Lenses

1/3“ Manual vario lenses with CS mount

Art. No. 11720 **Model name** VC-ZM28-12CS **Version** 2,8 - 12 mm , F1,4-22 manual
Art. No. 20109 **Model name** VC-ZM35-8CS **Version** 3,5 - 8,0 mm, F1,4-22 manual
Art. No. 11006 **Model name** VC-ZM05-50CS **Version** 5,0 - 50 mm , F1,7-22 manual

VDE **CE** **EMC**

These manual zoom lenses guarantee low distortion and high resolution in details by improved performance of contrast.

The lenses can operate at any light condition (twilight to bright sunshine) if the camera attached works with auto shutter function (1/50 - 1/100000 sec.).

The high speed shutter function of the camera offers even much better sharpness at motions in the picture than the automatic control of the iris by DC lenses only.

Refer to the list below about the advantage of operating a camera with auto shutter and using manual iris lens.

Advantage use of VC manual iris lenses:

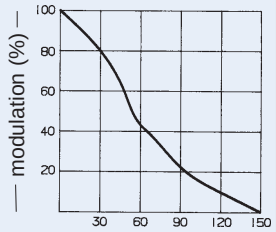
1. *No mechanical parts (abrasion)*
2. *No loss in transmission by grey spot filter*
3. *Sharpness in fast motion pictures by high speed shutter control of the camera*
4. *IR-correction by coated glass elements*
5. *High transmission by steady aperture for constant focus*
6. *Low price structure*

Technical Datas

Art. No.	11720	20109	11006
Dimensions (Ø x L)	36 x 68mm	32 x 45mm	44 x 62mm
Weight	126g	84g	110g

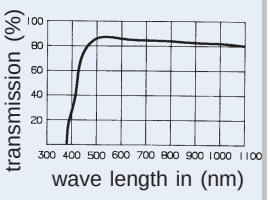
Mutal technical datas

Designed for b/w and colour cameras	
image format	4,8 x 3,6 mm (1/3“)
modulation deepth	>90%
spectral wave length	400 - 1200 nm
aperture	98%
sharpness on edge	above 80%
brightness on edge	above 60%
focal range	manual 0,2 m - ∞
environmental temperature	-10° to +50°C
lens mount	CS-Mount
lens coating	yes (IR-corrected)
back focal length	12,5 mm
electrical safety	60065 + 60950
MTBF	80.000 hours
EMC	EN 50081+82, CE-Certification



Spatial frequency in double lines per mm (l/mm)

The modulation transmission function (MTF) of the manual lenses without grey spot filter offers a modulation deepth of 80% at 60 TVL/mm or 40% at 120TVL/mm.



The high spectral transmission by low dispersion of the used glass elements are the basic reason for the IR corrected performance of these lenses.

Picture performance of quick motions in comparison

Using manual iris lens **with** auto shutter function of the camera

Using DC iris without auto shutter function of the camera

The range of the vario lenses provides a perfect viewing by the camera for areas as close as 1m and as far as 100m.

variable focal length	variable angle	Distance between camera and subject									
		1m	2m	3m	4m	5m	10m	30m	50m	80m	100m
		wideness of picture view according to the lens angle (m)									
3,5mm	68°	1,2	2,4	3,6	4,8	6,0	12	36	60	96	120
4,5mm	56°	1	2	3	4	5	10	30	50	80	100
5,0mm	50°	0,85	1,7	2,5	3,4	4,2	8,5	25	42	68	85
8,0mm	34°	0,55	1,1	1,7	2,2	2,8	5,5	17	28	44	55
10mm	28°	0,4	0,8	1,2	1,6	2	4	12	20	32	40
15mm	18°	0,25	0,5	0,75	1	1,25	2,5	7,5	12,5	20	25
50mm	5°	0,1	0,2	0,3	0,4	0,5	1	3	5	8	10

range

2,5 m is the maximum wideness in order to recognize a strange face
4,5 m is the maximum wideness in order to recognize a car plate
25 m is the maximum wideness in order to recognize subjects at least 1m wide