Galaxy® AF-3400 34 mm Monochrome/RGB

Installation and Operation Manual

ED-16680 *Rev 2* *23 March 2009*

DAKTRONICS

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DAKTRONICS

ED-16680
Product 1329
Rev 2 – 23 March 2009

Fill in the chart with specific information about this display so these details will be readily available when calling for service or replacement parts.

Information needed for technicians and/or Customer Call Center	**Fill in the blank**
Location address of the display	
Model number of the display:	**Galaxy AF-3400 34mm**
Version of software being used: *(Right-click on Venus 1500 name in toolbar, choose "About Venus 1500")*	
Method of communication being used *(Refer to Section 4 for guidance)*	
Controller version used in the display	**Version 3**
Network address	

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DAKTRONICS, INC.

Reproduction Reference
ED-16680 – P1329
Display Manual; Galaxy® AF-3400 - 34mm – Mono/RGB

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1) This page is for reproduction reference only and will not be included in the manual.

2) This manual is to be copied on FRONT AND BACK PAGES -8 ½ x 11 paper. **Note:** The first page, Cover Page, uses the front of the page (blank on back). Section heading pages always start on a new page; they never start on the back of another page.

3) Insert **ED-7244** at the end of **Section 2**.

4) Insert **ED-14377** within **Appendix B**.

5) Insert **SL-02374** within **Appendix C**.

6) Use a blue window cover and a blue back.

7) Punch all pages, window cover and back cover along the left edge, and bind with a binder.

8) Please direct questions and suggestions to Engineering Secretarial.

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Section 1: Overview of the Displays

Daktronics Galaxy® displays are built for long life and easy maintenance. To ensure the optimal performance of the display, this manual provides information on installation, maintenance and troubleshooting. Diagnostic information and parts replacement are also included within these sections. Definitions of terms and explanations of common connectors used in the displays can be found in **Section 8.**

1.1 Display Details

Galaxy® model numbers are described as follows:

AF-3400-RRxCCC-34-R-X		
AF-3400	=	Outdoor Louvered Galaxy Display
RR	=	Number of Rows High (16, 32, 48 or 64)
CCC	=	Number of Columns Long (Up to 144 Columns Standard)
34	=	34 mm pixel to pixel spacing
R, A, RGB	=	LED Color, R (Red), A (Amber), RGB (Red, Green, Blue - 32,000 color)
X	=	P - Primary or 2V – Primary/Mirror

The displays are offered as single-face or double-face units. The first display is called the primary, and if mounted back-to-back with a second display, the second display is called the mirror. If the second display will be mounted at a distance of more than six feet (2m) from the primary display, then two primary displays will be utilized.

A module is the building block of the Galaxy display. Each module measures 8 pixels high by 8 pixels wide. Refer to **Figure 1**. By placing modules side-by-side and on top of one another, a display of any size can be designed and built. Individual modules can be easily removed from the display, if required.

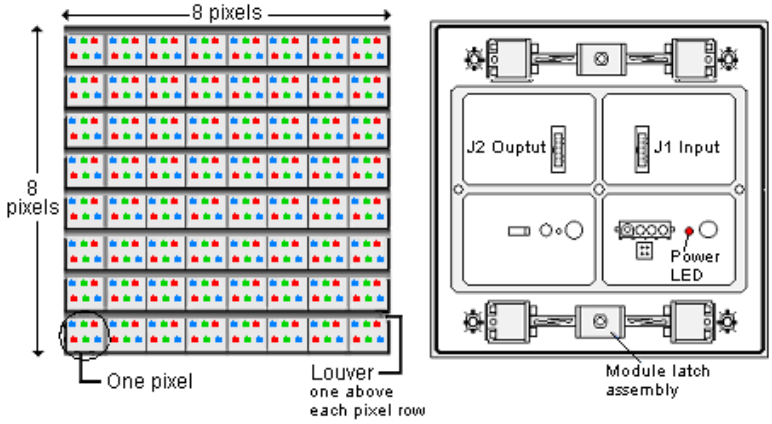

Figure 1: *RGB Module, Front and Back*

A typical display system involving up to 240 displays is controlled with a Windows® based personal computer (PC) running Venus® 1500 software. Venus® 1500 is a software package that runs under Windows® 98, ME™, 2000, or XP Home/Professional operating systems on an IBM®-compatible computer. Refer to the Venus® 1500 operations manual (**ED-13530**) for installation and operation of the Venus® 1500 software.

The diagrams in **Figure 2** and **Figure 3** give an overview of the displays. The first figure shows the front and back views of a typical display. The second figure shows a simplified diagram of basic display set-up. These diagrams will help in understanding the display manual information.

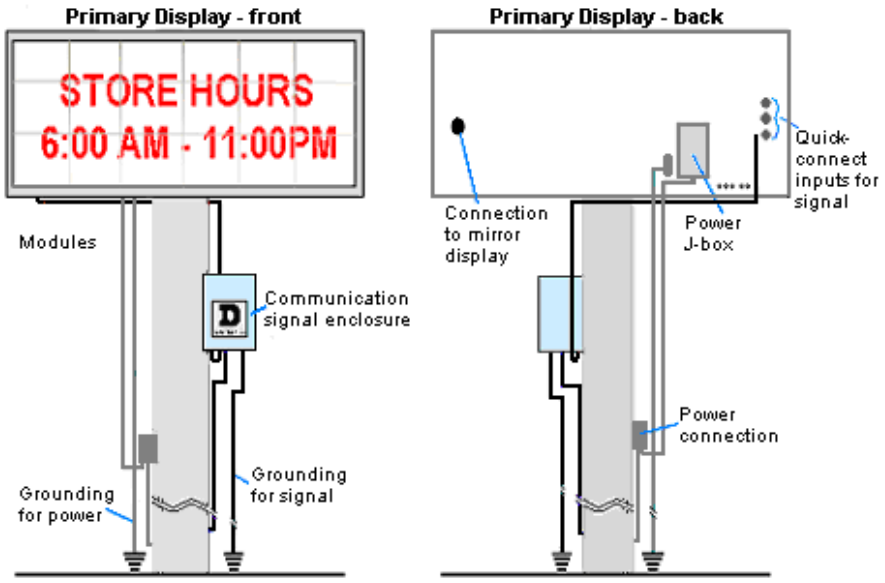

***Figure 2**: Front and Rear View of a Display*

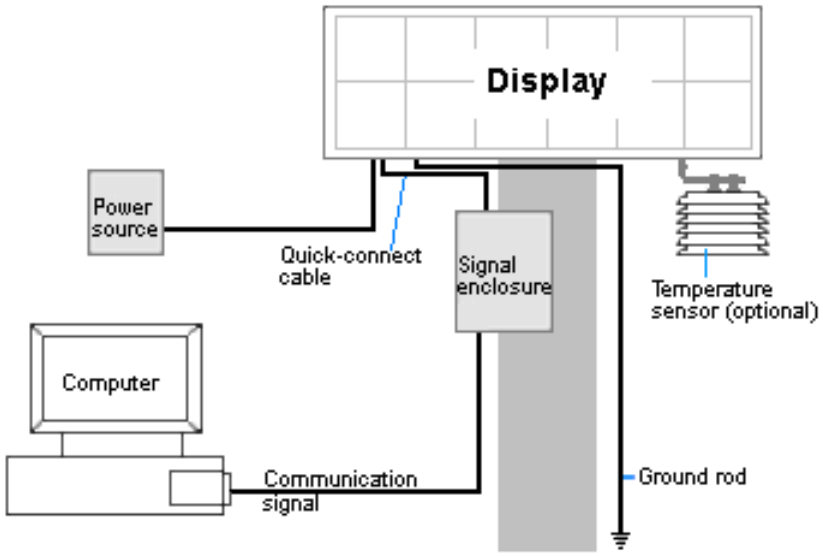

***Figure 3:** Basic Display Set-up*

Section 2: Mechanical Installation

Read the Mechanical, Power and Signal Installation sections before installing the display(s).

Daktronics engineering staff must approve **any** changes that may affect the weather-tightness of the display. If any modifications are made, detailed drawings of the changes **must** be submitted to Daktronics for evaluation and approval, or the warranty may be void.

Daktronics is not responsible for installations or the structural integrity of support structures done by others. The customer is responsible for ensuring that a qualified structural engineer approves the structure and any additional hardware.

2.1 Support Structure Requirements

The installer is responsible for ensuring that the mounting structure and hardware are capable of supporting the display, and the structure follows all local codes.

Because every installation site is unique, no single procedure is approved by Daktronics for mounting Galaxy® displays. The information contained in this section is general information only and may or may not be appropriate for this particular installation. Refer to **Figure 2** and **Figure 3** for basic display set-ups.

A qualified individual must make all decisions regarding the mounting of this display.

Support structure design depends on the mounting methods, display size, and weight. In general, the front of the display needs to be unobstructed to allow for air flow and internal access. Also keep in mind the location of the mounting clips and the power/signal termination box or knockouts on the back of the display. Refer to **Figure 4** for the back view of a typical display. Display height and wind loading are also critical factors to be considered. This information can be found in the following places:

- Size and weight information – Shop Drawings listed in **Section 2.2**
- Mounting hardware location – Shop Drawings listed in **Section 2.2**
- Signal and power termination – Power Specifications included in **Appendix A**
  Shop Drawings listed in **Section 2.2**

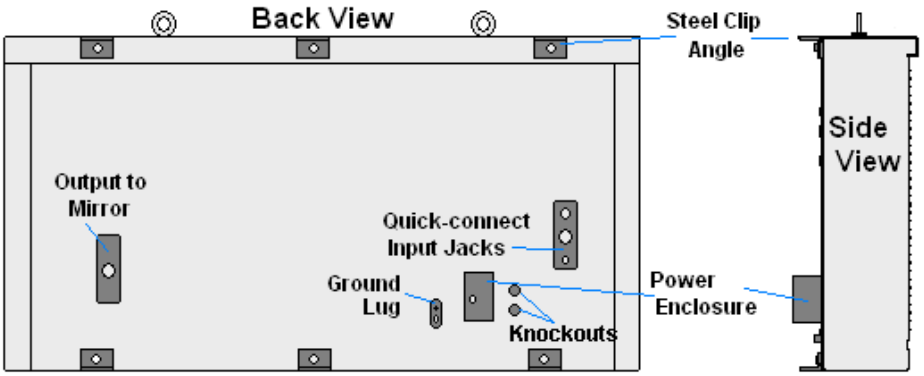

Figure 4: *Back and Side Views of Typical Display*

Pre-installation Checklist

Verify the following before proceeding with installation:

- The display is in good condition after shipping and uncrating.
- A straight and square mounting frame is provided for the display.
  Height variation in any four-foot horizontal section may not exceed ¼-inch.
- Adequate support is provided for the display so that the structure will not yield at any unsupported points after mounting.
- Clearance of 4" of unobstructed space above the top of the display is allowed to remove the eyebolt.
  Note: No clearance is required once the eyebolt is removed.
- Clearance in front of the display is maintained to allow unobstructed air flow through the vents and to allow access to internal components.
- Clearance is maintained in the area of the fans if located on the display back.

2.2 List of Reference Drawings

Shop drawings provide the exact locations of the display mounting hardware, as well as the location of power and signal termination. A Shop Drawing was provided when the display order was placed. However, if a Shop Drawing is needed, use this list to find the correct number and request one from the Daktronics Customer Service. Note that they are listed by the pixel matrix size of the display.

Shop drawings, listed by pixel matrix size

Shop Dwg, AF-3400-8x48-34 ..... **Drawing B-216498**
Shop Dwg, AF-3400-8x64-34 ..... **Drawing B-216500**
Shop Dwg, AF-3400-8x80-34 ..... **Drawing B-216501**
Shop Dwg, AF-3400-8x96-34 ..... **Drawing B-216503**
Shop Dwg, AF-3400-8x112-34 ..... **Drawing B-216504**
Shop Dwg, AF-3400-8x128-34 ..... **Drawing B-216506**
Shop Dwg, AF-3400-8x144-34 ..... **Drawing B-216507**
Shop Dwg, AF-3400-8x160-34 ..... **Drawing B-230801**
Shop Dwg, AF-3400-8x176-34 ..... **Drawing B-230802**
Shop Dwg, AF-3400-8x192-34 ..... **Drawing B-230803**

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Shop Dwg, AF-3400-16x64-34 ..... **Drawing B-216517**
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Shop Dwg, AF-3400-64x176-34 ..... **Drawing B-233754**
Shop Dwg, AF-3400-64x192-34 ..... **Drawing B-233755**

2.3 Display Mounting

The installer is responsible for ensuring that the installation adequately meets local codes and standards, including safe, adequate mounting hardware and procedures.

1. Lift the display into position on the support structure following the guidelines in **Figure 5**.

   Do not attempt to permanently support the display by the eyebolts.

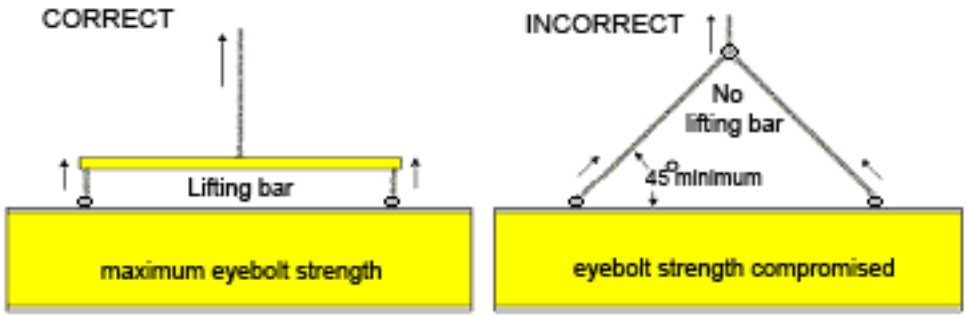


Figure 5: *Correct/Incorrect Lifting Procedures*

2. Weld or use 1/2" Grade-5 bolts and hardware to secure the clip angles to the support structure as shown in the **Shop Drawing. Attach <u>all</u> clip angles to structure.**
3. Refer to **Section 3** and the appropriate communication manual for information on routing power and signal to the display.
4. After installation is complete, carefully inspect the display for any holes that may allow water to seep into the display and seal all openings with silicone.

If the eyebolts on the top of the display have been removed, plug the holes with bolts and the rubber-sealing washer that was removed with the eyebolt, unless an overhead structure protects the area.

2.4 Optional Temperature Sensor Mounting

If a temperature sensor will be used with this display, see **Appendix B** for mounting and signal connections.

Section 3: Power Installation

Read the Mechanical, Power and Signal Installation sections before installing the display(s).

Only a qualified individual should terminate power and signal cable at this Daktronics display.

All proposed changes must be approved by Daktronics engineering staff or the warranty will be rendered null and void.

3.1 Conduit

Daktronics **does not** include the conduit. Separate conduit must be used to route:

- power
- signal IN wires to the signal termination enclosure, when applicable
- signal OUT wires (if not using the provided interconnect cable)

The power J-box is provided with 3/4" threaded holes for use with 3/4" conduit. Unthreaded 1/2" knockout holes are provided in the signal enclosures used with the display. If not using the provided enclosures, use the knockout/ drill holes provided in the display cabinet.

3.2 Overview of Power/ Signal Connection

Following is a brief summary of the power and signal connections to the display.

1. **Enclosures** are provided with the display for termination of both signal and power. If the installation of the display does not allow for the use of these enclosures, refer to **Section 3.5** for diagrams on internal wiring for the power.
2. Possible methods for signal termination are shown in the manual for the specific communication type.
3. Route power to the display through a **fused disconnect switch** capable of opening all ungrounded power conductors. Install this disconnect within the line-of-sight of any personnel performing maintenance on the display. If the disconnect is located out of sight of the display, it must be capable of being locked in the open position.

Note for 1 and 2 circuit power termination panels: Displays are equipped with supplemental protection devices that carry a **UL1077 (IEC 60947, VDE 660)** rating. These devices are only intended to protect the components within the display. Suitable devices must be used for the equipment and feeders supplying power to the display.

4. Power conductors from the disconnect to the display should be **routed through conduit** in agreement with local code.
5. Display power will terminate at the **power termination panel,** either through the J-box or directly. If the display has two faces, power will need to be connected to both the primary and the mirror displays separately.

6. Connect the grounding electrode conductor at the **grounding lug** on the back of the display. If the display has two faces, a ground will need to be connected to each display face.
7. **Signal cable** is routed to the signal termination enclosure. A grounding electrode may also be connected there when required.
8. Signal into the enclosures must be routed through 1/2"conduit.
9. The **signal quick-connect cable** from the enclosure to the display can be routed through conduit or through the display pole.

Note: Daktronics strongly recommends that the quick-connect cable be secured to protect it from weather and vandalism.

3.3 Power Requirements

Note: Conductors of circuits delivering power to a Daktronics display shall be sized in accordance with NEC and local electrical codes so that the power distribution system is capable of delivering full load power to the display while maintaining a voltage within 5% of the utility nominal voltage.

Each display uses a 120VAC or 120/240 VAC single-phase power source. Proper power installation is imperative for proper display operation. Basic power information for various display sizes can be found in the power specifications charts located in **Appendix A**. The following sub-sections provide details for display power installation.

Main Disconnect

The National Electrical Code requires the use of a lockable power disconnect near the display. Provide a lockable disconnect switch (knife switch) at the display location so that all power lines can be completely disconnected. Use a 3-conductor disconnect so that both hot lines and the neutral can be disconnected. The main disconnect should be mounted at or near the point of power supply connection. A main disconnect is to be provided for each supply circuit to the display.

The disconnecting means must be located in a direct line-of-sight from the display or outline lighting that it controls. This requirement enables a worker to keep the disconnecting means within view while working on the display.

Exception: Disconnect components that are capable of being locked in the open position may be located elsewhere.

3.4 Grounding

This sign is to be installed in accordance with the requirements of Articles 250 and 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

For these displays, installation includes ground and neutral conductors. The power cable **must** contain an isolated earth-ground conductor.

Under this circumstance, **do not** connect neutral to ground at the disconnect or at the display. This would violate electrical codes and void the warranty. Use a disconnect so that all hot lines and neutral can be disconnected. The National Electrical Code requires the use of a lockable disconnect within sight of or at the display.

The display system **must** be connected to earth-ground. Proper grounding is necessary for reliable equipment operation. Refer to **Figure 6**. It also protects the equipment from damaging electrical disturbances and lightning.

The display must be properly grounded, or the warranty will be void.

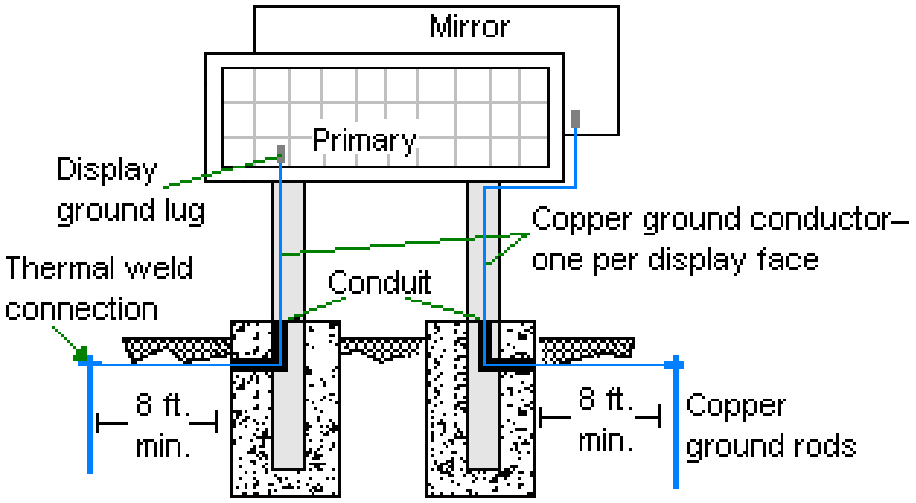


Figure 6: *Proper Grounding*

Important points about grounding:

- Follow local and national codes: The material of an earth-ground electrode differs from region to region and from conditions present at the site. Consult the National Electrical Code and any local electrical codes that may apply.

- Support structure **cannot** be used as an earth-ground electrode: The support is generally embedded in concrete. If embedded in earth, the steel is either primed or it corrodes, making it a poor ground.

- One grounding electrode for each display face: The grounding electrode requires one grounding rod for each display face. Other grounding electrodes as described in Article 250 of the National Electric Code may be used.

- Resistance to ground 10 ohms or less: This is required by Daktronics for proper display performance. If the resistance to ground is higher than 10 ohms, it will be necessary to install additional grounding electrodes to reduce the resistance. The grounding electrode should be installed within 25 feet of the base of the display. The grounding electrode must be connected to the ground lug on the back of the display (**Figure 6**).

3.5 Power Connection

Two options are possible for terminating power to the display.

Option 1: Connecting to the power termination J-box on the back of the display.

Option 2: Connecting directly to the power termination panel inside the display.

Installation instructions for both options are provided in this section.

Option 1: Terminating to the J-box enclosure

1. Route the power cable through 3/4" conduit to the rear of the display and into the power termination enclosure.
2. The power termination enclosure will contain two or three wires plus a ground coming from the interior of the display. These wires are pre-terminated to the power termination panel inside the display.
3. Inside the external power termination J-box, connect the power wires to the wires coming from the display interior using wire nuts. Refer to **Figure 8** for a diagram.

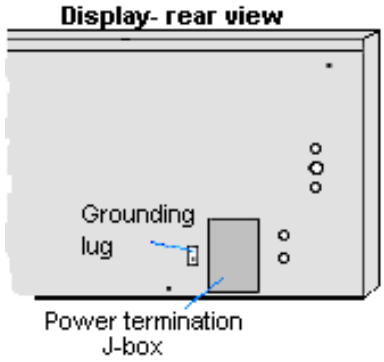


Figure 7: *Location of J-box*

The following colors are used for the pre-terminated wires:

- Line 1 – Black (Brown – 240V)
- Line 2 – Red (only on three wire installations – 120/240V)
- Neutral - White (Blue – 240)
- Grounding Conductor – Green-Yellow

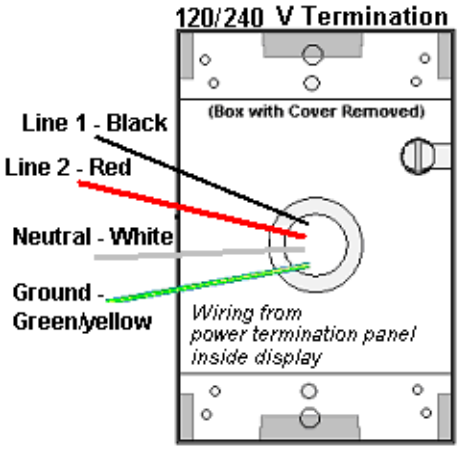


Figure 8: *J-box Wiring*

Option 2: Terminating directly at the power termination panel

Directions are provided for one circuit, two circuit, four and six breaker panels.

1. Open the display (refer to **Section 6.1**) and locate the power termination panel.
2. Route cable through conduit to the back of the display. Use the 3/4" knockout for access, being careful not to damage internal components (**Figure 9**).
3. Disconnect the wires to the terminal block going to the external power J-box, and connect the wires from the direct cable, if applicable.
4. Remove the panel cover. Using a small flat screwdriver, open the cage clamps. Release the jumper wires connected to the external wires going to the external power termination box.

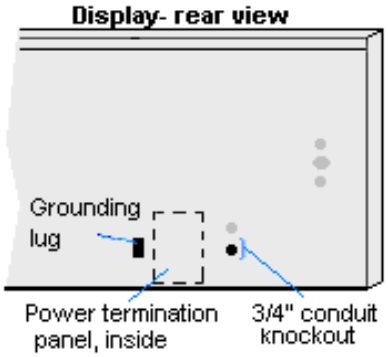


Figure 9: *Location of Power Knockouts*

5. Install the wires from the direct circuit into the cage clamps (**Figure 8**).

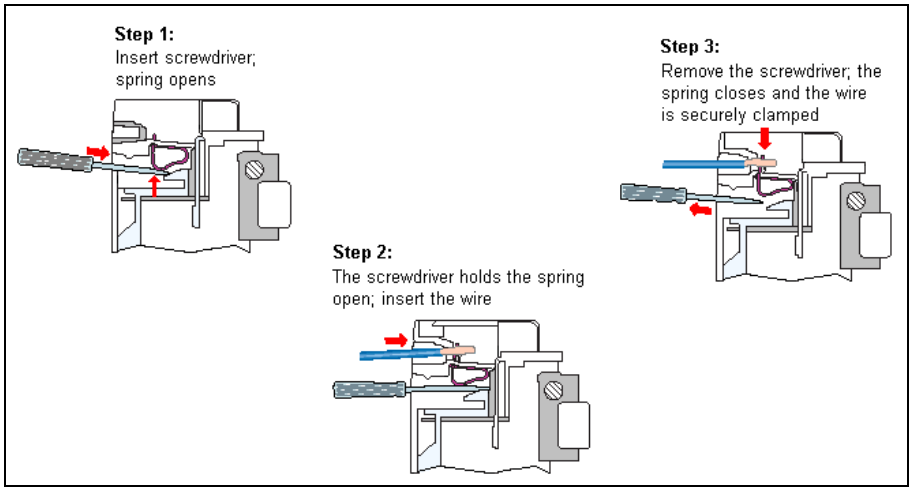


Figure 10: *Cage clamp connection*

6. Make the following connections:

   - Hot to circuit breaker 1 (line side)
   - Hot to circuit breaker 2 (line side in three wire connections)
   - Neutral to gray terminal block (line side)
   - Ground to green/green yellow terminal block

Refer to **Figures 11, 12,** and **13** for wiring with different circuit sizes.

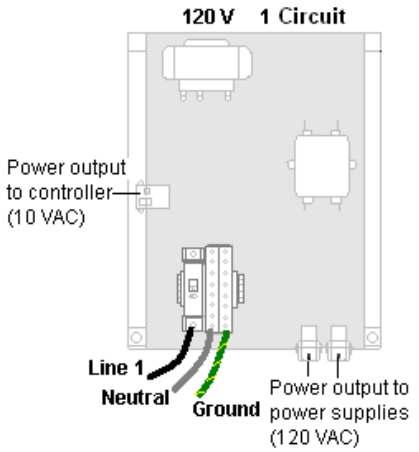


Figure 11: *One Circuit 120 VAC Wiring*

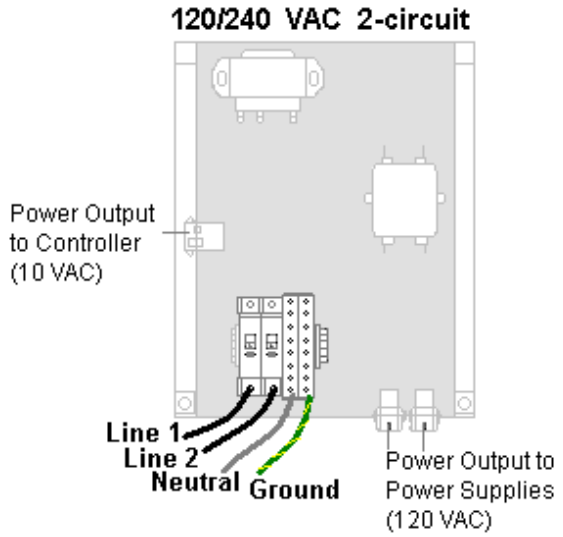


Figure 12: *Two Circuit 120 VAC Wiring*

Note: The four and six circuit displays do not use cage clamps. Feeders from the main disconnect must be grounded to the main lugs of the power termination panel. Refer to **Figure 13**.

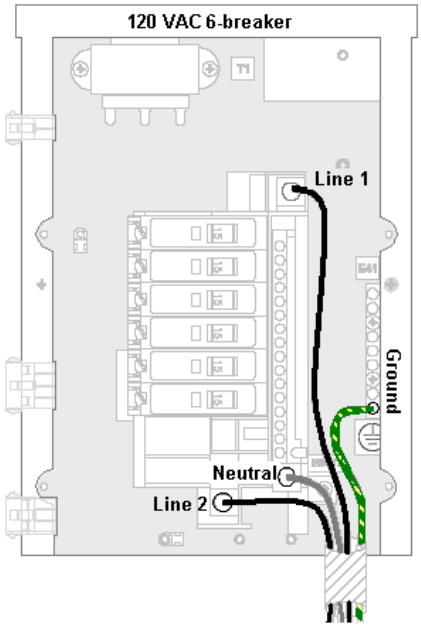


Figure 13: *Six Circuit 120 VAC Wiring*

3.6 Power Routing in the Display

Following is a basic overview of power routing. This may vary depending on the pixel dimensions and LED color of each display. Check for exact power routing on the **Shop Drawing** for the specific display.

A general power routing, shown in **Figure 14**, is summarized as follows. The numbers in this list correspond with the numbers in the diagram.

1. Power may terminate to the J-box on the back of the display.
2. From the J-box, power continues through pre-terminated wires to the power termination panel, which may include the transformer and filter. Or power may be directly terminated to the power termination panel.
3. Power passes through the transformer where 120 VAC voltage is stepped down to 10 VAC for use by the controller.
4. Power is routed to the power supplies which provide DC voltage to the modules. Depending on the pixel count and LED color, either 6.5 VDC or 9 VDC power supplies are used to power the modules.
5. Power is also sent to the fans and to the thermostat, if installed.

Note: Power supplies are preset to proper voltage levels. Contact Daktronics Customer Service for proper settings.

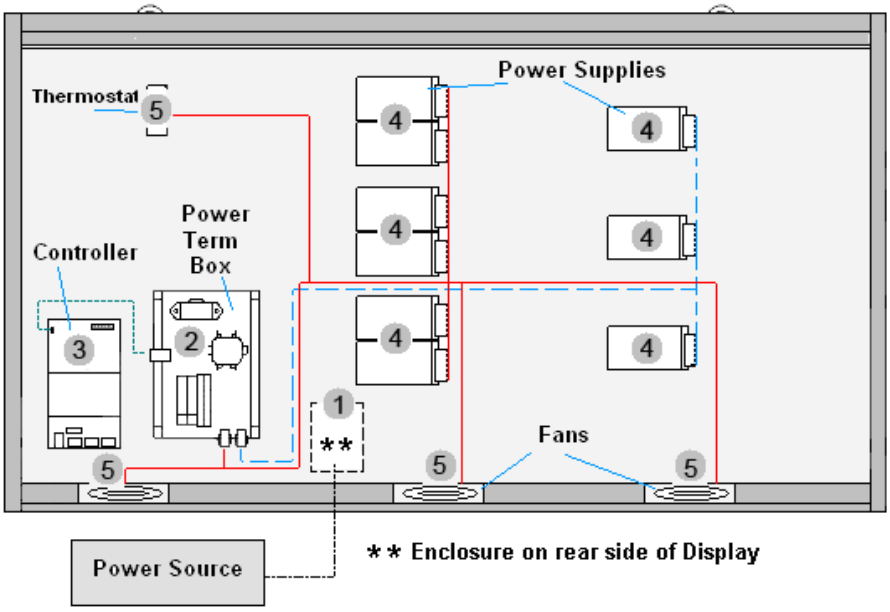


Figure 14: *Power Routing Summary*

Section 4: Signal Installation Overview

4.1 Introduction to Signal Communication

Daktronics Galaxy® displays are equipped to receive many types of communication signals. The following sections include a brief description of each available communication type. Also included is a list of troubleshooting tips to check that the display is connected and configured correctly.

For specific details on installing the signal, consult the quick guide and the manual for that communication type. These were included in the shipment of the communications equipment. Each type is listed below with its manual number.

Communication Type	Communication Manual ED#
RS-232	**ED-14739**
RS-422	**ED-14742**
Serial Fiber	**ED-14743**
Radio	**ED-13932**
Modem	**ED-14744**
Wire Ethernet	**ED-14745**
Fiber Ethernet	**ED-14746**
Ethernet Radio	**ED-16483**

Note: These are the standard communication types. However, each site is unique and may include additional equipment. If problems arise, contact the display's seller, service company, or Daktronics Customer Service.

If the display is a two-sided primary/mirror display, a six-foot quick-connect cable will be provided to connect the signal between the two display faces. Refer to **Figure 15** for proper connection.

Note: It is recommended that the quick-connect cable be secured to protect it from weather and vandalism.

If the display faces are mounted at more than the length of the quick-connect cable, two primary displays will be utilized, requiring hard-wiring between the two display faces.

***Figure 15**: Quick-connect Cable*

4.2 RS-422 Communication

If the communication system is RS-422, look for:

- a signal converter near the computer.
- wires from the signal converter connecting to an enclosure at the display.

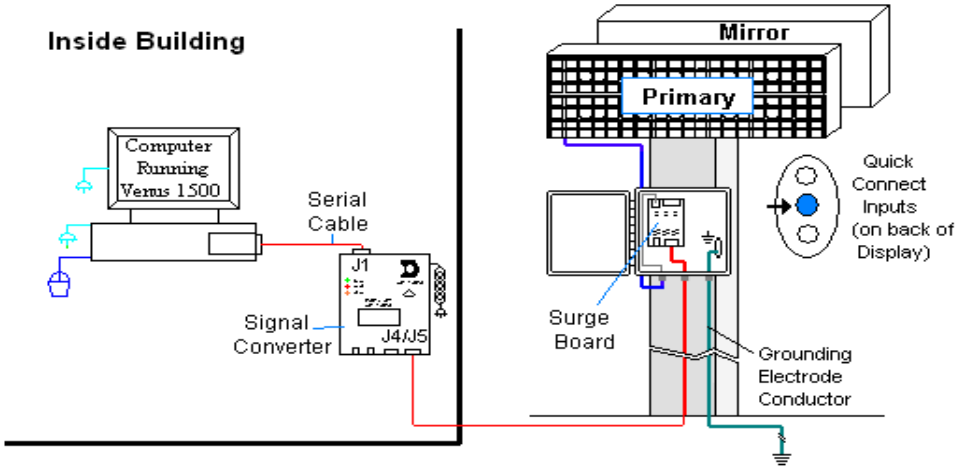


Figure 16: *RS-422 Communication Layout*

Connections

- Computer to signal converter – six-foot (2m) serial cable with 9-pin plug connecting to computer port or USB adaptor and 25-pin plug connecting to the signal converter at J1, RS232 IN.
- Signal converter plugged into a AC wall outlet.
- Signal converter to surge board at display – four individual wires and ground from green Phoenix plug at either J4 or J5 run to Phoenix plug on surge board.
- Surge board to display – quick-connect cable from enclosure to the center jack on display back.

Troubleshooting	
Component	**Check:**
Cable Connections:	• The serial cable connects the computer to the signal converter. • All the wires are connected at the signal converter and the surge board. They need to be making good electrical contact with the metal, no interference. • The color sequence of the wires should be the same to both signal converter and surge board (e.g. black, white, red and black, white, red). • The quick-connect cable is connected from the enclosure to the center jack on the back of the display.
Diagnostic LEDs	• The green LED on the signal converter should be on when plugged into power. • The red transmit and amber receive LEDs will flash when sending and receiving signal from the display; otherwise they are off.
Display Power:	• The display is either running a message or showing a single pixel flashing in the bottom right corner of the display when power is on.
Software:	• The software and the display are set for the same network address. • Refer to the software manual for other possible conditions.

4.3 Fiber Optic Communication

If the communication system is Fiber Optic, look for:

- a signal converter near the computer.
- fiber-optic cables connecting the signal converter to an enclosure at the display.

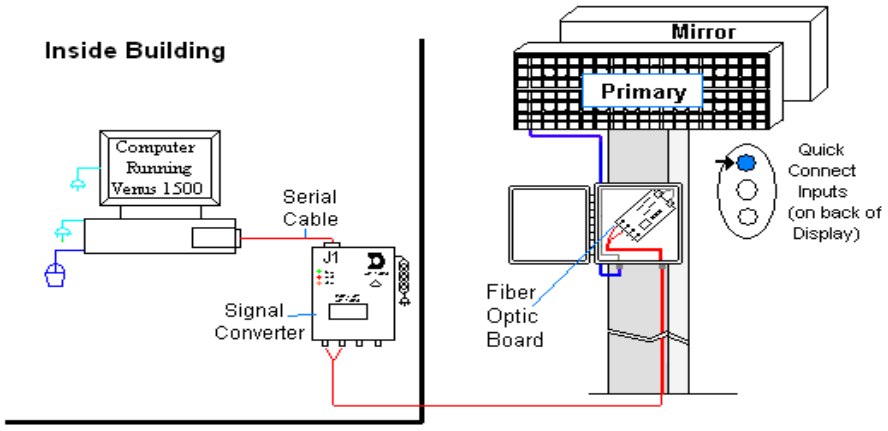


Figure 17: *Fiber Serial Communication Layout*

Connections

- Computer to signal converter – six-foot (2m) cable with 9-pin plug connecting to computer port or USB adaptor and 25-pin plug connecting to the signal converter at J1, RS232 IN.
- Signal converter plugged into a 120 volt AC outlet.
- Signal converter to fiber optic board at display – two individual fiber-optic cables connect to signal converter at either J4 and J5 or J3 and J2; other end runs to fiber optic board at display.
- Fiber optic board to display – quick-connect cable from enclosure to the top jack on display back.

DO NOT SHARPLY BEND fiber-optic cable at any point along the fiber cable.

Troubleshooting	
Component	**Check:**
Cable Connections:	• The serial cable is connected from the computer to the signal converter. • Both fiber optic cables are connected at the signal converter and the fiber board. • The cable from the enclosure is connected to the top jack on display back.
Diagnostic LEDs	• The green LEDs on the signal converter and the fiber optic board in the enclosure will be on when they have power. • The red transmit and amber receive LEDs on both components will flash when sending and receiving signal from the display; otherwise they are off.
Display Power:	• The display is either running a message or showing a single pixel flashing in the bottom right corner of display when power is on.
Software:	• The software and the display are set for the same network address. • Refer to the software manual for other possible conditions.

4.4 Radio Communication

If the communication system is Radio, look for:

- a radio J-box near the computer.
- a server radio outside the building and a second (client) radio at the display.

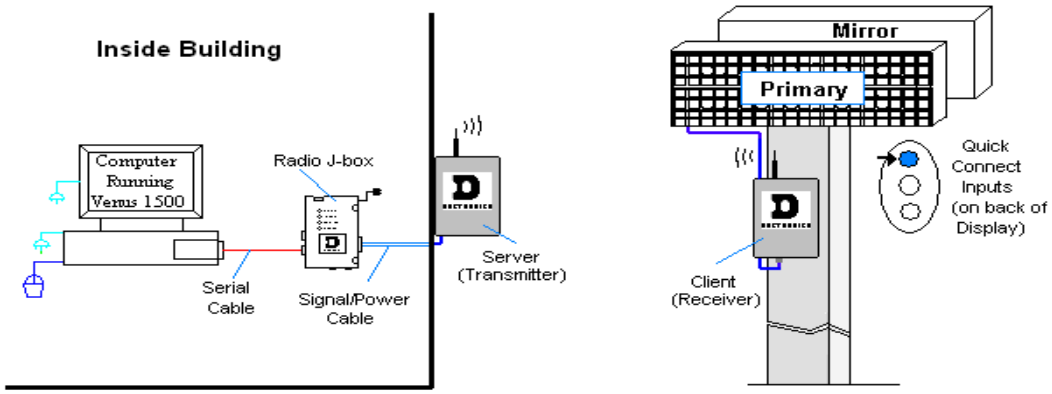


Figure 18: *Radio Communication Layout*

Connections

- Computer to radio J-box – ten-foot (3m) cable with 9-pin plugs on both ends, one connecting to computer or USB adaptor and the other plug connecting to radio J-box at "DB9 Female V1500 PC Connect".
- Radio J-box 12 VAC power pack plugged into outlet.
- Radio J-box to radio transmitter on building – Phoenix plug on side of J-box to Phoenix plug inside radio transmitter.
- Server radio to client radio – clear line-of-sight between radios for strong transmission.
- Radio receiver to display – quick-connect cable from receiver to top jack on display back.

Troubleshooting	
Component	**Check:**
Cable Connections:	• The cable connects the computer to the radio J-box. • All the wires are connected at the radio J-box and at the "server" radio; the wires make good electrical contact with the metal, no interference. . • The color sequence of the wires should be the same to both the radio J-box and the server (e.g. black, white, red and black, white, red). • The cable is connected from the radio client to the top jack on back of display.
Diagnostic LEDs	• The green LEDs will be on when the radio J-box has power. • The amber LED is on when the computer is connected to the radio J-box. • The red and amber transmit and receive LEDs will flash when sending and receiving signal from the display; otherwise they are off.
Display Power:	• The display is either running a message or showing a single pixel flashing in the bottom right corner of the display when power is on.
Software:	• The software and the display are set for the same network address. • Refer to the software manual for other possible conditions.

4.5 RS-232 Communication

If the communication system is RS-232, look for:

- no indoor connectors.
- one enclosure at the display.

This communication type is designed to work over short distances and typically connects to an indoor display.

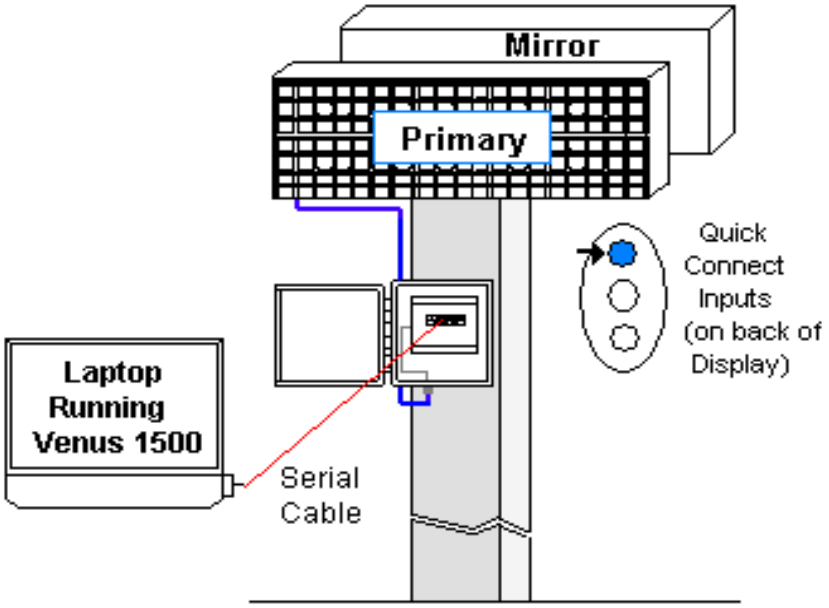


Figure 19: *RS-232 Communication Layout*

Connections

- Computer to display enclosure – six-foot (2m) serial cable with 9-pin plug into laptop computer and a 25-pin jack into enclosure.
- Enclosure to display – quick-connect cable (maximum 25 feet/8m) from back of enclosure to top jack on back of display.

Troubleshooting	
Component	**Check:**
Cable Connections:	• The serial cable is connected from the laptop to the enclosure. • The cable is connected from the enclosure to the top jack on the back of the display.
Display Power:	• The display is either running a message or showing a single pixel flashing in the bottom right corner of the display when power is on.
Software:	• The software and the display are set for the same network address. • Refer to software manual for other possible conditions.

4.6 Ethernet Communication

If the communication system is Wire Ethernet, look for:

- a network card in the computer connecting to a network switch/router.
- a network jack that looks similar to an oversized phone jack.

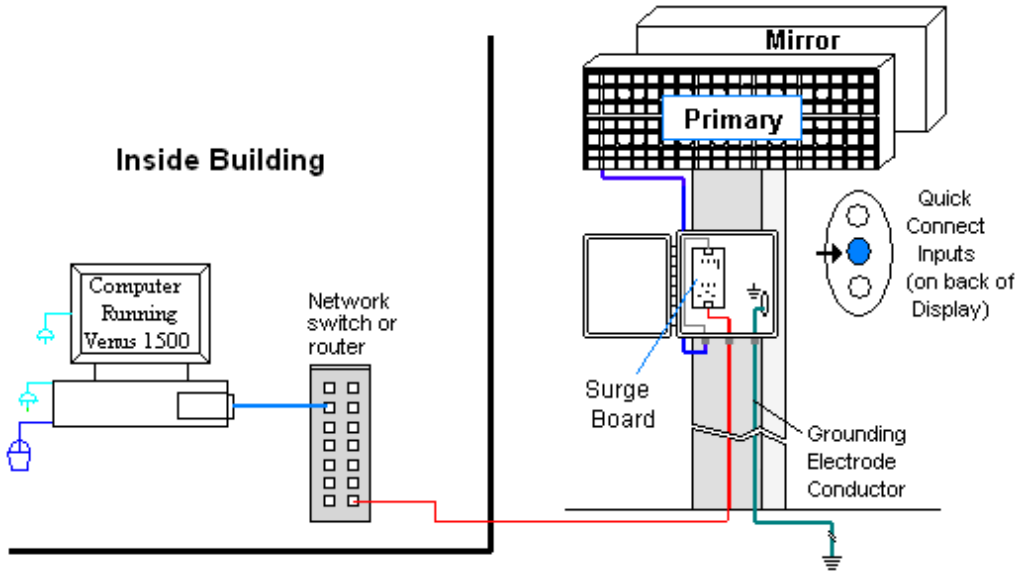


Figure 20: *Ethernet Communication Layout*

Connections

- Computer to network – RJ45 cable from computer port to network switch/router.
- Network switch to surge board – another RJ45 cable from network switch/router to surge board in enclosure at display.
- Enclosure at display to display – quick-connect cable from enclosure to middle jack on back of display.

Troubleshooting	
Component	**Check:**
Cable Connections:	• The network cable connects the computer to the network switch/router. • An RJ45 cable from network is connected to input port on Ethernet surge board. • A quick-connect cable runs from the enclosure to the middle jack on display back.
Display Power:	• The display is either running a message or showing a single pixel flashing in the bottom right corner of the display when power is on.
Software:	• The software is configured for TCP/IP communication. • The software and the display are set for the same network address. • Refer to the software manual for other possible conditions.

4.7 Fiber Ethernet Communication

If the communication system is Fiber Ethernet, look for:

- an indoor media converter connected to the network and to fiber cable.
- a second media converter outdoors located in an enclosure at the display.

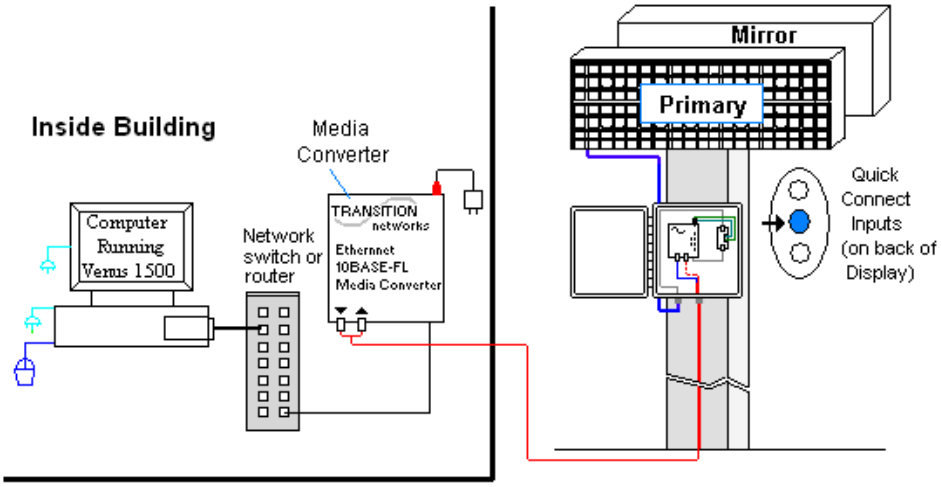


Figure 21: *Fiber Ethernet Communication Layout*

Connections

- Computer to network – RJ45 cable from computer port into network switch/router.
- Network switch to first media converter – RJ45 cable into media converter.
- Media converter's 9 VAC power adaptor plugged into 120 VAC outlet.
- Indoor media converter to outdoor media converter – two fiber-optic cables run from indoor media converter to second converter in the enclosure at display.
- Enclosure to display – quick-connect cable to the middle jack on display back.

DO NOT SHARPLY BEND fiber-optic cable at any point along the fiber cable.

Troubleshooting	
Component	**Check:**
Cable Connections:	• The serial cable is connected from the computer to the network switch/router. • The network cable connects from network switch to the media converter in building. • The indoor media converter power adaptor is plugged in. • The fiber cables connect from the first media converter to the second one at display. The "out" arrow on one will connect to an "in" arrow on the other. • The cable is connected from the enclosure to middle jack on display back.
Diagnostic LEDs	• Each media converter has a green power LED on, indicating power. • When the media converter transmits data, the "link" is ON and the RX LEDs flash.
Display Power:	• The display is either running a message or showing a single pixel flashing in the bottom right corner of the display when power is on.
Software:	• The software is configured for TCP/IP communication. • The software and the display are set for the same network address. • Refer to the software manual for other possible conditions.

4.8 Ethernet Bridge Radio Communication

If the communication system is a wireless Ethernet radio, look for:

- a network card in the computer connecting to a network switch/router.
- a server radio mounted on the building and a client radio at the display.

Note: This system is referred to as Ethernet "bridge" communication because it requires a pair of matched radios to create a signal connection or bridge.

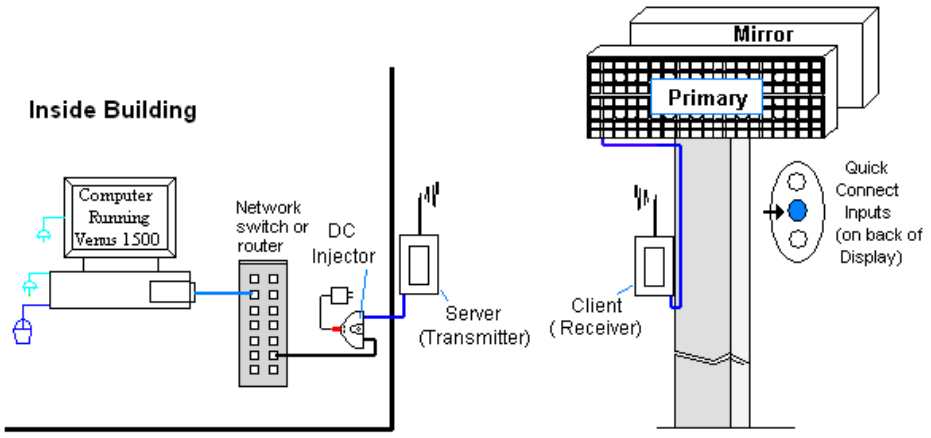


Figure 22: *Ethernet Bridge Radio Layout*

Connections

- Computer to network – RJ45 cable from computer port into network switch/router.
- Network switch to DC injector - RJ45 cable from network to "DATA IN" jack.
- DC injector power adaptor plugged into 120 VAC outlet.
- DC injector to server radio - RJ45 cable from "P+DATA OUT" to server radio.
- Server radio to client radio - clear line of sight for signal transmission.
- Client radio to display – quick-connect cable from radio to middle jack on display back.

Troubleshooting	
Component	**Check:**
Cable Connections	• A cable connects the computer to the network switch/router. • A cable runs from the network through the DC injector to the server radio (max. 300 ft/90m). • The DC injector is plugged into a 120 VAC outlet. • A cable runs from DC injector to server radio. • The quick-connect cable connects from client radio to top jack on display back.
Diagnostic LEDs	• The DC injector's green LED should be on, indicating power. • Both radios have internal LEDs; refer to manual for their specifications. • The same channel LEDs will be on for both radios when locked together.
Display Power	• The display is either running a message or showing a single pixel flashing in the bottom right corner of the display when power is on.
Software	• The software is configured for TCP/IP communication. • The software and the display are set for the same network address. • Refer to the software manual for other possible conditions.

4.9 Modem Communication

If the communication system works with a modem, look for:

- a modem (internal or external) at the computer that connects to a phone jack
- a phone line connects to the display

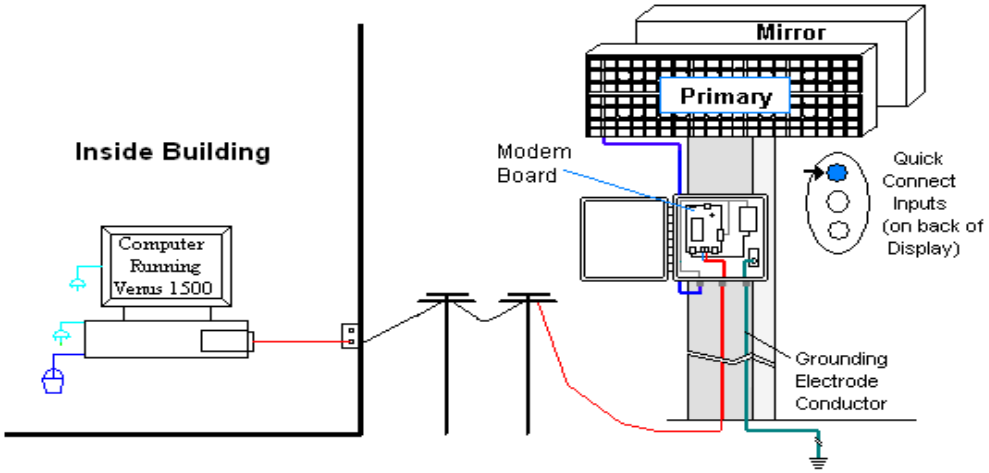


Figure 23: *Modem Communication Layout*

Connections

- Computer modem (internal or external) to phone jack – phone cable plugs into both.
- Phone jack to modem at display – signal runs on a local dedicated telephone line. (This line can not run through a switchboard.)
- Modem board in enclosure to display – quick-connect cable from enclosure to top jack on display back.

Troubleshooting	
Components	**Check:**
Cable Connections:	• The phone line is connected from the modem at computer to phone jack. • The two phone wires are connected at the modem board (wire color is determined by the phone company). • The wires are making good electrical contact with the metal, no interference. • The cable is connected from the enclosure to the top jack on the display back.
Diagnostic LEDs	• The modem in the enclosure has the green LED on, indicating power. • The bottom red LED (carrier detect) is on when the modems are connected. • Transmit and receive LEDs flash when sending and receiving signal over the telephone line; otherwise, they are off.
Display Power:	• The display is either running a message or showing a single pixel flashing in the bottom right corner of the display when power is on.
Software:	• The software and the display are configured for dial-up communication and the phone number is correct. • Refer to the software manual for other possible conditions.

Section 5: Start-up Procedure

Before starting up the display, go over this checklist to ensure that all parts are ready to operate correctly. **Figure 24** shows the basic display components referred to in each step.

5.1 Start-up Checklist

✔ Is power connected to the display?

The power conduit will leave the display from the rear and connect to a power source either on the display structure or inside a building. Refer to **Figure 2** for approximate location of the power cable or conduit.

✔ If the display has two faces, are the two sides connected?

Check that a quick-connect cable or hard-wired communication cable runs between the back connections of the two display cabinets. Refer to the illustration in **Figure 15.**

✔ Is the control computer connected to the display?

Some type of communication line or wireless device will send signal between the control computer and the display, depending on the communication method. Refer to **Section 4** for assistance with checking the communication.

✔ Is the computer software set up to work with the display?

The software manual provides the information necessary to allow the computer to communicate with the display. Follow the step-by-step directions in the **Configuration** section of the software manual for correct set-up.

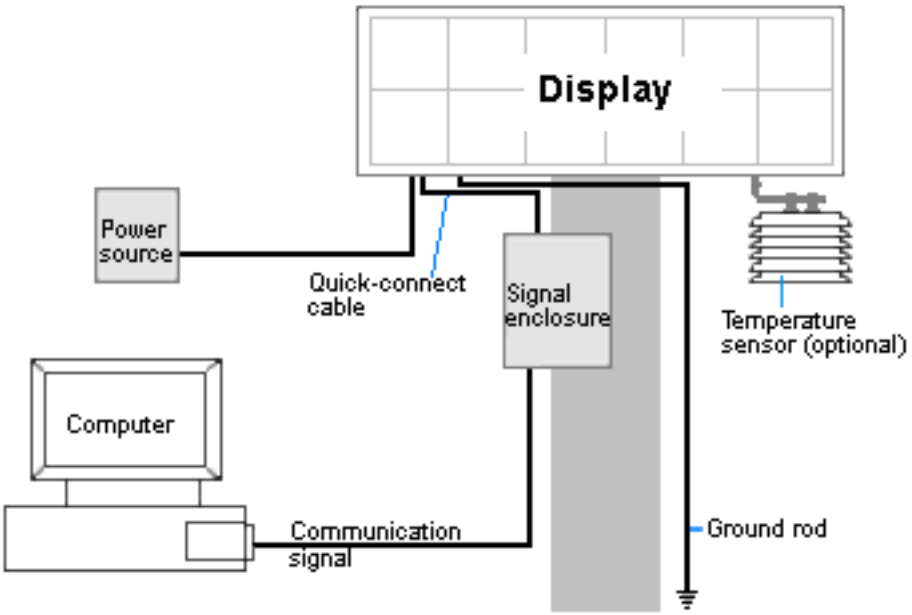


Figure 24: *Basic Display Set-up*

5.2 Start-up Sequence

Each time the display is turned on, an initialization sequence will run. The information in the second column will then be shown on the display:

Note: The Xs refer to numbers that may vary for each display, such as the hardware address.

	Topic	Information shown
1.	Product Name	• Galaxy®
2.	Display Size	• Row x Column
3.	Shading	• 64 Mono
4.	Bootloader Version	• OS X.XX
5.	Firmware Number	• **ED-13305**
6.	Firmware Revision	• Rev X.XX
7.	Hardware Address	• HW:XX
8.	Software Address	• SW:XX
9.	IP Address:	• (default: IP: 172.16.192.25)
10.	Subnet Msk:	• (default) Msk: 255.255.0.0)
11.	COM1 Configuration	• C1:V15 (modem: C1:V15 if a modem is present)
12.	COM 2 Configuration	• C2: RTD
13.	Socket 3001:	• IP 3001: V15
14.	Socket 3002:	• IP 3002: RTD
15.	Line Frequency	• CLK: AUTO (60)
16.	Display Description	• Galaxy # rows x # columns

After this sequence is complete, the display will blank. A single pixel will flash in the lower right corner of the display to show that the display has power but no messages are currently running.

Section 6: Maintenance

Important Notes:

Power must be turned off before any repair or maintenance work is done on the display.

Qualified service personnel must make any access to internal display electronics.

The Daktronics engineering staff must approve ANY changes made to the display. Before altering the display, detailed drawings for the proposed modifications must be submitted to the Daktronics engineering staff for evaluation and approval or the warranty will be rendered null and void.

Daktronics Galaxy® AF-3400 series 34 mm displays are front accessible, meaning that access to the internal components is gained by removing the front modules of the display. The display may need to be opened to perform maintenance or for troubleshooting. The following diagram (**Figure 25**) shows the typical location of internal components.

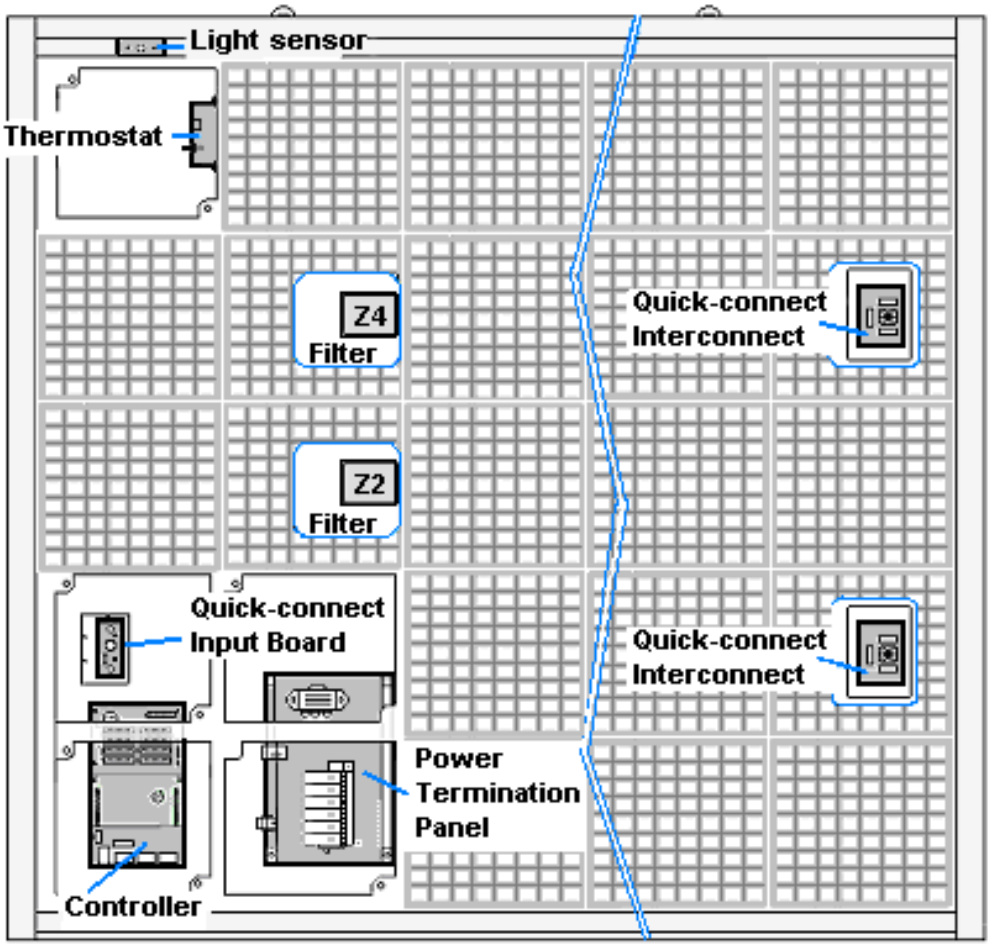


Figure 25: *Location of Internal Components*

6.1 Display Access

To gain access to the interior of a display, single modules can be removed. Refer to **Figure 25** to locate the internal components which may need to be viewed. To locate fans and power supplies, refer to the **Schematic Drawing** for the specific display since the number and location of these components varies with display size. The module in front of the specific component may be removed to perform maintenance or for troubleshooting.

To access the interior of the display, perform the following steps:

1. **Turn off power to the display.**
2. Locate the latch access fasteners on the module. One is centered below the first row of pixels and one is centered above the bottom row.
3. With a 1/8" hex wrench, turn the latch access fasteners a quarter turn counterclockwise. Gently pull the module far enough forward to reach behind the back and disconnect the power and ribbon cables (**Figure 27**). Note the cable connections so they can later be reconnected correctly.
4. Disconnect the two ribbon cables from the module by spreading the tabs on the sides and then lifting the cable head from the jack. Note how they are connected to the back.
5. Unplug the power cable by squeezing the tabs on the sides of the plug head and pulling out.
6. When ready to reinstall the module, reconnect the cables to the module, making sure that the tabs are tightly pushed against the cable head. Carefully push the ribbon wires back into the cabinet so they are clear of the module edges.
7. Place the module into its proper location, checking that the weather stripping is in place. Latch the module both top and bottom using the hex wrench.

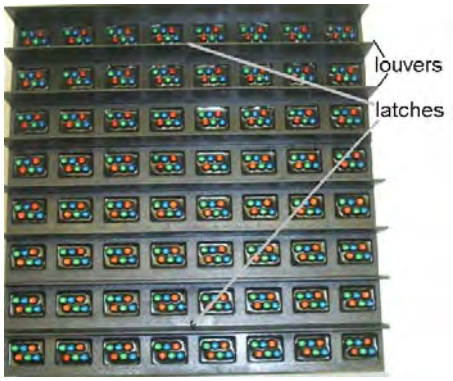


Figure 26: *Module Access Locations*

Figure 27: *Removing a Module*

Note:

- The weather-stripping on the back edge of the module must be intact and in good condition if it is to prevent water from seeping into the display.

- The module latches must be fully engaged to create a watertight seal around the edge of the module. The module should be firmly seated against the display when the latches are fully engaged.

6.2 Ventilation System Maintenance

Frequency of Inspection

Ventilation fans are located either on the bottom or the back of the display. If fans are on the bottom, air is pulled into the cabinet, venting out the top front (**Figure 28**). If fans are located on the back, air is pulled out the back of the display (**Figure 29**).

Fans should be checked every time the display is opened or annually to ensure the display is being cooled properly. Fans should be checked more often if the display is located in a dusty or harsh weather environment (i.e. along a gravel road with dust laden air).

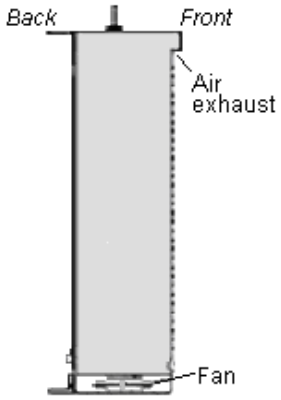


***Figure 28: Air** Exhaust in Small Displays*

Fan Blades

Check the fan blades for dirt and debris, cleaning them and the inside of the display if necessary. Fan blades must be kept clean to maintain fan efficiency and to ensure proper cooling. Spin the fan blades with a pen or pencil to ensure that the bearings are free and the fan is still in balance.

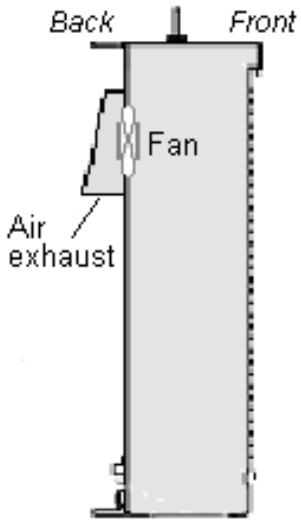


***Figure 29:** Air Exhaust in Larger Displays*

Air Flow

To check the operation of the fans, open the display to expose the thermostat in the top left corner of the cabinet behind the first module (**Figure 30**). Push the bypass button on the thermostat enclosure to temporarily turn on the fans. If a fan does not rotate or does not operate smoothly, replace it.

Make sure that the intake and exhaust vents are not blocked and are free of dust or other debris. Hold your hand or a piece of lightweight paper in front of the vents to detect air movement.

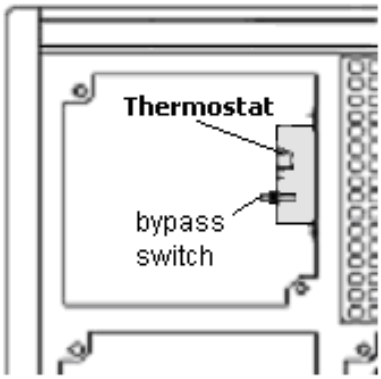


***Figure 30:** Thermostat*

6.3 Annual Inspection

A yearly inspection should be completed to maintain safe and dependable display operation. The display will need to be opened to visually inspect the cabinet interior and the components. Refer to **Section 6.1** for these directions. The inspection should address the following issues:

Inspection item	Possible corrective measures
Loose bolts, screws, rivets	• Tighten or replace, as required.
Fans	• Refer to **Section 6.2**. Clean or replace as necessary.
Dust around fans, on cabinet bottom	• Vacuum or carefully wipe away.
Water intrusion or stains	• Replace weather-stripping. • Tighten module latches. • Place silicon sealant around all locations where water might enter. • Replace damaged electronic components.
Paint corrosion by footings, tie points, ground rods	• Check the metal for structural integrity. • Replace and/or repaint as necessary.

Section 7: Diagnostics and Troubleshooting

Safety Precautions

- Read and understand these instructions for proper operation of the display.
- **Disconnect power when servicing the display.**
- **Do not** modify the display structure or attach any panels or coverings to the display without written consent of Daktronics.

7.1 Display Interior

This section defines the diagnostic LEDs located on the controller and also provides troubleshooting tips for solving display problems.

The controller is one of the internal components labeled in **Figure 31**. The controller is the "brains" of the display, receiving communication from the computer and then sending the appropriate information to the modules. The LEDs on the controller are able to show whether the power and communication signal are working correctly.

Since the controller is inside the display, a module or two will need to be removed to view the diagnostic LEDs. To access the interior of the display, refer to **Section 6.1** for instructions and illustrations.

Remember to turn off power to the display before accessing the interior.
However, once the modules are removed and wires are found to be safe, power can be turned back on to view the diagnostic LEDs.

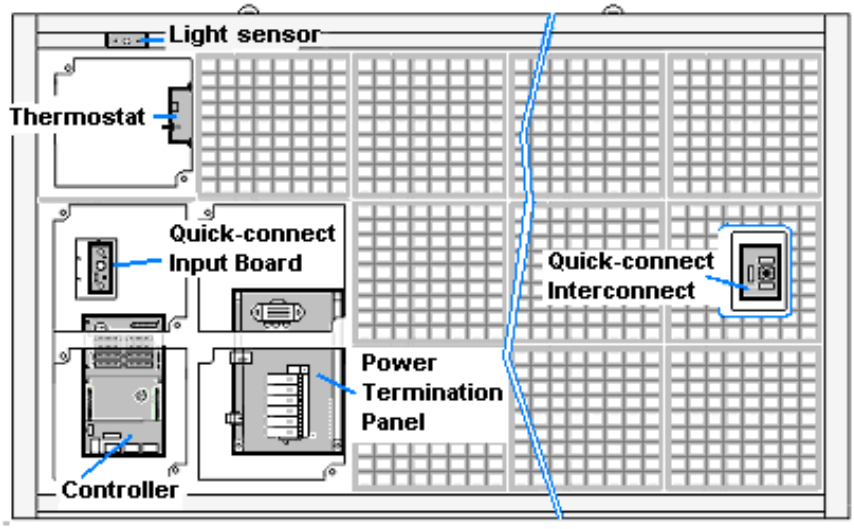


Figure 31: *Interior Component Locations*

7.2 Controller Diagnostics

The controller is the component that receives communication from the computer and then sends data to the modules. **Figure 32** illustrates a typical controller.

Diagnostic LEDs are located at various places on the controller. The following table details some essential LEDs to monitor and the information that each LED provides. The LED name and number are noted in **Figure 32**.

Note that some LEDs, such as "Run" and "Receive signal", have the same number. This occurs because the controller includes two layers of circuit board which are not easily shown in an illustration. Be sure to note the name as well as the number of the LED when looking at the diagnostics chart.

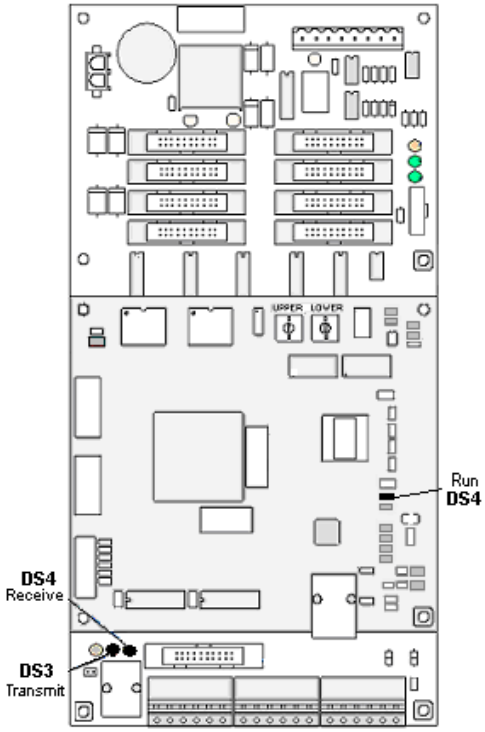


Figure 32: *Controller Diagnostic LEDs*

Figure/ label	LED #	Color	Operation
Run	DS4	Red	Steady FLASH about once per second indicates controller is working properly.
Send signal TX1	DS3	Yellow	OFF is the normal state. FLASH when transmitting communication from the computer.
Receive signal RX1	DS4	Yellow	OFF is the normal state. FLASH when receiving communication from the computer.

Temperature Sensor Diagnostic

If the display includes a temperature function, the temperature sensor board will also provide diagnostic information. The temperature sensor board is located inside the temperature sensor housing which hangs at or near the display. Refer to *Temperature Sensor Replacement* in **Section 8.2** for directions on opening the sensor. The sensor board diagram in **Figure 33** shows the red diagnostic LED (DS2) near the bottom edge of the component.

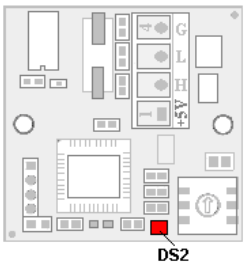


Figure 33: *Temperature Sensor Board*

Temperature Sensor			
DS2	Red	Run	FLASH at variable rates when sending temperature information; evidence that the unit has power.

7.3 Troubleshooting Display Problems

This section contains some symptoms that may be encountered in the displays. This list does not include every possible symptom or solution but does represent common situations and simple steps to resolve them. The solutions are given in priority order so try the first solution first.

Troubleshooting may require removal and replacement of modules. Refer to **Section 6.1** for instructions on this procedure. When replacing modules, make sure that the power and signal cables are reconnected correctly and the latches are tightly closed.

Module and LED problems

One or more LEDs are not lighting.

- Check/replace the ribbon cables on the module.
- If that does not help, the module may need to be replaced.

One or more LEDs on a single module will not turn off.

- Check/replace the ribbon cables on the module.
- If that does not help, the module may need to be replaced.

A section of the display is not working, extending all the way to the right end.

- Check/replace ribbon cables from the last working module in the row to the first non-working module next to it (**Figure 34**).
- Move or replace the first non-working module.
- Move or replace the last working module.
- Check that the power LED on the back of the modules is ON.
- Make sure the power cable to the module is connected.

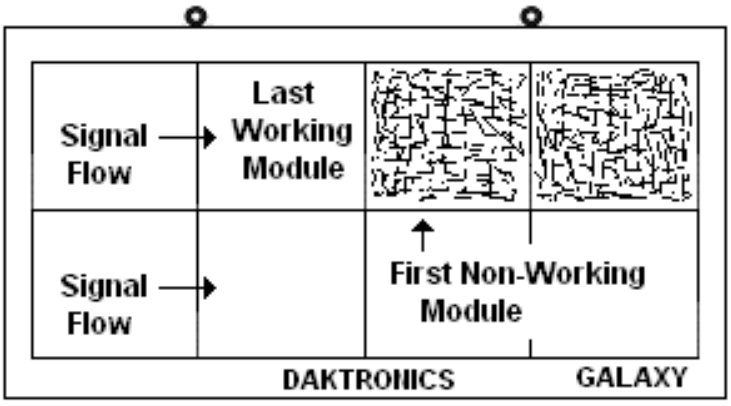


Figure 34: *Modules Not Working*

One row of modules is not working or shows a distorted message.

- Check/replace the ribbon cables to and from the first non-working module (**Figure 34**).
- Check for bent pins on the jack going to a non-working module.
- Move or replace the modules that show distorted text.
- Move or replace the last working module.
- Make sure that the first module in the row is receiving power.

A column of the display does not work.

- Check that the ribbon and power cables are plugged into the first module in the row.
- While power is on, look at the back of the first malfunctioning module to see if the diagnostic LED is off, implying a power input problem.

Entire display fails to work.

- Check the diagnostic LEDs on the controller for Power and Run. (**Section 7.2**)
- Check the breakers in the building connected to main power source.
- Check the breakers in power termination panel (bottom row, second module from left).
- Check/replace the ribbon cable(s) from the controller to the modules.
- Verify proper use of the software by checking the software manual.

Brightness problems

Display is stuck on bright or dim.

- Check Manual/Auto dimming in Venus 1500 software. The Brightness is typically set to Automatic. If not, perform the following step:
  > In Display Manager/ Diagnostics, change the slide bar and click <Set Brightness>.
- Check the light sensor cable and wiring for secure connections.
- Check the light sensor lens for obstructions. (top left edge, front of primary cabinet)
- Replace the light sensor assembly.

Display is too bright at night.

Set the Dimming Schedule. Refer to the Venus 1500 manual.

Message problems

Blank display is seen after boot-up.

A blank display is normal after the boot-up procedure. When finished, the display will be blank except for a flashing pixel in the lower right corner. The display is then waiting for a message to be sent.

LED flashes in the lower right corner.

The flashing pixel indicates that the display is receiving power and waiting for a message to be sent. Once a message is sent, the flashing pixel should be replaced with the message.

Message only shows up on one side of the display.

Determine if the displays are set up as two primary displays or one primary and one mirror display. To do this, turn off power, then turn it back on and observe the two display faces. Make sure that both faces have power.

If the set-up involves two primary displays, one should show "HW001" and the other "HW002" in the boot-up sequence.

- Verify that two different addresses are set up for these two primary displays in the Venus 1500 Administrator.
- Verify that two different addresses are set on the controllers.
- Send a different message to each display separately by clicking on that display name in the list. **Note:** With two controllers, messages may not always run synchronously.

If the set-up consists of a primary/mirror display, check the cable running between them.

- Verify that the cable is firmly plugged into both cabinets.
- Check that the cable and plugs are in good condition.

Temperature problems

(For displays with a temperature sensor installed.)

How to show the current temperature on the display.

1. Open the *Venus 1500 Message Studio*.
2. Choose **File→ New** if the temperature will be part of a new message or **File→ Open** if this will be added to a current message.
3. Open the message field and click **Data Fields** at the top.
4. Choose **Temperature**.
5. Select the desired format. The field is now in the message.
6. Send the message to the display and the temperature will now be shown.

Note: The temperature sensor must be correctly installed before a correct temperature can be shown.

Temperature shown is too high or too low.

The temperature on the display can be adjusted either up or down to become more accurate.

1. Open the *Venus 1500 Display Manager* and click **Diagnostic Control**.
2. Click on the name of this display under the *Display List*.
3. To the right of the *Set Temperature Offset* button, use the up and down arrows to adjust the temperature being shown. The range is ±9°C (1°C=1.8°F).
4. Once the adjustment is made, click **Set Temperature Offset** to send this change to the display.

Note: Repeat these steps for each primary display that shows the temperature.

Temperature always reads –196F/-127C degrees.

- Check the temperature sensor cable connections.
- Look for bent pins on connectors.
- Check that the temperature sensor is set to address 1.
- Make sure the sensor has power by checking that the LED is blinking.
- Replace the temperature sensor.

Testing displays

Start and stop the test pattern.

1. Open the *Venus 1500 Display Manager* and click **Diagnostic Control**, represented by the gears in the top section.
2. Click on the name of the chosen display under the *Display List*, then click **Start Test**.
3. Once testing is finished, click on the name of the display, then click **Stop Test**.

Note: This procedure must be done for each primary display being tested.

Before calling for help

Steps to take before calling Daktronics Customer Service:

1. Turn off the power breaker switch. Wait a few minutes and turn it back on. Have someone watch the display(s) to make sure that the initialization sequence runs.
2. Once the sequence is complete, try to communicate with the display.
3. Refer to the **Communication** and **Troubleshooting** sections of this manual.
4. Call the service technician or Daktronics Customer Service at 866-343-3122.

This chart is also provided inside the front cover of this manual for easy reference.

Information needed for technicians and/or Customer Call Center	Fill in the blank
Location address of the display	
Model number of the display:	**AF-3400 34mm**
Version of software being used: *(Right-click on Venus 1500 name in toolbar, choose "About Venus 1500")*	
Method of communication being used *(See Section 3 for guidance)*	
Controller version used in the display	**Version 3**
Network address	

Note: It is helpful to be sitting at the control computer while talking with the service technician.

Section 8: Parts Replacement

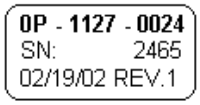


Figure 36: *Part Label*

Turn off power when servicing the display.

Do not modify the display structure or attach any panels or coverings to the display without the written consent of Daktronics.

8.1 Obtaining Replacement Parts

Daktronics AF-3400 Galaxy® displays are designed and manufactured for performance, reliability, easy maintenance, and long life. However, on occasion, parts may need to be replaced. **Section 9** provides information on obtaining replacement parts from Daktronics. This section also provides replacement instructions for the following parts:

- modules
- controller
- power supplies
- light sensor
- temperature sensor

These components are typically located as shown in **Figure 35**. Verify component location by looking at the **Layout Drawing** for a particular display.

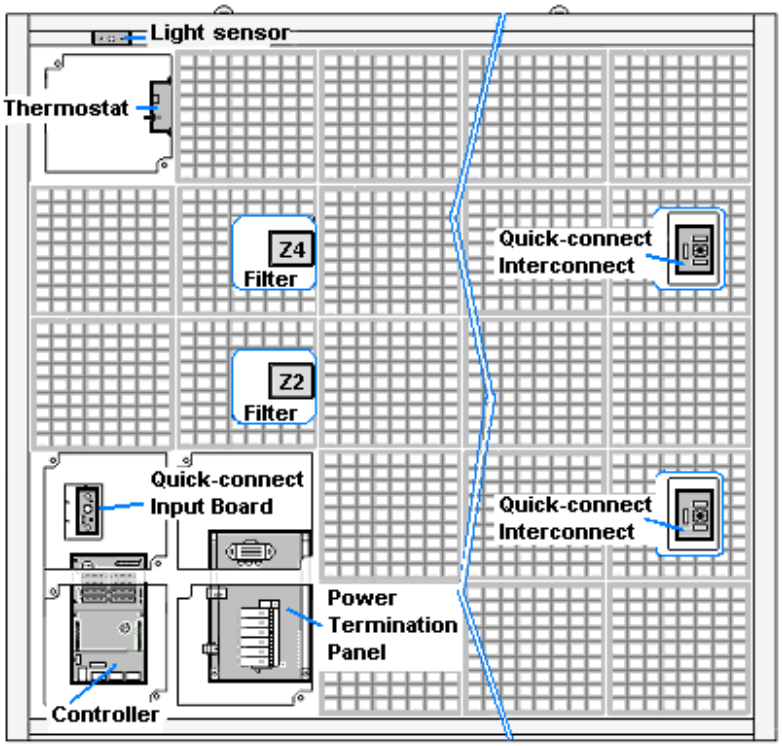


Figure 35: *Interior Location of Components*

The following table contains some of the items that may need to be replaced in a display over a period of time. If a circuit board or assembly is not listed in the Replacement Parts List, look at the label attached to the part to find the part number. Most circuit boards and components within this display carry a label that lists the part number of the unit. A typical label is shown in **Figure 36** with the part number in bold.

Cables will not carry a part number label. To assist with correct identification of cables and connectors, refer to the descriptions in **Section 8.4**.

Part Description	Part Number
Module, 1R, 8x8 (30x70), Red	0A-1208-4000
Module, 1A, 8x8 (30x70), Amber (*used before 1 Oct. 2007*)	0A-1208-4001
Module, 1A, 8x8 (30x70), Amber (*used after 1 Oct. 2007*)	0A-1208-4003
Module, 1R1G1B (1:1) 8x8 (30x70), RGB	0A-1208-4550
Controller II, Louvered Galaxy, 8-connector	0A-1229-0013
Power Supply Assembly, w/Harness, A-1633, Amber and RGB Displays	0A-1327-0009(1) 0A-1327-0010(2)
Power Supply Assembly, w/Harness, A-1591, Red Displays	0A-1327-0003(1) 0A-1327-0004(2)
Power Termination Panels	
Transformer/filter - 1 circuit	0A-1327-0100
Transformer/filter - 2 circuit	0A-1327-0101
Transformer - 4 circuit	0A-1327-0104
Transformer - 6 circuit	0A-1327-0106
Filter, RFI Line 20 AMP 120 VAC	Z-1007
Digital Temperature Sensor	0P-1247-0008
Light Level Detector	0P-1151-0002
Fan; 245 CFM, 120V @60Hz, 46-50 watt	B-1019
Fan; 134 CFM, 120V @60Hz, 22 watt, 4.5"	B-1053
Ribbon Cables; 20 Position	
Cable Assy; 20 pos Ribbon, 18", Dual Row	W-1387
Ribbon Assy; 20 Pos, 30"	0A-1000-0017
Ribbon Assy; 20 Pos, 36"	0A-1000-0018
Ribbon Assy; 20 Pos, 60"	0A-1000-0021
Ribbon Assy; 20 Pos, 72"	0A-1000-0022
Cable; 22 AWG, 2-pair, shielded (light sensor/temp sensor to controller)	W-1234
Interconnect Cable; 31-pin male to 31-pin male, 6', QC	W-1503
Quick-connect interface, input, with Ethernet	0P-1229-2004
31-pin, quick-connect input/output board	0P-1229-2008
Hex Wrench, T-Handle 1/8" RT for modules	TH-1062
Manual; Venus 1500 Operator's, Version 3.0	**ED-13530**

8.2 Instructions for Replacing Parts

Module Removal/Replacement

If LEDs have failed, **do not attempt to replace individual LEDs.**
Return a failed module to Daktronics for replacement and/or repair.

Each module may be removed separately without moving other components of the display.

1. **Turn off power to the display.**
2. Release the module with the 1/8" hex wrench as described in **Section 6.1.** The latch accesses are noted in **Figure 37**.
3. Disconnect the two ribbon cables from the module, noting their connection to the back. (**Figure 38**). Release ribbon cables by spreading the tabs on the sides and then lifting the cable head from the jack.
4. Unplug the power cable by squeezing the tabs on the sides of the plug head and pulling out.
5. Connect all three cables to the new module, making sure that the ribbon cable tabs are tightly pushed against the cable head.
   Carefully push the ribbon wires back into the cabinet so they are clear of the module edges.
6. Place the module into its proper location, checking that the weather stripping is in place. Latch the module tightly both top and bottom using the hex wrench.

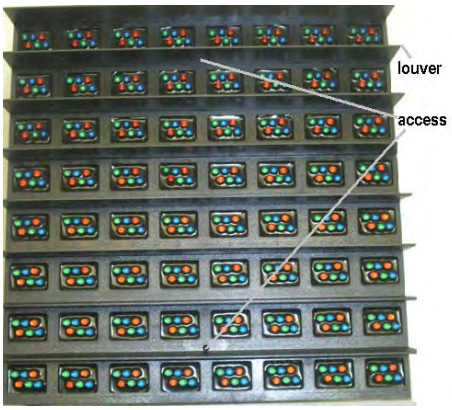


Figure 37: *Access Locations*

Note:

- The weather-stripping on the back edge of the module must be in good condition and returned to its proper position if it is to prevent water from seeping into the display.
- The module latches must be fully engaged to create a watertight seal around the edge of the module. The module should be firmly seated against the display when the latches are fully engaged.

Figure 38: *Removing a Module*

Controller Replacement

Complete the following steps to remove the controller from the display:

Tools required: 1/8" hex wrench and 3/16" nut driver

1. **Turn off power to the display.**
2. Remove the module directly in front of the controller in the lower left corner of the primary display.
3. Disconnect the power plug from power input jack.
4. Remove all power and signal connections from the board, carefully pulling them from their jacks. Label the various cables and wires as they are removed to insure their proper replacement.
5. Remove the six nuts holding the board in place using a $^{3}/_{16}$" nut driver.
6. Take note of the address of the controller and set the same address on the replacement controller. Refer to the information following for instructions.

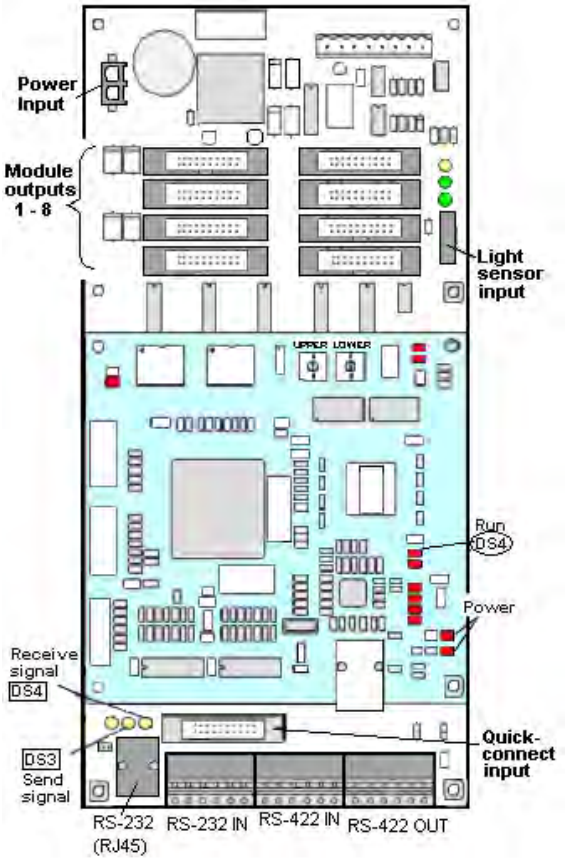


Figure 39: *Typical Controller*

Controller Address Setting

The rotary switches set the hardware address which the software uses to identify that particular display (**Figure 40**). Each controller in a network needs a unique address.

Set the switches by rotating them counter clockwise until the arrow points to the desired number. The display's power must be turned off and then turned back on to activate the test mode or to change the address.

Note: Setting both rotary switches to address 0 will activate a Test Mode. Turn the display's power off and back on to activate testing.

After testing, set the addresses to numbers other than 0/0. The software will not communication with a controller set to address 0.

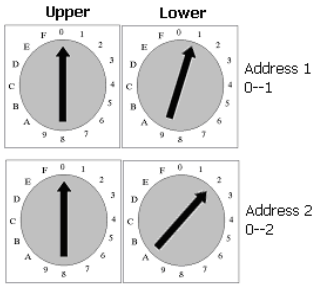


Figure 40: *Rotary Switches*

Power Supply Replacement

The modules in a display rely on power supplies that receive 120 VAC from the power termination panel and send out DC power to the modules. Power supply voltage differs depending on the LED color of the display.

- **Monochrome Red**: Each 6.5 VDC power supply provides power for up to eight modules in a display that uses monochrome red LEDs.

- **Monochrome Amber and RGB**: Each 9 VDC power supply provides power for up to eight amber LED modules and up to four RGB modules.

Power supplies may be installed as single or double units depending on the pixel size of the display. A double unit consists of two single units connected together. The wiring for a single unit power supply is shown in **Figure 41**.

Tools required: 5/32″ hex wrench, Phillips screwdriver

Complete the following steps to replace a power supply:

1. Turn off power to the display.
2. Access the interior of the display by removing the module in front of the power supply to be replaced. Use a 1/8″ hex wrench to turn the latch fasteners. Refer to **Section 6.1** for additional instructions.
3. Disconnect and label all the wires connected to the power supply.
4. Remove the hardware holding the power supply in place.
5. Follow these steps in reverse order to install a new power supply.

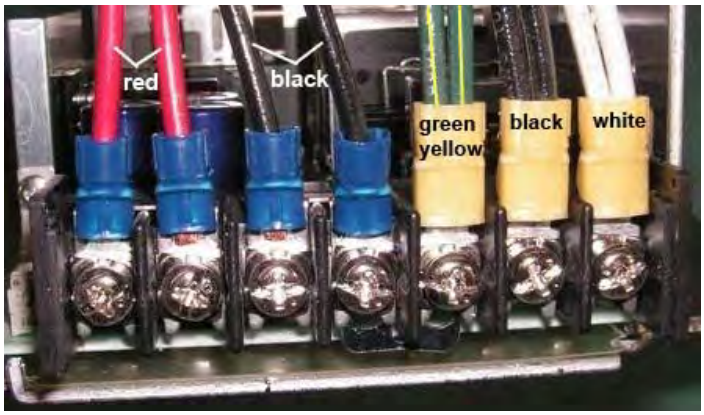


Figure 41: *Single Unit Power Supply*

Light Sensor Replacement

The light sensor assembly is mounted inside the top left of the cabinet. Refer to **Figure 31** for location. The entire assembly fits over two screws.

If the light sensor should fail, only the circuit board needs to be replaced (**Figure 42**). Remove the top left module on the display to access the light sensor. To replace a light sensor circuit board, follow these steps.

Note: The hardware mentioned in each step is given a corresponding number in the drawing. For instance, the nuts mentioned in step 2 are labeled #2 in the figure.

1. Remove the nuts behind the circuit board plate, and then remove the plate and circuit board from the assembly.
2. Remove the nuts securing the circuit board to the plate.
3. Remove the standoffs and attachment screws from the board.
4. Disconnect the four electrical wires on the sensor by unscrewing each screw that holds a wire in place. Note the order that the wires are connected.
5. The light sensor plug on the controller does not need to be detached.
6. Reattach the new circuit board, following these steps in reverse.

Note: Align the new circuit board so that the lens lines up with the 1/2" circular opening in the top edge of the display when the assembly is in place.

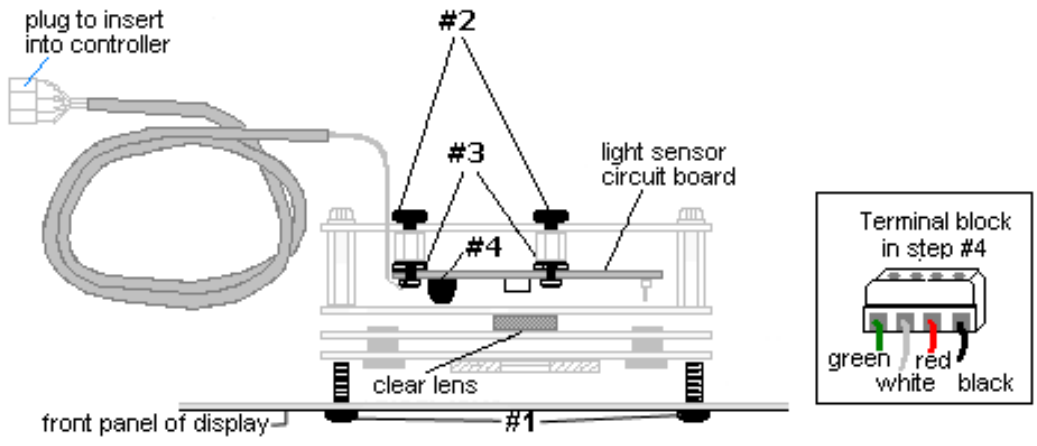


Figure 42: *Light Sensor Assembly*

Temperature Sensor Replacement

The temperature component is a small sensor board inside a plastic housing (**Figure 44**). This will be mounted outside, typically either near the display or near a building. If the temperature sensor is not working correctly, the internal sensor can be replaced by accessing it in the following steps:

1. Open the temperature sensor housing by removing the four nuts from the bottom, and removing the five bottom discs. Three of the discs are solid, while the center two have a square hole in them to fit around the sensor.
2. Label the wires connected to the temperature sensor board and then disconnect the cable from the temperature sensor terminal block in the sensor housing.
3. Remove the two screws holding the board to the plastic disc. Install the new board, and replace the two screws.
4. Reconnect the cable to the temperature sensor board, making sure all the wires make a good electrical connection.
5. Route cable around the sensor board (**Figure 43)** and then reassemble the sensor enclosure.

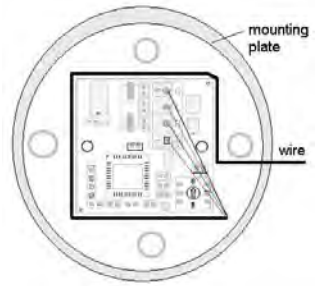


Figure 43: *Wire around Sensor Board*

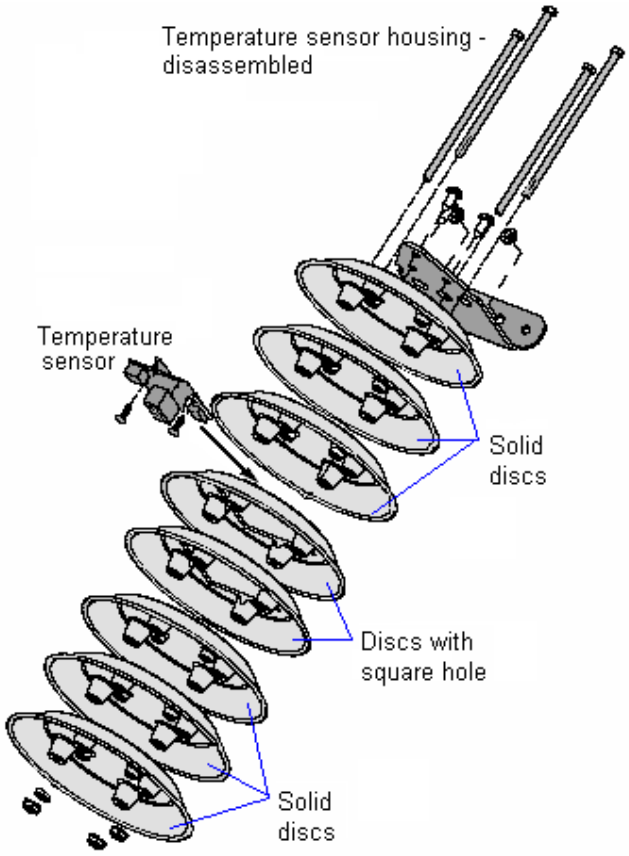


Figure 44: *Temperature Sensor*

8.3 Glossary

Controller: The "brains" of the display. The controller receives signal communication from the computer and sends the appropriate information to the modules. Messages and schedules may also be stored on the controller for use when desired.

Display Address: An identification number assigned to each display of a network. The control software uses the address to locate and communicate with each display. Displays that are on the same network must have different addresses.

Driver/LED Board: A component mounted directly onto the module. This board is responsible for the on/off and intensity levels of the LEDs.

Galaxy®: Name is given to Daktronics LED matrix displays that can be monochrome, tri-color, or RGB.

LED (light emitting diode): A low energy, high intensity lighting unit.

Louver: A black plastic ledge positioned horizontally above each pixel row. The louvers block sunlight, thus increasing the contrast on the display face.

Mirror: The second display in a two-sided configuration. The mirror display **does not** have a controller so it displays an exact copy of the information on the primary display. All signal information to the mirror is received through an inter-connect cable from the primary display.

Module: 34 mm Galaxy® modules are 8 pixels high by 8 pixels wide. Each is individually removable from the front of the display.

Network: Consists of multiple displays connected to each other. As many as 240 primary displays can exist on one network.

Pixel: A single LED or cluster of LEDs. The number and color of the LEDs will depend on display application.

Primary: A single-faced unit or the first display in a Primary-Mirror (2V) configuration. The communication signal, light sensor and temperature sensor will be connected to this display. The information from these components will be relayed from the primary display to the mirror display so that it shows exactly the same information. An inter-connect cable will transfer this information from the primary to the mirror display in this configuration.

Venus 1500: The name given to Daktronics software that is used on the control computer to create messages and send them to the displays. The Venus 1500 manual is included on the installation disk.

8.4 Common Power and Signal Connectors

When pulling a connector plug from a jack, **do not pull on the wire or cable**; pull on the plug head itself. Pulling on the wires may damage the connector.

The power and communication signal connections in the displays use many different types of connectors. The following information presents some common connectors encountered during display installation and maintenance.

Ribbon Cable Connectors:
A typical ribbon connector is shown in **Figure 45**. To disconnect the ribbon cable, push out the plastic clips on the sides to unlock the cable and then remove the jack.

Before replacing a ribbon cable connector, spray it with DeoxIT™ contact cleaner to remove any foreign matter that may cause signal problems. In addition, apply a generous amount of CaiLube™ protector paste to the plug before inserting it into the jack. This paste will protect both the plug and the jack from corrosion.

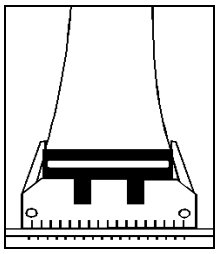


Figure 45: *Ribbon Cable Connector*

Termination Blocks:
Termination blocks are commonly used to connect internal power to an external power source. Power wires need to have one-half inch of insulation stripped from the end of the wire prior to termination. Insert wires into terminations and make sure the clamp holds the wire firmly. A typical termination block is shown in **Figure 46**.

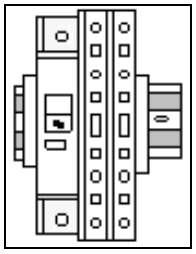


Figure 46: *One breaker Termination Block*

Phoenix™-Style Connectors:
Phoenix connectors, which are usually green, are often used for communication signal termination on circuit boards. Refer to **Figure 47**. Strip one-quarter inch of insulation from the wire prior to insertion. To remove a wire, turn the corresponding screw counter-clockwise to loosen the connector's grip on the wire. To insert a wire, push the bare wire into the connector and turn the above screw clockwise to lock the wire into place.

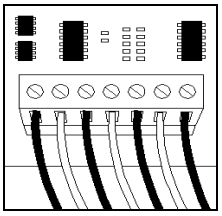


Figure 47: *Phoenix Connector*

Mate-n-Lok™ Connectors:
The Mate-n-Lok connectors found in the displays are white and come in a variety of sizes. **Figure 48** illustrates a four-pin Mate-n-Lok connector. To remove the plug from the jack, squeeze the plastic locking clasps on the side of the plug and pull it from the jack.

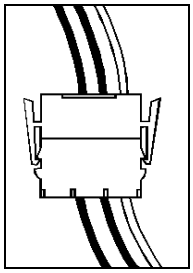


Figure 48: *Mate-n-Lok Connector*

Phone/Network Jacks (RJ11/RJ45 Connectors):
RJ connectors, as seen in **Figure 49**, are similar to the telephone connectors or network jacks found in homes and businesses. These jacks are used on the ends of RJ11 or RJ45 cable. In order to remove this plug from the jack, depress the small clip on the underside of the plug.

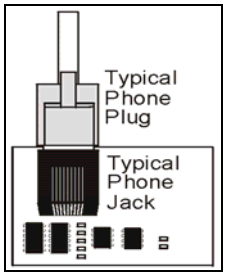


Figure 49: *RJ11/RJ45 Connector*

Before replacing an RJ connector, spray it with DeoxIT™ contact cleaner to remove any foreign matter that may cause signal problems. In addition, apply a generous amount of CaiLube™ protector paste to the plug before inserting it into the jack. This paste will protect both the plug and the jack from corrosion.

Quick-connect Jack:
The display uses quick-connect jacks for the connection of the signal, the temperature sensor and the connection to a mirror display. Three input and one output quick-connect jacks are located on the back of the primary display. When not in use, the attached dust cover should be kept closed.

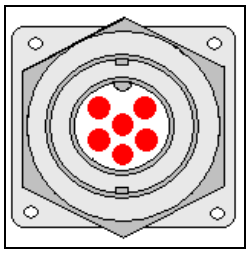


Figure 50: *RS232 6-pin Quick-connect Jack*

To attach the cable to a jack, match the configuration of wires in the plug to the pattern in the jack. Push the plug in, then turn the outer collar to lock it into place. **Figure 50** illustrates the 6-pin quick-connect jack.

Fiber Optic Cable:
A fiber optic network transmits light (signal) through a glass fiber. Because fiber optic cable is glass, the cable must never be bent. The cable is usually a four-fiber cable, with two fibers used for display communications and the other two saved for spares (**Figure 51**).

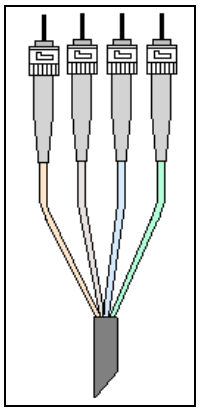


Figure 51*: Fiber Optic Cable*

Section 9: Daktronics Exchange and Repair & Return Programs

To serve customers' repair and maintenance needs, Daktronics offers both an Exchange Program and a Repair and Return Program.

Exchange Program

Daktronics unique Exchange Program is a quick service for replacing key parts in need of repair. If a part requires repair or replacement, Daktronics sends the customer a replacement, and the customer sends the defective part to Daktronics. This decreases display downtime.

Before Contacting Daktronics

Insert important part numbers here:

_____

_____

_____

Display Serial Number: _____

Display Model Number: _____

Contract Number: _____

Date Installed: _____

Daktronics Customer ID Number: _____

To participate in the Exchange Program, follow these steps.

1. **Call Daktronics Customer Service: 866-343-3122**

2. **When the new exchange part is received, mail the old part to Daktronics.**
   If the replacement part fixes the problem, send in the problem part which is being replaced.
   - **a.** Package the old part in the same shipping materials in which the replacement part arrived.
   - **b.** Fill out and attach the enclosed UPS shipping document.
   - **c.** Ship the part to Daktronics.

3. **A charge will be made for the replacement part immediately, unless a qualifying service agreement is in place.**
   In most circumstances, the replacement part will be invoiced at the time it is shipped.

4. **If the replacement part does not solve the problem, return the part within 30 working days or the full purchase price will be charged.**
   If the equipment is still defective after the exchange is made, please contact Customer Service immediately. Daktronics expects *immediate return* of an exchange part if it does not solve the problem. The company also reserves the **right to refuse** parts that have been damaged due to acts of nature or causes other than normal wear and tear.

Repair & Return Program

For items not subject to exchange, Daktronics offers a Repair & Return Program. To send a part for repair, follow these steps:

1. **Call or fax Daktronics Customer Service:**
   Phone: 866-343-3122 Fax: 605-697-4444

2. **Receive a Return Materials Authorization (RMA) number before shipping.**
   This expedites repair of the part.

3. **Package and pad the item carefully to prevent damage during shipment.**
   Electronic components, such as printed circuit boards, should be placed in an antistatic bag before boxing. Daktronics does not recommend styrofoam peanuts in packaging.

4. **Enclose:**
   - your name
   - address
   - phone number
   - the RMA number
   - a clear description of symptoms

Shipping Address

Daktronics Customer Service
PO Box 5128
331 32nd Ave
Brookings, SD 57006

9.1 Daktronics Warranty and Limitation of Liability

Daktronics Warranty and Limitation of Liability is located in Appendix C. The Warranty is independent of Extended Service agreement and is the authority in matters of service, repair, and display operation.

Appendix A: Reference Drawings

The following drawings are included in this appendix. Note that the drawings differ between monochrome and RGB displays and are sorted by matrix sizes. Most drawings include more than one display size. For example, the first layout drawing includes displays that range from 8 to 64 pixels high and 48 to 144 pixels long. Be sure to refer to the correct drawing for the specific display.

Power Specs, AF-3400-(8x192-64x192)-34-Red ..... **Drawing A-229071**
Power Specs, AF-3400-(8x192-64x192)-34-Amber ..... **Drawing A-229090**
Power Specs, AF-3400-(8x192-64x192)-34-RGB ..... **Drawing A-229098**

Layout, EE/ME, AF-3400-(8-64)x(48-144)-34-Mono ..... **Drawing B-227806**
Layout, EE/ME, AF-3400-(8-64)x(160-192)-34-Mono ..... **Drawing B-217685**

Layout, EE/ME, AF-3400-(8-64)x(48-144)-34-RGB ..... **Drawing B-217338**
Layout, EE/ME, AF-3400-(8-64)x(160-192)-34-RGB ..... **Drawing B-217727**

Listed for reference purposes only

Schematic drawings provide wiring information as well as the location of internal components. If a Schematic Drawing is needed, use this list to find the correct number and request one from the Daktronics Customer Service. Note that they are listed by the pixel matrix size of the display.

***RGB** listed by matrix height*

Schematic, AF-3400-8x***-34-RGB-P/M ..... **Drawing B-229690**
Schematic, AF-3400-16x(48-96)-34-RGB-P/M ..... **Drawing B-229711**
Schematic, AF-3400-16x(112-192)-34-RGB-P/M ..... **Drawing B-229692**
Schematic, AF-3400-24x(48-144)-34-RGB-P/M ..... **Drawing B-229662**
Schematic, AF-3400-24x(160-192)-34-RGB-P/M ..... **Drawing B-229617**
Schematic, AF-3400-32x(48-80)-34-RGB-P/M ..... **Drawing B-229456**
Schematic, AF-3400-32x(96-192)-34-RGB-P/M ..... **Drawing B-229450**
Schematic, AF-3400-40x(48-192)-34-RGB-P/M ..... **Drawing B-229233**
Schematic, AF-3400-48x***-34-RGB-P/M ..... **Drawing B-229002**
Schematic, AF-3400-56x(48-112)-34-RGB-P/M ..... **Drawing B-232922**
Schematic, AF-3400-56x(128-192)-34-RGB-P/M ..... **Drawing B-232750**
Schematic, AF-3400-64x(48-80)-34-RGB-P/M ..... **Drawing B-232812**
Schematic, AF-3400-64x(96-192)-34-RGB-P/M ..... **Drawing B-232253**

***Monochrome** listed by matrix height*

Schematic, AF-3400-8x***-34-Mono-P/M ..... **Drawing B-229770**
Schematic, AF-3400-16x***-34-Mono-P/M ..... **Drawing B-229775**
Schematic, AF-3400-24x(48-144)-34-Mono-P/M ..... **Drawing B-229787**
Schematic, AF-3400-24x(152-192)-34-Mono-P/M ..... **Drawing B-229788**
Schematic, AF-3400-32x(48-112)-34-Mono-P/M ..... **Drawing B-229789**
Schematic, AF-3400-32x(128-192)-34-Mono-P/M ..... **Drawing B-229790**

MATRIX SIZE	TOTAL WATTS	120V AMPS	120/240 3, wire LINE 1 AMPS	120/240 3, wire LINE 2 AMPS	240V AMPS
8X48	131	1.09	120/240 VAC IS NOT		0.55
8X64	184	1.53	AVAILABLE FOR SIZE		0.77
8X80	215	1.79			0.90
8X96	247	2.06			1.03
8X112	300	2.50			1.25
8X128	331	2.76			1.38
8X144	362	3.02			1.51
8X160	416	3.46			1.73
8X176	447	3.72			1.86
8X192	478	3.99			1.99
16X48	247	2.06			1.03
16X64	331	2.76			1.38
16X80	394	3.28			1.64
16X96	478	3.99			1.99
16X112	541	4.51			2.25
16X128	625	5.21			2.61
16X144	710	5.92			2.96
16X160	772	6.44			3.22
16X176	857	7.14			3.57
16X192	941	7.85			3.92
24X48	362	3.02			1.51
24X64	478	3.99			1.99
24X80	594	4.95			2.48
24X96	710	5.92			2.96
24X112	826	6.88			3.44
24X128	941	7.85			3.92
24X144	1057	8.81			4.41
24X160	1173	9.78	3.77	6.00	4.89
24X176	1289	10.74	4.55	6.19	5.37
24X192	1405	11.71	5.34	6.37	5.85
32X48	456	3.80			1.90
32X64	603	5.03			2.51
32X80	750	6.25			3.13
32X96	897	7.48			3.74
32X112	1045	8.70			4.35
32X128	1192	9.93	4.29	5.64	4.97
32X144	1339	11.16	5.34	5.82	5.58
32X160	1486	12.38	6.38	6.00	6.19
32X176	1633	13.61	6.38	7.23	6.80
32X192	1780	14.83	6.38	8.45	7.42

MATRIX SIZE	TOTAL WATTS	120V AMPS	120/240 3, wire LINE 1 AMPS	120/240 3, wire LINE 2 AMPS	240V AMPS
40X48	604	5.03	2.21	2.82	2.52
40X64	800	6.67	3.25	3.42	3.34
40X80	997	8.31	3.51	4.79	4.15
40X96	1193	9.94	4.29	5.65	4.97
40X112	1389	11.58	5.34	6.24	5.79
40X128	1586	13.22	5.34	7.88	6.61
40X144	1782	14.85	6.64	8.21	7.43
40X160	1979	16.49	7.42	9.07	8.24
40X176	2175	18.12	8.20	9.92	9.06
40X192	2371	19.76	9.51	10.25	9.88
48X48	698	5.82	3.25	2.56	2.91
48X64	925	7.71	3.25	4.46	3.86
48X80	1153	9.61	4.82	4.79	4.80
48X96	1381	11.51	5.34	6.17	5.75
48X112	1608	13.40	6.38	7.02	6.70
48X128	1836	15.30	6.38	8.92	7.65
48X144	2064	17.20	7.94	9.25	8.60
48X160	2291	19.09	8.46	10.63	9.55
48X176	2519	20.99	9.51	11.48	10.50
48X192	2746	22.89	9.51	13.38	11.44
56X48	792	6.60	3.51	3.08	3.30
56X64	1051	8.75	4.29	4.46	4.38
56X80	1309	10.91	5.34	5.58	5.46
56X96	1568	13.07	6.38	6.69	6.53
56X112	1827	15.23	7.68	7.55	7.61
56X128	2086	17.38	7.42	9.96	8.69
56X144	2345	19.54	8.46	11.08	9.77
56X160	2604	21.70	10.55	11.15	10.85
56X176	2863	23.86	11.33	12.01	11.93
56X192	3122	26.01	12.63	13.38	13.01
64X48	885	7.38	3.25	4.13	3.69
64X64	1176	9.80	4.29	5.50	4.90
64X80	1466	12.22	5.34	6.88	6.11
64X96	1756	14.63	6.38	8.25	7.32
64X112	2046	17.05	7.42	9.63	8.53
64X128	2336	19.47	8.46	11.01	9.73
64X144	2626	21.89	9.51	12.38	10.94
64X160	2917	24.31	10.55	13.76	12.15
64X176	3207	26.72	11.59	15.13	13.36
64X192	3497	29.14	12.63	16.51	14.57

THE ABOVE DISPLAY SIZES CAN BE POWERED BY EITHER 120VAC (2 WIRE + GND), 120/240 (3 WIRE + GND) OR 240VAC (2 WIRE + GND) SERVICES (EXCEPT WHERE NOTED).

REV.	DATE	DESCRIPTION	BY	APPR.
01	21JAN05	ADDED VALUES FOR LINE 1 AND LINE 2 AMPS FOR ALL MATRIX SIZES 56 AND 64 HIGH.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34MM RED 6.5 V

TITLE: POWER SPECS, AF-3400-(8X192-64X192)-34-RED

DES. BY: DMATHER DRAWN BY: WSCHNEI DATE: 07 DEC 04

APPR. BY: DJM

SCALE:

REVISION 01

1329-R10A-22907 1

MATRIX SIZE	TOTAL WATTS	120V AMPS	120/240 3, wire LINE 1 AMPS	120/240 3, wire LINE 2 AMPS	240V AMPS
8X48	174	1.45	120/240 VAC IS NOT		0.72
8X64	241	2.01	AVAILABLE FOR SIZE		1.00
8X80	287	2.39			1.19
8X96	332	2.77			1.38
8X112	400	3.33			1.66
8X128	445	3.71			1.85
8X144	491	4.09			2.04
8X160	558	4.65			2.33
8X176	604	5.03			2.51
8X192	649	5.41			2.70
16X48	332	2.77			1.38
16X64	445	3.71			1.85
16X80	536	4.47			2.23
16X96	649	5.41			2.70
16X112	740	6.17			3.08
16X128	853	7.11			3.55
16X144	966	8.05			4.03
16X160	1057	8.81			4.40
16X176	1170	9.75			4.88
16X192	1283	10.69			5.35
24X48	491	4.09			2.04
24X64	649	5.41			2.70
24X80	808	6.73			3.37
24X96	966	8.05			4.03
24X112	1125	9.37			4.69
24X128	1283	10.69			5.35
24X144	1442	12.01			6.01
24X160	1600	13.34	5.43	7.90	6.67
24X176	1759	14.66	6.57	8.08	7.33
24X192	1917	15.98	7.71	8.27	7.99
32X48	627	5.23			2.61
32X64	831	6.93			3.46
32X80	1035	8.63			4.31
32X96	1239	10.33			5.16
32X112	1443	12.03			6.01
32X128	1647	13.73	6.19	7.53	6.86
32X144	1851	15.43	7.71	7.72	7.71
32X160	2055	17.13	9.23	7.90	8.56
32X176	2259	18.83	9.23	9.60	9.41
32X192	2463	20.53	9.23	11.30	10.26

MATRIX SIZE	TOTAL WATTS	120V AMPS	120/240 3, wire LINE 1 AMPS	120/240 3, wire LINE 2 AMPS	240V AMPS
40X48	818	6.81	3.16	3.65	3.41
40X64	1085	9.04	4.68	4.37	4.52
40X80	1353	11.27	5.06	6.22	5.64
40X96	1620	13.50	6.19	7.31	6.75
40X112	1888	15.73	7.71	8.02	7.87
40X128	2155	17.96	7.71	10.25	8.98
40X144	2423	20.19	9.61	10.58	10.10
40X160	2690	22.42	10.74	11.68	11.21
40X176	2958	24.65	11.88	12.77	12.32
40X192	3225	26.88	13.78	13.10	13.44
48X48	954	7.95	4.68	3.28	3.98
48X64	1267	10.56	4.68	5.88	5.28
48X80	1580	13.17	6.95	6.22	6.58
48X96	1893	15.78	7.71	8.07	7.89
48X112	2206	18.39	9.23	9.16	9.19
48X128	2519	20.99	9.23	11.77	10.50
48X144	2832	23.60	11.50	12.10	11.80
48X160	3145	26.21	12.26	13.95	13.11
48X176	3459	28.82	13.78	15.04	14.41
48X192	3772	31.43	13.78	17.65	15.71
56X48	1091	9.09	5.06	4.03	4.54
56X64	1449	12.08	6.19	5.88	6.04
56X80	1808	15.06	7.71	7.36	7.53
56X96	2166	18.05	9.23	8.83	9.03
56X112	2525	21.04	11.12	9.92	10.52
56X128	2883	24.03	10.74	13.29	12.01
56X144	3242	27.02	12.26	14.76	13.51
56X160	3601	30.00	15.29	14.71	15.00
56X176	3959	32.99	16.43	15.80	16.50
56X192	4318	35.98	18.33	17.65	17.99
64X48	1227	10.23	4.68	5.55	5.11
64X64	1631	13.59	6.19	7.40	6.80
64X80	2035	16.96	7.71	9.25	8.48
64X96	2439	20.33	9.23	11.10	10.16
64X112	2843	23.70	10.74	12.95	11.85
64X128	3247	27.06	12.26	14.80	13.53
64X144	3652	30.43	13.78	16.65	15.21
64X160	4056	33.80	15.29	18.50	16.90
64X176	4460	37.16	16.81	20.35	18.58
64X192	4864	40.53	18.33	22.20	20.27

THE ABOVE DISPLAY SIZES CAN BE POWERED BY EITHER 120VAC (2 WIRE + GND), 120/240 (3 WIRE + GND) OR 240VAC (2 WIRE + GND) SERVICES (EXCEPT WHERE NOTED).

REV.	DATE	DESCRIPTION	BY	APPR.
01	21JAN05	ADDED VALUES FOR LINE 1 AND LINE 2 AMPS FOR ALL MATRIX SIZES 56 AND 64 HIGH.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34MM AMBER 9.0 V

TITLE: POWER SPECS, AF-3400-(8X192-64X192)-34-AMB

DES. BY: DMATHER DRAWN BY: WSCHNEI DATE: 07 DEC 04

APPR. BY: DJM

SCALE:

REVISION 01

1329-R10A-22909 0

MATRIX SIZE	TOTAL WATTS	120V AMPS	120/240 3, wire LINE 1 AMPS	120/240 3, wire LINE 2 AMPS	240V AMPS
8X48	310	2.58	120/240 VAC IS NOT		1.29
8X64	423	3.52	AVAILABLE FOR SIZE		1.76
8X80	513	4.28			2.14
8X96	604	5.04			2.52
8X112	717	5.98			2.99
8X128	808	6.73			3.37
8X144	899	7.49			3.75
8X160	1012	8.43			4.22
8X176	1103	9.19			4.59
8X192	1194	9.95			4.97
16X48	604	5.04			2.52
16X64	808	6.73			3.37
16X80	990	8.25			4.12
16X96	1194	9.95			4.97
16X112	1375	11.46	6.18	5.28	5.73
16X128	1579	13.16	6.18	6.98	6.58
16X144	1783	14.86	7.70	7.16	7.43
16X160	1965	16.37	9.21	7.16	8.19
16X176	2168	18.07	9.21	8.86	9.04
16X192	2372	19.77	9.21	10.56	9.88
24X48	899	7.49	4.67	2.82	3.75
24X64	1194	9.95	4.67	5.28	4.97
24X80	1488	12.40	6.94	5.46	6.20
24X96	1783	14.86	9.21	5.64	7.43
24X112	2078	17.31	9.21	8.10	8.66
24X128	2372	19.77	9.21	10.56	9.88
24X144	2667	22.22	11.49	10.74	11.11
24X160	2962	24.68	12.24	12.44	12.34
24X176	3256	27.14	12.24	14.89	13.57
24X192	3551	29.59	15.27	14.32	14.80
32X48	1172	9.76	6.18	3.58	4.88
32X64	1557	12.98	6.18	6.79	6.49
32X80	1943	16.19	9.21	6.98	8.09
32X96	2328	19.40	9.21	10.19	9.70
32X112	2714	22.62	10.73	11.89	11.31
32X128	3099	25.83	12.24	13.58	12.91
32X144	3485	29.04	13.76	15.28	14.52
32X160	3870	32.25	15.27	16.98	16.13
32X176	4256	35.47	16.79	18.68	17.73
32X192	4642	38.68	18.30	20.38	19.34

MATRIX SIZE	TOTAL WATTS	120V AMPS	120/240 3, wire LINE 1 AMPS	120/240 3, wire LINE 2 AMPS	240V AMPS
40X48	1498	12.49	6.18	6.30	6.24
40X64	1993	16.61	7.70	8.91	8.30
40X80	2487	20.73	9.97	10.76	10.36
40X96	2982	24.85	12.24	12.60	12.42
40X112	3476	28.97	13.76	15.21	14.48
40X128	3970	33.09	15.27	17.81	16.54
40X144	4465	37.21	17.54	19.66	18.60
40X160	4959	41.33	19.82	21.51	20.66
40X176	5454	45.45	22.09	23.36	22.72
40X192	5948	49.57	24.36	25.21	24.78
48X48	1771	14.76	7.70	7.06	7.38
48X64	2356	19.64	9.21	10.42	9.82
48X80	2942	24.51	12.24	12.27	12.26
48X96	3527	29.39	15.27	14.12	14.70
48X112	4112	34.27	16.79	17.48	17.13
48X128	4698	39.15	18.30	20.84	19.57
48X144	5283	44.02	21.33	22.69	22.01
48X160	5868	48.90	24.36	24.54	24.45
48X176	6453	53.78	25.88	27.90	26.89
48X192	7039	58.66	27.39	31.27	29.33
56X48	2044	17.03	8.46	8.57	8.52
56X64	2720	22.67	10.73	11.94	11.33
56X80	3396	28.30	13.76	14.54	14.15
56X96	4072	33.94	16.79	17.15	16.97
56X112	4748	39.57	19.06	20.51	19.79
56X128	5425	45.21	21.33	23.87	22.60
56X144	6101	50.84	23.60	27.24	25.42
56X160	6777	56.48	27.39	29.08	28.24
56X176	7453	62.11	30.42	31.69	31.06
56X192	8129	67.75	31.94	35.81	33.87
64X48	2316	19.30	9.21	10.09	9.65
64X64	3083	25.69	12.24	13.45	12.85
64X80	3850	32.09	15.27	16.81	16.04
64X96	4618	38.48	18.30	20.18	19.24
64X112	5385	44.87	21.33	23.54	22.44
64X128	6152	51.26	24.36	26.90	25.63
64X144	6919	57.66	27.39	30.27	28.83
64X160	7686	64.05	30.42	33.63	32.02
64X176	8453	70.44	33.45	36.99	35.22
64X192	9220	76.83	36.48	40.35	38.42

THE ABOVE DISPLAY SIZES CAN BE POWERED BY EITHER 120VAC (2 WIRE + GND), 120/240 (3 WIRE + GND) OR 240VAC (2 WIRE + GND) SERVICES (EXCEPT WHERE NOTED).

REV.	DATE	DESCRIPTION	BY	APPR.
01	21JAN05	ADDED VALUES FOR LINE 1 AND LINE 2 AMPS FOR ALL MATRIX SIZES 56 AND 64 HIGH.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34MM RGB 9.0 V

TITLE: POWER SPECS, AF-3400-(8X192-64X192)-34-RGB

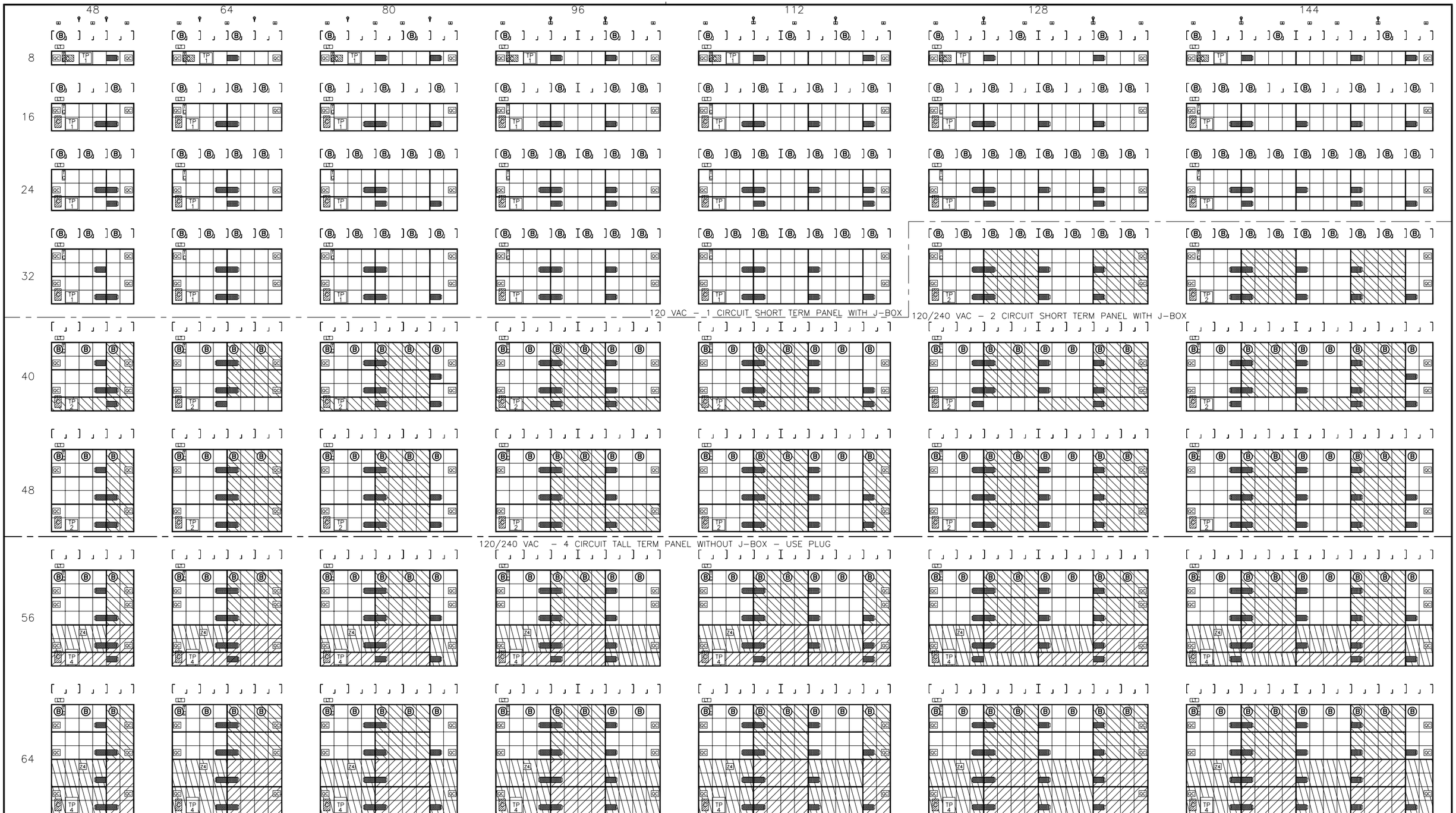
DES. BY: DMATHER DRAWN BY: WSCHNEI DATE: 07 DEC 04

APPR. BY: DJM

SCALE:

REVISION 01

1329-R10A-22909 8



FAN B B-1053, (8/16/24/32)HIGH; 0A-1327-3500 (40/48/56/64)HIGH

THERMOSTAT T C 0A-1327-3101

1 POWER SUPPLY 0A-1327-0003 RED; 0A-1327-0009 AMBER

POWER FILTER Z# 0A-1327-0202 (2)FILTERS; 0A-1327-0203 (4)FILTERS

POWER TERM PANEL TP # 0A-1327-0100 (1)CIRCUIT; 0A-1327-0101 (2)CIRCUIT; 0A-1327-0104 (4)CIRCUIT; 0A-1327-0105 (6)CIRCUIT

CONTROLLER 0A-1229-0013

MODULE 10.64" X 10.64" 8 PIXEL X 8 PIXEL 34MM C-C / 1.33" C-C

DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE OR DOUBE UNIT OF POWER SUPPLIES.

PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT QC 0A-1327-1000

PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS QC 0A-1327-1010

MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS QC 0A-1327-1011

QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE QC 0A-1327-1003

LIGHT DETECTOR PRIMARY ONLY LT 0A-1327-3000 (8/16/24)HIGH; 0A-1327-3003 (32/40/48/56/64)HIGH

LIGHT DETECTOR BLANK MIRROR ONLY LT 0A-1213-4009

AREA POWERED BY Z1 (J41)

AREA POWERED BY Z2 (J42)

AREA POWERED BY Z3

AREA POWERED BY Z4

AREA POWERED BY Z5

AREA POWERED BY Z6

REV.	DATE	DESCRIPTION	BY	APPR.
02	19JAN05	ADDED POWER TERM PANEL AND POWER FILTER NUMBERS FOR 56 AND 64 HIGH. ADDED POWER FILTER AREA HATCHES FOR 56 AND 64 HIGH.	WRS	DJM
01	04JAN05	ADDED POSSIBLE LAYOUT FOR 56 AND 64 HIGH. TO BE DETERMINED.	WRT	

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY AF-3400 34MM FRONT VENTILATION

TITLE: LAYOUT, EE/ME, AF-3400-(8-64)X(48-144)-34-MONO

DES. BY: WTUCKER DRAWN BY: WTUCKER DATE: 15NOV04

REVISION 02 APPR. BY:

SCALE: 1=70

1329-E10B-227806

160 176 192

8

16

120_VAC_-_1_CIRCUIT_SHORT_TERM_PANEL_WITH_J-BOX

24

32

120/240_VAC_-_2_CIRCUIT_SHORT_TERM_PANEL_WITH_J-BOX

40

120/240_VAC_-_4_CIRCUIT_TALL_TERM_PANEL_WITHOUT_J-BOX_-_USE_PLUG

48

120/240_VAC_-_6_CIRCUIT_TALL_TERM_PANEL_WITHOUT_J-BOX_-_USE_PLUG

56

120/240_VAC_-_4_CIRCUIT_TALL_TERM_PANEL_WITHOUT_J-BOX_-_USE_PLUG

64

FAN	B	B-1053, (8/16/24/32)HIGH 0A-1327-3500 (40/48/56/64)HIGH
THERMOSTAT	T C	0A-1327-3101
1 POWER SUPPLY		0A-1327-0003 RED 0A-1327-0009 AMBER
POWER FILTER	Z#	0A-1327-0202 (2)FILTERS 0A-1327-0203 (4)FILTERS
POWER TERM PANEL	TP #	0A-1327-0100 (1)CIRCUIT 0A-1327-0101 (2)CIRCUIT 0A-1327-0104 (4)CIRCUIT 0A-1327-0105 (6)CIRCUIT

CONTROLLER 0A-1229-0013

MODULE 10.64" X 10.64"
8 PIXEL X 8 PIXEL
34MM C-C / 1.33" C-C

DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE OR DOUBE UNIT OF POWER SUPPLIES.

PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT	QC	0A-1327-1000
PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS	QC	0A-1327-1010
MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS	QC	0A-1327-1011
QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE	QC	0A-1327-1003
LIGHT DETECTOR PRIMARY ONLY	LT	0A-1327-3000 (8/16/24)HIGH 0A-1327-3003 (32/40/48/56/64)HIGH
LIGHT DETECTOR BLANK MIRROR ONLY	LT	0A-1213-4009

- AREA POWERED BY Z1 (J41)
- AREA POWERED BY Z2 (J42)
- AREA POWERED BY Z3
- AREA POWERED BY Z4
- AREA POWERED BY Z5
- AREA POWERED BY Z6

REV.	DATE	DESCRIPTION	BY	APPR.
02	18JAN05	ADDED POWER TERM PANEL AND POWER FILTER NUMBERS FOR 56 AND 64 HIGH. ADDED POWER FILTER AREA HATCHES FOR 56 AND 64 HIGH.	WRS	DJM
01	04JAN05	REUSED THIS DRAWING NUMBER FOR A NEW COMPONENT LAYOUT FORMAT AND MASTER DESIGN LAYOUT DRAWING.	WRT	

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY AF-3400 34MM FRONT VENTILATION

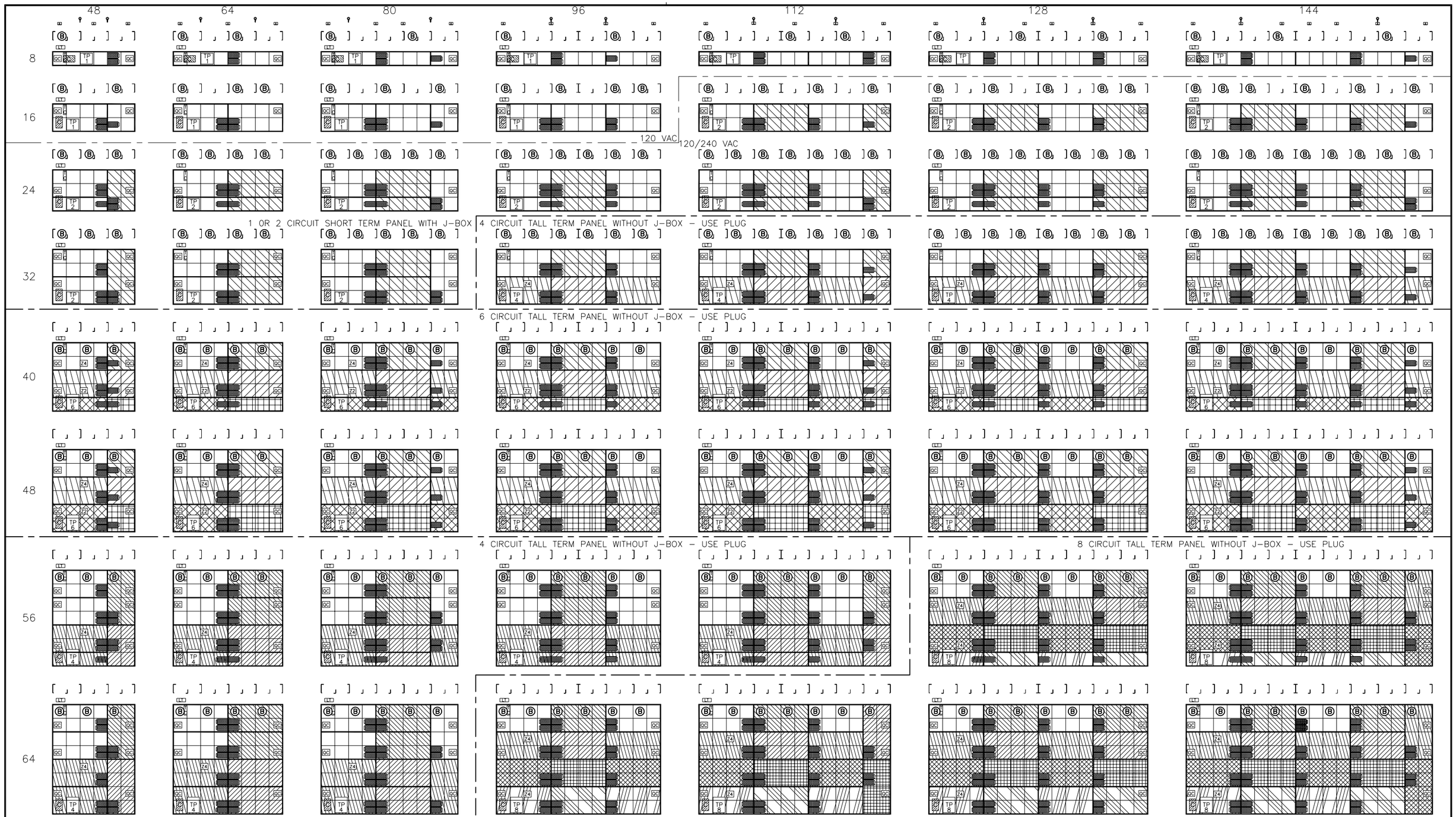
TITLE: LAYOUT, EE/ME, AF-3400-(8-64)X(160-192)-34-MONO

DES. BY: WTUCKER DRAWN BY: WTUCKER DATE: 15DEC04

REVISION 02 APPR. BY:

SCALE: 1=70

1329-E10B-217685



FAN (B) B-1053 (8/16/24/32)HIGH, 0A-1327-3500 (40/48/56/64)HIGH

THERMOSTAT (C) 0A-1327-3101

1 POWER SUPPLY 0A-1327-0009

2 POWER SUPPLIES 0A-1327-0010

POWER FILTER (Z#) 0A-1327-0202 (2)FILTERS, 0A-1327-0203 (4)FILTERS

POWER TERM PANEL (TP #) 0A-1327-0100 (1)CIRCUIT, 0A-1327-0101 (2)CIRCUIT, 0A-1327-0104 (4)CIRCUIT, 0A-1327-0105 (6)CIRCUIT, 0A-1327-0109 (8)CIRCUIT

CONTROLLER 0A-1229-0013

MODULE 10.64" X 10.64", 8 PIXEL X 8 PIXEL, 34MM C-C / 1.33" C-C

DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE OR DOUBE UNIT OF POWER SUPPLIES.

PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT (QC) 0A-1327-1000

PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS (QC) 0A-1327-1010

MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS (QC) 0A-1327-1011

QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE (QC) 0A-1327-1003

LIGHT DETECTOR PRIMARY ONLY (LT) 0A-1327-3000 (8/16/24)HIGH, 0A-1327-3003 (32/40/48/56/64)HIGH

LIGHT DETECTOR BLANK MIRROR ONLY (LT) 0A-1213-4009

AREA POWERED BY Z1 (J41)
AREA POWERED BY Z2 (J42)
AREA POWERED BY Z3
AREA POWERED BY Z4
AREA POWERED BY Z5
AREA POWERED BY Z6
AREA POWERED BY Z7
AREA POWERED BY Z8

REV.	DATE	DESCRIPTION	BY	APPR.
03	19JAN05	ADDED POWER TERM PANEL AND POWER FILTER NUMBERS FOR 56 AND 64 HIGH. ADDED POWER FILTER AREA HATCHES FOR 56 AND 64 HIGH.	WRS	DJM
02	29DEC04	UPDATED FAN PART FOR 40-64 HIGH DISPLAYS	RTV	
01	15NOV04	UPDATED COMPONENT LAYOUTS PER THE NEW 4 LATCH MODULE STANDARDIZATION DONE UNDER P1329-03	WRT	

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY AF-3400 34MM FRONT VENTILATION

TITLE: LAYOUT, EE/ME, AF-3400-(8-64)X(48-144)-34-RGB

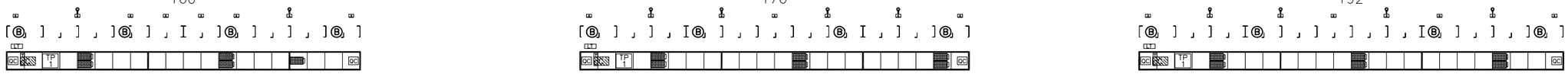
DES. BY: WTUCKER DRAWN BY: WTUCKER DATE: 11NOV04

REVISION 03 APPR. BY: SCALE: 1=70

1329-E10B-217338

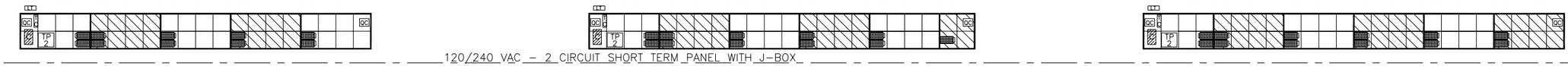
160 176 192

8



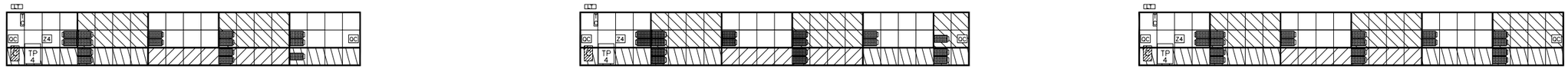
120 VAC – 1 CIRCUIT SHORT TERM PANEL WITH J–BOX

16



120/240 VAC – 2 CIRCUIT SHORT TERM PANEL WITH J–BOX

24



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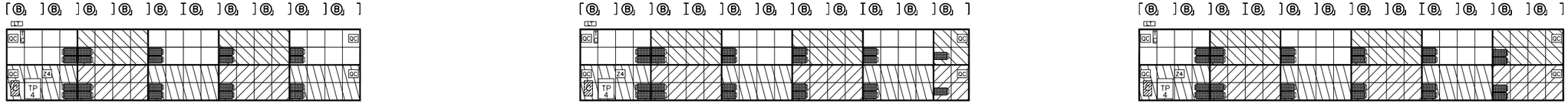
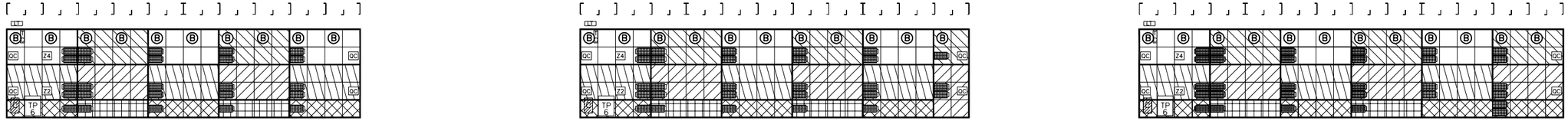
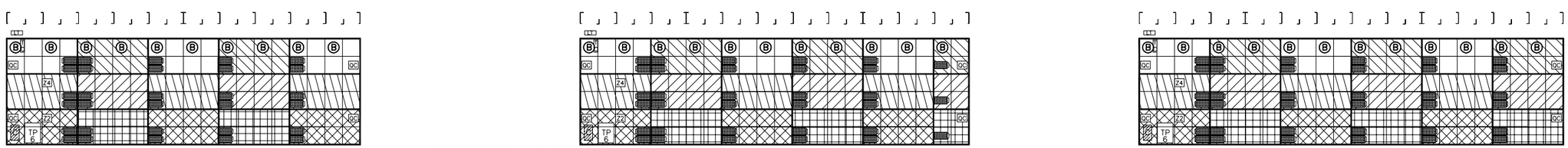


120/240 VAC – 4 CIRCUIT TALL TERM PANEL WITHOUT J–BOX – USE PLUG

40

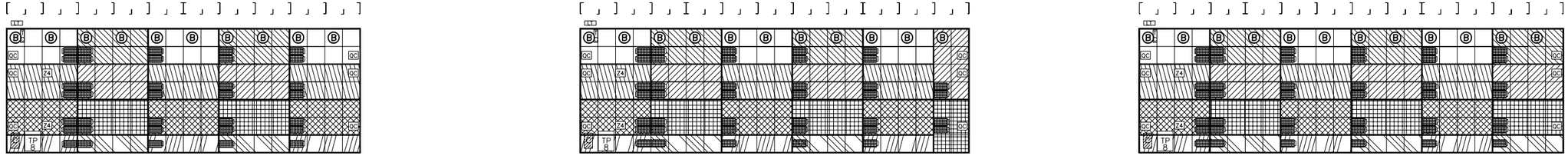


48



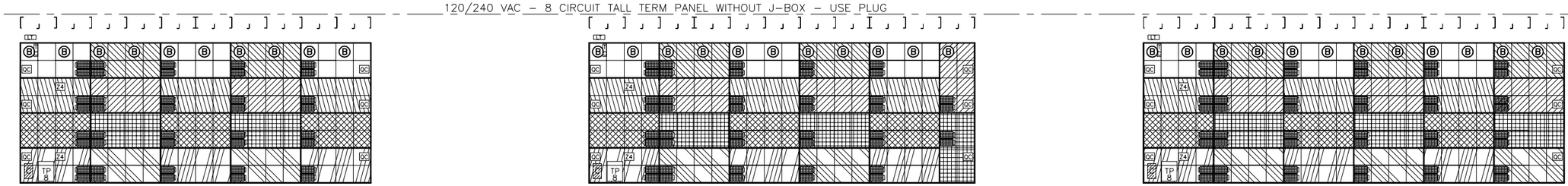
120/240 VAC – 6 CIRCUIT TALL TERM PANEL WITHOUT J–BOX – USE PLUG

56



120/240 VAC – 8 CIRCUIT TALL TERM PANEL WITHOUT J–BOX – USE PLUG

64



FAN B B–1053 (8/16/24/32)HIGH
0A–1327–3500 (40/48/56/64)HIGH

THERMOSTAT T C 0A–1327–3101

1 POWER SUPPLY 0A–1327–0009

2 POWER SUPPLIES 0A–1327–0010

POWER FILTER Z# 0A–1327–0202 (2)FILTERS
0A–1327–0203 (4)FILTERS

POWER TERM PANEL TP # 0A–1327–0100 (1)CIRCUIT
0A–1327–0101 (2)CIRCUIT
0A–1327–0104 (4)CIRCUIT
0A–1327–0105 (6)CIRCUIT
0A–1327–0109 (8)CIRCUIT

CONTROLLER 0A–1229–0013

MODULE 10.64" X 10.64"
8 PIXEL X 8 PIXEL
34MM C–C / 1.33" C–C

DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE OR DOUBE UNIT OF POWER SUPPLIES.

PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT QC 0A–1327–1000

PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS QC 0A–1327–1010

MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS QC 0A–1327–1011

QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE QC 0A–1327–1003

LIGHT DETECTOR PRIMARY ONLY LT 0A–1327–3000 (8/16/24)HIGH
0A–1327–3003 (32/40/48/56/64)HIGH

LIGHT DETECTOR BLANK MIRROR ONLY LT 0A–1213–4009

AREA POWERED BY Z1 (J41)
AREA POWERED BY Z2 (J42)
AREA POWERED BY Z3
AREA POWERED BY Z4
AREA POWERED BY Z5
AREA POWERED BY Z6
AREA POWERED BY Z7
AREA POWERED BY Z8

REV.	DATE	DESCRIPTION	BY	APPR.
02	19JAN05	ADDED POWER TERM PANEL AND POWER FILTER NUMBERS FOR 56 AND 64 HIGH. ADDED POWER FILTER AREA HATCHES FOR 56 AND 64 HIGH.	WRS	DJM
01	04JAN05	REUSED THIS DRAWING NUMBER FOR A NEW COMPONENT LAYOUT FORMAT AND MASTER DESIGN LAYOUT DRAWING.	WRT	

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY AF–3400 34MM FRONT VENTILATION

TITLE: LAYOUT, EE/ME, AF–3400–(8–64)X(160–192)–34–RGB

DES. BY: WTUCKER DRAWN BY: WTUCKER DATE: 11DEC04

REVISION 02 APPR. BY:

SCALE: 1=70

1329-E10B-217727

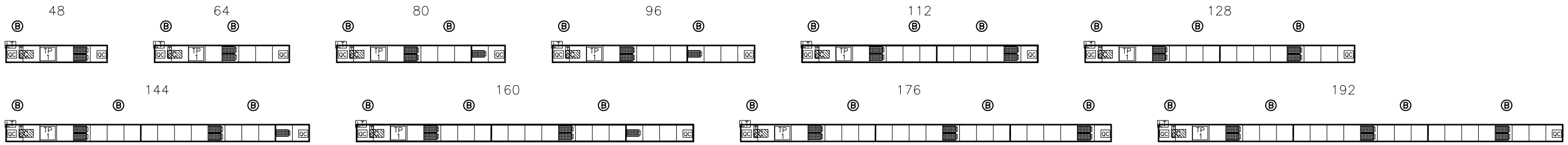


FIGURE 1: DEPICTS LARGEST 8 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

1 POWER SUPPLY(PS) ASSEMBLY

2 POWER SUPPLY(PS) ASSEMBLY

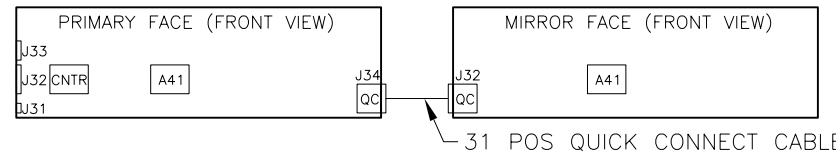
Ⓑ FAN

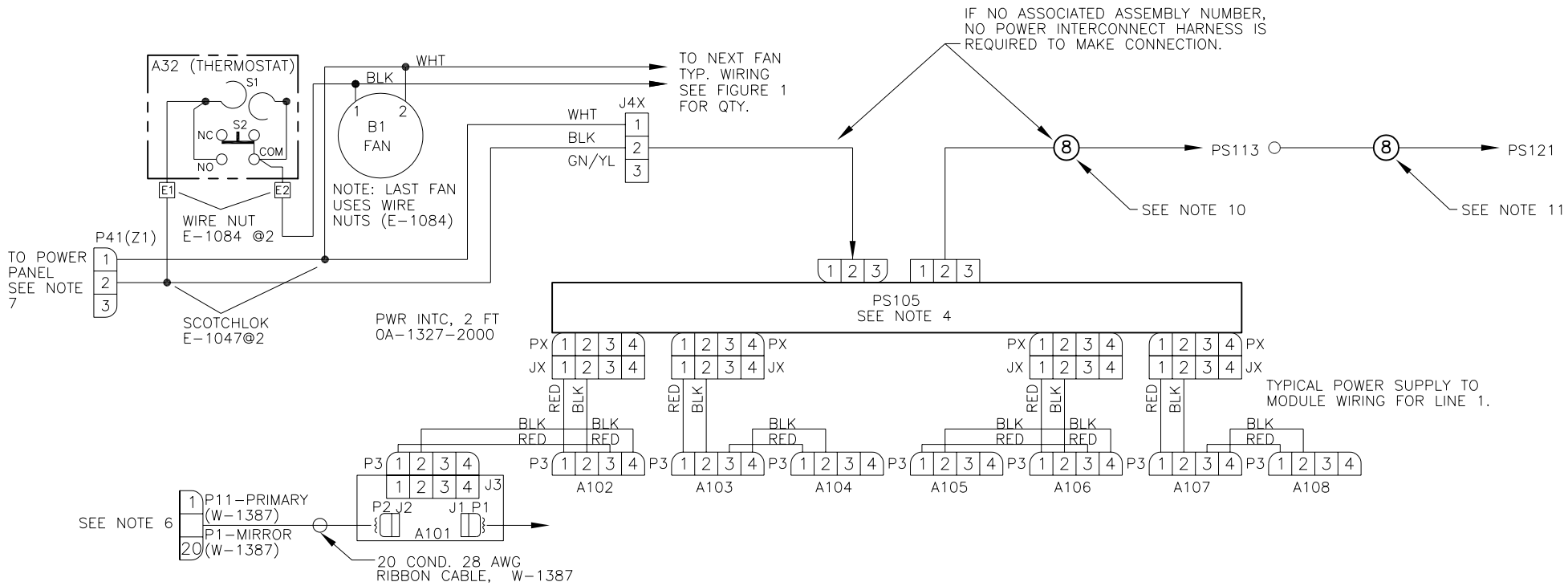
QC QUICK CONNECT PANEL

MODULE POWERED BY Z1 (J41)

POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA

FIGURE 2:





NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211950 FOR 120VAC. REFER TO DWG-220287 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 8 HIGH DISPLAY (8X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.
10) USE HARNESS LISTED, EXCEPT ON DISPLAY LENGTHS: 8X80 AND 96, USE 0A-1327-2001 (4 FT).
11) USE HARNESS LISTED, EXCEPT ON DISPLAY LENGTHS: 8X144 AND 160, USE 0A-1327-2001 (4 FT).

④ HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001

⑧ HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

REV.	DATE	DESCRIPTION	BY	APPR.
02	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-RGB SERIES (-03)

TITLE: SCHEMATIC, AF-3400-8X***-34-RGB, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 15 DEC 04

REVISION 02 APPR. BY:

SCALE: 1=1

1329-R03B-229690

FIGURE 1: DEPICTS LARGEST 16 ROW BY 96 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

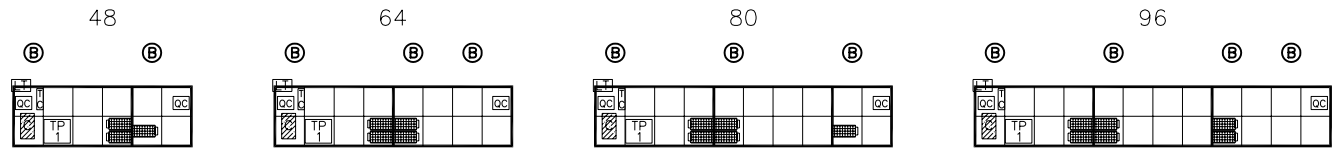
(NO SCALE)

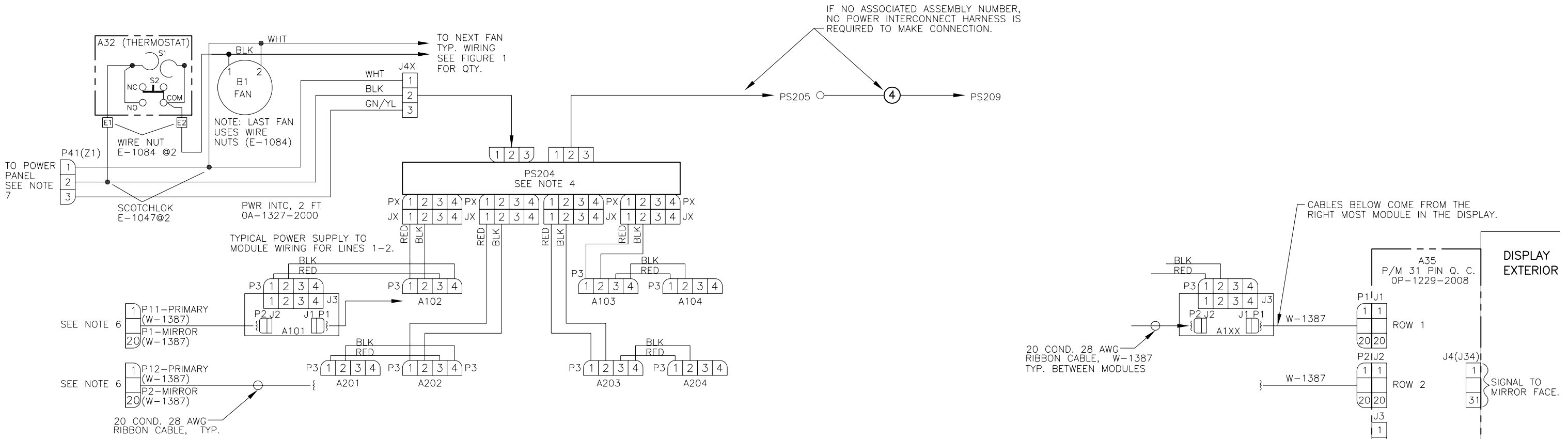
1 POWER SUPPLY(PS) ASSEMBLY Ⓑ FAN

2 POWER SUPPLY(PS) ASSEMBLY QC QUICK CONNECT PANEL

MODULE POWERED BY Z1 (J41)

POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA



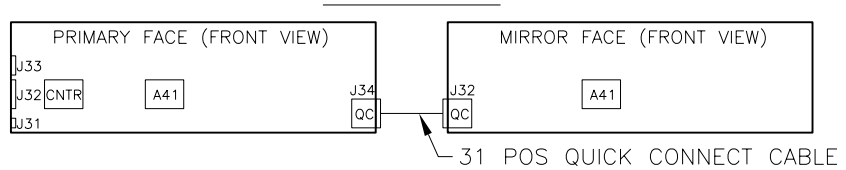


NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211950 FOR 120VAC. REFER TO DWG-220287 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 16 HIGH DISPLAY (16X96). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	22FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-RGB SERIES (-03)

TITLE: SCHEMATIC, AF-3400-16X(48-96)-34-RGB, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 15 DEC 04

REVISION 03 APPR. BY: SCALE: 1=1

1329-R03B-229711

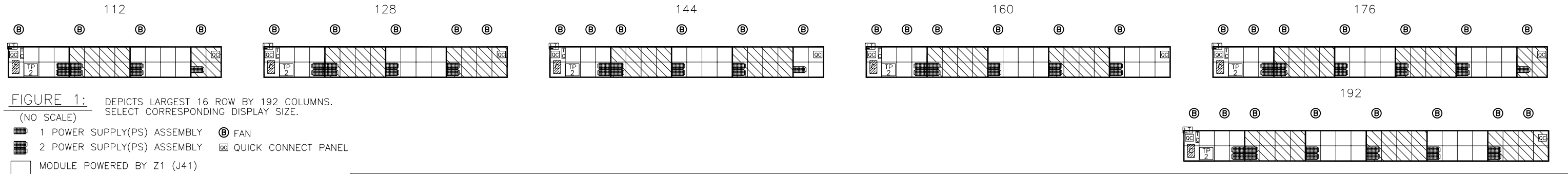
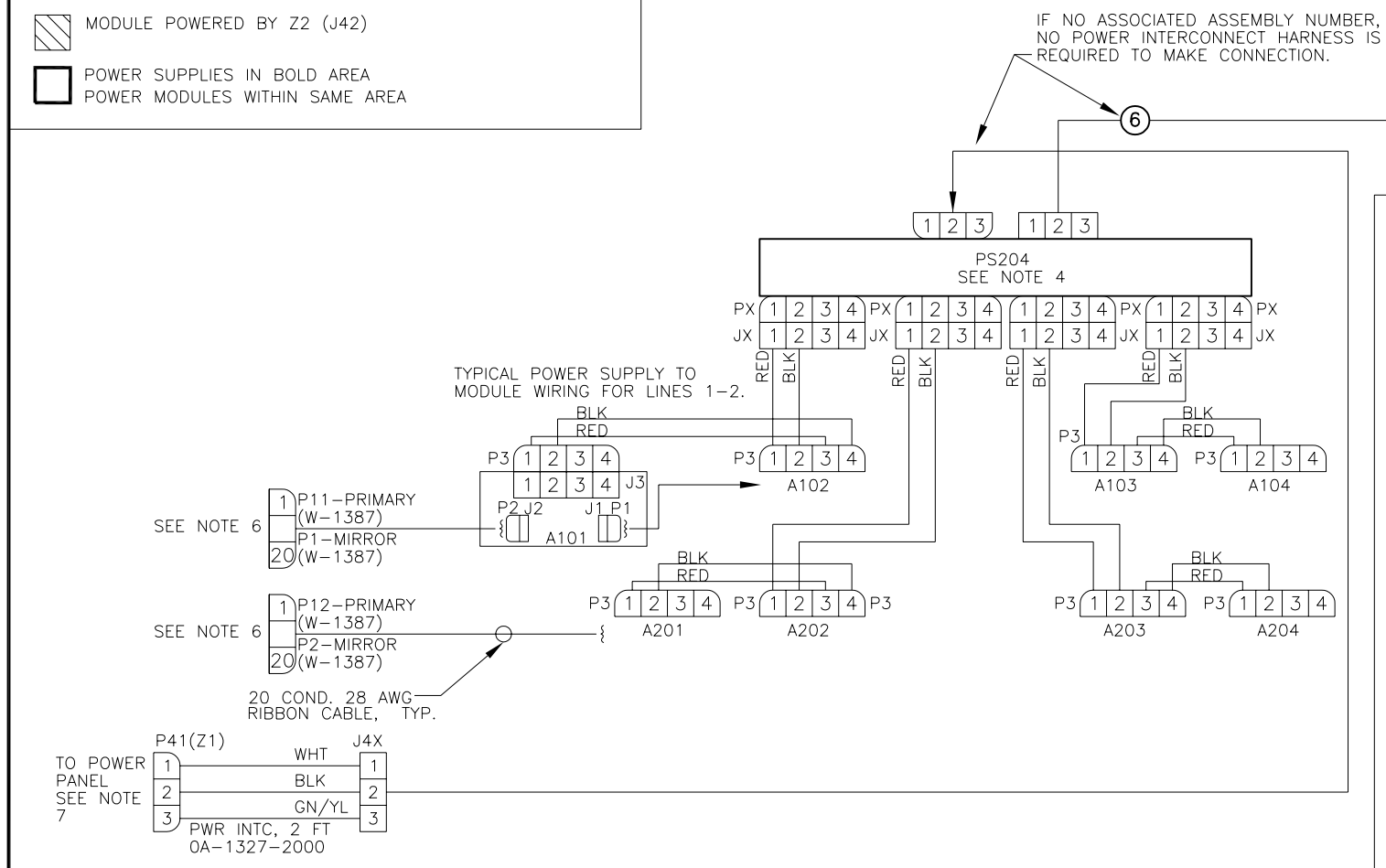
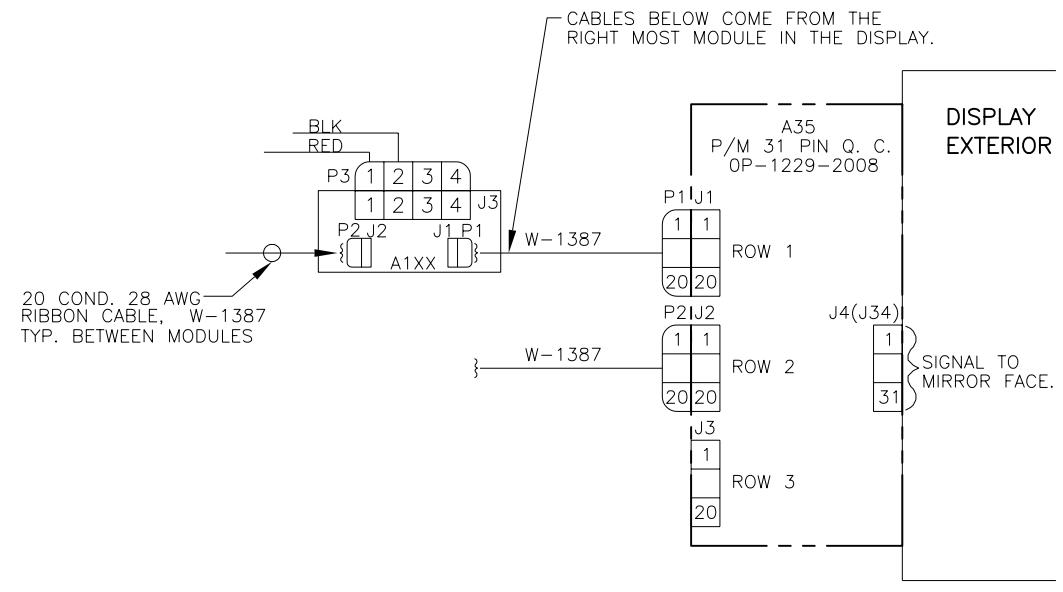


FIGURE 1: DEPICTS LARGEST 16 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

1 POWER SUPPLY(PS) ASSEMBLY
2 POWER SUPPLY(PS) ASSEMBLY
Ⓑ FAN
QC QUICK CONNECT PANEL
MODULE POWERED BY Z1 (J41)
MODULE POWERED BY Z2 (J42)
POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA



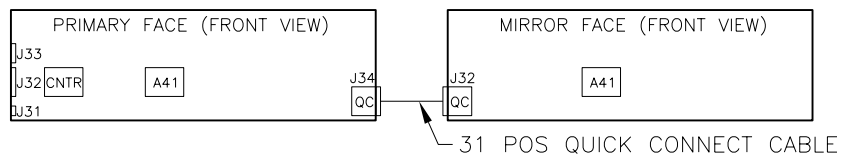


NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211947 FOR 120/240VAC. REFER TO DWG-218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 16 HIGH DISPLAY (16X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002
(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387	LLK	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-RGB SERIES (-03)
TITLE: SCHEMATIC, AF-3400-16X(112-192)-34-RGB, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 15 DEC 04
REVISION 03 APPR. BY: SCALE: 1=1
1329-R03B-229692

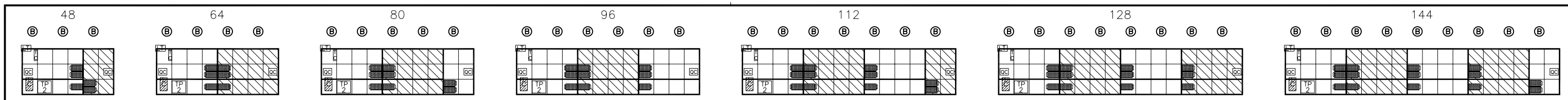


FIGURE 1: DEPICTS LARGEST 24 ROW BY 144 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.
(NO SCALE)

1 POWER SUPPLY(PS) ASSEMBLY
2 POWER SUPPLY(PS) ASSEMBLY
Ⓑ FAN
QC QUICK CONNECT PANEL
MODULE POWERED BY Z1 (J41)
MODULE POWERED BY Z2 (J42)
POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA

IF NO ASSOCIATED ASSEMBLY NUMBER, NO POWER INTERCONNECT HARNESS IS REQUIRED TO MAKE CONNECTION.

PS204 SEE NOTE 4
PS205
PS209
PS213
PS305
PS309
PS313
PS317
⑥
⑧

TYPICAL POWER SUPPLY TO MODULE WIRING FOR LINES 1–2.
TYPICAL POWER SUPPLY TO MODULE WIRING FOR LINE 3.

A101 A102 A103 A104
A201 A202 A203 A204
A301 A302 A303 A304

SEE NOTE 6: P11–PRIMARY (0A–1000–17) / P1–MIRROR (W–1387)
SEE NOTE 6: P12–PRIMARY (W–1387) / P2–MIRROR (W–1387)
SEE NOTE 6: P13–PRIMARY (W–1387) / P3–MIRROR (W–1387)
20 COND. 28 AWG RIBBON CABLE, TYP.

P41(Z1) TO POWER PANEL SEE NOTE 7 — WHT, BLK, GN/YL — PWR INTC, 2 FT 0A–1327–2000
P42(Z2) TO POWER PANEL SEE NOTE 7 — WHT, BLK, GN/YL — PWR INTC, 4 FT 0A–1327–2001

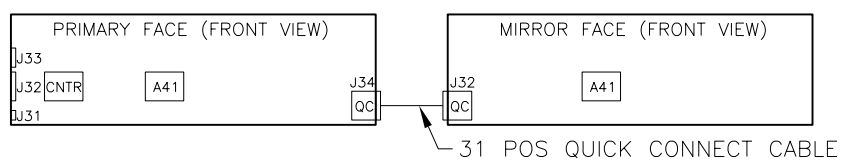
A32 (THERMOSTAT) S1 S2 NC COM NO E1 E2
B1 FAN
WIRE NUT E–1084 @2
NOTE: LAST FAN USES WIRE NUTS (E–1084)
TO NEXT FAN TYP. WIRING SEE FIGURE 1 FOR QTY.
SCOTCHLOK E–1047@2

CABLES BELOW COME FROM THE RIGHT MOST MODULE IN THE DISPLAY.
20 COND. 28 AWG RIBBON CABLE, W–1387 TYP. BETWEEN MODULES
A1XX
W–1387
A35 P/M 31 PIN Q. C. 0P–1229–2008
DISPLAY EXTERIOR
P1 J1 ROW 1
P2 J2 ROW 2
P3 J3 ROW 3
J4(J34) SIGNAL TO MIRROR FACE.

NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY. NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG–211947 FOR 120/240VAC. REFER TO DWG–218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 24 HIGH DISPLAY (24X144). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.
⑥ HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002
⑧ HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A–1327–2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A–1000–17 TO W–1387	LLK	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

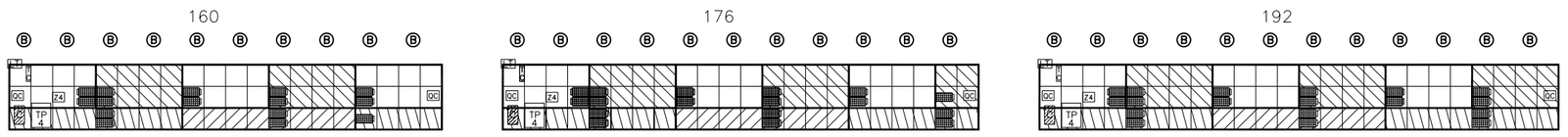
DAKTRONICS, INC. BROOKINGS, SD 57006

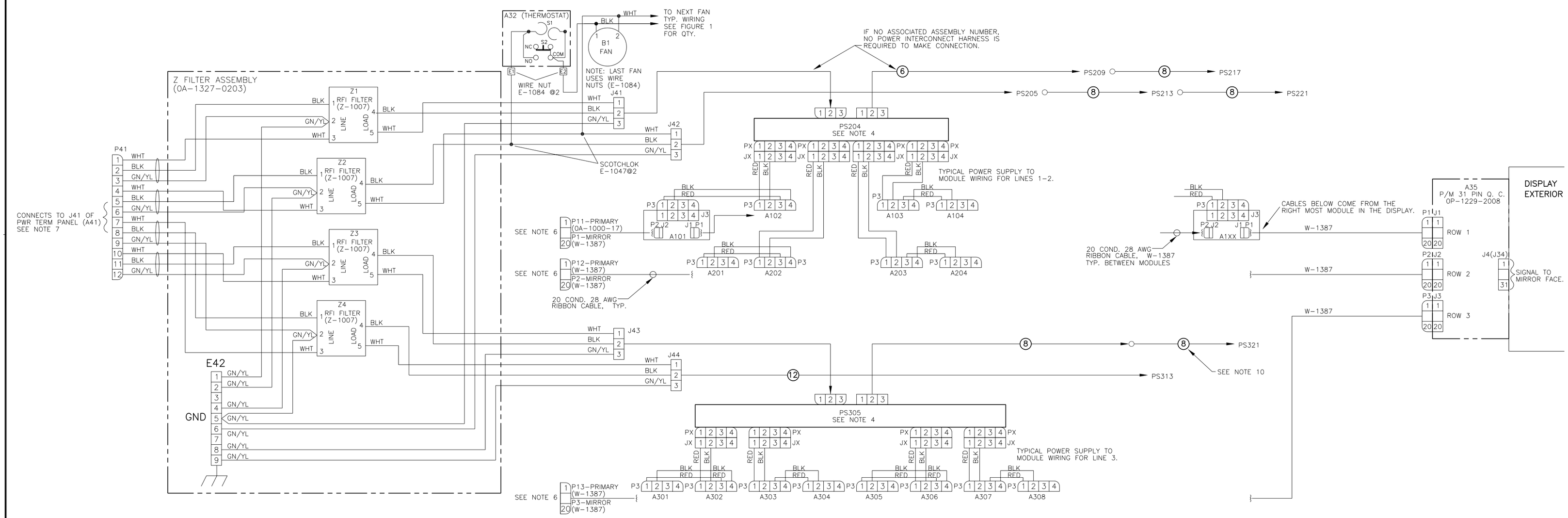
PROJ: GALAXY; AF–3400–34–RGB SERIES (–03)
TITLE: SCHEMATIC, AF–3400–24X(48–144)–34–RGB, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 15 DEC 04
REVISION 03 APPR. BY:
SCALE: 1=1

1329-R03B-229662

FIGURE 1: DEPICTS LARGEST 24 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.
(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA POWER MODULES WITHIN SAME AREA
- 4 FILTER ASSY
- (B) FAN
- QUICK CONNECT PANEL



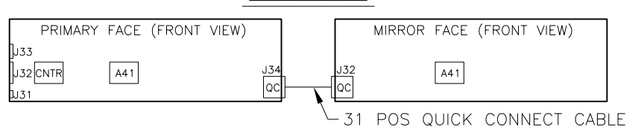


NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-223673 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 24 HIGH DISPLAY (24X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.
10) USE HARNESS LISTED, EXCEPT ON DISPLAY LENGTH: 24X160, USE 0A-1327-2001 (4 FT).

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001
(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002
(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003
(12) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 12 FT(14AWG) 0A-1327-2005

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-RGB SERIES (-03)
TITLE: SCHEMATIC, AF-3400-24X(160-192)-34-RGB, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 15 DEC 04
REVISION 03 APPR. BY:
SCALE: 1=1
1329-R03C-229617

FIGURE 1: DEPICTS LARGEST 32 ROW BY 80 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

1 POWER SUPPLY(PS) ASSEMBLY
2 POWER SUPPLY(PS) ASSEMBLY
Ⓑ FAN
QC QUICK CONNECT PANEL
MODULE POWERED BY Z1 (J41)
MODULE POWERED BY Z2 (J42)
POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA

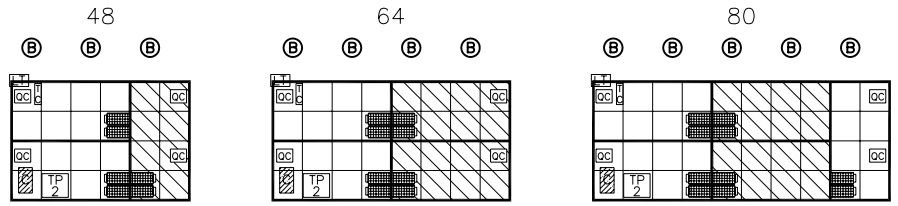
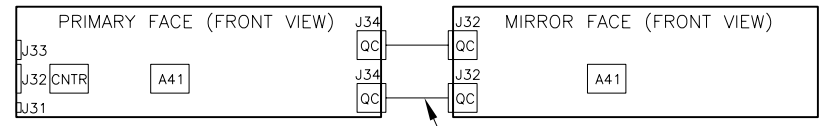
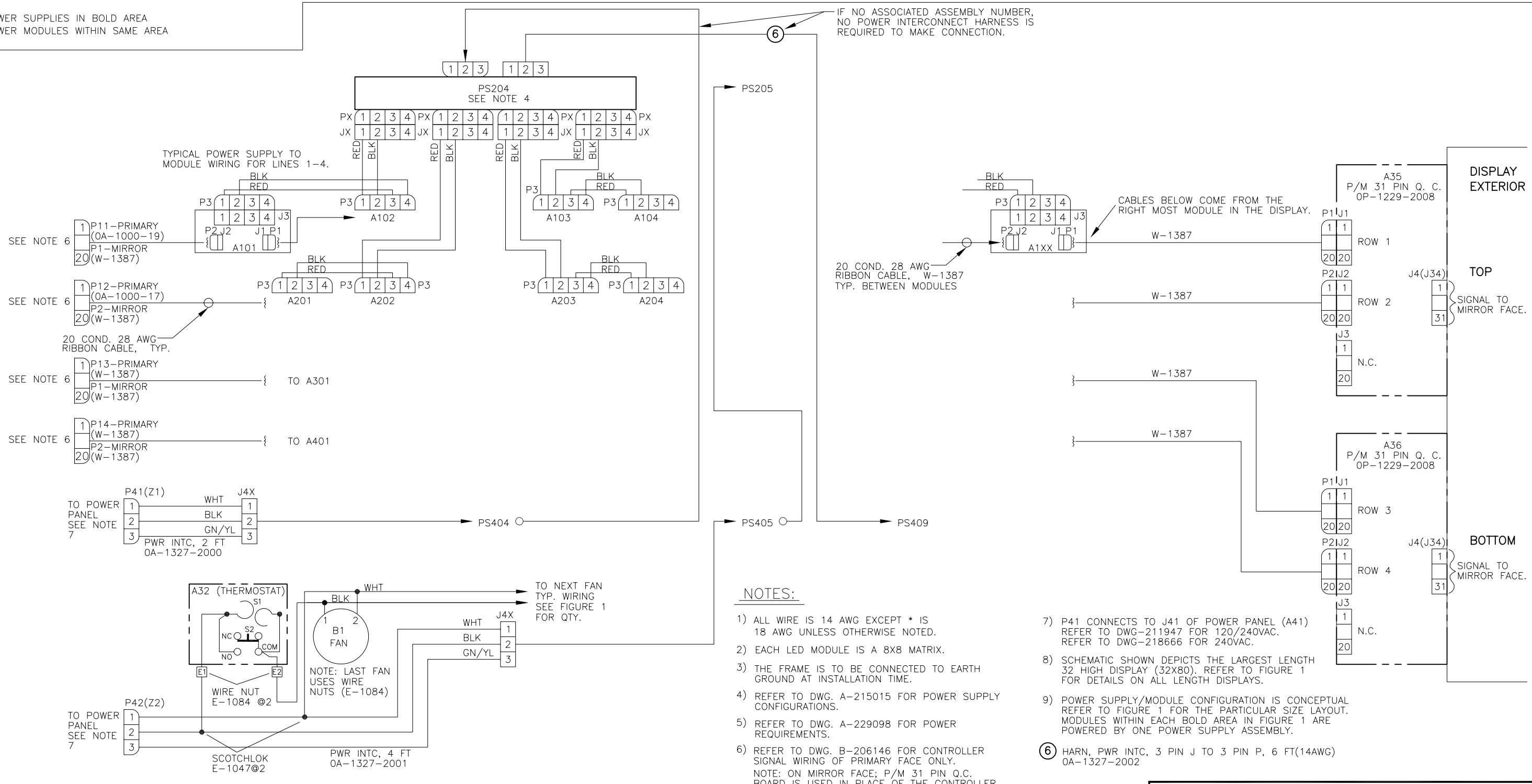


FIGURE 2:





NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG–211947 FOR 120/240VAC. REFER TO DWG–218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 32 HIGH DISPLAY (32X80). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002

REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A–1000–17 TO W–1387.	LLK	DJM
01	22FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

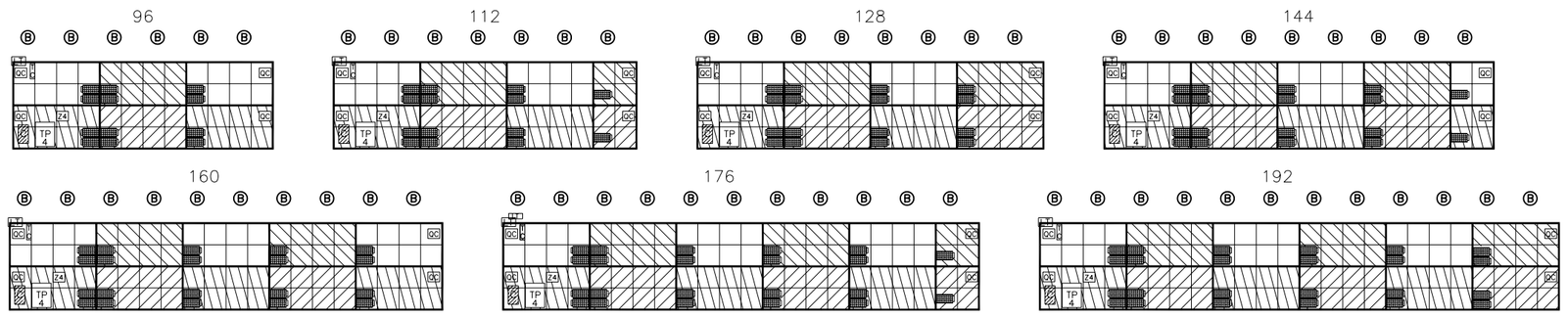
PROJ: GALAXY; AF–3400–34–RGB SERIES (–03)
TITLE: SCHEMATIC, AF–3400–32X(48–80)–34–RGB, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 14 DEC 04
REVISION 03 APPR. BY:
SCALE: 1=1

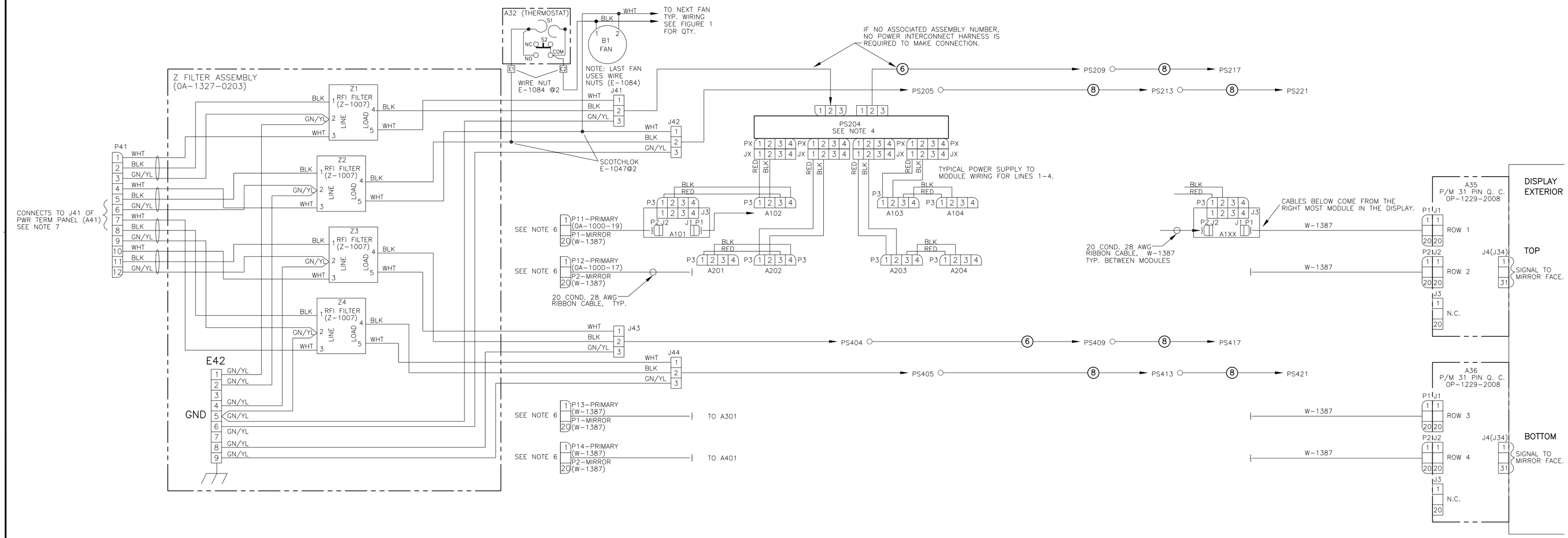
1329-R03B-229456

FIGURE 1: DEPICTS LARGEST 32 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 4 FILTER ASSY
- (B) FAN
- QUICK CONNECT PANEL





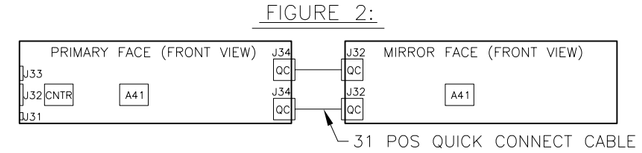
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-223673 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 32 HIGH DISPLAY (32X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	23FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-RGB SERIES (-03)

TITLE: SCHEM, AF-3400-32X(96-192)-34-RGB, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 14 DEC 04

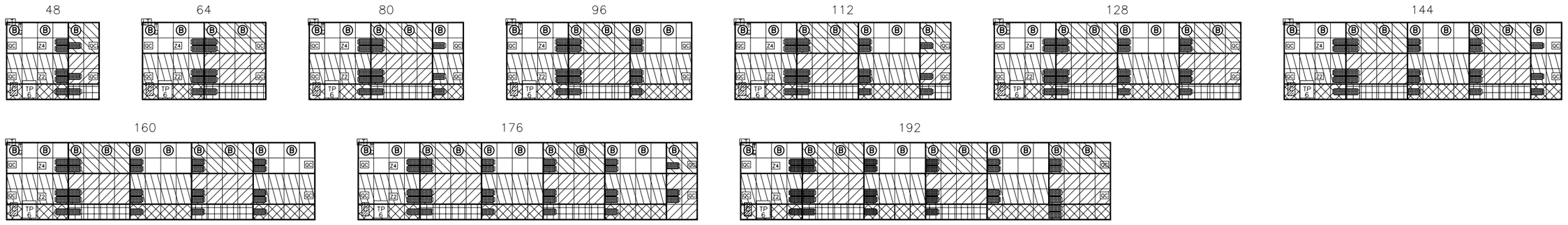
REVISION 03 APPR. BY: SCALE: 1=1

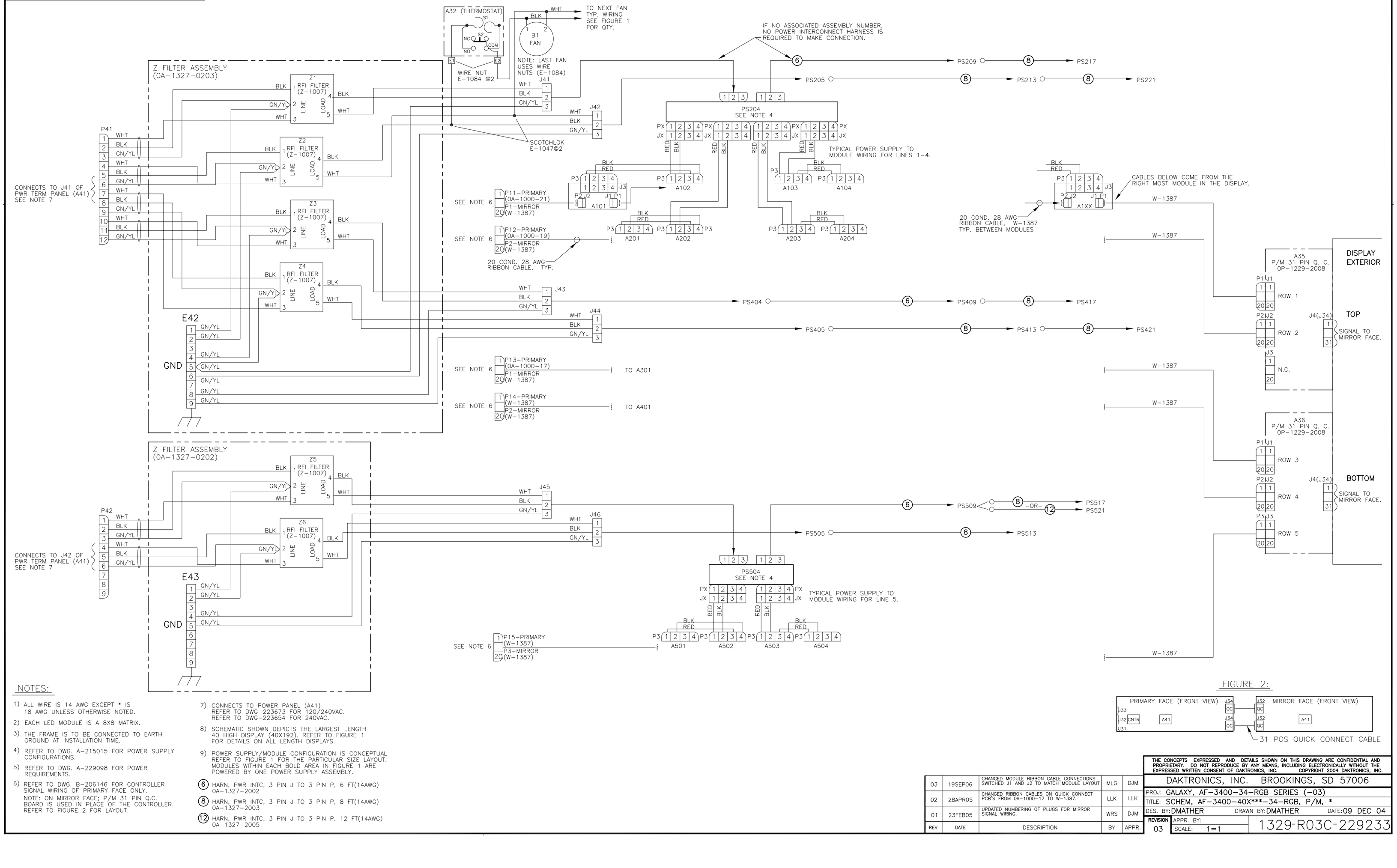
1329-R03C-229450

FIGURE 1: DEPICTS LARGEST 40 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- MODULE POWERED BY Z5 (J45)
- MODULE POWERED BY Z6 (J46)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 2 FILTER ASSY
- 4 FILTER ASSY
- (B) FAN





NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-223673 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 40 HIGH DISPLAY (40X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002
(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003
(12) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 12 FT(14AWG) 0A-1327-2005

FIGURE 2:

REV.	DATE	DESCRIPTION	BY	APPR.
03	19SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	LLK
01	23FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-RGB SERIES (-03)

TITLE: SCHEM, AF-3400-40X***-34-RGB, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 09 DEC 04

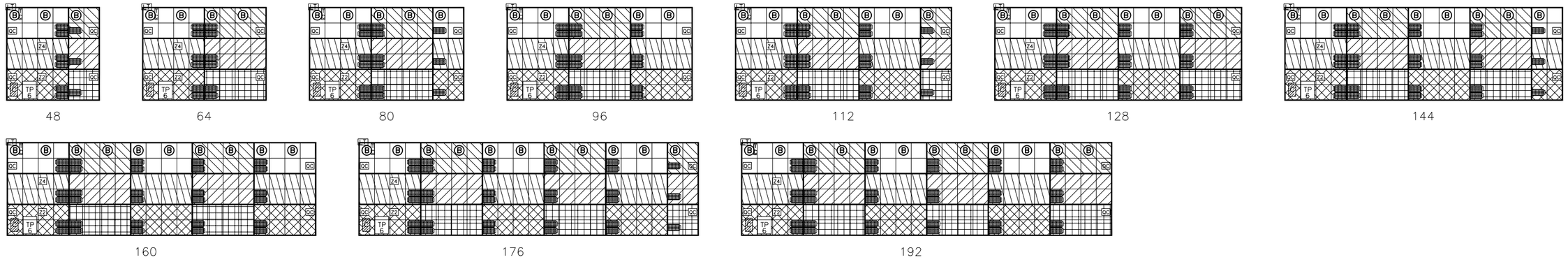
REVISION 03 APPR. BY: SCALE: 1=1

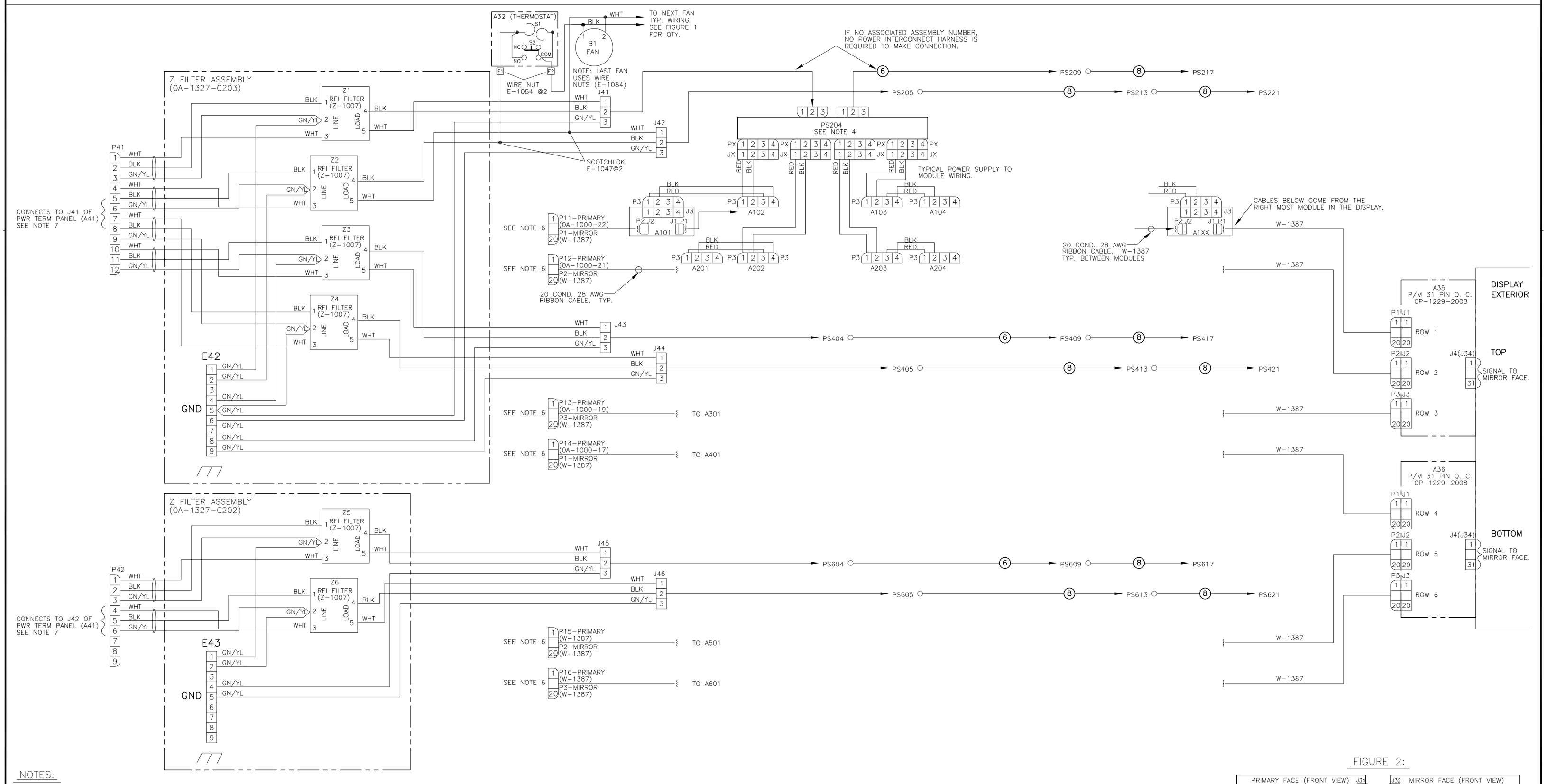
1329-R03C-229233

FIGURE 1: DEPICTS LARGEST 48 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- MODULE POWERED BY Z5 (J45)
- MODULE POWERED BY Z6 (J46)
- POWER SUPPLIES IN BOLD AREA POWER MODULES WITHIN SAME AREA
- 2 FILTER ASSY
- 4 FILTER ASSY
- (B) FAN
- QUICK CONNECT PANEL





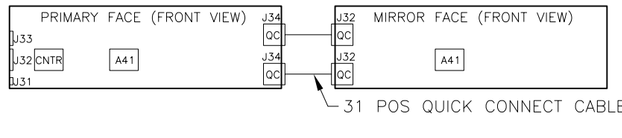
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY. NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-223673 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 48 HIGH DISPLAY (48X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	19SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	23FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-RGB SERIES (-03)

TITLE: SCHEM, AF-3400-48X***-34-RGB, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 06 DEC 04

REVISION 03 APPR. BY:

SCALE: 1=1

1329-R03C-229002

FIGURE 1: DEPICTS LARGEST 64 ROW BY 80 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 2 FILTER ASSY
- 4 FILTER ASSY
- (B) FAN

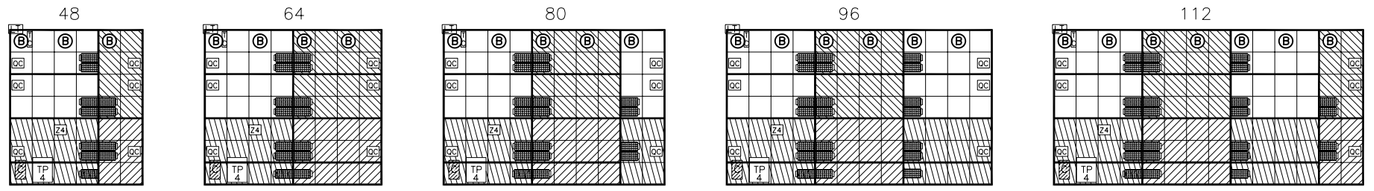
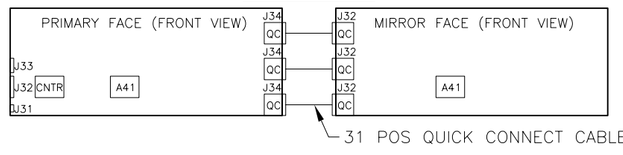
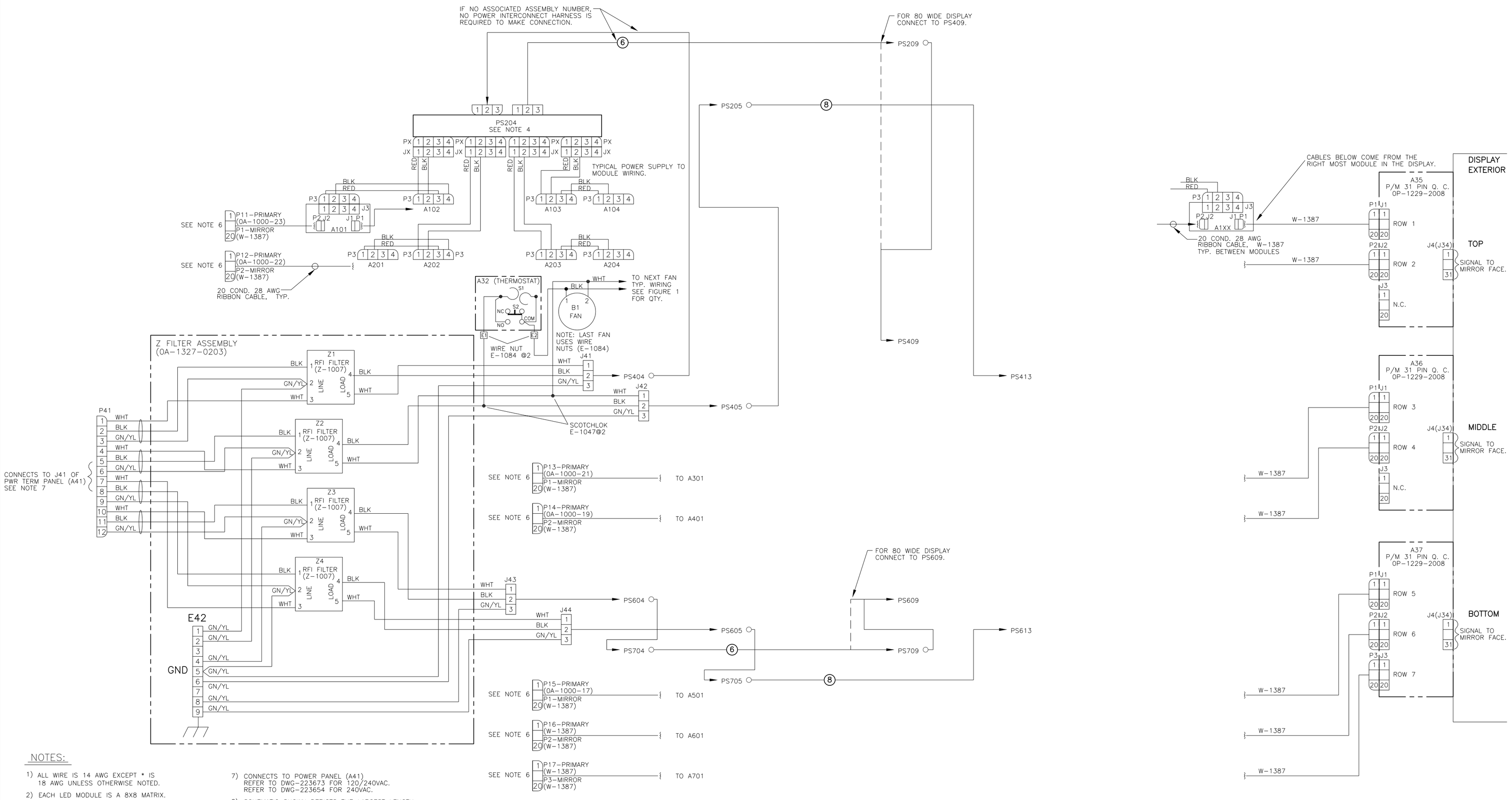


FIGURE 2:





NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG–223673 FOR 120/240VAC. REFER TO DWG–223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 56 HIGH DISPLAY (56X112). REFER TO FIGURE 1 FOR DETAILS ON OTHER LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A–1327–2003

REV.	DATE	DESCRIPTION	BY	APPR.
03	19SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A–1000–17 TO W–1387.	LLK	DJM
01	23FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF–3400–34–RGB SERIES (–03)

TITLE: SCHEM, AF–3400–56X(48–112)–34–RGB– P/M– *

DES. BY: DMATHER DRAWN BY: LKERR DATE: 31 JAN 05

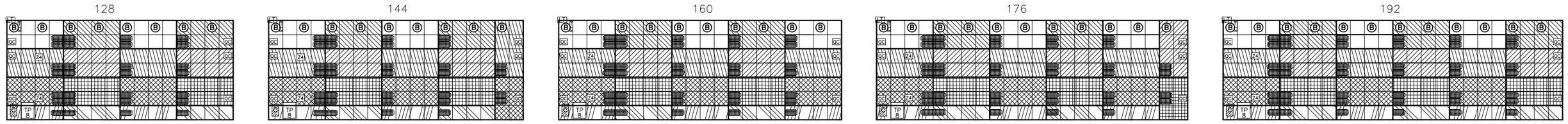
REVISION 03 APPR. BY:

SCALE: 1=1

1329-R03C-232922

FIGURE 1: DEPICTS LARGEST 56 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.
(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- 2 FILTER ASSY
- 4 FILTER ASSY
- MODULE POWERED BY Z1 (J41)
- FAN
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- MODULE POWERED BY Z5 (J45)
- MODULE POWERED BY Z6 (J46)
- MODULE POWERED BY Z7 (J47)
- MODULE POWERED BY Z8 (J48)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA



NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
   EACH LED MODULE IS A 8X8 MATRIX.
2) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
3) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
4) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
5) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
6) NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD(S) ARE USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-231469 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC. TWO 4 CIRCUIT POWER PANELS ARE REQUIRED FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 56 HIGH DISPLAY (56X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

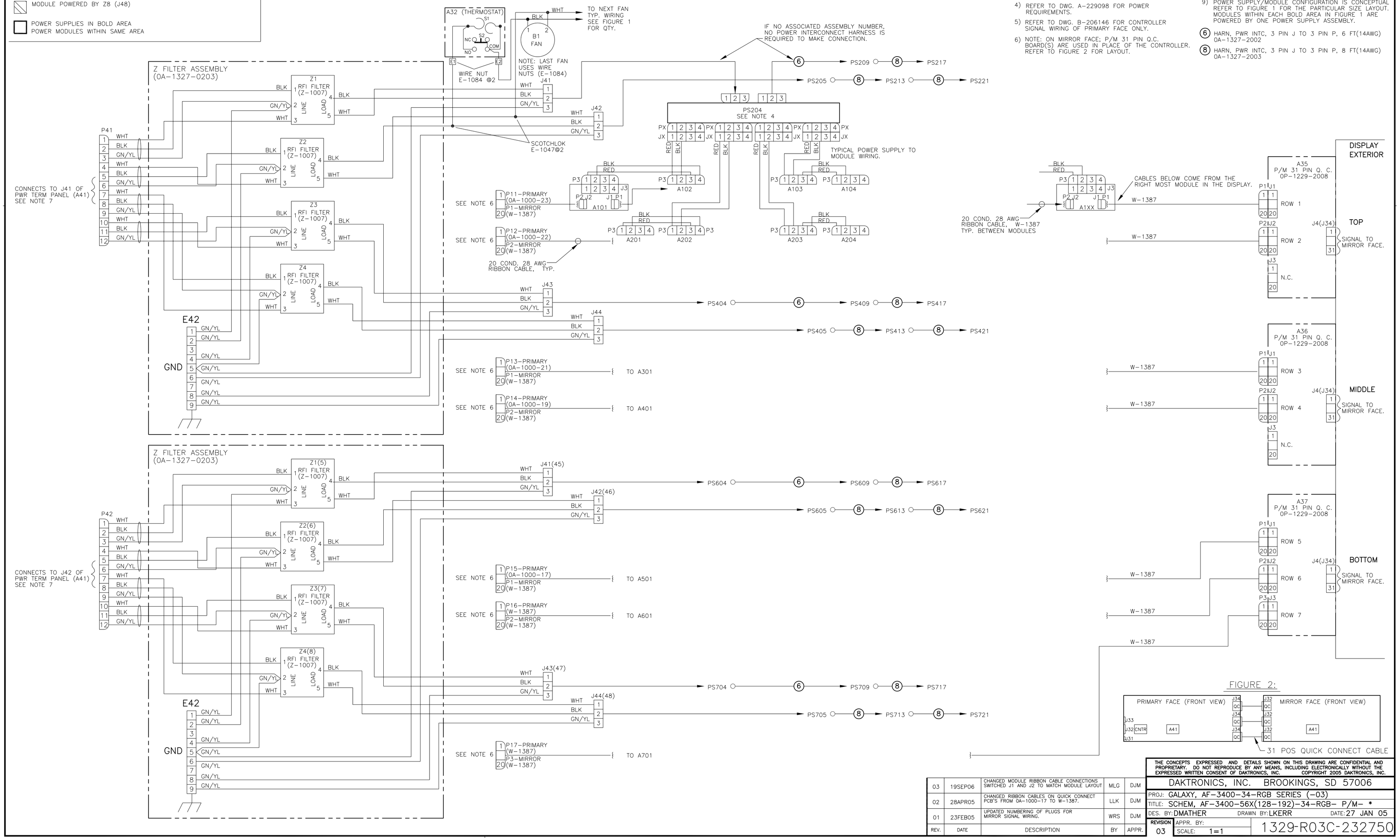


FIGURE 2:

REV.	DATE	DESCRIPTION	BY	APPR.
03	19SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	23FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-RGB SERIES (-03)

TITLE: SCHEM, AF-3400-56X(128-192)-34-RGB- P/M- *

DES. BY: DMATHER DRAWN BY: LKERR DATE: 27 JAN 05

REVISION 03 APPR. BY:

SCALE: 1=1

1329-R03C-232750

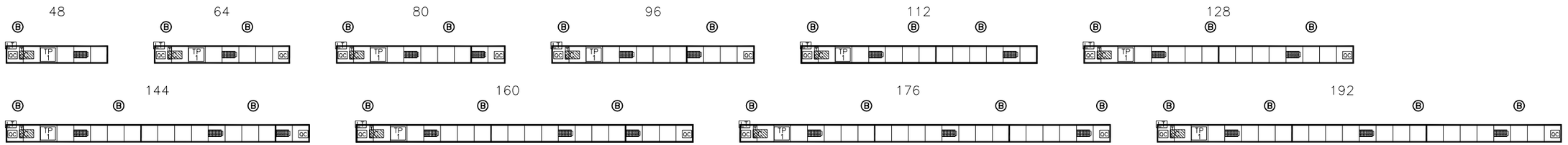
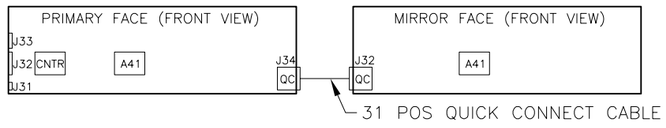


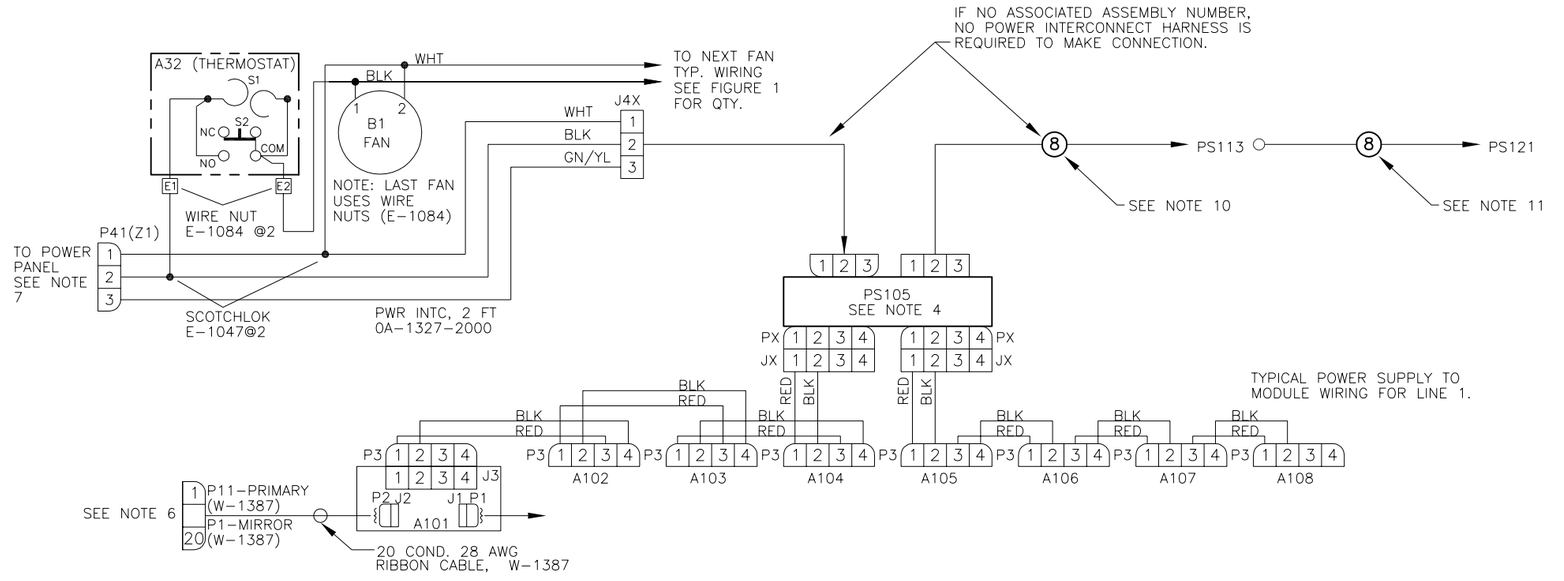
FIGURE 1: (NO SCALE)

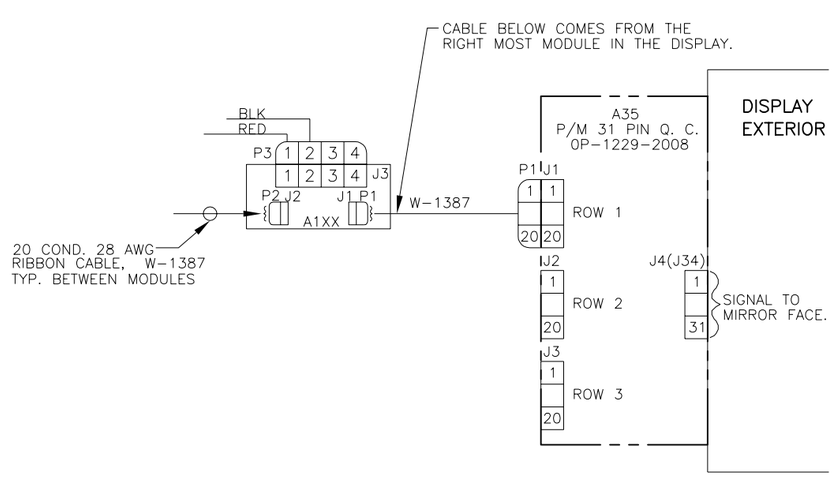
DEPICTS LARGEST 8 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- POWER SUPPLIES IN BOLD AREA
- POWER MODULES WITHIN SAME AREA
- (B) FAN
- QC QUICK CONNECT PANEL

FIGURE 2:







NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211950 FOR 120VAC. REFER TO DWG-220287 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 8 HIGH DISPLAY (8X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.
10) USE HARNESS LISTED, EXCEPT ON DISPLAY LENGTHS: 8X80 AND 96, USE 0A-1327-2001 (4 FT).
11) USE HARNESS LISTED, EXCEPT ON DISPLAY LENGTHS: 8X144 AND 160, USE 0A-1327-2001 (4 FT).

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

REV.	DATE	DESCRIPTION	BY	APPR.
03	01/JAN/08	MOVED FANS OVER TO THE RIGHT FROM UNDERNEATH POWER SUPPLY	TGA	DJM
02	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEMATIC, AF-3400-8X***-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 16 DEC 04

REVISION 03 APPR. BY: SCALE: 1=1

1329-R03B-229770

FIGURE 1: DEPICTS LARGEST 64 ROW BY 80 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 2 FILTER ASSY
- 4 FILTER ASSY
- (B) FAN

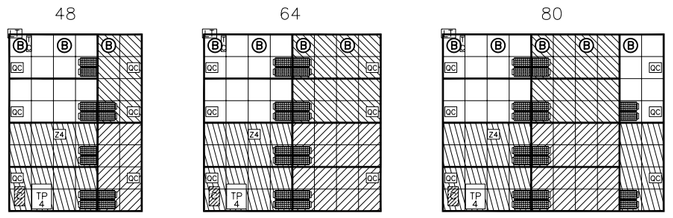
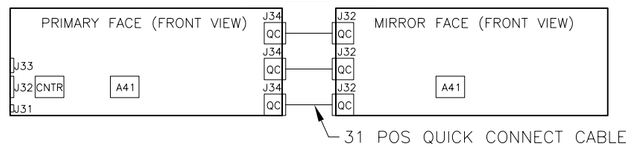
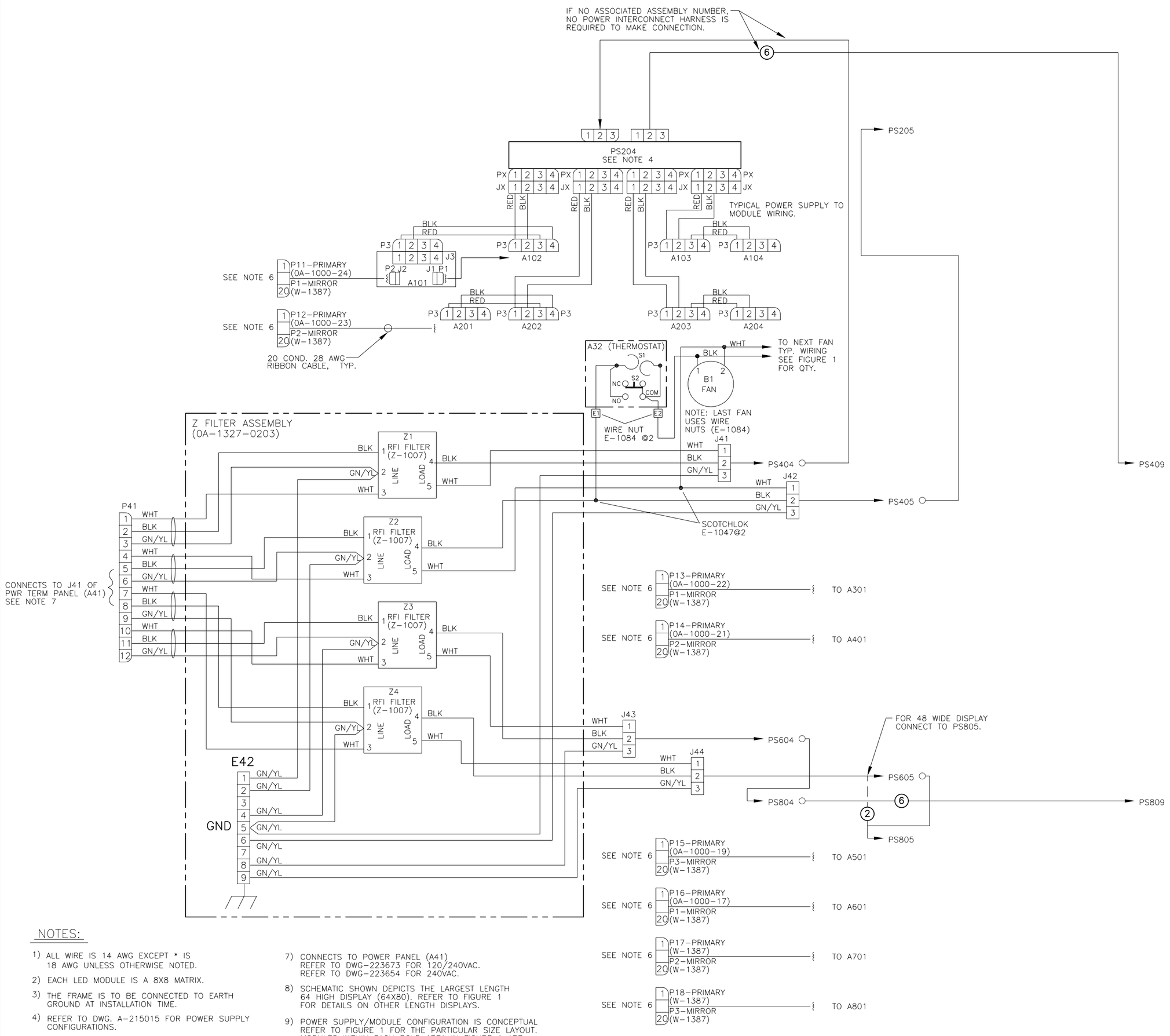
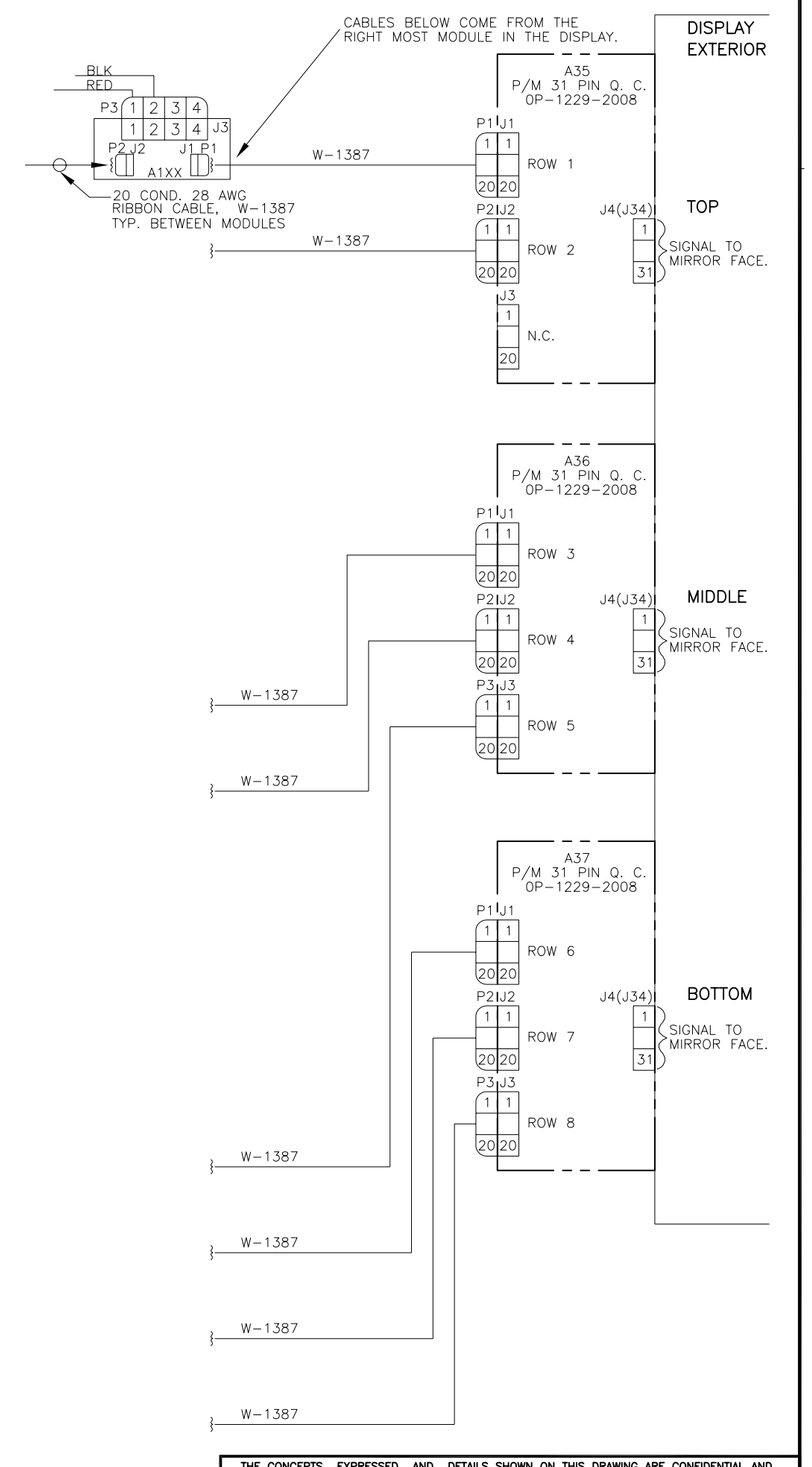


FIGURE 2:







NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215015 FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229098 FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG–223673 FOR 120/240VAC. REFER TO DWG–223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 64 HIGH DISPLAY (64X80). REFER TO FIGURE 1 FOR DETAILS ON OTHER LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(2) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 2 FT(14AWG) 0A–1327–2000

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002

REV.	DATE	DESCRIPTION	BY	APPR.
03	19SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A–1000–17 TO W–1387.	LLK	DJM
01	23FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF–3400–34–RGB SERIES (–03)

TITLE: SCHEM, AF–3400–64X(48–80)–34–RGB– P/M– *

DES. BY: DMATHER DRAWN BY: LKERR DATE: 28 JAN 05

REVISION 03 APPR. BY:

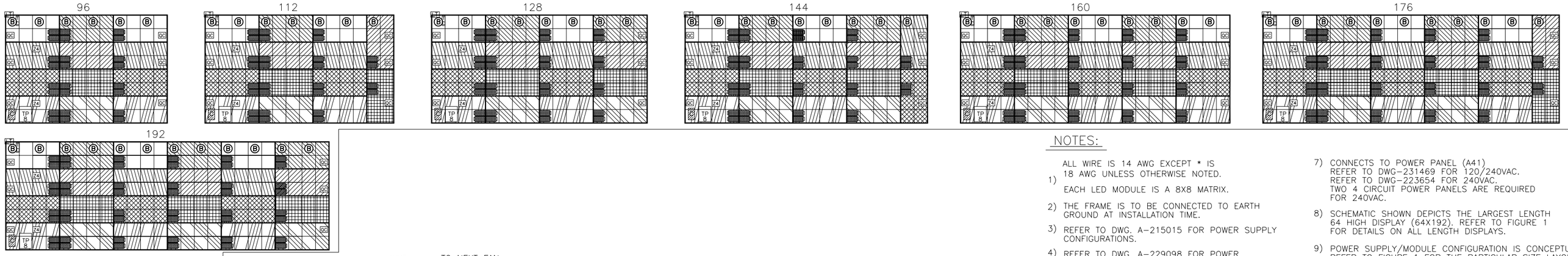
SCALE: 1=1

1329-R03C-232812

FIGURE 1: DEPICTS LARGEST 64 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- 2 FILTER ASSY
- 4 FILTER ASSY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- MODULE POWERED BY Z5 (J45)
- MODULE POWERED BY Z6 (J46)
- MODULE POWERED BY Z7 (J47)
- MODULE POWERED BY Z8 (J48)
- POWER SUPPLIES IN BOLD AREA POWER MODULES WITHIN SAME AREA
- (B) FAN



NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
   EACH LED MODULE IS A 8X8 MATRIX.
2) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
3) REFER TO DWG. A-215015 FOR POWER SUPPLY CONFIGURATIONS.
4) REFER TO DWG. A-229098 FOR POWER REQUIREMENTS.
5) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
6) NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD(S) ARE USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-231469 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC. TWO 4 CIRCUIT POWER PANELS ARE REQUIRED FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 64 HIGH DISPLAY (64X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

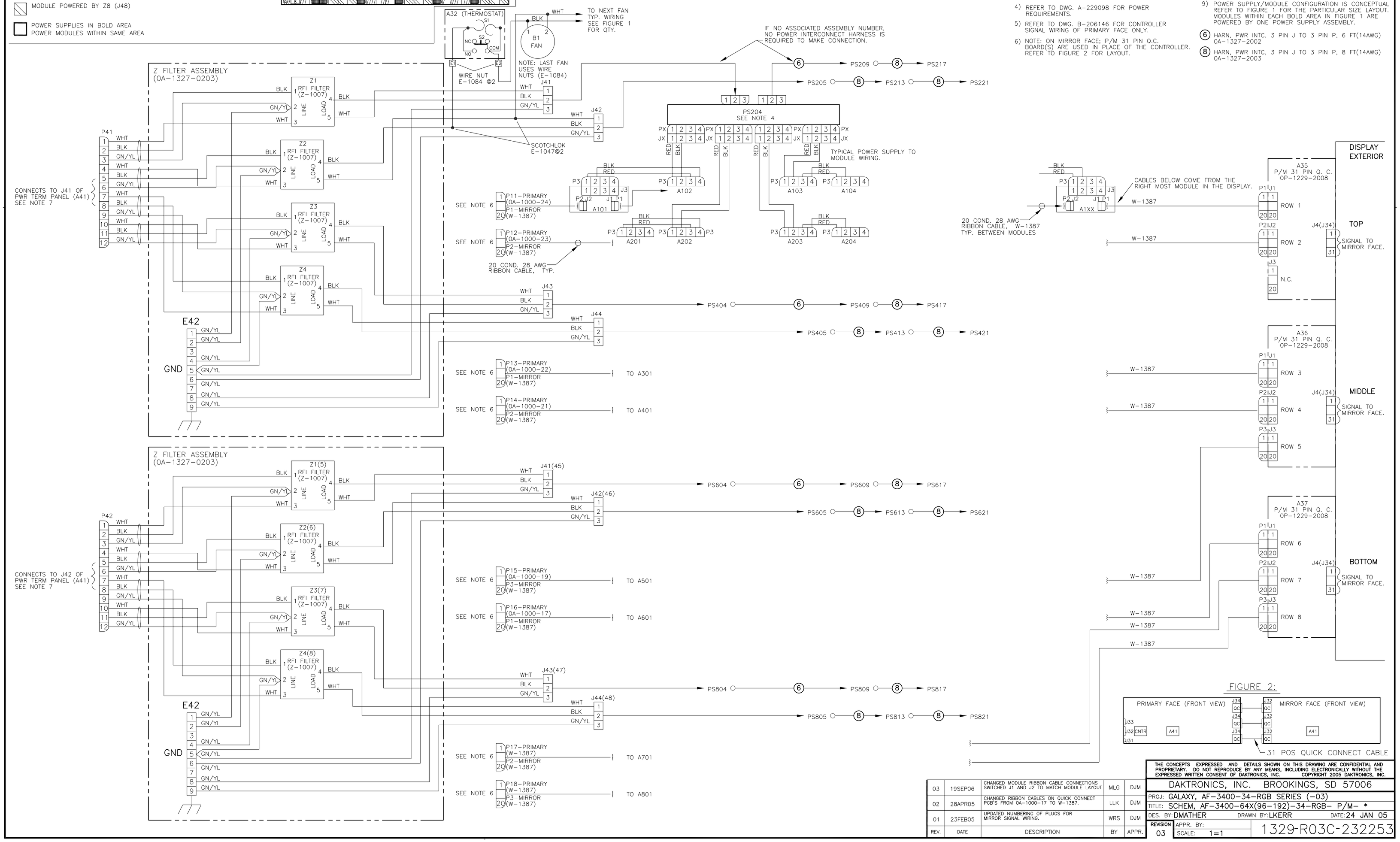


FIGURE 2:

REV.	DATE	DESCRIPTION	BY	APPR.
03	19SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	23FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-RGB SERIES (-03)

TITLE: SCHEM, AF-3400-64X(96-192)-34-RGB- P/M- *

DES. BY: DMATHER DRAWN BY: LKERR DATE: 24 JAN 05

REVISION 03 APPR. BY: SCALE: 1=1

1329-R03C-232253

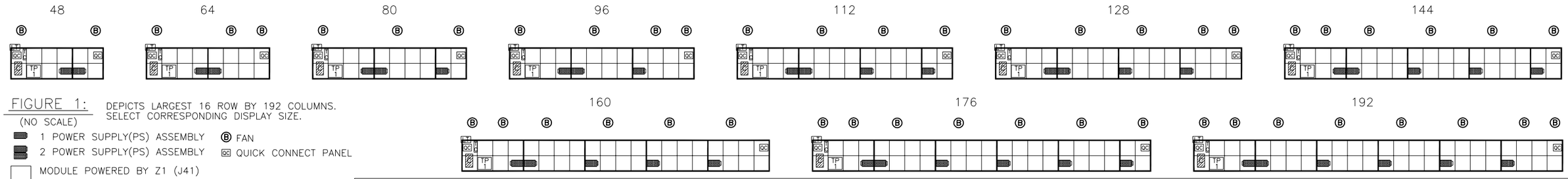
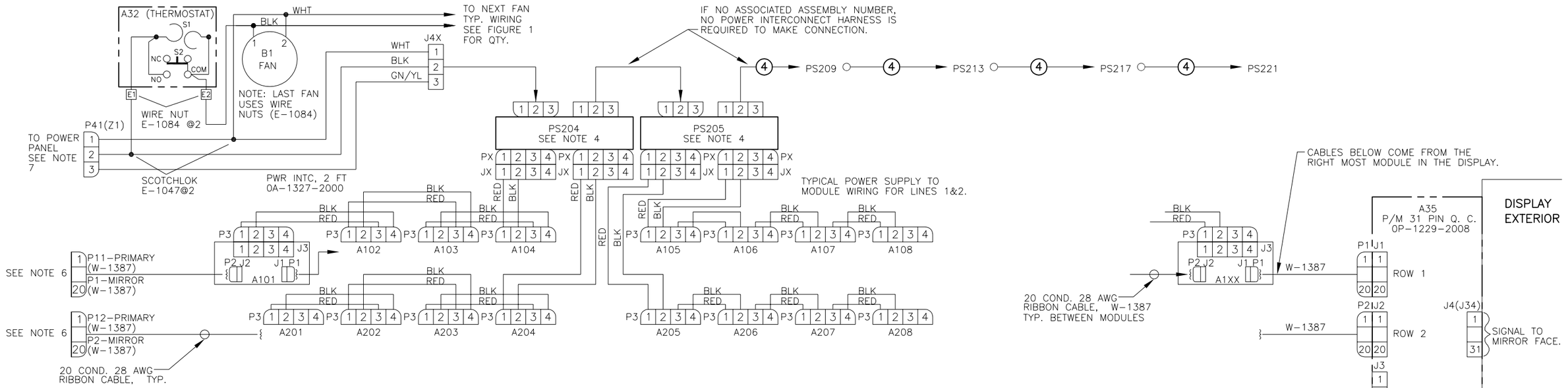


FIGURE 1: (NO SCALE)

DEPICTS LARGEST 16 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- Ⓑ FAN
- QC QUICK CONNECT PANEL

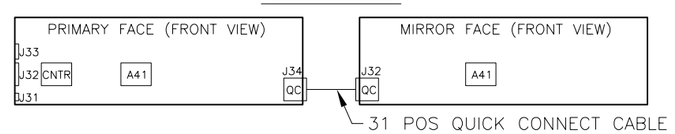


NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211950 FOR 120VAC. REFER TO DWG-220287 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 16 HIGH DISPLAY (16X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
04	07JAN08	MOVED FANS OVER TO THE RIGHT FROM UNDERNEATH POWER SUPLPY	TGA	DJM
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	27APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEMATIC, AF-3400-16X***-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 16 DEC 04

REVISION 04 APPR. BY: SCALE: 1=1

1329-R03B-229775

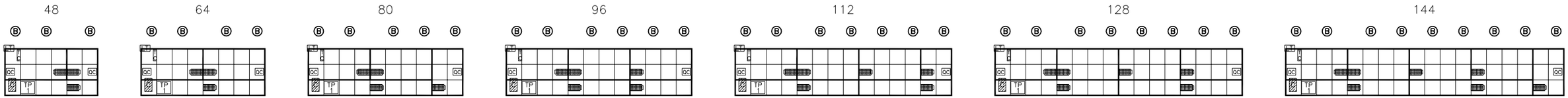
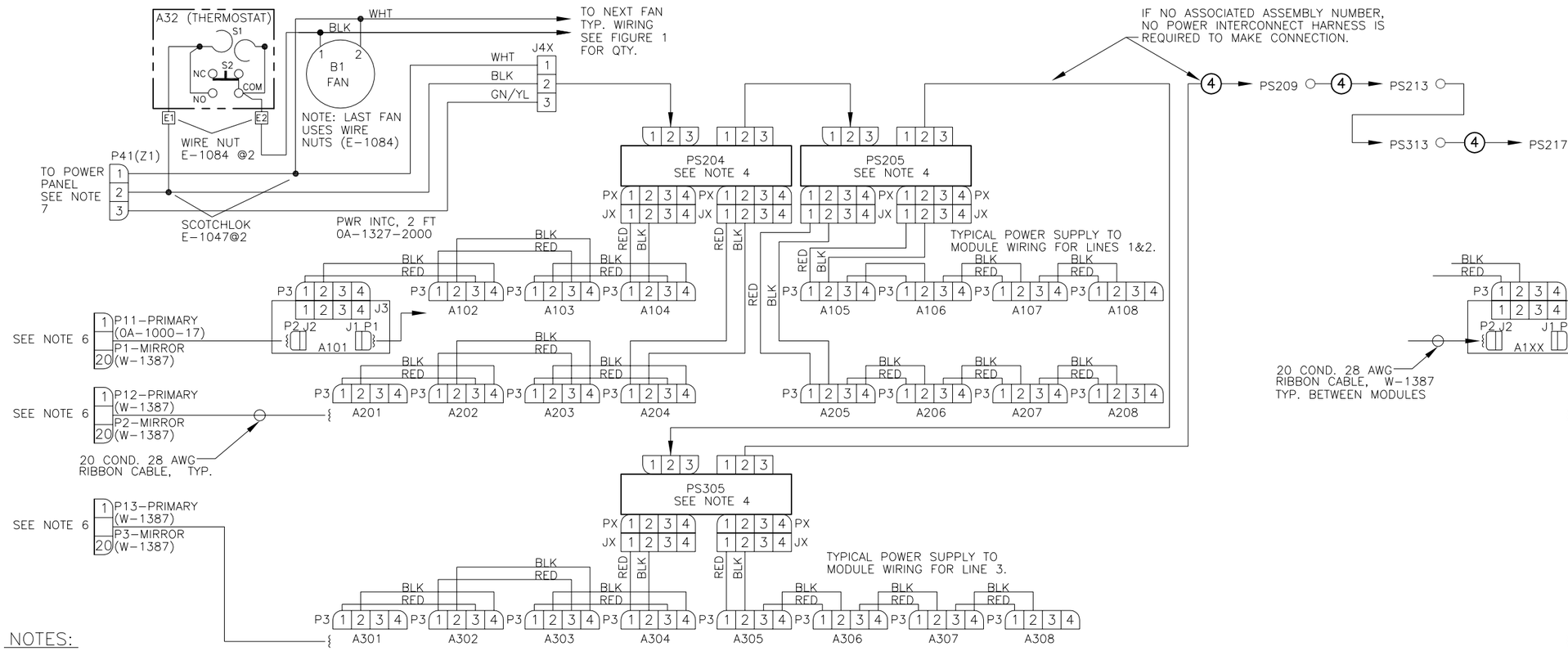


FIGURE 1: (NO SCALE)

DEPICTS LARGEST 24 ROW BY 144 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- Ⓑ FAN
- QC QUICK CONNECT PANEL
- MODULE POWERED BY Z1 (J41)
- POWER SUPPLIES IN BOLD AREA
- POWER MODULES WITHIN SAME AREA

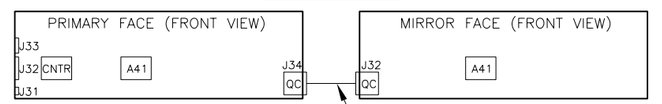


NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211950 FOR 120VAC. REFER TO DWG-220287 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 24 HIGH DISPLAY (24X144). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
04	07JAN08	MOVED FANS OVER TO THE RIGHT FROM UNDERNEATH POWER SUPPLY	TGA	DJM
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	27APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEMATIC, AF-3400-24X(48-144)-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 16 DEC 04

REVISION 04 APPR. BY:

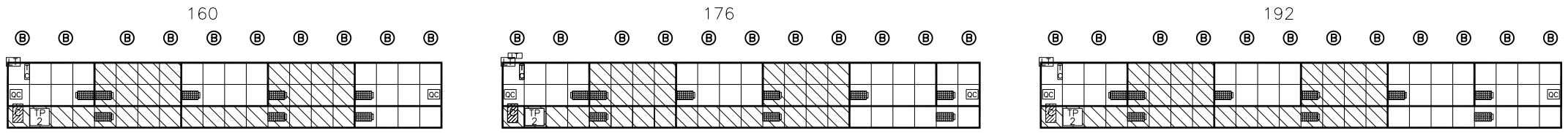
SCALE: 1=1

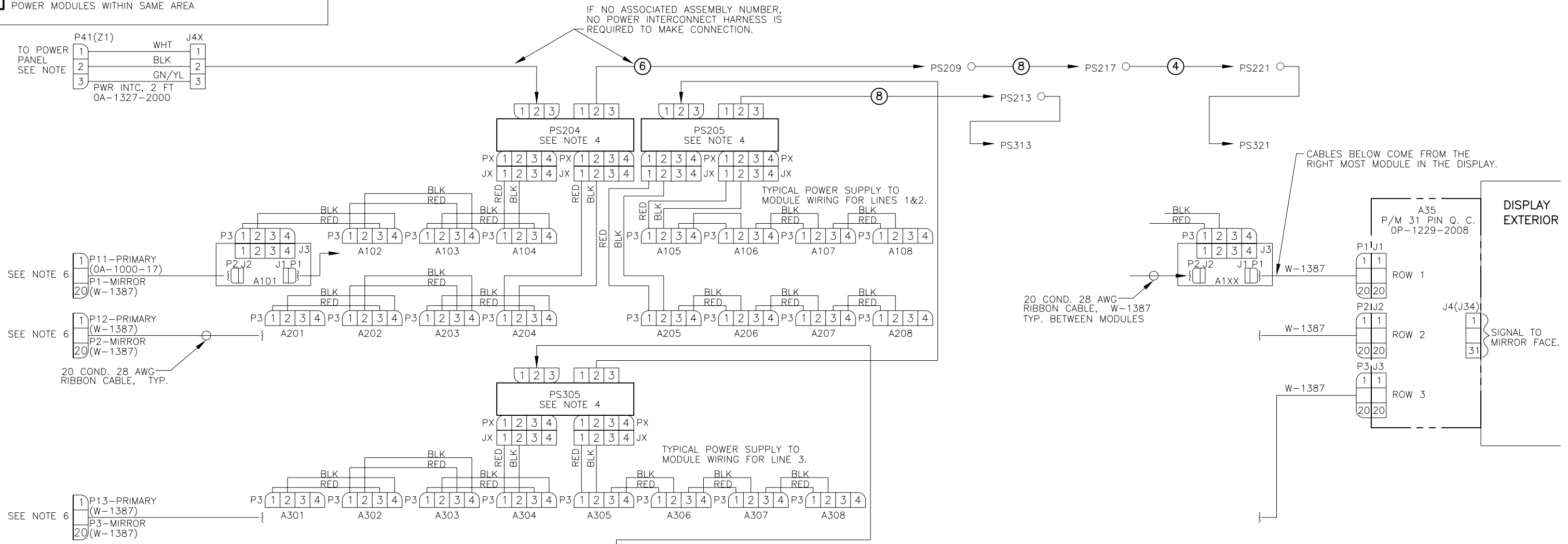
1329-R03B-229787

FIGURE 1: DEPICTS LARGEST 24 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

1 POWER SUPPLY(PS) ASSEMBLY
2 POWER SUPPLY(PS) ASSEMBLY
Ⓑ FAN
QUICK CONNECT PANEL
MODULE POWERED BY Z1 (J41)
MODULE POWERED BY Z2 (J42)
POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA



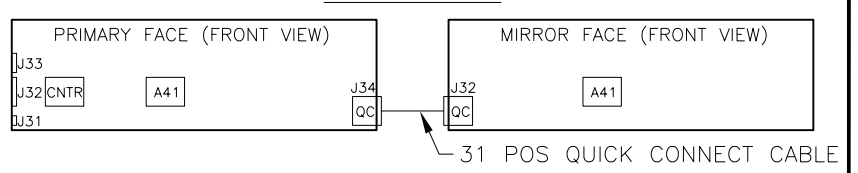


NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY. NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211947 FOR 120/240VAC. REFER TO DWG-218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 24 HIGH DISPLAY (24X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001
(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002
(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
04	07JAN08	MOVED FANS OVER TO THE RIGHT FROM UNDERNEATH POWER SUPPLY	TGA	DJM
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	27APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	24FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

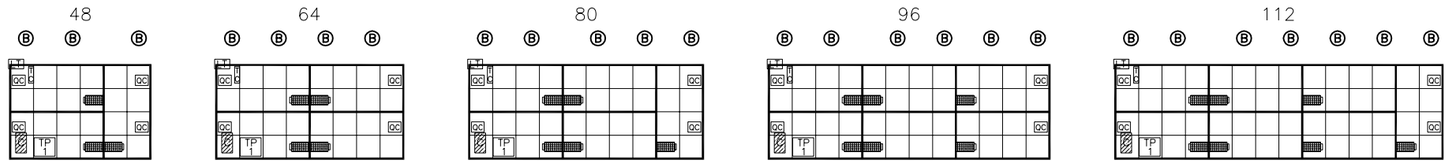
PROJ: GALAXY; AF-3400-34-MONO SERIES (-03)
TITLE: SCHEMATIC, AF-3400-24X(160-192)-34-MONO, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 16 DEC 04
REVISION 03 APPR. BY: SCALE: 1=1

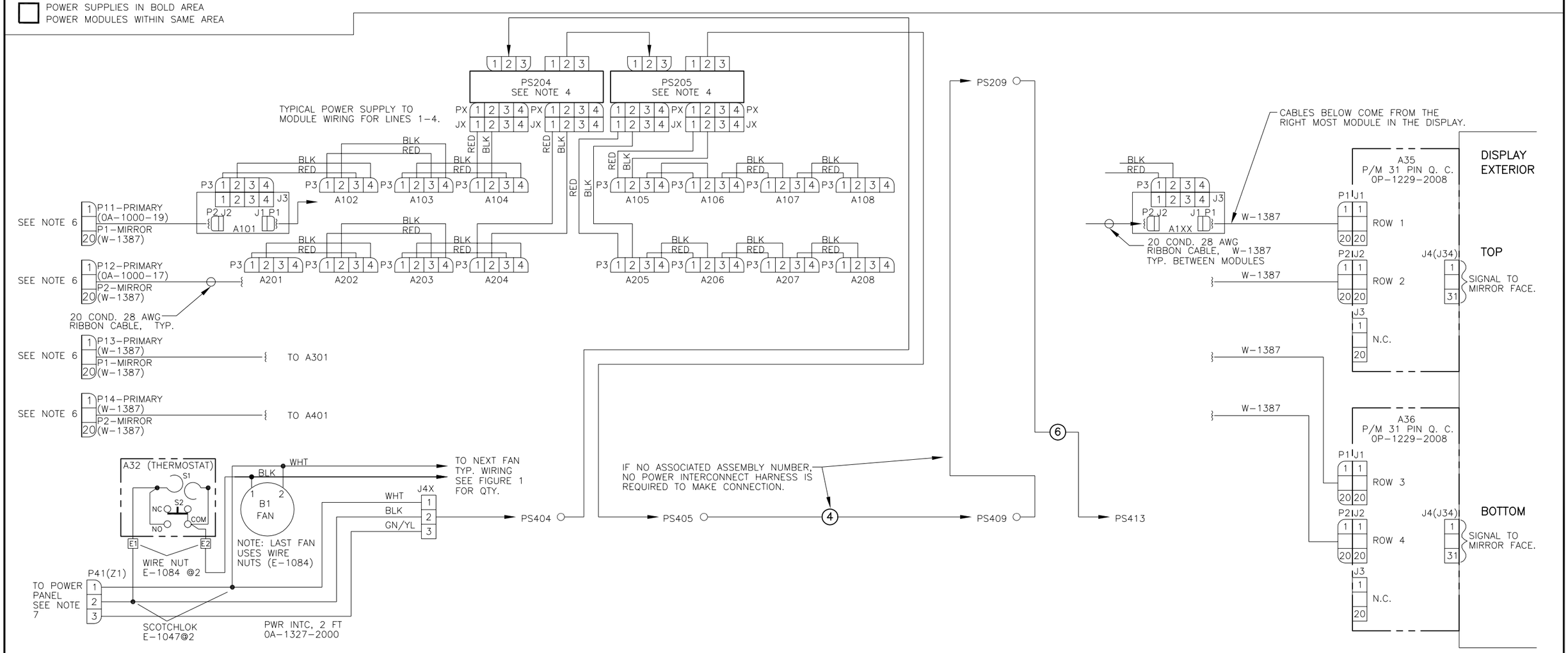
1329-R03B-229788

FIGURE 1: DEPICTS LARGEST 32 ROW BY 112 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- (B) FAN
- QC QUICK CONNECT





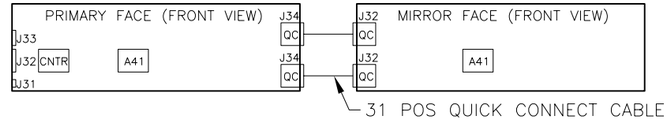
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211950 FOR 120VAC. REFER TO DWG-220287 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 32 HIGH DISPLAY (32X112). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
04	07JAN08	MOVED FANS OVER TO THE RIGHT FROM UNDERNEATH POWER SUPPLY	TGA	DJM
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	21FEB05	UPDATED NUMBERING ON PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECTS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEMATIC, AF-3400-32X(48-112)-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 17 DEC 04

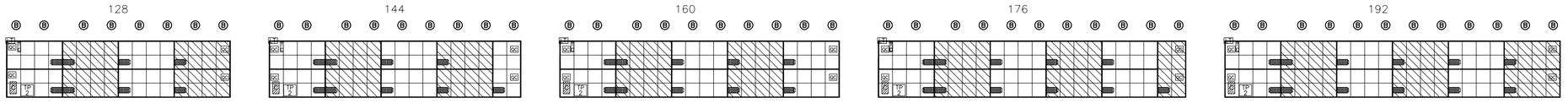
REVISION 04 APPR. BY: SCALE: 1=1

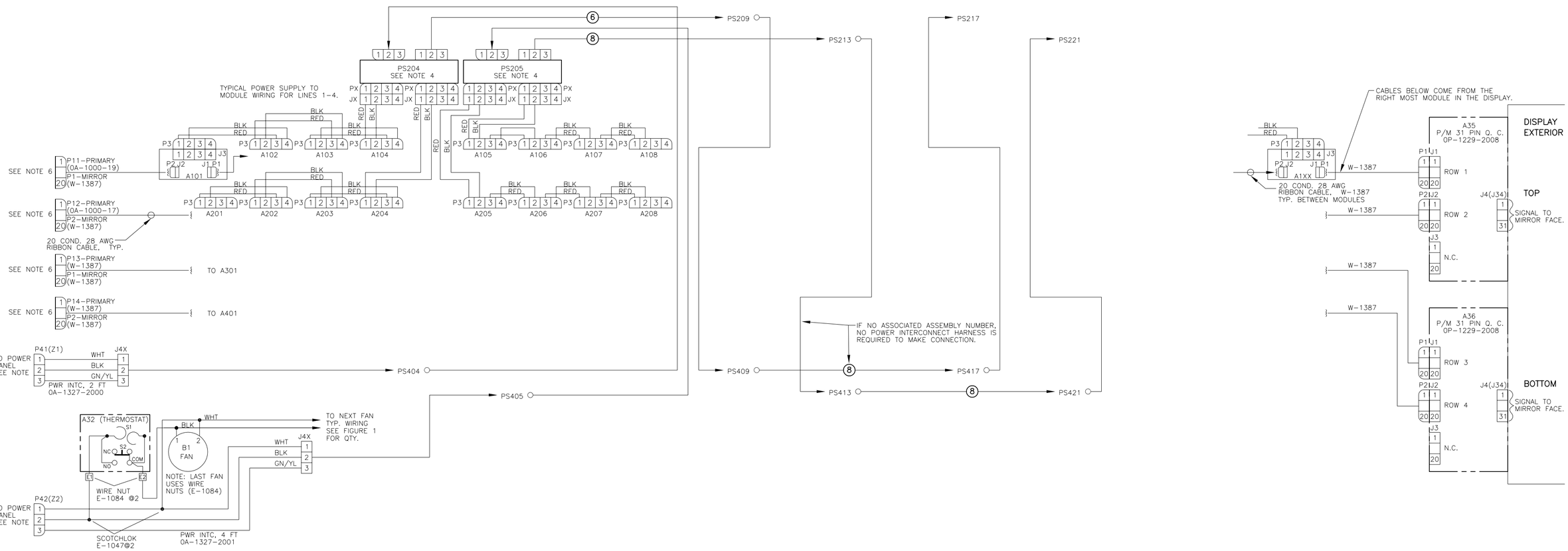
1329-R03B-229789

FIGURE 1: DEPICTS LARGEST 32 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- (B) FAN
- QUICK CONNECT





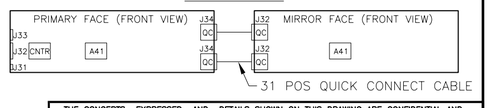
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211947 FOR 120/240VAC. REFER TO DWG-218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 32 HIGH DISPLAY (32X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
04	07JAN08	MOVED FANS OVER TO THE RIGHT FROM UNDERNEATH POWER SUPPLY	TGA	DJM
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	21FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECTS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEMATIC, AF-3400-32X(128-192)-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 17 DEC 04

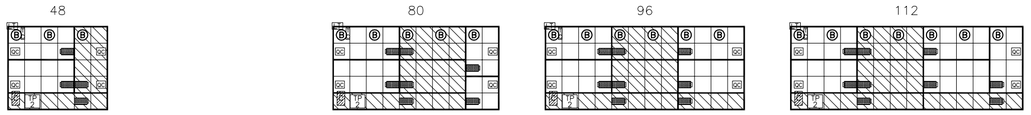
REVISION 04 APPR. BY: SCALE: 1=1

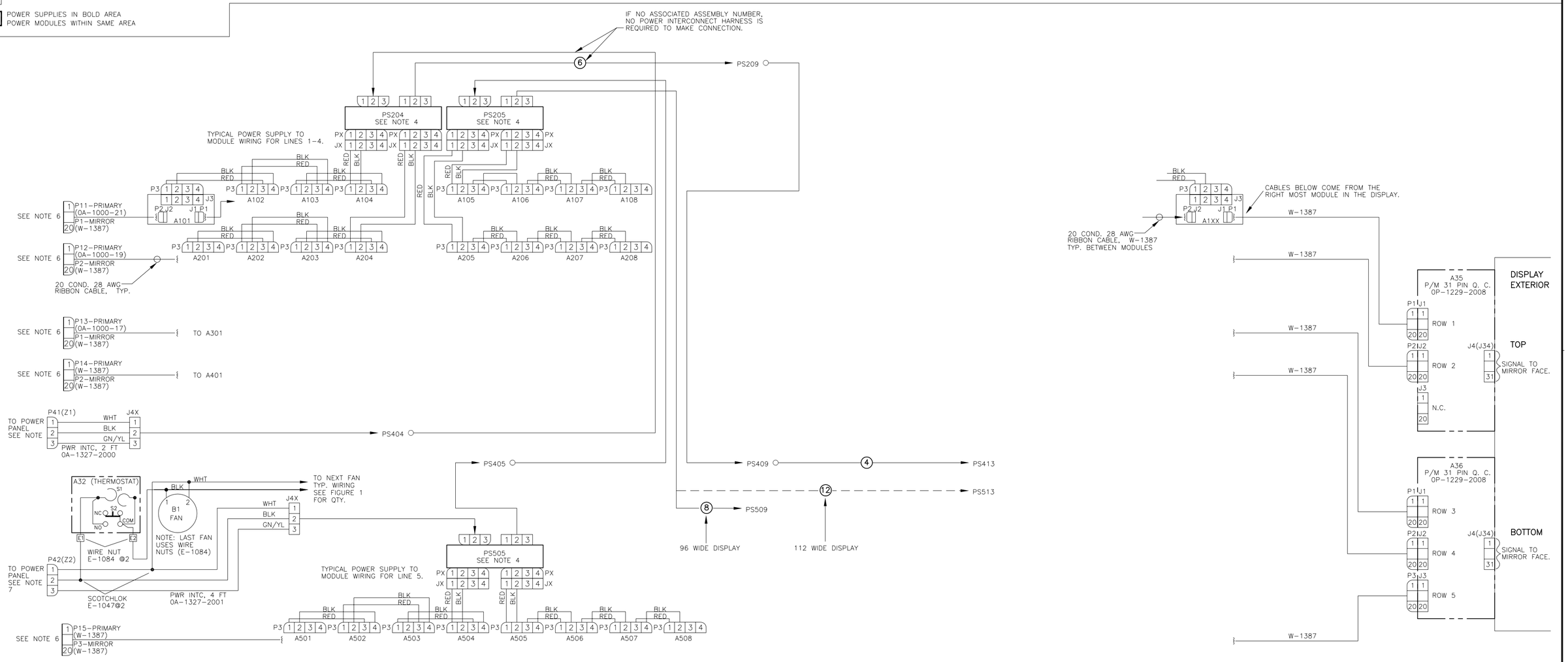
1329-R03C-229790

FIGURE 1: DEPICTS LARGEST 40 ROW BY 112 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

1 POWER SUPPLY(PS) ASSEMBLY
2 POWER SUPPLY(PS) ASSEMBLY
MODULE POWERED BY Z1 (J41)
MODULE POWERED BY Z2 (J42)
POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA
(B) FAN
QUICK CONNECT PANEL



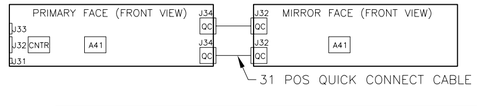


NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY. NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211947 FOR 120/240VAC. REFER TO DWG-218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 40 HIGH DISPLAY (40X112). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(4) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 4 FT(14AWG) 0A-1327-2001
(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002
(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003
(12) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 12 FT(14AWG) 0A-1327-2005

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
04	08FEB07	ADDED 8FT 0A-1327-2003 FOR 96 WIDE DISPLAY.	MLG	
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	21FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECTS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

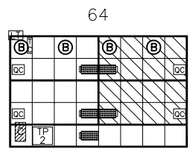
PROJ: GALAXY, AF-3400-34-MONOCHROME SERIES (-03)
TITLE: SCHEM, AF-3400-40X(48,80,96,112)-34-MONO, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 20 DEC 04
REVISION 04 APPR. BY:
SCALE: 1=1

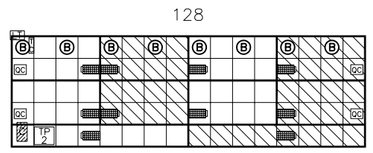
1329-R03C-229791

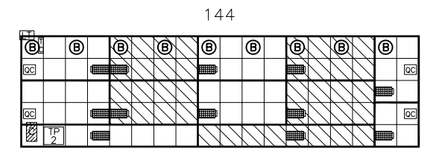
FIGURE 1: DEPICTS LARGEST 40 ROW BY 144 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

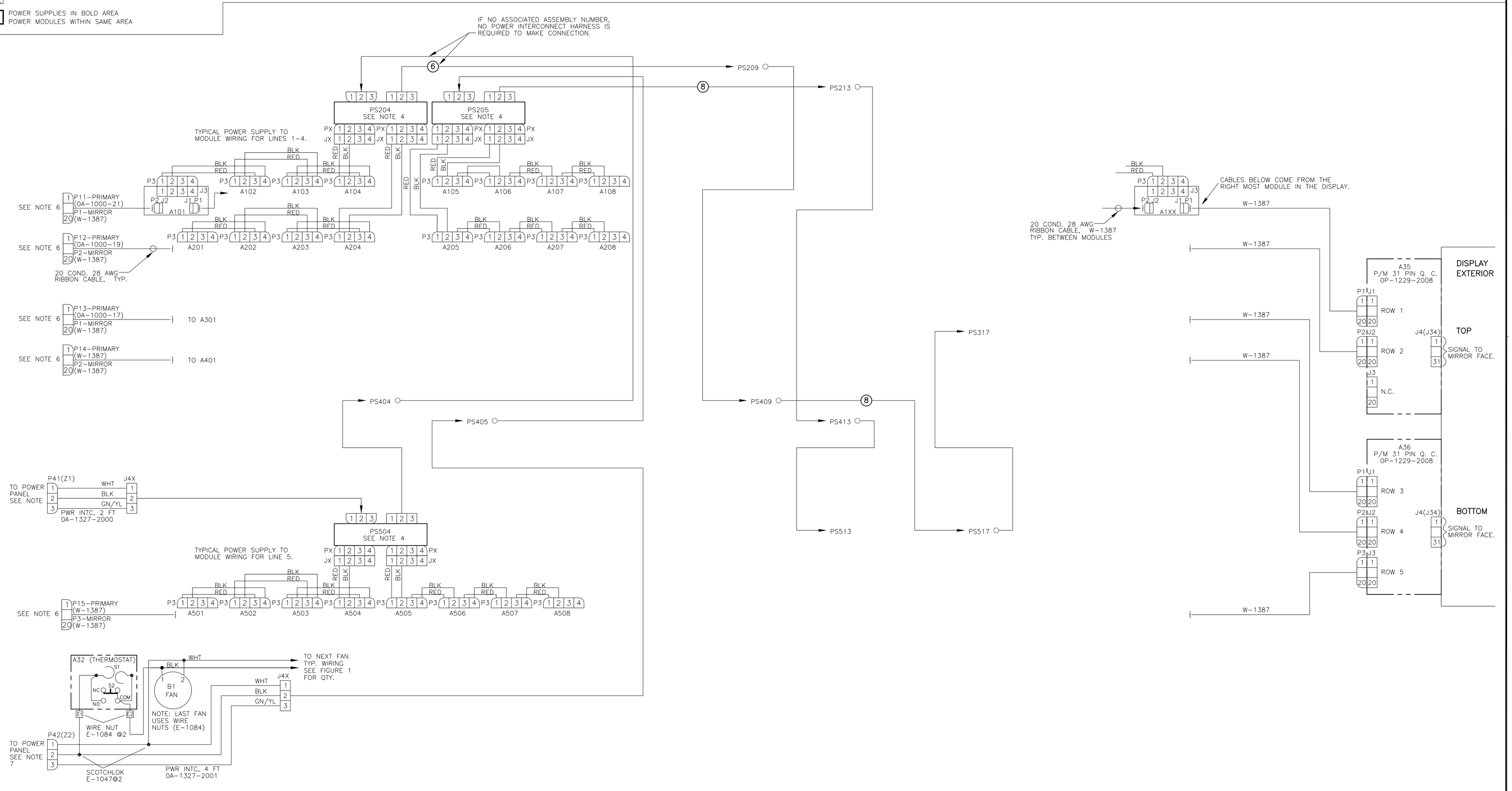
(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- (B) FAN
- QUICK CONNECT PANEL
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- POWER SUPPLIES IN BOLD AREA POWER MODULES WITHIN SAME AREA









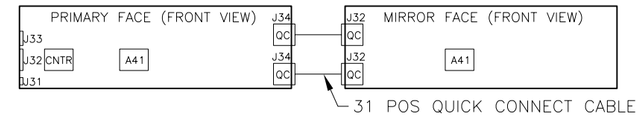
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG-211947 FOR 120/240VAC. REFER TO DWG-218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 40 HIGH DISPLAY (40X144). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	22FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECTS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEM, AF-3400-40X(64,128,144)-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 20 DEC 04

REVISION 03 APPR. BY:

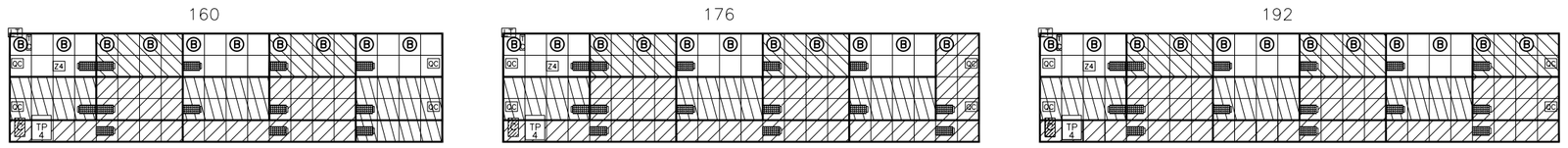
SCALE: 1=1

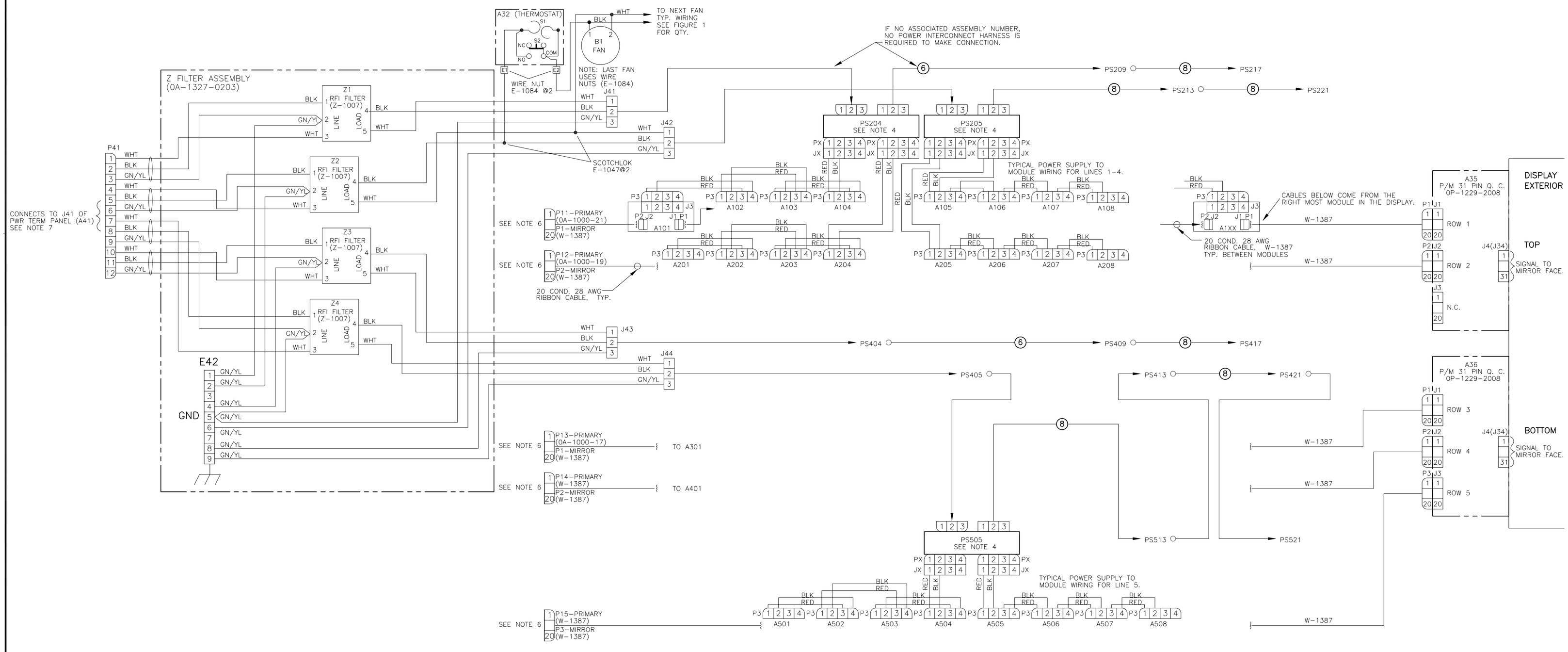
1329-R03C-230018

FIGURE 1: DEPICTS LARGEST 40 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 4 FILTER ASSY
- (8) FAN
- QUICK CONNECT PANEL





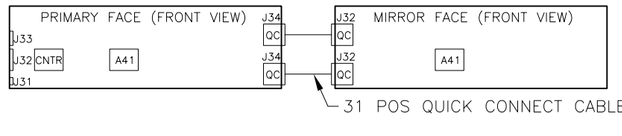
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE: P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-223673 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 40 HIGH DISPLAY (40X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	22FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECTS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEM, AF-3400-40X(160-192)-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 21 DEC 04

REVISION 03 APPR. BY:

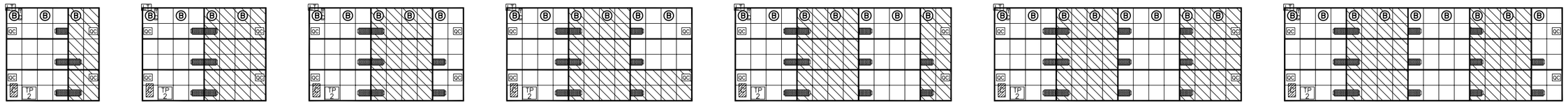
SCALE: 1=1

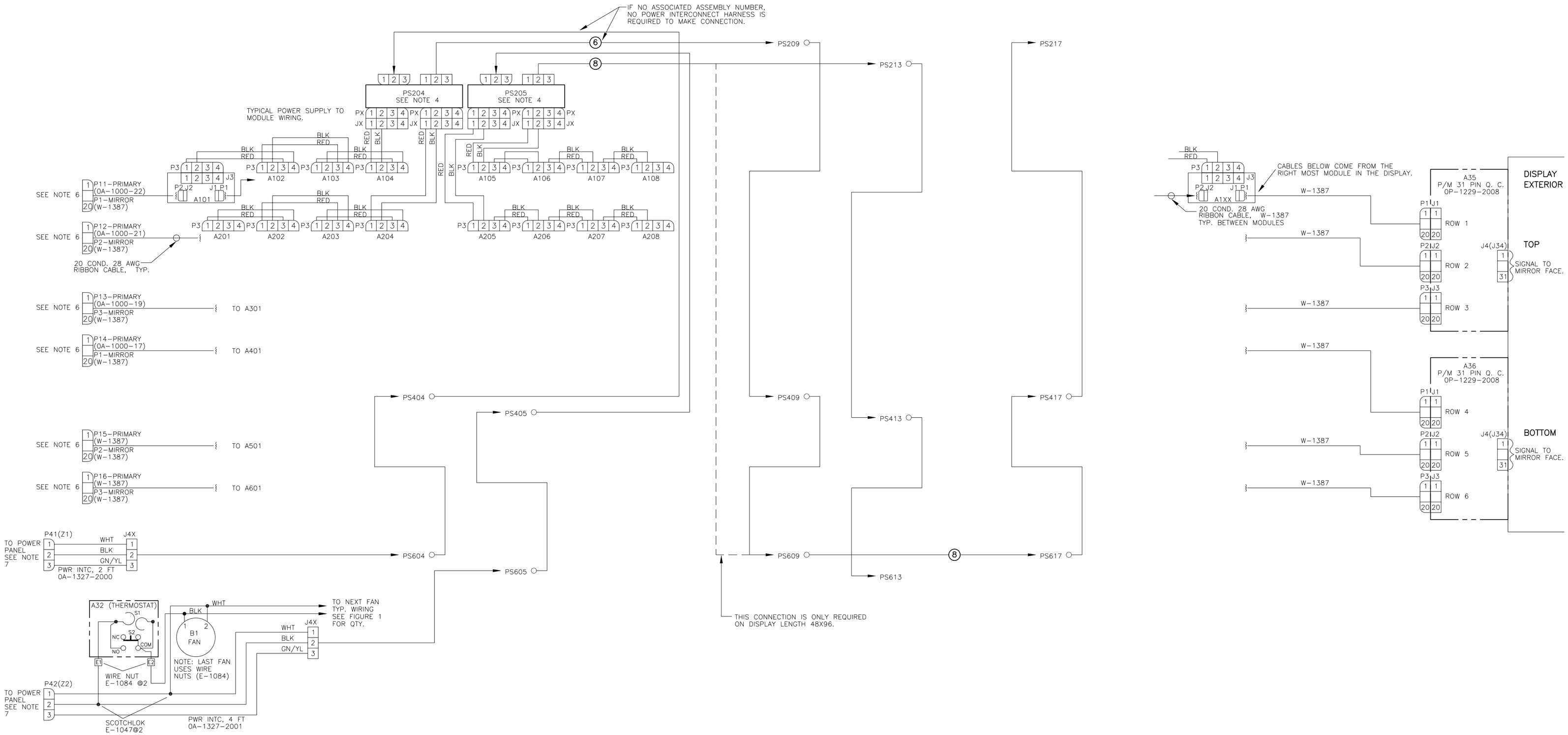
1329-R03C-229792

FIGURE 1: DEPICTS LARGEST 48 ROW BY 144 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

1 POWER SUPPLY(PS) ASSEMBLY
2 POWER SUPPLY(PS) ASSEMBLY
(B) FAN
QUICK CONNECT PANEL
MODULE POWERED BY Z1 (J41)
MODULE POWERED BY Z2 (J42)
POWER SUPPLIES IN BOLD AREA
POWER MODULES WITHIN SAME AREA





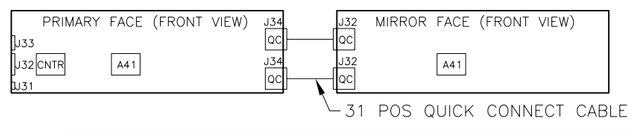
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215014(2 LED, RED PIXEL) & DWG. A–215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229071(2 LED, RED PIXEL) & DWG. A–229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY. NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) P41 CONNECTS TO J41 OF POWER PANEL (A41) REFER TO DWG–211947 FOR 120/240VAC. REFER TO DWG–218666 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 48 HIGH DISPLAY (48X144). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A–1327–2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A–1000–17 TO W–1387.	LLK	DJM
01	22FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECTS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY; AF–3400–34–MONOCHROME SERIES (–03)
TITLE: SCHEMATIC, AF–3400–48X(48–144)–34–MONO, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 21 DEC 04
REVISION 03 APPR. BY:
SCALE: 1=1
1329-R03C-229797

FIGURE 1: DEPICTS LARGEST 56 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 4 FILTER ASSY
- (B) FAN
- QUICK CONNECT PANEL

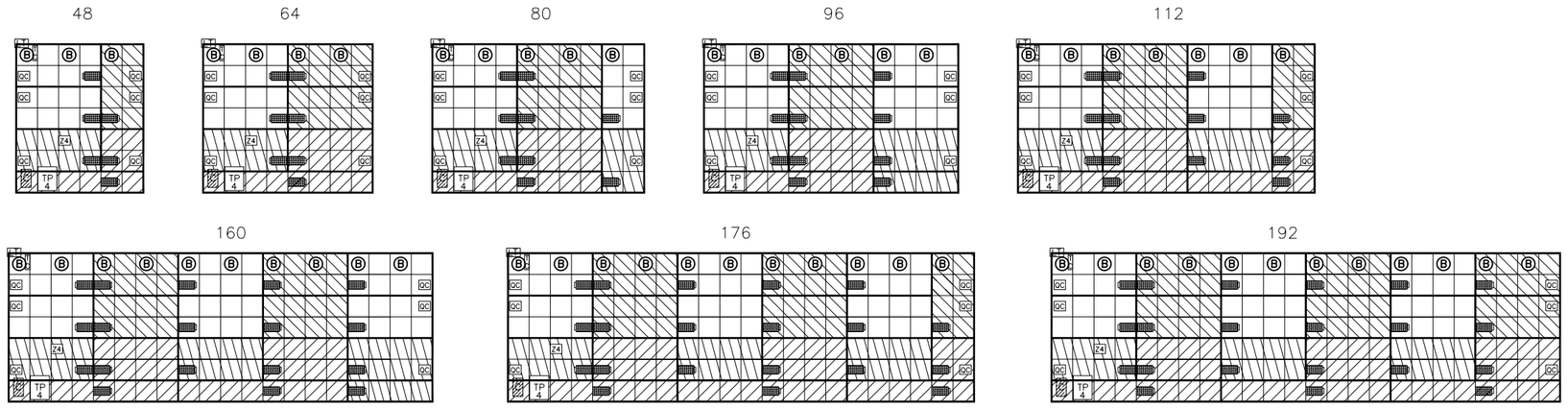
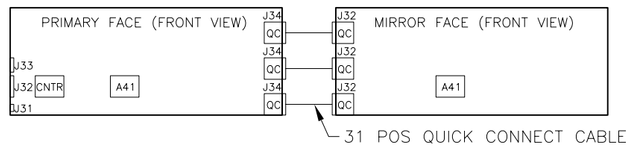
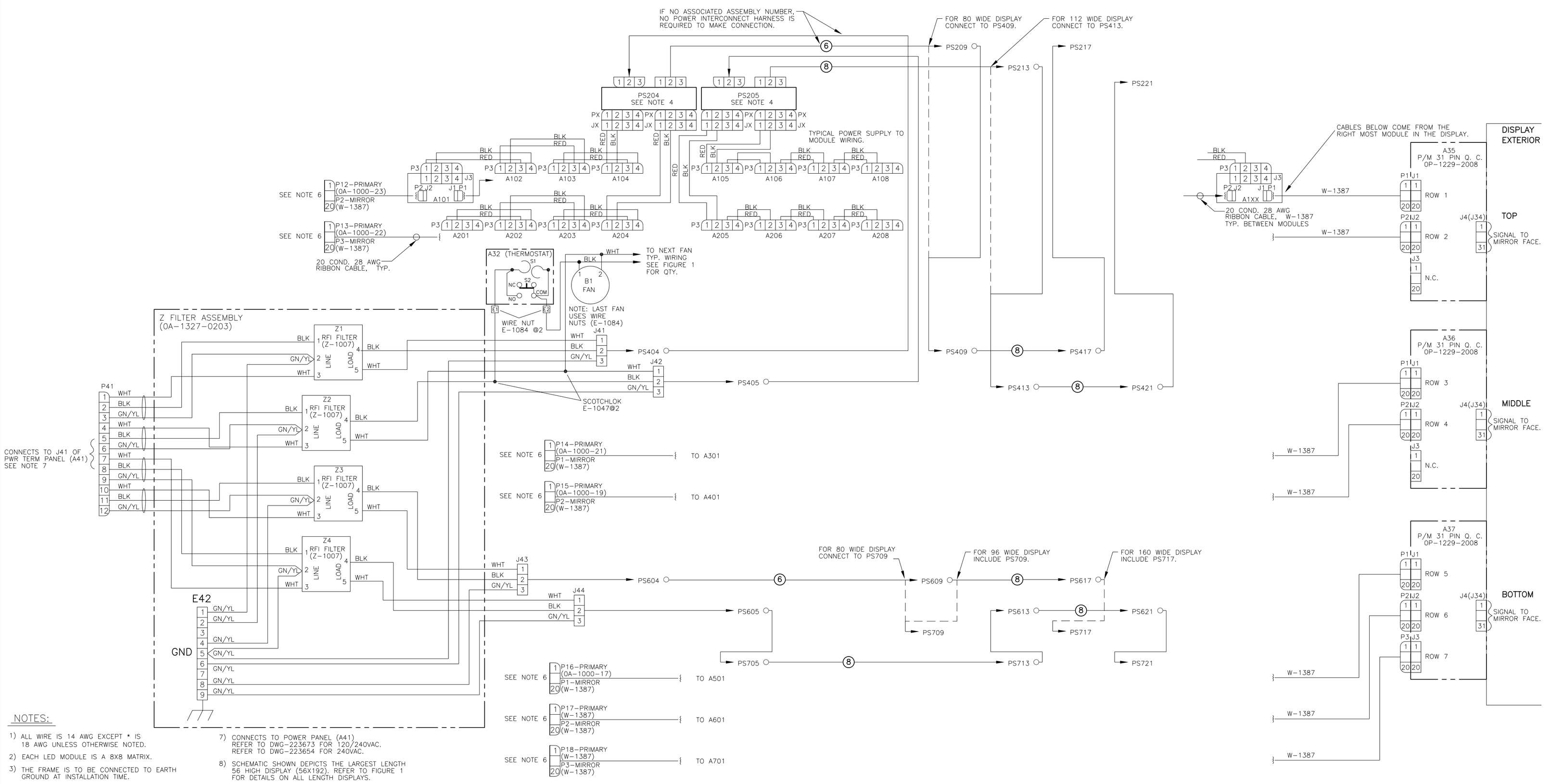


FIGURE 2:





NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215014(2 LED, RED PIXEL) & DWG. A–215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229071(2 LED, RED PIXEL) & DWG. A–229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG–223673 FOR 120/240VAC. REFER TO DWG–223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 56 HIGH DISPLAY (56X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A–1327–2003

REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A–1000–17 TO W–1387.	LLK	DJM
01	22FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF–3400–34–MONO SERIES (–03)

TITLE: SCHEM,AF–3400–56X(48–112,160–192)–34–MONO,P/M *

DES. BY: DMATHER DRAWN BY: WSCHNEI DATE: 27 JAN 05

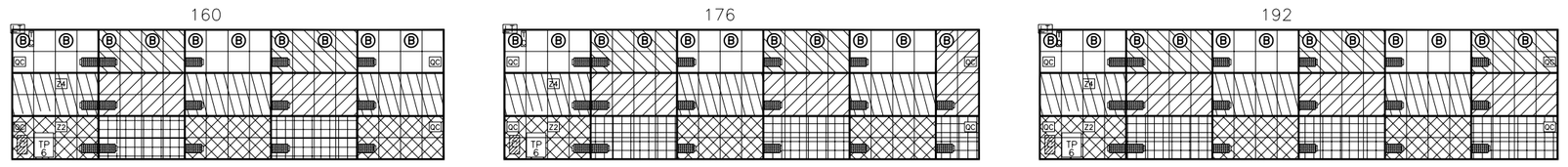
REVISION 03 APPR. BY: SCALE: 1=1

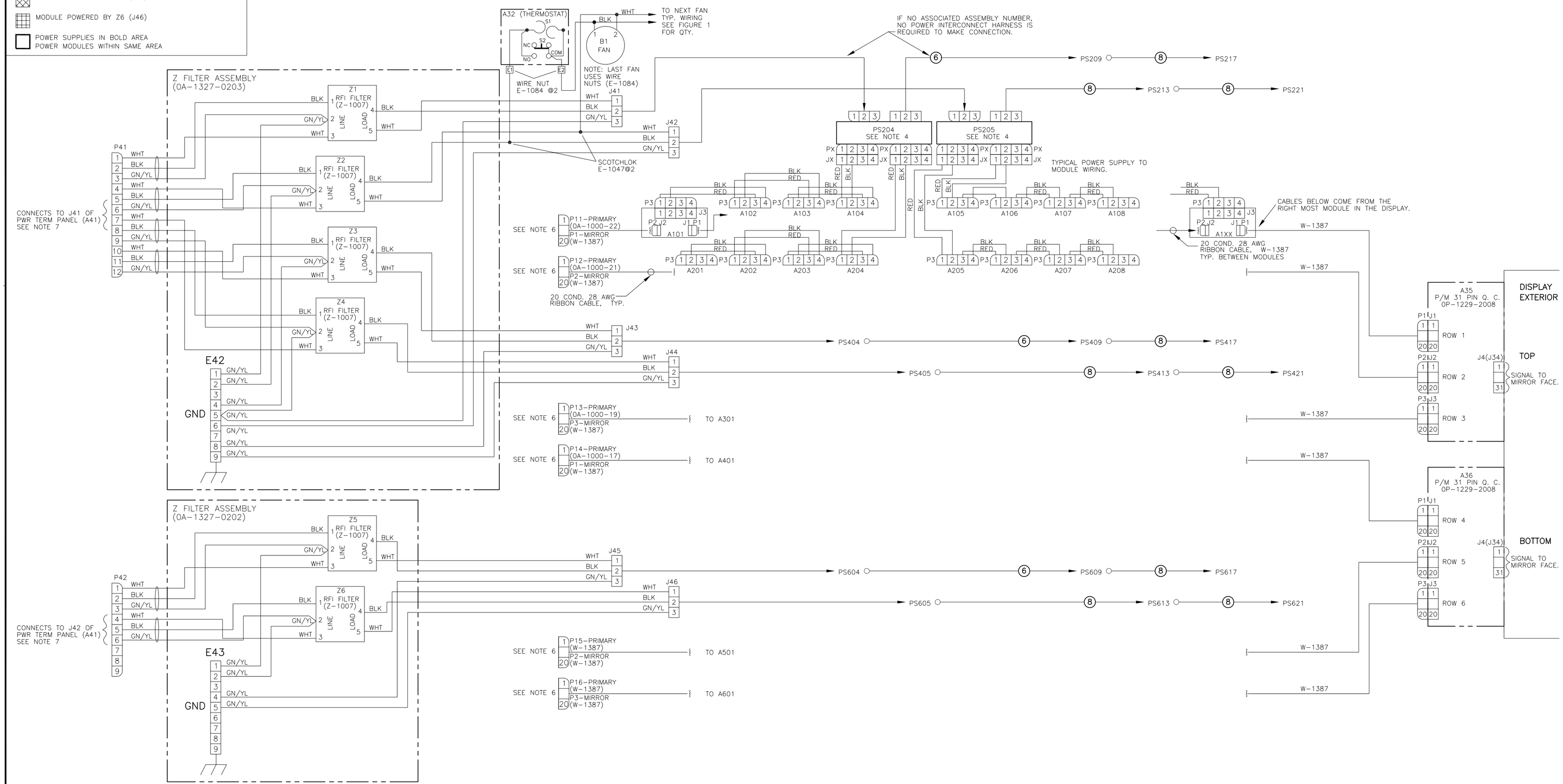
1329-R03C-232740

FIGURE 1: DEPICTS LARGEST 48 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- MODULE POWERED BY Z5 (J45)
- MODULE POWERED BY Z6 (J46)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 2 FILTER ASSY
- 4 FILTER ASSY
- FAN
- QUICK CONNECT PANEL





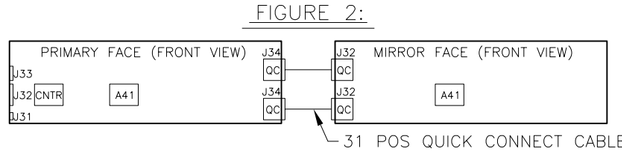
NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A-215014(2 LED, RED PIXEL) & DWG. A-215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A-229071(2 LED, RED PIXEL) & DWG. A-229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B-206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG-223673 FOR 120/240VAC. REFER TO DWG-223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 48 HIGH DISPLAY (48X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL. REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A-1327-0202

(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A-1327-2003

FIGURE 2:



REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A-1000-17 TO W-1387.	LLK	DJM
01	22FEB05	UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING. ADDED QUICK CONNECTS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF-3400-34-MONOCHROME SERIES (-03)

TITLE: SCHEM, AF-3400-48X(160-192)-34-MONO, P/M, *

DES. BY: DMATHER DRAWN BY: DMATHER DATE: 22 DEC 04

REVISION 03 APPR. BY:

SCALE: 1=1

1329-R03C-229798

FIGURE 1: DEPICTS LARGEST 56 ROW BY 144 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.
(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 4 FILTER ASSY
- (B) FAN
- QUICK CONNECT PANEL

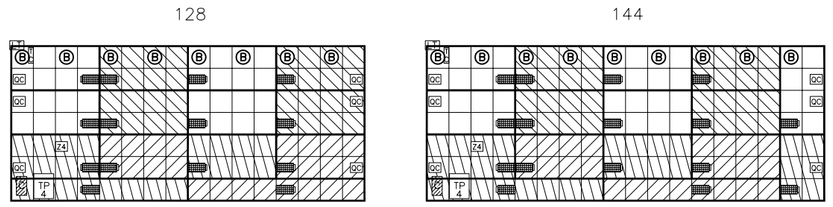
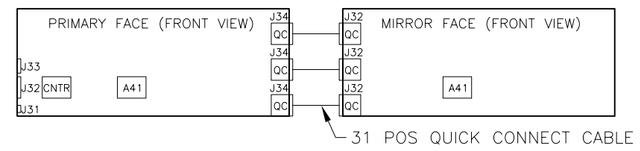
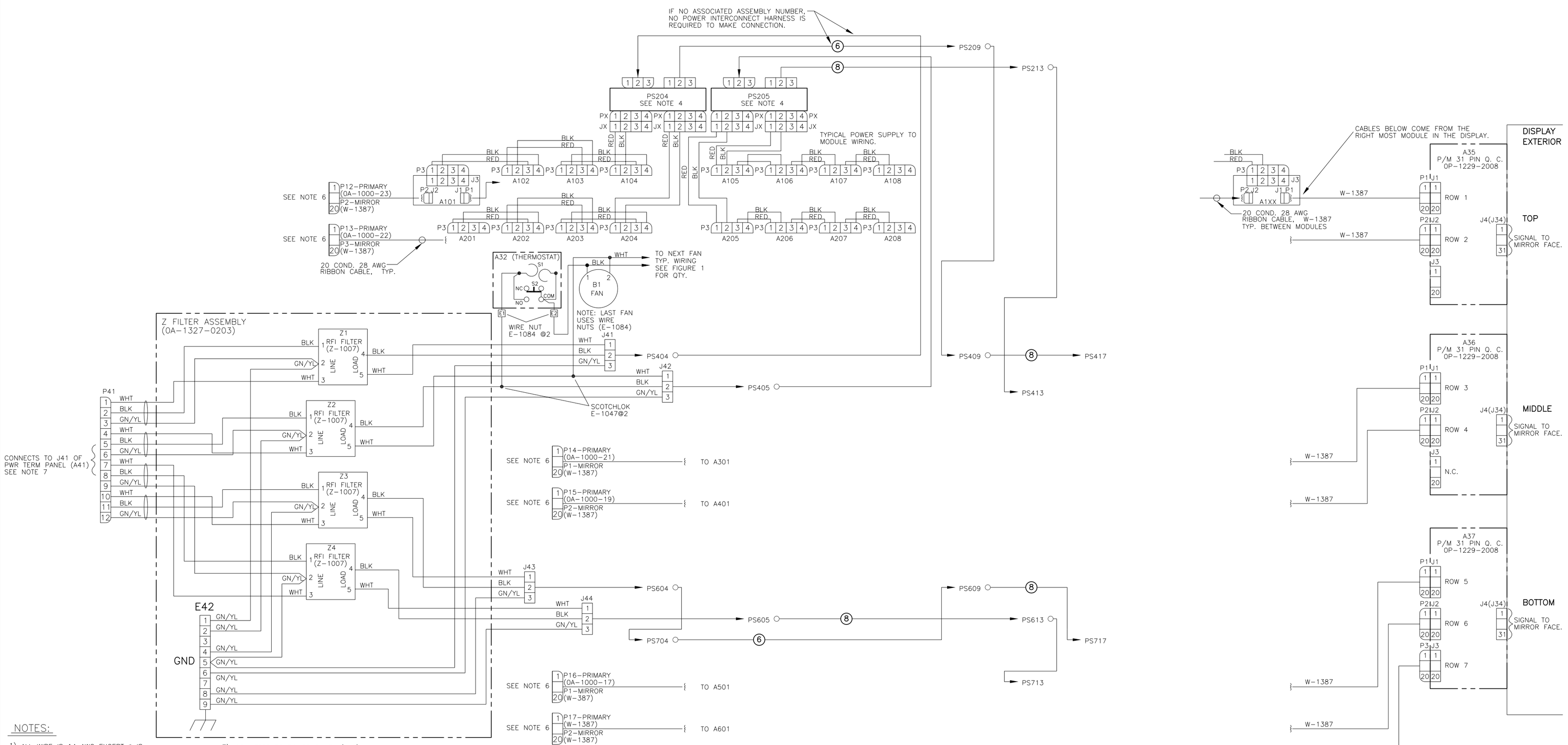


FIGURE 2:





NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215014(2 LED, RED PIXEL) & DWG. A–215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229071(2 LED, RED PIXEL) & DWG. A–229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG–223673 FOR 120/240VAC. REFER TO DWG–223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 56 HIGH DISPLAY (56X144). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002
(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A–1327–2003

REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUICK CONNECT PCB'S FROM 0A–1000–17 TO W–1387.	LLK	DJM
01	22FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF–3400–34–MONO SERIES (–03)
TITLE: SCHEM, AF–3400–56X(128,144)–34–MONO, P/M, *
DES. BY: DMATHER DRAWN BY: WSCHNEI DATE: 27 JAN 05
REVISION 03 APPR. BY: SCALE: 1=1
1329-R03C-232761

FIGURE 1: DEPICTS LARGEST 64 ROW BY 192 COLUMNS. SELECT CORRESPONDING DISPLAY SIZE.

(NO SCALE)

- 1 POWER SUPPLY(PS) ASSEMBLY
- 2 POWER SUPPLY(PS) ASSEMBLY
- MODULE POWERED BY Z1 (J41)
- MODULE POWERED BY Z2 (J42)
- MODULE POWERED BY Z3 (J43)
- MODULE POWERED BY Z4 (J44)
- POWER SUPPLIES IN BOLD AREA
  POWER MODULES WITHIN SAME AREA
- 2 FILTER ASSY
- 4 FILTER ASSY
- (B) FAN
- QUICK CONNECT PANEL

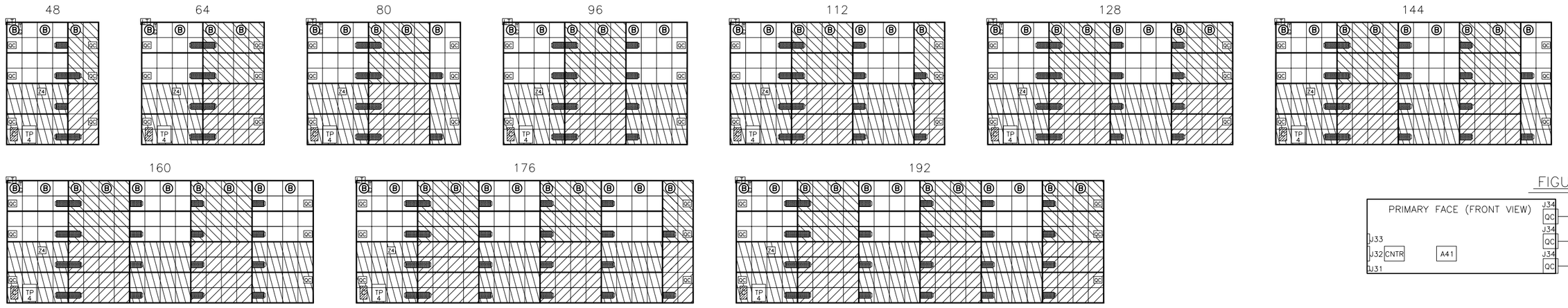
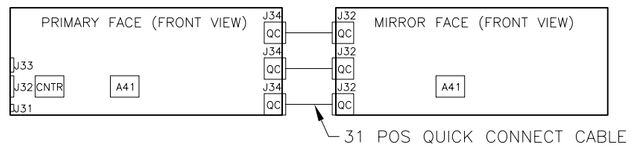
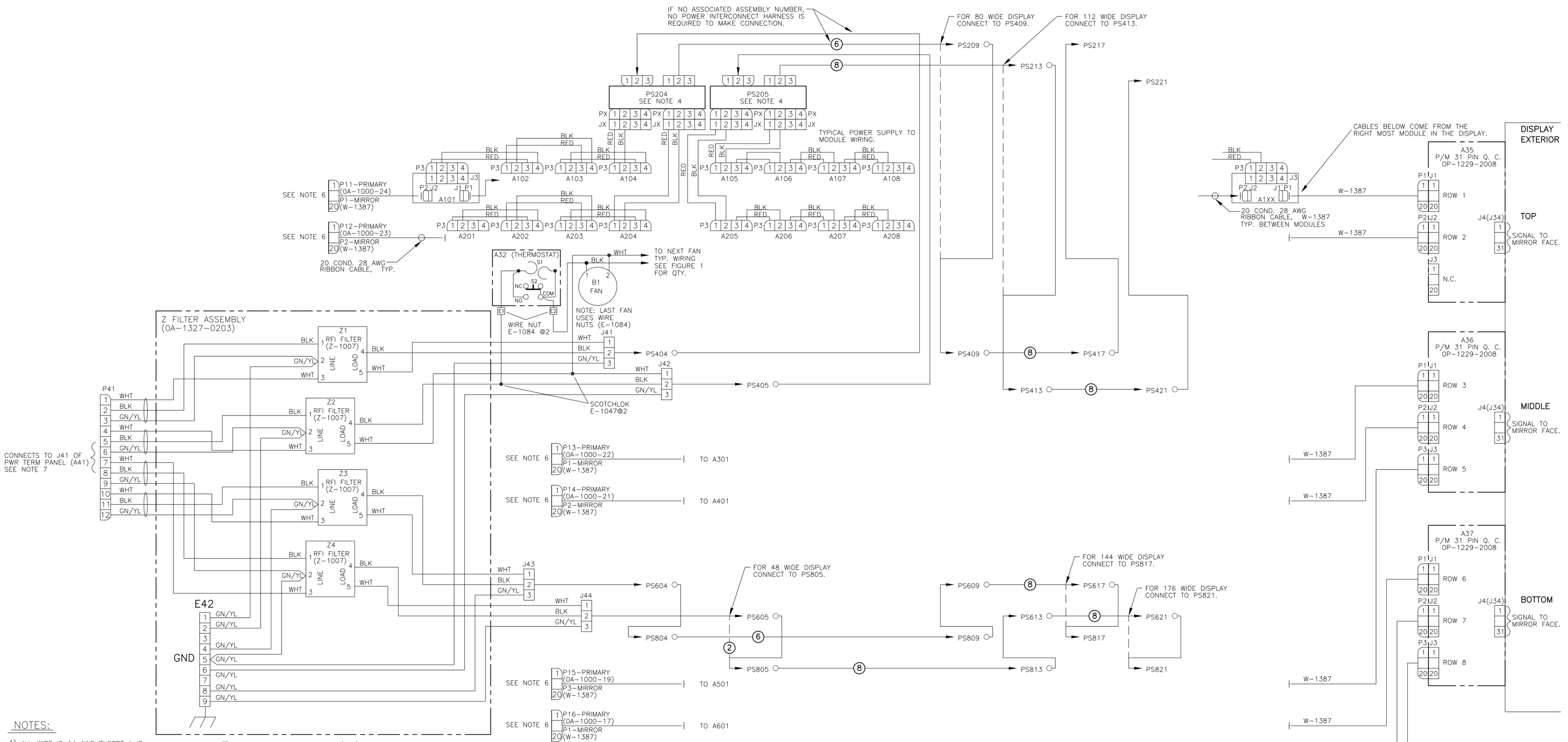


FIGURE 2:





NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 8X8 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) REFER TO DWG. A–215014(2 LED, RED PIXEL) & DWG. A–215015(3 LED, AMB PIXEL) FOR POWER SUPPLY CONFIGURATIONS.
5) REFER TO DWG. A–229071(2 LED, RED PIXEL) & DWG. A–229090(3 LED, AMB PIXEL) FOR POWER REQUIREMENTS.
6) REFER TO DWG. B–206146 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.
   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD IS USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 2 FOR LAYOUT.
7) CONNECTS TO POWER PANEL (A41) REFER TO DWG–223673 FOR 120/240VAC. REFER TO DWG–223654 FOR 240VAC.
8) SCHEMATIC SHOWN DEPICTS THE LARGEST LENGTH 64 HIGH DISPLAY (64X192). REFER TO FIGURE 1 FOR DETAILS ON ALL LENGTH DISPLAYS.
9) POWER SUPPLY/MODULE CONFIGURATION IS CONCEPTUAL REFER TO FIGURE 1 FOR THE PARTICULAR SIZE LAYOUT. MODULES WITHIN EACH BOLD AREA IN FIGURE 1 ARE POWERED BY ONE POWER SUPPLY ASSEMBLY.

(2) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 2 FT(14AWG) 0A–1327–2000
(6) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 6 FT(14AWG) 0A–1327–2002
(8) HARN, PWR INTC, 3 PIN J TO 3 PIN P, 8 FT(14AWG) 0A–1327–2003

REV.	DATE	DESCRIPTION	BY	APPR.
03	18SEP06	CHANGED MODULE RIBBON CABLE CONNECTIONS SWITCHED J1 AND J2 TO MATCH MODULE LAYOUT	MLG	DJM
02	28APR05	CHANGED RIBBON CABLES ON QUIC CONNECT PCB'S FROM 0A–1000–17 TO W–1387.	LLK	DJM
01	22FEB05	ADDED QUICK CONNECT PANELS TO FIGURE 1, UPDATED NUMBERING OF PLUGS FOR MIRROR SIGNAL WIRING.	WRS	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXY, AF–3400–34–MONO SERIES (–03)
TITLE: SCHEM, AF–3400–64X***–MONO, P/M, *
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 24 JAN 05
REVISION 03 APPR. BY:
SCALE: 1=1

1329-R03C-232341

Appendix B: Temperature Sensor Installation

Optional Temperature Sensor Mounting

For Galaxy displays only

Reference Drawings:

Temperature Sensor Cable Routing Schematic ..... **Drawing A-197884**
Exploded Temperature Housing Assembly..... **Drawing A-198371**

1.1 Temperature Sensor Overview

The temperature sensor enclosure is made up of eight plastic disks, a metal mounting bracket, and a 25-foot weather resistant cable. Refer to **Figure 1**.

In most cases, the enclosure will be mounted using two screws. The cable will be plugged into the back of the display.

In certain cases, it may be necessary to disassemble the enclosure or rewire the temperature sensor board. Instructions are provided for those situations. If replacement or additional parts are needed, refer to the following chart for part numbers.

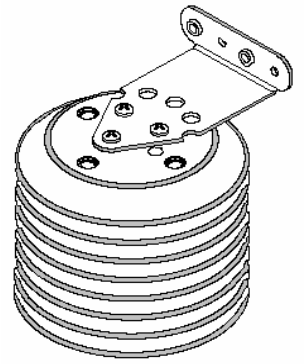


Figure 1: *Temperature Sensor*

Parts List	
Part description	**Daktronics part number**
Temperature sensor housing	0A-1151-0005
Temperature sensor	0P-1247-0008
4-pin Mal Conxall cable	W-1819
22 AWG 2-pair shielded cable	W-1234
30-foot extension cable	W-1820
100-foot extension cable	W-1821
200-foot extension cable	W-1822

1.2 Mounting Locations

For greater accuracy of temperature, follow these mounting recommendations:

- An ideal location is under a north eave or on a northern exposure away from direct sunlight (**Figure 4**).
- Mount the sensor above grass or vegetation rather than concrete or other paving.
- Mount at least 20 feet away from chimneys, vents, air conditioners, or other items that would influence correct temperature readings.
- **Do not** mount between displays or in any location that restricts air movement.
- Mount the sensor so that the cable can be protected from weather and vandalism.

The most common locations for the temperature sensor are on the display cabinet (**Figure 2**), or on the display structure (**Figure 3**). A light-colored display is preferred in this location. Location of the sensor should be below or on a northern edge of the display to keep the sensor shaded.

Figure 2: *Located on the Display*

Figure 3: *Located on Structure*

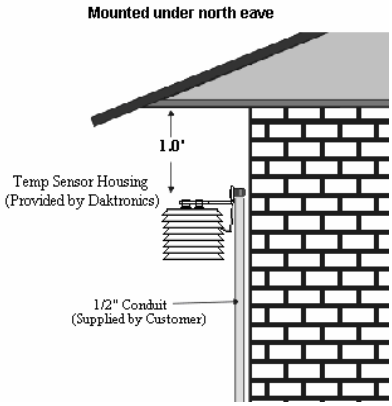


Figure 4: *Located on the North Eave*

When exposed to outdoor conditions, it is necessary to route cable through conduit. In cases such as this, the quick-connect cable must be extended or replaced with four-conductor, 22-AWG, shielded cable. The maximum length of the cable should be no more than 500 feet.

Mounting to a sheet metal surface

Follow these instructions when mounting the sensor to a sheet metal surface:

1. Drill two pilot holes using a 5/32″ drill bit. Horizontally space the holes 1.5″ apart.
2. Insert two self-drilling screws through the holes of the mounting bracket, and screw into the pilot holes.
3. Route cable up to the quick-connect jack on the back of the display and plug into J31. Refer to **Section 1.3** for an example of connection.

1.3 Temperature Signal Connection

Three options for signal connection are explained in this section:

- Using the 25-foot quick-connect cable.
- Using the quick-connect cable but less than 25 feet.
- Using more than 25-feet including extension cables or 22 AWG shielded cable.

Using the provided 25-foot quick-connect cable

1. The temperature sensor is provided with a 25-foot weather-resistant cable. This cable does not need to be in conduit. The sensor connects to the display at J31. Refer to **Figure 5** for the location of the quick-connect plug.
2. Secure any excess cable to discourage vandalism.
3. Between displays, the quick-connect signal cable connects both communication and temperature signal, thus no additional wiring is required from display to display for the temperature sensor.

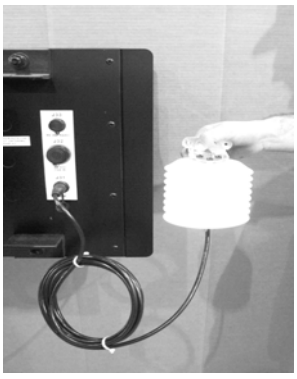


Figure 5: *Quick-connect Cable*

Using the quick-connect cable and less than the 25-foot cable

1. Open the temperature sensor housing by removing the four nuts from the bottom and then removing the five bottom disks. Refer to **Drawing A-198371** for details on sensor housing disassembly.
2. Disconnect the quick-connect CAN temperature sensor cable from the temperature terminal block in the CAN temperature sensor housing.
3. Cut the cable to the desired length and reattach to the temperature sensor terminal block in the CAN temperature sensor housing. Refer to the table and **Figure 6** for the temperature sensor wiring.
4. Make sure to route cable around the sensor board as shown in **Figure 7** and **Drawing A-197884**.
5. Reconnect the cable and reassemble the sensor.

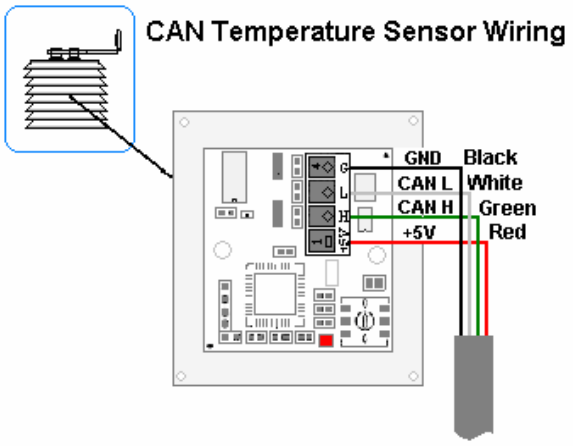


Figure 6: *CAN Temperature Sensor Wiring*

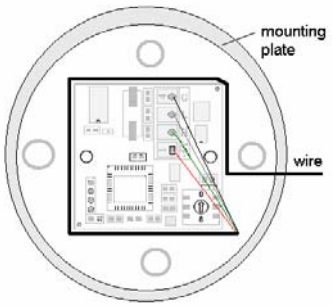


Figure 7: *Wiring Around Sensor*

Wire Color	Temperature Sensor Terminal Block (TB1)
Red	+5V CAN (Pin 1)
Green	CANH (Pin 2)
White	CANL (Pin 3)
Black	GND (Pin 4)
***Note:** Do not terminate shield at this point.	

Using more than 25-feet of cable

To meet customer needs, Daktronics has designed extension cables that allow extra length from the sensor to the display without separate rewiring. These cables contain the correct circular ends to be used with the quick-connect cable and quick-connect input. Refer to the parts list in **Section 1.1** for the cable options available.

If 22 AWG shielded cable is used instead of the cable extensions, follow these steps:

1. Run 1/2" conduit from the temperature sensor to a knockout on the back of the primary display. The cable must be routed through 1/2" metal conduit that should be earth-grounded to protect the sensor and controller from lightning damage.
2. Use a 2-pair 22 AWG individually shielded cable to connect the sensor to the 8-position terminal block in the display labeled "CAN US/DS" (A31/TB4). Connect to the controller as shown in **Figure 8**.
3. Open the temperature sensor housing by removing the four nuts from the bottom and then removing the five bottom disks. Refer to **Drawing A-198371** for details on sensor housing disassembly.
4. Disconnect the quick-connect temperature sensor cable from the terminal block in the temperature sensor housing.
5. Connect the cable coming from the display's terminal block to the temperature sensor board in the temperature sensor housing. Refer to **Figure 8** and table below for wiring locations at the sensor and to the controller.
6. Make sure to route cable around the sensor board as shown in **Drawing A-197884**. Connect the cable and reassemble the sensor. Refer to **Figure 8** and to the table below for the temperature sensor wiring.

Note: The cable length from the sensor to the display should not exceed 500 feet.

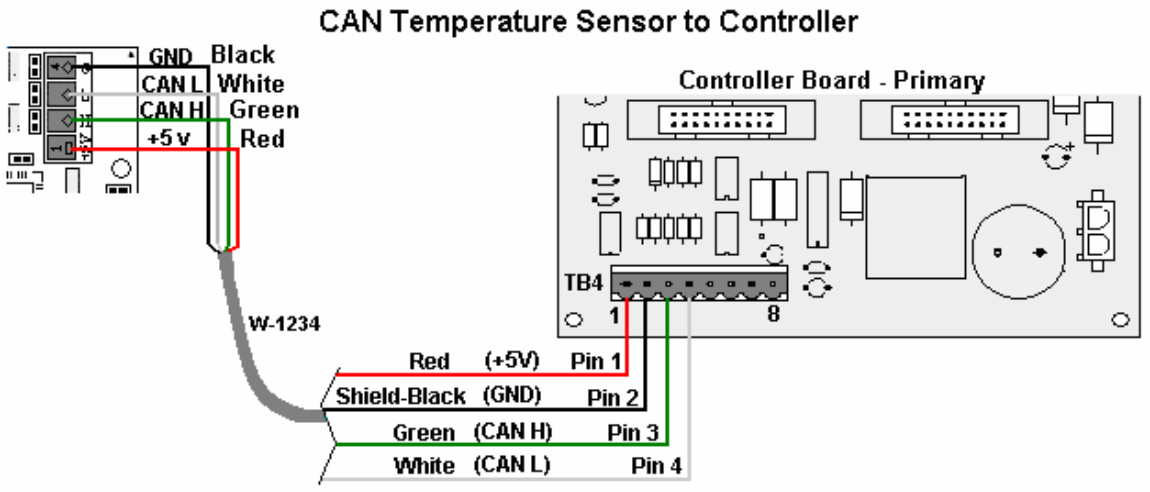


Figure 8: *CAN Temperature Sensor Connection*

CAN Temperature Sensor (TB1)	Field Cabling	Primary - Controller Board CAN US (A31-TB4)
Pin 1 (+5V CAN)	Red	Pin 1 (+5V CAN)
Pin 2 (CAN H)	Green	Pin 3 (CAN H)
Pin 3 (CAN L)	White	Pin 4 (CAN L)
Pin 4 (GND CAN)	Black	Pin 2 (GND CAN)
	Shield	Pin 2 (Shield)

1.4 Temperature Interconnection Between Displays

If the display uses the quick-connect interconnect cable, this connection is already complete.

If the interconnect cable was not used, a 4-conductor shielded cable is needed to terminate the temperature sensor from side one to side two. One end terminates at the "CAN US/DS" 8-position terminal block (A31-TB4) on the Primary display. The other end terminates at the "CAN US/DS" 8-position terminal block (A31-TB4) at the second Primary display. Refer to **Figure 9** and the table for correct interconnect locations.

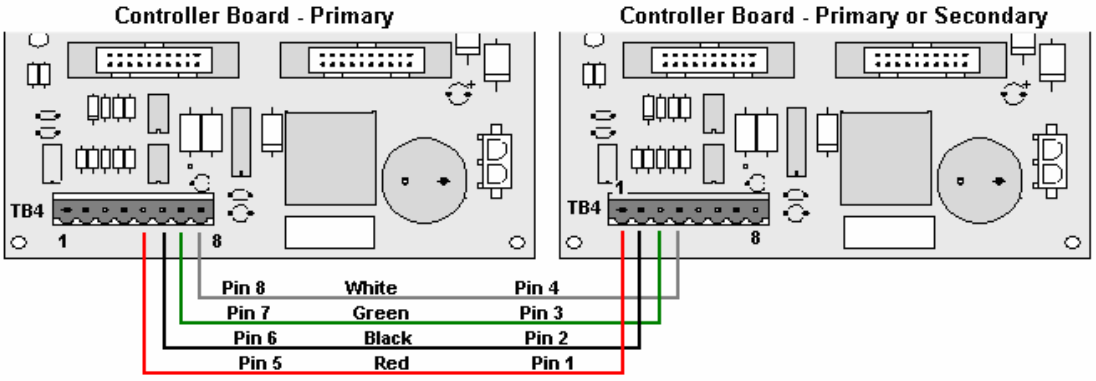


Figure 9: *CAN Controller Interconnect*

Primary - CAN DS (A31-TB4)	Field Cabling	Secondary - CAN US (A31-TB4)
Pin 7 (CAN H)	Green	Pin 3 (CAN H)
Pin 8 (CAN L)	White	Pin 4 (CAN L)
Pin 6 (GND CAN)	Black	Pin 2 (GND CAN)
Pin 5 (Relay)	Red	Pin 1(CAN +5V)
	Shield	

1.5 Sensor Board Replacement

If a problem occurs with the temperature sensor board or the wiring to the sensor, the board can be accessed in the following method:

1. Open the temperature sensor housing by removing the four nuts from the bottom, and removing the five bottom disks. Refer to **Figure 10** or **Drawing A-198371** for details on sensor housing disassembly.
2. Label the wires connected to the temperature sensor board and then disconnect the cable from the temperature sensor terminal block in the temperature sensor housing.
3. Remove the two screws holding the board to the plastic disk. Install the new board, and replace the two screws.
4. Reconnect the cable to the temperature sensor board, making sure all the wire make a good electrical connection.
5. Make sure to route cable around the sensor board as shown in **Drawing A-197884**, and reassemble the sensor enclosure.

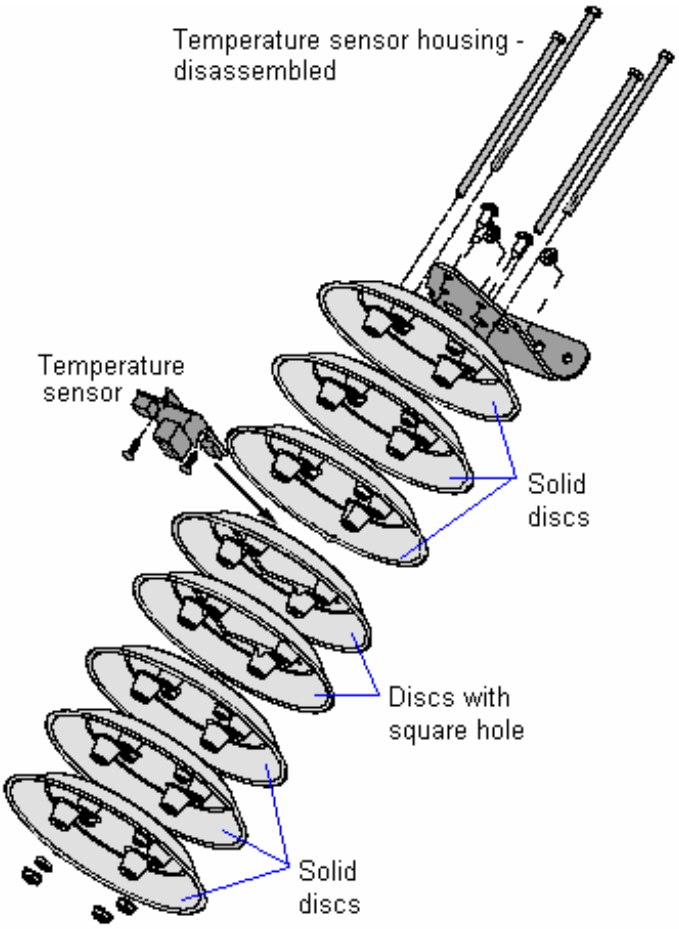
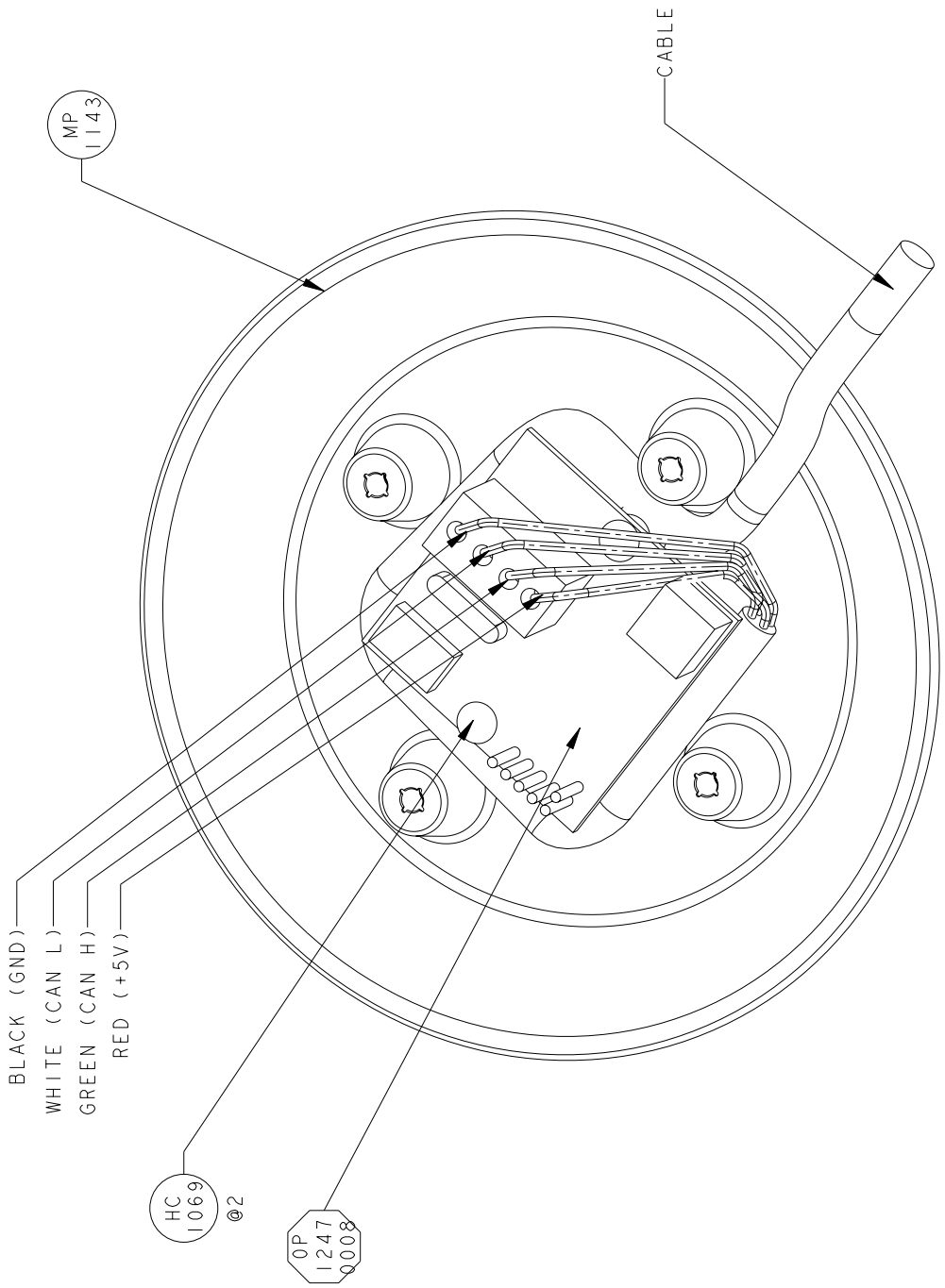


Figure 10: *Temperature Sensor Housing Disassembled*



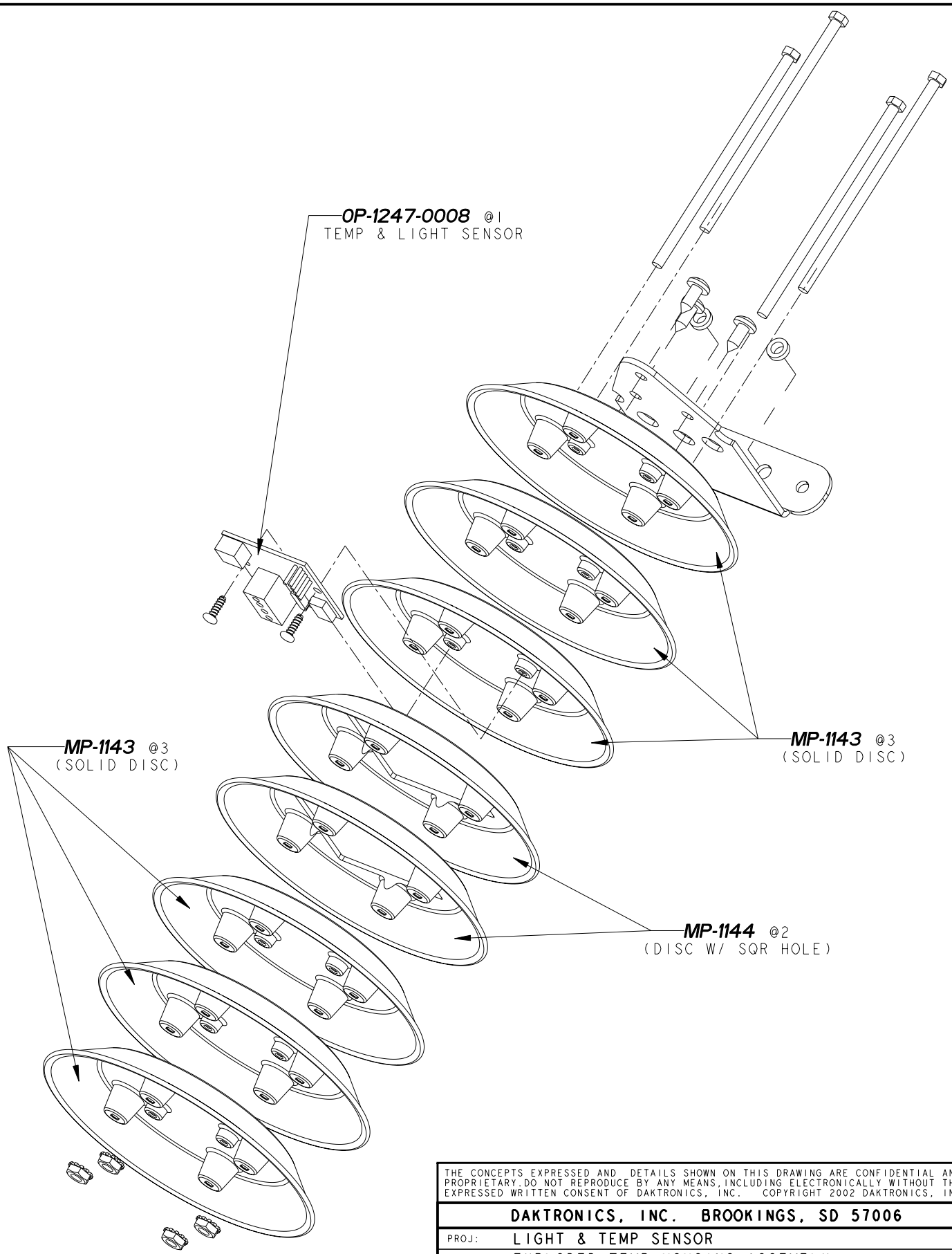
ASSEMBLY INSTRUCTIONS:

ATTACH PC BOARD TO MP-1143 W/ HC-1069.
STRIP JACKET OF W-1819 2". STRIP INSULATION
OF INDIVIDUAL WIRES APPROXIMATELY 1/4".
INSERT WIRES INTO TERMINALS AS SHOWN & TIGHTEN.
ROUTE CABLE AS SHOWN.

	DAKTRONICS, INC. BROOKINGS, SD 57006
PROJ:	LIGHT & TEMP SENSORS
TITLE:	TEMP SENSOR CABLE ROUTING SCHEMATIC
DES. BY: KMILLER	DRAWN BY: KMILLER DATE: 030CT03
SHEET 1 OF DWG 197884	1151-E10A-197884
SCALE: 1=1	

REV.	DATE	DESCRIPTION	BY	APPR.

REVISION



DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:	LIGHT & TEMP SENSOR
TITLE:	EXPLODED TEMP HOUSING ASSEMBLY
DES. BY:	KMILLER
DRAWN BY:	KMILLER
DATE:	14OCT03
REVISION	
SHEET 1 OF DWG 198371	
SCALE:	1=3

1151-E10A-198371

REV.	DATE	DESCRIPTION	BY	APPR.

Appendix C: Daktronics Warranty and Limitation of Liability (SL-02374)