pyroscience
sensor technology

SENSOR DIMENSIONS
FIBER-OPTIC SENSORS

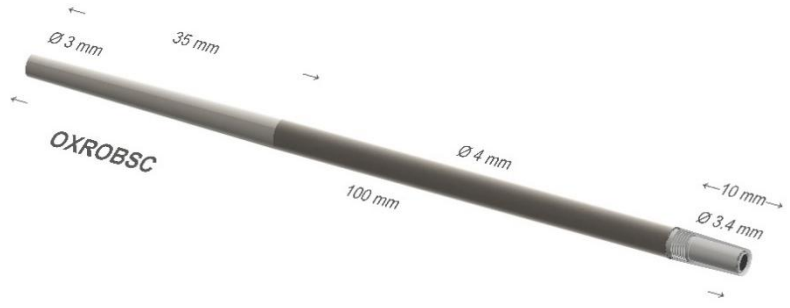
1 SENSOR DIMENSIONS

All dimensions stated for the following sensors are valid for all available versions of the respective oxygen sensors: full range and trace range versions, high speed and ultra-high speed versions (options -**HS** & -**UHS**), as well as optically isolated sensors (option -**OI**).

1.1 Dimensions of robust (screw cap) probes

Sensor Dimensions	OXROB3/10	OXROBSC / TPROBSC / PHROBSC-PKx	OXROBGSC-CLx
Sensor Dimensions Length without cable (ca.) Shaft diameter (ca.) Tip Diameter (ca.)	 30 / 100 mm 3 mm 3 mm	 100 mm 3 -4 mm (tapered) 3.4 mm	 100 mm 3 -4 mm (tapered) 3.4 mm
Cable length (ca.)	2 or 4 m	2 m	5, 10 or 20 m

Tip Geometries of screw cap probes (OXROB(G)SC, PHROBSC, TPROBSC)

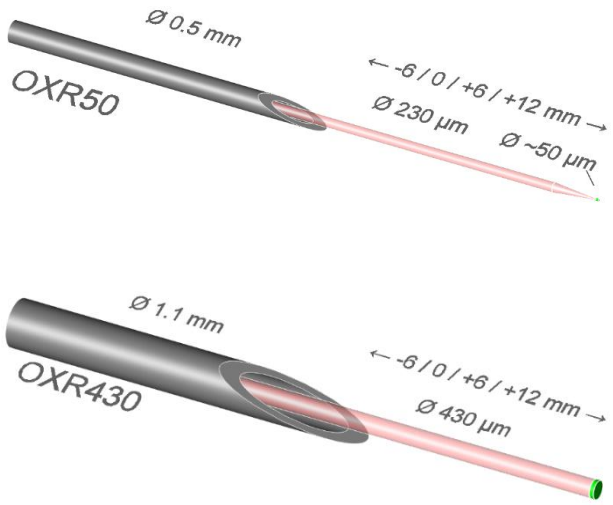


1.2 Dimensions of Retractable Needle-type Sensors (OXR50 & OXR430; TPR430)

Sensor Dimensions	**OXR50**	**OXR430 / TPR430**
Sensor Dimensions Length without cable (ca.) Shaft diameter (ca.)	 230 mm 8 mm	 230 mm 8 mm
Needle Dimensions Length Diameter	 40 mm 0.5 mm	 40 mm 1.1 mm mm
Fiber and Sensor Tip Fiber diameter Tip diameter (ca.) Sensor tip position (rel. to needle, ca.)	 230 µm 50-70µm -6/0/+6/+12 mm	 430 µm 430 µm -6/0/+6/+12 mm
Cable length (ca.)	2 m or 4 m (custom versions up to 20 m)	

Tip Geometries

True to scale drawings with syringe needle (grey), optical fiber (pink) and oxygen-sensitive REDFLASH indicator (green).

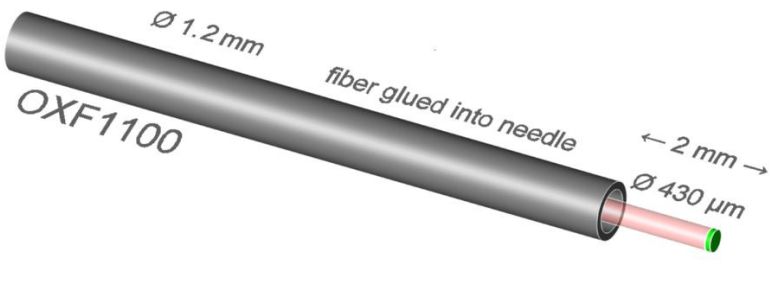


1.3 Dimensions of Fixed Needle-type Sensors (OXF50, OXF1100; TPF1100)

Sensor Dimensions	OXF50	OXF1100 / TPF1100
Sensor Dimensions Length without cable (ca.) Shaft diameter (ca.)	 190 mm 8 mm	 190 mm 8 mm
Needle Dimensions Length Diameter	 40 mm 0.5 mm	 40 mm 1.2 mm
Fiber and Sensor Tip Fiber diameter Tip diameter (ca.) Sensor tip position (rel. to needle, ca.)	 230 µm 50-70 µm ca. 6 mm	 430 µm 430 µm ca. 2-3 mm
Cable length (ca.)	2 m or 4 m (custom versions up to 20 m)	

Tip Geometries (exemplary)

True to scale drawings with syringe needle (grey), optical fiber (pink) and oxygen-sensitive REDFLASH indicator (green).

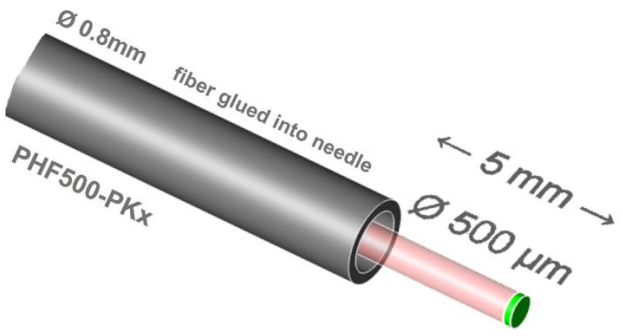


1.4 Dimensions of Fixed Fiber pH Minisensor (PHF500-PKx)

Sensor Dimensions	**PHF500-PKx**
Sensor Dimensions Length without cable (ca.)	 100 mm
Needle Dimensions Length Diameter	 50 mm 0.8 mm
Fiber and Sensor Tip Fiber diameter Tip diameter (ca.) Sensor tip position (rel. to needle, ca.)	 500 µm 500 µm ca. 5 mm
Cable length (ca.)	2 m

Tip Geometries

Drawing with syringe needle (grey), optical fiber (pink) and pH-sensitive REDFLASH indicator (green).

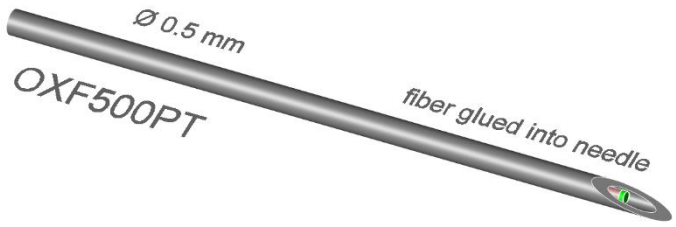


1.5 Dimensions of Fixed Needle-type Sensors with protected tip (OXF500PT & OXF900PT)

Sensor Dimensions	OXF500PT	OXF900PT
Sensor Dimensions Length without cable (ca.) Shaft diameter (ca.)	 190 mm 8 mm	 190 mm 8 mm
Needle Dimensions Length Diameter	 40 mm 0.5 mm	 40 mm 0.9 mm
Fiber and Sensor Tip Fiber diameter Tip diameter (ca.) Sensor tip position (rel. to needle)	 230 µm 230 µm 0 mm	 230 µm 230 µm 0 mm
Cable length (ca.)	2 m or 4 m (custom versions up to 20 m)	

Tip Geometries (exemplary)

True to scale drawings with syringe needle (grey), optical fiber (pink) and oxygen-sensitive REDFLASH indicator (green).

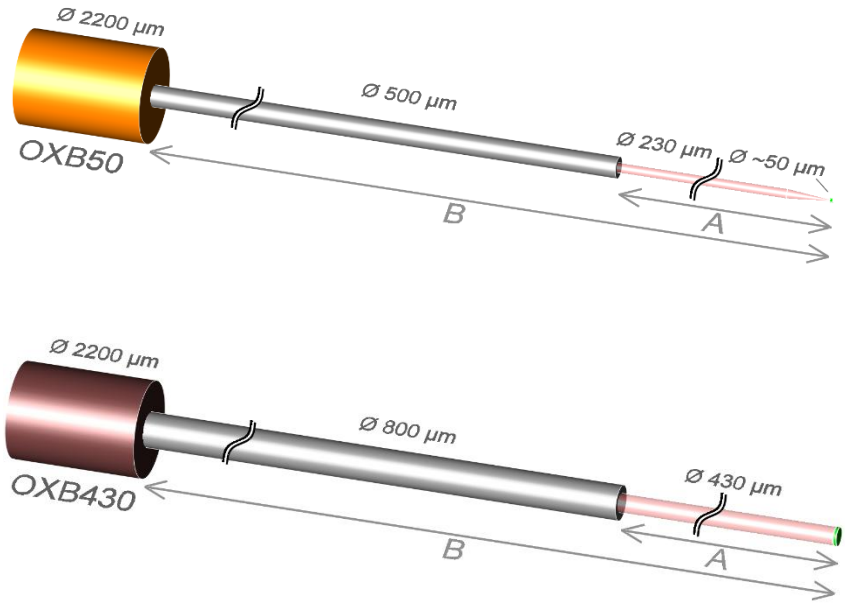


1.6 Dimensions of Bare Fiber Sensors (OXB50, OXB430; TPB430)

Sensor Dimensions	OXB50	OXB430 / TPB430
Fiber and Sensor Tip		
Fiber diameter	230 µm	430 µm
Tip diameter (ca.)	50-70 µm	430 µm
Tip geometry	see image below	
Stripping length	A = 20mm, B = 100mm (other stripping lengths optional on request: A= 5-30 mm, B= 20-500 mm (B +/-5 mm)	
Cable length (ca.)	2 m or 4 m (custom versions up to 20 m)	

Tip Geometries

True to scale drawings with outer jacket (orange), plastic coating (grey), optical fiber (pink) and oxygen-sensitive REDFLASH indicator (green).



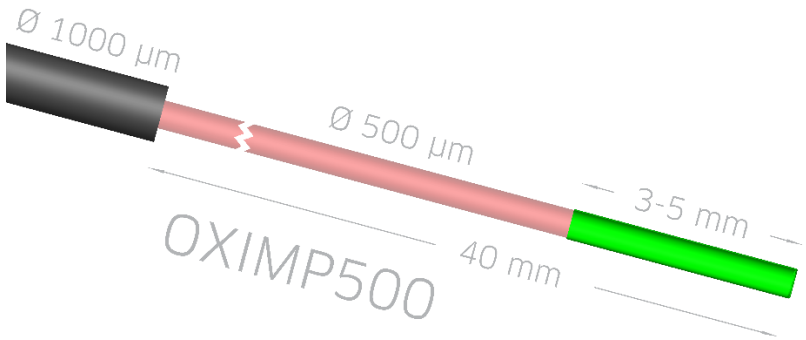
1.7 Dimensions of Insertable Mini Probes

OXIMP250, OXIMP500, OXIMP1000

Sensor Dimensions	OXIMP250	OXIMP500	OXIMP1000
Fiber and Sensor Tip			
Fiber diameter	0.25 mm	0.5 mm	1 mm
Cable diameter	1 mm	1 mm	2.2 mm
Stripping Length (Bare fiber tip)	40 mm	40 mm	60 mm
Length of Sensor Coating	3-5 mm	3-5 mm	3-5 mm
Cable length (ca.)	1 m (custom version up to 2 m)		2m (custom version up to 4 m)

Tip Geometries

True to scale drawings with outer jacket (black), optical fiber (pink) and oxygen-sensitive REDFLASH indicator (green).



TPIMP500, PHIMP500-PK6.5

Sensor Dimensions	TPIMP500/PHIMP500
Fiber and Sensor Tip	
Fiber diameter	0.5 mm
Cable diameter	1 mm
Cable length	1 m
Stripping Length (Bare fiber tip)	40 mm
Length of Sensor Coating	Tip only

1.8 Dimensions of Solvent-Resistant Probes (OXSOLV & OXSOLV-PTS)

Sensor Dimensions	OXSOLV	OXSOLV-PTS
Sensor Dimensions Length without cable (ca.) Shaft diameter (ca.)	 300 mm 8 mm	 190 mm 8 mm
Needle Dimensions Length Diameter	 150 mm 1.5 mm	 40 mm 1.5 mm
Fiber and Sensor Tip Fiber diameter Sensor tip position (rel. to needle, ca.)	 3 mm 2 mm	 3 mm 0 mm
Cable length (ca.)	2 m or 4 m (custom versions up to 20 m)	

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