



UFS Corporation
Getting Started

PN 221028

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Welcome to UFS Corporation

This guide is intended to be an overview of a typical Current Monitor Panel (evaluates current passing through a typical Membrane Electrode Cell) and how it works. It is presented to the owners, system designers, installers, and members of the paint-finishing department where the equipment is to be used. Also included are pages specific to your system. It is important that you keep this documentation in an easily accessible place for future reference.

Product Support and Customer Service

For customers in the **United States** and **Canada**:

You may call (219-464-2027) or fax (219-464-8646) our office during normal business hours (7:30 a.m. - 4:30 p.m., CST). Technical Service can be reached at extension 22 and Customer Service can be reached at extension or 28.

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Many of the Getting Started manuals are available in German and Spanish. Please contact UFSc for assistance. Persons with disabilities should contact UFSc and request assistance.

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Introduction

This manual has been prepared as a cover manual to the attached manuals for each of the major functional components that make up this panel. These functional components include –

- 48 Point Current Monitor
- 48 Point DC Shunt & Power Distribution
- 4 Channel Variable Current Overload Controller
- 4 Channel @ 50 Amp each Power Transistor Switch
- 5 v DC Power Supply

In addition the floor standing panel includes the following items –

- Panel Disconnect Switch, Important Notice – this has a set of dry contacts that is suitable to be used as a switch in order to control the DC Power Rectifier and shut it down, if so desired. This disconnect switch is only rated at 30 amps and is not designed to disconnect the ~1000 amp capacity of the DC Rectifier.
- Interior lights that are turned on when the appropriate door is opened.
- Industrial fan and exhaust grill located on opposite sides of the floor standing control panel
- 2 x duplex GFI outlets, 2 x fluorescent Lamps, 1 x blower

You will need to provide the following to complete the installation

- Suitable pad lock for use on the disconnect switch
- Dry, level concrete floor location

Safety

A safe work environment for our customers (their employees and outside contractors) is of utmost importance to UFS Corporation. All applicable OSHA and owner's safety requirements must be followed when performing any maintenance, inspection, repair or testing on Electrodes and/or Electrode Systems. This includes, but is not limited to, the following safety regulations: Lockout/Tagout (Energy Control); Hazard Communication; Confined Spaces; Personal Protective Equipment; Electrical Safe Work Practices; Ergonomics and Material Handling; Accident Prevention signs (Danger – Energized Equipment).

Before installing or working on the DC rectifier, Lockout/Tagout procedures are to be followed. Use a Splash Guard (UFSc PN 175101 or equal) on top of the Electrode Holder with ED tanks that do not have an enclosure wall surrounding the Electrodes.

On going training of employees on ED equipment and system installation, operation, and maintenance of UFSc components is strongly recommended. MSDS (Material Safety Data Sheets) are provided for UFSc materials. Replacement or missing copies are available upon request from the UFSc Safety Coordinator.

Unpacking the Panel

The unit will be delivered on its back. Carefully remove the over packaging from around the outside of the panel. Remove the steel bands as required. Insure that all the backplanes are secured to the back wall of the enclosure.

Stand the panel up by using the 2 eyelets on the top of the unit and a suitable hoist. Carefully move the panel into place.

System Requirements

Single phase 120 v AC power (allow for up to 10 amps) will be required to be brought into the floor standing panel in order to supply power to the following devices -

- 2 x fluorescent lamps
- 1 x fan blower
- 1 x digital meter (i.e. ammeter)
- 1 x 5 v DC power supply

In addition, another single phase 120 v AC line should be brought into the panel to service -

- 2 x GFI duplex outlets (15 amps each)

Ratings

The electric current limit for each of the 48 ME Cell positions is 100 amps, which is the limit for each of the DC Shunts. However, the overall electrical current limit is 2250 amps, which is the limit of the copper bus bar.

ME Cell ID Locator Diagram

Please refer to Drawing Number 996030 for the numeric ID for each of the 48 ME Cells in the ED tank.

Refer to Other Manuals

At this point you should refer to the other Equipment Getting Started Guides for detailed information on their specifics.

Checkout

There is a Checkout procedure in each of the other Getting Started Manuals. Make sure you have completed them and each piece of equipment is operating

After all the installation steps are completed, it is time to test and debug the field wiring to look for shorts and poor connections. If there are problems, refer to the Troubleshooting section.

A. GFI Outlets

Test the functionality of each of the GFI outlets and confirm that they operate properly.

B. Disconnect Handle

Remove the pad lock and pull the handle down. Check to make sure that what ever task the dry contacts of the disconnect were meant to initiate have been performed before the right hand door is opened.

C. Open Right Hand Door - Lamp Check

After the appropriate safety checks have been made and it has been determined it is safe to open the door – do so. Note the right hand door must always be opened before the left hand door. Does the lamp turn on?

D. Open Left Hand Door – Lamp Check

Open the left hand door and lamp should turn on.

Quality Assurance

In the back of this Guide is a copy of an Inspection and Certification report. All product(s) are tested and certified before they leave the factory. The matters of the testing and the results are shown on this report.

Operation

There are only two components, which will perform an operation. The first is the Current Monitor and the second is the Variable Current Overload. Refer to the specific manuals for operation details.

Spare Parts and Accessories

Refer the individual component Getting Started Guides for spare parts information. Look below for specific spare parts for the Floor Standing Panel –

Item	Description	Quantity used
Fluorescent lamp	F20T12	2
GFI Outlet	15 amp	2
Inlet & Exhaust Aluminum Filter	Hoffman #A-FTLR275AL (5 per package)	1
Blower motor	Hoffman #A-DB275	1

Limited Warranty and Liability

WARRANTY

We warrant all equipment manufactured by us to be free from defects in material and manufacture at the time of shipment for a period of one (1) year from the date of shipment. We will furnish without charge F.O.B. our factory, but will not install, replacements for such parts as we find to have been defective.

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This warranty shall not apply to any equipment which has been subjected to misuse, neglect or accident, or has been altered or tampered with, or if corrective work has been done thereon without our specific written consent. No allowances will be made for such corrective work done without such consent. Improper maintenance, deterioration by chemical action, and wear, do not constitute defects. Equipment manufactured by others, and included in our offering, is not warranted in any way by us but carries only the manufacturer's warranty, if any. All electrodes (and or cathodes), of any material, are not warranted by us in any way since they by nature are sacrificial and will erode or corrode away with time.

All warranty claims must be submitted within ten (10) days of discovery of defects or shall be deemed waived. All parts returned for inspection must be sent prepaid. No representative of our company has any authority to waive, alter, vary or add to the terms hereof without prior approval in writing. The foregoing is in lieu of all other warranties (including that of merchantability), whether express or implied.

LIABILITY

It is expressly understood that our liability, including that for breach of Contract, negligence, strict liability in tort, or otherwise, for our products is limited to the furnishing of such replacement parts, and that we will not be liable for any other expense, injury, loss or damage, whether direct or consequential, including but not limited to loss of profits, production, increased cost of operation, or spoilage of material, arising in connection with the sale or use of, or inability to use, our equipment or products for any purpose, except as herein provided.

Frequently Asked Questions (FAQ's)

1. How should the 30 amp dry contacts be used in the disconnect switch?

When the disconnect lever is pulled down, the normally closed contacts are opened. This open signal can be used to tell the DC rectifier to turn off.

2. Why does the floor standing panel require an air blower?

Electrical devices are known to disspate significant amounts of heat as high current must pass through conductors. These conductors do cause voltage drops. Thus heat is generated as a result of these voltage drops. Hence, a constant and virous flow of air through the panel will remove the dissapted heat from the inside of the panel.

3. Can I operate more than 1 bat handle switch levels at the same time?

Only depress or push up one switch handle at a time. Operating more than one switch at a time can cause erroneous readings or cause a fuse to blow.

Drawings

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UFS Corporation is a distributor of:

- **Myron L** Conductivity Controllers
- **Webster** Pumps