheet

Uniblitz® VS14

14 mm Uni-Stable Optical Shutter



Overview

The Uniblitz® VS14 has been designed to provide accurate, repeatable exposures for a wide variety of applications. VS series shutters have been field tested worldwide in microscopy, video imaging, PMT protection and photographic applications. The VS14 is available in a housed or un-housed configuration for OEM applications (or where spatial limitations are a consideration).

Uni-stable shutter devices, like the VS14, require power to hold the blades in the open state (though the device can be custom-configured for “normally open” operation).

Key features

- ✓ 14 mm aperture
- ✓ Small, slim form factor
- ✓ Configured for the VCM-D1 driver
- ✓ Transfer time: 1.5 ms opening, 3.5 ms closing
- ✓ RoHS compliant

Specifications

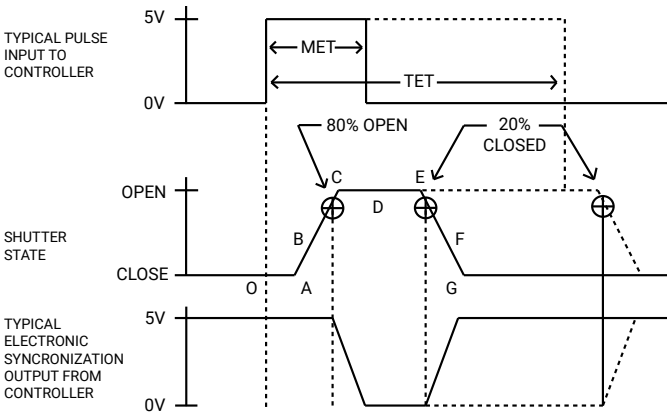
Electrical	
Coil resistance	12 Ω
Voltage to open	+65 VDC
Hold voltage (nominal)[1]	+5 VDC

Mechanical	
Weight, un-housed	60.0 g
Weight, housed	290.0 g
Operating temperature	0–80 °C
Max. opening bounce	15%
Max. closing bounce	5%
Max. frequency[2]	10 Hz / 40 Hz
Number of shutter blades	2

1 Voltage across the actuator coil while holding the shutter open.
2 Continuous: at the shutter’s minimum exposure pulse. Burst: 4 s maximum, with at least 1 min between bursts.

©2026 Vincent Associates · 803 Linden Ave., Rochester, NY 14625

Shutter timing data[2]



1 Measured with the VCM-D1 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	2.0
A–C	Transfer time on opening	1.5
O–C	Total opening time	3.5
C–E	Min. dwell time with min. input pulse	2.0
B–F	Min. equivalent exposure time	4.5
E–G	Transfer time on closing	3.0
A–G	Total window time	6.5
MET	Minimum exposure time	4.0
TET	Typical exposure time	>6.5

Product options

VS14 [2] [3] [4] [5] [6] – [7] – [8]

Example: **VS14S2ZM0-EC-21**

2	**Driver compatibility**
S	Use with VCM-D1, VMM-D3/D4
E	Use with V880, VED24, or D880C
3	**Housing**
1	Un-housed
2	#2 housing
4	**Blades**[1]
T	Low energy (Teflon®)
ZM	High energy ($AlMgF_2$)[2]
5	**Electronic sync**
0	Omitted
1	Included

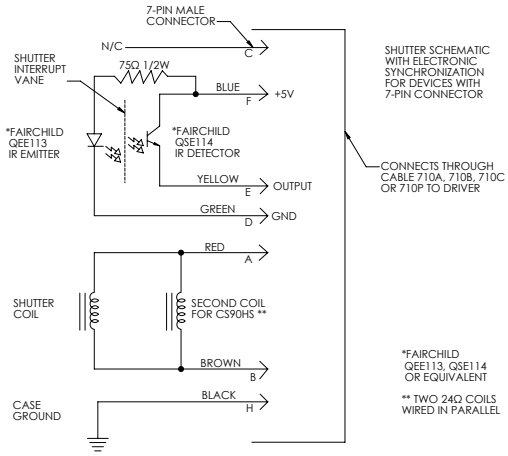
6	**Connector**
L	18 in (457 mm) flying leads
—	Leave blank for 7-pin Wire-Pro connector
7	**Encapsulated coil**
EC	Included
—	Leave blank if not required
8	**Mount**[3]
21	Zeiss Axiovert
24	Olympus BX/IX
27	Nikon
105	C-Mount (male)
106	C-Mount (female)
—	Leave blank if not required

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.
3 Mounts require the #2 housing.

Electronic sync

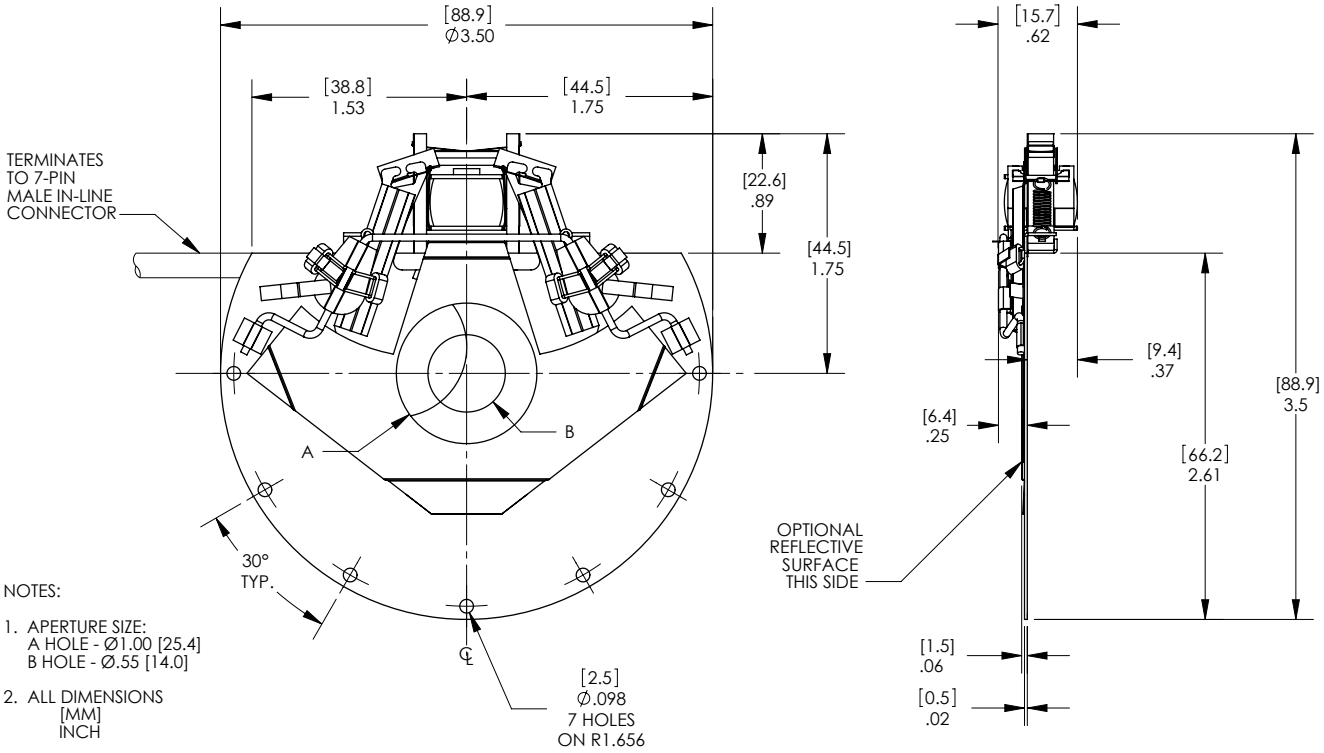
The electronic sync gives a feedback signal (through the driver) once the shutter moves to the open state. It uses an infrared emitting diode, an infrared-sensitive detecting transistor and an interrupting vane: the vane blocks the light path while the shutter is closed and clears it at about 80% open, switching the detector to the active state. On the VS14, a similar activation flag on the mechanism triggers a reflective emitter/detector device.

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



Technical drawings

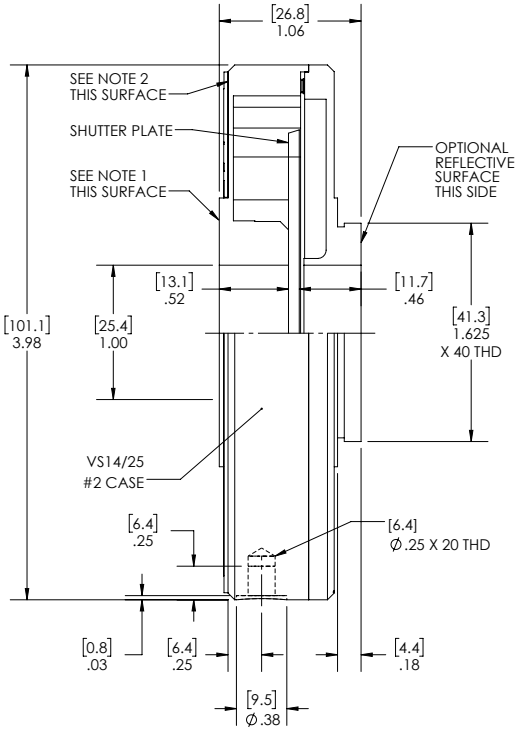
VS14, un-housed



NOTES:

1. APERTURE SIZE:
   A HOLE - Ø1.00 [25.4]
   B HOLE - Ø.55 [14.0]
2. ALL DIMENSIONS
   [MM]
   INCH

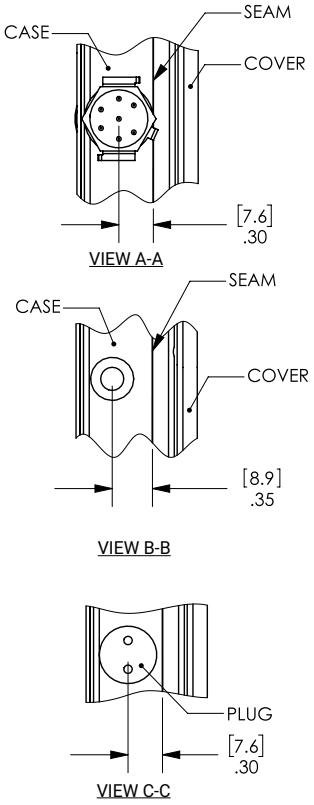
VS14, #2 housing



NOTES:

1. (3) #2-56 MOUNTING HOLES ON A Ø1.204 BOLT CIRCLE, 120° APART
   (3) #2-56 MOUNTING HOLES ON A Ø1.578 BOLT CIRCLE, 120° APART
2. (3) #4-40 MOUNTING HOLES ON A Ø2.425 BOLT CIRCLE 120° APART (UNDER NAME PLATE)
3. ALL DIMENSIONS: [MM] INCH

VS14, connector layout



NOTES:

1. DRAWING SHOWING CONNECTOR AND 1/4-20 MOUNTING LOCATION.
2. FINISH BLACK ANODIZE.
3. TERMINATES TO 710P OR 710C CABLE ASSEMBLY.
4. ALL DIMENSIONS MAXIMUM [MM] INCH

