

Ensenso X/XR Static Lenses

Affected Products and Changes:	All Ensenso X & XR models
Type of Product Change:	<input checked="" type="checkbox"/> Optical Specification
Document Version:	1.1
Document Release Date:	2021-06-09
Date of change:	2021-07-01 (prelim.) – For Ensenso X this change will follow the front Lens Tube Adaptor change

Reasons and overview of the product changes

The object lenses used in Ensenso X & XR models are changed to new “static” lenses with increased robustness versus mechanical force on the lenses. This provides additional stability of the optical setup and calibration.

- The mechanical lens design is using locking nut and static diaphragm aperture instead of integrated focusing mechanics and blade-based aperture.
- The static lenses have larger outer diameter of 34.0 mm (versus 29.5mm before).
- The static lenses offer a fixed set of apertures F=1.6, F=4.0, F=8.0. Once implemented, the Ensenso selector will result in configurations using these apertures only.
- The static lenses can be identified by a knurled lock ring around the lens body.



Static lens sample is shown on the right.

Recommended actions for customers

Though usually large apertures are preferred in Ensenso X/XR model selection, for a given model this can cause an updated aperture.

E.g., the following table shows a comparison for the model X36-5CP-16/23/2600-400/2600 with F=2.3 which can be updated to either F=1.6 (shorter operating distance range, greater light throughput) or F=4.0 (longer operating distance range, less light throughput):

Initial model:	X36-5CP-16/ 23 /2600-400/2600 Operating distance 1900 – 4200mm	X36-5CP-16/ 23 /2600-400/2600 Operating distance 1900 – 4200mm
New model:	X36-5CP-16/ 16 /2600-400/2600 Operating distance 2000 – 3600mm	X36-5CP-16/ 40 /2600-400/2600 Operating distance 1500 – 5000mm
Optics blur comparison		

Custom apertures can be made available on request, please contact IDS Sales.