



## Dragon™ 10kW High Power Laser Cable (Dragon Series)

Rev11

### Description

AFR's Dragon™ 10kW product provides QBH compatible connector for high power fiber lasers up to 10kW. Technologies incorporated in the products include cladding mode stripping, indirect water cooling, protective window and safety interlock.

### Key Features

- Low Transmission Loss
- High Power Handling
- High Reflection Power Endurance
- Indirect Water Cooling
- Safety Interlock

### Applications

- Fiber Laser Output Connector
- High Power Laser Coupling Cable

### Specifications

Optical Parameter	Unit	Value
Operation Wavelength	nm	900 - 1100
Fiber Core Diameter	µm	20 - 400
Numerical Aperture (NA)	-	≤0.22
Max. Transmission Loss	%	2
Max. Power Handling	W	10k
Max. Stripping Cladding Power	W	500
Backward Power Handling	W	500
Max. Z-position Tolerance	µm	50
Fiber Concentricity	µm	≤50
Max. Angular Deviation	mrad	20
<b>Cooling Water Requirements</b>		
Flow Rate	L/min	1.5 - 3.0
Max. Water Pressure	Mpa	0.8
Water Temperature	°C	10 - 25
Water PH Value	-	5.6 - 7.9
Water Hose Diameter	mm	ID/OD=4/6
<b>Others</b>		
Mechanical Interface	-	Compatible with the Standard QBH Interface
Armoured Cable Diameter	mm	13.3
Storage Temperature	°C	-20 to +70

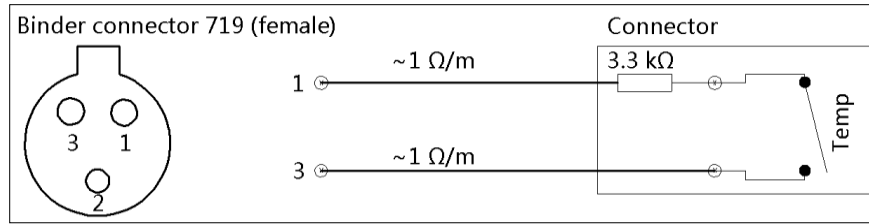
## Safety Interlock

Interlock Circuit Resistance

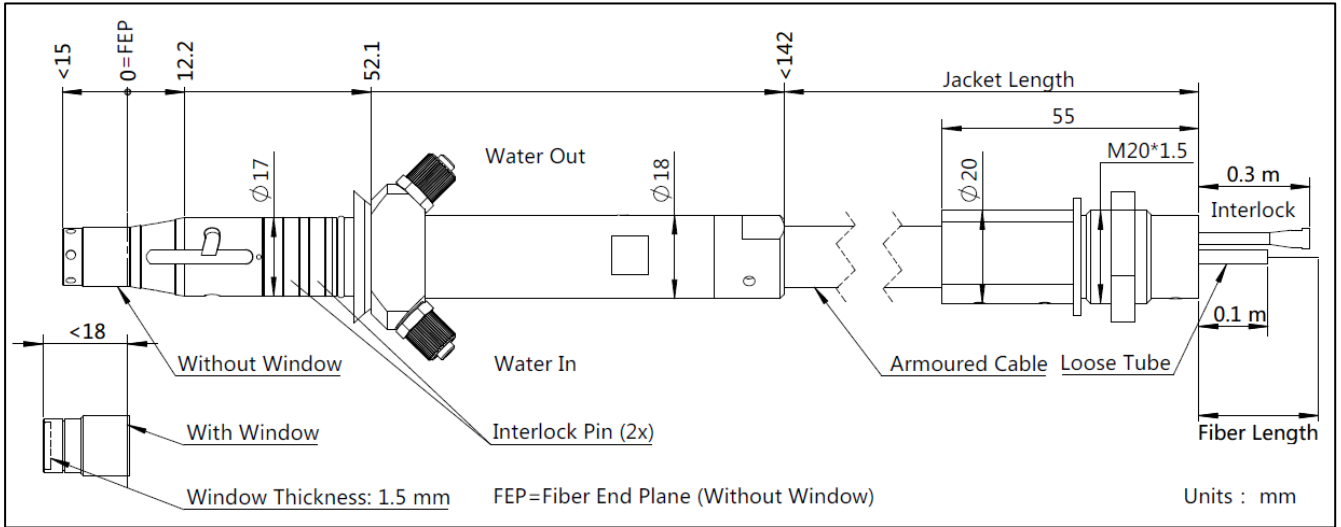
$3.3\text{k}\Omega \pm 5\% + 2\Omega/\text{m fiber}$

Thermoswitch Limit

$70^\circ\text{C} \pm 5^\circ\text{C}$ , Reset temp  $>30^\circ\text{C}$



## Package Dimensions



## Ordering Information

**Dragon-①①-②②②②-③③③-④④-⑤-⑥-⑦**

①①: Handling Power

01 - 1 kW

02 - 2 kW

03 - 3 kW

06 - 6 kW

10 - 10 kW

②②②②: Wavelength

0915 - 915 nm

1064 - 1064 nm

1080 - 1080 nm

③③③: Fiber Core

020 - 20  $\mu\text{m}$       150 - 150  $\mu\text{m}$

025 - 25  $\mu\text{m}$       200 - 200  $\mu\text{m}$

030 - 30  $\mu\text{m}$       300 - 300  $\mu\text{m}$

050 - 50  $\mu\text{m}$       400 - 400  $\mu\text{m}$

100 - 100  $\mu\text{m}$       SSS - Specify

④④: Jacket Length

10 - 10 m

15 - 15 m

20 - 20 m

XX - XX m

⑤: Fiber Length

1 - 1 m

2 - 2 m

3 - 3 m

⑥: Cable End Package

S - Standard

N - None

⑦: Window Option

W - With Window

N - Without Window