

Furnace Probe Camera C1317F



Furnace probe camera CCBC1317F

Furnace probe camera consisting of CCD color camera C1317F, furnace probe lens and probe camera housing.

Probe housing

- Probe camera housing in 2 standard and long design
- Housing made of CrNi-steel or Titanium.
- Double walled housing for cooling water; with forced ventilation, temperature monitoring at the probe tip.
- Probe with straight viewing direction or 70° elbow view.
- Housing and viewing aperture air -purged for cooling purpose and keeping the viewing aperture clean.
- V-mounting flange for accurate centering of probe housing.

CCD-Camera

- High resolution color camera
- Interline transfer CCD image sensor with color raster filter
- Sensor size 1/3 inch.
- 625 lines, 50 fields/s according to CCIR (PAL)
- Without geometric distortions
- CCVS output $U_{pp} = 1\text{ V}$ into $75\ \Omega$
- resolution ≥ 450 TV lines, horizontal
- White balance automatic or manual
- Remote control parameterization possible via interface (TTL or RS485), thus enables full system integration
- Electronic zoom function (max 4 x)
- Electronic pan-and tilt function
- AGC adjustable from typical 0 dB to 24 dB (max 48 dB)
- Input voltage: 12V DC/ 24V AC

Lenses

- Furnace probe lens with viewing aperture 1,5 mm \varnothing
- Lenses with wide angle and wide depth of focus
- Lens with straight view, 70°, 94°, 110° diagonal view
- Lens with elbow view 70° and 70° diagonal view
- Auto-iris function, video controlled
- Camera adapter for 1/3", 1/2" and 2/3" image sensors
- With filter holder for 2 additional filters

Technical data

Camera

Type	CCD color camera
Temperature of use at tip of probe housing	$\leq 2000\ \text{°C}$
Degree of protection	IP 54 acc. To DIN 40050
Dimensions	as per data sheet probe housings
Connections	5 pole plug DC12C, CCVS signal

Cooling water

for probe camera housing

- Water	clean, filtered, chemically non-corros.
- Input overpressure	2 bar (max 4 bar)
- Inlet temperature	25 °C to 38 °C
- Outlet overpressure	0 bar, open to atmosphere max. 2 bar in closed circulation
- Outlet temperature	max. 40 °C
- Flow rate	2 to 20 l/min (20 l/min at ΔP of 4 bar; > 5 l/min with elbow viewing direction)

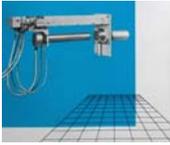
Volum of probe housing

Solids	< 10 mg/l
Carbonate hardness	< 1,8 mval/l (5° dH)
Non-carbonat hardness	< 1,8 mval/l (5° dH)
Total hardness	< 3,6 mval/l (10° dH)
pH value	6 to 7,5
Conductivity	< 0,5 mS/cm

Purging air

for viewing aperture of probe and front lens

Air condition	clean compressed air free of oil, water
Purity	99,999 % filtration referring to aerosoles of 0,01 μm diameter. Air supplied from compressed air unit.
Pressure	0,2 to 0,3 bar (max. 2,5 bar)
Temperature	< inlet temperature of cooling water or cold dried air with dew point < 0 °C
Consumption at 0,2 bar	appr. 2 m ³ /h



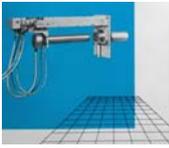
Furnace Probe Camera C1317F

Ordering data

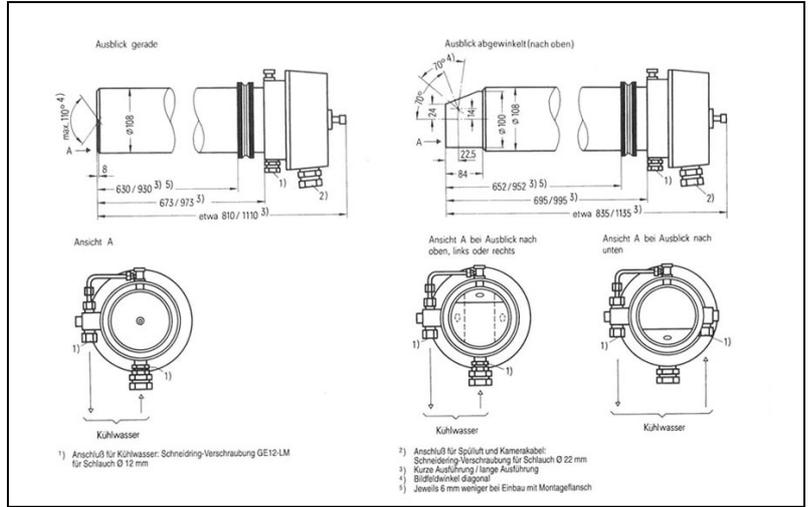
Item	Order No.:
Furnace Probe Camera C1317F ¹⁾ CCD color camera with furnace probe lens And probe camera housing 450 TV-lines, 50 fields/s	2GF1181 - 6
Probe camera housing - Made of CrNi steel short design long design - Made of Titanium short design long design	 E G B D
Viewing direction ¹⁾ (probe camera housing) - Straight viewing direction - Straight viewing direction, upright format image - Elbow viewing direction 70° upwards upwards, upright format image downwards downwards, upright format image to the left to the left, upright format image to the right to the right, upright format image	 A 0 B 0 C 0 D 0 E 0 F 0 G 0 H 0 J 0 K 0
Furnace probe lens ²⁾ with furnace probe lens, lens with video-controlled auto iris incl. 2 cleat glass plates BK7, fitted - Lens with straight viewing direction: diagonal angle of view 70° diagonal angle of view 94° diagonal angle of view 110° - Lens with elbow viewing direction, diagonal angle of view 70° ²⁾	 1 2 3 4
Camera cable for camera CCFC1315 with camera connection plug, 2,8 m long, heat-resistant up to 180°C same as above but cable length 3,1 m	G23942-D0009-D020-1 G23942-D0009-D021-1

¹⁾ Elbow view is obtained, using an internal prism. Thus features a mirror image. On request, special CCD camera with electronic mirror image function may be supplied, which enable display of upright and true-sided video image.

²⁾ A straight viewing direction of the probe camera housing necessitates a straight viewing direction of the furnace lens and vice versa. The same applies to the elbowed viewing direction.

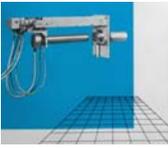


Probe Camera Housing, Water cooled

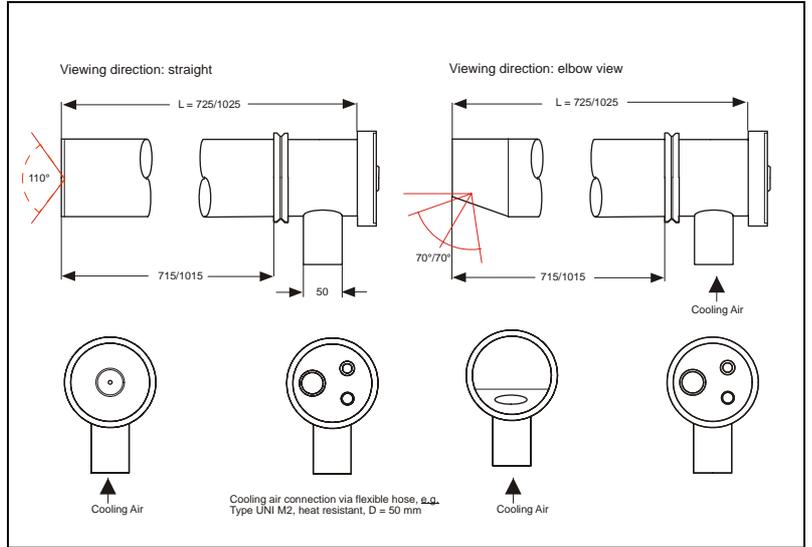


Ordering data

Item	Order no.
Probe camera housing, water cooled	2GF1700 - 8 <input type="checkbox"/> <input type="checkbox"/>
With V-flange, flange distance from tip of camera housing: 630 mm oder 930 mm (straight viewing direction) or 625 mm oder 925 mm (elbowed viewing direction)	
Design	
- Made of CrNi steel 1.4571	
Short design	M
Long design	N
- Made of Titan	
Short design	D
Long design	H
Viewing direction	
- straight	A
- upwards	B
- downwards	C
- to the left	D
- to the right	E



Probe Camera Housing, Air cooled



Ordering data

Item	Order no.
Probe camera housing, air cooled	2DK1000 - 1 <input type="checkbox"/> <input type="checkbox"/>
With adjustable V-flange, flange distance from tip of camera housing 715 mm or 1015 mm (straight viewing direction) or 715 mm or 1015 mm (elbowed viewing direction)	
Design	
- Made of CrNi steel 1.4571	
Short design	A
Long design	B
Viewing direction	
- straight	A
- upwards	B
- downwards	C
- to the left	D
- to the right	E