

CS25 SHUTTER SPECIFICATIONS

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FEATURES

- Small form factor, a 25 mm aperture fits into a 2.37 inch diameter housing!
- Five-bladed design in combination with a new miniature UNIBLITZ® actuator, and a state of the art patented damping system provide increased reliability over other designs of this type.
- Reflective blades available for laser and non-coherent light sources "S", "Z" and "ZM" Type.
- Can be driven with our existing VMM/VCM drive units. Special driver not required.
- Available housed or un-housed for OEM applications.
- #90 Mounting Ring available for universal mounting applications.
- Electronic Synchronization System option available.
- Exposure repetition rates from DC to 30Hz.
- Design, accuracy, and reliability that you have come to know as with all other UNIBLITZ products!
- 5-pin female to 7-pin male adapter (501A-S7) included to interface with VCM/VMM controllers (see figure 4).
- Available with 25mm manually variable iris.
- Can be configured normally open.

The CS25 is the fourth release in the new UNIBLITZ® CS series. The small form factor allows a 25 mm aperture to be installed into applications not presently accessible with existing UNIBLITZ VS series shutters. As with the CS45, CS65 and CS90, the CS25 has been designed to provide accurate, repeatable exposures for a wide variety of applications. The small form factor allows a 25 mm aperture to be installed into a 2.37-inch diameter housing (a 40% reduction in overall size from the VS25 series). To increase the unit's flexibility, the shutter can be supplied in an un-housed version for OEM applications or in situations inaccessible to most shutters due to spatial limitations.

The UNIBLITZ® CS25 incorporates a new miniaturized actuator system that can be driven with existing VMM drive units. As an option, the shutter may also be equipped with an electronic synchronization system, to increase the unit's flexibility. It is available in a housed or un-housed OEM version that is electronically programmed to fire specific exposures at precise time intervals. The new shutter's multi-bladed design, combined with its new miniaturized UNIBLITZ actuator, provides increased reliability over other designs of this type.

When gating high intensity light sources, the CS25 can be equipped with reflective blades. This option protects the shutter blades from the light source's damaging effects by reflecting the energy away from the blade surface. Three standard reflective blade options are available. "S" (reflective stainless steel), "Z" (AlSiO) and "ZM" (AlMgF₂).

To further enhance the flexibility of the CS25; an optional #90 mounting ring is available to allow the shutter to be easily mounted in many non-specific applications. Also available is an optional #3 housing cover which includes a 25mm manually variable iris, the #525. Additional information regarding the #90 mounting ring, the #525 25mm Variable Iris, and additional mounts available can be found in the specific data sheets entitled "MICROSCOPE, VIDEO and UNIVERSAL MOUNTING SYSTEMS" or on-line under "products", "Mounting Systems".

¹ Voltage level required across actuator coil when being held in the open position.

² CONTINUOUS frequency rating specified at shutter's minimum exposure pulse. BURST frequency rating specified for (4) four seconds maximum with (1) one minute minimum between bursts. Frequency measurements are taken in free air, 25°C ambient, actuator coil equipped with heat sink. For additional information on maximum sustained frequencies obtainable, please contact one of our technical representatives.

ELECTRICAL

Coil Resistance	12 ohms
Pulse Voltage to Open	+65VDC
Hold Voltage ¹	+5VDC

MECHANICAL

Wgt. Un-Cased	1.28 oz (.04 kg)
Wgt. Cased	3.16 oz (.09 kg)
Operating Temp.	0°C to +80°C
Max. Opening Bounce	15%
Max. Closing Bounce	5%
Max. Frequency of Operation (CONT/BURST) ²	5 Hz / 30 Hz
Number of Blades	5

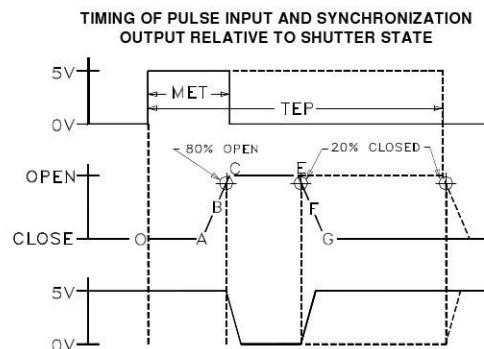
TIMING

Typical timing values (msec.) using UNIBLITZ drive equipment and measured with UNIBLITZ shutters equipped with standard TEFLON® coated shutter blades.

TYPICAL PULSE INPUT TO CONTROLLER

SHUTTER STATE

TYPICAL ELECTRONIC SYNCHRONIZATION OUTPUT FROM CONTROLLER



(Timing in msec.)

O-A Delay time on opening after current is applied	3.0
A-C Transfer time on opening	9.0
O-C Total opening time	12.0
B-F Min. equivalent exp. time	17.5
C-E Min. dwell time with min. input pulse	6.0
E-G Transfer time on closing	14.0
A-G Total window time	29.0

MET: Min. exposure time	15.0
TEP: Typical exposure pulse	>15.0

The question regarding enhancement of shutter speed with the application of user supplied lubricants has been repeatedly asked. It is our experience that lubricating the shutter blades will actually slow the shutter down and eventually render the shutter inoperable. UNDER NO CIRCUMSTANCES SHOULD ANY TYPE OF LUBRICANT BE APPLIED TO THE SHUTTER BLADE AREA.

PRODUCT OPTIONS

CS25S	3	T	0	R3	-90
APERTURE SIZE	HOUSING	BLADE FINISH	ELECTRONIC SYNCHRONIZATION	HIGH TEMPERATURE MODIFICATION	MOUNTING OPTIONS
CS25S - 25mm	1 - UNCASED 3 - #3 CASE	T - TEFLON COATED S - POLISHED STAINLESS STEEL BLADES [*] ZM - AlMgF ₂ COATED 86Cu BLADES [*] Z - AISIO COATED 86Cu BLADES [*]	0 - OMIT SYNC. 1 - ELECTRONIC SYNC.	R3 - HIGH TEMP. MOD. (OMIT R3 DESIGNATION IF NOT REQUIRED)	17 F-C VIDEO ADAPTER 21 ZEISS AXIOVERT TYPE 22 OLD STYLE NIKON TYPE 23 OLYMPUS TYPE 24 OLYMPUS TYPE 26 LEICA TYPE 27 NIKON TYPE 28 OLYMPUS IX TYPE 29 NIKON TYPE 30 LEICA TRANSMITTED TYPE 31 NIKON/CONFOCAL TYPE 32 NIKON 80I TYPE 90 MOUNTING RING 105 C-MOUNT ADAPTER (MALE) 106 C-MOUNT ADAPTER (FEMALE) 110 T-MOUNT ADAPTER 525 25MM VARIABLE IRIS

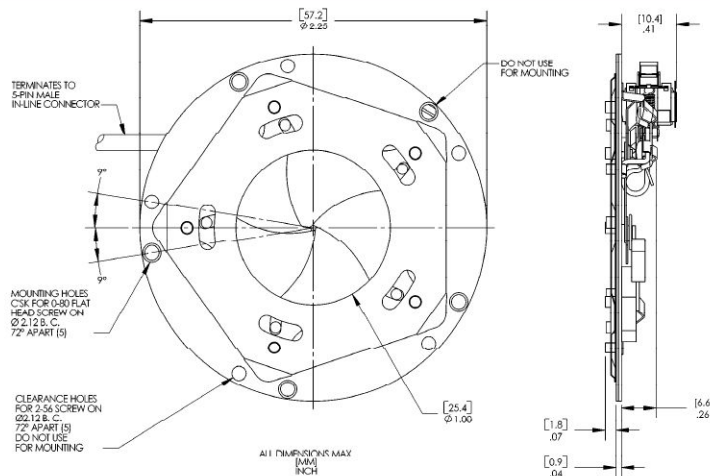
*Input side only, Teflon® coating is on opposite side. Intended to protect the shutter blade surface, light source must be input to the reflective side only.

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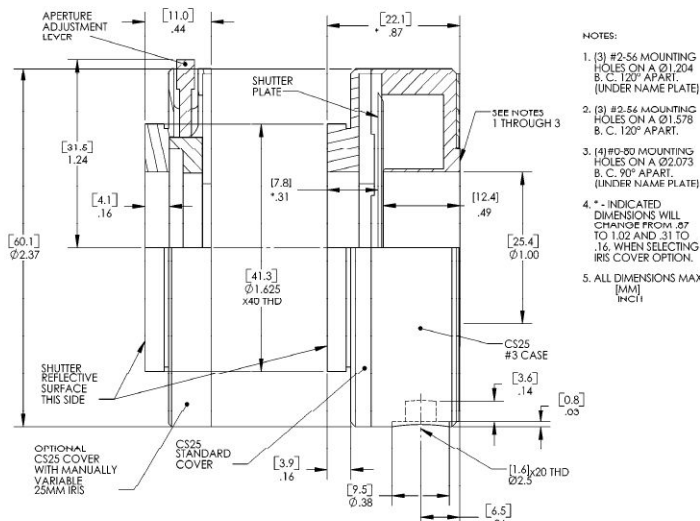


UN-HOUSED STYLE



The CS25 un-housed style is the basic configuration of this device and is best suited for OEM applications. Mounting can be accomplished through four 0-80 (flat head screws required) clearance holes located around the unit's perimeter on a 2.120 inch diameter bolt circle. These holes, as indicated, are 72 degrees apart. Unless otherwise specified, this standard unit is terminated to a 5-pin male connector through a 5-wire six-inch cable assembly. (The five 2-56 holes and one 0-80 hole are not recommended for mounting due to the potential for interference with the shutter's five blades or actuator mechanism.)

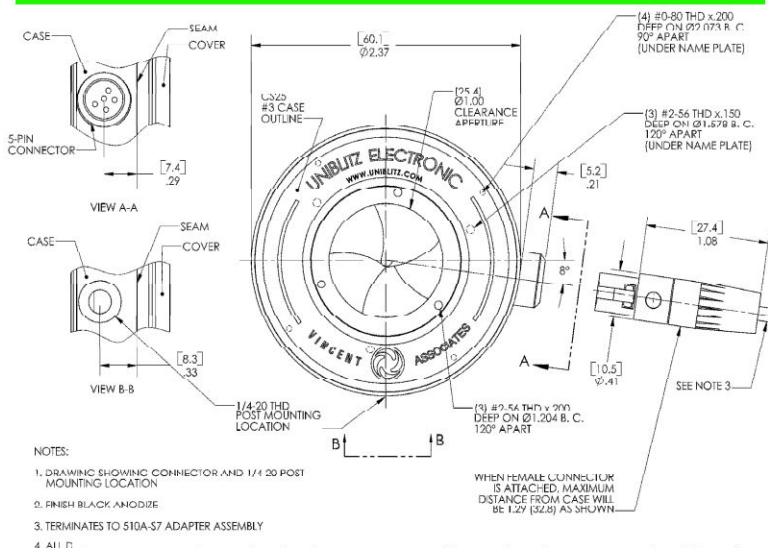
HOUSED STYLE



The CS25 #3 housing style allows a number of mounting configurations. A 1/4-20 threaded hole is provided for post mounting. The 1.625inch x 40TPI external thread located on the rear side, and the specific mounting holes located on the front side (see Figure #2 and Figure #3) can be interfaced directly into your application or fitted with a variety of user specific mounting options. For the CS25, the #90 Mounting Ring is a mounting option available that simplifies mounting the housed style onto a flat surface. In addition, the CS25's standard #3 housing cover can be replaced with a cover containing a one inch manually variable iris diaphragm. The overall housing thickness will increase by .150 inches (3.8mm) when this option is specified. The #90 mounting ring can attach to this cover in the same manner as the standard cover.

Additional information regarding the #90 mounting ring and the #525 25mm Variable Iris can be found in the specific data sheet entitled "UNIVERSAL MOUNTING SYSTEMS" or online under "products", "Mounting Systems". The unit terminates with a 5-pin male connector as illustrated.

HOUSING/CONNECTOR LAYOUT



This drawing illustrates 5-pin connector and 1/4-20 threaded hole layout for the CS25 series #3 housed style.

501A-S7 ADAPTER ASSEMBLY LAYOUT

Figure 4 illustrates 501A-S7 adapter included with the CS25 to allow connection to VCM/VMM type controllers

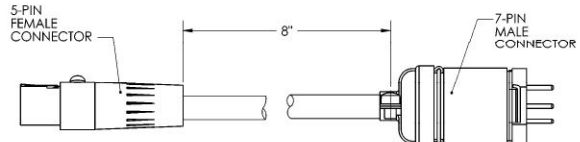


Figure 4

Due to our ongoing product development program, Vincent Associates reserves the right to discontinue or change specifications or designs at any time, without incurring any obligations. Teflon is a registered trade mark of E.I. DuPont U. S. Pat. No. 3,427,576; 3,595,553; 3,967,293; 6,652,165. Drawing shown for illustrative purposes only. Updated 03/2006.