Uniblitz® CS65

65mm Uni-Stable Optical Shutter

Overview

The Uniblitz CS65 has been designed to provide accurate, repeatable exposures for a wide variety of applications such as telescopy and aerospace. The slim form-factor provides a large 65mm aperture that can be inserted into a 5.00 inch diameter housing. The CS65 is available in a housed or an un-housed configuration for OEM applications (or simply where spatial limitations are a consideration).

Uni-stable shutter devices, like the CS65, require power to hold the blades in the open state.

Key Features

- Large 65mm aperture
- Slim form-factor, 6-bladed design
- Configured for the **VCM-D1 Shutter Driver**
- **RoHS Compliant**
- Transfer time on opening: 45.0 milliseconds
- Transfer time on closing: 54.0 milliseconds

Specifications

Electrical Specifications

Coil resistance	12 OHMS
Voltage to Open	+70 VDC
Hold Voltage (Nominal) [1]	+7 VDC / +5 VDC [2]

Mechanical Specifications

Weight Unhoused	110.0 g
Weight Housed	370.0 g
Operating Temp.	0 - 80 °C
Max. Opening Bounce	15%
Max. Closing Bounce	5%
Max. Freq. of Operation [3]	2 Hz / 5 Hz
Number of Shutter Blades	6

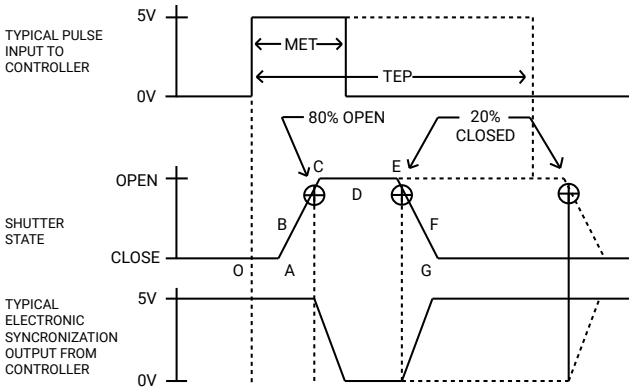
[1] Voltage level required across actuator coil when being held in the open position.
[2] Dual hold voltage system included in VCM-D1 shutter driver.
[3] (Continuous/Burst) Continuous frequency rating specified at shutter's minimum exposure pulse. Burst frequency rating specified for four (4) seconds maximum with one (1) minute minimum between bursts.

VINCENT ASSOCIATES

Need Support? Please visit our website or email us at **info@uniblitz.com**.
Tel: +1 585-385-5930 | Fax: 585-385-6004 | 803 Linden Ave. Rochester, NY 14625
Updated 2/22 | Document Version 6.0 | ©2022 Vincent Associates

Uniblitz® CS65

Shutter Timing Data



[1] Under no circumstances should any type of lubricant be applied to the shutter blade area. Lubricating the shutter blades will likely slow the shutter down and may eventually render it inoperable.

CS65 (w/ VCM-D1 and "T" blades) [1]		Time (msec.)
O - A	Delay time on opening after current applied	9.0
A - C	Transfer time on opening	45.0
O - C	Total opening time	54.0
C - E	Min. dwell time with min. input pulse	22.0
B - F	Min. eqivalent exp. time	70.0
E - G	Transfer time on closing	52.0
A - G	Total window time	119.0
MET	Min. exposure time	65.0
TEP	Typical exposure pulse	>75.0

Product Options

CS65 ❷❸❹❺❻ - ❼ - ❽

Ex: CS65S3T0-EC-102

❶ Shutter Series:

CS65

❷ Voltage:

S: Use with VCM-D1

E: Use with D880C or VED24

❸ Housing:

1: Un-Housed

3: #3 Housing

❹ Blades: [2]

T: Low Energy (Teflon®)

ZM: High Energy (AlMgF2) [3]

❺ Electronic Sync:

0: Omitted

1: Included

❻ Connector:

L: 18" Flying Leads

Leave blank for 7-pin Wire Pro connector

❼ Encapsulated Coil:

EC: Included

Leave blank if not required

❽ Mount: [4]

102: Mounting Ring

Leave blank if not required

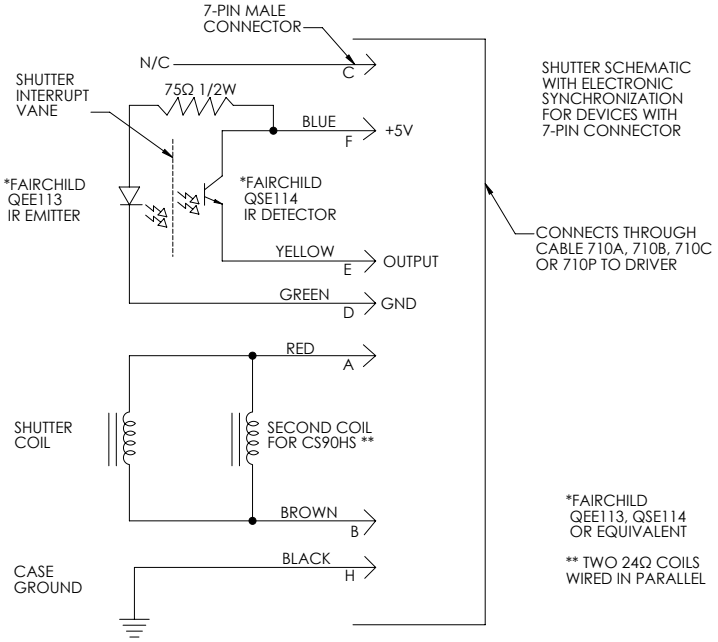
[2] Other blade coating options may be available by special order.

[3] Input side only; Teflon® coating is on opposite side to protect shutter blade surface. Light source must be input to the reflective side only.

[4] Mounts are only compatible if #3 housing is optioned as well.

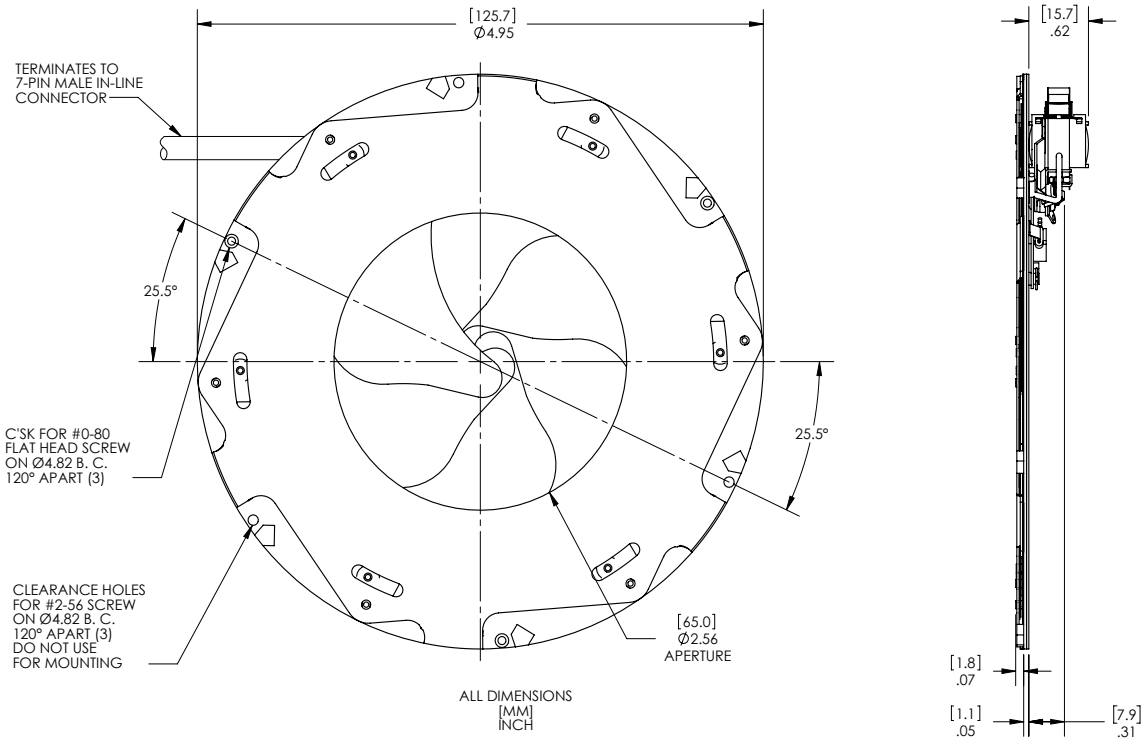
Electronic Sync.

The electronic synchronization system provides a feedback signal (through the driver utilized) after the shutter transfers to the open state. The system incorporates an infrared emitting diode, an infrared sensitive detecting transistor, and an interrupting vane. The vane is attached to the shutter so as to block the light path between the emitter and detector in the closed position. When the shutter transfers to the 80% open position, the vane is removed from the infrared light path, allowing the emitter to switch the detector to the active state. For the CS65, this system uses a similar activation flag attached to the mechanism, which triggers a reflective emitter/ detector device. **No connection to the designated synchronization pins when no electronic sync. is selected.**

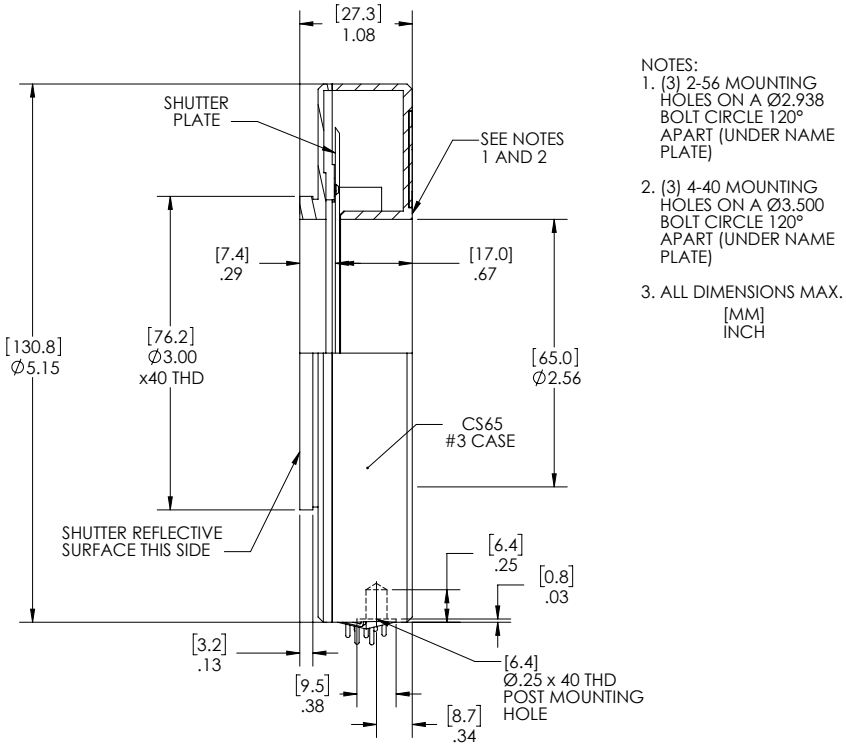


Uniblitz® CS65 Technical Drawings

Un-Housed



Housed



NOTES:
1. (3) 2-56 MOUNTING HOLES ON A Ø2.938 BOLT CIRCLE 120° APART (UNDER NAME PLATE)
2. (3) 4-40 MOUNTING HOLES ON A Ø3.500 BOLT CIRCLE 120° APART (UNDER NAME PLATE)
3. ALL DIMENSIONS MAX.
   [MM]
   INCH

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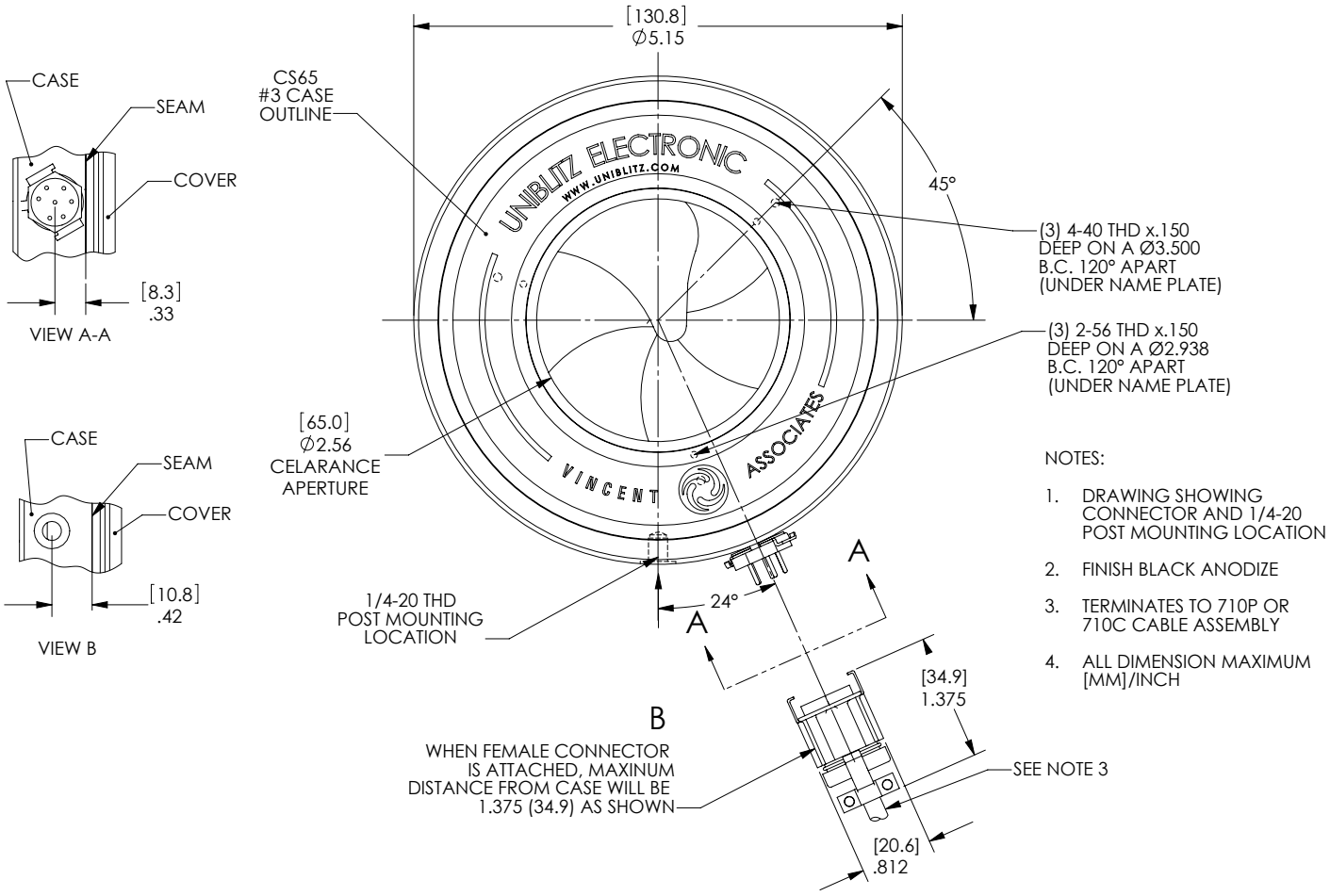
Connector Layout