

Lenses by SCHNEIDER KREUZNACH

LENS TYPE	PAGE
Standard lenses / 3-CCD lenses	1-2
Compact series	2
C-Mount lenses IR (400-1000nm)	3
Macro system	4
Bilateral telecentric lenses	4
Unifoc 58/76	5

Standard lenses / 3-CCD lenses

C-mount lenses of our standard series can be used for sensor sizes up to 2/3", some of them even up to 1" format. Two of the lenses have a very high relative aperture of 0.95 which results in excellent image quality even under low illumination conditions. Besides the fixed focal length lenses, two zoom lenses are available – one of them also in motorized version. The two lenses of the 3-CCD series are designed for 3-CCD colour cameras with a maximum sensor size of 1/3". The special lens design considers the colour beam splitter and the small depth of insertion of such cameras.



Designation (Schneider Code No.)	Format [Zoll]	f-stop range	Focusing range [m]	Magnification range	Remarks
XENON 0.95/17-CM120 (10456)	2/3	0,95 – 11	∞ – 0,15	1:∞ – 1:7	with fixing screws for iris and focus
XENOPLAN 1,7/17-CM120 (10892)		1,7 – 16	∞ – 0,30	1:∞ – 1:15	
VARIGON 1.8/12.5-75-CM123 (13462)		1,8 – 16	∞ – 0,50	1:∞ – 1:36	
VARIGON 1.8/10-100-CM123 (13714)		1,8 – 16	∞ – 1,00	1:∞ – 1:90	with spot filter
VARIGON 1.8/10-100-CP123VF (13714)					with spot filter; potentiometers for focus and zoom
VARIGON 1.8/10-100-CP123VS (13714)					with spot filter, video signal control
VARIGON 1.8/10-100-CP123VS/PS (13714)					with spot filter, video signal control, potentiometers for focus and zoom
CINEGON 1.8/10-CM120 (12849)		1	1,8 – 16	∞ – 0,20	1:∞ – 1:13
CINEGON 1.4/16-CM120 (37146)	1,4 – 16		∞ – 0,30	1:∞ – 1:14	with fixing screws for iris and focus
XENON 0.95/25-CM120 (12101)	0,95 – 11		∞ – 0,30	1:∞ – 1:10	with fixing screws for iris and focus
XENOPLAN 1,9/25-CM120 (10894)	1,9 – 16		∞ – 0,60	1:∞ – 1:20	
Cinegon 2.0/5.3-CM120 (36939)	1/3	1,8 – 22	∞ – 0,07	1:∞ – 1:3	for 3 CCD cameras, with fixing screw for iris
Cinegon 1.7/10-CM120 (36942)		1,7 – 32	∞ – 0,10	1:∞ – 1:2,5	for 3 CCD cameras, with fixing screw for iris

Accessories for the Standard lenses (continued from last page)

Designation	Schneider Code No.	Remarks
CS-Mount adapter	25081	Allows C-mount lenses to be mounted on CS-mount cameras
C-Mount extension tube 5mm	39316	To be mounted between lens and camera
C-Mount extension tube 8mm	39315	
C-Mount extension tube 10mm	39312	
Clamping device for 3-CCD lenses	10277	For Cinegon 2.0/5.3-CM120 and Cinegon 1.7/10-CM120
Clamping device for zoom lenses	20057	for VGN1.8/12.5-75 and VGN1.8/10-100

Compact series

Optically and mechanically designed for the specialized needs of industrial image processing, these lenses are an invaluable component for high-end machine vision systems. In accordance with the spectral sensitivity range of common CCD and CMOS sensors, the 2/3" lenses are corrected and broadband coated for the spectral range of 400-1000nm (VIS+NIR). The lenses for larger sized sensors up to a diagonal of 22mm are also broadband coated and may be used alternatively in the visible or near infrared range. The robust mechanical design with lockable focus and iris setting mechanism guarantees long-term stability even in typical production environments.



Designation (Schneider Code No.)	Extension tube [mm]	Magnification range [1 :]	Working distance [mm]	Object to image distance [mm]	Object size with		Remarks
					1/2"- sensor	2/3"- sensor	
CNG 1.8/4.8 (17528)	without	∞ - 2,7	∞ - 0,0	∞ - 61	∞ x ∞ - 13,0 x 17,3	∞ x ∞ - 17,8 x 23,8	Image circle diameter 11mm (2/3")
CNG 1.4/8 (41823)	without	∞ - 1,7	∞ - 0,0	∞ - 56	∞ x ∞ - 8,0 x 10,7	∞ x ∞ - 11,0 x 14,7	
CNG 1.4/12 (22892)	without	∞ - 2,5	∞ - 57,7	∞ - 76	∞ x ∞ - 12,1 x 16,1	∞ x ∞ - 16,6 x 22,2	
XNP 1.4/17 (41831)	without	∞ - 3,5	∞ - 42,0	∞ - 99	∞ x ∞ - 16,8 x 22,5	∞ x ∞ - 23,2 x 30,9	
	5	3,5 - 1,8	42,0 - 11,2	99 - 73	16,8 x 22,5 - 8,4 x 11,3	23,2 x 30,9 - 11,6 x 15,5	
	8	2,2 - 1,4	18,9 - 4,0	79 - 69	10,6 x 14,1 - 6,5 x 8,6	14,5 x 19,4 - 8,9 x 11,9	
XNP 1.4/23 (41835)	without	∞ - 4,5	∞ - 81,7	∞ - 142	∞ x ∞ - 21,6 x 28,8	∞ x ∞ - 29,7 x 39,6	
	5	4,5 - 2,3	81,7 - 31,1	142 - 97	21,6 x 28,8 - 10,8 x 14,4	29,7 x 39,6 - 14,8 x 19,8	
	8	2,8 - 1,7	43,7 - 19,4	107 - 88	13,5 x 18,0 - 8,3 x 11,1	18,5 x 24,7 - 11,4 x 15,2	
XNP 1.9/35 (41877)	without	∞ - 7,0	∞ - 246	∞ - 305	∞ x ∞ - 33,6 x 44,7	∞ x ∞ - 46,1 x 61,5	
	5	7,0 - 3,5	246 - 125	305 - 188	33,6 x 44,7 - 16,8 x 22,3	46,1 x 61,5 - 23,0 x 30,7	
	8	4,4 - 2,7	155 - 96,6	217 - 163	21,0 x 28,0 - 12,9 x 17,2		
	10	3,5 - 2,3	125 - 84,1	188 - 153	16,8 x 22,3 - 11,2 x 14,9	28,8 x 38,5 - 17,8 x 23,7	
	13 (8+5)	2,7 - 1,9	96,6 - 70,5	163 - 142	12,9 x 17,2 - 9,3 x 12,4	23,0 x 30,7 - 15,4 x 20,5	
XNP 2.0/28 (17224)	without	∞ - 5,9	∞ - 174	∞ - 232	∞ x ∞ - 28,3 x 37,8	∞ x ∞ - 38,9 x 51,9	Image circle diameter 22mm
	5	5,9 - 2,9	174 - 88,3	232 - 151	28,3 x 37,8 - 13,9 x 18,6	38,9 x 51,9 - 19,1 x 25,5	
	8	3,7 - 2,3	110 - 68,5	171 - 135	17,8 x 23,4 - 11,0 x 14,7	24,4 x 32,6 - 15,2 x 20,2	
	10	2,9 - 2,0	88,3 - 59,7	151 - 128	13,9 x 18,6 - 9,6 x 12,8	19,1 x 25,5 - 13,2 x 17,6	
XNP 2.8/50 (40122)	without	∞ - 10,0	∞ - 530	∞ - 606	∞ x ∞ - 48,0 x 64,0	∞ x ∞ - 66,0 x 88,0	
	5	10,0 - 5,0	530 - 278	606 - 359	48,0 x 64,0 - 24,0 x 32,0	66,0 x 88,0 - 33,0 x 44,0	
	8	6,3 - 3,9	341 - 220	420 - 304	30,2 x 40,3 - 18,7 x 25,0	41,6 x 55,4 - 25,7 x 34,3	
	10	5,0 - 3,3	278 - 195	359 - 280	24,0 x 32,0 - 15,8 x 21,1	33,0 x 44,0 - 21,8 x 29,0	
	13 (8+5)	3,9 - 2,8	220 - 167	304 - 255	18,7 x 25,0 - 13,4 x 17,9	25,7 x 34,3 - 18,5 x 24,6	
15 (10+5)	3,3 - 2,5	195 - 153	280 - 243	15,8 x 21,1 - 12,0 x 16,0	21,8 x 29,0 - 16,5 x 22,0		

Accessories for lenses of the compact series

Designation	Schneider-Code No.	Remarks
CS-Mount adapter	25081	allows C-mount lenses to be mounted on CS-mount cameras
C-Mount extension tube 5mm	39316	to be mounted between lens and camera
C-Mount extension tube 8mm	39315	
C-Mount extension tube 10mm	39312	
Filter holder for CNG 1.8/4.8	14604	for filters with thread M62x0,75
Assembly kit	20042	allen screws and key for additional iris lock

C-Mount lenses IR (400-1000nm)

The 2/3" C-Mount lenses are designed for a spectral range of 400-1000 nm and can be used in the visible and near infrared range, practically without focus difference. The high optical performance is achieved by a sophisticated optical design and the use of ultra low dispersion glass. A special broadband coating reduces stray light and increases transmission over the whole spectral range. The lenses are available with manual, motorized or video signal controlled iris, which makes them suitable for video surveillance as well as for technical applications.



Designation (Schneider Code No.)	f-stop range without/ with spot filter	hor. angle of view [degree]			MOD [m]	Object dimensions(B x H) [mm] MOD 1 m 5 m			Remarks
		2/3"	1/2"	1/3"		2/3"	1/2"	1/3"	
Cinegon 1.8/4.8-CM120 (10432)									manual iris
Cinegon 1.8/4.8-CP100VF (10550)	1,8 - 22 2,1- >2000	91	69	53	1	24 x 18 1650 x 1240 8610 x 6460	17 x 13 1200 x 900 6260 x 4700	13 x 10 900 x 680 4700 x 3520	motorized iris, spot filter
Cinegon 1.8/4.8-CP100VS (10551)									motorized iris, spot filter, Video signal control
Cinegon 1.4/8-CM120 (12543)									manual iris
Cinegon 1.4/8-CP100VF (10982)	1,4 - 22 1,6- >2000	55	42	33	5	18 x 14 1000 x 750 5200 x 3900	13 x 10 730 x 550 3780 x 2840	10 x 7 550 x 410 2840 x 2130	motorized iris, spot filter
Cinegon 1.4/8-CP100VS (10667)									motorized iris, spot filter, Video signal control
Cinegon 1.4/12-CM120 (10423)									manual iris
Cinegon 1.4/12-CP100VF (10568)	1,4 - 22 1,6- >2000	38	29	22	20	28 x 21 670 x 500 3470 x 2600	20 x 15 480 x 370 2520 x 1890	15 x 11 370 x 270 1890 x 1420	motorized iris, spot filter
Cinegon 1.4/12-CP100VS (10576)									motorized iris, spot filter, Video signal control
Xenoplan 1.4/17-CM120 (10623)									manual iris
Xenoplan 1.4/17-CP100VF (10578)	1,4 - 22 1,6- >2000	28	21	16	70	39 x 29 480 x 360 2480 x 1860	28 x 21 350 x 260 1800 x 1350	21 x 16 260 x 200 1350 x 1020	motorized iris, spot filter
Xenoplan 1.4/17-CP100VS (10579)									motorized iris, spot filter, Video signal control
Xenoplan 1.4/23-CM120 (10425)									manual iris
Xenoplan 1.4/23-CP100VF (10581)	1,4 - 22 1,6- >2000	22	16	12	115	50 x 37 370 x 280 1940 x 1450	36 x 27 270 x 200 1410 x 1060	27 x 20 200 x 150 1060 x 790	motorized iris, spot filter
Xenoplan 1.4/23-CP100VS (10582)									motorized iris, spot filter, Video signal control
Xenoplan 1.9/35-CM120 (39959)									manual iris
Xenoplan 1.9/35-CP100VF (39957)	1,9 - 22 2,1- >2000	14	10	7,9	310	77 x 58 250 x 190 1260 x 940	56 x 42 180 x 140 920 x 690	42 x 32 140 x 100 690 x 510	motorized iris, spot filter
Xenoplan 1.9/35-CP100VS (39956)									motorized iris, spot filter, Video signal control
Tele-Xenar 2.2/70-CM120 (39963)									manual iris
Tele-Xenar 2.2/70-CP100VF (39961)	2,2 - 22 2,3- >2000	7,2	5,2	3,9	1250	154 x 116 - 620 x 470	112 x 84 - 450 x 340	84 x 63 - 340 x 260	motorized iris, spot filter
Tele-Xenar 2.2/70-CP100VS (39960)									motorized iris, spot filter, Video signal control

MACRO system

The compact and robust Macro System, consisting of SCHNEIDER enlarging lenses in a special diaphragm body, helical mount, extension rings and camera adapters, is the best choice for close-up and macro images of outstanding quality. The system can be adapted on many different cameras for photographic, industrial and scientific applications. The lenses can be mounted in reverse position for enlarged imaging without any additional accessory.



Designation	Schneider Code No.	Nominal image circle diameter [mm]	Flange to image distance [mm]	Remarks
Componon 2,8/28	14794	30,0	25,13	Aperture 2,8 recommended only for maximum diameter of 11mm (2/3")
Componon 2,8/35	14792	32,5	30,75	
Apo-Componon 2,8/40	14798	43,2	38,11	
Apo-Componon 4,0/45	14783	43,2	42,35	
Componon-S 2,8/50	14796	43,2	42,00	
Apo-Componon 4,0/60	14802	60,0	53,29	
Componon-S 4,0/80	14780	80,6	75,45	
Apo-Componon 4,5/90	14767	87,8	85,51	
Componon-S 5,6/100	35142	108,0	95,87	
Apo-Componon 5,6/80	35145	141,0 (1:1)	158,22 (1:1)	For close-up scales 1:4 – 4:1

Accessories

Designation	Schneider Code No.	Mount	Max. diameter [mm]	Extension [mm]	Remarks
Makro-Unifoc 12	11726	V/V	48	17,4 – 29,4	Helical mounts
Makro-Unifoc 6	36464			17,4 – 23,4	
Zwischenring-6mm	20176		44	6	Extension tubes
Zwischenring-8mm	20177			8	
Zwischenring-10mm	20178			10	
Zwischenring-25mm	20179			25	
Zwischenring-50mm	20154			50	
Zwischenring-75mm	20155			75	
Montagesatz	20042	Screws and allen key (Spare)			

Designation	Schneider Code No.	Extension [mm]	Designation	Schneider Code No.	Extension [mm]
Adapter Canon	21623	13,8	Adapter Rolleiflex	21609	11,3
Adapter Contax/Yashica	21653	10,3	Adapter C-Mount	20052	6,5
Adapter Pentax K	21601		Adapter T2 (M42 x 0,75)	20053	
Adapter Leica	25771	8,8	Adapter M42x1	20059	
Adapter Minolta AF	21691	11,3	Adapter Leica (M39 x 26Gg)	20054	
Adapter Minolta MD	21613	12,3	Adapter I (M36x0,75)	20056	
Adapter Nikon	21610	9,3	Adapter O (M29,5 x 0,5)	20055	
Adapter Olympus	21657	9,8			

Bilateral telecentric lenses

The bilateral telecentric lenses for matrix and linescan cameras set a new standard of lens performance for optical metrology. The absolute distortion in the image plane of these lenses is only a few micrometers. The lenses can be focussed on the image side in a range of +/- 3mm, which means that the working distance can be adjusted within the defined limits without any change in the lens magnification. Thus the lenses can easily be adjusted to fit the space conditions in the application. With the numeric aperture of 0.14 or 0.13, the light intensity of these lenses is remarkably higher than other lenses in the market. The integrated iris allows easy setting and locking for the demands of any measurement task.



Designation	Object size [mm]		Working distance [mm]	Num. aperture	Distortion [µm]	Telecentric depth [mm]
	1/2" sensor	2/3" sensor				
Xenoplan 1:1	6,4 x 4,8	8,8 x 6,6	47 ± 3	0,14	< 1	± 2
Xenoplan 1:2	12,8 x 9,6	17,6 x 13,2	195 ± 12		< 8	± 4
Xenoplan 1:3	19,2 x 14,4	26,4 x 19,8	161 ± 27		< 20	± 6
Xenoplan 1:4	25,6 x 19,2	35,2 x 26,4	176 ± 48	0,13	< 3	± 8
Xenoplan 1:5	32,0 x 24,0	44,0 x 33,0	269 ± 75		< 1	± 10

Unifoc 58/76

The helical focusing mounts UNIFOC 58 and UNIFOC 76 are especially designed for the use of SCHNEIDER enlarging lenses in combination with linear and area CCD cameras. This combination allows the imaging of small objects with an extraordinary high image quality.



Designation (Schneider Code No.)	Image circle Ø [mm]	Extent. rings [mm]	Magnific. [1:]	Working distance [mm]	Object distance [mm]	Object size	
						1/2" sensor [mm x mm]	2/3" sensor [mm x mm]
Componon 4,0/28 (37275)	30,0	-	1,76 - 0,69	52 - 21	124 - 118	8,4 x 11,3 - 3,3 x 4,4	11,6 x 15,5 - 4,6 x 6,1
		1 x 25	0,76 - 0,44	21 - 13	118 - 136	3,4 x 4,5 - 2,1 x 2,8	4,7 x 6,2 - 2,9 x 3,9
		2 x 25	0,44 - 0,32	13 - 10	135 - 157	2,1 x 2,8 - 1,5 x 2,0	2,9 x 3,9 - 2,1 x 2,8
Componon 4,0/35 (37277)	32,5	-	3,07 - 0,94	112 - 38	184 - 136	14,8 x 19,7 - 4,5 x 6,0	20,3 x 27,1 - 6,2 x 8,3
		1 x 25	0,96 - 0,56	39 - 25	136 - 147	4,6 x 6,1 - 2,7 x 3,6	6,3 x 8,4 - 3,7 x 4,9
		2 x 25	0,57 - 0,40	25 - 19	147 - 167	2,7 x 3,6 - 1,9 x 2,6	3,7 x 4,9 - 2,6 x 3,5
APO-Componon HM 2,8/40 (19746)	43,2	-	11,16 - 1,41	476 - 71	548 - 169	53,6 x 71,4 - 6,8 x 9,0	73,6 x 98,2 - 9,3 x 12,4
		1 x 25	1,44 - 0,76	73 - 44	167 - 170	6,9 x 9,3 - 3,7 x 4,9	9,5 x 12,7 - 5,0 x 6,7
		2 x 25	0,77 - 0,52	45 - 34	167 - 182	3,7 x 4,9 - 2,5 x 3,3	5,1 x 6,8 - 3,5 x 4,6
APO-Componon HM 4,0/45 (39256)	43,2	-	∞ - 1,84	∞ - 104	∞ - 201	∞ x ∞ - 8,9 x 11,8	∞ x ∞ - 12,2 x 16,2
		1 x 25	1,90 - 0,92	106 - 61	203 - 184	9,2 x 12,1 - 4,4 x 5,9	12,5 x 16,7 - 6,1 x 8,1
		2 x 25	0,94 - 0,62	62 - 47	184 - 194	4,5 x 6,0 - 2,6 x 3,9	6,2 x 8,2 - 4,1 x 5,4
Componon-S 2,8/50 (16828)	43,2	-	∞ - 2,12	∞ - 138	∞ - 235	∞ x ∞ - 10,6 x 13,6	∞ x ∞ - 14,0 x 18,7
		1 x 25	2,18 - 1,06	414 - 82	238 - 204	10,5 x 14,0 - 5,1 x 6,8	14,4 x 19,2 - 7,0 x 9,3
		2 x 25	1,07 - 0,70	83 - 63	204 - 211	5,1 x 6,8 - 3,4 x 4,5	7,1 x 9,4 - 4,6 x 6,2
APO-Componon HM 4,0/60 (18928)	60,0	-	∞ - 4,21	∞ - 287	∞ - 384	∞ x ∞ - 20,2 x 27,0	∞ x ∞ - 27,8 x 37,1
		1 x 25	4,43 - 1,53	300 - 126	397 - 249	21,3 x 28,4 - 7,3 x 9,8	29,2 x 39,0 - 10,1 x 13,4
		2 x 25	1,65 - 0,93	128 - 91	250 - 238	7,5 x 10,0 - 4,5 x 6,0	10,3 x 13,7 - 6,2 x 8,2
Componon-S 4,0/80 (14850)	80,6	1 x 25	∞ - 5,35	∞ - 482	∞ - 604	∞ x ∞ - 25,7 x 34,3	∞ x ∞ - 35,3 x 47,1
		2 x 25	5,61 - 2,01	503 - 213	625 - 361	26,7 x 35,9 - 9,7 x 12,9	37,1 x 49,4 - 13,3 x 17,7
		3 x 25	2,04 - 1,24	216 - 151	363 - 323	9,8 x 13,1 - 6,0 x 7,9	13,5 x 18,0 - 8,2 x 10,9
APO-Componon HM 4,5/90 (37834)	87,8	1 x 25	∞ - 13,83	∞ - 1308	∞ - 1431	∞ x ∞ - 66,4 x 88,5	∞ x ∞ - 91,3 x 122
		2 x 25	15,50 - 2,86	1459 - 319	1580 - 466	74,4 x 99,2 - 13,7 x 18,3	102 x 136 - 18,9 x 25,2
		3 x 25	2,93 - 1,60	325 - 205	471 - 377	14,1 x 18,8 - 7,7 x 10,2	19,3 x 25,8 - 10,6 x 14,1
Componon-S 5,6/100 (14022)	96,8	2 x 25	∞ - 4,71	∞ - 558	∞ - 706	∞ x ∞ - 22,6 x 30,1	∞ x ∞ - 31,1 x 41,5
		3 x 25	4,87 - 2,19	574 - 300	721 - 473	23,4 x 31,2 - 10,5 x 14,0	32,1 x 42,9 - 14,5 x 19,3
Componon-S 5,6/135 (39569)	150,9	2 x 25	∞ - 6,98	∞ - 1055	∞ - 1235	∞ x ∞ - 33,5 x 44,7	∞ x ∞ - 46,1 x 61,4
		3 x 25	7,25 - 3,05	1091 - 522	1270 - 727	34,8 x 46,4 - 14,6 x 19,5	47,8 x 63,8 - 20,1 x 26,8
Componon-S 5,6/150 (39570)	150,9	2 x 25	∞ - 31,89	∞ - 4917	∞ - 5098	∞ x ∞ - 153 x 204	∞ x ∞ - 210 x 280
		3 x 25	37,44 - 5,06	5752 - 883	5933 - 1089	179 x 239 - 24,3 x 32,4	247 x 329 - 33,4 x 44,5

Designation	Schneider Code No.	Remarks
UNIFOC 58	39549	Helical mount
Extention tube 25mm	41643	Accessories for UNIFOC 58
C-Mount Adaper	41629	
Adapter T2/Nikon	21591	
Adapter T2/M42 x 1,0	21592	
UNIFOC 76	13048	Helical mount
Extention tube 10mm	13051	Accessories for UNIFOC 76
Extention tube 25mm	13050	
Apapter M58x0,75 / M72 x 0,75	13052	
Adapter for Componon-S 135/150	17231	

© Februar 2006, EURECA Messtechnik GmbH

No guaranty is given for he indicated facts in this document. Changes of technical specifications or our range of supply can be made without prior notice. Some used terms or names may be covered by trademarks of the respective companies.