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Safety Interlock High Voltage f/t for Ionpumps

The safety interlock feature requires two ground connections from the pump to the controller, for the high voltage to operate. The primary ground is made by the braided shielding of the coaxial cable. It connects the controller chassis ground to the pump body through the cable connectors. The second ground is made by an additional wire inside the outer cover of the coaxial bundle. This second ground makes contact to the pump by a ring of fingers inside the HVFT 5125 feedthrough, which are connected to the pump through the body of the feedthrough. There are two insulated pins inside the Fischer cable connector, which connect the secondary ground wire to the ring of fingers, when the Fischer connector is plugged into the feedthrough.

On the controller side of the cable the second ground wire is split out of the coax before the Fischer connector. It attaches to a stud on the controllers rear panel that is insulated from the chassis ground. When the second ground makes a complete connection to the controller chassis through the pump feedthrough it latches a relay which allows the high voltage to be turned on. If the high voltage connector is removed from the pump feedthrough, the connection to the relay is broken and the high voltage is turned off for safety.

All HV cables now incorporate a new type of coaxial cable which uses Tefzel™ insulation, is rated at 15KVDC, is bakeable to 200 degrees C, contains a separate ground-sense wire and is radiation resistant.

For more informations please contact us

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