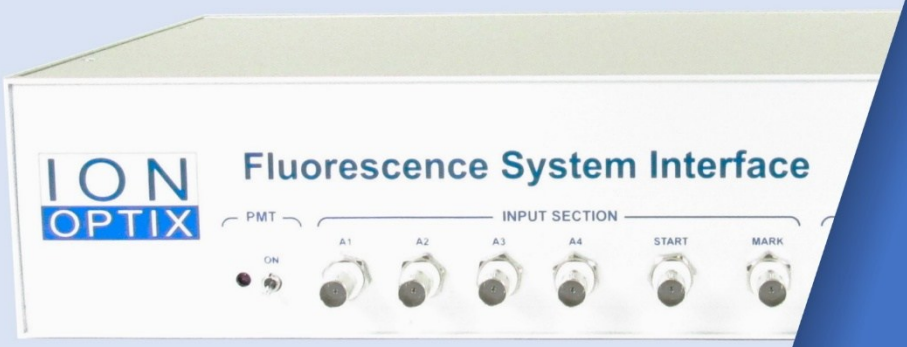
ION OPTIX



Fluorescence System Interface

FSI800

User Guide

rev. 2

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Research Use Only

This product is intended for research purposes only. It is not certified for clinical applications (including diagnostic purposes). Use of this product in uncertified applications is in violation of FDA regulations

Table of Contents

Safety Precautions

To ensure reliability and safety, we recommend using the instrument according to the guidelines described in this manual. All safety and operating instructions should be read and understood before use.

Electric shock risk! Do not remove instrument cover. There are no user-serviceable parts inside. Refer servicing to IonOptix technical support (support@ionoptix.com). Static electricity can damage electronic components. Take care to discharge yourself before handling the device.

Please adhere to the following safety guidelines:

- Unplug the instrument from the wall before cleaning.
- Keep the instrument free from moisture, water, and dust.
- Do not place instrument on unstable surface and do not drop the device.
- If ventilation slots are present on instrument panels, keep clear of obstructions.
- All cables and power supply cords should be routed so as to not cause a hazard. Use only supplied or approved/recommended cables.
- Ensure instrument is not situated near a heat source.

Statement of Conformity

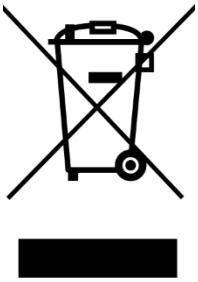
This instrument carries the CE mark and meets the appropriate EU directives.

Intended Use

This product is intended for **research purposes only**. It is not certified for clinical applications (including diagnostic purposes). Use of this product in uncertified applications is in violation of FDA regulations.

IonOptix products are intended to be installed, used, and operated under the supervision of an appropriately qualified life-science researcher.

Disposal



Forward to recycling center or return to manufacturer. Unwanted equipment bearing the Waste Electrical and Electronic Equipment (WEEE) Directive symbol requires separate waste collection. For a product labeled with this symbol, either forward to a recycling center or contact your nearest IonOptix representative for methods of disposal at the end of its working life.

Warranty

This IonOptix instument is warrantied for a period of one (1) year from delivery under normal use and conditions, and will operate in material conformance with applicable IonOptix specifications or standards.

This warranty does not apply to any defect caused by failure to provide a suitable operating environment, any other excluded use, or any other abuse, misuse, or neglect off the instrument.

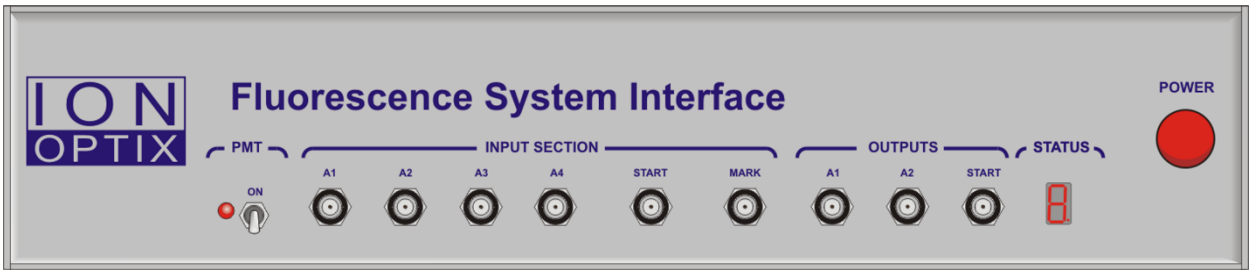
Technical Specifications

Item	Specification
Dimensions	425 (L) x 203.2 (D) x 88.1 (H) mm 16.73(L) x 8 (D) x 3.74 (H) inches
Weight	2.15 kg /4.75 lbs
ADC	4 x 16 bits; +/-10V
DAC	2x 12 bits; +/-5V
PMT	2x 9-pin DSUB
Power	110-240VAC
Operating temperature	10 - 40 °C
Air humidity	10 – 90 % RH, non-condensing

About this Manual

This manual describes how to setup and use the FSI800 Fluorescence System Interface in your application.

Front Panel Connections



The FSI front panel has the following connections and controls.

PMT

The PMT section has a power switch to control the 5V power to the back panel PMT connectors. The red LED indicates if the power is on. To extend the life of your PMT(s), keep the power off when you are not measuring fluorescence.

Input Section

The input section has 4 BNC connectors, labeled A1-A4, for the analog inputs. These are 16-bit, +/- 10V inputs.

There are also 2 BNC connectors, labeled Start and Mark, that are 5v TTL/CMOS compatible trigger inputs.

Output Section

The output section has 2 BNC connectors, labeled A1 and A2, for the analog outputs. These are 12-bit, +/- 5V outputs.

There is also a BNC connector, labeled Start, that is a 5v TTL/CMOS compatible trigger input. This is often used in conjunction with the MyoCam-S3 for sending timing triggers.

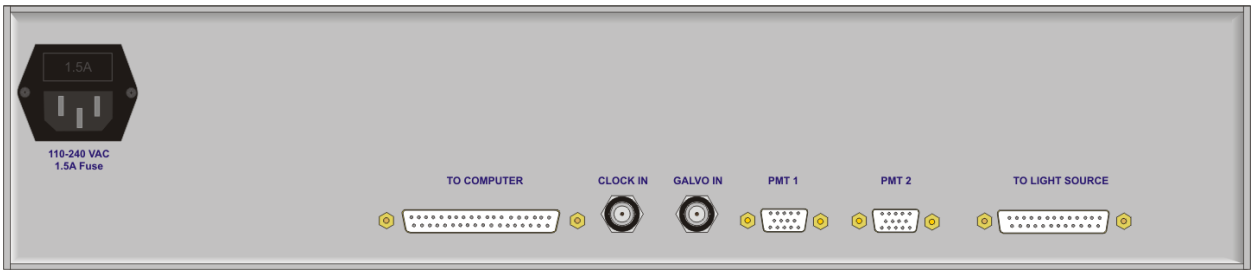
Status

The 7-segment Status LED shows the current filter/shutter status of your fluorescence light source, if one is attached.

Power

The power switch in the upper right controls the power to the entire device.

Back Panel



To Computer

This 37-pin DSUB connector should be connected to the IO24 card in your acquisition computer. This is how the computer communicates with the FSI.

Clock In/Galvo In

These inputs are not used.

PMT 1/PMT 2

These are the two standard PMT inputs for connecting IonOptix PMT200 or PMT300 devices for measuring fluorescence emission signals.

To Light Source

This 25-pin DSUB connector connects your optional MuStep, HyperSwitch, or OptoSwitch LED light source to the FSI.

Installation

Attention: Always use the supplied or recommended cables and mounting accessories.

- Assure power is off to FSI, computer, and all attached devices.
- Connect FSI to IO-24 with supplied 37-pin M-F cable.
- [Optional] Connect FSI to light source with supplied 25-pin
- [Optional] Connect Start Out of FSI to In of MyoCamS3
- Turn power on to FSI, computer, and attached devices.

How to use

Apart from the PMT power, explained earlier, there are no user controls on the FSI. Everything is controlled by software. See the IonWizard Acquisition Manual for software setup.

Cleaning and Maintenance

Cleaning

- Use a soft cloth and a mild cleaner (e.g. window cleaner) to clean the outside of the FSI as necessary.
- Do not use solvents like acetone or thinner.
- Do not allow device to become saturated with cleaning solution.

Maintenance

- No maintenance other than cleaning is necessary.
- In case of malfunctions contact the manufacturer.

Storage and Transport

Storage

- Store in a dry and clean environment.

Transport

- For transport, the original box is preferred.

Faults and Troubleshooting

Troubleshooting

- If any signal is not working, check the cables.
- If the device will not power on, check and replace the fuses with 1.5A slow-blow fuses if necessary.

Accessories

Part Number	Description
Z-C-DB37-MF-6ft	6 ft, male to female, DB37 cable
Z-C-BNC-MM-6FT	6 ft, male to male bnc cable
Z-C-DB25-MM-6F	Myohandle 6 ft male to male DB25 cable for Light Source

Index