ION OPTIX

FSI800-Fluorescence System Interface

User Manual

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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

About this Manual

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

General Safety Precautions

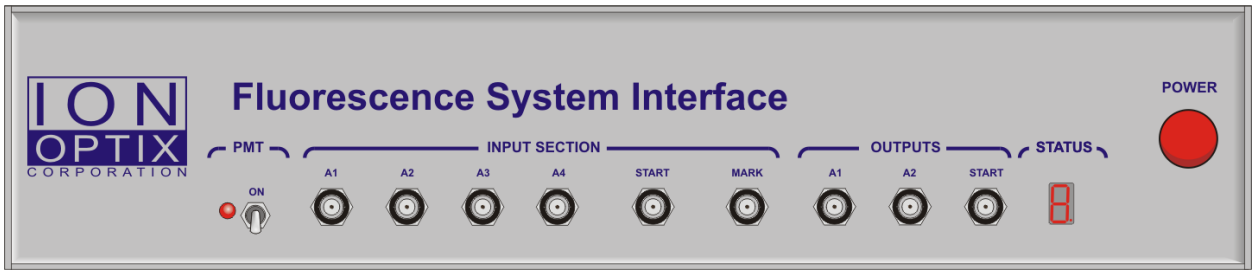
The FSI is a robust device, however some precautions must be taken:

- Do not drop this device.
- Use in dry and clean environments only.
- Prevent spills or liquids coming into contact with the device.
- Use only the supplied or approved/recommended cables.
- Static electricity can damage electronic components. Take care to discharge yourself before handling the device.

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

Front Panel Connections



The FSI front panel has the following connections and controls.

PMT

The PMT section has a power switch to controls 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.

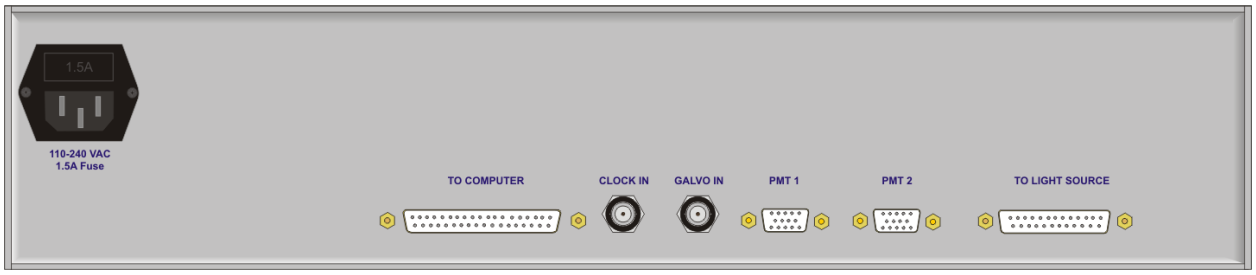
Status

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 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

With the exception of the PMT power, explained earlier, there are no user controls on the FSI. Everything is controlled by software. See the IonWizard Acqusition 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.

Repairing

- If the FSI is damaged, stop using it and disconnect all cabling.
- The FSI cannot be repaired by the user, and there are no user-serviceable parts inside.
- For repair or inspection, contact the manufacturer.

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

Dismantling and Disposing

The FSI is an electronic device and should be disposed of according to local regulations.

Do not put the device in the trash.