

FEATURES

- New quick-change housing eliminates need to remove attached equipment when upgrading shutter.
- Small form factor, a 45 mm aperture fits into a 4-inch diameter housing!
- Five-bladed design in combination with the *UNIBLITZ*[®] actuator provide increased speed over other designs of this type.
- State of the art patented damping system for increased reliability and speed.
- 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.
- Mounting adapters available for various camera manufacturers
- Electronic Synchronization System option available.
- Exposure repetition rates from DC to 15Hz.
- Can be configured normally open (QCSR45).

The **QCS45** is the first shutter to utilize our new quick change housing. The new case design will virtually eliminate downtime due to recalibration and alignment when upgrading a shutter in your optical system. The housing consists of three parts: the case, cover and carrier. The carrier houses the mechanical shutter and data connections. The case and cover remain attached to the existing aligned components at all times. By the removal of two screws, the carrier and shutter unit can be upgraded with a new one.

The **QCS45** utilizes a modified CS45 standard shutter, therefore it possesses all the same reliability and timing characteristics as a typical CS45. For information regarding the electrical, mechanical and timing specifications of the **QCS45** please refer to the CS45 documentation.

The **QCS45**, along with its state of the art patented damping system, provides increased reliability over other designs of its type. In addition, the system provides the reliable actuator system found in all other *UNIBLITZ* shutter designs allowing it to be driven with our existing VCM/VMM drive units. As an option, the shutter can be equipped the electronic synchronization system.

When gating high intensity light sources, the **QCS45** can be equipped with polished stainless steel reflective blades. This option protects the shutter blades from the light source's damaging effects by reflecting the energy away from the blade surface. Also available are "Z" (AlSiO) and "ZM" (AlMgF₂) coated shutter blades.

To further enhance the flexibility of the QCS series, we offer an optional #17 mount for adapting the shutter with Nikon type lenses. We also offer a series of mounts for Camelia, Dalsa, and Cooke specific cameras. For non-specific mounting installations, the #101 mounting ring can be used for universal mounting into many applications. Additional information regarding these and the #101 ring can be found in the specific data sheets entitled "MICROSCOPE, VIDEO and UNIVERSAL MOUNTING SYSTEMS" or on-line under "products", "Mounting Systems".



This figure shows a typical shutter application including a camera and lens. The QCS45 is in the installed position for normal operation.



This figure shows the cartridge in the removed position. The camera and lens are not disturbed, maintaining proper optical alignment.

PRODUCT OPTIONS

QCS45S 3 T 0 -101

APERTURE SIZE	HOUSING	BLADE FINISH	ELECTRONIC SYNCHRONIZATION	MOUNTING OPTIONS
QCS45S - 45mm	1- CARRIER ONLY 3- #3 CASE	T - TEFLON COATED S - POLISHED STAINLESS STEEL BLADES* ZM - AlMgF ₂ COATED BeCu BLADES* Z - AISIO COATED BeCu BLADES*	0 - OMIT SYNC. 1 - ELECTRONIC SYNC.	-17 F TYPE VIDEO ADAPTER -101 MOUNTING RING -125 CAMELIA ADAPTER -126 NIKON "F" MOUNT (MALE) -127 DALSTAR ADAPTER -128 COOKE ADAPTER

*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.

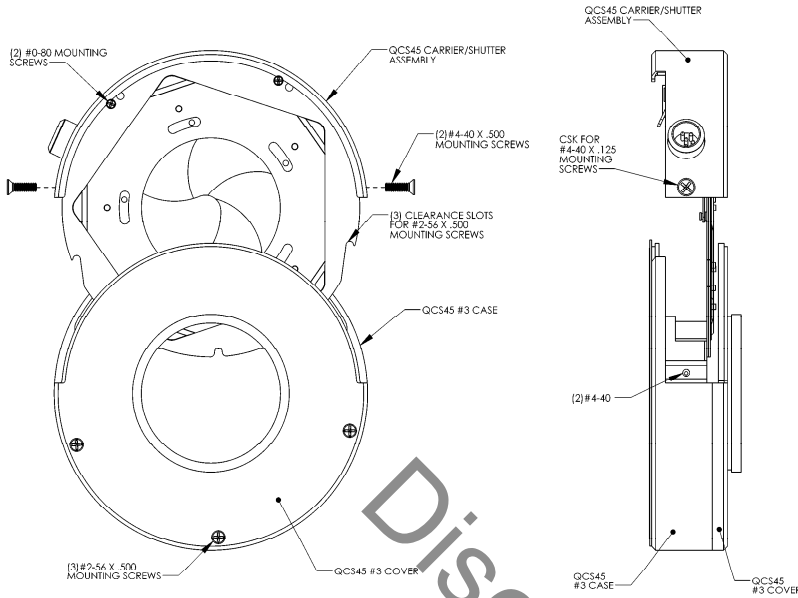


Figure 1

This drawing depicts the QCS45 with the carrier partially removed. The housing consists of three parts: the case, cover and carrier. The case and cover are mounted to each other via three screws inserted from the cover side. A slightly modified CS45 is mounted to the carrier, which also houses all electrical/data connections. The carrier/shutter assembly is then inserted into the case/cover assembly. The two parts are fastened to each other by two screws inserted from the profile side of the case. When the shutter needs to be upgraded, the two screws are removed while the case and cover remain secured in the optical system, maintaining alignment and calibration.

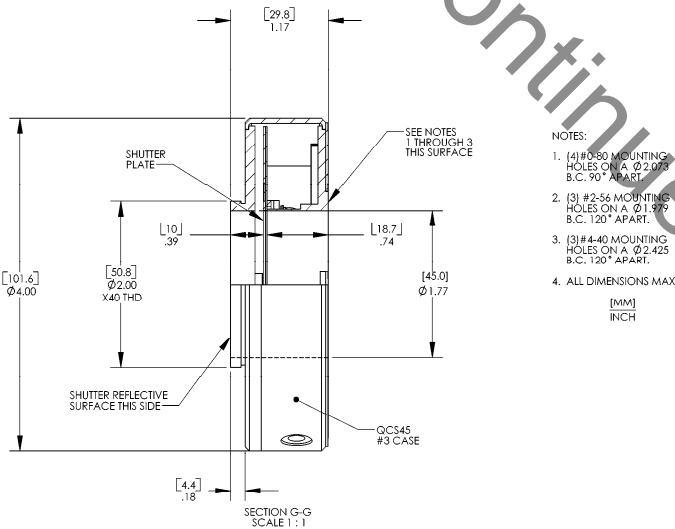


Figure 2

The QCS45 #3 housing style allows a number of mounting configurations. A 1/4-20 threaded hole is provided for post mounting. The 2.00inch 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 specific mounting options. For a list of available mounting options see the PRODUCT OPTIONS table on page one of this document. For additional information regarding these options see "MICROSCOPE, VIDEO and UNIVERSAL MOUNTING SYSTEMS" data sheets. The unit terminates with a 5-pin male connector as illustrated.

- NOTES:
- (4) #0-80 MOUNTING HOLES ON A Ø2.000 B.C. 90° APART.
 - (3) #2-56 MOUNTING HOLES ON A Ø1.979 B.C. 120° APART.
 - (3) #4-40 MOUNTING HOLES ON A Ø2.425 B.C. 120° APART.
 - ALL DIMENSIONS MAX
- [MM]
[INCH]

HOUSING/CONNECTOR LAYOUT

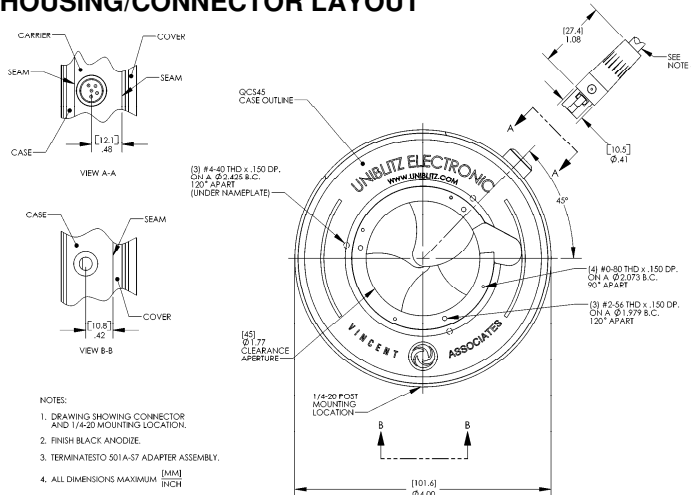


Figure 3

This drawing illustrates 5-pin connector and 1/4-20 threaded hole layout for the QCS45 series #3 housed style.

501A-S7 ADAPTER ASSEMBLY LAYOUT

Figure 4 illustrates the 501A-S7 adapter included with the QCS45 to allow connection to VCM/VMM type controllers

Figure 4

