



**Probing Solutions.
Made in Germany.**

EN



FireFly[®] Probe Positioners

Hands-free Testing
0 °C to +50 °C

Instruction Manual



FireFly® Probe Positioners

The FireFly® probe positioners offer precise and semi-permanent positioning for FireFly® optically-isolated probes, minimizing the risk of unwanted movement that could damage the device under test or result in an unsafe condition. These positioners act as a reliable "third helping hand". One of the key advantages of the FireFly® probe positioners is their quick and easy setup process, saving valuable time and effort by moving the probe into the desired position and holding it securely in place.

Specifications

FireFly® products are not rated for CAT II, III or IV. Do not exceed the specifications. Review also the FireFly® Series Instruction Manual. The following ratings are according to IEC 61010-031:2023-05.

Electrical Specifications of FF-HAL10kV and FF-3DPOS200

Rating for Measurement Category not II, III or IV:



Maximum Rated Insulating Voltage
Pollution Degree

10 kV (DC + Peak AC)
2

Electrical Specifications of FF-2FOOTER



Not applicable within hazard zone



Caution – Risk of electric shock. When using the probe head with the FF-2FOOTER above an earth ground plane, the maximum common mode voltage is limited to 10kV to ensure safety and reduce the risk of electrical hazard.



Environmental Specifications

Altitude	Operating	up to 2000 m
	Non-operating	up to 15000 m
Temperature Range	Operating	0 °C to +50 °C
	Non-Operating	-40 °C to +71 °C
Maximum Relative Humidity	Operating	80 % relative humidity for temperatures up to +31 °C, decreasing linearly to 40 % at +50 °C
	Non-operating	95 % relative humidity for temperatures up to +40 °C

Maintenance and General Notes

The 3D Probe Positioners are almost maintenance-free. However, if the device is exposed to pollution, regular cleaning is necessary. Remove dust and dirt from the joints.



Make sure to use any FireFly® probe positioner in a clean lab environment without any pollution, dust or dirt to maintain the specified isolation voltage.

For cleaning purposes use standard cleaning agents commercially available. Don't use any lye or acids. Apply a little amount of lubricant to the screws and joints, as needed.

Scope of Delivery

- FireFly® Positioning System (FF-3DPOS200) including Wrench 7mm, FireFly® Probe Head Holder FF-HAL10kV, or FireFly® 2-Footer (FF-2FOOTER)
- Instruction Manual

Getting Started

Read also the FireFly® Instruction Manual before first use, and keep both for future reference. A digital copy of the latest Instruction Manual revisions can be downloaded at www.pmk.de. The use of this equipment is for qualified personnel only. Observe adequate spacing between FireFly® probe head components and earth ground. Note, FireFly® products are not rated for CAT II, III or IV. To achieve the most accurate measurement results, review the “Getting Started” section in the FireFly® Series Instruction Manual.

Clamping the FireFly® Probe (all models)

Insert the FireFly® probe from the top into the holder. Before turning the FireFly® probe by 90° to mount or unmount, make sure the probe is fully inserted and seated into the holder. The following example is also valid when using the bi-pod FF-2FOOTER.



The FireFly® probe holders consist of insulating material.
Only the holder FF-HAL10kV, which is equipped with the 3D probes positioner FF-3DPOS200, provides isolation voltages up to 10kV.
Observe the required distances of FireFly® probe head to earth ground.



Insert / remove probe



Make sure probe head is fully inserted and seated into holder



Twist by 90° to mount or unmount

Using the Holders FF-3DPOS200 and FF-HAL10kV

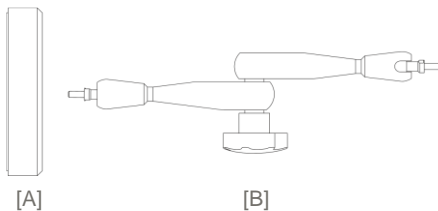
- **Assembly**

Screw the positioner arm [B] into the product specific base [A] with M6 thread, and tighten it with the 7mm wrench from the scope of delivery. The base [A] is available in three different variants: Steel base, vacuum base or table clamp. The positioner arms [B] with M6 thread are available with 130mm and 200mm span width.

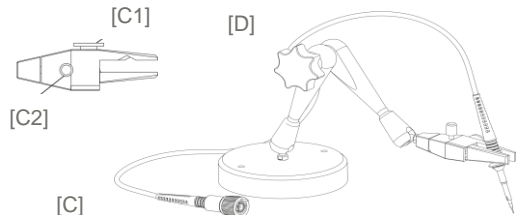


The probe holder [C] shape depends on the probe being in use. For the FireFly® Series use the FF-HAL10kV only. The drawing below shows as example of the universal probe holder.

Assembly Overview, Example



Tensioning knob [D], Example



- **Handling and Re-Positioning**

Hold the 3D Probe Positioner and loosen the central tensioning knob [D] until the 3D Probe Positioner can be moved.



Do not release the tensioning knob [D] completely, otherwise the 3D Probe Positioner collapses in itself and could damage your measuring setup.

If you are using MMCX as the input connector, disconnect the MMCX connector from the circuit under test before repositioning the probe and its holder, otherwise you may cause unnecessary mechanical stresses on the MMCX connector and the PCB.

Bring the 3D Probe Positioner into the desired position and fix the device by turning the central tensioning knob [D] contrary.

Ordering Information

All components are compatible with parts from the PMK positioning systems series. If a 3D positioning system from PMK is available already, only the FireFly® probe holder FF-HAL-10kV is needed. For spare parts and more positioners, visit us at www.pmk.de

Order No.	Item	Picture
FF-3DPOS200	FireFly® 3D Probe Positioner for 10kV Insulation with steel base (893-100-001), arm with span width 200mm (893-200-200), FireFly® probe holder (FF-HAL10kV), Wrench 7mm	
FF-HAL10kV	FireFly® Series non-conducting High Voltage Differential Probe Holder for 10kV Voltage Insulation, M6 thread, pack of three	
893-000-SW7	Wrench 7mm – spare part	
FF-2FOOTER	FireFly® Probe Holder 2-Footer (Bipod) – spare part	

Copyright © 2023 PMK - All rights reserved.

Information in this publication supersedes that in all previously published material. Specifications are subject to change without notice.

Manufacturer

PMK Mess- und Kommunikationstechnik GmbH
Königsteiner Str. 98
65812 Bad Soden, Germany

Tel: +49 (0) 6196 999 5000

Internet: www.pmk.de
E-Mail: sales@pmk.de

Warranty

PMK warrants this product for normal use and operation within specifications for a period of one year from date of shipment and will repair or replace any defective product, which was not damaged by negligence, misuse, improper installation, accident or unauthorized repair or modification by the buyer. This warranty is applicable only to defects due to material or workmanship. PMK disclaims any other implied warranties of merchantability or fitness for a particular purpose. PMK will not be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of use or data, interruption of business and the like), even if PMK has been advised of the possibility of such damages arising from any defect or error in this manual or product.

M-FF-POSITIONERS

Revision 02-2023