



Digital optical UV-VIS spectral sensors

CarboVis®

Spectral sensor with integrated ultrasonic cleaning for the chemical-free measurement of the organic load (COD/TOC/DOC/BOD/UVT/SAC) and suspended solids concentration (optional)

We would like to inform you about the application range on our website

Technical Data

Model	CarboVis® 701 IQ			CarboVis® 705 IQ		CarboVis® 701 IQ TS		CarboVis® 705 IQ TS		
Measuring method	Spectral Measurement in the UV-VIS Range (200 - 720 nm)									
Measuring gap (optical layer thickness)	1 mm			5 mm		1 mm		5 mm		
Application (optimized for)	Municipal wastewater:			Municipal wastewater:		Municipal wastewater:		Municipal wastewater:		
Measuring range and Resolution	Inlet:					Inlet:				
	COD _{total}	0 ... 20,000 mg/l	1 mg/l			0 ... 20,000 mg/l	1 mg/l			
	COD _{dissolv}	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l			
	TOC	0 ... 20,000 mg/l	1 mg/l			0 ... 20,000 mg/l	1 mg/l			
	DOC	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l			
	BOD	0 ... 8,000 mg/l	1 mg/l			0 ... 8,000 mg/l	1 mg/l			
	SAC _{254 total}	0.0 ... 5,000 1/m	1 1/m			0.0 ... 5,000 1/m	1 1/m			
	SAC _{254 dissolv}	0.0 ... 3,000 1/m	1 1/m			0.0 ... 3,000 1/m	1 1/m			
	UVT _{254 total} *	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %			
	UVT _{254 dissolv} *	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %			
TSS						0.00 ... 15.00 g/l	0.01 g/l			
	Aeration:					Aeration:				
	COD _{dissolv}	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l			
	DOC	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l			
	SAC _{254 total}	0.0 ... 5,000 1/m	1 1/m			0.0 ... 5,000 1/m	1 1/m			
	SAC _{254 dissolv}	0.0 ... 3,000 1/m	1 1/m			0.0 ... 3,000 1/m	1 1/m			
	UVT _{254 total} *	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %			
	UVT _{254 dissolv} *	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %			
	TSS						0.00 ... 20.00 g/l	0.01 g/l		
		Effluent:			Effluent:		Effluent:		Effluent:	
		COD _{total}	0 ... 4,000 mg/l	1 mg/l	0.0 ... 800.0 mg/l	0.1 mg/l	0 ... 4,000 mg/l	1 mg/l	0.0 ... 800.0 mg/l	0.1 mg/l
COD _{dissolv}		0 ... 4,000 mg/l	1 mg/l	0.0 ... 800.0 mg/l	0.1 mg/l	0 ... 4,000 mg/l	1 mg/l	0.0 ... 800.0 mg/l	0.1 mg/l	
TOC		0 ... 2,500 mg/l	1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l	0 ... 2,500 mg/l	1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l	
DOC		0 ... 2,500 mg/l	1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l	0 ... 2,500 mg/l	1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l	
BOD		0 ... 2,500 mg/l	1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l	0 ... 2,500 mg/l	1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l	
SAC _{254 total}		0.0 ... 3,000 1/m	1 1/m	0.0 ... 600.0 1/m	0.1 1/m	0.0 ... 3,000 1/m	1 1/m	0.0 ... 600.0 1/m	0.1 1/m	
SAC _{254 dissolv}		0.0 ... 3,000 1/m	1 1/m	0.0 ... 600.0 1/m	0.1 1/m	0.0 ... 3,000 1/m	1 1/m	0.0 ... 600.0 1/m	0.1 1/m	
UVT _{254 total} *		0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %	0.1 %	
UVT _{254 dissolv} *		0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %	0.1 %	
TSS						0 ... 4,500 mg/l	1 mg/l	0.0 ... 900.0 mg/l	0.1 mg/l	

Accuracy (standard application muni. WWTP)
 Carbon parameters: ± 5 % of measured value ± 2.5 mg/l
 SAC: ± 0.5 % of measured value ± 0.4 SAK
 UVT: < 10 % UVT ± 1 % UVT of measured value; > 10 % UVT ± 0.1 % UVT of measured value
 TSS: ± 5 % of measured value ± 50 mg/l

Flow rate	≤ 3 m/s	CarboVis® 701 IQ (TS), CarboVis® 705 IQ (TS)
Pressure Resistance	Maximum 1 bar (incl. sensor connection cable)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A Intended for indispensable operation	
Certifications	CE	
Mechanical	Housing: Titan Grade 2, PEEK; Window: Sapphire glass Protection class: IP 68	
Weight (without cable)	Approx. 8.82 lb (4 kg)	
Warranty	2 years for defects in quality	

* The UVT-254 value is standardized to 10 mm gap width.

Model	Description	Order No.
CarboVis® 701 IQ	Spectral UV-VIS probe to measure COD _{tot} , COD _{diss} , TOC, BOD, DOC, SAC _{tot} , SAC _{diss} and UVT ₂₅₄ in the inlet and the aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481048
CarboVis® 705 IQ	Like CarboVis® 701 IQ, but for the measurement in the drain	481050
CarboVis® 701 IQ TS	Like CarboVis® 701 IQ, but to measure suspended solids included	481049
CarboVis® 705 IQ TS	Like CarboVis® 701 IQ TS, but for the measurement in the drain	481051