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Mess- und Prüftechnik. Die Experten.

PMK Probing Solutions. Made in Germany.

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# FireFly®
# Power-Over-Fiber Adapter

## Enabling Continuous FireFly® Operation

Preliminary

**Datasheet**

## About FireFly® Power-over-Fiber Adapter

The FireFly® Power-over-Fiber (PoF) Adapter provides an alternative to the standard 18650 battery to enable continuously powering of the FireFly Probe Head. Having the ability to continuously power a FireFly allows it to be used in a Production Line Testing and Automation environment. The FireFly Probe Head power source can be quickly and easily changed between battery and the Power-over-Fiber adapter. The FireFly Probe Head must be de-energized (powered OFF) when swapping these two power options.

The PoF Adapter consist of a Laser Module (transmitter unit) and a Probe Head Adapter (receiver unit). The Laser Module requires a PMK power supply e.g. PS02, PS03 etc. connection,

The Laser Module converts the electrical power to optical power, transmits it over a fiber link and the Probe Head Adapter converts it back to from optical power to electrical power.

The Laser Module and Probe Head Adapter has a separate optical communication link that manages the overall system control and status monitoring. The Laser Module and Probe Head Adapter optical path is continuously monitored by the Laser Module and will provide safety shutdown if there is failure condition such as a broken fiber.

## Specifications

This adapter comes with 1 year warranty.

Do not exceed specifications.

This adapter is not rated for CAT II, III or IV.

## Electrical Specifications

Electrical specifications[1] that are marked with * are guaranteed, others are typical. Use original PMK power supplies only. See Ordering Information.

| | |
|---|---|
| **Compatibility** | For use with PMK's FireFly series ONLY |
| **Power Consumption (Laser Module)** | 5W Maximum |
| **Internal Battery Type** | Protected Lithium Polymer Battery |
| **Laser Certification** | Laser Class 1<br>IEC/EN 60825-1:2014, US 21CFR Part 1010, US 21CFR Part 1040 |

## Physical Specifications

| Parameter | Specifications |
|---|---|
| **Weight** | 740 g (Laser Module & Probe Head Adapter) |
| **Dimensions** | Laser Module: 115 x 127.5 x 50.5 mm<br>Probe Head Adapter: 180 x ø26 mm |
| **Connectors** | Secondary/ output: FireFly® Battery Input<br>Primary/ input: 1ch of referring PMK power supply |

Notes:
[1] Determined when using a PS-02 power supply at +23°C ambient temperature.

## Environmental Specifications

| Parameter | | Specifications |
|---|---|---|
| **Temperature Range** | Operating | +10 ºC to +40 ºC |
| | Non-Operating | -20 ºC to +60 ºC |
| **Maximum Relative Humidity** | Operating | 5 % to 85 % RH (relative humidity) at up to +40 °C, 5 % to 45 % RH above +40 °C up to +50 °C, non-condensing |
| | Non-Operating | 5 % to 85 % RH (relative humidity) at up to +40° C, 5 % to 45 % RH above +40° C up to +71° C, non-condensing |
| **Maximum Altitude** | Operating | 3000 m (9843 ft) |
| | Non-Operating | 15000 m (49213 ft) |

## Dimensions

The dimensional drawing of the Laser Module and Probe Head Adapter are coming soon. If the needed, please contact us via sales@pmk.de

## Product Overview

The FireFly® series Power-over-Fiber Adapter, FF-POF-A01, enables continuous operation of PMK's FireFly optically isolated probe head. The Power-over-Fiber Adapter consists of a Laser Module connected to a Probe Head Adapter via a 2.5mfiber optical cable, that provides complete galvanic isolation between the Laser Module and Probe Head Adapter. The Laser Module requires an external PMK power supply.

**The PoF Laser Module (transmitter) is equipped with high-power laser diode component.**
It is important to note that these components are sensitive to changes in ambient temperature. To avoid any potential issues and extend the lifespan of the unit, it is essential to ensure that it is installed in a controlled environment. In the event that the laser module is operating outside of its temperature range for an extended period, the PoF transmitter will shut down and the Laser Module status indicator LED will turn orange.

Laser Module (Transmitter Unit)


Probe Head Adapter (Receiver Unit)


## Laser Module (Transmitter Unit)

The Laser Module converts electric energy to optical energy that is transmitted to the optical isolated probe head via optical fiber.

## Probe Head Adapter (Receiver Unit)

The Probe Head Adapter is inserted into the FireFly battery compartment and secured.
Follow the startup sequence below.

## Scope of Delivery

The FF-POF-A01 FireFly Power-over-Fiber Adapter requires one output of the PMK Power Supplies, e.g. PS02/03. See Ordering Information if you need another power supply with more outputs. The following accessories are included in the scope of delivery.

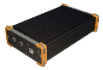
- **FF-POF-A01** FireFly® Power-over-Fiber adapter
- **890-520-900** Power supply cable (0.6 m)
- Instruction Manual

## Ordering Information

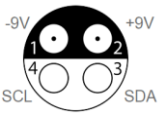
### Select Power Supply

A PMK power supply is required for using the system.

The power supply pin assignment is different from other power supplies. Use only original PMK power supplies with PMK products.

| | | |
|---|---|---|
| **889-09V-PS2** | PS-02 (2 channels, with USB interface for remote control) |  |
| **889-09V-PS2-L** | PS-02-L (2 channels, with LAN and USB interface for remote control) |  |
| **889-09V-PS3** | PS-03 (4 channels, with USB interface for remote control) |  |
| **889-09V-PS3-L** | PS-03-L (4 channels, with LAN and USB interface for remote control) |  |
| **889-09V-AP01** | AP-01 (battery pack, 1 channel, no remote control) |  |
| **890-520-900** | Power supply cable (0.6 m), included in probe's scope of delivery |  |
| **890-520-915** | Power supply cable (1.5 m) |  |

Observe Connector Pin-Out
for PMK power supply cables



## Notes

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