

FBP-1KF



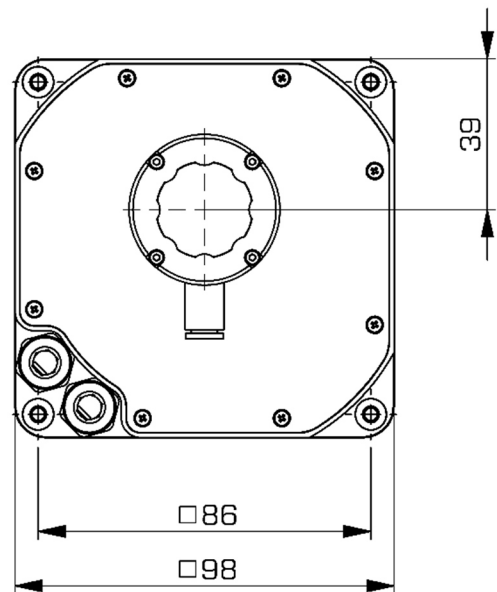
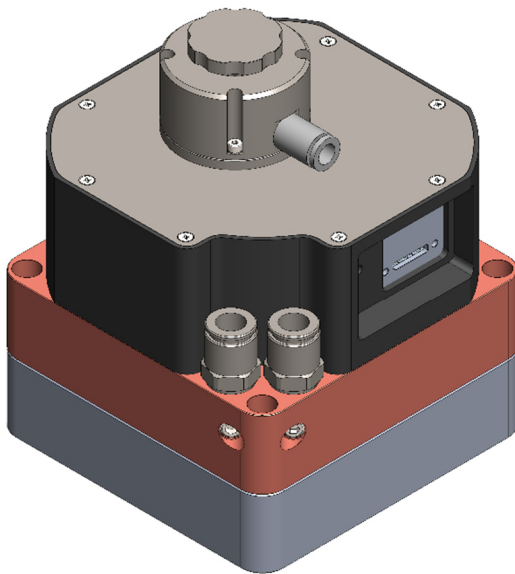
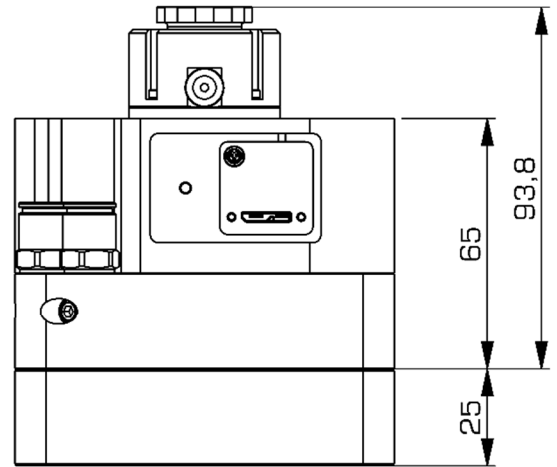
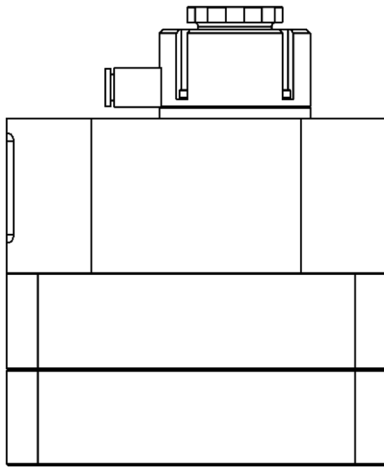
The Focus Beam Profiler FBP-1KF is a robust and compact analysis system to measure a focused laser with up to 400W power. The FBP-1KF is based on a multi-stage high-performance attenuator.

Its operational robustness and reliability ensures continuous use applications especially in industrial applications. The whole measuring process is controlled by CINOGY's software RayCi.

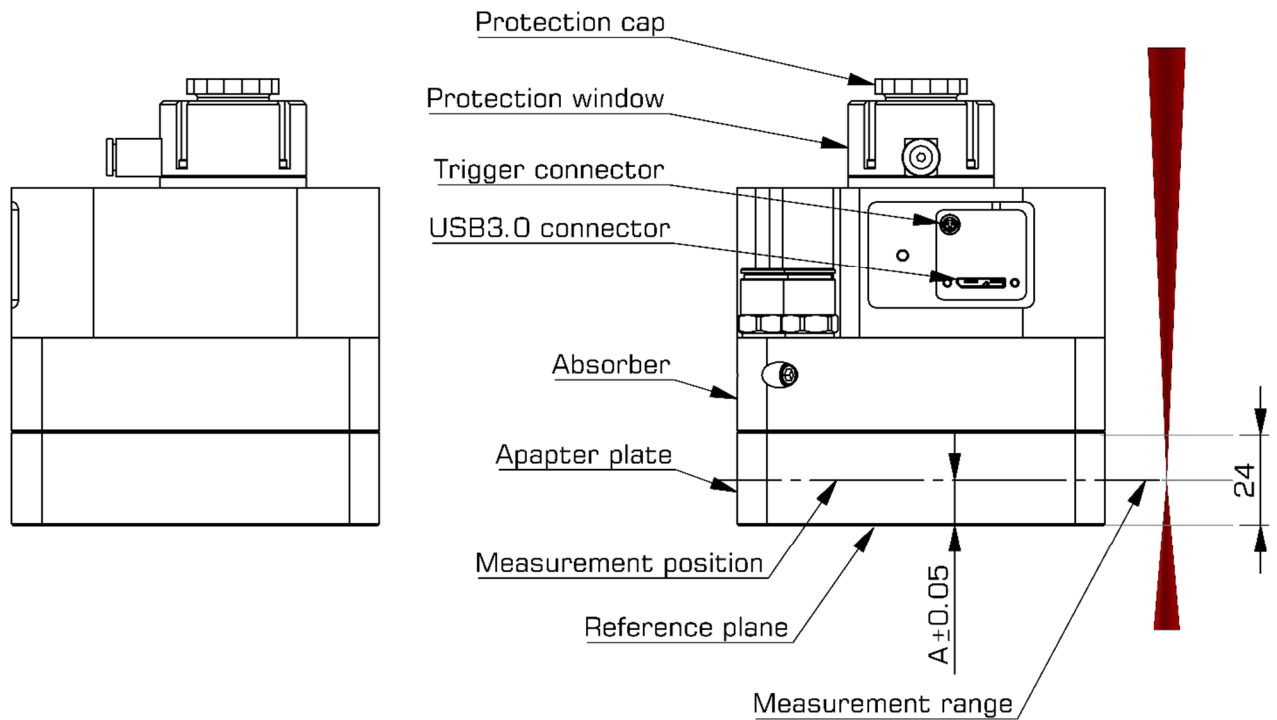
Specification

SENSOR DATA	FBP-1KF-5.3	FBP-1KF-5.3-3x
Option:	Without Objective	With 3x Objective
Spectral Response:		
1064nm (1030nm; 1070nm)	x	
Other	On Request	
Pixel Size:	5.3μm²	Effective 2μm² (*1)
Number of Pixel:	1.3MPixel	
Sensor Technology:	CMOS (frame rate 40Hz, exposure time 50μs – 100ms)	
Data Output:	10Bit	
Interface:	USB3.0 (USB2.0)	
FEATURES		
Focused Beam Size:		
Single-Mode	75μm - 1.2mm	30μm - 0.6mm
Multi-Mode	300μm - 1.2mm	300μm - 0.6mm
Measurement Range	± 12mm (other on request)	
Max NA / Divergence:	0.05 / 100mrad	
Angle of Incidence:	0 – 1.5°	
Max Input Laser Power:		
	400W@single-mode / 700W@multi-mode	
	Measurement Time with Water-Cooling @ 22°C: no limitation	
	Measurement Time without Water-Cooling: 20s@400W	
System Aperture:		
Clear Diameter	Ø 18mm (with AR-coated protection window)	
Input for Clean Air Flushing	Ø 6mm Hose (Optional: Coupling plug (NW2,7) with valve for double-sided shut off	
Optional Protection Window	1064nm (1030nm; 1070nm)	
Accuracy:		
Measurement Position (*1)	± 50μm	
Magnification Factor (*1)	-	2 – 4%
Waist Position	± 100μm	
Waist Size	2 – 4%	
M²-Value	2 – 4%	
Power Measurement (optional)	5 – 7%	
Software:	RayCi-Pro	
SPECIFICATIONS		
Mechanical Dimensions:	98 x 98 x 65mm³	
Weight:	~ 2kg	
Electrical Requirements:	Power Supply via USB	
Water-Cooling:	Water-Cooled Absorber, Tap or DI-Water: ≥ 2l/min, 1bar, 20-25°C, Ø 8mm Hose	
Dust Protection:	Flushing with Clean Air, Avoid Contamination of Optics cleaned, oil-free, dry, particles < 10nm	
Storage Temperature:	- 10°C...+ 60°C	
Operating Temperature:	+ 0°C...+ 40°C	
Regulations:	CE	
*1: Exact magnification factor and measurement position is determined during the calibration process and is added into the calibration files and certification.		

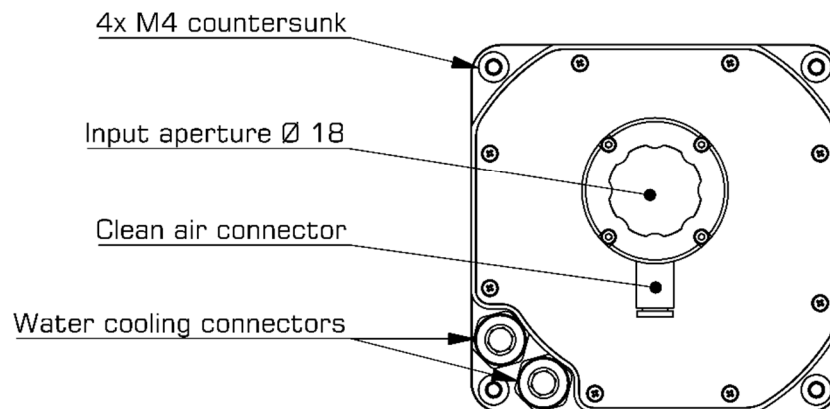
Dimension



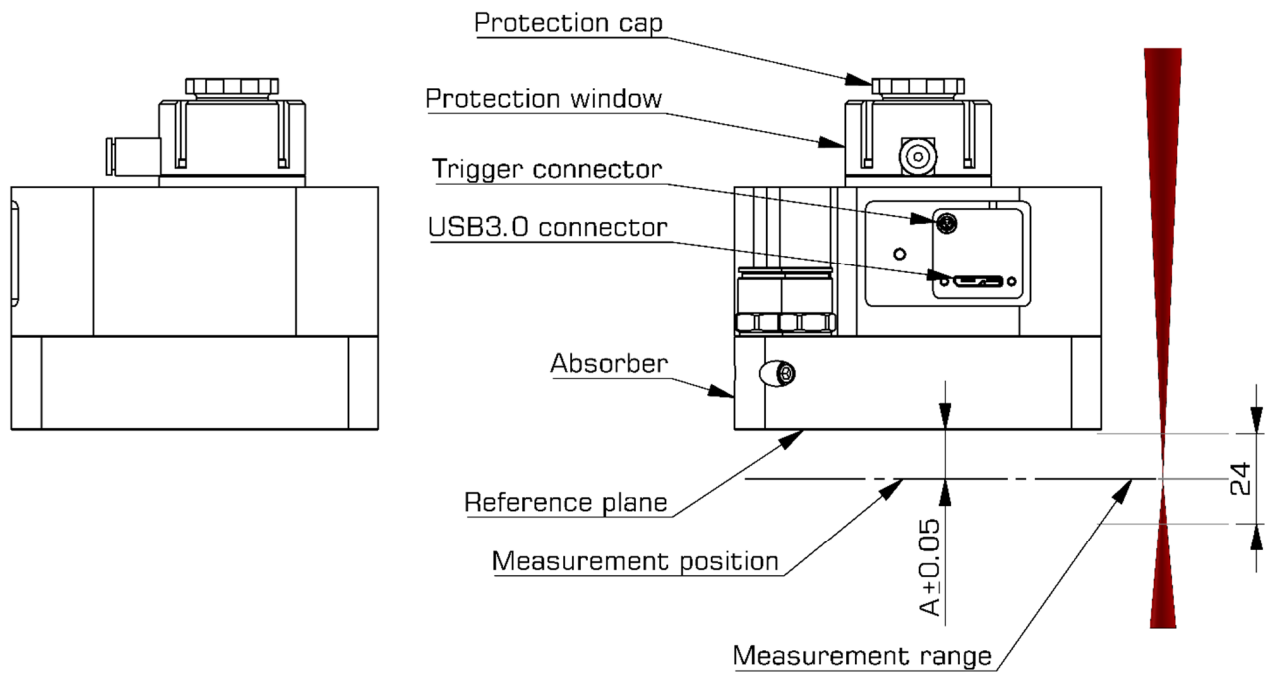
Description (Option 1 – with adapter plate)



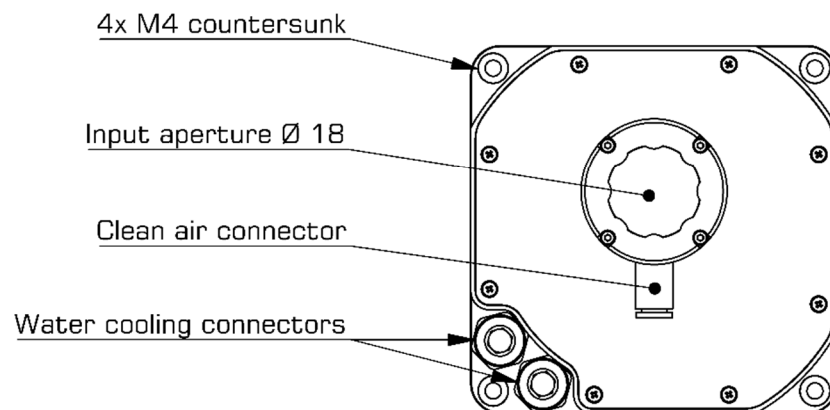
Value -A- is listed in the calibration certificate and is added in the software settings.
All results (positions) are corrected with value A.



Description (Option 2 – w/o adapter plate)



Value -A- is listed in the calibration certificate and is added in the software settings.
All results (positions) are corrected with value A.



FBP-2KF



The Focus Beam Profiler FBP-2KF is a robust and compact analysis system to measure a focused laser with up to 1000W power. The FBP-2KF is based on a multi-stage high-performance attenuator.

Its operational robustness and reliability ensures continuous use applications especially in industrial applications. The whole measuring process is controlled by CINOGY's software RayCi.

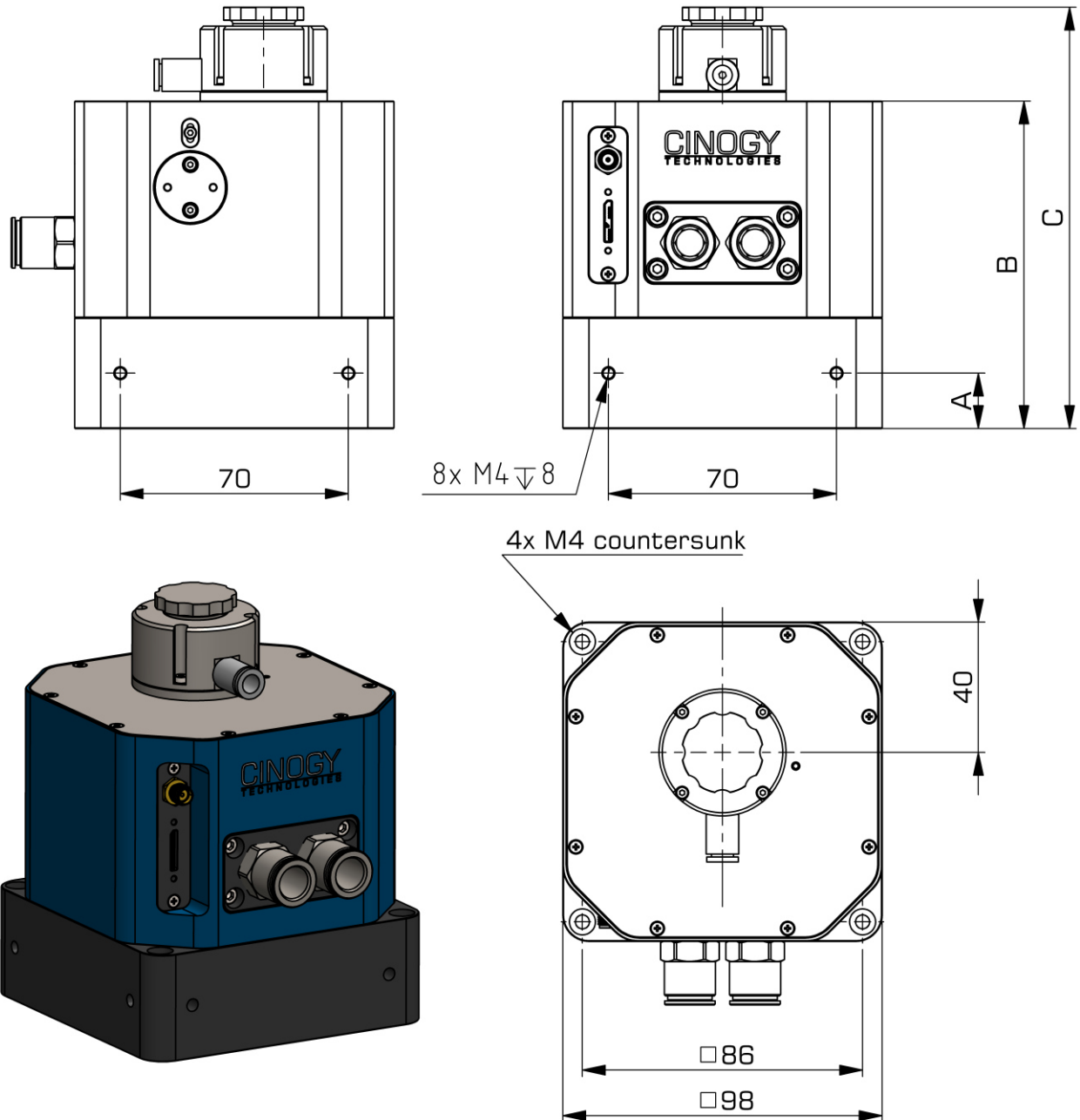
Specification

SENSOR DATA	FBP-2KF-5.3	FBP-2KF-5.3-3x
Option:	Without Objective	With 3x Objective
Spectral Response:		
1064nm (1030nm; 1070nm)	x	
Other	On Request	
Pixel Size:	5.3 μm^2	Effective 2 μm^2 (*1)
Number of Pixel:	1.3MPixel	
Sensor Technology:	CMOS (frame rate 30Hz, exposure time 50 μs - 100ms)	
Data Output:	10Bit	
Interface:	USB3.0 (USB2.0)	
FEATURES		
Focused Beam Size:		
Single-Mode	75 μm -1.2mm	30 μm -0.6mm
Multi-Mode	300 μm -1.2mm	300 μm -0.6mm
Max NA / Divergence:	0.04 / 80mrad	
Angle of Incidence:	0-1°	
Max Input Laser Power:		
	1000W@single-mode / 1200W@multi-mode	
	Measurement Time with Water-Cooling @22°C: no limitation	
	Measurement Time without Water-Cooling: 20s@500W	
System Aperture:		
Clear Diameter	Ø18mm (with AR-coated protection window)	
Input for Clean Air Flushing	Ø6mm Hose (Optional: Coupling plug (NW2,7) with valve for double-sided shut off)	
Optional Protection Window	1064nm (1030nm; 1070nm)	
Accuracy:		
Measurement Position (*1)	±50 μm	
Magnification Factor (*1)	-	2-4%
Waist Position	±100 μm	
Waist Size	2 - 4%	
M ² -Value	2 - 4%	
Power Measurement (optional)	5 - 7%	
Software:	RayCi-Pro	
SPECIFICATIONS		
Mechanical Dimensions:	98 x 98 x 129.3mm ³	98 x 98 x 132.3mm ³
Weight:	~2,6kg	
Electrical Requirements:	Power Supply via USB	
Water-Cooling:	Water-Cooled Absorber, Tap or DI-Water; 4l/min, 2bar, 20-22°C, Ø 10mm Hose (Optional: SMC S-Koppler with valve for double-sided shut off)	
Dust Protection:	Flushing with Clean Air, Avoid Contamination of Optics (cleaned, oil-free, dry, particles < 10 nm) 0,5 – 2bar	
Storage Temperature:	-10°C... +60°C	
Operating Temperature:	+0°C... +40°C	
Regulations:	CE	

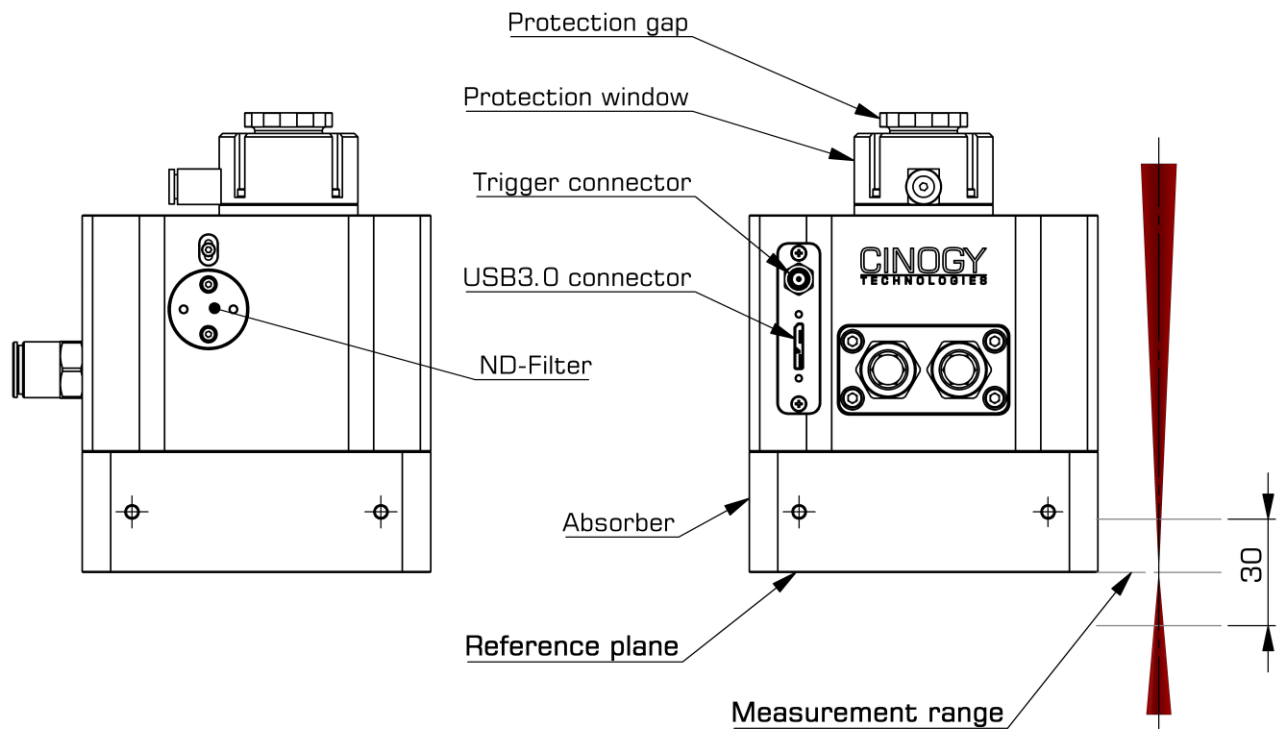
*1: Exact magnification factor and measurement position is determined during the calibration process and is added into the calibration files and certification.

Dimension

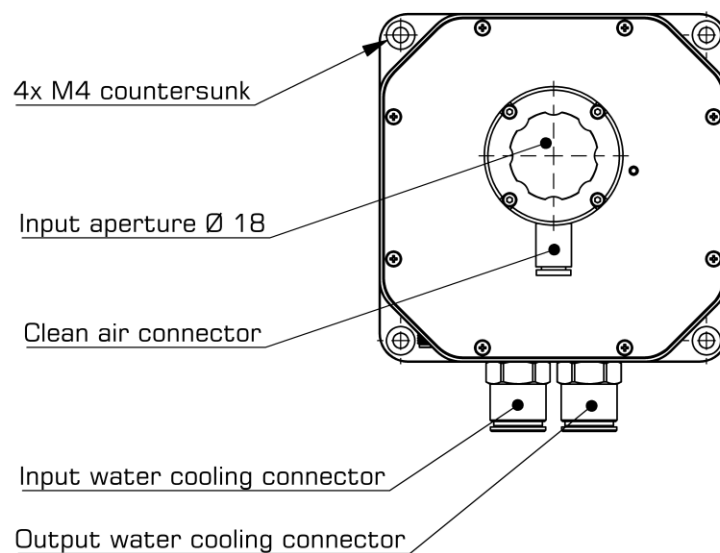
	FBP-2KF-5.3	FBP-2KF-5.3-3x
A	17 mm	20 mm
B	100,5 mm	103,5 mm
C	129,3 mm	132,3 mm



Description



Reference plane = Measurement position



FBP-3KF



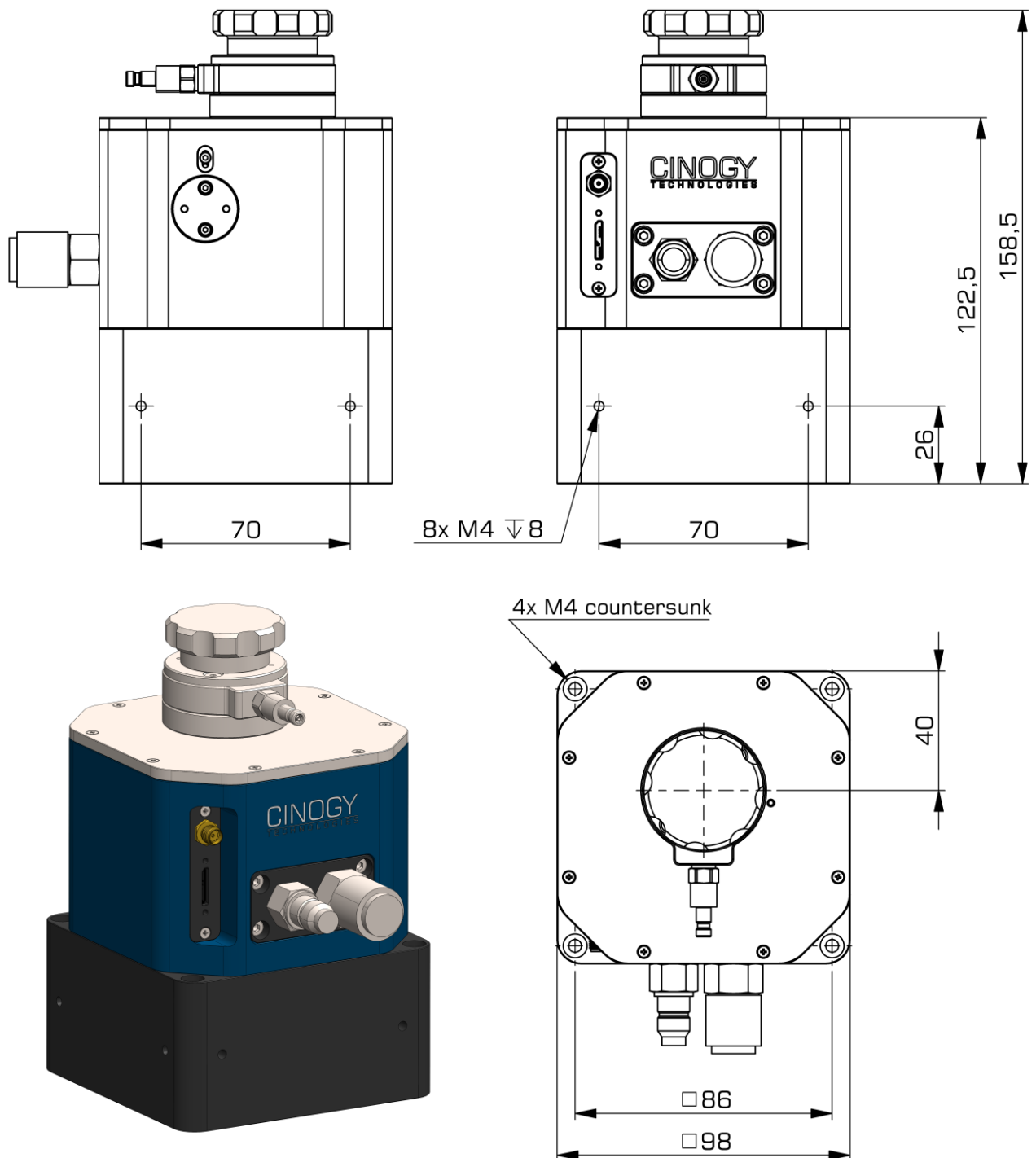
The Focus Beam Profiler FBP-3KF is a robust and compact analysis system to measure a focused laser with up to 2000W power. The FBP-3KF is based on a multi-stage high-performance attenuator.

Its operational robustness and reliability ensures continuous use applications especially in industrial applications. The whole measuring process is controlled by CINOGY's software RayCi.

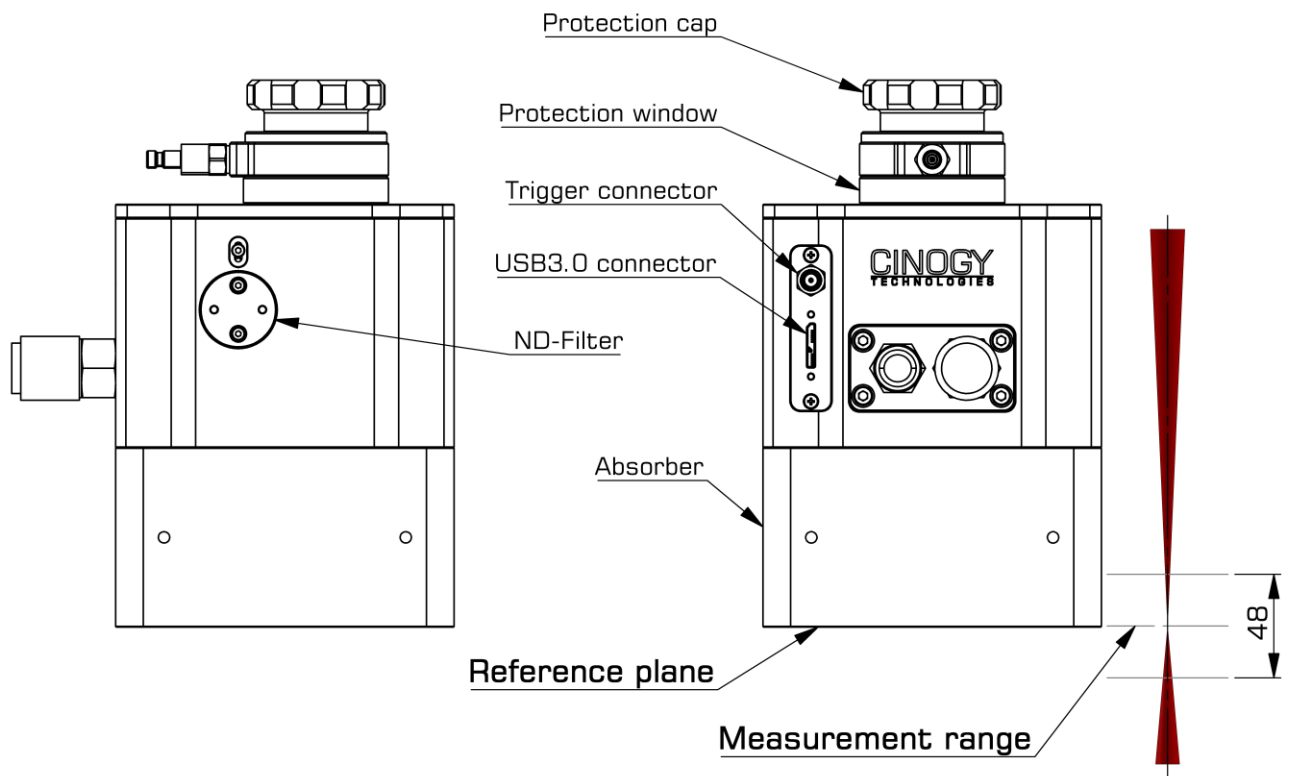
Specification

SENSOR DATA	FBP-3KF-5.3
Spectral Response:	
1064nm (1030nm; 1070nm)	x
Other	On Request
Pixel Size:	5.3 μ m ²
Number of Pixel:	1.3MPixel
Sensor Technology:	CMOS (frame rate 30Hz, exposure time 50 μ s – 100ms)
Data Output:	10Bit
Interface:	USB3.0 (USB2.0)
FEATURES	
Focused Beam Size:	
Single-Mode	75 μ m - 1.2mm
Multi-Mode	300 μ m - 1.2mm
Measurement Range	\pm 24mm (other on request)
Max NA / Divergence:	0.04 / 80mrad
Angle of Incidence:	0 – 1°
Max Input Laser Power:	
	2000W@single-mode / 2200W@multi-mode
	Measurement Time with Water-Cooling @ 22°C: no limitation
System Aperture:	
Clear Diameter	\varnothing 18mm (with AR-coated protection window)
Input for Clean Air Flushing	Coupling plug (NW2,7) with valve for double-sided shut off
Optional Protection Window	1064nm (1030nm; 1070nm)
Accuracy:	
Measurement Position	\pm 50 μ m
Waist Position	\pm 75 μ m
Waist Size	2 – 4%
M ² -Value	2 – 4%
Power Measurement (optional)	5 – 7%
Software:	RayCi-Pro
SPECIFICATIONS	
Mechanical Dimensions:	98 x 98 x 159mm ³
Weight:	~ 3,7kg
Electrical Requirements:	Power Supply via USB
Water-Cooling:	Water-Cooled Absorber, Tap or DI-Water; \geq 6l/min, 3bar, 20 - 22°C Connector: SMC S-Koppler with valve for double-sided shut off
Dust Protection:	Flushing with Clean Air, Avoid Contamination of Optics cleaned, oil-free, dry, particles < 10nm, 0,5 – 2bar
Storage Temperature:	- 10°C... + 60°C
Operating Temperature:	+ 0°C... + 40°C
Regulations:	CE

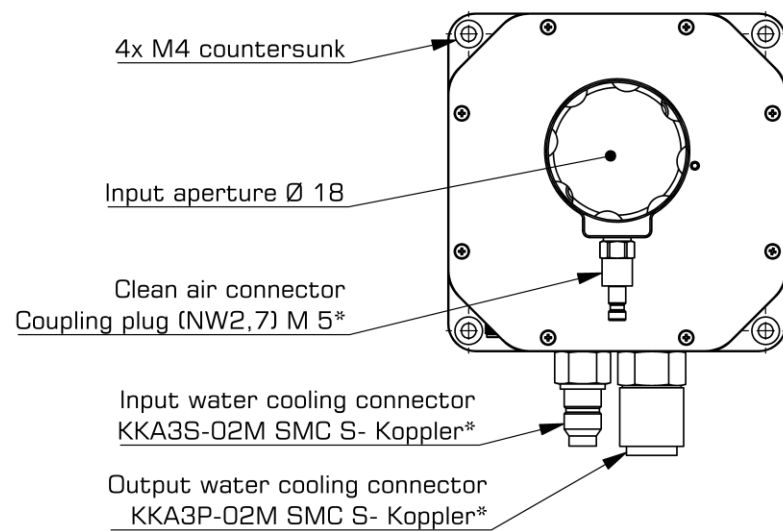
Dimension



Description



Reference plane = Measurement position



*Coupling plugs with valve for double-sided shut off can only be used with the special coupling sockets provided for them.