



#### Features

- Very compact but suitable to large image format
- For industrial cameras up to sensor sizes of 24x36 mm or 41mm line sensors
- Precise manual focusing
- Robust full-metal construction
- Features special screws to fix focus and aperture settings even in rough situations
- Due to light weight resistant against vibrations and shocks
- Large angular field of 91°

#### **Camera Mount**

M42x1 screw mount (18 mm FFD)



## **Technical Specifications**



Х	Υ	Z	А	В
67.0 mm (inf.)	61.7 mm	Ø = 62.0 mm	1.14 mm (inf.)	65.45 mm (inf.)

Focal length	21 mm		
Aperture range	f/2.8 - f/22		
Number of elements / groups	11/9		
Min. working distance (object to sensor)	250 mm (0.82 ft.) – ∞		
Min. free working distance	160 mm (0.52 ft.) – ∞		
Angular field* (diag. / horiz. / vert.)	91 / 81 / 59°		
Max. diameter of image field	43.3 mm (1.7")		
Flange focal length	18.0 mm		
Coverage at close range	281 x 187 mm (11.0 x 7.3"), line 319 mm (12.5")		
Image ratio at close range	1:7.81		
Filter-thread	M 52 x 0.75		
Weight	448 g (1.0 lbs.)		
Camera mount	M42 (18.0 mm FFD)		

\* referring to 24 x 36 mm format resp. 43 mm line



### **Relative Illuminance\***



### E [%]

The relative illuminance shows the image brightness over the image height u' in relation to the image center.

f-number = 2.8
f-number = 4
f-number = 5.6

### **Relative Distortion\***



### V [%]

The relative distortion shows the deviation of the image height from the expected image height u' in percent.



### **MTF Charts\***



### Contrast [%]

The Modulation Transfer (MTF) as a function of image height (u) and slit orientation (sagittal, tangential) has been measured with white light at spatial frequencies of R = 10, 20 and 40 cycles/mm.

#### F-Number 2.8

\_\_\_ Sagittal ... Tangential



\*Data for infinite focus setting



## **Spectral Transmission**





## Sketch of the M42x1 Interface (FFD 18.0 mm)



The diameter of the camera/lens adapter must not exceed 60 mm at the interface to the lens!