Overview

The Uniblitz XRS6 has been designed specifically for x-ray switching applications. The innovative platinum-iridium (PtIr) blade design allows beam extinction of 90% up to 30 keV x-ray energy (based upon the tenth value extinction of PtIr). The XRS6 is well suited for applications such as x-ray crystallography, medical x-ray imaging, etc.

Uni-stable shutter devices, like the XRS6, require power to hold the blades in the open state.

Key Features

- 6mm aperture
- Uni-stable operation
- Capable of blocking x-ray energy (30 KeV)
- RoHS Compliant
- Transfer time on opening: 3.2 milliseconds
- Total opening time: 4.4 milliseconds
- Configured for the VCM-D1 Shutter Driver

Need Support? Please visit our website or email us at info@uniblitz.com.

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**Product Options**

**XRS6**

1. **Shutter Series:**
   - **XRS6**

2. **Driver Compatibility:**
   - **S:** Use with VCM-D1 (Std.)
   - **E:** Use with D880C or VED24

3. **Housing:**
   - **1:** Un-Housed
   - **2:** #2 Housing

4. **Blade Coating:**
   - **P:** 0.01" thick PtIr (10% iridium, 90% platinum)

5. **Electronic Sync:**
   - **0:** Omitted
   - **1:** Included

6. **Connector:**
   - **L:** 18" flying leads *(Un-housed only)*
   - Leave blank for 7-pin Wire Pro connector

7. **Encapsulated Coil:**
   - **EC:** Included
   - Leave blank if not required

8. **Mount:** *(#2 housing only)*
   - **21:** Zeiss Axiovert
   - **24:** Olympus BX/IX
   - **27:** Nikon
   - **105:** C-Mount (Male)
   - **106:** C-Mount (Female)
   - Leave blank if not required

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**Shutter Timing**

**Ex: XRS6S2P0-EC-21**

- **O - A** Delay time on opening after current applied: 1.2 msec.
- **A - C** Transfer time on opening: 3.2 msec.
- **O - C** Total opening time: 4.4 msec.
- **C - E** Min. dwell time with min. input pulse: 5.6 msec.
- **B - F** Min. equivalent exp. time: 2.0 msec.
- **E - G** Transfer time on closing: 3.8 msec.
- **A - G** Total window time: 9.0 msec.
- **MET** Min. exposure time: 5.0 msec.
- **TEP** Typical exposure pulse: >6.4 msec.
Technical Specifications

### Coil Resistance

<table>
<thead>
<tr>
<th>Resistance</th>
<th>Voltage to Open</th>
<th>Hold Voltage (Nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 Ω</td>
<td>+65 VDC</td>
<td>+10 VDC</td>
</tr>
</tbody>
</table>

1. Voltage level required across actuator coil when being held in the open position.
2. (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.

### Series Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Weight (Unhoused)</th>
<th>Weight (Housed)</th>
<th>Operating Temp.</th>
<th>Max. Opening Bounce</th>
<th>Max. Closing Bounce</th>
<th>Max. Freq. of Operation</th>
<th>Number of Shutter Blades</th>
</tr>
</thead>
<tbody>
<tr>
<td>XRS6</td>
<td>1.20 oz (0.04 kg)</td>
<td>7.46 oz (0.21 kg)</td>
<td>0 - 80 °C</td>
<td>15%</td>
<td>5%</td>
<td>10 Hz / 50 Hz</td>
<td>1</td>
</tr>
</tbody>
</table>

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 XRS6, 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.**
NOTES:
1. (3) #2-56 MOUNTING HOLES ON A \( \varnothing1.204 \) BOLT CIRCLE 120° APART.
(3) #2-56 MOUNTING HOLES ON A \( \varnothing1.578 \) BOLT CIRCLE 120° APART.
2. ALL DIMENSIONS [MM] INCH.
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 MAX. [MM] INCH

WHEN FEMALE CONNECTOR IS ATTACHED, MAXIMUM DISTANCE FROM CASE WILL BE 1.375 [34.9] AS SHOWN

SEE NOTE 3

(3) 2-56 THREAD x .150 DEEP ON Ø 1.578 BOLT CIRCLE 120° APART

(3) 2-56 THREAD x .150 DEEP ON Ø 1.204 BOLT CIRCLE 120° APART

CASE
SEAM
COVER

VIEW A-A

CASE
SEAM
COVER

[7.6] .30

VIEW B-B

[6.4] Ø .25 CLEARANCE APERTURE

XRS6 #2 CASE OUTLINE

50°

152°

[79.0] Ø 3.11