

1.1.2.11 Accessories for High Power Water Cooled Sensors

1.1.2.11.1 Fiber Adapter for Ophir High Power Sensors

Adapters for high power fiber connectors are available for Ophir sensors L1500W and 5000W for use in industrial environments.

The fiber adapters allow mounting of QBH fiber terminators to Ophir sensors. When using an adapter, the fiber output is centered on the sensor surface and is isolated from surrounding dust and contaminants. Choice of the correct adapter model depends on the power and divergence angle of the laser being measured, see specs below.

Note: Ophir does not supply the QB bayonet, more details can be found in the User Notes.

Fiber adapter QBH mount L compatible, Mounted on 5000W sensor



Description	QBH fiber adapter for high power sensors models	
Use	Adapter for direct measurement of QBH fiber output	
Sensors Supported	L1500W-LP2-50, L1500W-BB-50, 5000W-LP2-50 and 5000W-BB-50 ^(a)	
Added Error	1% for BB type coatings	
Housing Temperature at Max Power	55°C ^(b)	
Cooling	Water, maximum temperature 30°C	
Fiber Adapter Water Flow Requirements	2 liter/min, minimum ^(c)	
Water Connectors	(2x) Quick Connect Fitting For Ø3/8 Plastic Hose ^(d)	
Model	Fiber adapter QBH mount L compatible	Fiber adapter QBH mount S compatible
Maximum Beam Divergence Half Angle ^(e)	120 mrad (180 mrad)	180 mrad (270 mrad)
Minimum Beam Divergence Half Angle	See note ^(f)	See note ^(f)
Dimensions	See drawing below	See drawing below
Part number	7Z08456	7Z08457

Note: (a) Please note that older versions of the above sensors do not have the requisite 4 threads on Ø70mm circle on their front flange and cannot be used with the QBH adapter.

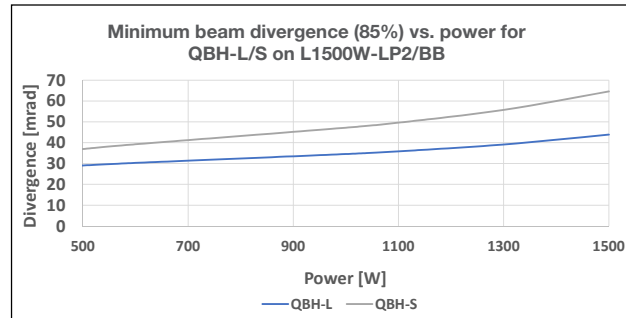
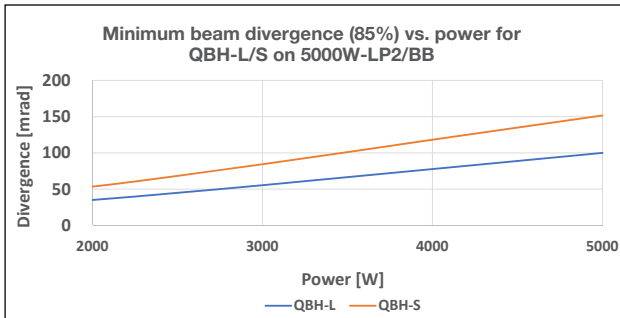
Note: (b) When using BB type coatings temperature may reach 80°C at midpoint of adapter.

Note: (c) The water flow requirements of the fiber adapter are much lower than that of the water-cooled sensor (see the sensor data sheet for details). Therefore, the fiber adapter can be connected in series with the sensor water supply but then the water flow rate of both will have to meet the sensor minimum water flow rates.

Note: (d) For Metric water connectors see page 108.

Note: (e) Divergence angle given defines radius of beam containing 86% of power, the divergence of 98% of the power is given in brackets.

Note: (f) Graphs of beam divergence:



The parameters in the graphs above assume that the fiber adapter used is a generic QB bayonet. For specific models the maximum and/or minimum N.A values for the fibers may differ – please consult User Notes for more details.

High Power QBH-Fiber Adapter

Fiber adapter QBH mount L compatible

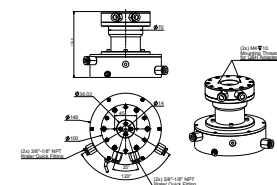
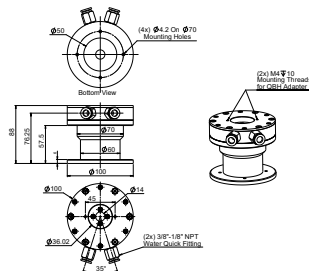
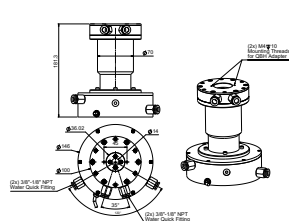
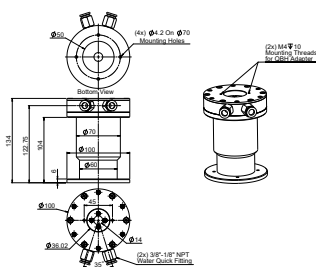
Fiber adapter QBH mount S compatible

Standalone

Mounted on a 5000W sensor

Standalone

Mounted on a 5000W sensor



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
1.1.2.11.2 Protective Housing for 5000W, 10K-W and 15K-W Series Sensors

For use with 5000W, 10K-W and 15K-W sensors in industrial environments where sensors may be contaminated by debris from material working process.

The protective housing and shutter prevent contamination of the sensor, particularly the absorbing surface, by this debris. The housing has a solenoid actuated shutter that can be opened when needed for measuring and be closed otherwise. The protective housing is fastened to the front flange of the sensor ^(a).

Protective Housing for 5000W / 10K-W / 15K-W Mounted on Sensor (shutter open)
Rear view (cables and water connector)

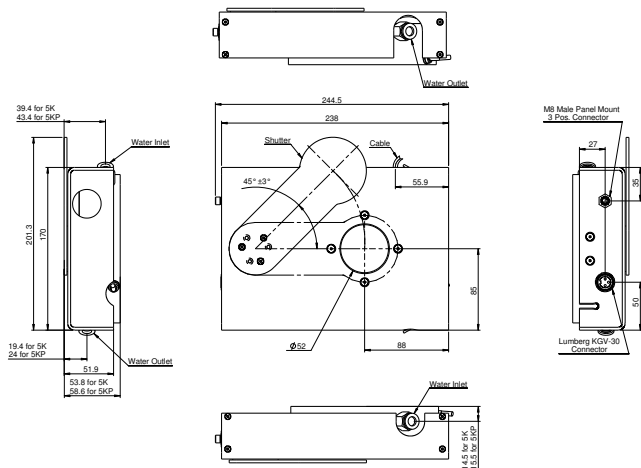


Model	5000W / 10K-W / 15K-W Protective Housing	
Use	Protection from debris of material working process	
Sensors Supported	For 5000W, 10K-W and 15K-W. Needs threaded front flange ^(a)	
Aperture	Exposes full aperture of sensors	
Solenoid Actuating Power	24VDC 1A, Shutter is normally Closed	
Electrical Connection	Lumberg SV30 male connector with 2m cable (P/N 7Z10377) as supplied. Black wire (pin3) is ground, Red wire (pin1) is +24VDC, no wire connected (pin 2)	
Interlock	Interlock switch is open if shutter is closed. This can be used to protect the shutter from accidental exposure to the laser	
Electrical Connection for Interlock	M8-3 Pin male connector (pin 1,4 connected to switch contacts). 1.5m cable (P/N 7E01513A) included, brown and black wires are the switch contacts. Pin 3 - no wire connected	Cable Plug (Female) Not connected 
Dimensions	See drawing below	
Housing Material	Sheet aluminum	
Version	V1	
Part number	7Z08344	

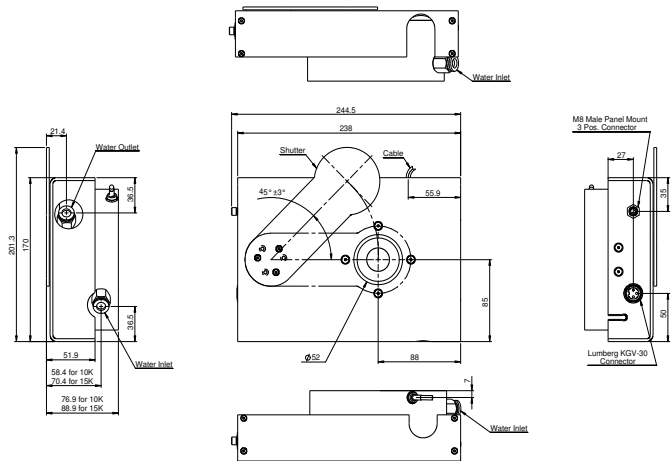
Note: (a) When fitting the housing to previous versions of the above sensors not having the requisite threads on their front flange, it will be necessary to exchange the front flange of the sensor with a new one having the requisite mounting threads. For details, consult Ophir representative.

Protective Housing for 5000W, 10K-W and 15K-W

As mounted on 5000W



As mounted on 10K-W / 15K-W



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1.1.2.11.6 Metric Water Connectors for Water Cooled Sensors

The standard water connection supplied with Ophir water cooled sensors are quick connect fittings for 3/8" and 1/2" plastic tubing. Metric water connectors are available as follows:

Connector (set of 2 ea.)	For use with	Part Number
1/4" NPT to 12mm O.D. tubing	20K-W & 30K-W	7Z08352 ^(a)
1/8" NPT to 10mm O.D. tubing	All other water cooled sensors & QBH Adapters	7Z08353

Note: (a) The water connector is compatible also with the 16K-W-BB-55 sensor P/N 7Z07131



1.1.2.11.7 Protective Covers with Target Pattern for High Power Sensors and for Scatter Shields

All the protective covers are made of black anodized aluminum, and have a cross pattern for alignment. Sensors: The 5000W, 10K-W, 15K-W sensors are supplied with the 10K-W Protective Cover. This protective cover also fits the 1000W and L1500W sensors, but is not supplied with these sensors. The protective cover can be ordered separately for these sensors. The 20K-W sensor is supplied with the 20K-W Protective Cover. The 30K-W sensor is supplied with the 30K-W Protective Cover.

Scatter Shields: 10K-W / 15K-W Scatter Shield (P/N 7Z08295), 20K-W scatter shield (P/N 7Z08355) and 30K-W Scatter Shield (P/N 7Z08293) are supplied with their respective protective covers (P/N 7Z08345 for 10K-W / 15K-W and P/N 7Z08346 for 30K-W).

For more information on scatter shields see page 107.

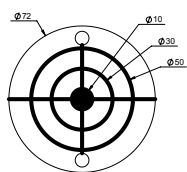
All protective covers can also be ordered separately (see table below).



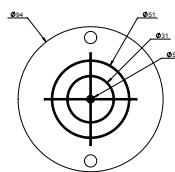
Protective Cover	For use with	Part Number
10K-W Protective Cover	15K-W, 10K-W, 5000W, L1500W, 1000W without scatter shield	1G01332
10K-W / 15K-W Scatter Shield Cover	10K-W and 15K-W with Scatter Shield	7Z08345
20K-W Protective Cover	20K-W without Scatter Shield	1G02813 ^(b)
30K-W Protective Cover	30K-W without Scatter Shield	1G02406
30K-W Scatter Shield Cover	30K-W with Scatter Shield	7Z08346

Note: (b) The protective cover is compatible also with the 16K-W-BB-55 sensor P/N 7Z07131

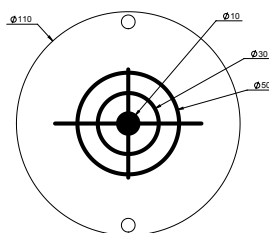
10K-W Protective Cover



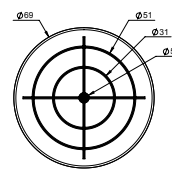
20K-W Protective Cover



30K-W Protective Cover



10K-W / 15K-W Scatter Shield Cover



30K-W Scatter Shield Cover

