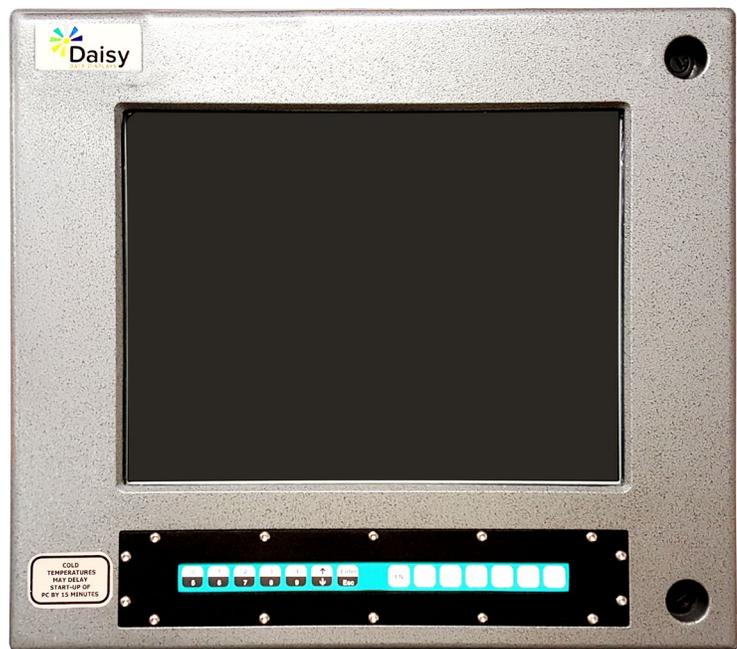




## 4823DH User Manual

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January 2018



Daisy Data Displays, Inc.  
5031 Richard Lane, Suite 103  
Mechanicsburg, PA 17055  
Phone: 717-796-9999



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Manual Revision 01

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To the original purchaser, Daisy Data Displays, Inc., hereinafter referred to collectively as SELLER, warrants each of its manufactured products, and all components therein contained to be free from defects in materials and/or workmanship for a period of 24 months from the date of purchase.

Should a malfunction or other indication of defect attributable directly to faulty materials and/or workmanship occur, Seller will, at its option, and without charge to the customer for labor and parts, repair or replace the defective product, F.O.B. Seller's plant, but Seller will not be responsible for freight from Purchaser to Seller's plant. In no event shall Seller be liable for any loss, inconvenience or damage, whether direct, incidental, consequential or otherwise resulting from abuse, misapplication or modification of the product, improper or faulty power, damage resulting from repairs or alterations performed by unauthorized persons, or conditions resulting from any other equipment attached to the product.

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This warranty is exclusive and is in lieu of any warranty of merchantability or fitness for a particular purpose or other warranty of quality whether expressed or implied, except of title and against patent infringement. Correction of nonconformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of the Seller to the Purchaser with respect to, or arising out of the goods, whether based on contract, negligence, strict tort or otherwise.

**LIMITATION OF LIABILITY:** The Seller shall not under any circumstances be liable for special or consequential damages, such as, but not limited to, damage or loss of other property or equipment, loss of profits or revenues, cost of capital, cost of purchased or replacement goods, or claims of customers of Purchaser for service interruptions. The remedies of the Purchaser set forth herein are exclusive, and the liability of Seller respect to any contract, or anything done in connection therewith such as the performance or breach thereof, of from the manufacture, sale, delivery, resale, installation or use of any goods covered by or furnished under this contract whether arising out of contract, negligence, strict tort or breach of warranty or otherwise, shall not, except as expressly provided herein, exceed the price of the goods upon which such liability is based.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. Seller makes every effort to provide clear and accurate technical information on the application of its products in the Operator's Manual, and assumes no liability for misuse of the information.

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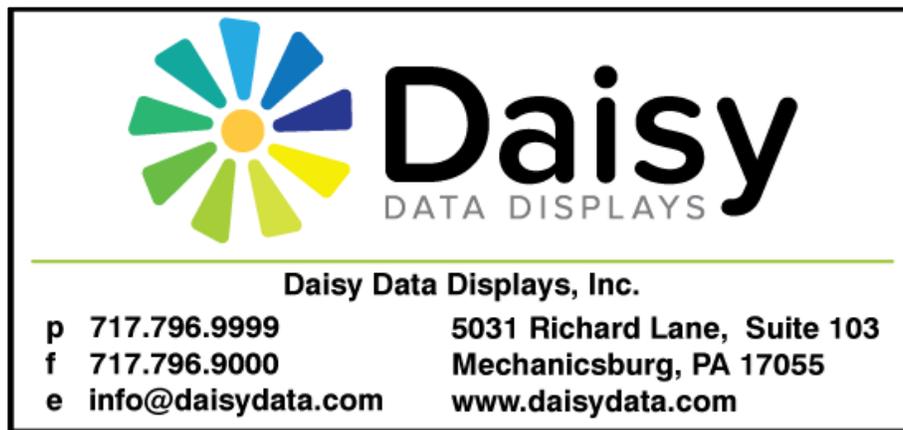
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## 1. Introduction

*Thank you* for selection a Daisy solution for your hazardous area operator interface needs.

This manual contains drawings and component locations for installing and setting up Daisy Data flat panel operator interface systems. In addition, Daisy Data provides warnings, precautions, and methods to ensure that the electronic systems are safe for hazardous areas. This explains the theory behind the unique product and services provided by Daisy Data.

Should you have any inquiries or concerns, please contact Daisy.



## 2. Applicable Hazardous Locations Safety Methods

### 2.1 Division 2: Non-Incendive Protection

The NEC defines a non-incendive circuit as:

“...one other than field wiring, in which any arc or thermal effect produced under intended operating conditions of the equipment, is not capable, under specified test conditions, of igniting the flammable gas-air, vapor-air or dust-air mixture.”

Non-incendive circuit designs do not take component failure into consideration, and therefore have a reduced safety level compared to IS circuit design. They can be worked on while energized without a hot-work permit.

Non-incendive devices can be rated for Division 2 as well as Zone 2 areas without a purge control or other protective device.

*Please note that DAISY's systems have been fully tested under the supervision of Factory Mutual (FM) to ensure compliance with the standards, and are approved as non-incendive devices for all Division 2 areas.*

\*Part of the NEC definition of Division 2 areas.

## 4823DH User Manual

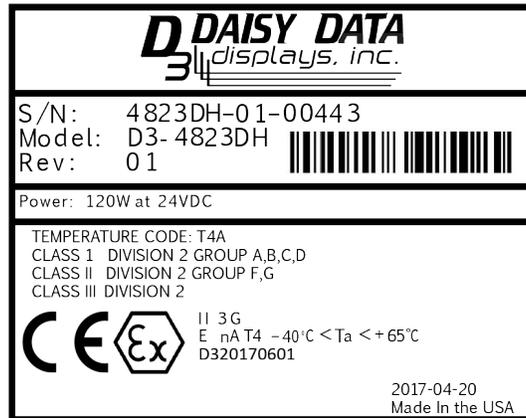
### 3. Customer Service

All Daisy systems pass detailed quality control configuration and inspection before being shipped. Daisy strives to create the highest quality systems, and chooses top quality parts. However, like most electronic devices, units may experience issues over time. Should you experience problems, or have any further inquiries or comments, please contact Daisy's customer service department:

Phone (717) 796-9999 Ext. 222  
Fax (717) 796-9990  
Email [support@daisydata.com](mailto:support@daisydata.com)

Equipment returned to Daisy for service must be accompanied by a valid return merchandise authorization (RMA) number. Items or products shipped to Daisy without a valid RMA number will be refused. An RMA will be generated upon receipt of Company Name, Address, Contact, Product Model and Serial Numbers.

#### Typical Model/Serial Number Tag



Daisy Data Displays Inc. prides itself on offering best in class support for your products. Our technical support team can help you with installation, configuration, troubleshooting, and other support issues for all Daisy's products.

### 4. Software/Hardware

Daisy data should be contacted for any hardware or software questions/issues. Additional SSD's or operating systems can be supplied as needed. Be aware that any modifications or alterations without the assistance of Daisy Data could affect unit certifications and implied warranty.

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## 5. Specifications

MATERIAL	
Enclosure	Cast Aluminum Powder Coat Finish
Viewport	Surface Capacitive Touch System
Design	NEMA 4X, Non-incendive Electrical Equipment
PHYSICAL	15.50" Height (H <sub>1</sub> ) 17.50" Width (W) 14.50" Height (H <sub>2</sub> ) 8.56" Depth (D <sub>1</sub> ) 1.56" Depth (D <sub>2</sub> ) 9.16" View Height (VH) 12.16" View Width (VW)
Weight	50–55 Lbs.
Viewing Window	Glass Touch Screen

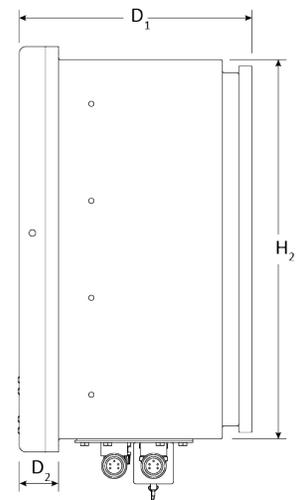
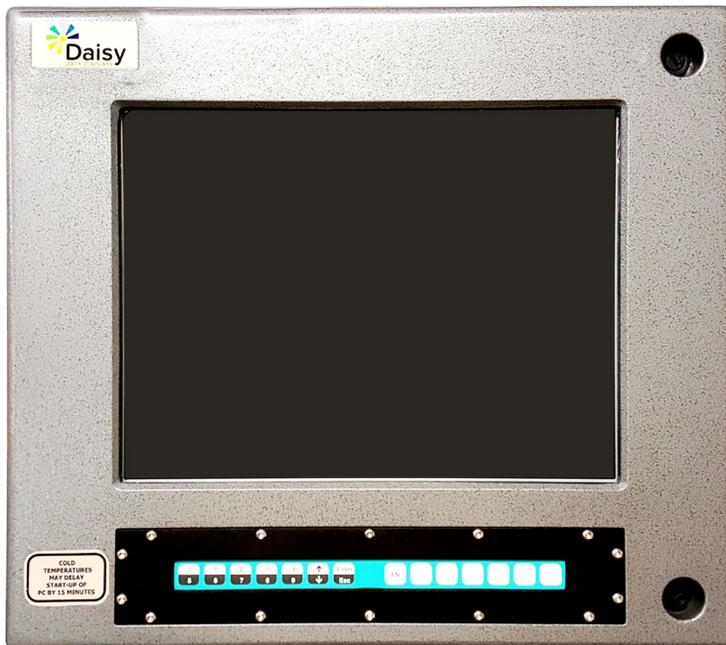
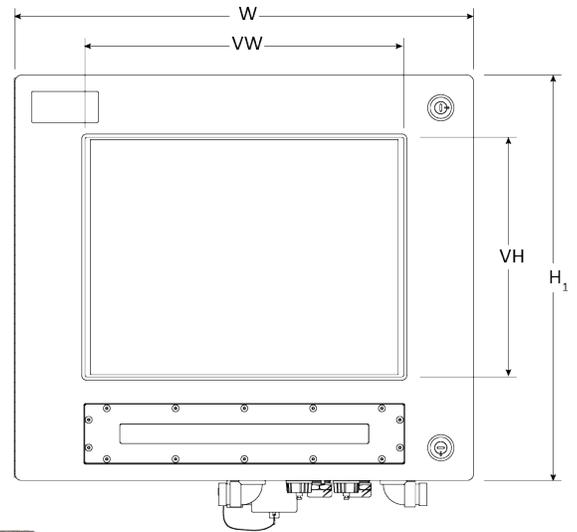


Figure 1 – Unit Mounting Dimensions

ELECTRICAL	
Voltage	24 VDC @ 5 Amps
Power	70 W* (120 W w/heaters)
	* Computer and display only

FLAT PANEL SPECIFICATIONS	
Maximum Resolution	1024 (H) x 768 (V) pixels
Dot Pitch	0.099 (H) x 0.297 (V) mm
Pixel Pitch	0.297 (H) x 0.297 (V) mm
Color Depth	16,777,216 colors (32-bit)
Viewing Angle	At the contrast ratio $\geq 10:1$ Horizontal: Right side 80° (typ.), Left side 80° (typ.) Vertical: Up side 80° (typ.), Down side 80° (typ.)
Luminance	At the maximum luminance control 600 cd/m <sup>2</sup> (typ.)

ENVIRONMENTAL	
Shock (IEC68 2-27)	15G bi-directional impulse 11 msc, non-operational 3 axes
Vibration (IEC68 2-6)	3 GRMS operational, 5–2000 Hz 5 GRMS non-operational, 5–2000 Hz, 3 axes
Operating Temperature	-40 – +150 °F (-40° – +65°C)
Storage Temperature	-40 – +150 °F (-40° – +65°C)
Relative Humidity	10-95% Non-condensing
Listed Approvals	TEMPERATURE CODE: T4A CLASS 1 DIVISION 2 GROUP A,B,C,D CLASS II DIVISION 2 GROUP F,G CLASS III DIVISION 2 Ex nA T4 -40°C < Ta < +65°C TUVNA 08ATEX7152



COMPUTER SPECIFICATIONS	
Motherboard ASY, COMe, Atom E3845, 4GB RAM	AMI uEFI 64M or 128 Mbit Flash ROM Two 204-pin DDR3 SODIMM sockets IC, RAM, LP DDR3, SODIMM,1333, 2GB, 204P 2x Serial ATA ports, SMBus, LPC 7x USB 2.0 (4 USB2.0 by Hub), 1x USB 3.0 ports Baytrail SoC integrated Graphics, Chrontel CH7511B (eDP to LVDS) Dual channel 18/24-bit LVDS DP, eDP (2560 x 1600@60 24bpp), HDMI 1.4a (1920 x 1080@60 24bpp) 10/100/1000 Base-Tx Gigabit Ethernet Compatible
<b>Storage</b>	32 GB SSD 4 GB RAM
<b>CPU</b>	COMe Intel® Atom™ E3845 quad core 1.91 GHz processor
<b>Connections (External)</b>	2 CAN 2 USB (2.0) 2 Ethernet 1 DC Power 1 Serial 1 PS/2 (Mouse)
<b>Connections (Internal)</b>	1 USB (2.0) 1 VGA 1 PS/2 (Keyboard)

AVAILABLE OPTIONS	
820	Bezel
821	Sun Visor
231	Win7 Pro 32-bit
9137	Yoke Mount

\*Specifications are subject to change without notice

4823DH User Manual

6. Operator Controls (Front Door)

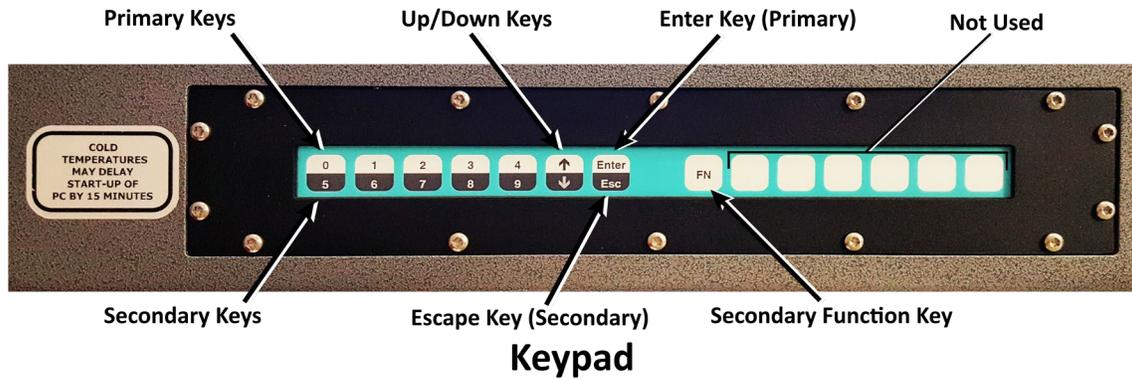
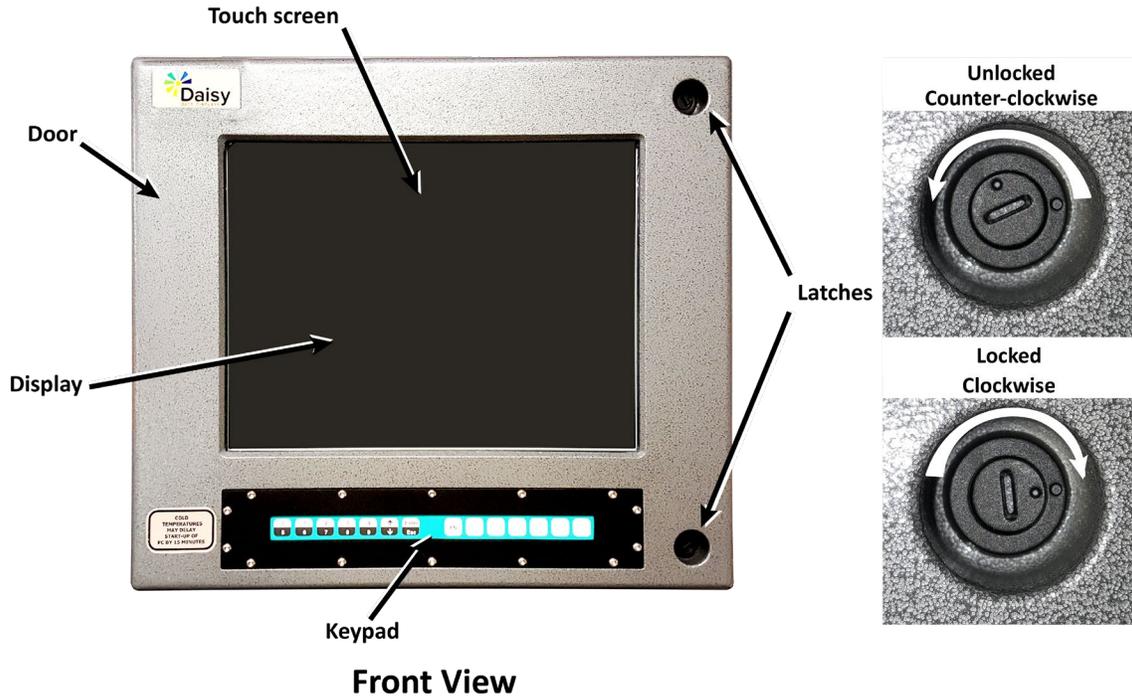


Figure 2 – Operator Controls (Front Door)

7. Accessory Mounting Locations

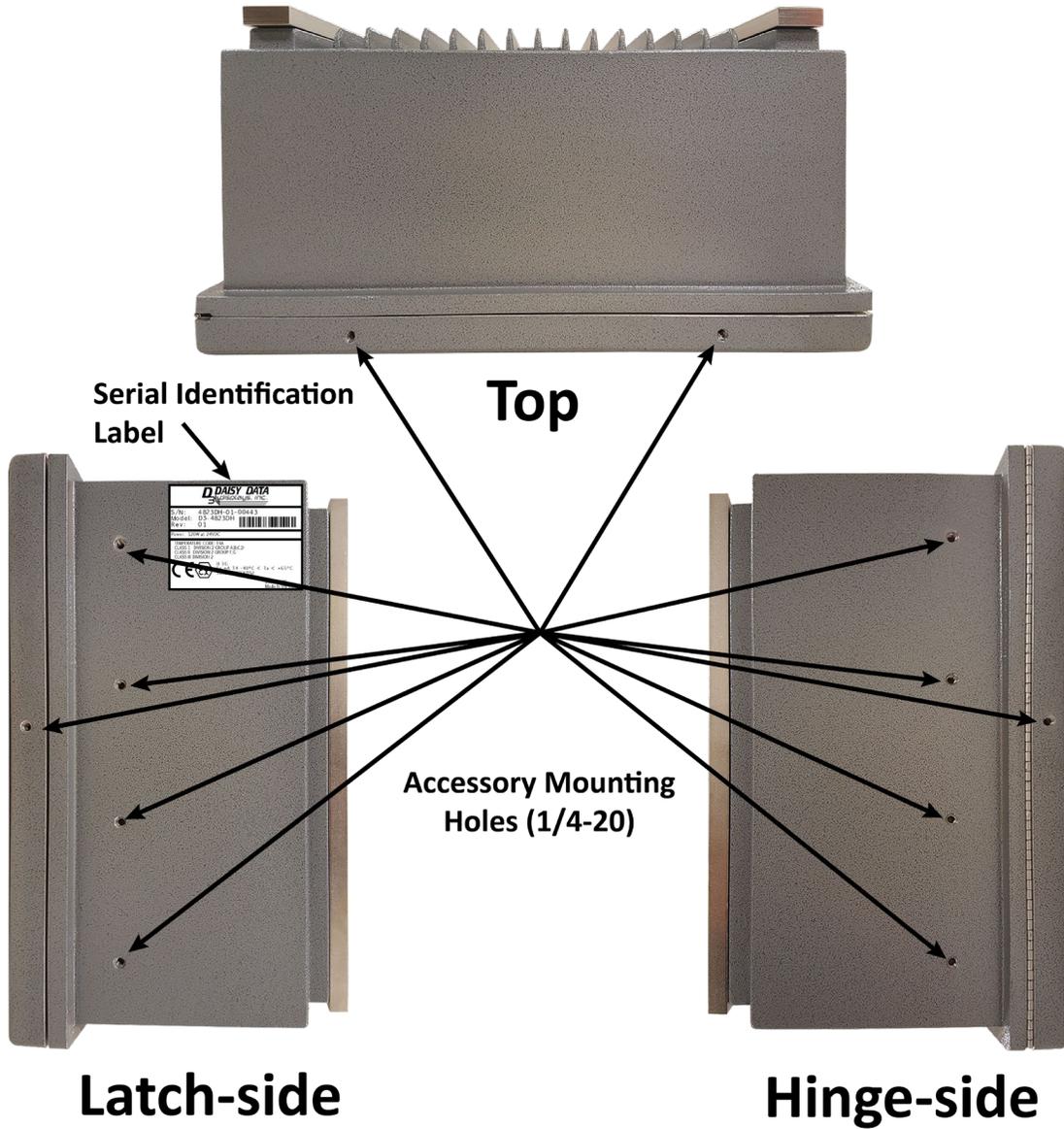


Figure 3 – Mounting Locations

8. Panel Mount Configuration



**Backside**

Figure 4 – Mounting Bars/Panel Holes

### 9. Gland Plate Connections

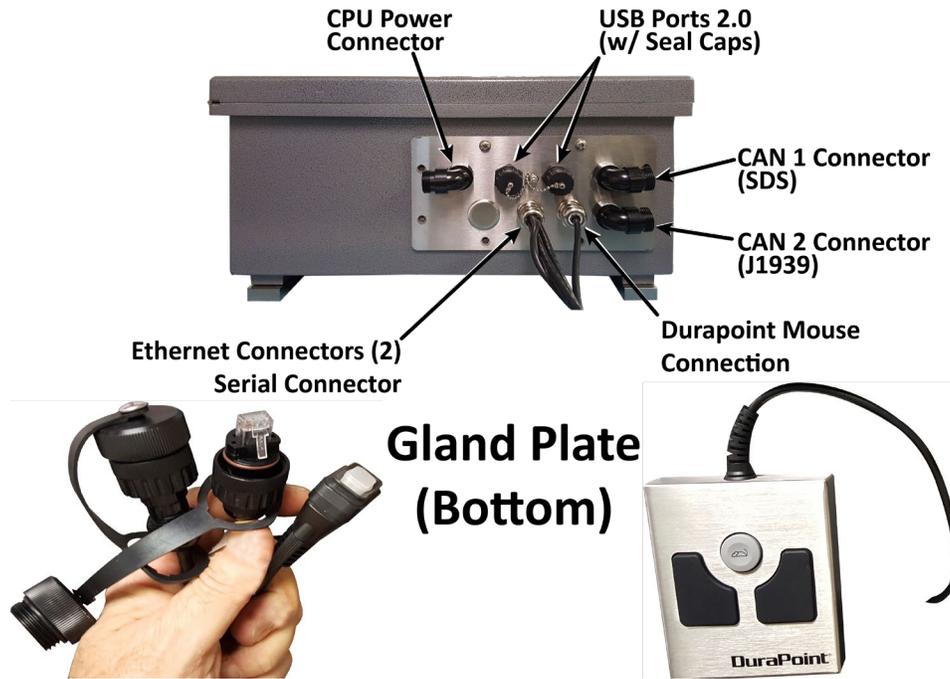


Figure 5 – Gland Plate Connections

10. Door Assembly/Front Panel Components

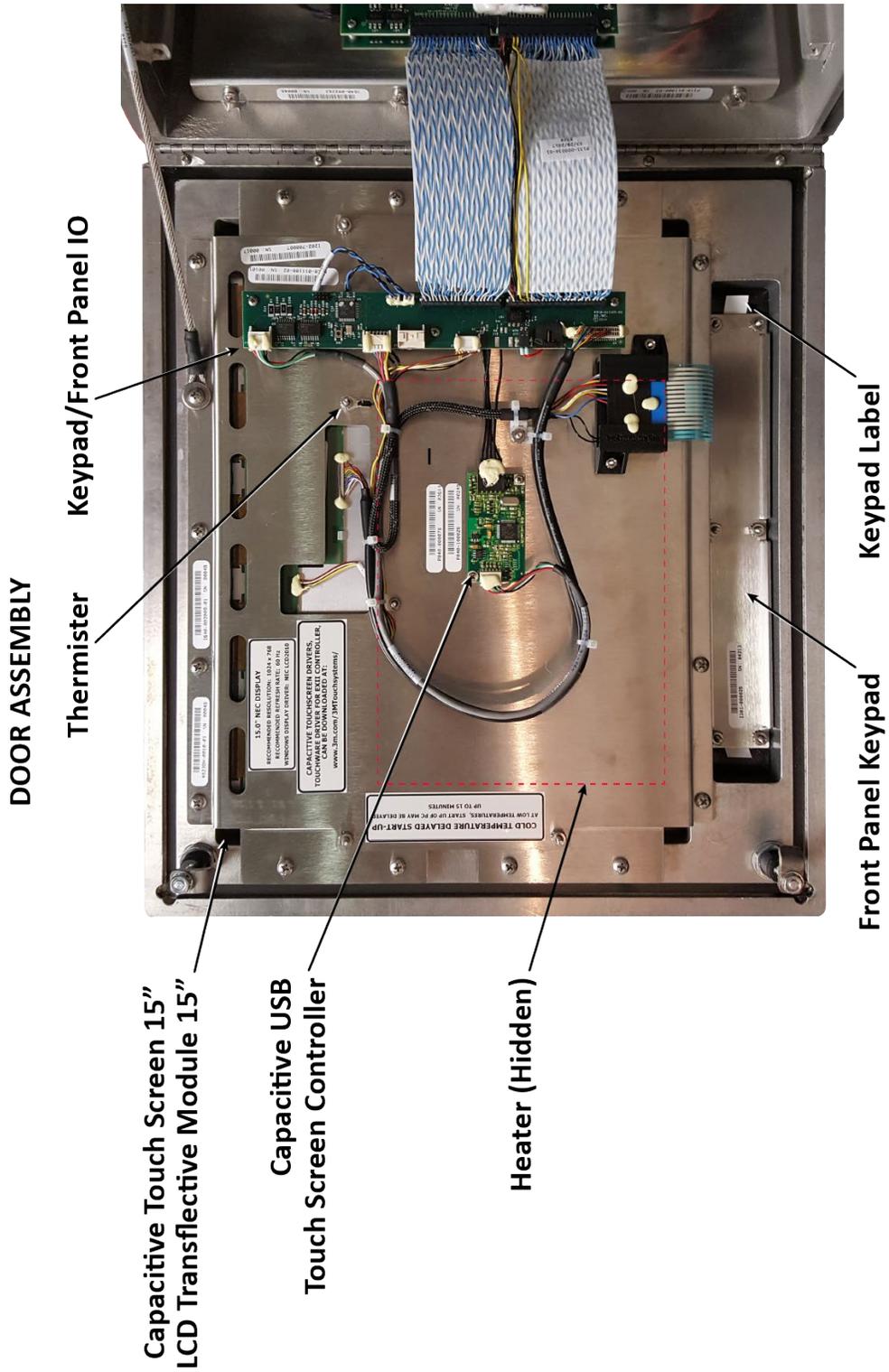
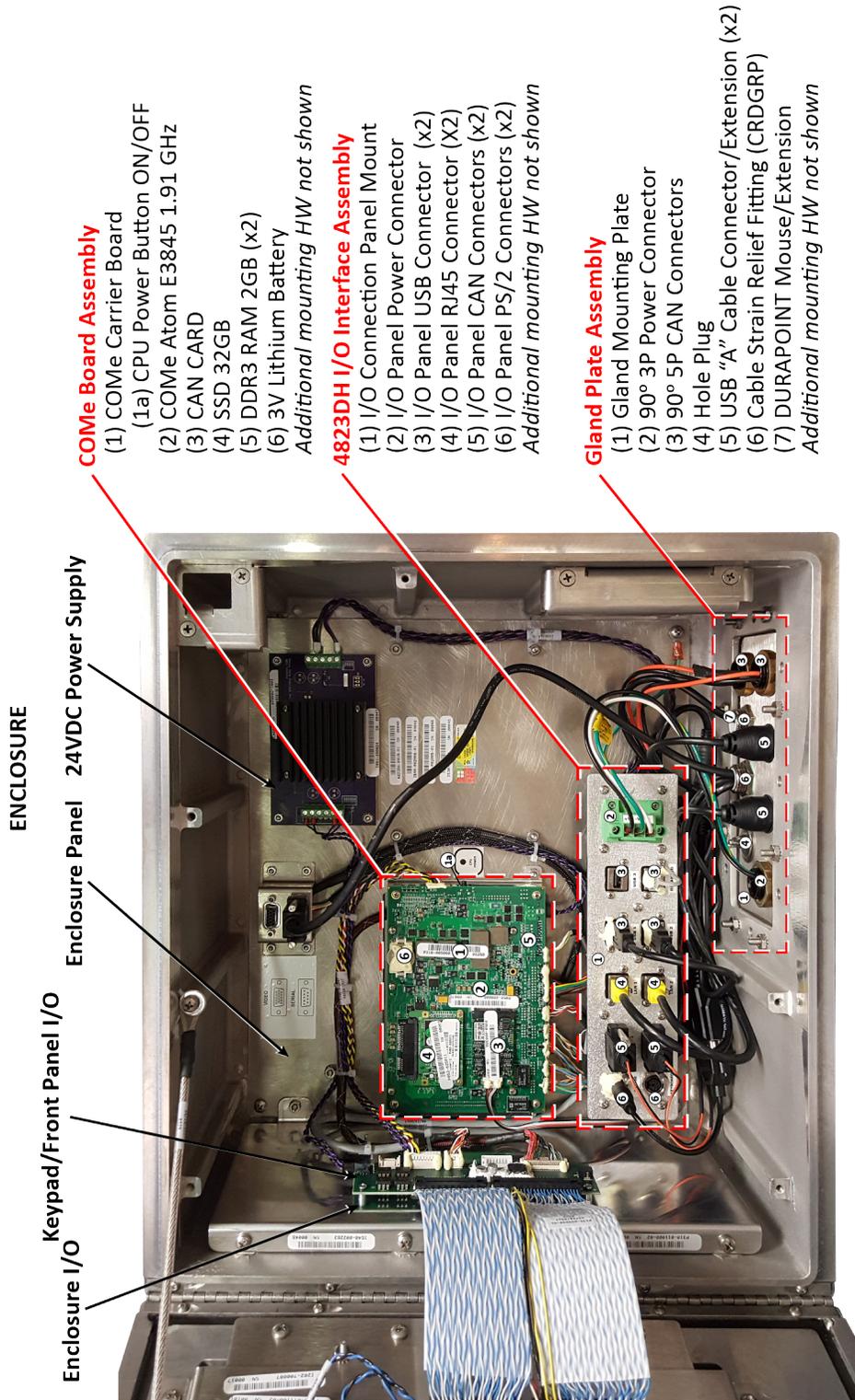


Figure 6 – Door Assembly/Front Panel Components

<b>DOOR/FRONT PANEL COMPONENTS</b>	
<b>PART NUMBER</b>	<b>DESCRIPTION</b>
I640-002009	Entire Door Assembly
P040-000078	Capacitive Touch Screen 15"
P000-000139	LCD Transflective Module 15"
I202-700007	Keypad/Front Panel IO
I301-000025	Front Panel Keypad
P040-100026	Capacitive USB Touch Screen Controller
P071-00004	Heater
I301-000025	Front Panel Keypad
D103-100005	Keypad Label

<b>DOOR/FRONT PANEL CABLES</b>	
<b>PART NUMBER</b>	<b>DESCRIPTION</b>
P070-000574	LVDS Cable
P131-000051	Backlight Cable
I100-002354	Heater/Thermistor Cable
I100-002266	Touch Screen USB Cable
I100-001990	Touch Screen Extension Cable
I100-002339	Thermistor/Cable
P131-000049	On-screen Display (OSD) Cable

11. Door Assembly/Front Panel Components



**COMe Board Assembly**

- (1) COMe Carrier Board
  - (1a) CPU Power Button ON/OFF
  - (2) COMe Atom E3845 1.91 GHz
  - (3) CAN CARD
  - (4) SSD 32GB
  - (5) DDR3 RAM 2GB (x2)
  - (6) 3V Lithium Battery
- Additional mounting HW not shown*

**4823DH I/O Interface Assembly**

- (1) I/O Connection Panel Mount
  - (2) I/O Panel Power Connector
  - (3) I/O Panel USB Connector (x2)
  - (4) I/O Panel RJ45 Connector (X2)
  - (5) I/O Panel CAN Connectors (x2)
  - (6) I/O Panel PS/2 Connectors (x2)
- Additional mounting HW not shown*

**Gland Plate Assembly**

- (1) Gland Mounting Plate
  - (2) 90° 3P Power Connector
  - (3) 90° 5P CAN Connectors
  - (4) Hole Plug
  - (5) USB "A" Cable Connector/Extension (x2)
  - (6) Cable Strain Relief Fitting (CRDGRP)
  - (7) DURAPOINT Mouse/Extension
- Additional mounting HW not shown*

ENCLOSURE

Enclosure Panel 24VDC Power Supply

Keypad/Front Panel I/O

Enclosure I/O

Figure 7 – Door Assembly/Front Panel Components

<b>ENCLOSURE/COMPUTER COMPONENTS</b>	
<b>PART NUMBER</b>	<b>DESCRIPTION</b>
I640-002005	Enclosure
I640-002008	Enclosure Panel
P202-700007	Keypad/Front Panel I/O
I310-011000	Enclosure I/O
I091-300024	24VDC Power Supply
<b>I630-004001 COMe Board Assembly</b>	
P310-005000	COMe Carrier Board
P050-200008	COMe Atom E3845 1.91 GHz
P050-000308	CAN CARD
P062-025011	SSD 32GB
A314-312002	DDR3 RAM 2GB (x2)
E905-000015	3V Lithium Battery
<b>I640-002285 4823DH I/O Interface Assembly</b>	
M140-003510	I/O Connection Panel Mount
E204-101503	I/O Panel Power Connector
I061-000000	I/O Panel USB Connector (x2)
I061-100001	I/O Panel RJ45 Connector (X2)
<b>I640-002286 Gland Plate Assembly</b>	
M140-003349	Gland Mounting Plate
E205-400003	90° 3P Power Connector
E205-400005	90° 5P CAN Connectors (Channel A & B)(x2)
M100-000041	Hole Plug
<b>P070-000545 USB "A" Cable Connector/Extension (x2)</b>	
E205-500000	USB Connection Screw Cap (x2)
<b>M290-000063 Cable Strain Relief Fitting (CRDGRP)</b>	
P131-000024	Ethernet Connector/Extensions (x2)
P130-000068	Serial Connector/Extension
<b>M290-000063 Cable Strain Relief Fitting (CRDGRP)</b>	
P040-300025	DURAPOINT Mouse/Extension

**ENCLOSURE PANEL CABLES**

<b>PART NUMBER</b>	<b>DESCRIPTION</b>
P131-000036	7" 50-pin Passthrough Cable Assembly (Door I/O-Enclosure I/O)
P131-000037	7" 40-pin Passthrough Cable Assembly (Door I/O-Enclosure I/O)
I100-002359	Power Supply Cable Assembly (Enclosure I/O-Power Supply)
I100-002337	Power Supply Cable Assembly (Power Supply-I/O Interface)
I100-002340	Backlight/Power Cable Assembly (Enclosure I/O-COMe)
P131-000046	LVDS Cable Assembly (Enclosure I/O-COMe)
I100-002271	USB Cable Assembly (x2)(Enclosure I/O-COMe)
I100-002356	Serial Cable Assembly (COMe-Serial Connector)
P131-000047	VGA Cable Assembly (COMe-VGA Connector)
I100-002360	Chassis Ground (I/O Interface-enclosure)
P131-000048	USB (2) & Ethernet (2) Cable Assemblies (COMe-I/O Interface)(x4)
P050-000308	CAN (Channel A & B) Cable Assembly (From COMe Assembly)(x2)
I131-000050	PS/2 Serial Connector Cable Assembly (From COMe Assembly)

**12. Important Safety Instructions**

**WARNING EXPLOSION HAZARD**  
**SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.**

**WARNING EXPLOSION HAZARD**  
**DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.**

The unit must be used only for the permitted purpose. Incorrect or impermissible use of non-compliance with these instructions invalidates the unit. Any alterations and modifications to the unit impairing its safety protection methods are not permitted. The unit should not be used if there is damage.

Installation, maintenance, overhaul and repair may only be carried out by appropriately authorized and trained personnel.

Observe the follow information during installation and operation:

- Any damage can invalidate the systems safety integrity
- National and local safety regulations
- National and local accident prevention regulations
- National and local assembly and installation regulations
- General recognized technical regulations
- Safety instructions within this document
- Characteristic values and rated operating conditions
- Product needs to maintain continuous operating temperature; the system should be observed frequently to insure system stability
- Continuous energization of the overall equipment. Any interruptions in energization of any length requires a visual inspection for condensation/frost on any part followed by a warm-up period involving just the internal heater, with the electronics energized and the heater de-energized only after the internal temperature exceeds 25°C.

## 13. Repair, Maintenance and Warnings

**WARNING EXPLOSION HAZARD**  
**SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I,  
 DIVISION 2.**

**WARNING EXPLOSION HAZARD**  
**DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE  
 AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.**

**WARNING EXPLOSION HAZARD**  
**DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE  
 AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.**

Unit and connections must be installed per mounting drawings (See [Panel Mount Configuration](#)). For supply connections, use wires suitable for at least 75°C and use Copper, Copper-Clad Aluminum, or Aluminum Conductors.

### 13.1 Repairs and installation

End user is responsible for installation of power input to the unit. Repairs and installation of this unit need to be performed by authorized personnel in accordance with the National Electrical Code (NEC) (NFPA), European Committee for Electrotechnical Standardization (CENELEC), Canadian Electrical Code (CEC), and any applicable local code regulations. Contact your local Authority having jurisdiction (AHJ) for assistance in field wiring in accordance with local code regulations. This unit incorporates static sensitive components which need to be handled carefully; be sure to follow all ESD safety procedures. The door assembly of this unit cannot be opened while in operation.

### 13.2 Maintenance

Maintenance should be performed by authorized personnel. The only maintenance is periodic inspections for damage and proper operation. Any damaged parts or damaged cabling entering into the unit, need to be replaced promptly to ensure that the safety methods used, and their integrity are still valid.

The following details must be checked during maintenance:

- Compliance with the permitted temperatures
- Damage to the enclosure and seals
- Cables are held securely in place
- Clean unit enclosure with non-corrosive and non-combustible chemicals
- Continuous energization of the overall equipment. Any interruptions in energization of any length requires a visual inspection for condensation/frost on any part followed by a warm-up period involving just the internal heaters and fans, with the electronics energized and the heaters de-energized only after the internal temperature exceeds 25°C.

14. Model 4823DH Block Diagram (Door)

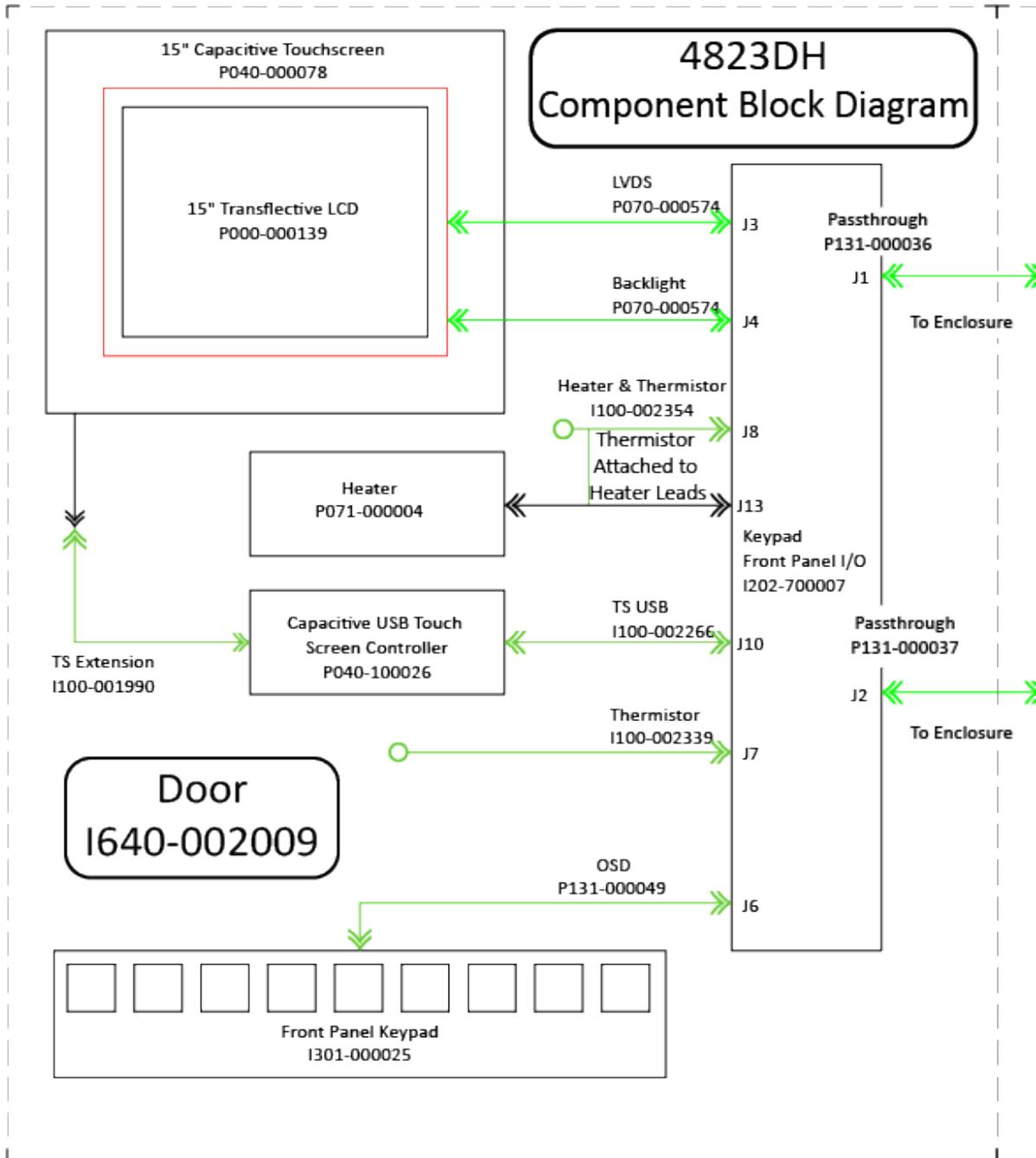


Figure 8 – 4823DH Block Diagram (Door)

15. Model 4823DH Block Diagram (Enclosure)

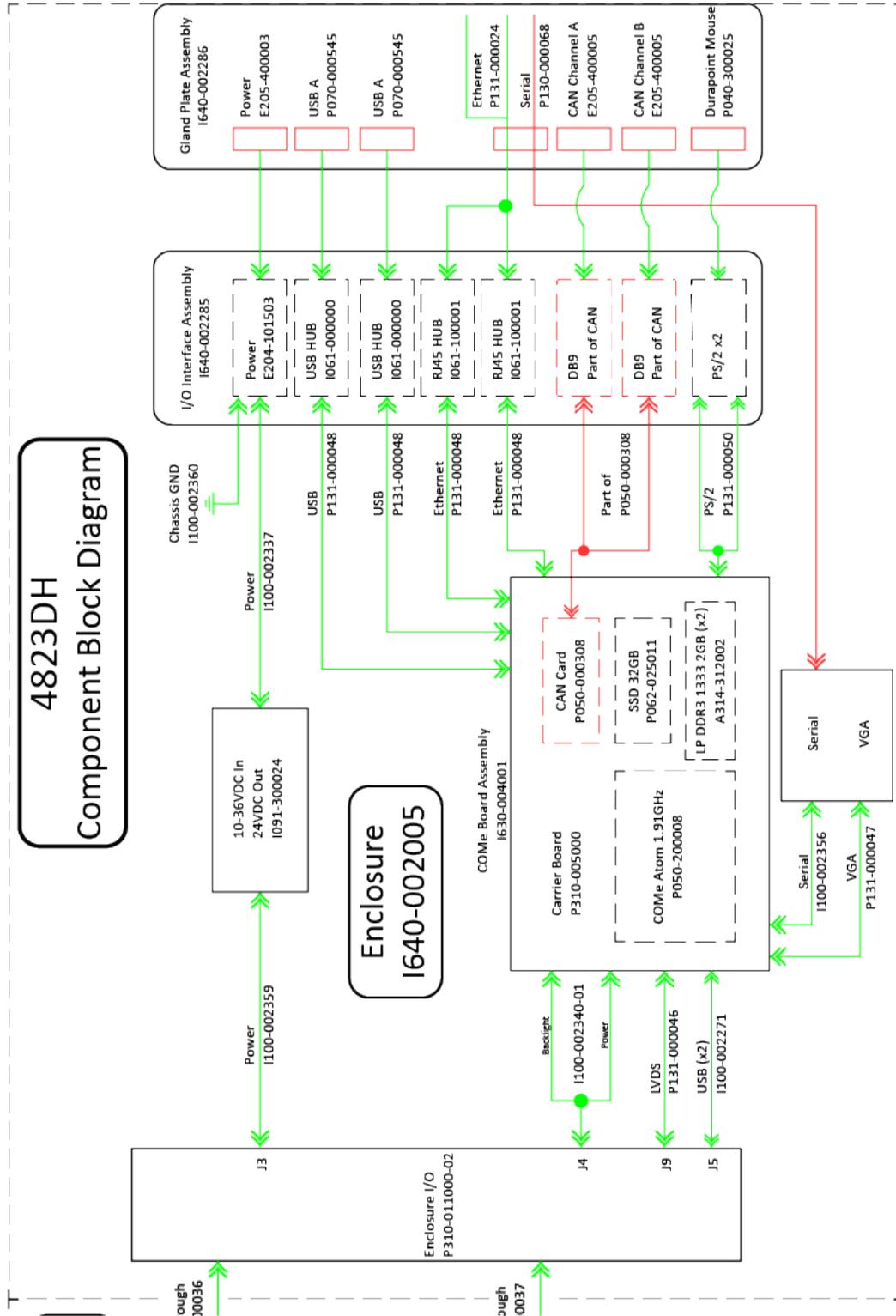


Figure 9 - 4823DH Block Diagram (Enclosure)

16. Model 4823DH Mounting Configuration

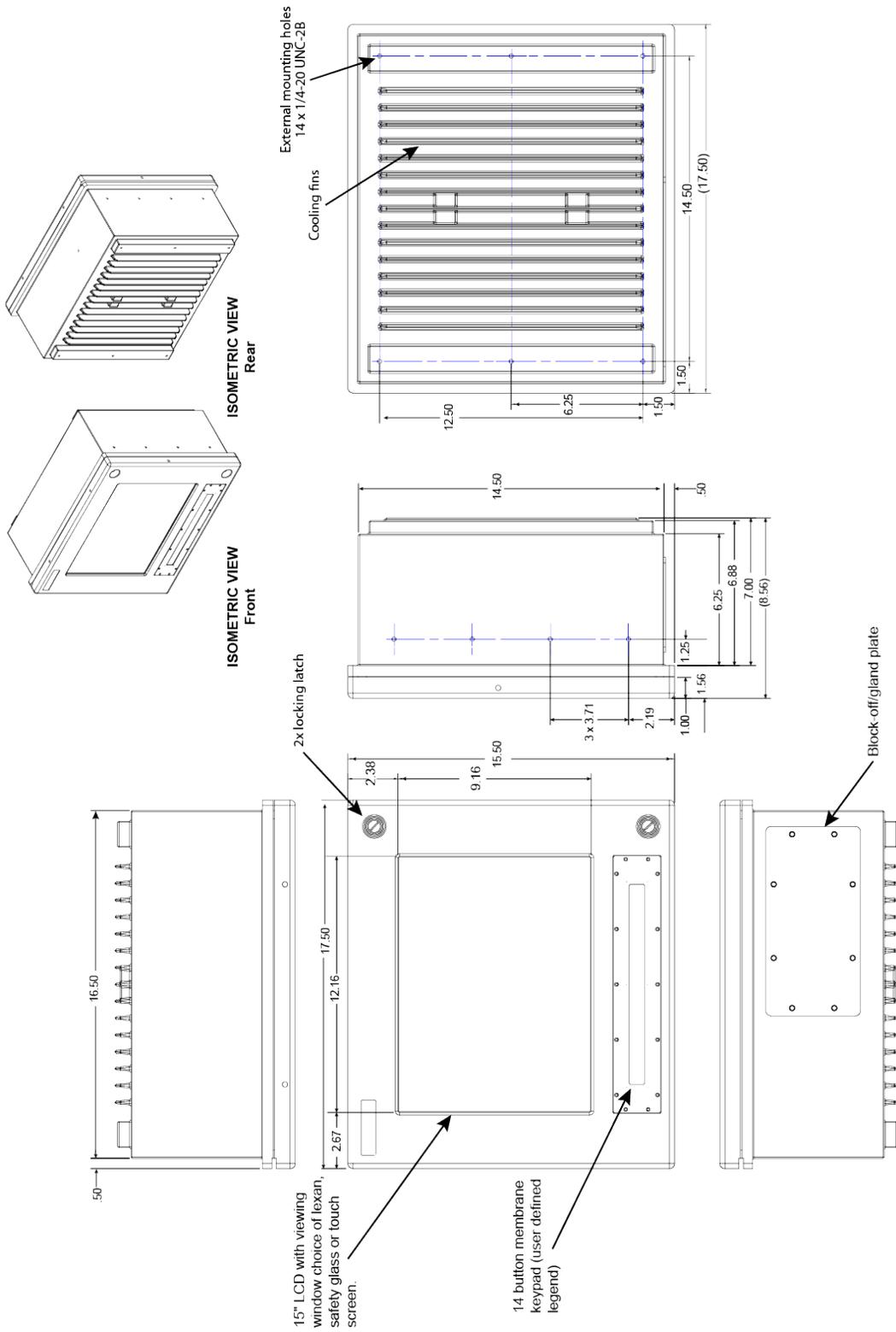
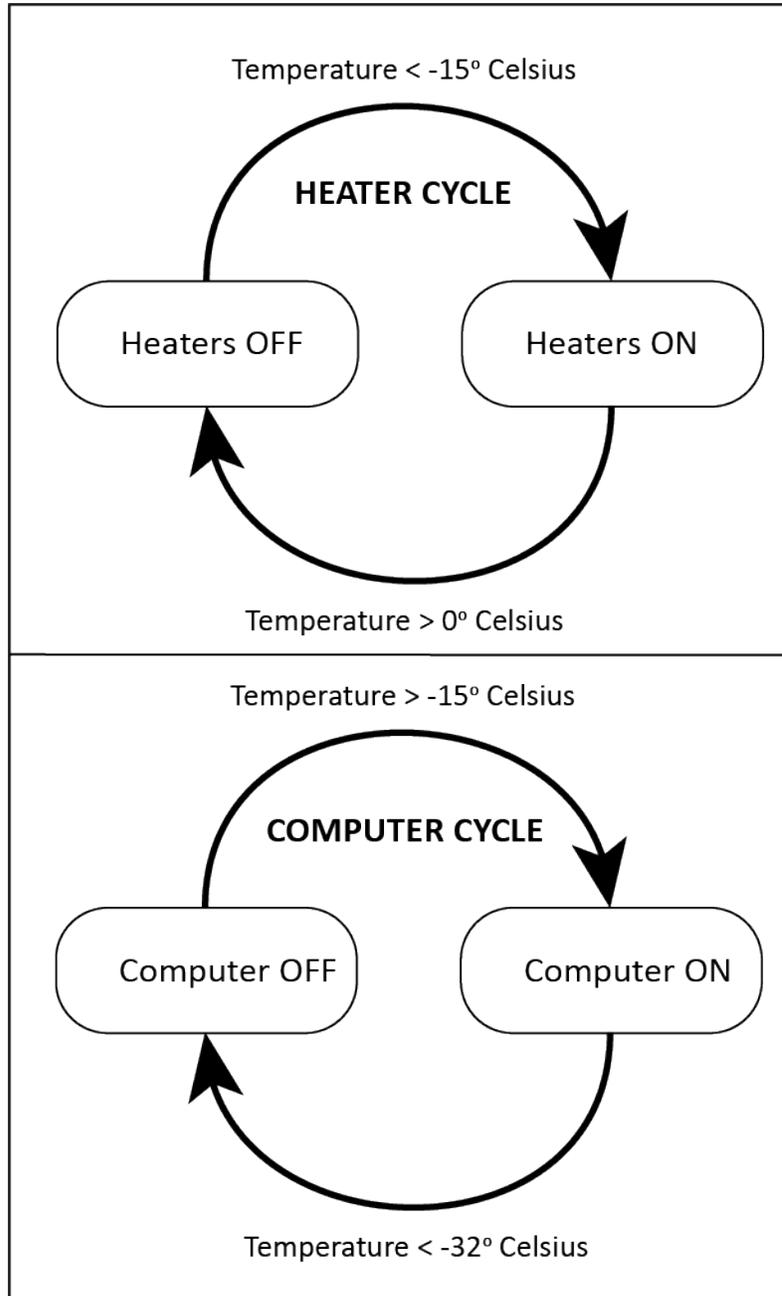


Figure 10 - Model 4823DH Mounting Configuration

**17. Cold Temperature Delayed Start-up Sequence**

At the low temperatures, the computer will not turn on until the heaters bring the internal temperature up to -15° Celsius. This could take 15 minutes or longer.

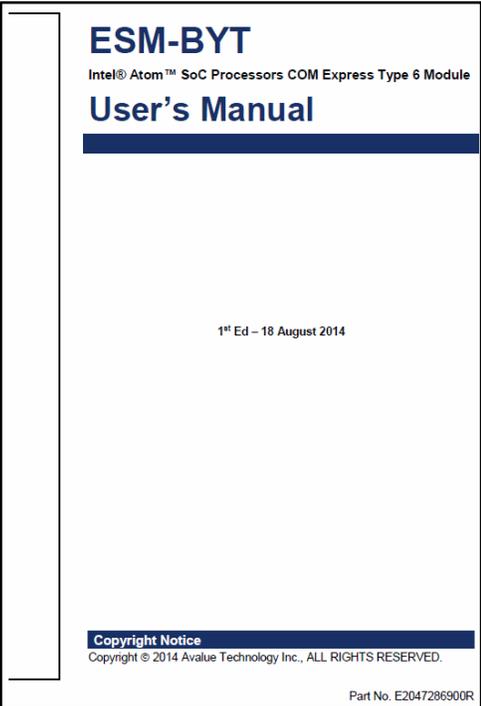
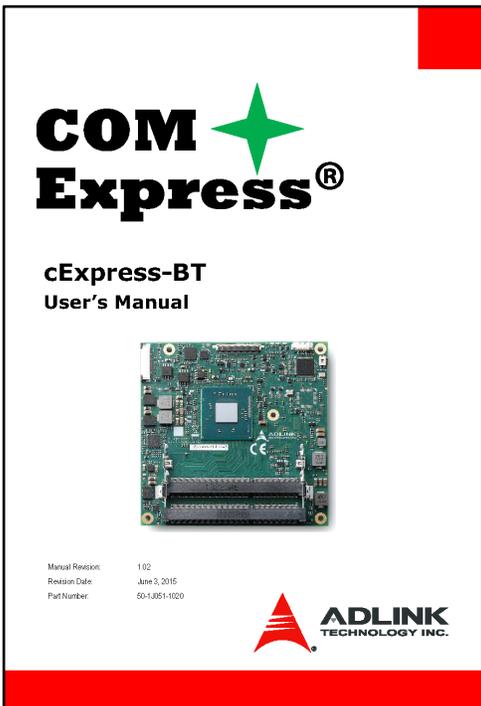


**Figure 11 – Heater/CPU Power Cycle**

## 4823DH User Manual

### 18. COMe Module User Guides

Detailed information for your COMe Module, check to see which module your configuration has been installed (Avalue or ADLINK) and select the appropriate user's manual below.

Avalue Technology ESM-BYT User's Manual	ADLINK Technology cExpress-BT User's Manual
	
<p><b>Includes:</b></p> <ol style="list-style-type: none"><li>1. Getting Started</li><li>2. Hardware Configuration<ol style="list-style-type: none"><li>a. Overview</li><li>b. Installation</li><li>c. Connectors</li><li>d. Jumpers</li></ol></li><li>3. BIOS Setup</li><li>4. Drivers Installation</li><li>5. Mechanical Drawing</li></ol>	<p><b>Includes:</b></p> <ol style="list-style-type: none"><li>1. Introduction</li><li>2. Specifications</li><li>3. Pinouts and Signal Descriptions</li><li>4. Module Interfaces</li><li>5. Smart Embedded Management Agent</li><li>6. System Resources</li><li>7. BIOS Setup</li><li>8. BIOS Checkpoints, Beep Codes</li><li>9. Mechanical Information</li></ol>

19. Trouble Shooting

Troubleshooting

**POWER REQUIREMENTS**

- Model 4823DH
- Nominal Output Voltage 24VDC
- Input Voltage (Min.) 10VDC
- Input Voltage (Max.) 36VDC
- Current (Warm Climate) ≈ 3A (Max.)
- Current (Cold Climate) ≈ 5A (Max.)

**NOTE 1**

The computer is not permitted to start if the temperature drops below -32° Celsius inside the cabinet and will remain off until the temperature rises above -15° Celsius.

**NOTE 2**

The heaters turn on when the internal temperature drops below -15° Celsius and will remain on until the internal temperature rises above 0° Celsius.

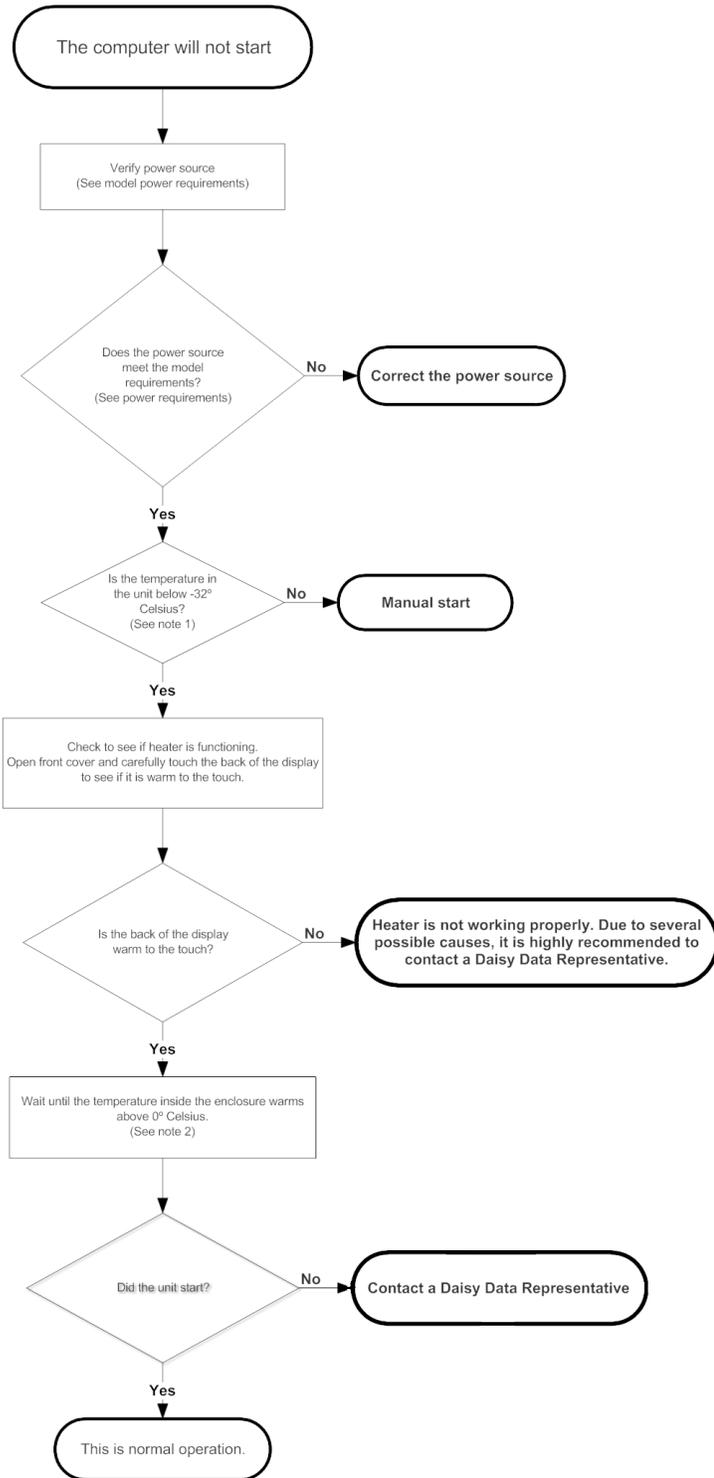


Figure 12a – Troubleshooting

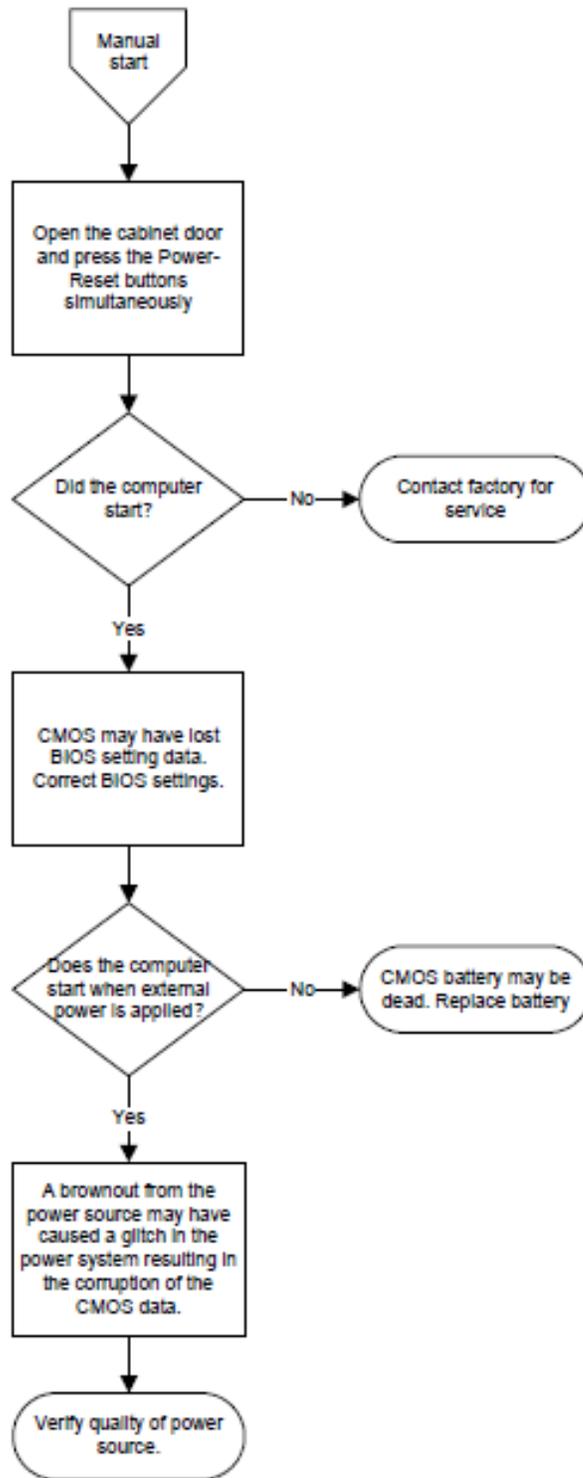


Figure 12b - Troubleshooting

20. Revision History

REVISION	CHANGE DESCRIPTION	DATE	AUTHOR
-	Initial Release	04/17/2017	BM
01	Updated Linked document locations. Corrected Serial No. Data Plate error, updated page numbering/page count	1/29/2018	BM