GalaxyPro® 20 mm
AF-3700 Series

Installation & Operation Manual

ED-16281 *Rev 4* *23 March 2009*

DAKTRONICS

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DAKTRONICS

ED-16281
Product 1375
Rev 4 – 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 Service	**Fill in the blank**
Location address of the display:	
Model number of the display:	**GalaxyPro AF-3700 20mm**
Version of software being used: *(Right-click on Venus 1500 name in toolbar, choose "About Venus 1500")*	**Venus 1500 v.** _____
Method of communication being used: *(See Section 4 for guidance)*	
Controller version used in the display:	**M3 controller**

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CHANGING MESSAGE SIGN 26NV

DAKTRONICS, INC.

Reproduction Reference
ED-16281 – P1375
Display Manual; GalaxyPro® 20mm – Series AF-3700

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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 the drawings into **Appendix A**. Use the drawing list to print and arrange the drawings. Print C-size as B-size.

5) Insert **ED-16704** within **Appendix C**. ***NOTE!!!*** New number for GalaxyPro.

6) Insert **SL-02374** into **Appendix D**.

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

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

9) Please direct questions and suggestions to Engineering Secretarial.

Table of Contents

List of Figures

Section 1: Overview of the Displays

Daktronics GalaxyPro® 3700 series displays are built to display a wide variety of messages with great color depth. This manual provides installation, maintenance, and troubleshooting information to help ensure the optimal performance of the display. Diagnostic information and parts replacement are also included. Definitions of terms and connectors used in the manual can be found in **Appendix B**.

1.1 Display Details

The GalaxyPro® model numbers are described as follows:

AF-3700-RRxCCC-20-RGB-X		
AF-3700	**=**	Outdoor GalaxyPro display
RR	**=**	Number of pixel rows high (16, 32, 48… to 128)
CCC	**=**	Number of pixel columns long (Up to 384 columns standard)
20	**=**	20 mm pixel to pixel spacing
RGB	**=**	LED Color: R (Red), G (Green), B (blue) (68 billion colors - pixel calibrated)
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. If the primary is mounted back-to-back with a second display, the second display is called the mirror.

A module is the building block of the GalaxyPro® display. Each module measures 16 pixels high by 16 pixels wide as seen in **Figure 1**. By placing modules side-by-side and on top of one another, a variety of display sizes can be designed and built. Individual modules can be easily removed from the display if required.

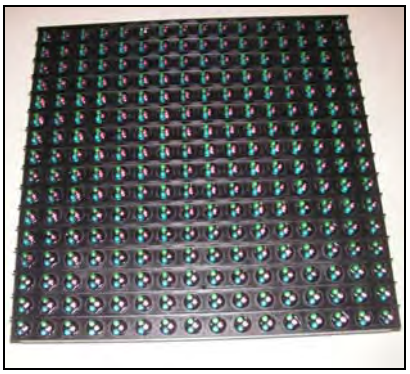


Figure 1: *Single Module*

A typical display system is run with a Windows® based personal computer (PC) running Venus® 1500 software and one or more displays. Venus® 1500 is a software package that runs under Windows® ME™, NT® 4.0, 2000, XP, or Vista 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.

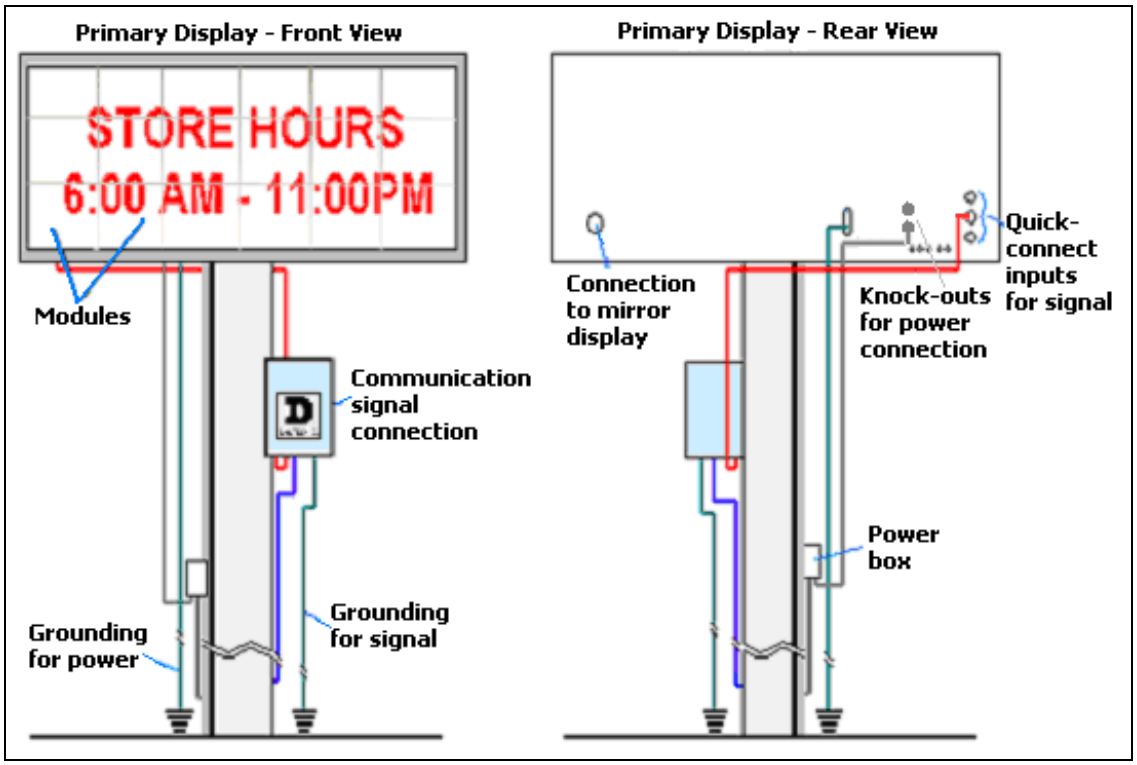


***Figure 2**: Display Components*

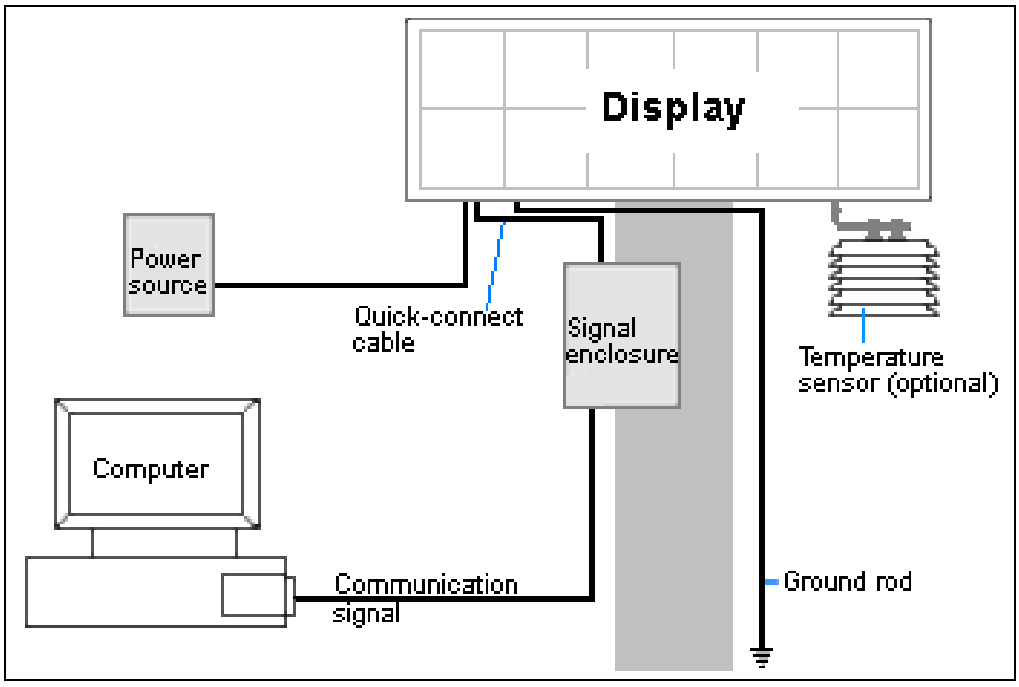


***Figure 3:** Basic Display Set-up*

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 that the structure follows all local codes.

Support structure design depends on the mounting methods, display size, and weight. Because every installation site is unique, no single procedure is approved by Daktronics for mounting GalaxyPro® 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.

Mounting plans need to take into account the ventilation system for the specific display size. In general, the front of all displays needs to be unobstructed to allow for air flow and internal access. Small displays contain fans on the bottom that pull air in from the lower vent and exhaust it out the top vent. Displays 64 pixels high and larger need unobstructed area in the back to allow for fans expelling air through the hoods as shown in **Figure 4**.

Also keep in mind the location of the mounting clips and the clearance needed for the power/signal terminations on the back of the display as shown in **Figure 5**. Display height and wind loading are also critical factors to be considered. This information can be found in the **Shop Drawings** in **Appendix A**. Be sure to consult the drawing for the appropriate pixel matrix size.

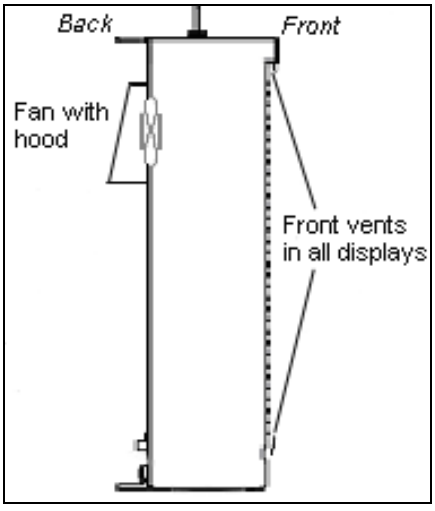


Figure 4: *Fans on Back*

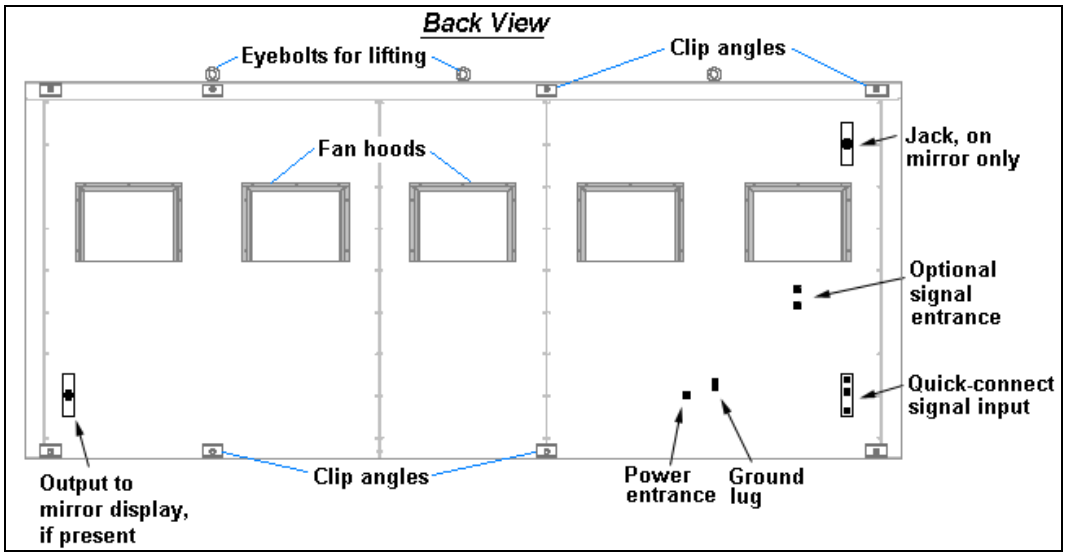


Figure 5: *Back View of Typical Display*

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 around the display is maintained to allow unobstructed air flow through the vents and fans and to allow access to internal components.

2.2 Display Mounting

In order to maintain the structural integrity of the display cabinet, the 90° angle between the cabinet and the lifting method must be maintained.

Do not lift combined sections by the eyebolts.
The eyebolts and interconnect bolts are not strong enough to support the weight of multiple sections.

If damage occurs because of improper lifting procedures, the warranty will be void.

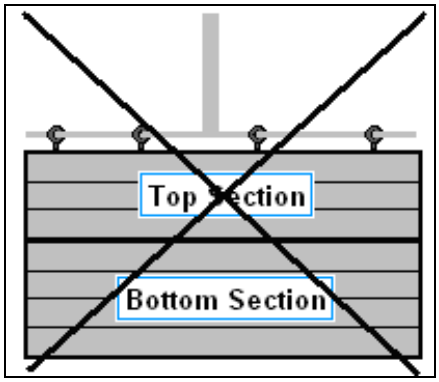


Figure 6: *Multiple Section Lifting Not Advised*

General Mounting Procedure for Displays less than 112 pixels high

1. Lift the display into position on the support structure, following the guidelines in **Figure 7**.

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

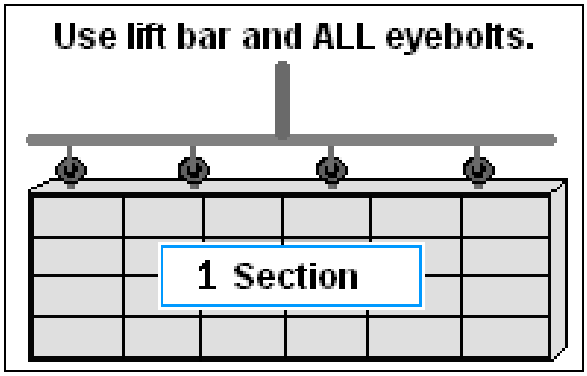


Figure 7: *Correct Lifting Procedures*

2. Weld or use ½" grade-5 bolts and hardware to secure the clip angles to the support structure as shown in the appropriate **Shop Drawing** in **Appendix A**.
3. Refer to **Section 3** for power routing and to the appropriate communication manual for signal connections 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 any 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.

General Mounting Procedure for Sectional Displays (112 and 128 pixels high)

Also refer to **ED-18097.**

These steps are to be done before mounting, connecting the sections, or installation.

1. In the bottom section, remove the first module from the top row and the first and second modules from the bottom row, as shown in **Figure 8**.

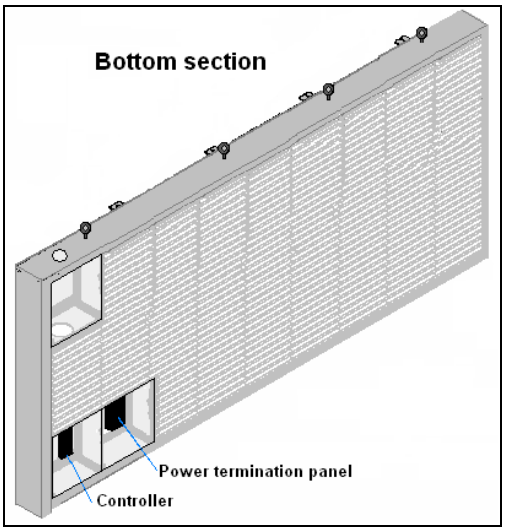


Figure 8: *Bottom Section Preparation*

2. In the top section, remove the first, second, and every even module from the bottom row. Also remove the last module on the bottom row, if not already removed (**Figure 9**). This will aid in aligning and connecting the top and bottom sections.

3. Behind the first module in the bottom row is a padded envelope containing hardware needed to attach the sections together. Remove this envelope now and use the hardware in the following steps.

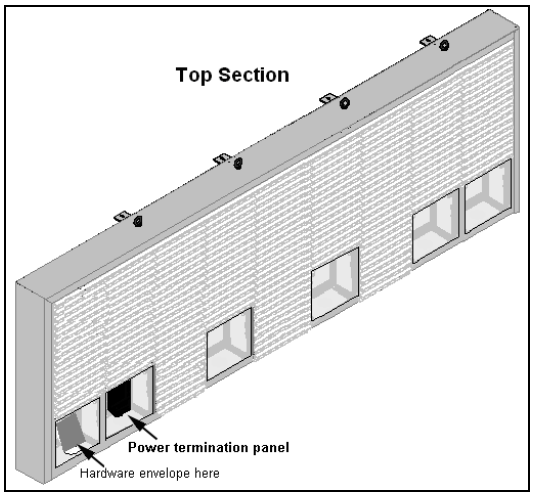


Figure 9: *Top Section Preparation*

4. Mount the bottom section to the support structure, using a lift bar and all eyebolts for lifting.

   Do not lift combined sections by the eyebolts. The eyebolts and interconnect bolts are not strong enough to support the weight of multiple sections.

   If damage occurs because of improper lifting procedures, the warranty will be void.

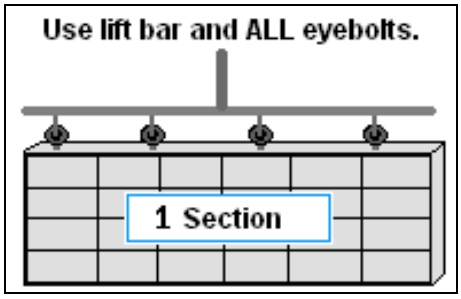


Figure 10: *Correct Lifting Method*

5. On the bottom section, remove the eyebolts and install the alignment pins, preferably one at each end and one in the middle. Screw them into the holes where the eyebolts had been located.

6. Attach the bottom section to the support structure. Weld or use 3/8" grade-5 bolts and hardware to secure the clip angles to the structure (**Figure 11**). **Attach all clip angles.**

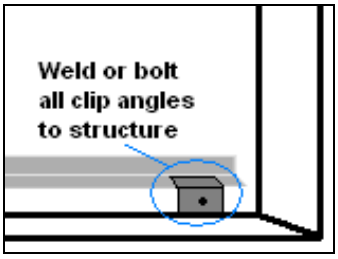


Figure 11*: Clip Angle Attachment*

7. Lift and mount the top section on top of the bottom section with the aid of the alignment pins (**Figure 13**).

8. Attach the top and bottom sections by unscrewing the alignment pins and replacing them with the following (**Figure 12**):

   - 1/2"-13x1-1/2" bolts (HC-1152)
   - 1/2" split washers (HC-1101)
   - 1/2" flat washers (HC-1095)

   Also fill in the holes in each module opening with this combination of bolts and washers in order to join the sections securely.

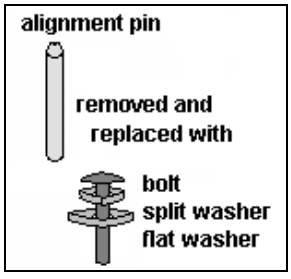


Figure 12: *Replacing Alignment Pins with Bolts*

9. Attach the top section to the support structure. Weld or use 3/8" grade-5 bolts and hardware to secure all clip angles to the structure (**Figure 13**).

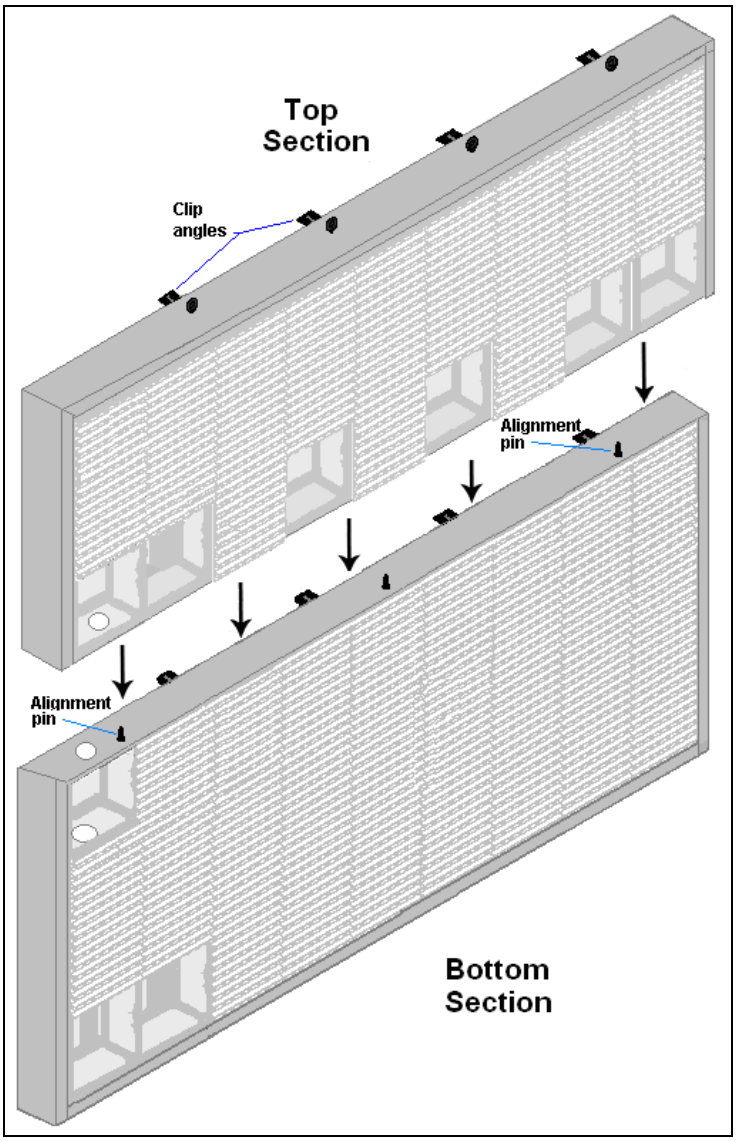


Figure 13: *Attaching Top to Bottom Sections*

2.3 Optional Temperature Sensor Mounting

If an optional temperature sensor will be used with this display, see **Appendix C** 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).

Most displays are provided with unthreaded knockouts on the back for use with ½" conduit. The 16 pixel high displays have a J-box on the back for power termination.

3.2 Overview of Power/ Signal Connection

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

1. Power to the display will be **terminated internally** in most cases. **Section 3.5** shows the internal wiring diagrams.
2. Possible methods for signal termination are shown in the manual for the specific communication type.
3. Power is routed 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: Displays are equipped with overcurrent protection devices that carry a **UL489** or **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 internally at the **power termination panel**.
6. Connect the grounding electrode conductor at the **grounding lug** on the back of the display. With sectional displays, connect one grounding lug to earth ground and run the bonding jumper between display sections.

7. **Signal cable** is routed to the signal termination enclosure. When a ground cable is provided with the enclosure, ground the enclosure to an isolated earth ground connector.
8. Signal into the enclosures must be routed through **conduit**. The knockouts in the enclosures require the use of ½" conduit.
9. The **signal quick-connect cable** from the enclosure to the display can be routed through conduit or through the display pole if power is not also routed in the display pole.

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

3.3 Power Requirements

Do not connect the displays to any voltage other than that listed on the Daktronics product label.

Important 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 size may be constructed to use either single-phase or three-phase power, with the exception of the 16 high displays which use only single-phase power. Proper power installation is imperative for proper display operation. Power specifications for various size displays can be found in **Appendix A**. The following sub-sections provide general details of 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 disconnect so that all hot lines and the neutral can be disconnected. The main disconnect should be mounted at or near the point of power 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 Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

Displays **must** be grounded according to the provisions outlined in Article 250 of the National Electrical Code®.

These displays are installed with ground and neutral conductors provided. 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 if the disconnect is not located within sight of the display.

The display system **must** be connected to earth-ground as shown in **Figure 14**. Proper grounding is necessary for reliable equipment operation. It also protects the equipment from damaging electrical disturbances and lightning. Daktronics requires a resistance to ground of 10 ohms or less. **The display must be properly grounded or the warranty will be void**.

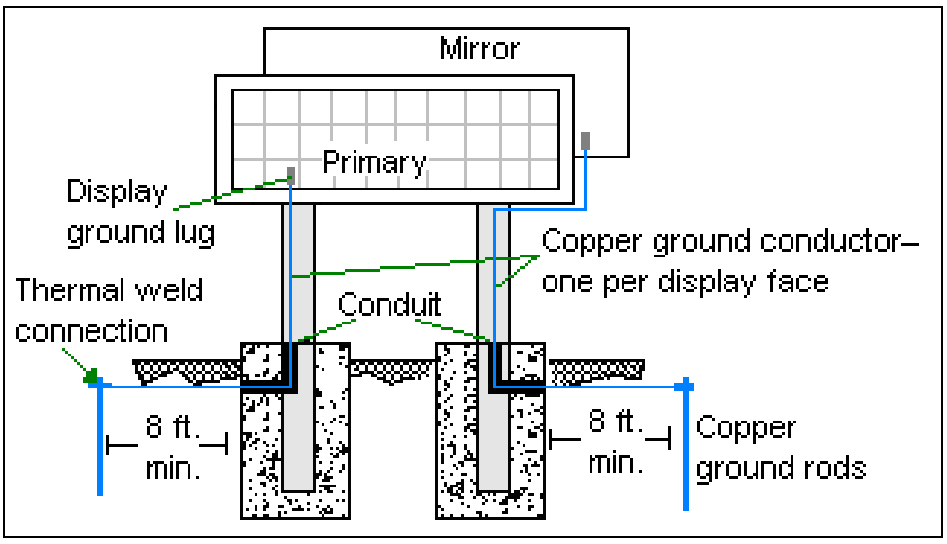


Figure 14: *Correct Grounding of Display*

Important points about grounding:

- 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 14**).
- 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, and if 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 is typically one grounding rod for each display face. Other grounding electrodes as described in Article 250 of the National Electric Code may be used.
  Note: Each section of a sectional display has a ground lug but only one lug per display face needs to be connected to the ground rod. A bonding jumper runs between sections.

Grounding Sectional Displays

In addition to following all the requirements of general grounding, sectional displays have a few additional requirements.

Each section of a sectional display will contain a ground lug. Only one of these lugs needs to be connected to earth ground. Refer to **Figure 15**.

A bonding jumper is present in the top section. Connect this to the bottom section by unscrewing the nut, placing the loop end of the cable over the screw, and replacing the nut. Refer to **Figure 16**.

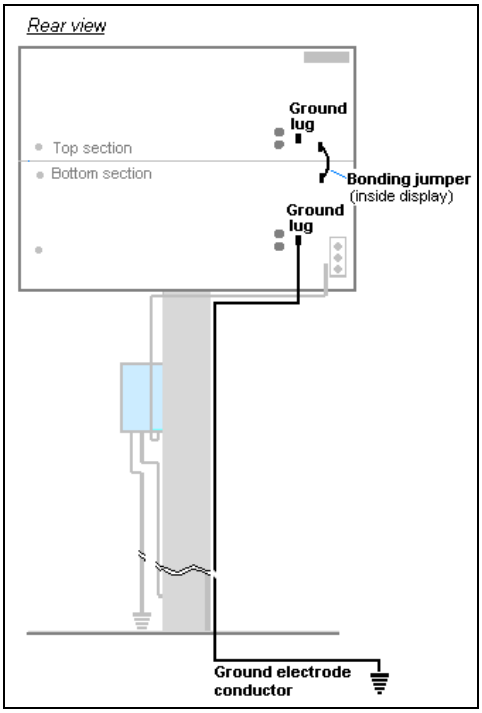


Figure 15: *Grounding Sectional Displays*

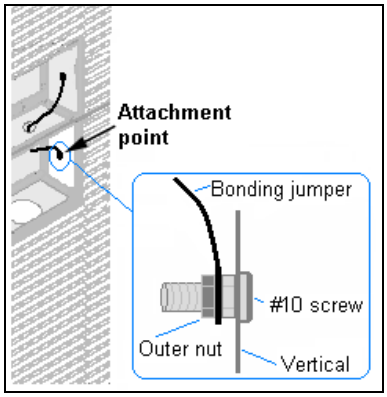


Figure 16: *Bonding Jumper Attachment*

3.5 Power Connection

Power is terminated internally to the power termination board in all displays except the 16-high. Included in this section are the instructions for:

- Terminating single-phase power (3 wires and ground)
- Terminating three-phase power (4 wires and ground)
- Terminating power to the J-box (single-phase, 16-high displays only).

Terminating single-phase power to the internal power termination panel, both domestic and international:

1. Open the display as explained in **Section 6.1** and locate the power termination panel.
2. Route the cable through conduit to the back of the display. Use one of the knockouts for access, being careful not to damage internal components.
3. Connect the neutral wire to the neutral lug and the live wires to Line 1 lug and Line 2 lug.
4. The ground wire connects to the grounding bus bar. Refer to **Figure 17**, **Figure 18**, and **Figure 19** for various examples.

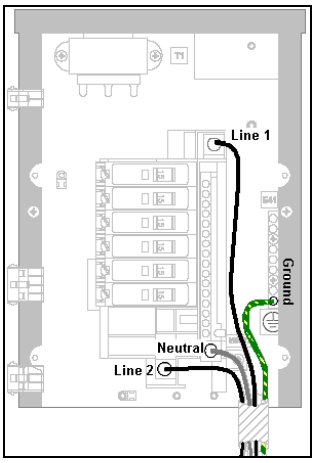


Figure 17: *Single-phase 6-breaker Domestic Panel*

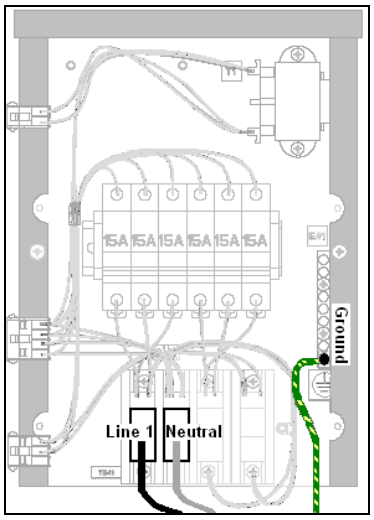


Figure 18: *Single-phase 6-breaker International Panel*

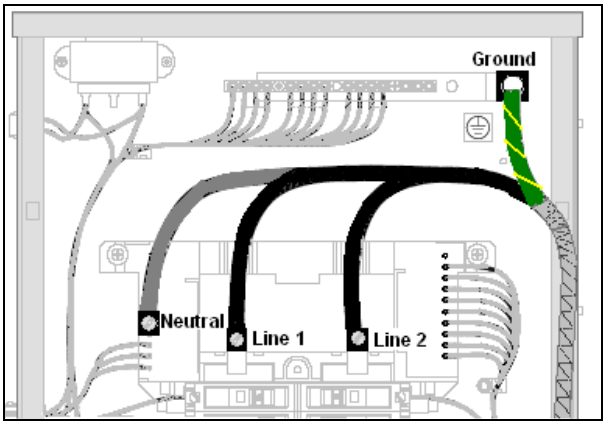


Figure 19: *Single-phase Wiring for 9, 12, and 18 breaker Domestic Panels*

Terminating three-phase power to the internal power termination panel:

1. Open the display as explained in **Section 6.1** and locate the power termination panel.
2. Route the cable through conduit to the back of the display. Use one of the knockouts for access, being careful not to damage internal components.
3. Connect the neutral wire to the neutral lug and the live wires to the lugs labeled A, B, and C. Refer to the following figures for the number of breakers in a specific display.
4. The ground wire connects to the grounding bus bar.
   Refer to **Figure 20**, **Figure 22**, and **Figure 21** for various examples.

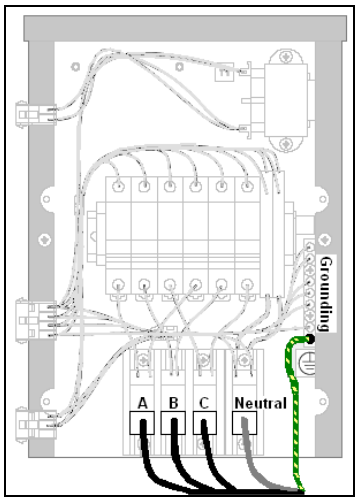


Figure 22: *Three-phase 6-breaker Panel for Domestic and International*

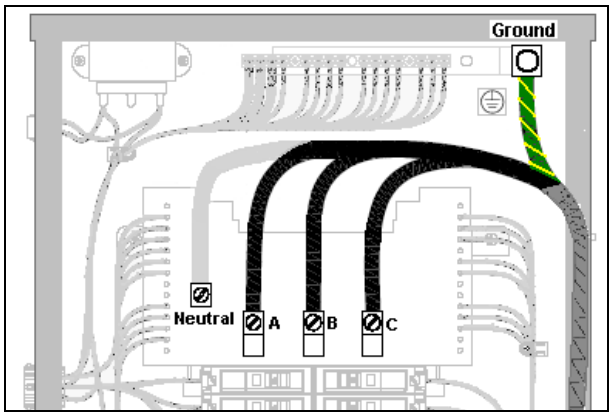


Figure 20: *Three-phase Wiring for 9, 12, and 18 Breaker Domestic Panels*

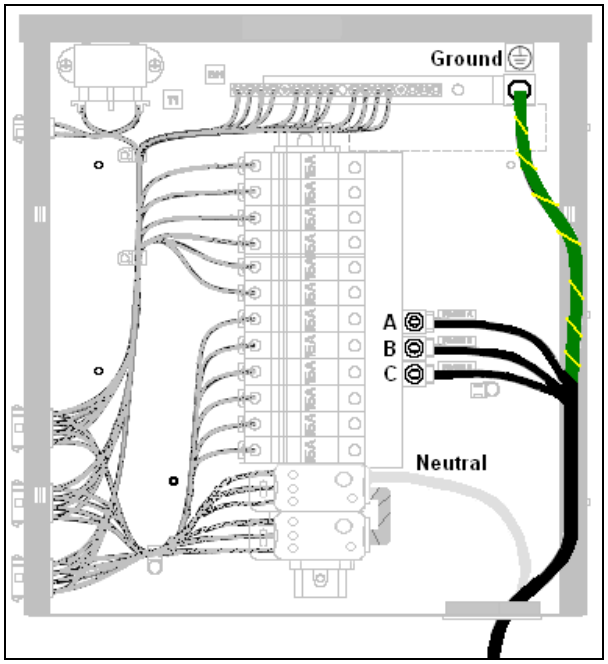


Figure 21: *Three-phase Wiring for 9 and 12 breaker International Panels*

For 16-high displays:

Terminating hot, neutral, and ground wires at the J-box

1. Route the power cable through ½" conduit to the rear of the display and into the power termination J-box.
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 23** for 120/240 VAC and **Figure 24** for 240 VAC.

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

120/240 VAC

- Line 1 – Black
- Line 2 – Red
- Neutral - White
- Grounding – Green-Yellow

240 VAC

- Line 1 - Brown
- Neutral - Blue
- Grounding – Green-Yellow

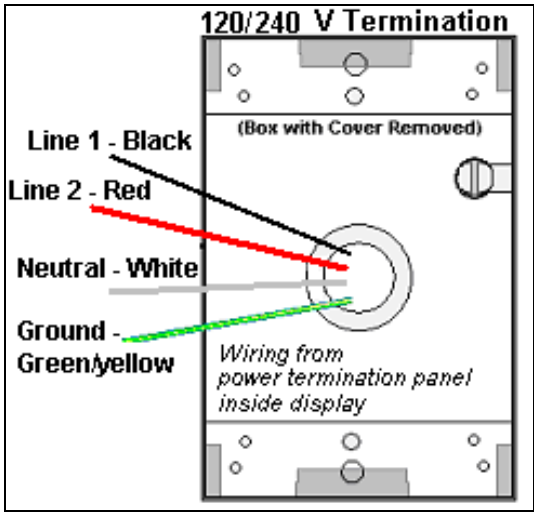


Figure 23: *120/240 V Power Termination*

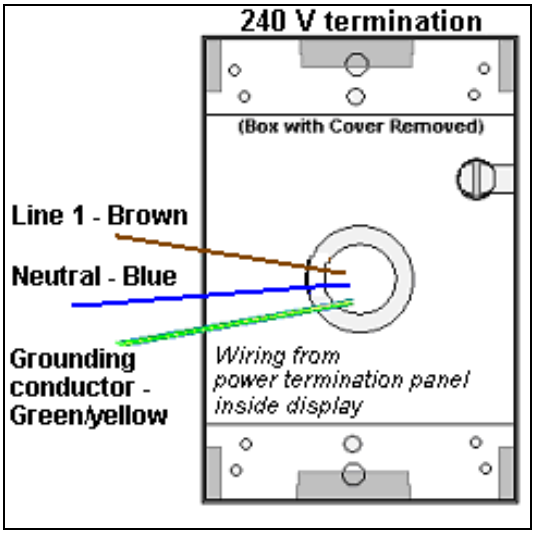


Figure 24: *240 V Power Termination*

3.6 Power Routing in the Display

Following is a basic overview of power routing. Check exact power routing for a specific display on the **Layout Drawing** found in **Appendix A**.

A general power routing, as shown in **Figure 25**, can be summarized as follows.

1. Power terminates internally to the power termination panel.
2. Power travels through the transformer which adjusts power to the appropriate voltage for the controller.
3. Power is routed through filters to the power supplies which provide power to the modules.
4. Power is also sent from the last breaker on the power termination panel through a filter to the fans and the thermostat.

Note: Power supplies are preset to the proper voltage: 12-13.1VDC.

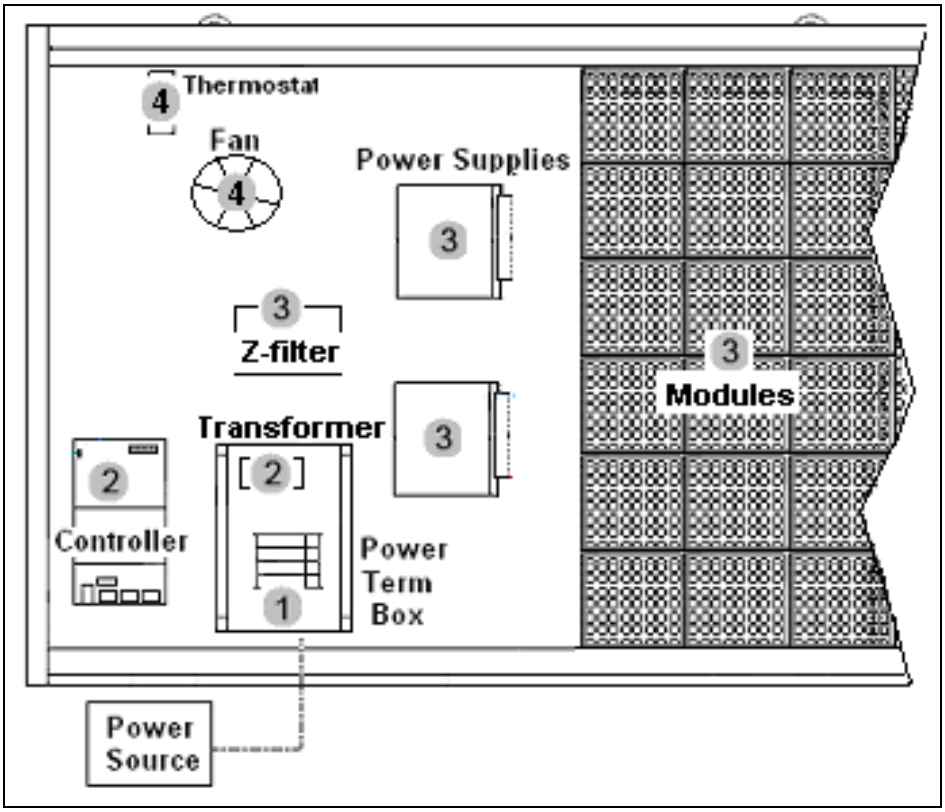


Figure 25: *Power Flow Summary*

Section 4: Signal Installation Overview

Daktronics GalaxyPro® 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 communication signal, consult the quick guide and manual included in the box with the communication equipment. Each type of communication is listed below with its manual number.

Communication Type	Communication Manual ED#
Wireless Ethernet Bridge	**ED-16483**
Ethernet	**ED-14745**
Fiber Ethernet	**ED-14746**

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

4.1 Primary Mirror Display Interconnections

If this display is a two-sided primary/mirror display, a quick-connect cable will be provided to connect the signal between the two display faces. This cable has right-angle plugs at each end. These need to be installed with the cable facing either down or to the side to provide the least stress on the cable. In addition, secure the excess cable to the supports to prevent damage from weather or vandalism (**Figure 26**).

***Figure 26**: Quick-connect Cable*

Larger displays will have more than one quick-connect per display face. Be sure to connect all necessary signal interconnections (**Figure 27**).

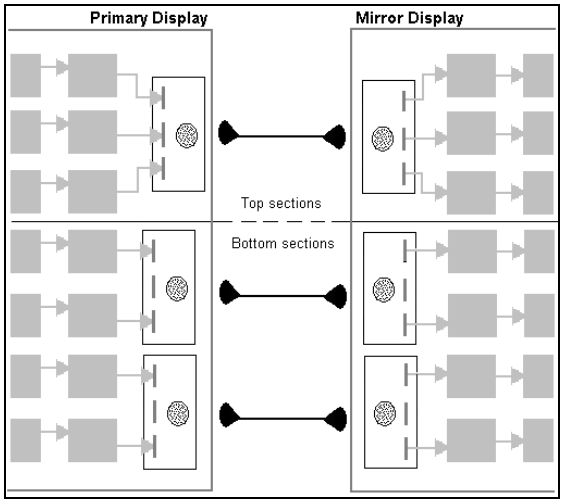


***Figure 27:** Multiple Quick-connect Connections*

4.2 Signal Connections in Sectional Displays

After the sections are attached to each other and mounted to the display structure, signal connections can be made.

Connect the signal ribbon cables from the left modules of the top section to the controller in the bottom left corner of the bottom section. Refer to **Figure 28** and **Figure 30**.

Connect the bonding jumper from the top section to the bottom section by removing the outer nut, sliding the bonding jumper loop onto the screw, and replacing the nut (**Figure 29**).

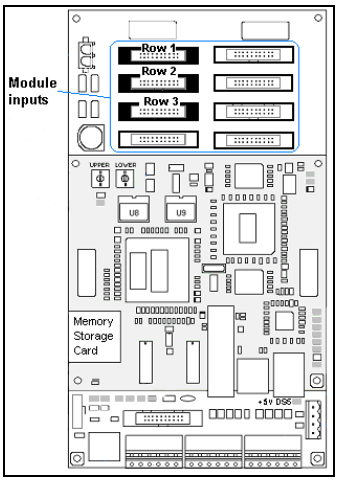


Figure 28: *Module Outputs*

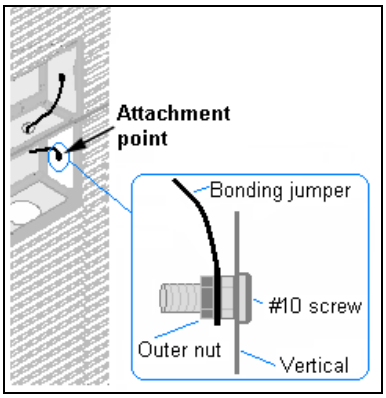


Figure 29: *Bonding Jumper Connection*

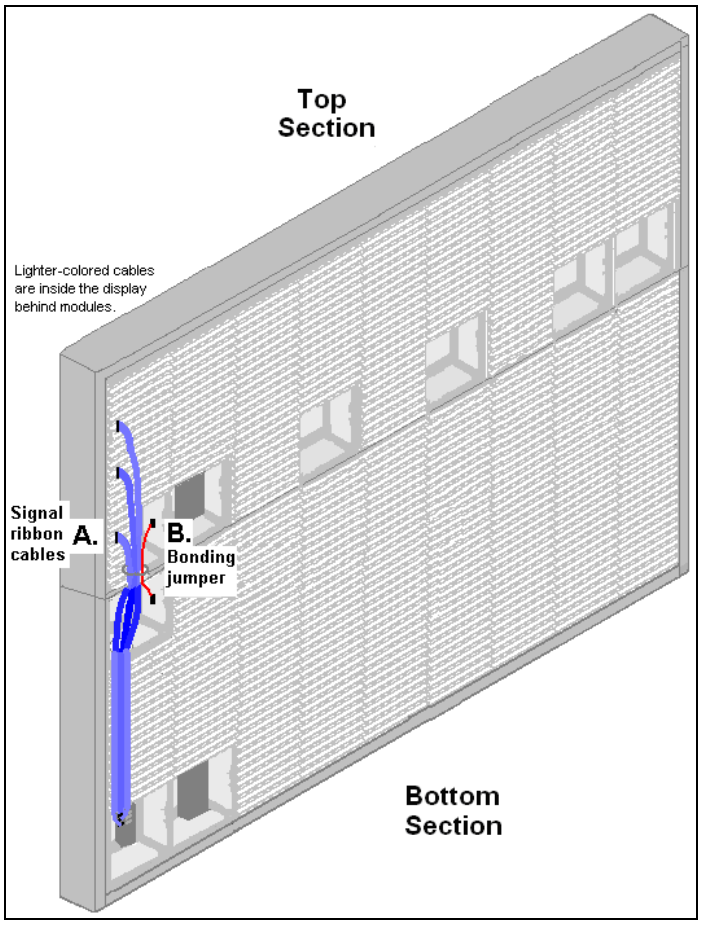


Figure 30: *Signal Connections in Sectional Display*

4.3 Wireless Ethernet Bridge Communication

If the communication system is a Wireless Ethernet Bridge, look for:

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

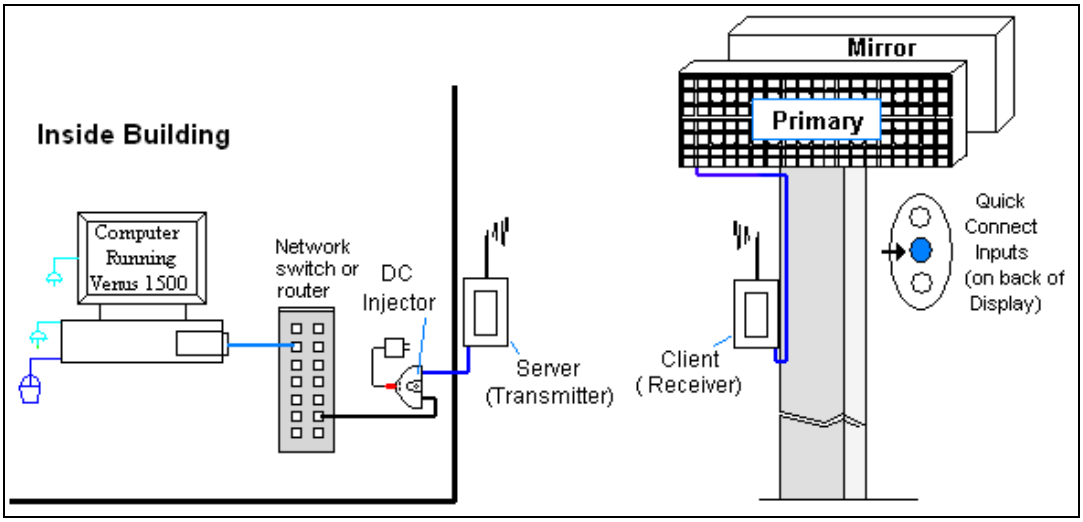


Figure 31: *Wireless Ethernet Bridge Layout*

Connections

- Computer to network – RJ45 cable from computer port into network server in building.
- Network switch to DC injector.
- Wall power adapter from 120 VAC outlet to DC injector.
- Network cable from DC injector to server radio.
- Clear line of sight between server radio and client radio.
- Client radio to display – quick-connect cable to the middle jack on display back.

Troubleshooting	
Component	**Check:**
Cable Connections	• A cable connects the computer to the network. • A cable runs from the server to the DC injector. • A cable runs from DC injector to server radio. • The quick-connect cable is connected from the client radio to the middle jack on back of display.
Diagnostic LEDs	• The green LEDs will be on when DC injector has power. • The server and client radios have internal LEDs. Refer to the Wireless Ethernet manual for their specifications.
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 to the same network address. • Refer to the software manual for other possible conditions.

4.4 Wire Ethernet Communication

If the communication system is Ethernet, look for:

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

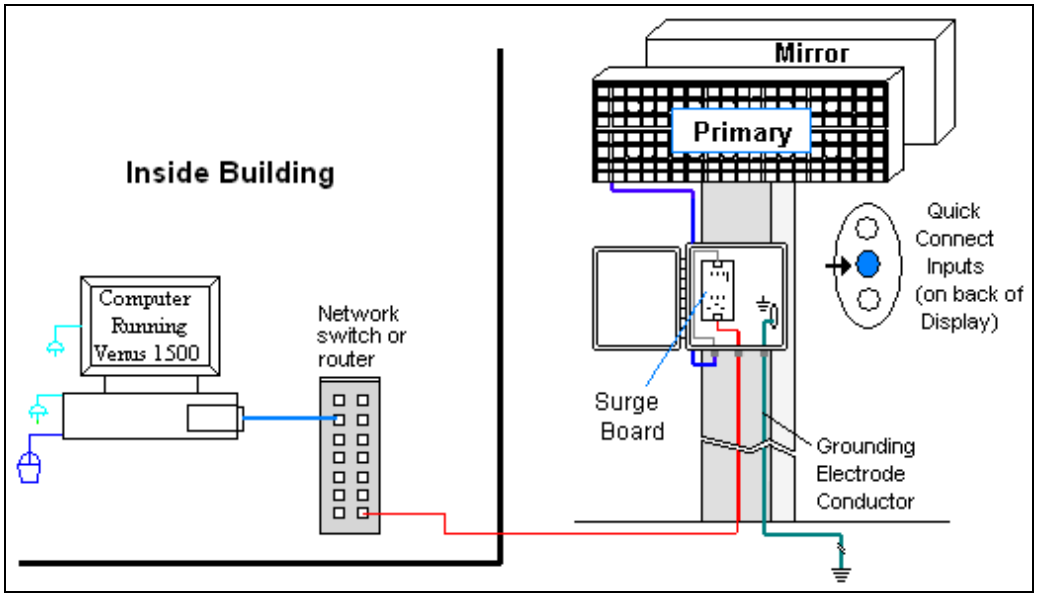


Figure 32: *Ethernet Communication Layout*

Connections

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

Troubleshooting	
Component	**Check:**
Cable Connections	• The network jack connects the computer to the network switch/router. • An RJ45 cable from the server is connected to the input jack on the Ethernet surge board. • The 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 to the same network address. • Refer to the software manual for other possible conditions.

4.5 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.

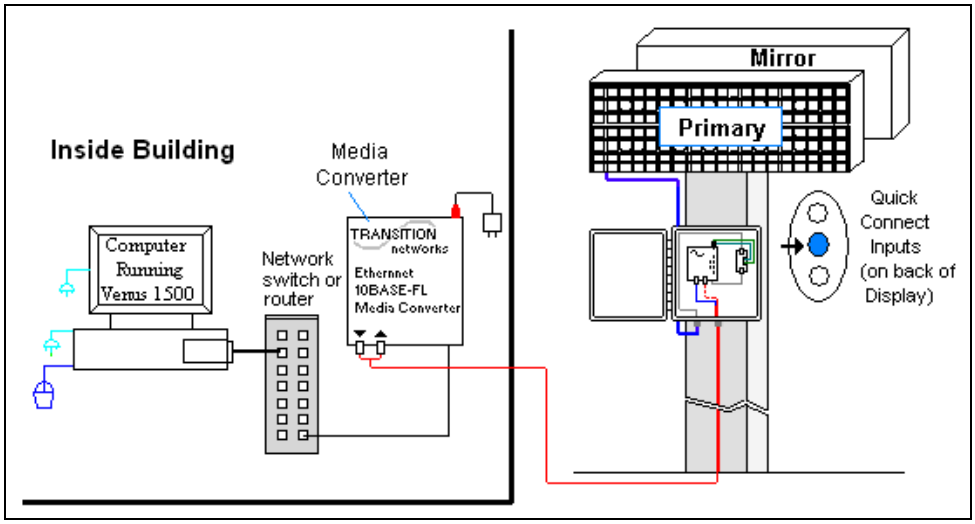


Figure 33: *Fiber Ethernet Communication Layout*

Connections

- Computer to network – RJ45 cable from computer port into network switch.
- Network switch to first media converter – RJ45 cable from network switch/router into media converter.
- Media converter's 9-volt power adapter 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 cable is connected from the computer to the network switch/router. • The network cable connects from network switch/router to media converter in building. • The indoor media converter power adapter 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 quick-connect cable connects from 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 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 to the same network address. • 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 34** 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 outside or inside a building. Refer to **Figure 34** for approximate location of the power cable or conduit.

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

Check that signal connections run between the back of the two display cabinets. Check that power has been connected to both sides. Refer to the illustrations in **Figure 26** and **Figure 27.**

If the display has two sections, are the two sections connected?

Check that both signal and ground connections run between the top and bottom sections.

Is the control computer connected to the display?

An Ethernet or fiber cable will connect the control computer to the display. Refer to **Section 4** for assistance with identifying the communication type and its connections.

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 this display. Follow the step-by-step directions in the software manual's **Configuration** section for correct set-up.

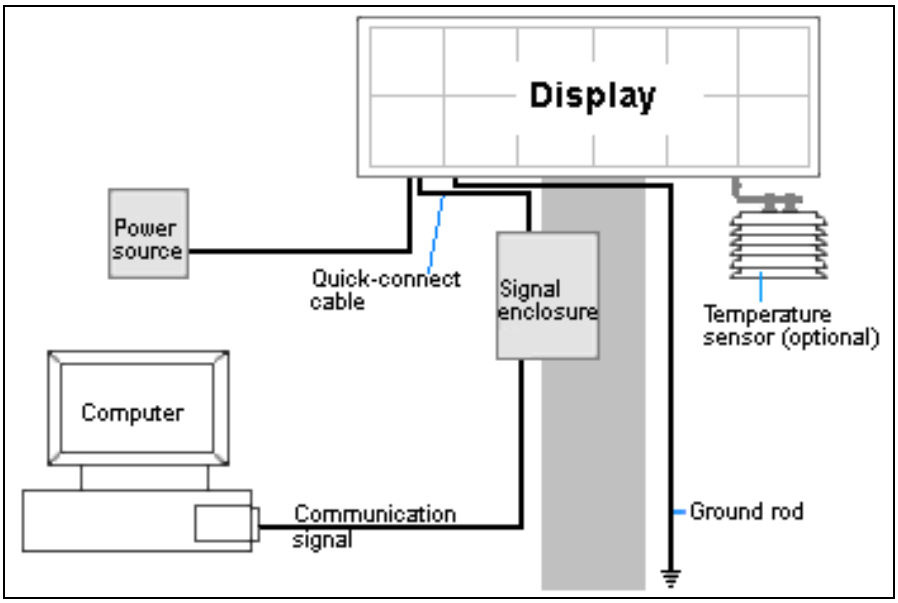


Figure 34: *Basic Display Set-up*

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	• GalaxyPro
2.	Display Size	• Row x Column
3.	Shading	• 16 mil
4.	Bootloader Version	• OS X.XX
5.	Firmware Number	• **ED-16619**
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	• GalaxyPro # 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 are recommended for servicing internal electronic components.
- The Daktronics' engineering staff must approve ANY changes made to the display. Before altering the display, detailed drawings for proposed modifications must be submitted to Daktronics' engineering staff for evaluation and approval, or the warranty will be rendered null and void.

Daktronics GalaxyPro® AF-3700 series 20 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 diagrams (**Figure 35**, **Figure 36**,) show the location of internal components. On larger displays, many internal components will remain in the lower left area of the display and the thermostat will be located in the upper left corner of the bottom section. A second power termination panel will be located in the upper section.

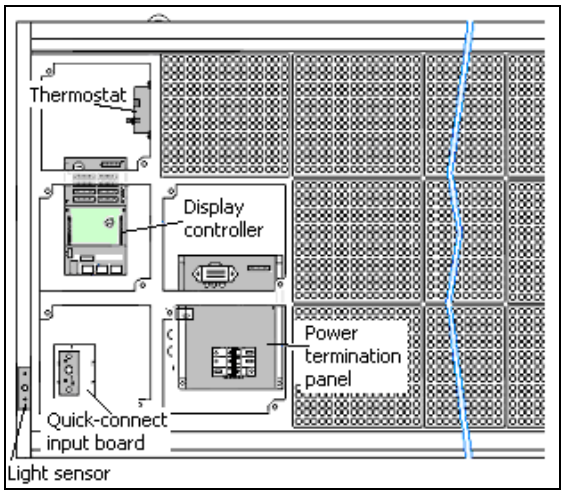


Figure 36: *Internal Components- Single Cabinet*

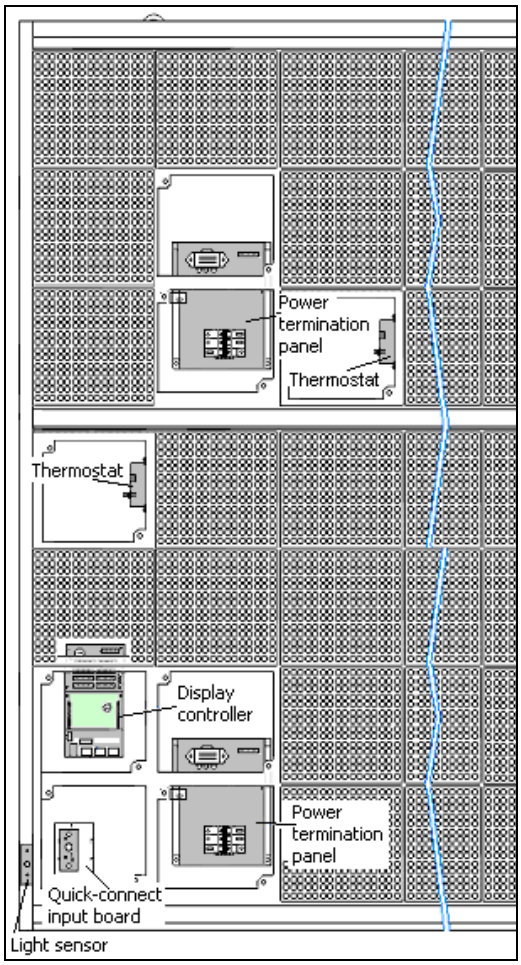


Figure 35: *Internal Components in Sectional*

6.1 Internal Display Access

Daktronics GalaxyPro® displays provide access to internal components by removing the front modules. The display may need to be opened to perform maintenance or for troubleshooting. To access the interior of the display, perform the following steps:

1. **Disconnect power to the display.**
2. Locate the latch access fasteners on the module (**Figure 37**). One is centered below the second row of pixels and one is centered above the bottom two rows.
3. With a $^{1}/_{8}$" hex wrench, turn the latch access fasteners a quarter turn counter-clockwise. Gently pull the module far enough forward to reach behind the back and disconnect the power and ribbon cables (**Figure 38**). 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 by turning the hex wrench clockwise a quarter turn.

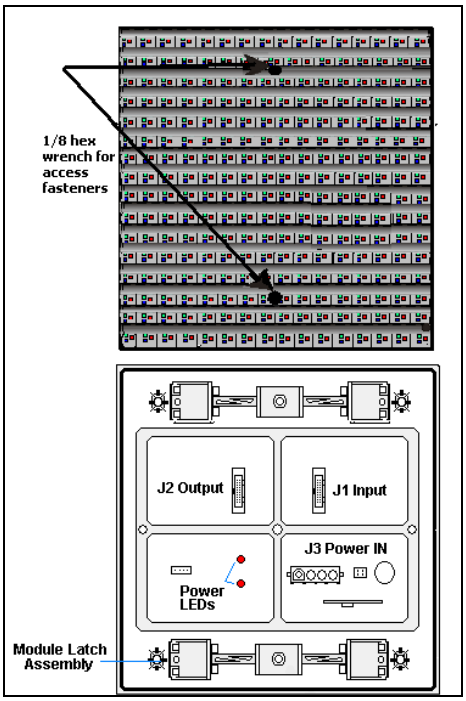


Figure 37: *Module Access Locations*

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.

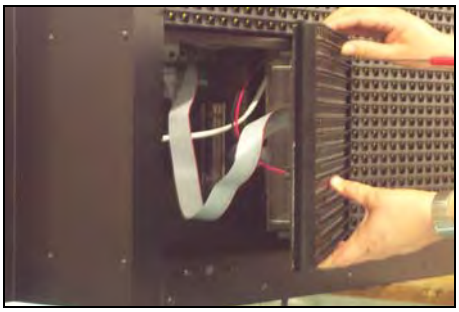


Figure 38: *Removing a Module*

6.2 Ventilation System/ Fans

Frequency of Inspection

In displays smaller than 64 pixels high, ventilation fans are located along the bottom of the display. The fans pull air into the cabinet from the lower vent, exhausting air out the top vent (**Figure 39**). Displays 64 pixels high and larger have fans mounted on the back of the display, pulling air from the front vents and out through hoods (**Figure 40**). Sectional displays have fans in both top and bottom sections. Air is pulled in either top or bottom vent and out the back.

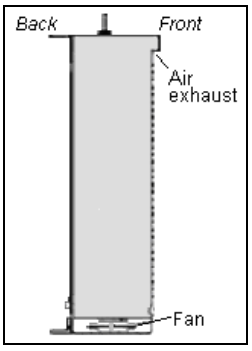


Figure 39: *Air Exhaust in Smaller Displays*

Fans should be checked every time the display is opened or at a minimum of once per year. Check more often if the display is located in a dusty or harsh environment, such as along a gravel road.

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 that the fan is still in balance.

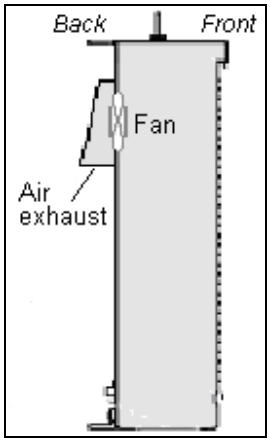


Figure 40: *Air Exhaust in Larger Displays*

Air Flow

To check the operation of the fans, open the display to expose the thermostat. To locate the thermostat, refer to **Figure 35** and **Figure 36**. Push the bypass button on the thermostat enclosure to temporarily turn on the fans (**Figure 42**). If a fan does not rotate or does not operate smoothly, replace it.

Make sure that the intake vents on the bottom front and the exhaust vents on the top front of the display are not blocked and are free of dust or other debris. Hold a piece of lightweight paper in front of the top edge of the display to detect air movement through the vents.

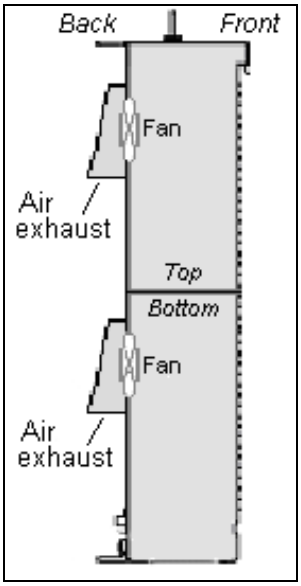


Figure 41: *Air Exhaust in Sectionals*

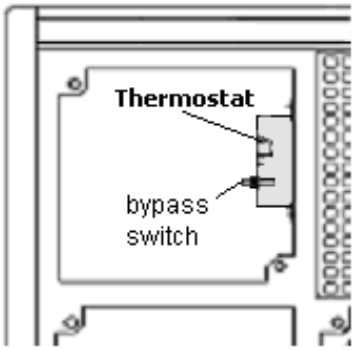


Figure 42: *Thermostat*

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 directions to access the interior. The inspection should address the following issues:

Inspection item	Possible corrective measures
Loose bolts, screws, rivets	• Tighten or replace, as required.
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 footings for structural integrity. • Replace and/or repaint as necessary. • Check ground wire connections at ground rod and ground lug.

Section 7: Diagnostics and Troubleshooting

This section defines the diagnostic LEDs located on the controller and the temperature sensor. Troubleshooting tips are also provided for solving display problems.

Safety Precautions

Disconnect power when servicing the display.

Qualified service personnel are recommended for servicing internal electronic components.

7.1 Controller Diagnostics

The controller is the "brains" of the display, receiving communication from the computer and then sending the appropriate information to the modules. The controller is located in the lower left area (**Figure 43)** in both single-section and two-section displays. The LEDs on the controller are able to show whether the power and communication signal are working properly.

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.

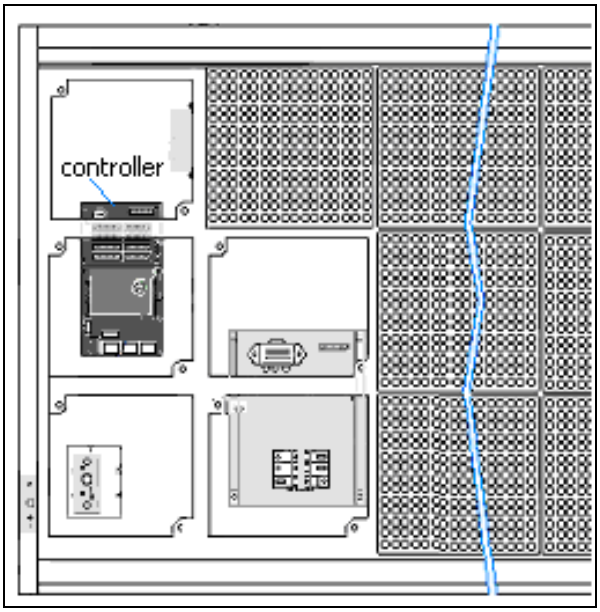


Figure 43: *Controller Locations*

Remember to disconnect 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.

A GalaxyPro controller is illustrated in **Figure 44** with essential diagnostic LEDs labeled. The table explains the information that each of these LEDs provides.

Figure label	LED #	Operation
Run	DS4	Steady FLASH about once per second indicates controller is working properly.
Send signal	DS3	OFF is the normal state. FLASH when transmitting communication from the computer.
Receive signal	DS2	OFF is the normal state. FLASH when receiving communication from the computer.

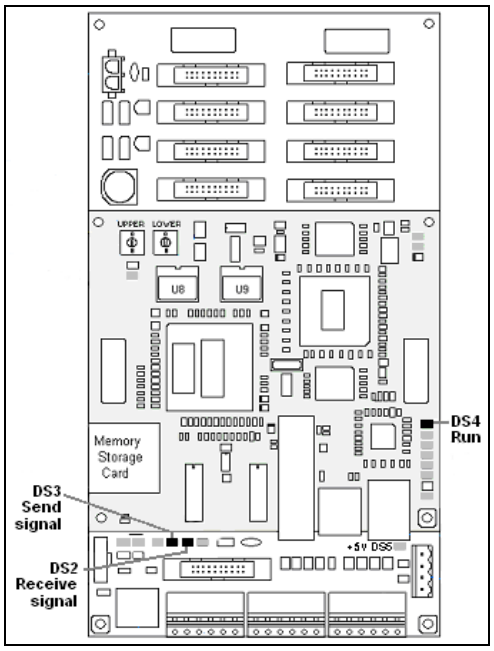


Figure 44: *Controller Diagnostics*

7.2 Temperature Sensor Diagnostic

If the display includes a temperature sensor, the temperature sensor board will also provide diagnostic information. The temperature sensor board is located inside the temperature sensor housing which is located near the display (**Figure 45**). The sensor board diagram below shows the red diagnostic LED (DS2) near the bottom edge of the component.

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

Refer to **Appendix C** for temperature sensor mounting and connections.

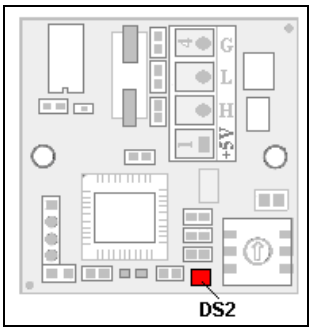


Figure 45: *Temperature sensor board*

7.3 Troubleshooting Display Problems

This section contains some symptoms that may be encountered with 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

- Check/replace ribbon cables from the last working module in the row to the first non-working module next to it (**Figure 46**).
- Check the back of the modules to see that the power LEDs are on.
- Make sure the power cable to the module is connected.
- Move or replace the first non-working module with the one on the far left of the non-working section.
- Move or replace the first module to the left of the non-working modules.

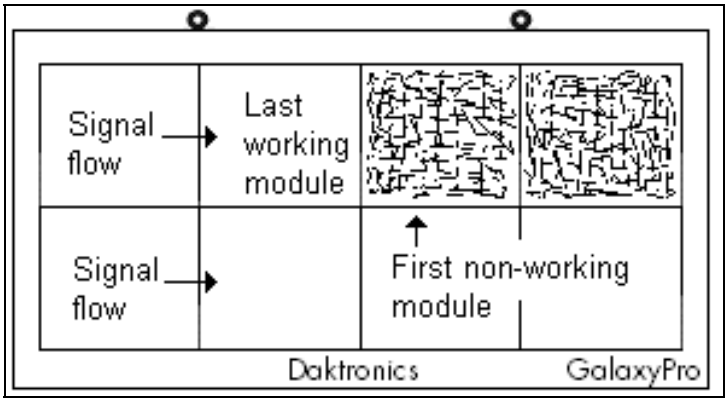


***Figure 46**: Modules Not Working*

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.
- 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 first module to the left of the one that isn't working.
- Check the fuse from the power supply output and replace if necessary.

A column of the display does not work.

- Check that the power cable is plugged into the module in the column.
- While power is on, look at the back of the malfunctioning module(s) to see if the diagnostic LED is off, implying a power supply problem.
- Check the power supply fuse and replace as necessary.
- Verify power to the power supply.

Entire display fails to work

- Check the breakers in the building connected to main power source.
- Check the breakers in the power termination panel (bottom row, second module from left).
- Check the diagnostic LEDs on the controller for Power and Run (**Section 7.1**).
- Check/replace the ribbon cable 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*, select **Automatic** and click **Set Brightness**.
- Check the light sensor cable and wiring for secure connections.
- Check the light sensor lens for obstructions (lower 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 (ED-13530).

Message problems

Blank display 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 LED 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 and run, the flashing LED 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 the power, then turn it back on and observe the two display faces.

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

- 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 controller(s).
- 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 simultaneously.

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

Showing 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 and run the message and the temperature will now be shown.

Note: The temperature sensor must be correctly installed before a current 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 slider bar to adjust the temperature being shown. The change made will be shown next to the bar. 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**.
2. Click on the name of the chosen display under the *Display List*, then choose **Cycle All** for the complete sequence or use the arrow to choose the specific test to be shown. 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. Check the Communication and Troubleshooting sections of this manual.
4. Call the service technician or Daktronics Customer Service at 866-343-3122.

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

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

Information needed for technicians and/or Customer Service	**Fill in the blank**
Location address of the display:	
Model number of the display:	**AF-3700**
Version of software being used: *(Right-click on Venus 1500 name in toolbar, choose "About Venus 1500")*	**Venus 1500 v.** _____
Method of communication being used: *(See Section 4 for guidance)*	
Controller version used in the display:	**M3 controller**

Section 8: Parts Replacement

This section covers the replacement of parts in a GalaxyPro display. The first section provides a list of parts and their Daktronics part numbers. The second section gives instructions for replacing the most basic parts. For information on obtaining replacement parts from Daktronics, refer to **Section 9**.

Disconnect power when servicing the display.

Qualified service personnel are recommended for servicing internal electronic components.

8.1 About Replacement Parts

Daktronics AF-3700 GalaxyPro® 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. **Appendix B** provides information about the connectors referenced in the replacement instructions.

This section provides replacement instructions for the following parts:

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

These components are generally located as shown in **Figure 47**. Note that sectional displays (those 112 and 128 pixels high) contain a power termination panel and thermostat in each section. Also, larger displays will contain more than one signal connection between primary and mirror displays. Check the **Layout Drawing** in **Appendix A** for the specific display size to find the exact location of components.

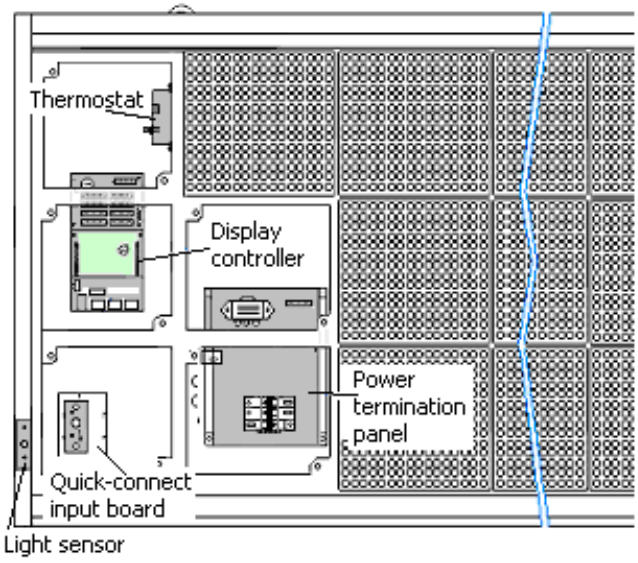


Figure 47: *Interior Location of Components*

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, use the label to order a replacement. 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 48** 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 **Appendix B**.

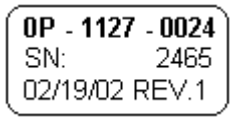


Figure 48: *Typical Label*

Part Description	Part Number
Module, 1R1G1B,	0A-1266-4650
Controller, GalaxyPro	0A-1382-0001
Power Supply Assembly, w/o harness, 600 watt	0A-1327-0016
Power Supply Assembly, w/o harness, 1,000 watt	0A-1327-0017
Transformer, Pri 115V, Sec 10VCT@3A	T-1119
Transformer, Pri 115/230V, Sec 10VCT@2.5A	T-1121
Filter, RFI Line 20 AMP 120 VAC	Z-1007
Automotive Fuse, 32 volt 15 amp	F-1048
Digital Temperature Sensor (PCB)	0P-1247-0008
Thermostat	0A-1327-3101
Light Sensor circuit board	0P-1151-0002
Fan; 110 CFM, 240V @60Hz, 24-29 watt	B-1011
Fan; 134 CFM, 120V @60Hz, 22 watt (16-48 high)	B-1053
Fan; 245 CFM, 120V @60Hz, 46-50 watt	B-1019
Fan; 245 CFM, 240V @60Hz, 46-50 watt	B-1020
Primary signal input	0A-1327-1000
Primary signal output	0A-1327-1015
Mirror signal input	0A-1327-1016
Ribbon Cables; 20 Position	
Cable Assy; 20 pos Ribbon, 18", Dual Row	W-1387
Ribbon Assy; 20 Pos, 24"	0A-1000-0016
Ribbon Assy; 20 Pos, 30"	0A-1000-0017
Ribbon Assy; 20 Pos, 42"	0A-1000-0019
Ribbon Assy; 20 Pos, 60"	0A-1000-0021
Ribbon Assy; 20 Pos, 72"	0A-1000-0022
Ribbon Assy; 20 Pos, 84"	0A-1000-0023
Interconnect Cable; 31-pin male to 31-pin male, 6', QC	W-1503
Memory Storage Card, 2 GB	A-2193
Electrical Contact Cleaner Lubricant / Cal-Lube	CH-1019
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 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 can be removed separately without moving other components of the display.

1. **Turn off power to the display.**
2. Follow the instructions in **Section 6.1** to release the module from the display cabinet (**Figure 50**).
3. Disconnect the two ribbon cables from the module, noting how they are connected to the back. Release ribbon cables by spreading the tabs on the sides and then lifting the cable head from the jack (**Figure 49**).
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 by turning the hex wrench a quarter turn clockwise.

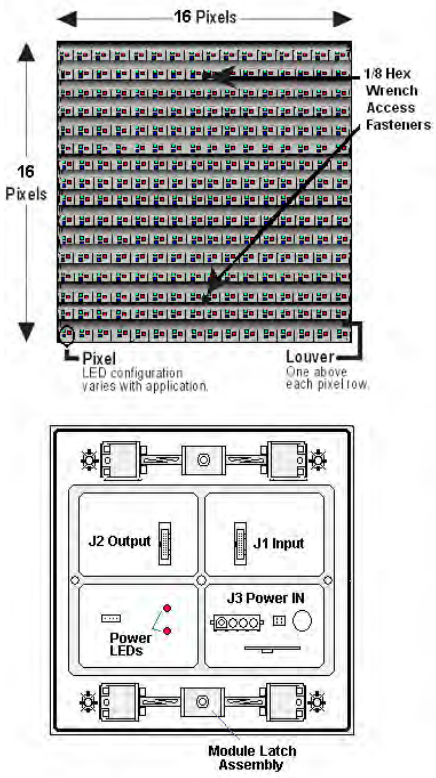


Figure 49: *Module, Front/Back*

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 50: *Removing a Module*

Controller Replacement

Complete the following steps to replace a controller in the display:

Tools required: $^{1}/_{8}$" hex wrench and $^{5}/_{16}$" nut driver

1. **Turn off power to the display.**
2. Remove the module directly in front of the controller in the lower left area of the display. Refer to **Figure 47** for the exact location.
3. Disconnect the power input.
4. Remove all power and signal connections from the board. Label the cables as they are removed to insure proper replacement.
5. Remove the six nuts holding the board in place using a $^{5}/_{16}$" nut driver.
6. Take note of the rotary address on the controller and ensure the address on the replacement board is the same (**Figure 52**).
7. Remove the memory storage card on the old controller and insert it into the new controller. Refer to the next page for additional information.
8. To install the new controller, replace the six nuts holding it to the display back. Reconnect power and signal cables. Turn on power, observing the boot-up sequence, and then note that the LED in the lower right corner shows power.

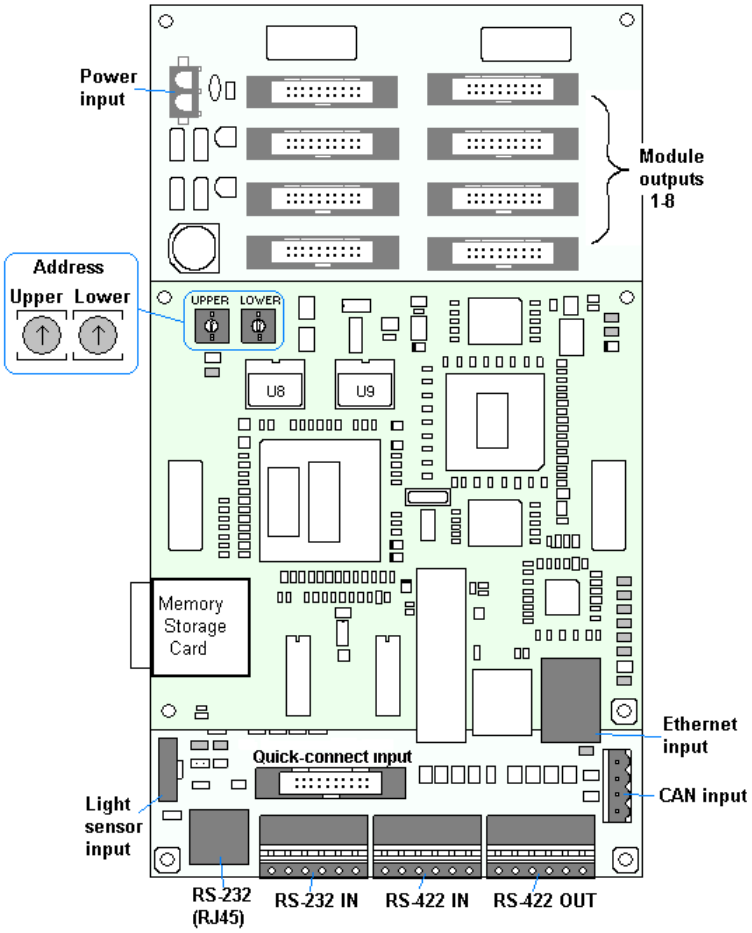


Figure 51: *GalaxyPro Controller*

Controller Address Setting

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

To set the rotary address switches, rotate them 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 an address.

Note:

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

- After testing, reset the rotary switches to an address other than 0/0. The software will not recognize an address of 0.

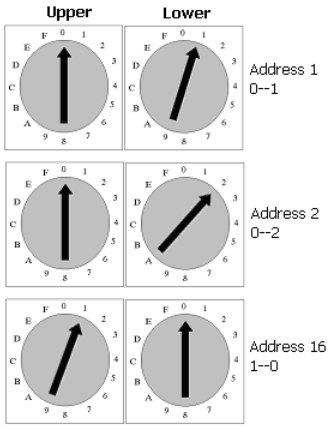


Figure 52: *Rotary Address Switches*

Memory Storage Card

Do not remove the memory storage card with power connected to the controller – critical damage will result.

The controller in the GalaxyPro display contains a 2 GB memory storage card. This card stores the configurations, messages, schedules and fonts created by the control software. The memory storage card can be moved if a controller needs to be replaced or if the information stored on it needs to be used on another display. The information on the card will automatically be recognized and available for use by the display, thus eliminating the need to reconfigure a display.

To remove the memory storage card, disconnect power and then gently push in on the edge of the card. The card will spring out of its location on the controller.

To install a memory storage card, slide it into the slot on the side of the controller. Push it gently in until a click is felt. The card should now be held firmly in the slot.

Warning! The memory storage card is specifically designed to work with the GalaxyPro controller. **Do not** attempt to reprogram or move files by inserting this card in a computer or other device. The card will then no longer function correctly in the controller.

Power Supply Replacement

Power supplies in GalaxyPro displays come in two basic types. Displays that are 16 pixels high use 600-watt power supplies that will each run up to six modules. All other displays use 1,000-watt power supplies. These run up to 12 modules each.

The power supply contains a power distribution board on one edge that receives 120 VAC or 240 VAC power and then supplies DC power to the modules. Each module is connected to a jack on the power distribution board by a Mate-n-Lok cable. Refer to **Figure 54**.

The fuses on the power distribution board are 32 volt 15 amp automotive fuses. Each jack has a corresponding fuse just above it. Refer to **Figure 53**.

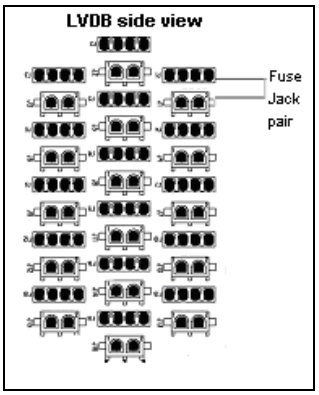


Figure 53: *Jacks and Fuses on RGB Power Supply*

Complete the following steps to replace a power supply:

Tool required: Phillips screwdriver

1. **Turn off power to the display.**
2. Remove the module directly in front of the appropriate power supply. Refer to the **Layout Drawings** in **Appendix A** for exact location.
3. Disconnect the Mate-n-Lok® connectors from the power source as well as those going to the modules.
4. Loosen the screw holding the power supply bracket to the cabinet upright and lift it off the hooks.
5. Carefully pull the power supply out of the cabinet.
6. Move the new power supply into place and tighten the screw on the support bracket.
7. Reconnect all the Mate-n-Lok® plugs so that each module will receive power.

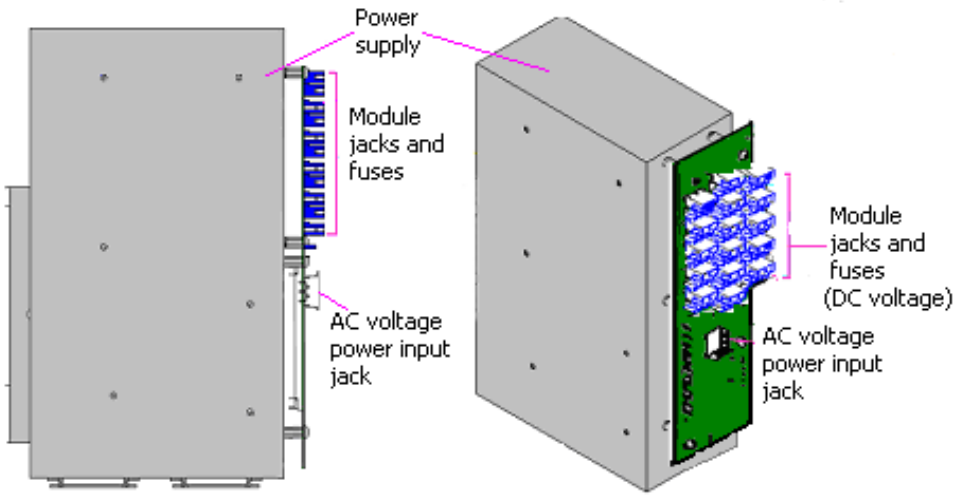


Figure 54: *Power Supply with Power Distribution Board*

Light Sensor Replacement

The light sensor assembly is mounted inside the bottom left edge of the cabinet. Refer to **Figure 43** for location. The entire assembly fits over two screws.

If the light sensor should fail, only the circuit board needs to be replaced. Remove the bottom left module on the display to access the light sensor. To replace a light sensor circuit board (**Figure 55**), 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.

Tool required: #4 hex driver, Phillips screwdriver

1. Remove the screws that hold the light sensor to the cabinet.
2. Remove the #4-40 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 so that they can be reconnected in the same locations on the replacement.
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 ½" circular opening in the bottom left edge of the display when the assembly is in place.

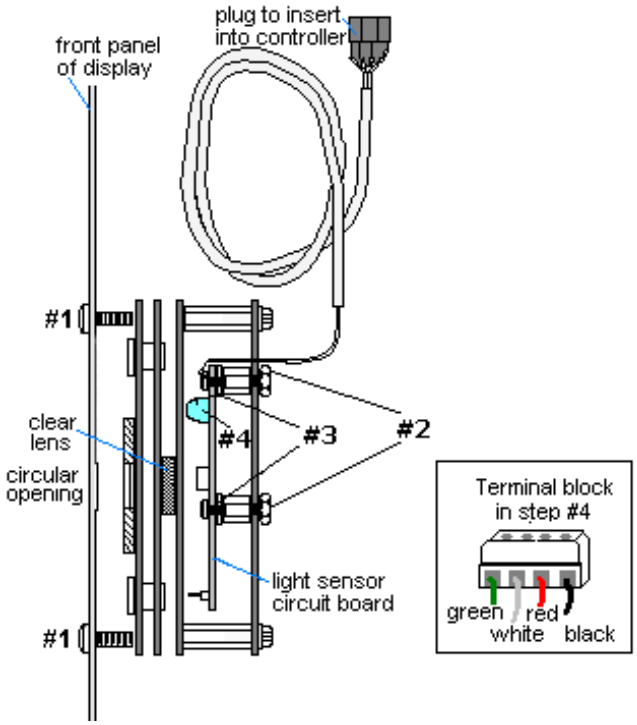


Figure 55: *Light Sensor Assembly*

Temperature Sensor Replacement

The temperature component is a small sensor board inside a plastic housing. This will be mounted outside, typically either near the display or near the building. If a problem appears, the internal sensor can be replaced by accessing it in the following method: (Refer to **Figure 57**)

Tool required: #8 hex driver, Phillips screwdriver

1. Open the temperature sensor housing by removing the four #8-32 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 56**) and then reassemble the sensor enclosure.

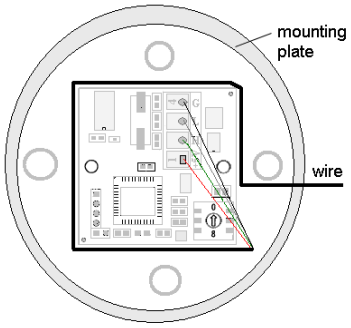


Figure 56: *Wire around Sensor Board*

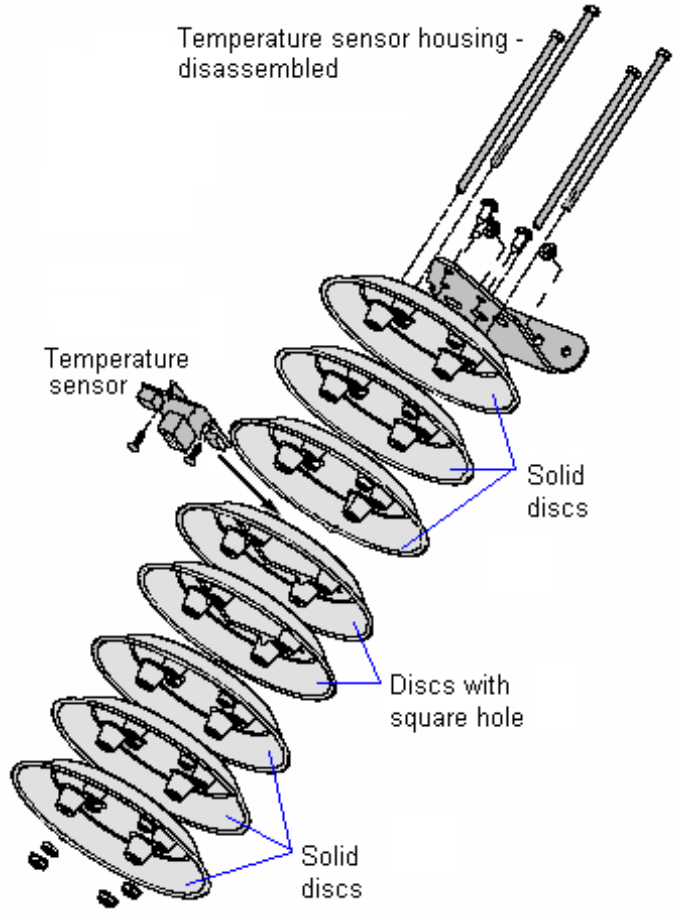


Figure 57: *Temperature Sensor*

Section 9: Daktronics Exchange and Repair & Return Programs

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

9.1 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 problem part to Daktronics. This decreases display downtime.

Before Contacting Daktronics

Print any important part numbers here:

_____

_____

_____

Fill in these numbers before calling Customer Service:

Display Serial Number: _____

Display Model Number: ____GalaxyPro AF-3700 20mm_____

Contract Number: _____

Date Installed: _____

Location of Display: _____

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.

9.2 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.

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

9.3 Daktronics Warranty and Limitation of Liability

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

Appendix A: Reference Drawings

Following are the **Power Specifications, Shop Drawings**, and **Layout Drawings** for GalaxyPro displays. Note that each drawing includes all height choices and a range of lengths. In the first Layout drawing, the length ranges from 48-224 pixels. Be sure to refer to the drawing which correlates with the size of the specific display since components will be located in different areas according to display size.

Controller, ProStar 2x14, 8conn J1087 TB ..... **Drawing B-261561**
Power Specs, AF-3700-(16-96)x*20-RGB-*-domestic ..... **Drawing B-266279**
Power Specs, AF-3700-(16-96)x*20-RGB-*-international ..... **Drawing B-296527**
Power Specs, AF-3700(112-128) x*-20-RGB-*-domestic ..... **Drawing B-310532**
Power Specs, AF-3700(112-128) x*-20-RGB-*-international ..... **Drawing B-311945**

Schematic, AF-3700-20-RGB-P/M,*, General ..... **Drawing B-266235**
Schematic, AF-3700-16x***-20-RGB-P/M, General ..... **Drawing B-266735**

Listed by ranges of pixel width
Layout, EE/ME, AF-3700-** x (48-224)-20 RGB ..... **Drawing C-263663**
Layout, EE/ME, AF-3700-** x (240-320)-20 RGB ..... **Drawing C-263664**
Layout, EE/ME, AF-3700-** x (336-400)-20 RGB ..... **Drawing C-263665**

Layout, AF-3700-(112-128) x (48-384)-20 ..... **Drawing C-309253**

Listed by pixel height
Shop Dwg, AF-3700-16 x ***-20 ..... **Drawing B-269369**
Shop Dwg, AF-3700-32 x ***-20 ..... **Drawing B-269370**
Shop Dwg, AF-3700-48 x ***-20 ..... **Drawing B-269371**
Shop Dwg, AF-3700-64 x ***-20 ..... **Drawing B-269372**
Shop Dwg, AF-3700-80 x ***-20 ..... **Drawing B-269373**
Shop Dwg, AF-3700-96 x ***-20 ..... **Drawing B-269374**
Shop Dwg, AF-3700-112 x ***-20 ..... **Drawing B-310159**
Shop Dwg, AF-3700-128 x ***-20 ..... **Drawing B-310161**

J8			
PIN	FUNCTION	PIN	FUNCTION
1	D1IN-P	A	I/O_00
2	D1IN-N	B	D1OUT-P
3	+V_UNREG	C	D1OUT-N
4	TX_COM1	D	AGND_IN
5	GND	E	D2_OOUT-N
6	D2OUT-P	F	D2IN-N
7	RX_COM1	H	D2IN-P
8	DCD_COM1	J	AGND
9	CANH	K	+5V_CAN
10	CANL	L	GND_CAN

INSTALL JUMPER FOR MODEM USE.

J9			
PIN	FUNCTION	PIN	FUNCTION
1	LIGHT-P	6	N.C.
2	LIGHT-N	5	SHIELD-N
3	+5V-P	4	GND-N

INSTALL JUMPER FOR RESET USE.

M3 PRODUCT BOARD: OP 1229 0027 — HC 1395 SCREW

M3 CNTRLR COATED: OP 1382 0002 — HE 1071 STANDOFF — HC 1395 SCREW

TYPICALLY @4 PLACES

LL 1002 ASSY # SERIAL # DATE: REV XX

J3

PIN	FUNCTION
1	GND
2	RTS
3	I/O
4	TX
5	GND
6	RX
7	DCD
8	GND

RS232 IN

TB1

PIN	FUNCTION
1	+VUNREG
2	CLIN+
3	TX
4	GND
5	RX
6	CLIN-

RS232 IN

TB2

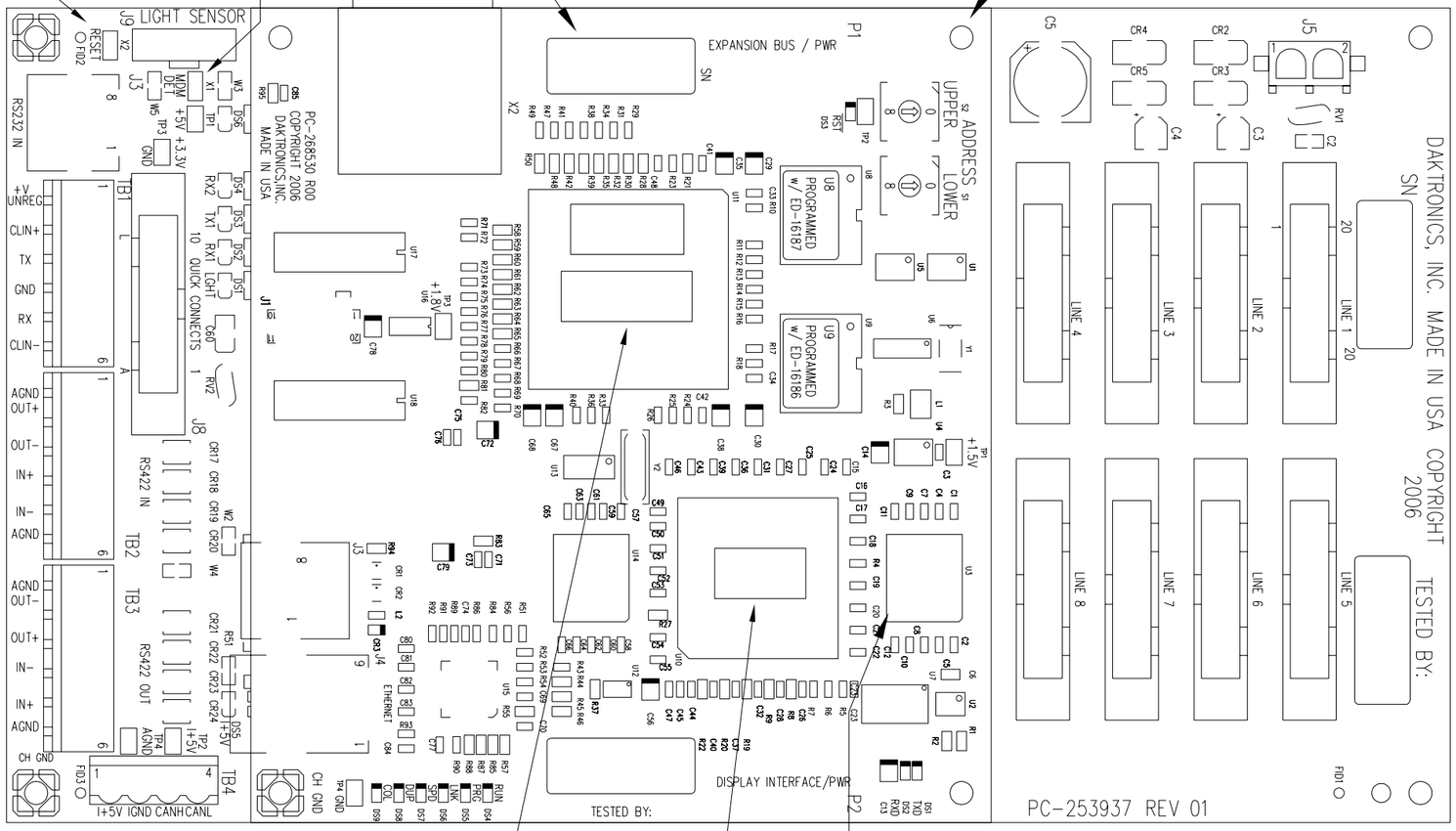
PIN	FUNCTION
1	AGND
2	D1OUT+
3	D1OUT-
4	D1IN+
5	D1IN-
6	AGND

RS422 IN

TB3

PIN	FUNCTION
1	AGND
2	D2OUT-
3	D2OUT+
4	D2IN-
5	D2IN+
6	AGND

RS422 OUT



J5	
PIN	FUNCTION
2	10VAC
1	10VAC

J11-18

FUNCTION	PIN	PIN	FUNCTION
GRN_00	1	20	RED_00
GND	2	19	RETURN_DATA
GND	3	18	XLAT
GND	4	17	BLANK
MUX2	5	16	BLU_00
MUX0	6	15	RED_01
GND	7	14	GS_CLK_DCLK
GND	8	13	GRN_01
MUX1	9	12	BLU_01
GND	10	11	CNTRL_DATA

TB4

PIN	1	2	3	4
FUNCTION	I+5V	IGND	CANH	CANL

ETHERNET J4

PIN	FUNCTION
1	TX+
2	TX-
3	RX+
4	CHGND
5	CHGND
6	RX-
7	CHGND
8	CHGND

LL 1002 FIRMWARE REVISION DATE

LL 1002 EPLD PROGRAM REVISION DATE

UPPER / LOWER ADDRESS SWITCHES

LL 1002 TESTED BY DATE

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: CNTRLR, PROSTAR 2X14, 8CONN, J1087, TB

DES. BY: DRAWN BY: M.RICHARDSON DATE: 30 MAY 06

REV.	DATE	DESCRIPTION	BY	APPR.
01	20 SEP 06	0A-1382-0001 REV 05 PACKET - REMOVED LOCK WASHER (HC-1149 @4) FROM M3 STANDOFF ASSY.	MER	

REVISION 01 APPR. BY: SCALE: 1=1

1229-R10B-261561

POWER SPECIFICATION CHART

MATRIX SIZE	WATTS	120/240VAC, 60 Hz (3 WIRE + GND)		120/208VAC, 60 Hz (4 WIRE + GND)		
		LINE 1 AMPS	LINE 2 AMPS	PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
16X48	318	2.47	0.18	120/208VAC NOT AVAILABLE FOR THESE SIZES.		
16X64	434	3.25	0.37			
16X80	528	4.03	0.37			
16X96	622	4.81	0.37			
16X112	715	4.81	1.15			
16X128	831	4.81	2.11			
16X144	925	4.81	2.89			
16X160	1041	4.81	3.86			
16X176	1134	4.81	4.64			
16X192	1228	4.81	5.42			
16X208	1344	5.59	5.60			
16X224	1438	6.38	5.60			
16X240	1553	7.16	5.79			
16X256	1647	7.94	5.79			
16X272	1763	8.72	5.97			
16X288	1857	9.50	5.97			
16X304	1972	9.50	6.94			
16X320	2066	9.50	7.72			
16X336	2182	9.50	8.68			
16X352	2276	9.50	9.46			
16X368	2391	9.50	10.43			
16X384	2485	9.50	11.21			
32X48	622	4.81	0.37	4.81	0.00	0.37
32X64	809	6.38	0.37	6.38	0.00	0.37
32X80	1019	7.94	0.55	7.94	0.00	0.55
32X96	1206	9.50	0.55	9.50	0.00	0.55
32X112	1416	9.50	2.30	9.50	1.56	0.73
32X128	1603	9.50	3.86	9.50	3.13	0.73
32X144	1813	9.50	5.60	9.50	4.69	0.92
32X160	2000	9.50	7.17	9.50	6.25	0.92
32X176	2210	9.50	8.91	9.50	7.81	1.10
32X192	2397	9.50	10.48	9.50	9.38	1.10
32X208	2607	11.06	10.66	9.50	9.38	2.85
32X224	2794	12.63	10.66	9.50	9.38	4.41
32X240	3004	14.19	10.84	9.50	9.38	6.15
32X256	3191	15.75	10.84	9.50	9.38	7.72
32X272	3401	17.31	11.03	9.50	9.38	9.46
32X288	3588	18.88	11.03	9.50	9.38	11.03
32X304	3798	18.88	12.77	11.06	9.38	11.21
32X320	3985	18.88	14.33	12.63	9.38	11.21
32X336	4195	18.88	16.08	14.19	9.38	11.39
32X352	4382	18.88	17.64	15.75	9.38	11.39
32X368	4592	18.88	19.39	17.31	9.38	11.58
32X384	4779	18.88	20.95	18.88	9.38	11.58

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MATRIX SIZE	WATTS	120/240VAC, 60 Hz (3 WIRE + GND)		120/208VAC, 60 Hz (4 WIRE + GND)		
		LINE 1 AMPS	LINE 2 AMPS	PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
48X48	903	7.16	0.37	7.16	0.00	0.37
48X64	1184	9.50	0.37	9.50	0.00	0.37
48X80	1487	9.50	2.89	9.50	2.34	0.55
48X96	1769	9.50	5.24	9.50	4.69	0.55
48X112	2072	9.50	7.76	9.50	7.03	0.73
48X128	2353	9.50	10.11	9.50	9.38	0.73
48X144	2656	11.84	10.29	9.50	9.38	3.26
48X160	2938	14.19	10.29	9.50	9.38	5.60
48X176	3241	16.53	10.48	9.50	9.38	8.13
48X192	3522	18.88	10.48	9.50	9.38	10.48
48X208	3825	18.88	13.00	11.84	9.38	10.66
48X224	4107	18.88	15.35	14.19	9.38	10.66
48X240	4410	18.88	17.87	16.53	9.38	10.84
48X256	4691	18.88	20.22	18.88	9.38	10.84
48X272	4994	21.22	20.40	18.88	11.72	11.03
48X288	5276	23.56	20.40	18.88	14.06	11.03
48X304	5579	25.91	20.58	18.88	16.41	11.21
48X320	5860	28.25	20.58	18.88	18.75	11.21
48X336	6163	28.25	23.11	18.88	18.75	13.74
48X352	6445	28.25	25.45	18.88	18.75	16.08
48X368	6748	28.25	27.98	18.88	18.75	18.61
48X384	7029	28.25	30.33	18.88	18.75	20.95
64X48	1220	9.50	0.67	9.50	0.00	0.67
64X64	1595	6.38	6.92	6.38	6.25	0.67
64X80	1970	7.94	8.48	7.94	7.81	0.67
64X96	2385	9.50	10.38	9.50	9.38	1.00
64X112	2760	12.63	10.38	9.50	9.38	4.13
64X128	3175	15.75	10.71	9.50	9.38	7.58
64X144	3550	18.88	10.71	9.50	9.38	10.71
64X160	3965	15.75	17.29	15.75	9.38	7.92
64X176	4340	17.31	18.85	17.31	9.38	9.48
64X192	4755	18.88	20.75	18.88	9.38	11.38
64X208	5130	22.00	20.75	18.88	12.50	11.38
64X224	5545	25.13	21.08	18.88	15.63	11.71
64X240	5920	28.25	21.08	18.88	18.75	11.71
64X256	6335	25.13	27.67	18.88	15.63	18.29
64X272	6710	26.69	29.23	18.88	17.19	19.85
64X288	7125	28.25	31.13	18.88	18.75	21.75
64X304	7500	31.38	31.13	22.00	18.75	21.75
64X320	7915	34.50	31.46	25.13	18.75	22.08
64X336	8290	37.63	31.46	28.25	18.75	22.08
64X352	8705	34.50	38.04	25.13	25.00	22.42
64X368	9080	36.06	39.60	26.69	26.56	22.42
64X384	9495	37.63	41.50	28.25	28.13	22.75

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MATRIX SIZE	WATTS	120/240VAC, 60 Hz (3 WIRE + GND)		120/208VAC, 60 Hz (4 WIRE + GND)		
		LINE 1 AMPS	LINE 2 AMPS	PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
80X48	1461	7.94	4.24	7.94	3.91	0.33
80X64	1970	7.94	8.48	7.94	7.81	0.67
80X80	2439	11.84	8.48	7.94	7.81	4.57
80X96	2948	15.75	8.81	7.94	7.81	8.81
80X112	3416	15.75	12.72	11.84	7.81	8.81
80X128	3925	15.75	16.96	15.75	7.81	9.15
80X144	4394	19.66	16.96	15.75	11.72	9.15
80X160	4903	23.56	17.29	15.75	15.63	9.48
80X176	5371	23.56	21.20	15.75	15.63	13.39
80X192	5880	23.56	25.44	15.75	15.63	17.63
80X208	6349	27.47	25.44	19.66	15.63	17.63
80X224	6858	31.38	25.77	23.56	15.63	17.96
80X240	7326	31.38	29.68	23.56	19.53	17.96
80X256	7835	31.38	33.92	23.56	23.44	18.29
80X272	8304	35.28	33.92	23.56	23.44	22.20
80X288	8813	39.19	34.25	23.56	23.44	26.44
80X304	9281	39.19	38.16	27.47	23.44	26.44
80X320	9790	39.19	42.40	31.38	23.44	26.77
80X336	10259	43.09	42.40	31.38	27.34	26.77
80X352	10768	47.00	42.73	31.38	31.25	27.10
80X368	11236	54.45	39.06	31.38	31.25	31.01
80X384	11745	58.69	39.06	31.38	31.25	35.25
96X48	1743	9.50	5.02	9.50	4.69	0.33
96X64	2345	9.50	10.04	9.50	9.38	0.67
96X80	2908	14.19	10.04	9.50	9.38	5.35
96X96	3510	18.88	10.38	9.50	9.38	10.38
96X112	4073	18.88	15.06	14.19	9.38	10.38
96X128	4675	18.88	20.08	18.88	9.38	10.71
96X144	5238	23.56	20.08	18.88	14.06	10.71
96X160	5840	28.25	20.42	18.88	18.75	11.04
96X176	6403	28.25	25.10	18.88	18.75	15.73
96X192	7005	28.25	30.13	18.88	18.75	20.75
96X208	7568	32.94	30.13	23.56	18.75	20.75
96X224	8170	37.63	30.46	28.25	18.75	21.08
96X240	8733	37.63	35.15	28.25	23.44	21.08
96X256	9335	37.63	40.17	28.25	28.13	21.42
96X272	9898	42.31	40.17	28.25	28.13	26.10
96X288	10500	47.00	40.50	28.25	28.13	31.13
96X304	11063	47.00	45.19	32.94	28.13	31.13
96X320	11665	47.00	50.21	37.63	28.13	31.46
96X336	12228	51.69	50.21	37.63	32.81	31.46
96X352	12830	56.38	50.54	37.63	37.50	31.79
96X368	13393	64.60	46.88	37.63	37.50	36.48
96X384	13995	69.63	46.88	37.63	37.50	41.50

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MATRIX SIZE	WATTS	120/240VAC, 60 Hz (3 WIRE + GND)		120/208VAC, 60 Hz (4 WIRE + GND)		
		LINE 1 AMPS	LINE 2 AMPS	PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
112X48	2024	11.84	5.02	7.94	4.69	4.24
112X64	2720	15.75	6.92	7.94	6.25	8.48
112X80	3416	15.75	12.72	11.84	7.81	8.81
112X96	4073	15.75	18.19	15.75	9.38	8.81
112X112	4769	21.22	18.52	15.75	14.84	9.15
112X128	5425	18.88	26.33	15.75	13.50	16.96
112X144	6121	24.34	26.67	19.66	17.06	17.29
112X160	6778	31.38	25.10	23.56	21.56	17.19
112X176	7474	31.38	30.91	23.56	21.56	21.09
112X192	8130	31.38	36.38	23.56	25.00	19.19
112X208	8826	36.84	36.71	23.56	25.00	24.99
112X224	9483	34.50	44.52	31.38	25.00	22.65
112X240	10179	39.97	44.85	31.38	28.91	24.54
112X256	10835	47.00	43.29	29.81	32.81	27.67
112X272	11531	53.78	42.19	31.38	32.81	31.91
112X288	12188	59.25	42.19	32.94	32.81	35.81
112X304	12886	59.58	47.66	38.41	32.81	36.15
112X320	13544	67.40	45.31	36.06	40.63	36.15
112X336	14236	67.73	50.78	37.63	40.63	40.39
112X352	14893	66.17	57.81	40.75	39.06	44.29
112X368	15589	71.97	57.81	44.66	40.63	44.63
112X384	16245	77.44	57.81	48.56	42.19	44.63
128X48	2345	14.19	5.35	9.50	4.69	5.35
128X64	3095	18.88	6.92	9.50	6.25	10.04
128X80	3885	18.88	13.50	14.19	7.81	10.38
128X96	4635	18.88	19.75	18.88	9.38	10.38
128X112	5425	25.13	20.08	18.88	15.63	10.71
128X128	6175	22.00	29.46	18.88	12.50	20.08
128X144	6965	28.25	29.79	23.56	14.06	20.42
128X160	7715	37.63	26.67	28.25	18.75	17.29
128X176	8505	37.63	33.25	28.25	23.44	19.19
128X192	9255	37.63	39.50	28.25	28.13	20.75
128X208	10045	43.88	39.83	28.25	28.13	27.33
128X224	10795	40.75	49.21	37.63	28.13	24.21
128X240	11585	47.00	49.54	37.63	32.81	26.10
128X256	12335	56.50	46.42	34.50	37.50	30.79
128X272	13125	62.38	46.88	36.06	37.50	35.81
128X288	13875	68.63	46.88	37.63	37.50	40.50
128X304	14655	68.96	53.13	43.88	37.50	40.83
128X320	15415	78.33	50.00	40.75	46.88	40.83
128X336	16205	78.67	56.25	42.31	46.88	45.85
128X352	16955	75.54	65.63	47.00	43.75	50.54
128X368	17745	82.13	65.63	51.69	45.31	50.88
128X384	18495	88.38	65.63	56.38	46.88	50.88

POWER SPECIFICATION INSTRUCTIONS:

1) REFER TO ABOVE CHART FOR POWER SPECIFICATION INFORMATION.
2) LOCATE THE DSIPLAY SIZE (MATRIX SIZE).
3) USE THE HIGHEST NUMBER OF AMPS GIVEN DEPENDING ON THE POWER TYPE OF THE DISPLAY.
   - A) IF THE DISPLAY IS 3 PHASE (3PH) USE THE 120/208, 4 WIRE + GND SECTION AND SELECT THE LARGEST NUMBER UNDER COLUMN A, B OR C FOR THAT SIZE.
   - B) IF THE DISPLAY IS 1 PHASE (1PH) USE THE 120/240, 3 WIRE + GND SECTION AND SELECT THE LARGEST NUMBER UNDER EITHER LINE 1 OR LINE 2 FOR THAT SIZE.
   - C) IDENTIFY MANUFACTURING PLANT WHERE SHOWN ON MAX WATTS LINE.

EXAMPLE PRODUCT IDENTIFICATION LABEL

DAKTRONICS, INC.
331 32ND AVE.
P.O. BOX 5128
BROOKINGS, SD 57006 PHONE 1-605-697-4000

ASSY NO. 0A-1375-****
SER. NO. (NEXT ASSIGNED #)
MFG DATE (TODAY'S DATE MM/DD/YY) REV XX
WORK ORDER NUMBER

AF-3700-64X192-20-RGB
120/240VAC, 1PH, 60HZ
AMPS PER LINE = 20.75
MAX WATTS = 4755 ---

LL-2306

EXAMPLE

SEE NOTE 3.C.
ABBREVIATE MANUFACTURING PLANT

NOTES:

1. SPECS LISTED ABOVE ARE FOR A SINGLE FACE DISPLAY.

POWER DISTRIBUTION/ DISCONNECT PANEL BY CUSTOMER

POWER PANEL A41 TYPICAL DISPLAY FACE

REV.	DATE	DESCRIPTION	BY	APPR.
02	27 AUG 07	MODIFIED LABEL BY ADDING NOTE 3.C.	JMG	DJM
01	02 JUL 07	ADDED INACTIVE LINES	JMG	

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO, AF-3700-20-RGB
TITLE: POWER SPECS, AF-3700-20-RGB-*-120/240&120/208V
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 17 MAR 06
REVISION 02 APPR. BY:
SCALE: 1=1

1375-R10B-266279

POWER SPECIFICATION CHART

MATRIX SIZE	WATTS	240VAC, 1PH, 50 Hz (2 WIRE + GND) LINE 1 AMPS	240/415VAC, 3PH, 50 Hz (4 WIRE + GND) PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
16X48	326	1.36	3PH NOT AVAILABLE FOR THESE SIZES.		
16X64	450	1.88			
16X80	544	2.27			
16X96	638	2.66			
16X112	731	3.05			
16X128	855	3.56			
16X144	949	3.95			
16X160	1073	4.47			
16X176	1166	4.86			
16X192	1260	5.25			
16X208	1384	5.77			
16X224	1478	6.16			
16X240	1601	6.67			
16X256	1695	7.06			
16X272	1819	7.58			
16X288	1913	7.97			
16X304	2036	8.48			
16X320	2130	8.88			
16X336	2254	9.39			
16X352	2348	9.78			
16X368	2471	10.30			
16X384	2565	10.69			
32X48	638	2.66	2.41	0.00	0.25
32X64	825	3.44	3.19	0.00	0.25
32X80	1043	4.34	3.97	0.00	0.38
32X96	1230	5.13	4.75	0.00	0.38
32X112	1448	6.03	4.75	0.78	0.50
32X128	1635	6.81	4.75	1.56	0.50
32X144	1853	7.72	4.75	2.34	0.63
32X160	2040	8.50	4.75	3.13	0.63
32X176	2258	9.41	4.75	3.91	0.75
32X192	2445	10.19	4.75	4.69	0.75
32X208	2663	11.09	4.75	4.69	1.66
32X224	2850	11.88	4.75	4.69	2.44
32X240	3068	12.78	4.75	4.69	3.34
32X256	3255	13.56	4.75	4.69	4.13
32X272	3473	14.47	4.75	4.69	5.03
32X288	3660	15.25	4.75	4.69	5.81
32X304	3878	16.16	5.53	4.69	5.94
32X320	4065	16.94	6.31	4.69	5.94
32X336	4283	17.84	7.09	4.69	6.06
32X352	4470	18.63	7.88	4.69	6.06
32X368	4688	19.53	8.66	4.69	6.19
32X384	4875	20.31	9.44	4.69	6.19

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MATRIX SIZE	WATTS	240VAC, 1PH, 50 Hz (2 WIRE + GND) LINE 1 AMPS	240/415VAC, 3PH, 50 Hz (4 WIRE + GND) PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
48X48	919	3.83	3.58	0.00	0.25
48X64	1200	5.00	4.75	0.00	0.25
48X80	1511	6.30	4.75	1.17	0.38
48X96	1793	7.47	4.75	2.34	0.38
48X112	2104	8.77	4.75	3.52	0.50
48X128	2385	9.94	4.75	4.69	0.50
48X144	2696	11.23	4.75	4.69	1.80
48X160	2978	12.41	4.75	4.69	2.97
48X176	3289	13.70	4.75	4.69	4.27
48X192	3570	14.88	4.75	4.69	5.44
48X208	3881	16.17	5.92	4.69	5.56
48X224	4163	17.34	7.09	4.69	5.56
48X240	4474	18.64	8.27	4.69	5.69
48X256	4755	19.81	9.44	4.69	5.69
48X272	5066	21.11	9.44	4.69	5.81
48X288	5348	22.28	9.44	5.86	5.81
48X304	5659	23.58	9.44	7.03	5.94
48X320	5940	24.75	9.44	8.20	5.94
48X336	6251		9.44	9.38	7.23
48X352	6533	1PH NOT AVAILABLE	9.44	9.38	8.41
48X368	6844	FOR THESE SIZES.	9.44	9.38	9.70
48X384	7125		9.44	9.38	10.88
64X48	1242	5.18	4.75	0.00	0.43
64X64	1617	6.74	3.19	3.13	0.43
64X80	1992	8.30	3.97	3.91	0.43
64X96	2418	10.08	4.75	4.69	0.64
64X112	2793	11.64	4.75	4.69	2.20
64X128	3219	13.41	4.75	4.69	3.98
64X144	3594	14.98	4.75	4.69	5.54
64X160	4020	16.75	7.88	4.69	4.19
64X176	4395	18.31	8.66	4.69	4.97
64X192	4821	20.09	9.44	4.69	5.96
64X208	5196	21.65	9.44	6.25	5.96
64X224	5622	23.43	9.44	7.81	6.18
64X240	5997	24.99	9.44	9.38	6.18
64X256	6423		9.44	7.81	9.51
64X272	6798	1PH NOT AVAILABLE	9.44	8.59	10.29
64X288	7224	FOR THESE SIZES.	9.44	9.38	11.29
64X304	7599		11.00	9.38	11.29
64X320	8025		12.56	9.38	11.50
64X336	8400		14.13	9.38	11.50
64X352	8826		12.56	12.50	11.71
64X368	9201		13.34	13.28	11.71
64X384	9627		14.13	14.06	11.93

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MATRIX SIZE	WATTS	240VAC, 1PH, 50 Hz (2 WIRE + GND) LINE 1 AMPS	240/415VAC, 3PH, 50 Hz (4 WIRE + GND) PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
80X48	1472	6.13	3.97	1.95	0.21
80X64	1992	8.30	3.97	3.91	0.43
80X80	2461	10.25	3.97	3.91	2.38
80X96	2981	12.42	3.97	3.91	4.54
80X112	3449	14.37	5.92	3.91	4.54
80X128	3969	16.54	7.88	3.91	4.76
80X144	4438	18.49	7.88	5.86	4.76
80X160	4958	20.66	7.88	7.81	4.97
80X176	5426		7.88	7.81	6.92
80X192	5946	1PH NOT AVAILABLE	7.88	7.81	9.09
80X208	6415	FOR THESE SIZES.	9.83	7.81	9.09
80X224	6935		11.78	7.81	9.30
80X240	7403		11.78	9.77	9.30
80X256	7923		11.78	11.72	9.51
80X272	8392		11.78	11.72	11.47
80X288	8912		11.78	11.72	13.63
80X304	9380		13.73	11.72	13.63
80X320	9900		15.69	11.72	13.84
80X336	10369		15.69	13.67	13.84
80X352	10889		15.69	15.63	14.06
80X368	11357		15.69	15.63	16.01
80X384	11877		15.69	15.63	18.18
96X48	1754	7.31	4.75	2.34	0.21
96X64	2367	9.86	4.75	4.69	0.43
96X80	2930	12.21	4.75	4.69	2.77
96X96	3543	14.76	4.75	4.69	5.33
96X112	4106	17.11	7.09	4.69	5.33
96X128	4719	19.66	9.44	4.69	5.54
96X144	5282	22.01	9.44	7.03	5.54
96X160	5895	24.56	9.44	9.38	5.75
96X176	6458		9.44	9.38	8.09
96X192	7071	1PH NOT AVAILABLE	9.44	9.38	10.65
96X208	7634	FOR THESE SIZES.	11.78	9.38	10.65
96X224	8247		14.13	9.38	10.86
96X240	8810		14.13	11.72	10.86
96X256	9423		14.13	14.06	11.08
96X272	9986		14.13	14.06	13.42
96X288	10599		14.13	14.06	15.98
96X304	11162		16.47	14.06	15.98
96X320	11775		18.81	14.06	16.19
96X336	12338		18.81	16.41	16.19
96X352	12951		18.81	18.75	16.40
96X368	13514		18.81	18.75	18.74
96X384	14127		18.81	18.75	21.30

NOTES:
1. SPECS LISTED TO THE LEFT ARE FOR A SINGLE FACE DISPLAY.

EXAMPLE PRODUCT IDENTIFICATION LABEL

DAKTRONICS, INC.
331 32ND AVE.
P.O. BOX 5128
BROOKINGS, SD 57006

PHONE 1-605-697-4000

ASSY NO.	0A-1375-****
SER. NO.	(NEXT ASSIGNED #)
MFG DATE	(TODAY'S DATE MM/DD/YY) REV XX
	WORK ORDER NUMBER

EXAMPLE

AF-3700-64X192-20-RGB
240VAC, 1PH, 50HZ
AMPS PER LINE = 20.09
MAX WATTS = 4821 ___

LL-2306

SEE NOTE 3.C.
ABBREVIATE MANUFACTURING PLANT

POWER SPECIFICATION INSTRUCTIONS:

1) REFER TO ABOVE CHART FOR POWER SPECIFICATION INFORMATION.
2) LOCATE THE DISPLAY SIZE (MATRIX SIZE).
3) USE THE HIGHEST NUMBER OF AMPS GIVEN DEPENDING ON THE POWER TYPE OF THE DISPLAY.
   A) IF THE DISPLAY IS 3 PHASE (3PH) USE THE 240/415, 4 WIRE + GND SECTION AND SELECT THE LARGEST NUMBER UNDER COLUMN A, B OR C FOR THAT SIZE.
   B) IF THE DISPLAY IS 1 PHASE (1PH) USE THE 240, 2 WIRE + GND SECTION AND SELECT THE NUMBER UNDER THE LINE 1 COLUMN FOR THAT SIZE.
   C) IDENTIFY MANUFACTURING PLANT WHERE SHOWN ON MAX WATTS LINE.

POWER DISTRIBUTION/ DISCONNECT PANEL BY CUSTOMER

POWER PANEL A41 TYPICAL DISPLAY FACE

REV.	DATE	DESCRIPTION	BY	APPR.
02	27 AUG 07	CLARIFIED EXAMPLE PRODUCT ID LABEL. ADDED MANUFACTURING PLANT IDENTIFIER.	JMG	DJM
01	12JUL07	DELETED 112-128 SIZES CHANGED TITLE	JMG	

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO, AF-3700-20-RGB
TITLE: P SPECS, AF-3700-16-96X*-20-RGB-*-240&240/415V
DES. BY: DRAWN BY: RFABER DATE: 07 FEB 07
REVISION 02 APPR. BY: DMATHER SCALE: 1=1

1375-R10B-296527

POWER SPECIFICATION CHART

MATRIX SIZE	SECTION SIZE	SECTION #	MAX WATTS	120/240VAC, 60 Hz (3 WIRE + GND)		120/208VAC, 60 Hz (4 WIRE + GND)		
				LINE 1 AMPS	LINE 2 AMPS	PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
112X48	48X48	TOP(S101)	888	7.03	0.37	7.03	0.00	0.37
	64X48	BTM(S201)	1220	9.50	0.67	9.50	0.00	0.67
112X64	48X64	TOP(S101)	1169	9.38	0.37	9.38	0.00	0.37
	64X64	BTM(S201)	1595	6.38	6.92	6.38	6.25	0.67
112X80	48X80	TOP(S101)	1472	9.38	2.89	9.38	2.34	0.55
	64X80	BTM(S201)	1970	7.94	8.48	7.94	7.81	0.67
112X96	48X96	TOP(S101)	1754	9.38	5.24	9.38	4.69	0.55
	64X96	BTM(S201)	2385	9.50	10.38	9.50	9.38	1.00
112X112	48X112	TOP(S101)	2057	9.38	7.76	9.38	7.03	0.73
	64X112	BTM(S201)	2760	12.63	10.38	9.50	9.38	4.13
112X128	48X128	TOP(S101)	2338	9.38	10.11	9.38	9.38	0.73
	64X128	BTM(S201)	3175	15.75	10.71	9.50	9.38	7.58
112X144	48X144	TOP(S101)	2641	11.72	10.29	9.38	9.38	3.26
	64X144	BTM(S201)	3550	18.88	10.71	9.50	9.38	10.71
112X160	48X160	TOP(S101)	2923	14.06	10.29	9.38	9.38	5.60
	64X160	BTM(S201)	3965	15.75	17.29	15.75	9.38	7.92
112X176	48X176	TOP(S101)	3226	16.41	10.48	9.38	9.38	8.13
	64X176	BTM(S201)	4340	17.31	18.85	17.31	9.38	9.48
112X192	48X192	TOP(S101)	3507	18.75	10.48	9.38	9.38	10.48
	64X192	BTM(S201)	4755	18.88	20.75	18.88	9.38	11.38
112X208	48X208	TOP(S101)	3810	18.75	13.00	11.72	9.38	10.66
	64X208	BTM(S201)	5130	22.00	20.75	18.88	12.50	11.38
112X224	48X224	TOP(S101)	4092	18.75	15.35	14.06	9.38	10.66
	64X224	BTM(S201)	5545	25.13	21.08	18.88	15.63	11.71
112X240	48X240	TOP(S101)	4395	18.75	17.87	16.41	9.38	10.84
	64X240	BTM(S201)	5920	28.25	21.08	18.88	18.75	11.71
112X256	48X256	TOP(S101)	4676	18.75	20.22	18.75	9.38	10.84
	64X256	BTM(S201)	6335	27.79	25.00	18.88	15.63	18.29
112X272	48X272	TOP(S101)	4979	21.09	20.40	18.75	11.72	11.03
	64X272	BTM(S201)	6710	29.35	26.56	18.88	17.19	19.85
112X288	48X288	TOP(S101)	5261	23.44	20.40	18.75	14.06	11.03
	64X288	BTM(S201)	7125	31.25	28.13	18.88	18.75	21.75
112X304	48X304	TOP(S101)	5564	25.78	20.58	18.75	16.41	11.21
	64X304	BTM(S201)	7500	34.38	28.13	22.00	18.75	21.75
112X320	48X320	TOP(S101)	5845	28.13	20.58	18.75	18.75	11.21
	64X320	BTM(S201)	7915	37.83	28.13	25.13	18.75	22.08
112X336	48X336	TOP(S101)	6148	30.14	21.09	18.75	18.75	13.74
	64X336	BTM(S201)	8290	40.96	28.13	28.25	18.75	22.08
112X352	48X352	TOP(S101)	6430	30.14	23.44	18.75	18.75	16.08
	64X352	BTM(S201)	8705	38.17	34.38	25.13	25.00	22.42
112X368	48X368	TOP(S101)	6733	30.33	25.78	18.75	18.75	18.61
	64X368	BTM(S201)	9080	39.73	35.94	26.69	26.56	22.42
112X384	48X384	TOP(S101)	7014	30.33	28.13	18.75	18.75	20.95
	64X384	BTM(S201)	9495	41.63	37.50	28.25	28.13	22.75

...CONTINUED

MATRIX SIZE	SECTION SIZE	SECTION #	MAX WATTS	120/240VAC, 60 Hz (3 WIRE + GND)		120/208VAC, 60 Hz (4 WIRE + GND)		
				LINE 1 AMPS	LINE 2 AMPS	PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
128X48	64X48	TOP(S101)	1205	9.38	0.67	9.38	0.00	0.67
	64X48	BTM(S201)	1220	9.50	0.67	9.50	0.00	0.67
128X64	64X64	TOP(S101)	1580	6.25	6.92	6.25	6.25	0.67
	64X64	BTM(S201)	1595	6.38	6.92	6.38	6.25	0.67
128X80	64X80	TOP(S101)	1955	7.81	8.48	7.81	7.81	0.67
	64X80	BTM(S201)	1970	7.94	8.48	7.94	7.81	0.67
128X96	64X96	TOP(S101)	2370	9.38	10.38	9.38	9.38	1.00
	64X96	BTM(S201)	2385	9.50	10.38	9.50	9.38	1.00
128X112	64X112	TOP(S101)	2745	12.50	10.38	9.38	9.38	4.13
	64X112	BTM(S201)	2760	12.63	10.38	9.50	9.38	4.13
128X128	64X128	TOP(S101)	3160	15.63	10.71	9.38	9.38	7.58
	64X128	BTM(S201)	3175	15.75	10.71	9.50	9.38	7.58
128X144	64X144	TOP(S101)	3535	18.75	10.71	9.38	9.38	10.71
	64X144	BTM(S201)	3550	18.88	10.71	9.50	9.38	10.71
128X160	64X160	TOP(S101)	3950	15.63	17.29	15.63	9.38	7.92
	64X160	BTM(S201)	3965	15.75	17.29	15.75	9.38	7.92
128X176	64X176	TOP(S101)	4325	17.19	18.85	17.19	9.38	9.48
	64X176	BTM(S201)	4340	17.31	18.85	17.31	9.38	9.48
128X192	64X192	TOP(S101)	4740	18.75	20.75	18.75	9.38	11.38
	64X192	BTM(S201)	4755	18.88	20.75	18.88	9.38	11.38
128X208	64X208	TOP(S101)	5115	21.88	20.75	18.75	12.50	11.38
	64X208	BTM(S201)	5130	22.00	20.75	18.88	12.50	11.38
128X224	64X224	TOP(S101)	5530	25.00	21.08	18.75	15.63	11.71
	64X224	BTM(S201)	5545	25.13	21.08	18.88	15.63	11.71
128X240	64X240	TOP(S101)	5905	28.13	21.08	18.75	18.75	11.71
	64X240	BTM(S201)	5920	28.25	21.08	18.88	18.75	11.71
128X256	64X256	TOP(S101)	6320	27.67	25.00	18.75	15.63	18.29
	64X256	BTM(S201)	6335	27.79	25.00	18.88	15.63	18.29
128X272	64X272	TOP(S101)	6695	29.23	26.56	18.75	17.19	19.85
	64X272	BTM(S201)	6710	29.35	26.56	18.88	17.19	19.85
128X288	64X288	TOP(S101)	7110	31.13	28.13	18.75	18.75	21.75
	64X288	BTM(S201)	7125	31.25	28.13	18.88	18.75	21.75
128X304	64X304	TOP(S101)	7485	34.25	28.13	21.88	18.75	21.75
	64X304	BTM(S201)	7500	34.38	28.13	22.00	18.75	21.75
128X320	64X320	TOP(S101)	7900	37.71	28.13	25.00	18.75	22.08
	64X320	BTM(S201)	7915	37.83	28.13	25.13	18.75	22.08
128X336	64X336	TOP(S101)	8275	40.83	28.13	28.13	18.75	22.08
	64X336	BTM(S201)	8290	40.96	28.13	28.25	18.75	22.08
128X352	64X352	TOP(S101)	8690	38.04	34.38	25.00	25.00	22.42
	64X352	BTM(S201)	8705	38.17	34.38	25.13	25.00	22.42
128X368	64X368	TOP(S101)	9065	39.60	35.94	26.56	26.56	22.42
	64X368	BTM(S201)	9080	39.73	35.94	26.69	26.56	22.42
128X384	64X384	TOP(S101)	9480	41.50	37.50	28.13	28.13	22.75
	64X384	BTM(S201)	9495	41.63	37.50	28.25	28.13	22.75

POWER SPECIFICATION LABEL INSTRUCTIONS:

1) REFER TO CHARTS FOR POWER SPECIFICATION INFORMATION.
2) LOCATE THE DISPLAY SIZE (MATRIX SIZE).
3) USE THE HIGHEST NUMBER OF AMPS GIVEN DEPENDING ON THE POWER TYPE OF THE DISPLAY. IF THE DISPLAY IS SECTIONAL, EACH SECTION WILL HAVE AN IDENTIFICATION LABEL WITH SPECS FOR THAT SECTION.
   A) IF THE DISPLAY IS 1 PHASE (1PH) USE THE 120/240VAC, 3 WIRE + GND SECTION AND SELECT THE LARGEST NUMBER UNDER EITHER LINE 1 OR LINE 2 FOR THAT SIZE.
   B) IF THE DISPLAY IS 3 PHASE (3PH) USE THE 120/208VAC, 4 WIRE + GND SECTION AND SELECT THE LARGEST NUMBER UNDER COLUMN A, B OR C FOR THAT SIZE.
   C) IDENTIFY MANUFACTURING PLANT WHERE SHOWN ON MAX WATTS LINE.

EXAMPLE PRODUCT IDENTIFICATION LABEL
SECTION "TOP" (WITHOUT CONTROLLER)

DAKTRONICS, INC.
331 32ND AVE.
P.O. BOX 5128
BROOKINGS, SD 57006

ASSY NO. (SAME AS BELOW)
SER. NO. (SAME AS BELOW)
MFG DATE (TODAY'S DATE MM/DD/YY) REV XX
WORK ORDER NUMBER

AF-3700-112X256-20-RGB
TOP SECTION (48X256)
120/240VAC, 1PH, 60HZ
AMPS PER LINE = 20.22
MAX WATTS = 4676 ___

EXAMPLE

PHONE 1-605-697-4000 LL-2306

SEE NOTE 3.C.
ABBREVIATE MANUFACTURING PLANT

EXAMPLE PRODUCT IDENTIFICATION LABEL
SECTION "BTM" (WITH CONTROLLER)

DAKTRONICS, INC.
331 32ND AVE.
P.O. BOX 5128
BROOKINGS, SD 57006

ASSY NO. 0A-1375-****
SER. NO. (NEXT ASSIGNED #)
MFG DATE (TODAY'S DATE MM/DD/YY) REV XX
WORK ORDER NUMBER

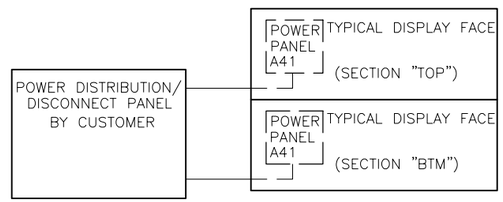
AF-3700-112X256-20-RGB
BTM SECTION (64X256)
120/240VAC, 1PH, 60HZ
AMPS PER LINE = 27.79
MAX WATTS = 6335 ___

EXAMPLE

PHONE 1-605-697-4000 LL-2306

SEE NOTE 3.C.
ABBREVIATE MANUFACTURING PLANT

FRONT VIEW



NOTES:

1. SPECS LISTED ARE FOR ONE SECTION OF A SINGLE FACE DISPLAY.
2. IF DISPLAY IS SECTIONAL, THE TOTAL DISPLAY WATTAGE CAN BE OBTAINED BY ADDING THE INDIVIDUAL SECTION WATTAGES TOGETHER.

REV.	DATE	DESCRIPTION	BY	APPR.
01	24AUG07	CLARIFIED EXAMPLE PRODUCT ID LABELS. ADDED SECTION IDENTIFIERS AND MANUFACTURING PLANT IDENTIFIER.	DJM	

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO, AF-3700-20-RGB
TITLE: PWR SPEC.,AF-3700-(112-128)X*-20-RGB-1PH & 3PH
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 29 JUN 07
REVISION 01 APPR. BY:
SCALE: 1=1

1375-R10B-310532

POWER SPECIFICATION CHART

MATRIX SIZE	SECTION SIZE	SECTION #	MAX WATTS	240VAC, 1PH, 50 Hz (2 WIRE + GND) LINE 1 AMPS	240/415VAC, 3PH, 50 Hz (4 WIRE + GND) PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
112X48	48X48	TOP	888	3.70	3.52	0.00	0.18
	64X48	BTM	1220	5.08	4.75	0.00	0.33
112X64	48X64	TOP	1169	4.87	4.69	0.00	0.18
	64X64	BTM	1595	6.65	3.19	3.13	0.33
112X80	48X80	TOP	1472	6.13	4.69	1.17	0.28
	64X80	BTM	1970	8.21	3.97	3.91	0.33
112X96	48X96	TOP	1754	7.31	4.69	2.34	0.28
	64X96	BTM	2385	9.94	4.75	4.69	0.50
112X112	48X112	TOP	2057	8.57	4.69	3.52	0.37
	64X112	BTM	2760	11.50	4.75	4.69	2.06
112X128	48X128	TOP	2338	9.74	4.69	4.69	0.37
	64X128	BTM	3175	13.23	4.75	4.69	3.79
112X144	48X144	TOP	2641	11.01	4.69	4.69	1.63
	64X144	BTM	3550	14.79	4.75	4.69	5.35
112X160	48X160	TOP	2923	12.18	4.69	4.69	2.80
	64X160	BTM	3965	16.52	7.88	4.69	3.96
112X176	48X176	TOP	3226	13.44	4.69	4.69	4.07
	64X176	BTM	4340	18.08	8.66	4.69	4.74
112X192	48X192	TOP	3507	14.61	4.69	4.69	5.24
	64X192	BTM	4755	19.81	9.44	4.69	5.69
112X208	48X208	TOP	3810	15.88	5.86	4.69	5.33
	64X208	BTM	5130	21.38	9.44	6.25	5.69
112X224	48X224	TOP	4092	17.05	7.03	4.69	5.33
	64X224	BTM	5545	23.10	9.44	7.81	5.85
112X240	48X240	TOP	4395	18.31	8.20	4.69	5.42
	64X240	BTM	5920	24.67	9.44	9.38	5.85
112X256	48X256	TOP	4676	240VAC, 1PH NOT AVAILABLE FOR THESE SIZES.	9.38	4.69	5.42
	64X256	BTM	6338		9.44	7.81	9.15
112X272	48X272	TOP	4979		9.38	5.86	5.51
	64X272	BTM	6710		9.44	8.59	9.93
112X288	48X288	TOP	5261		9.38	7.03	5.51
	64X288	BTM	7125		9.44	9.38	10.88
112X304	48X304	TOP	5564		9.38	8.20	5.60
	64X304	BTM	7500		11.00	9.38	10.88
112X320	48X320	TOP	5845		9.38	9.38	5.60
	64X320	BTM	7915		12.56	9.38	11.04
112X336	48X336	TOP	6148		9.38	9.38	6.87
	64X336	BTM	8290		14.13	9.38	11.04
112X352	48X352	TOP	6430		9.38	9.38	8.04
	64X352	BTM	8705		12.56	12.50	11.21
112X368	48X368	TOP	6733		9.38	9.38	9.30
	64X368	BTM	9080		13.34	13.28	11.21
112X384	48X384	TOP	7014		9.38	9.38	10.48
	64X384	BTM	9495		14.13	14.06	11.38

...CONTINUED

MATRIX SIZE	SECTION SIZE	SECTION #	MAX WATTS	240VAC, 1PH, 50 Hz (2 WIRE + GND) LINE 1 AMPS	240/415VAC, 3PH, 50 Hz (4 WIRE + GND) PHASE A AMPS	PHASE B AMPS	PHASE C AMPS
128X48	64X48	TOP	1205	5.02	4.69	0.00	0.33
	64X48	BTM	1220	5.08	4.75	0.00	0.33
128X64	64X64	TOP	1580	6.58	3.13	3.13	0.33
	64X64	BTM	1595	6.65	3.19	3.13	0.33
128X80	64X80	TOP	1955	8.15	3.91	3.91	0.33
	64X80	BTM	1970	8.21	3.97	3.91	0.33
128X96	64X96	TOP	2370	9.88	4.69	4.69	0.50
	64X96	BTM	2385	9.94	4.75	4.69	0.50
128X112	64X112	TOP	2745	11.44	4.69	4.69	2.06
	64X112	BTM	2760	11.50	4.75	4.69	2.06
128X128	64X128	TOP	3160	13.17	4.69	4.69	3.79
	64X128	BTM	3175	13.23	4.75	4.69	3.79
128X144	64X144	TOP	3535	14.73	4.69	4.69	5.35
	64X144	BTM	3550	14.79	4.75	4.69	5.35
128X160	64X160	TOP	3950	16.46	7.81	4.69	3.96
	64X160	BTM	3965	16.52	7.88	4.69	3.96
128X176	64X176	TOP	4325	18.02	8.59	4.69	4.74
	64X176	BTM	4340	18.08	8.66	4.69	4.74
128X192	64X192	TOP	4740	19.75	9.38	4.69	5.69
	64X192	BTM	4755	19.81	9.44	4.69	5.69
128X208	64X208	TOP	5115	21.31	9.38	6.25	5.69
	64X208	BTM	5130	21.38	9.44	6.25	5.69
128X224	64X224	TOP	5530	23.04	9.38	7.81	5.85
	64X224	BTM	5545	23.10	9.44	7.81	5.85
128X240	64X240	TOP	5905	24.60	9.38	9.38	5.85
	64X240	BTM	5920	24.67	9.44	9.38	5.85
128X256	64X256	TOP	6320	240VAC, 1PH NOT AVAILABLE FOR THESE SIZES.	9.38	7.81	9.15
	64X256	BTM	6335		9.44	7.81	9.15
128X272	64X272	TOP	6695		9.38	8.59	9.93
	64X272	BTM	6710		9.44	8.59	9.93
128X288	64X288	TOP	7110		9.38	9.38	10.88
	64X288	BTM	7125		9.44	9.38	10.88
128X304	64X304	TOP	7485		10.94	9.38	10.88
	64X304	BTM	7500		11.00	9.38	10.88
128X320	64X320	TOP	7900		12.50	9.38	11.04
	64X320	BTM	7915		12.56	9.38	11.04
128X336	64X336	TOP	8275		14.06	9.38	11.04
	64X336	BTM	8290		14.13	9.38	11.04
128X352	64X352	TOP	8690		12.50	12.50	11.21
	64X352	BTM	8705		12.56	12.50	11.21
128X368	64X368	TOP	9065		13.28	13.28	11.21
	64X368	BTM	9080		13.34	13.28	11.21
128X384	64X384	TOP	9480		14.06	14.06	11.38
	64X384	BTM	9495		14.13	14.06	11.38

POWER SPECIFICATION LABEL INSTRUCTIONS:

1) REFER TO CHARTS FOR POWER SPECIFICATION INFORMATION.
2) LOCATE THE DISPLAY SIZE (MATRIX SIZE).
3) USE THE HIGHEST NUMBER OF AMPS GIVEN DEPENDING ON THE POWER TYPE OF THE DISPLAY. EACH SECTION WILL HAVE AN IDENTIFICATION LABEL WITH SPECS FOR THAT SECTION.
   A) IF THE DISPLAY IS 1 PHASE (1PH) USE THE 240VAC, 2 WIRE + GND SECTION AND SELECT THE NUMBER UNDER THE LINE 1 COLUMN FOR THAT SIZE.
   B) IF THE DISPLAY IS 3 PHASE (3PH) USE THE 240/415VAC, 4 WIRE + GND SECTION AND SELECT THE LARGEST NUMBER UNDER COLUMN A, B OR C FOR THAT SIZE.
   C) IDENTIFY MANUFACTURING PLANT WHERE SHOWN ON MAX WATTS LINE.

EXAMPLE PRODUCT IDENTIFICATION LABEL
SECTION "TOP" (WITHOUT CONTROLLER)

DAKTRONICS, INC.
331 32ND AVE.
P.O. BOX 5128
BROOKINGS, SD 57006

ASSY NO. (SAME AS BELOW)
SER. NO. (SAME AS BELOW)
MFG DATE (TODAY'S DATE MM/DD/YY) REV XX
WORK ORDER NUMBER

AF-3700-128X256-20-RGB
TOP SECTION (64X256)
240/415VAC, 3PH, 50HZ
AMPS PER LINE = 9.38
MAX WATTS = 6320 ___

EXAMPLE

PHONE 1-605-697-4000 LL-2306

SEE NOTE 3.C.
ABBREVIATE MANUFACTURING PLANT

EXAMPLE PRODUCT IDENTIFICATION LABEL
SECTION "BTM" (WITH CONTROLLER)

DAKTRONICS, INC.
331 32ND AVE.
P.O. BOX 5128
BROOKINGS, SD 57006

ASSY NO. 0A-1375-****
SER. NO. (NEXT ASSIGNED #)
MFG DATE (TODAY'S DATE MM/DD/YY) REV XX
WORK ORDER NUMBER

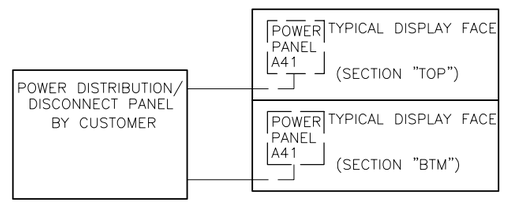
AF-3700-128X256-20-RGB
BTM SECTION (64X256)
240/415VAC, 3PH, 50HZ
AMPS PER LINE = 9.44
MAX WATTS = 6335 ___

EXAMPLE

PHONE 1-605-697-4000 LL-2306

SEE NOTE 3.C.
ABBREVIATE MANUFACTURING PLANT

FRONT VIEW



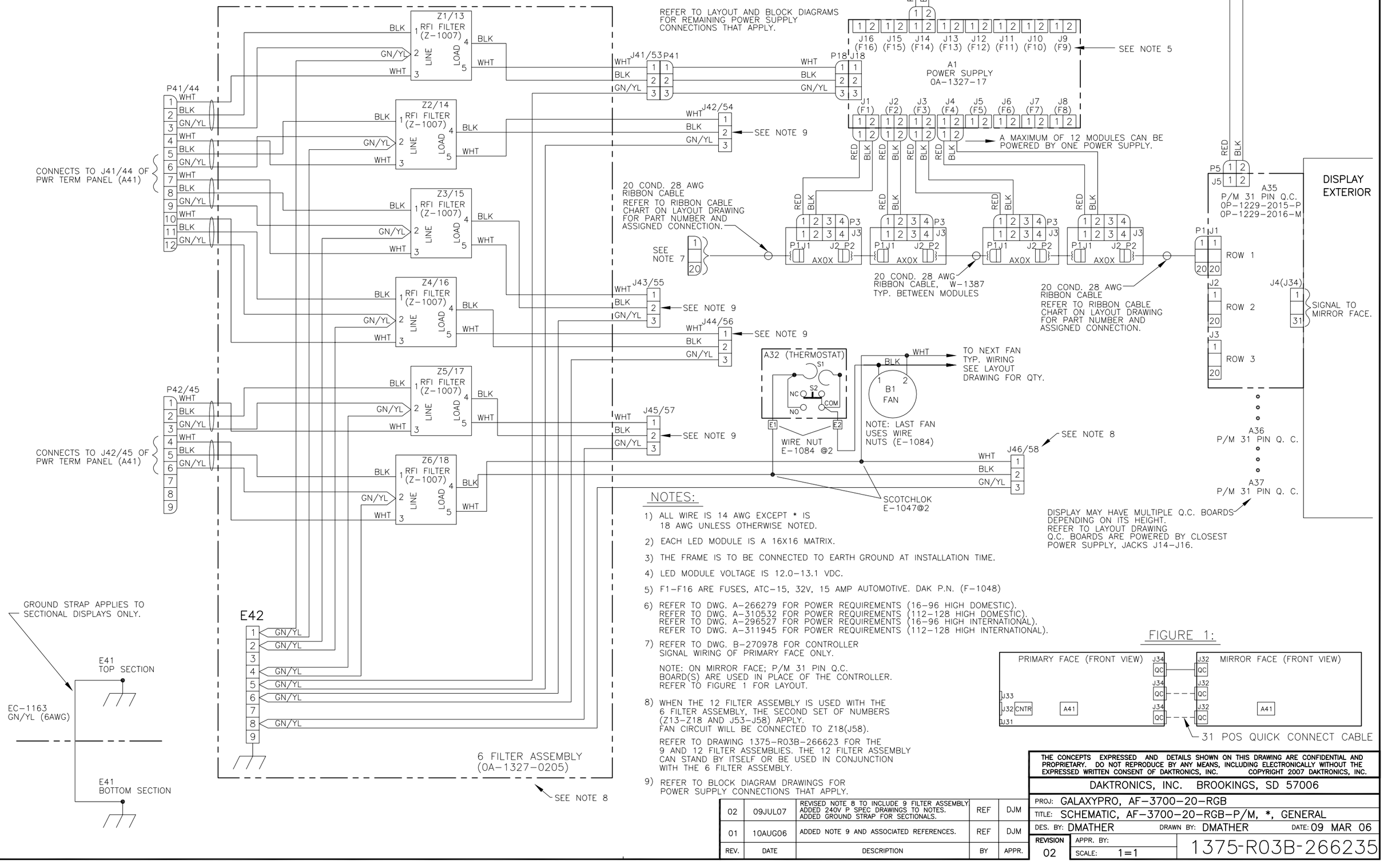
NOTES:

1. SPECS LISTED ARE FOR ONE SECTION OF A SINGLE FACE DISPLAY.
2. THE TOTAL DISPLAY WATTAGE CAN BE OBTAINED BY ADDING THE INDIVIDUAL SECTION WATTAGES TOGETHER.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO, AF-3700-20-RGB
TITLE: P.SPEC.,AF-3700-(112,128)X*-20-RGB-*-240&240/415V
DES. BY: RFABER DRAWN BY: RFABER DATE: 12 JUL 07
REVISION 01 APPR. BY: DMATHER SCALE: 1=1
1375-R10B-311945

REV.	DATE	DESCRIPTION	BY	APPR.
01	27 AUG 07	CLARIFIED EXAMPLE PRODUCT ID LABELS. ADDED SECTION IDENTIFIERS AND MANUFACTURING PLANT IDENTIFIER.	JMG	DJM



NOTES:

1) ALL WIRE IS 14 AWG EXCEPT * IS 18 AWG UNLESS OTHERWISE NOTED.
2) EACH LED MODULE IS A 16X16 MATRIX.
3) THE FRAME IS TO BE CONNECTED TO EARTH GROUND AT INSTALLATION TIME.
4) LED MODULE VOLTAGE IS 12.0-13.1 VDC.
5) F1-F16 ARE FUSES, ATC-15, 32V, 15 AMP AUTOMOTIVE. DAK P.N. (F-1048)
6) REFER TO DWG. A-266279 FOR POWER REQUIREMENTS (16-96 HIGH DOMESTIC).
   REFER TO DWG. A-310532 FOR POWER REQUIREMENTS (112-128 HIGH DOMESTIC).
   REFER TO DWG. A-296527 FOR POWER REQUIREMENTS (16-96 HIGH INTERNATIONAL).
   REFER TO DWG. A-311945 FOR POWER REQUIREMENTS (112-128 HIGH INTERNATIONAL).
7) REFER TO DWG. B-270978 FOR CONTROLLER SIGNAL WIRING OF PRIMARY FACE ONLY.

   NOTE: ON MIRROR FACE; P/M 31 PIN Q.C. BOARD(S) ARE USED IN PLACE OF THE CONTROLLER. REFER TO FIGURE 1 FOR LAYOUT.
8) WHEN THE 12 FILTER ASSEMBLY IS USED WITH THE 6 FILTER ASSEMBLY, THE SECOND SET OF NUMBERS (Z13-Z18 AND J53-J58) APPLY. FAN CIRCUIT WILL BE CONNECTED TO Z18(J58).

   REFER TO DRAWING 1375-R03B-266623 FOR THE 9 AND 12 FILTER ASSEMBLIES. THE 12 FILTER ASSEMBLY CAN STAND BY ITSELF OR BE USED IN CONJUNCTION WITH THE 6 FILTER ASSEMBLY.
9) REFER TO BLOCK DIAGRAM DRAWINGS FOR POWER SUPPLY CONNECTIONS THAT APPLY.

FIGURE 1:

REV.	DATE	DESCRIPTION	BY	APPR.
02	09JUL07	REVISED NOTE 8 TO INCLUDE 9 FILTER ASSEMBLY. ADDED 240V P SPEC DRAWINGS TO NOTES. ADDED GROUND STRAP FOR SECTIONALS.	REF	DJM
01	10AUG06	ADDED NOTE 9 AND ASSOCIATED REFERENCES.	REF	DJM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO, AF-3700-20-RGB

TITLE: SCHEMATIC, AF-3700-20-RGB-P/M, *, GENERAL

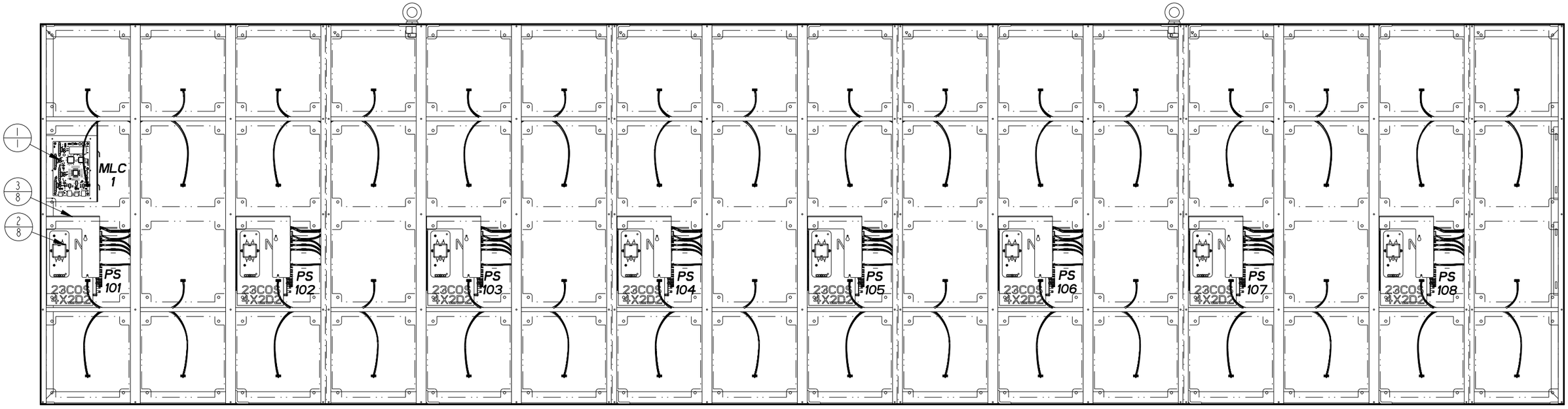
DES. BY: DMATHER DRAWN BY: DMATHER DATE: 09 MAR 06

REVISION 02 APPR. BY: SCALE: 1=1

1375-R03B-266235

0Z-12808-4301XB

LAYOUT; COMP & PWR, 64X256-23MM S402



FRONT VIEW

SCALE 1/15

NOTES:
1) EACH MODULE POWER ASSEMBLY CAN OPERATE UP TO TEN MODS.
2) THIS DRAWING REPRESENTS THE PHYSICAL LAYOUT OF THE MLC'S AND MLC POWER SUPPLIES. REFER TO APPROPRIATE ELECTRICAL DRAWINGS AS REQUIRED.
3) THIS DRAWING IS SPECIFIC TO THIS PROJECT AND SHOULD NOT BE USED AS REFERENCE FOR ASSEMBLY OF OTHER PROJECTS.

REFER TO DWG 12808-R01B-266745 FOR POWER BLOCK DIAGRAM.
REFER TO DWG 12808-R01B-266754 FOR SIGNAL BLOCK DIAGRAM.

INDEX	NAME	DRAWING	COMPONENT	OPTION	QUANTITY
1	0A-1335-4003		MLC3050, F/R ACCESS		1
2	0A-1335-5049	250951	POWER SUPPLY ASSEMBLY	23COS4X2D2	8
3	0M-235544				8

REV.	DATE	DESCRIPTION	BY	APPR.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:	CHICAGO FIRE; BRIDGEVIEW, IL
TITLE:	LAYOUT; COMP & PWR, 64X256-23MM S402
DES. BY:	AKLEINS
DRAWN BY:	AKLEINS
DATE:	14 MAR 06
REVISION	0
SHEET	1 OF DWG 266735
SCALE:	

12808-R04B-266735

	48	64	80	96	112	128	144	160	176	192	208	224
16	16X48	16X64	16X80	16X96	16X112	16X128	16X144	16X160	16X176	16X192	16X208	16X224
32	32X48	32X64	32X80	32X96	32X112	32X128	32X144	32X160	32X176	32X192	32X208	32X224
48	48X48	48X64	48X80	48X96	48X112	48X128	48X144	48X160	48X176	48X192	48X208	48X224
64	64X48	64X64	64X80	64X96	64X112	64X128	64X144	64X160	64X176	64X192	64X208	64X224
80	80X48	80X64	80X80	80X96	80X112	80X128	80X144	80X160	80X176	80X192	80X208	80X224
96	96X48	96X64	96X80	96X96	96X112	96X128	96X144	96X160	96X176	96X192	96X208	96X224
112	112X48	112X64	112X80	112X96	112X112	112X128	112X144	112X160	112X176	112X192	112X208	112X224
128	128X48	128X64	128X80	128X96	128X112	128X128	128X144	128X160	128X176	128X192	128X208	128X224

2 CRT

6 CRT

12 CRT

← mount to the backsheet

WIRE SUPPORT LOCATION

VAC ROUTING

VAC ROUTING ONLY FOR 48–112

POWER TERM PANEL [TP]	
120/240VAC, 1 PH	**240VAC, 1 PH**
0A-1327-0101(2CKT)	0A-1327-0103(2CKT)
0A-1327-0105(6CKT)	0A-1327-0107(6CKT)
0A-1327-0111(12CKT)	N/A (12CKT)
0A-1327-0113(18CKT)	N/A (18CKT)
120/208VAC, 3 PH	**240/415VAC, 3 PH**
0A-1327-0110(6CKT)	0A-1327-0127(6CKT)
0A-1327-0112(12CKT)	0A-1327-0126(12CKT)
0A-1327-0114(18CKT)	N/A (18CKT)

POWER FILTER [FZ]	0A-1327-0205 (6 FILTERS) 0A-1327-0206 (12 FILTERS)
1 POWER SUPPLY [A]	0A-1327-0016 (600W) 0A-1327-0017 (1000W)
DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE POWER SUPPLY.	
THERMOSTAT [T]	0A-1327-3101

FAN (B)

120VAC	240VAC	WHERE USED
B-1053	B-1011	16-48 HIGH
B-1019	B-1020	64-128 HIGH

NOTE: THE DIFFERENCE BETWEEN A MIRROR AND A PRIMARY DISPLAY IS IN THE QUICK CONNECTS, AND THE PRIMARY HAS A CONTROLLER WHILE THE MIRROR DOES NOT. SEE LEGENDS FOR ASSEMBLY NUMBERS.

CONTROLLER ** (PRIMARY ONLY)	[C]	0A-1382-0001
PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT	[X]	0A-1327-1000
PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS	[X]	0A-1327-1015
MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS	[X]	0A-1327-1016
QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE	[X]	0A-1327-1003
LIGHT DETECTOR (PRIMARY) BLANK COVER (MIRROR)	[L]	0A-1327-3000 0A-1213-4009
MODULE		12.48" X 12.48" 16 PIXEL X 16 PIXEL 20MM C-C / 0.78" C-C

WIRE SUPPORT ○ ICON IDENTIFIES THE WIRE SUPPORT LOCATION

MASTER PAGE 1

REV.	DATE	DESCRIPTION	BY	APPR.
02	24JUL07	ADDED 240V & 240/415V POWER PANELS AND FANS TO LEGEND CHANGED CONDUIT TO WIRE SUPPORT	JMG	DJM
01	06JUL06	UPDATED FAN QUANTITIES ON 16,32 & 48	SRG	MDM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO AF-3700 20MM

TITLE: LAYOUT, EE/ME, AF-3700-***X(48-224)-20-RGB 1of5

DES. BY: DRAWN BY: DMATHER DATE: 06 FEB 06

REVISION 02 APPR. BY:

SCALE: 1=75

1375-E10C-263663

	240	256	272	288	304	320	
16	16X240	16X256	16X272	16X288	16X304	16X320	WIRE SUPPORT LOCATION
32	32X240	32X256	32X272	32X288	32X304	32X320	VAC ROUTING
48	48X240	48X256	48X272	48X288	48X304	48X320	VAC ROUTING
64	64X240	64X256	64X272	64X288	64X304	64X320	VAC ROUTING
80	80X240	80X256	80X272	80X288	80X304	80X320	VAC ROUTING
96	96X240	96X256	96X272	96X288	96X304	96X320	VAC ROUTING
112	112X240	112X256	112X272	112X288	112X304	112X320	VAC ROUTING (Z12) VAC ROUTING (Z6)
128	128X240	128X256	128X272	128X288	128X304	128X320	VAC ROUTING (Z12) VAC ROUTING (Z6)

2 CRT

6 CRT

12 CRT

POWER TERM PANEL (TP)	
120/240VAC, 1 PH	**240VAC, 1 PH**
0A-1327-0101(2CKT)	0A-1327-0103(2CKT)
0A-1327-0105(6CKT)	0A-1327-0107(6CKT)
0A-1327-0111(12CKT)	N/A (12CKT)
0A-1327-0113(18CKT)	N/A (18CKT)
120/208VAC, 3 PH	**240/415VAC, 3 PH**
0A-1327-0110(6CKT)	0A-1327-0127(6CKT)
0A-1327-0112(12CKT)	0A-1327-0126(12CKT)
0A-1327-0114(18CKT)	N/A (18CKT)

POWER FILTER (Z)	0A-1327-0205 (6 FILTERS) 0A-1327-0206 (12 FILTERS)	
1 POWER SUPPLY (A)	0A-1327-0016 (600W) 0A-1327-0017 (1000W)	
DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE POWER SUPPLY.		
THERMOSTAT (T)	0A-1327-3101	

FAN (B)		
120VAC	240VAC	WHERE USED
B-1053 B-1019	B-1011 B-1020	16-48 HIGH 64-128 HIGH

WIRE SUPPORT ICON IDENTIFIES THE WIRE SUPPORT LOCATION

NOTE: THE DIFFERENCE BETWEEN A MIRROR AND A PRIMARY DISPLAY IS IN THE QUICK CONNECTS, AND THE PRIMARY HAS A CONTROLLER WHILE THE MIRROR DOES NOT. SEE LEGENDS FOR ASSEMBLY NUMBERS.

CONTROLLER (C) ** (PRIMARY ONLY)		0A-1382-0001
PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT		0A-1327-1000
PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS		0A-1327-1015
MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS		0A-1327-1016
QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE		0A-1327-1003
LIGHT DETECTOR (PRIMARY) BLANK COVER (MIRROR)	(D)	0A-1327-3000 0A-1213-4009
MODULE		12.48" X 12.48" 16 PIXEL X 16 PIXEL 20MM C-C / 0.78" C-C

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO AF-3700 20MM

TITLE: LAYOUT, EE/ME, AF-3700-***X(240-320)-20-RGB 2of5

DES. BY: DRAWN BY: DMATHER DATE: 06 FEB 06

REVISION 02 APPR. BY: SCALE: 1=75

1375-E10C-263664

REV.	DATE	DESCRIPTION	BY	APPR.
02	24JUL07	ADDED 240V & 240/415V POWER PANELS AND FANS TO LEGEND CHANGED CONDUIT TO WIRE SUPPORT	JMG	DJM
01	06JUL06	UPDATED FAN QUANTITIES ON 16, 32 & 48	SRG	MDM

	336	352	368	384	400	
16	16X336	16X352	16X368	16X384	16X400	WIRE SUPPORT LOCATION
32	32X336	32X352	32X368	32X384	32X400	VAC ROUTING
48	48X336	48X352	48X368	48X384	48X400	VAC ROUTING
64	64X336	64X352	64X368	64X384	64X400	VAC ROUTING
80	80X336	80X352	80X368	80X384	80X400	VAC ROUTING (Z12) VAC ROUTING (Z6)
96	96X336	96X352	96X368	96X384	96X400	VAC ROUTING (Z12) VAC ROUTING (Z6)
112	112X336	112X352	112X368	112X384	112X400	VAC ROUTING (Z12) VAC ROUTING (Z6)
128	128X336	128X352	128X368	128X384	128X400	VAC ROUTING (Z12) VAC ROUTING (Z6)

2 CRT
6 CRT
12 CRT
18 CRT

POWER TERM PANEL [TP]	
120/240VAC, 1 PH	**240VAC, 1 PH**
0A-1327-0101(2CKT)	0A-1327-0103(2CKT)
0A-1327-0105(6CKT)	0A-1327-0107(6CKT)
0A-1327-0111(12CKT)	N/A (12CKT)
0A-1327-0113(18CKT)	N/A (18CKT)
120/208VAC, 3 PH	**240/415VAC, 3 PH**
0A-1327-0110(6CKT)	0A-1327-0127(6CKT)
0A-1327-0112(12CKT)	0A-1327-0126(12CKT)
0A-1327-0114(18CKT)	N/A (18CKT)

POWER FILTER [F]	0A-1327-0205 (6 FILTERS)	0A-1327-0206 (12 FILTERS)
1 POWER SUPPLY [S]	0A-1327-0016 (600W)	0A-1327-0017 (1000W)
DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE POWER SUPPLY.		
THERMOSTAT [T]	0A-1327-3101	

FAN (B)		
120VAC	240VAC	WHERE USED
B-1053 B-1019	B-1011 B-1020	16-48 HIGH 64-128 HIGH

NOTE: THE DIFFERENCE BETWEEN A MIRROR AND A PRIMARY DISPLAY IS IN THE QUICK CONNECTS, AND THE PRIMARY HAS A CONTROLLER WHILE THE MIRROR DOES NOT. SEE LEGENDS FOR ASSEMBLY NUMBERS.

CONTROLLER ** (PRIMARY ONLY)	[C]	0A-1382-0001
PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT	[X]	0A-1327-1000
PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS	[X]	0A-1327-1015
MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS	[X]	0A-1327-1016
QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE	[X]	0A-1327-1003
LIGHT DETECTOR (PRIMARY) BLANK COVER (MIRROR)	[L]	0A-1327-3000 0A-1213-4009
MODULE		12.48" X 12.48" 16 PIXEL X 16 PIXEL 20MM C-C / 0.78" C-C

WIRE SUPPORT o ICON IDENTIFIES THE WIRE SUPPORT LOCATION

MASTER PAGE 3

REV.	DATE	DESCRIPTION	BY	APPR.
02	24JUL07	ADDED 240V & 240/415V POWER PANELS AND FANS TO LEGEND CHANGED CONDUIT TO WIRE SUPPORT	JMG	DJM
01	06JUL06	UPDATED FAN QUANTITIES ON 16, 32 & 48	SRG	MDM

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO AF-3700 20MM

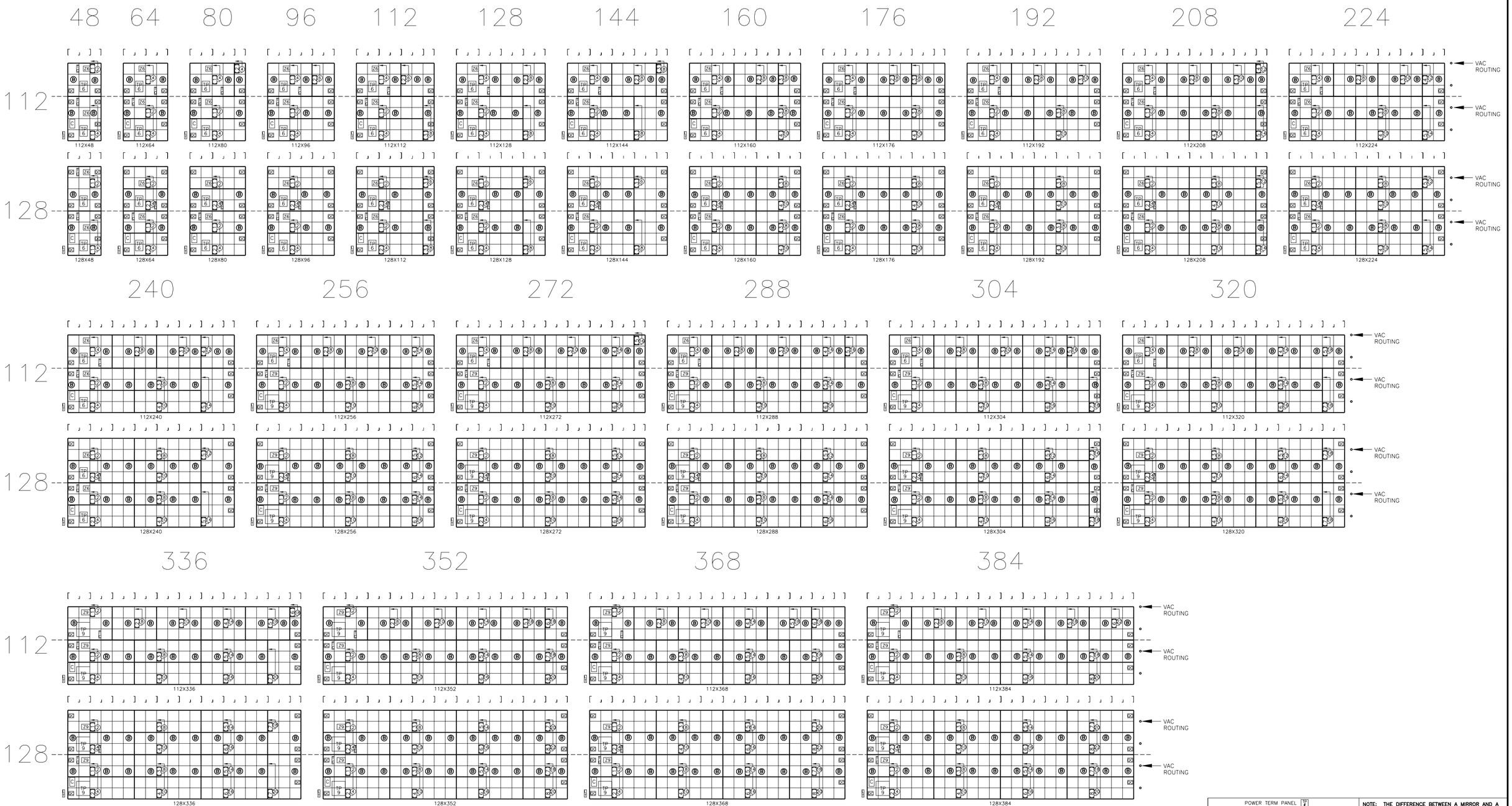
TITLE: LAYOUT, EE/ME, AF-3700-***X(336-400)-20-RGB 3of5

DES. BY: DRAWN BY: DMATHER DATE: 06 FEB 06

REVISION 02 APPR. BY:

SCALE: 1=75

1375-E10C-263665



NOTES:

25 JUN 07	MOVED ALL THERMOSTATS FROM TOP CORNER TO BOTTOM OF TOP SECTION AND MOVED FANS OVER TO HALF BAYS
26 JUN 07	MOVED POWER SUPPLIES DOWN ONE MOD IN TOP SECTIONS OF 128 HEIGHT
29 JUN 07	MOVED Z-FILTER UP ONE MOD IN 112X48
	MOVED TOP LEFT PS UP ONE MOD IN 112X336, 112X352, 112X368, AND 112X384
03 JUL 07	MOVED BTM RIGHT PS ONE MOD RIGHT ON 112X112
03 JUL 07	STARTED CHANGING CABLE LENGTHS ON FIRST 2 ROWS.
05 JUL 07	FINISHED CHANGING CABLE LENGTHS FOR ALL SIZES. CHANGED LAST FAN ON 64 BTM TO MATCH 64 TOP.
13 JUL 07	ADDED 240V & 240/415V POWER PANELS TO LEGEND.

POWER TERM PANEL	
120/240VAC, 1 PH 0A-1327-0119(6CKT) 0A-1327-0133(9CKT)	**240VAC, 1 PH** 0A-1327-0128(6CKT) N/A (9CKT)
120/208VAC, 3 PH 0A-1327-0125(6CKT) 0A-1327-0134(9CKT)	**240/415VAC, 3 PH** 0A-1327-0127(6CKT) 0A-1327-0135(9CKT)

POWER FILTER — 0A-1327-0205 (6 FILTERS) 0A-1327-0209 (9 FILTERS)

1 POWER SUPPLY — 0A-1327-0017 (1000W)

DARK GRID LINES REPRESENT A GROUPING OF MODULES THAT ARE POWERED BY A SINGLE POWER SUPPLY.

THERMOSTAT — 0A-1327-3101

FAN		
120VAC	240VAC	WHERE USED
B-1053	B-1011	48 HIGH
B-1019	B-1020	64 HIGH

WIRE SUPPORT ∘ ICON IDENTIFIES THE WIRE SUPPORT LOCATION

NOTE: THE DIFFERENCE BETWEEN A MIRROR AND A PRIMARY DISPLAY IS IN THE QUICK CONNECTS, AND THE PRIMARY HAS A CONTROLLER WHILE THE MIRROR DOES NOT. SEE LEGENDS FOR ASSEMBLY NUMBERS.

CONTROLLER ** (PRIMARY ONLY)	0A-1382-0001
PRIMARY QUICK CONNECT LEFT LOWER LEFT CORNER CUTOUT	0A-1327-1000
PRIMARY QUICK CONNECT RIGHT ALL RIGHT SIDE CUTOUTS	0A-1327-1015
MIRROR QUICK CONNECT LEFT ALL LEFT SIDE CUTOUTS	0A-1327-1016
QUICK CONNECT BLANK CUTOUTS NOT FILLED BY ABOVE	0A-1327-1003
LIGHT DETECTOR (PRIMARY) BLANK COVER (MIRROR)	0A-1327-3000 0A-1213-4009
MODULE	12.48" X 12.48" 16 PIXEL X 16 PIXEL 20MM C-C / 0.78" C-C

DAKTRONICS, INC. BROOKINGS, SD 57006

REV.	DATE	DESCRIPTION	BY	APPR.
02	07AUG07	MOVED UP #3PS ONE ROW ON TOP 128X128,144 MOVED UP #5PS ONE ROW ON TOP 128X224,240 MOVED UP #7PS ONE ROW ON TOP 128X320,336	MLG	
01	31JUL07	ADDED 240V FANS	JMG	DJM

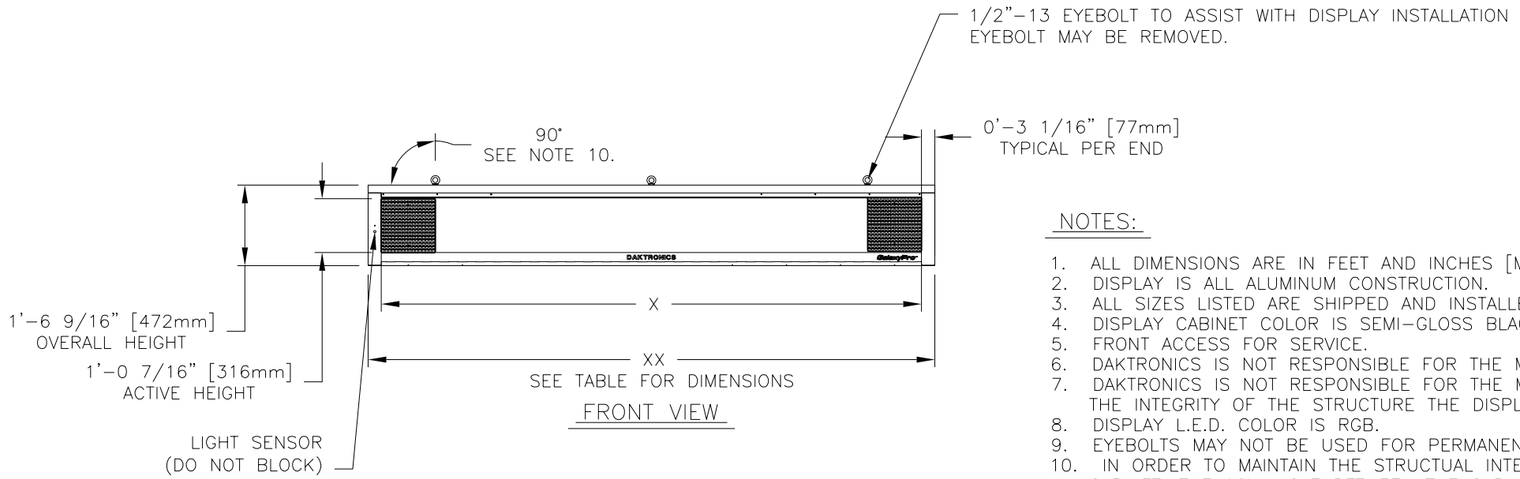
PROJ: GALAXYPRO AF-3700 20MM

TITLE: LAYOUT, EE/ME, AF-3700-(112-128)x(48-384)-20-RGB

DES. BY: DRAWN BY: SGADDAM DATE: 20 JUN 07

REVISION 02 APPR. BY: SCALE: 1=75

1375-E10C-309253

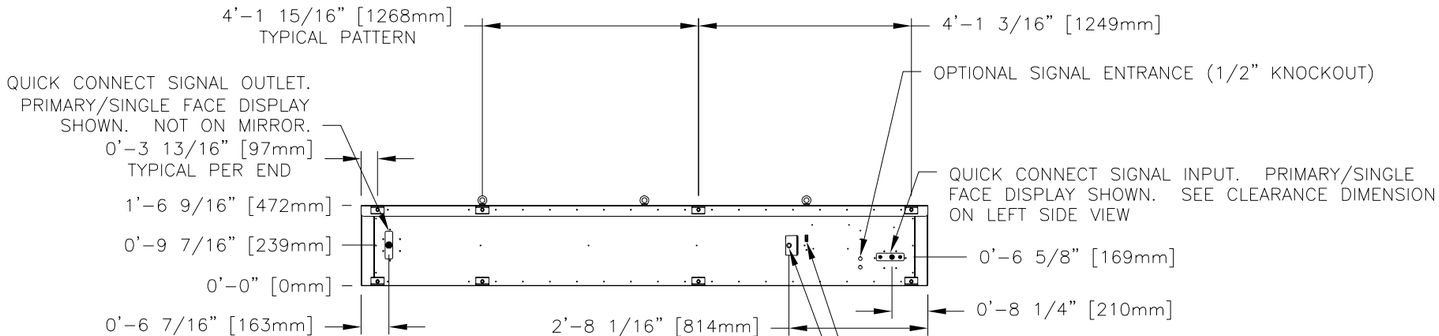


FRONT VIEW

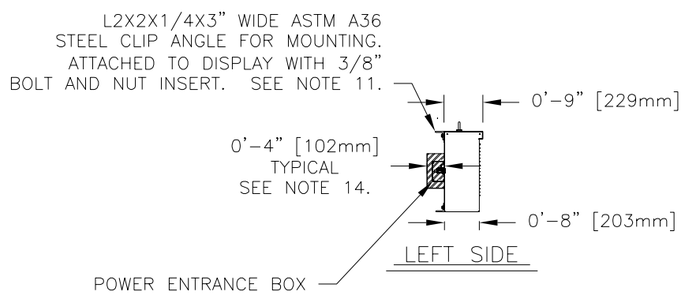
NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. ALL SIZES LISTED ARE SHIPPED AND INSTALLED AS A SINGLE UNIT.
4. DISPLAY CABINET COLOR IS SEMI–GLOSS BLACK.
5. FRONT ACCESS FOR SERVICE.
6. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
8. DISPLAY L.E.D. COLOR IS RGB.
9. EYEBOLTS MAY NOT BE USED FOR PERMANENT INSTALLATION.
10. IN ORDER TO MAINTAIN THE STRUCTUAL INTEGRITY OF THE DISPLAY CABINET, THE 90° ANGLE BETWEEN THE CABINET AND THE LIFTING METHOD MUST BE MAINTAINED.
11. ALL CLIP ANGLES (OR THEIR LOCATIONS) MUST BE USED FOR DISPLAY INSTALLATION.
12. INTAKE AND EXHAUST AIR IS THROUGH THE FRONT SO NO PORTION OF THE FRONT FACE CAN BE COVERED.
13. REFER TO DRAWING 1375–R10B–266279 FOR POWER REQUIREMENTS.
14. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.

	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	46	21
64	49.92	1.27	56.02	1.42	59	27
80	62.40	1.59	68.5	1.74	72	33
96	74.88	1.90	80.98	2.06	86	39
112	87.36	2.22	93.46	2.37	99	45
128	99.84	2.54	105.94	2.69	112	51
144	112.32	2.85	118.42	3.01	125	57
160	124.80	3.17	130.90	3.33	139	63
176	137.28	3.49	143.38	3.64	152	69
192	149.76	3.80	155.86	3.96	165	75
208	162.24	4.12	168.34	4.28	178	81
224	174.72	4.44	180.82	4.59	191	87
240	187.20	4.76	193.30	4.91	205	93
256	199.68	5.07	205.78	5.23	218	99
272	212.16	5.39	218.26	5.54	231	105
288	224.64	5.71	230.74	5.86	244	111
304	237.12	6.02	243.22	6.18	257	117
320	249.60	6.34	255.70	6.50	271	123
336	262.08	6.66	268.18	6.81	284	129
352	274.56	6.97	280.66	7.13	297	135
368	287.04	7.29	293.14	7.45	310	141
384	299.52	7.61	305.62	7.76	323	147



REAR VIEW



LEFT SIDE

REV.	DATE	DESCRIPTION	BY	APPR.
02	30JAN07	UPDATED FLAT BLACK TO SEMI–GLOSS PAINT ADDED DIMENSIONS TO KNOCKOUT AND QUICK CONNECTS, ADDED NOTE #3	BBH	
01	24AUG06	ADDED ACTIVE LENGTHS TO CHART, CHANGED LENGTH DIMENSIONS TO REFERENCE CHARACTERS	RDK	

DAKTRONICS, INC. BROOKINGS, SD 57006

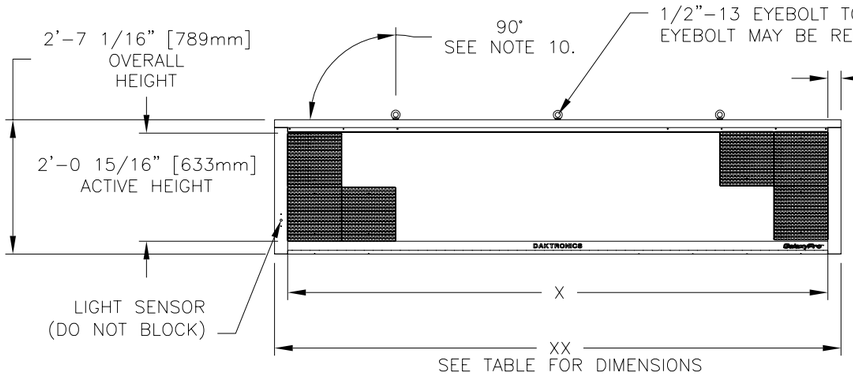
PROJ: GALAXYPRO AF–3700 20MM

TITLE: SHOP DWG, AF–3700–16X***–20

DES. BY: MMAMMEN DRAWN BY: MMAMMEN DATE: 01MAY06

REVISION 02 APPR. BY: SCALE: 1=35

1375-E10B-269369

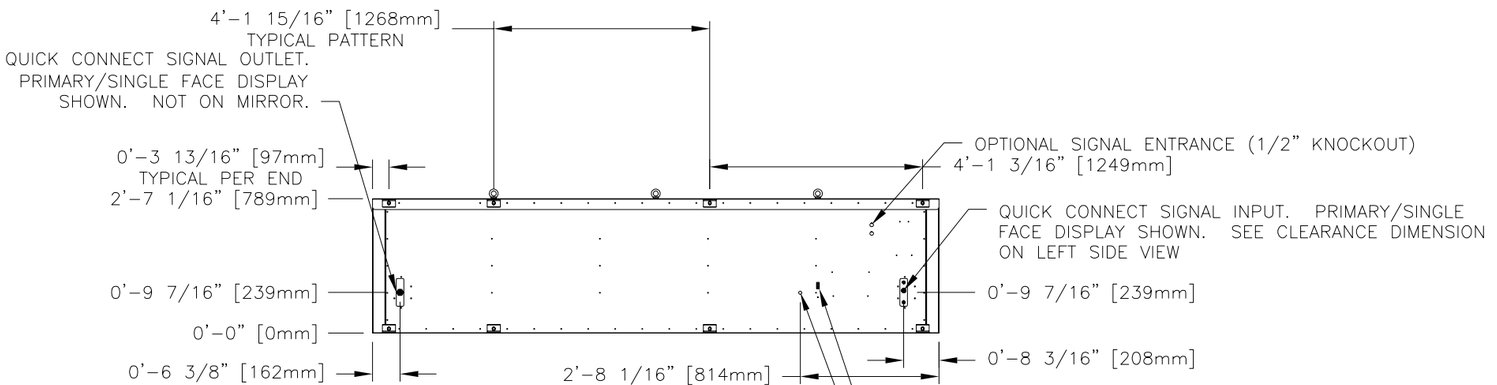


FRONT VIEW

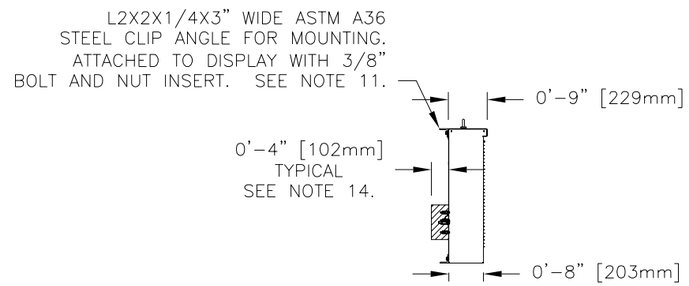
NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. ALL SIZES LISTED ARE SHIPPED AND INSTALLED AS A SINGLE UNIT.
4. DISPLAY CABINET COLOR IS SEMI-GLOSS BLACK.
5. FRONT ACCESS FOR SERVICE.
6. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
8. DISPLAY L.E.D. COLOR IS RGB.
9. EYEBOLTS MAY NOT BE USED FOR PERMANENT INSTALLATION.
10. IN ORDER TO MAINTAIN THE STRUCTUAL INTEGRITY OF THE DISPLAY CABINET, THE 90° ANGLE BETWEEN THE CABINET AND THE LIFTING METHOD MUST BE MAINTAINED.
11. ALL CLIP ANGLES (OR THEIR LOCATIONS) MUST BE USED FOR DISPLAY INSTALLATION.
12. INTAKE AND EXHAUST AIR IS THROUGH THE FRONT SO NO PORTION OF THE FRONT FACE CAN BE COVERED.
13. REFER TO DRAWING 1375-R10B-266279 FOR POWER REQUIREMENTS.
14. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.

	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	77	35
64	49.92	1.27	56.02	1.42	99	45
80	62.40	1.59	68.5	1.74	121	55
96	74.88	1.90	80.98	2.06	143	65
112	87.36	2.22	93.46	2.37	165	75
128	99.84	2.54	105.94	2.69	187	85
144	112.32	2.85	118.42	3.01	209	95
160	124.80	3.17	130.90	3.33	232	105
176	137.28	3.49	143.38	3.64	254	115
192	149.76	3.80	155.86	3.96	276	125
208	162.24	4.12	168.34	4.28	298	135
224	174.72	4.44	180.82	4.59	320	145
240	187.20	4.76	193.30	4.91	342	155
256	199.68	5.07	205.78	5.23	364	165
272	212.16	5.39	218.26	5.54	386	175
288	224.64	5.71	230.74	5.86	408	185
304	237.12	6.02	243.22	6.18	430	195
320	249.60	6.34	255.70	6.50	452	205
336	262.08	6.66	268.18	6.81	474	215
352	274.56	6.97	280.66	7.13	496	225
368	287.04	7.29	293.14	7.45	518	235
384	299.52	7.61	305.62	7.76	541	245



REAR VIEW



LEFT SIDE

REV.	DATE	DESCRIPTION	BY	APPR.
02	30JAN07	UPDATED FLAT BLACK TO SEMI-GLOSS PAINT ADDED DIMENSIONS TO KNOCKOUT AND QUICK CONNECTS, ADDED NOTE #3	BBH	
01	24AUG06	ADDED ACTIVE LENGTHS TO CHART, CHANGED LENGTH DIMENSIONS TO REFERENCE CHARACTERS	RDK	

DAKTRONICS, INC. BROOKINGS, SD 57006

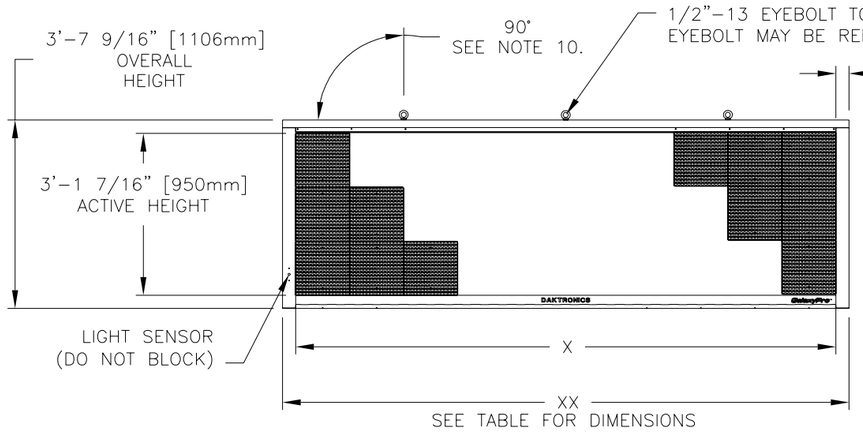
PROJ: GALAXYPRO AF-3700 20MM

TITLE: SHOP DWG, AF-3700-32X***-20

DES. BY: MMAMMEN DRAWN BY: NJACQUES DATE: 01 MAY 06

REVISION 02 | APPR. BY: | SCALE: 1=35

1375-E10B-269370

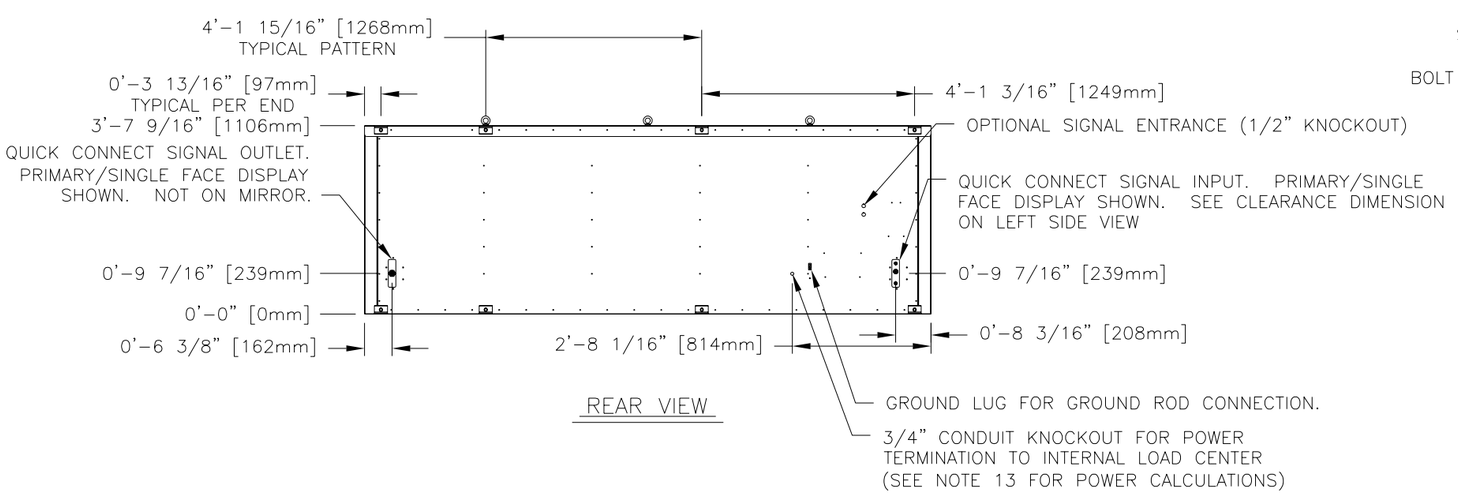


FRONT VIEW

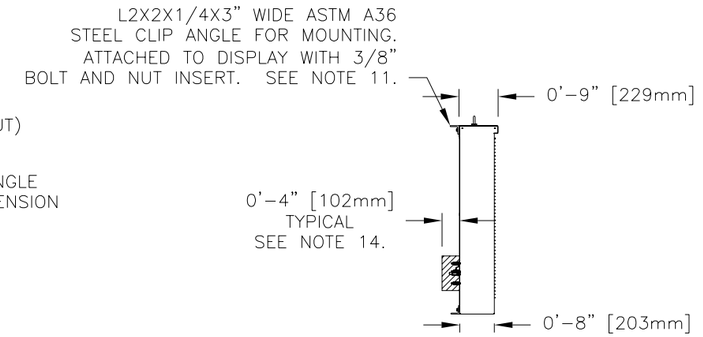
	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	108	49
64	49.92	1.27	56.02	1.42	139	63
80	62.40	1.59	68.5	1.74	170	77
96	74.88	1.90	80.98	2.06	201	91
112	87.36	2.22	93.46	2.37	232	105
128	99.84	2.54	105.94	2.69	263	119
144	112.32	2.85	118.42	3.01	294	133
160	124.80	3.17	130.90	3.33	325	147
176	137.28	3.49	143.38	3.64	355	161
192	149.76	3.80	155.86	3.96	386	175
208	162.24	4.12	168.34	4.28	417	189
224	174.72	4.44	180.82	4.59	448	203
240	187.20	4.76	193.30	4.91	479	217
256	199.68	5.07	205.78	5.23	510	231
272	212.16	5.39	218.26	5.54	541	245
288	224.64	5.71	230.74	5.86	572	259
304	237.12	6.02	243.22	6.18	603	274
320	249.60	6.34	255.70	6.50	634	288
336	262.08	6.66	268.18	6.81	665	302
352	274.56	6.97	280.66	7.13	696	316
368	287.04	7.29	293.14	7.45	727	330
384	299.52	7.61	305.62	7.76	758	344

NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. ALL SIZES LISTED ARE SHIPPED AND INSTALLED AS A SINGLE UNIT.
4. DISPLAY CABINET COLOR IS SEMI-GLOSS BLACK.
5. FRONT ACCESS FOR SERVICE.
6. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
8. DISPLAY L.E.D. COLOR IS RGB.
9. EYEBOLTS MAY NOT BE USED FOR PERMANENT INSTALLATION.
10. IN ORDER TO MAINTAIN THE STRUCTUAL INTEGRITY OF THE DISPLAY CABINET, THE 90° ANGLE BETWEEN THE CABINET AND THE LIFTING METHOD MUST BE MAINTAINED.
11. ALL CLIP ANGLES (OR THEIR LOCATIONS) MUST BE USED FOR DISPLAY INSTALLATION.
12. INTAKE AND EXHAUST AIR IS THROUGH THE FRONT SO NO PORTION OF THE FRONT FACE CAN BE COVERED.
13. REFER TO DRAWING 1375-R10B-266279 FOR POWER REQUIREMENTS.
14. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.



REAR VIEW



LEFT SIDE

REV.	DATE	DESCRIPTION	BY	APPR.
02	30JAN07	UPDATED FLAT BLACK TO SEMI-GLOSS PAINT ADDED DIMENSIONS TO KNOCKOUT AND QUICK CONNECTS, ADDED NOTE #3	BBH	
01	24AUG06	ADDED ACTIVE LENGTHS TO CHART, CHANGED LENGTH DIMENSIONS TO REFERENCE CHARACTERS	RDK	

DAKTRONICS, INC. BROOKINGS, SD 57006

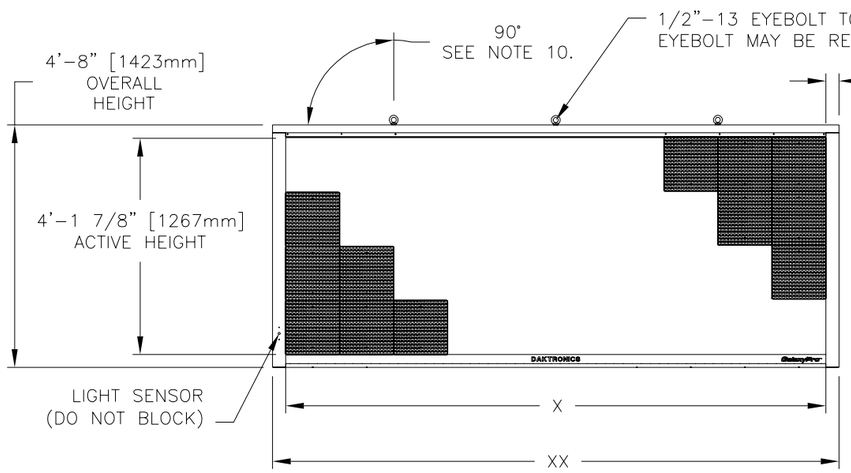
PROJ: GALAXYPRO AF-3700 20MM

TITLE: SHOP DWG, AF-3700-48X***-20

DES. BY: MMAMMEN DRAWN BY: NJACQUES DATE: 01 MAY 06

REVISION 02 | APPR. BY: | SCALE: 1=35

1375-E10B-269371

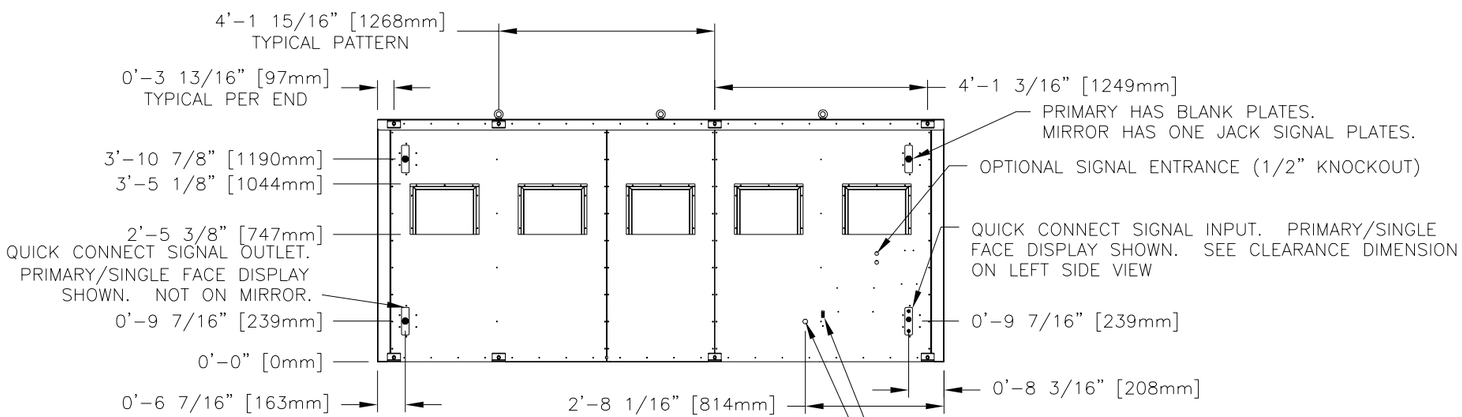


FRONT VIEW

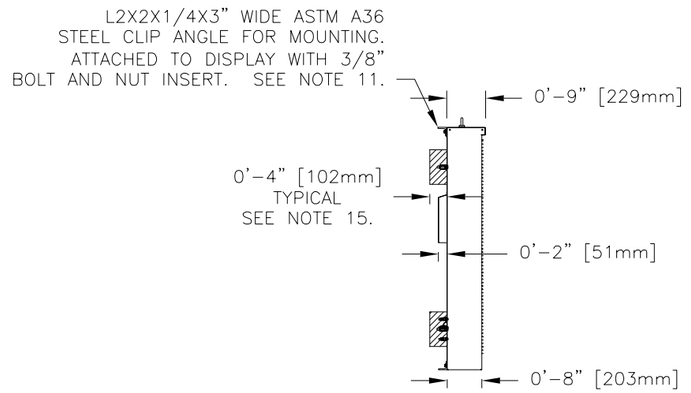
NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. ALL SIZES LISTED ARE SHIPPED AND INSTALLED AS A SINGLE UNIT.
4. DISPLAY CABINET COLOR IS SEMI-GLOSS BLACK.
5. FRONT ACCESS FOR SERVICE.
6. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
8. DISPLAY L.E.D. COLOR IS RGB.
9. EYEBOLTS MAY NOT BE USED FOR PERMANENT INSTALLATION.
10. IN ORDER TO MAINTAIN THE STRUCTUAL INTEGRITY OF THE DISPLAY CABINET, THE 90° ANGLE BETWEEN THE CABINET AND THE LIFTING METHOD MUST BE MAINTAINED.
11. ALL CLIP ANGLES (OR THEIR LOCATIONS) MUST BE USED FOR DISPLAY INSTALLATION.
12. INTAKE AIR IS THROUGH THE FRONT SO NO PORTION OF THE FRONT FACE CAN BE COVERED AND EXHAUST AIR OUT THE REAR THROUGH HOODS.
13. 30.5 SQUARE INCHES OF FRESH AIR IS NEEDED PER HOOD IF THE REAR OF THE DISPLAY IS SHROUDED OR IF THE CABINET IS PUT IN ANOTHER ENCLOSURE.
14. REFER TO DRAWING 1375-R10B-266279 FOR POWER REQUIREMENTS.
15. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.

	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	139	63
64	49.92	1.27	56.02	1.42	179	81
80	62.40	1.59	68.5	1.74	219	99
96	74.88	1.90	80.98	2.06	258	117
112	87.36	2.22	93.46	2.37	298	135
128	99.84	2.54	105.94	2.69	338	153
144	112.32	2.85	118.42	3.01	378	171
160	124.80	3.17	130.90	3.33	418	189
176	137.28	3.49	143.38	3.64	457	207
192	149.76	3.80	155.86	3.96	497	226
208	162.24	4.12	168.34	4.28	537	244
224	174.72	4.44	180.82	4.59	577	262
240	187.20	4.76	193.30	4.91	617	280
256	199.68	5.07	205.78	5.23	656	328
272	212.16	5.39	218.26	5.54	696	316
288	224.64	5.71	230.74	5.86	736	334
304	237.12	6.02	243.22	6.18	776	352
320	249.60	6.34	255.70	6.50	816	370
336	262.08	6.66	268.18	6.81	856	388
352	274.56	6.97	280.66	7.13	895	406
368	287.04	7.29	293.14	7.45	935	424
384	299.52	7.61	305.62	7.76	975	442



REAR VIEW



LEFT SIDE

REV.	DATE	DESCRIPTION	BY	APPR.
03	30JAN07	UPDATED FLAT BLACK TO SEMI-GLOSS PAINT ADDED DIMENSIONS TO KNOCKOUT AND QUICK CONNECTS, ADDED NOTE #3	BBH	
02	24AUG06	ADDED ACTIVE LENGTHS TO CHART, CHANGED LENGTH DIMENSIONS TO REFERENCE CHARACTERS	RDK	
01	02AUG06	CHANGED THE Y ORDINATE DIMENSIONS 4'-5 3/8" TO 3'-5 1/8" AND 4'-11 3/8" TO 3'-10 7/8"	JAH	

DAKTRONICS, INC. BROOKINGS, SD 57006

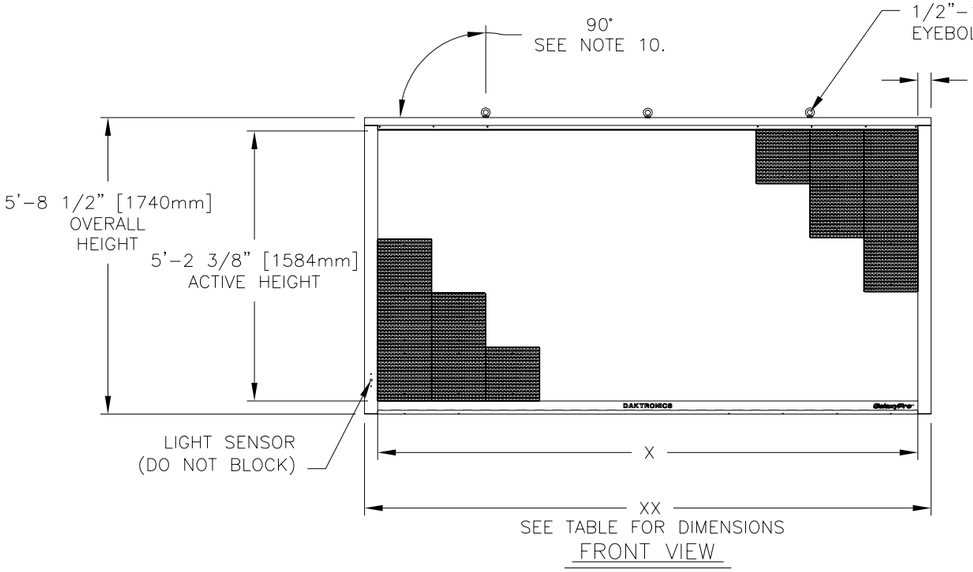
PROJ: GALAXYPRO AF-3700 20MM

TITLE: SHOP DWG, AF-3700-64X***-20

DES. BY: MMAMMEN DRAWN BY: NJACQUES DATE: 01MAY06

REVISION 03 | APPR. BY: | SCALE: 1=35

1375-E10B-269372

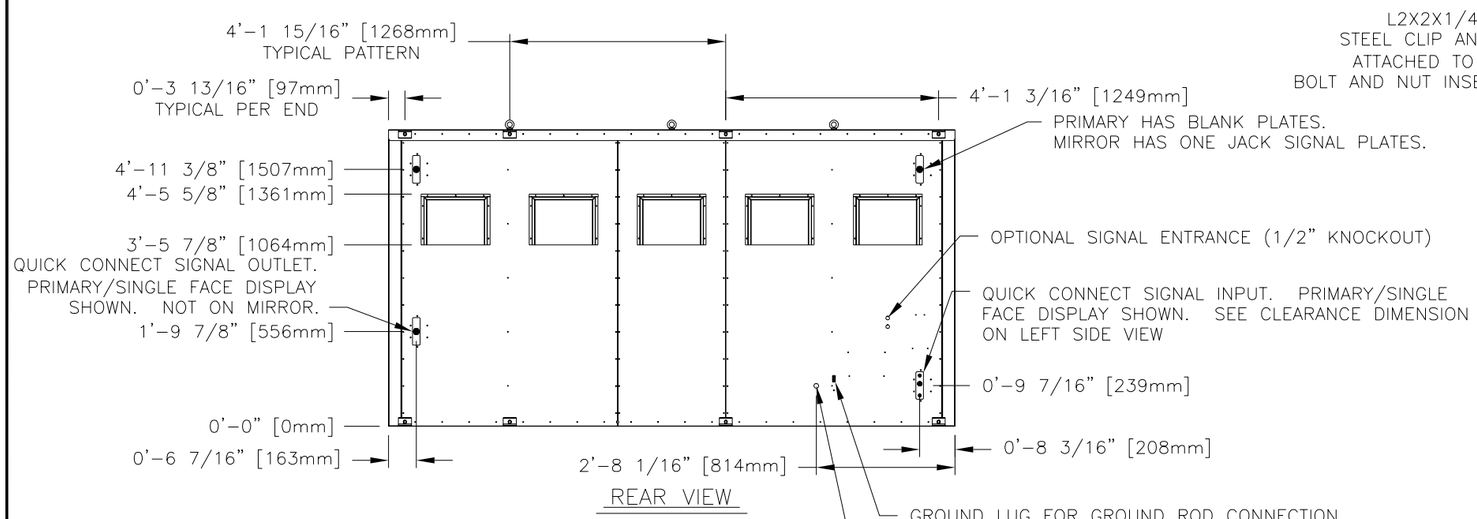


FRONT VIEW

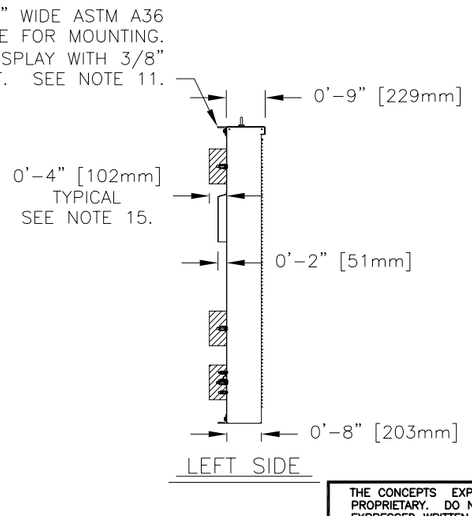
	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	170	77
64	49.92	1.27	56.02	1.42	219	99
80	62.40	1.59	68.5	1.74	267	121
96	74.88	1.90	80.98	2.06	316	143
112	87.36	2.22	93.46	2.37	365	165
128	99.84	2.54	105.94	2.69	413	187
144	112.32	2.85	118.42	3.01	462	210
160	124.80	3.17	130.90	3.33	511	232
176	137.28	3.49	143.38	3.64	559	254
192	149.76	3.80	155.86	3.96	608	278
208	162.24	4.12	168.34	4.28	657	298
224	174.72	4.44	180.82	4.59	705	320
240	187.20	4.76	193.30	4.91	754	342
256	199.68	5.07	205.78	5.23	803	364
272	212.16	5.39	218.26	5.54	851	386
288	224.64	5.71	230.74	5.86	900	408
304	237.12	6.02	243.22	6.18	949	430
320	249.60	6.34	255.70	6.50	997	452
336	262.08	6.66	268.18	6.81	1046	475
352	274.56	6.97	280.66	7.13	1095	497
368	287.04	7.29	293.14	7.45	1143	519
384	299.52	7.61	305.62	7.76	1192	541

NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. ALL SIZES LISTED ARE SHIPPED AND INSTALLED AS A SINGLE UNIT.
4. DISPLAY CABINET COLOR IS SEMI–GLOSS BLACK.
5. FRONT ACCESS FOR SERVICE.
6. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
8. DISPLAY L.E.D. COLOR IS RGB.
9. EYEBOLTS MAY NOT BE USED FOR PERMANENT INSTALLATION.
10. IN ORDER TO MAINTAIN THE STRUCTUAL INTEGRITY OF THE DISPLAY CABINET, THE 90° ANGLE BETWEEN THE CABINET AND THE LIFTING METHOD MUST BE MAINTAINED.
11. ALL CLIP ANGLES (OR THEIR LOCATIONS) MUST BE USED FOR DISPLAY INSTALLATION.
12. INTAKE AIR IS THROUGH THE FRONT SO NO PORTION OF THE FRONT FACE CAN BE COVERED AND EXHAUST AIR OUT THE REAR THROUGH HOODS.
13. 30.5 SQUARE INCHES OF FRESH AIR IS NEEDED PER HOOD IF THE REAR OF THE DISPLAY IS SHROUDED OR IF THE CABINET IS PUT IN ANOTHER ENCLOSURE.
14. REFER TO DRAWING 1375–R10B–266279 FOR POWER REQUIREMENTS.
15. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.



REAR VIEW



LEFT SIDE

REV.	DATE	DESCRIPTION	BY	APPR.
02	30JAN07	UPDATED FLAT BLACK TO SEMI–GLOSS PAINT ADDED DIMENSIONS TO KNOCKOUT AND QUICK CONNECTS, ADDED NOTE #3	BBH	
01	24AUG06	ADDED ACTIVE LENGTHS TO CHART, CHANGED LENGTH DIMENSIONS TO REFERENCE CHARACTERS	RDK	

DAKTRONICS, INC. BROOKINGS, SD 57006

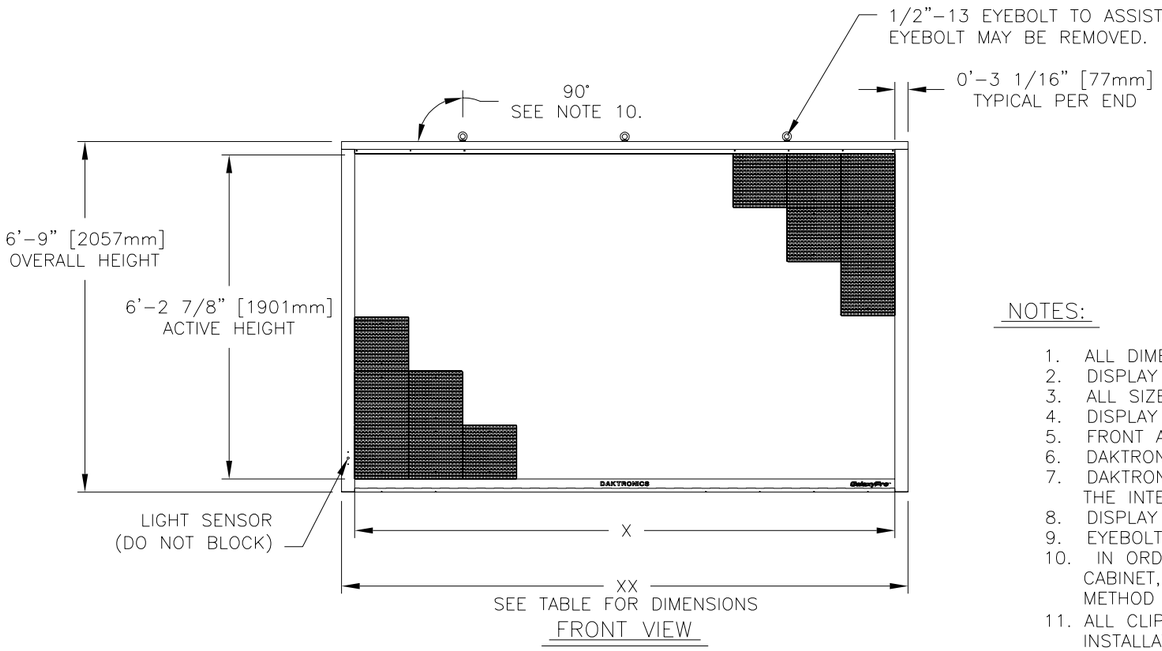
PROJ: GALAXYPRO AF–3700 20MM

TITLE: SHOP DWG, AF–3700–80X***–20

DES. BY: MMAMMEN DRAWN BY: NJACQUES DATE: 01 MAY 06

REVISION 02 | APPR. BY: | SCALE: 1=35

1375-E10B-269373

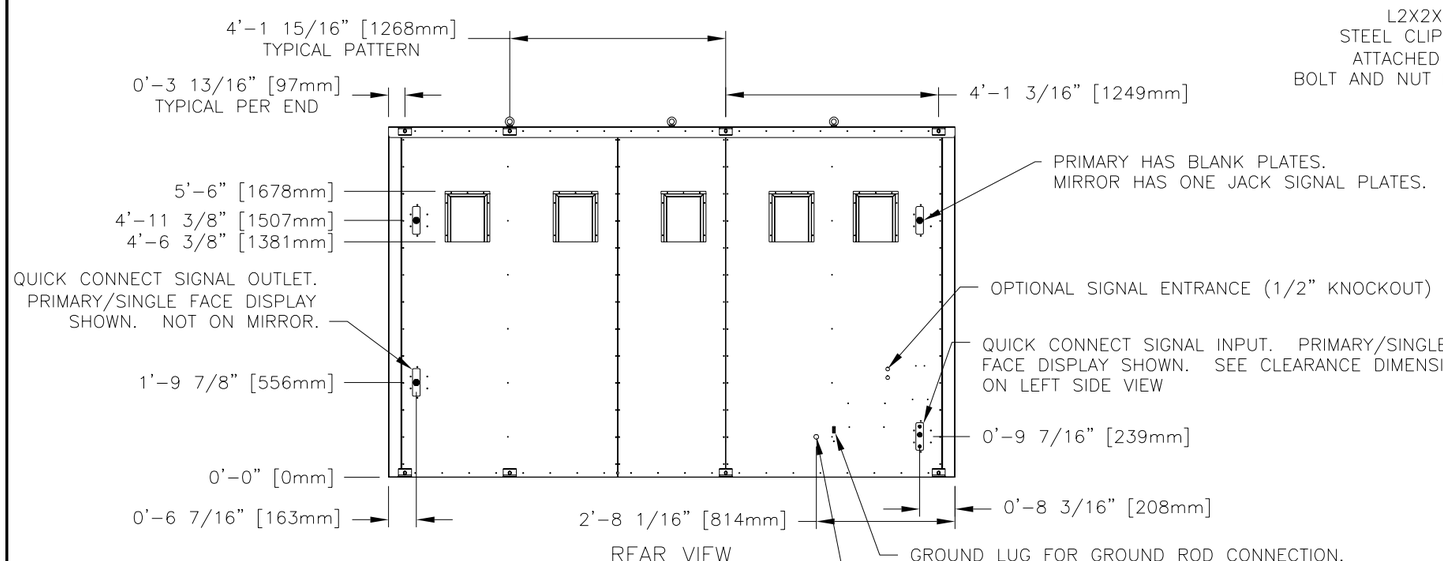


FRONT VIEW

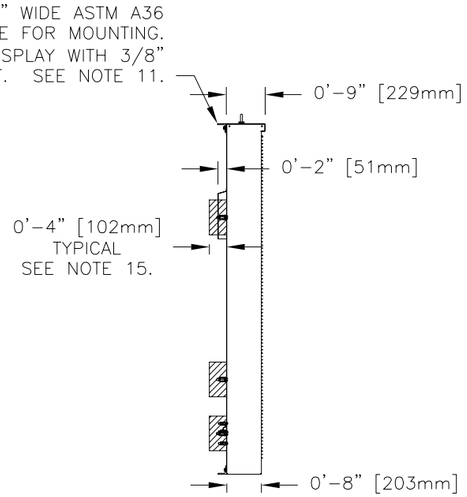
	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	201	91
64	49.92	1.27	56.02	1.42	258	117
80	62.40	1.59	68.5	1.74	316	143
96	74.88	1.90	80.98	2.06	373	169
112	87.36	2.22	93.46	2.37	431	195
128	99.84	2.54	105.94	2.69	489	222
144	112.32	2.85	118.42	3.01	546	248
160	124.80	3.17	130.90	3.33	604	274
176	137.28	3.49	143.38	3.64	661	300
192	149.76	3.80	155.86	3.96	719	326
208	162.24	4.12	168.34	4.28	776	352
224	174.72	4.44	180.82	4.59	834	378
240	187.20	4.76	193.30	4.91	891	404
256	199.68	5.07	205.78	5.23	949	430
272	212.16	5.39	218.26	5.54	1006	457
288	224.64	5.71	230.74	5.86	1064	483
304	237.12	6.02	243.22	6.18	1122	509
320	249.60	6.34	255.70	6.50	1179	535
336	262.08	6.66	268.18	6.81	1237	561
352	274.56	6.97	280.66	7.13	1294	587
368	287.04	7.29	293.14	7.45	1352	613
384	299.52	7.61	305.62	7.76	1409	639

NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. ALL SIZES LISTED ARE SHIPPED AND INSTALLED AS A SINGLE UNIT.
4. DISPLAY CABINET COLOR IS SEMI–GLOSS BLACK.
5. FRONT ACCESS FOR SERVICE.
6. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
8. DISPLAY L.E.D. COLOR IS RGB.
9. EYEBOLTS MAY NOT BE USED FOR PERMANENT INSTALLATION.
10. IN ORDER TO MAINTAIN THE STRUCTUAL INTEGRITY OF THE DISPLAY CABINET, THE 90° ANGLE BETWEEN THE CABINET AND THE LIFTING METHOD MUST BE MAINTAINED.
11. ALL CLIP ANGLES (OR THEIR LOCATIONS) MUST BE USED FOR DISPLAY INSTALLATION.
12. INTAKE AIR IS THROUGH THE FRONT SO NO PORTION OF THE FRONT FACE CAN BE COVERED AND EXHAUST AIR OUT THE REAR THROUGH HOODS.
13. 30.5 SQUARE INCHES OF FRESH AIR IS NEEDED PER HOOD IF THE REAR OF THE DISPLAY IS SHROUDED OR IF THE CABINET IS PUT IN ANOTHER ENCLOSURE.
14. REFER TO DRAWING 1375–R10B–266279 FOR POWER REQUIREMENTS.
15. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.



REAR VIEW



LEFT SIDE

REV.	DATE	DESCRIPTION	BY	APPR.
02	30JAN07	UPDATED FLAT BLACK TO SEMI–GLOSS PAINT ADDED DIMENSIONS TO KNOCKOUT AND QUICK CONNECTS, ADDED NOTE #3	BBH	
01	24AUG06	ADDED ACTIVE LENGTHS TO CHART, CHANGED LENGTH DIMENSIONS TO REFERENCE CHARACTERS	RDK	

DAKTRONICS, INC. BROOKINGS, SD 57006

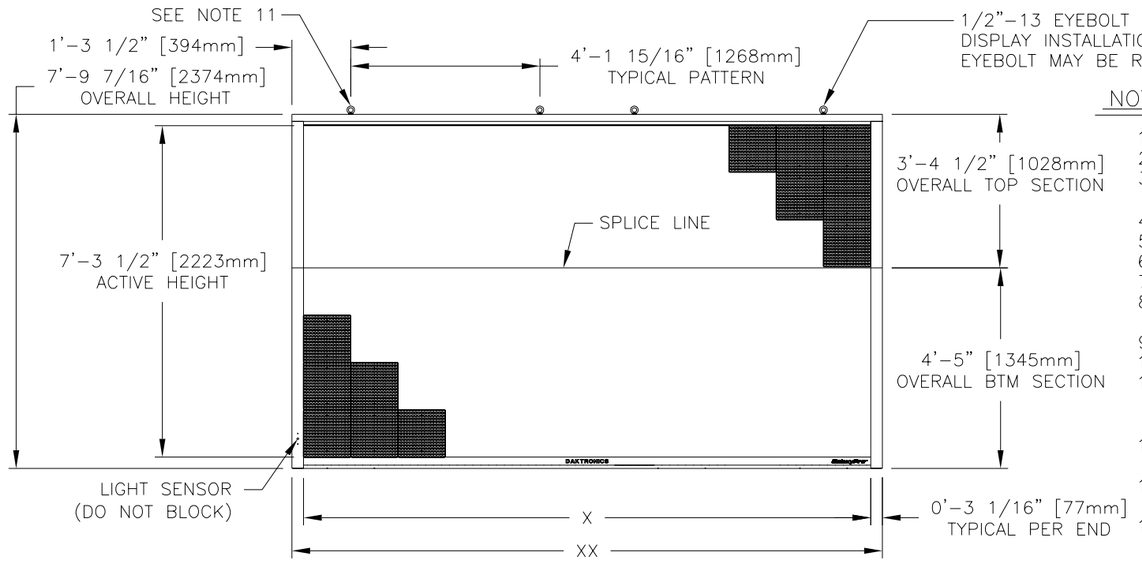
PROJ: GALAXYPRO AF–3700 20MM

TITLE: SHOP DWG, AF–3700–96X***–20

DES. BY: MMAMMEN DRAWN BY: NJACQUES DATE: 01 MAY 06

REVISION 02 APPR. BY: SCALE: 1=35

1375-E10B-269374

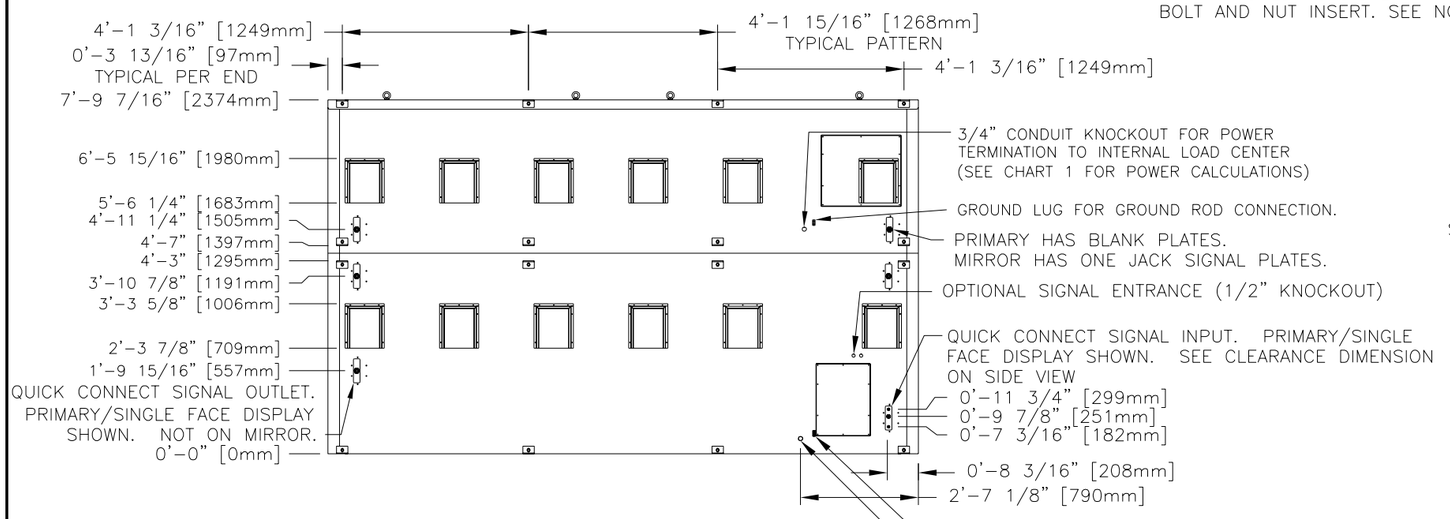


FRONT VIEW

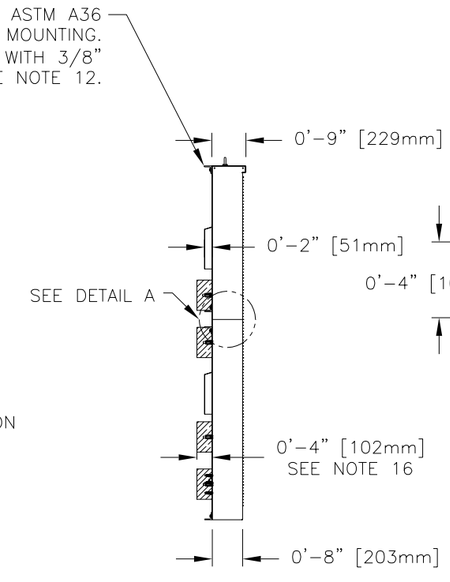
NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. THIS DISPLAY WILL BE SHIPPED IN TWO SECTIONS; ASSEMBLY OF SECTIONS IS REQUIRED ON SITE (SEE SPLICE LINE).
4. BOLTS TO ATTACH SECTIONS ARE PROVIDED BY DAKTRONICS.
5. DISPLAY CABINET COLOR IS SEMI-GLOSS BLACK.
6. FRONT ACCESS FOR SERVICE.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
8. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
9. DISPLAY L.E.D. COLOR IS RGB.
10. EYEBOLTS MAY NOT BE USED FOR PERMANENT INSTALLATION.
11. IN ORDER TO MAINTAIN THE STRUCTUAL INTEGRITY OF THE DISPLAY CABINET, THE 90° ANGLE BETWEEN THE CABINET AND THE LIFTING METHOD MUST BE MAINTAINED.
12. ALL CLIP ANGLES (OR THEIR LOCATIONS) MUST BE USED FOR DISPLAY INSTALLATION.
13. INTAKE AIR IS THROUGH THE FRONT SO NO PORTION OF THE FRONT FACE CAN BE COVERED AND EXHAUST AIR OUT THE REAR THROUGH HOODS.
14. 30.5 SQUARE INCHES OF FRESH AIR IS NEEDED PER HOOD IF THE REAR OF HE DISPLAY IS SHROUDED OR IF THE CABINET IS PUT IN ANOTHER ENCLOSURE.
15. REFER TO DRAWING 1375-R10B-310532 FOR POWER REQUIREMENTS.
16. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.

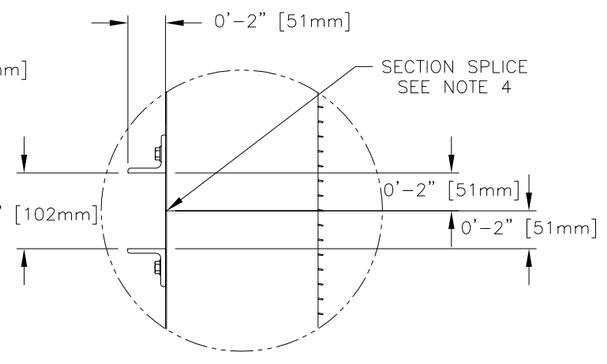
	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	250	114
64	49.92	1.27	56.02	1.42	320	146
80	62.40	1.59	68.5	1.74	390	177
96	74.88	1.90	80.98	2.06	460	209
112	87.36	2.22	93.46	2.37	530	241
128	99.84	2.54	105.94	2.69	600	273
144	112.32	2.85	118.42	3.01	670	304
160	124.80	3.17	130.90	3.33	740	336
176	137.28	3.49	143.38	3.64	810	368
192	149.76	3.80	155.86	3.96	885	402
208	162.24	4.12	168.34	4.28	955	434
224	174.72	4.44	180.82	4.59	1025	465
240	187.20	4.76	193.30	4.91	1095	497
256	199.68	5.07	205.78	5.23	1165	529
272	212.16	5.39	218.26	5.54	1235	561
288	224.64	5.71	230.74	5.86	1305	592
304	237.12	6.02	243.22	6.18	1375	624
320	249.60	6.34	255.70	6.50	1445	656
336	262.08	6.66	268.18	6.81	1515	688
352	274.56	6.97	280.66	7.13	1585	719
368	287.04	7.29	293.14	7.45	1660	753
384	299.52	7.61	305.62	7.76	1730	785



REAR VIEW



SIDE VIEW



DETAIL: A
(5 X SCALE)

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO AF-3700 20MM

TITLE: SHOP DWG, AF-3700-112X***-20

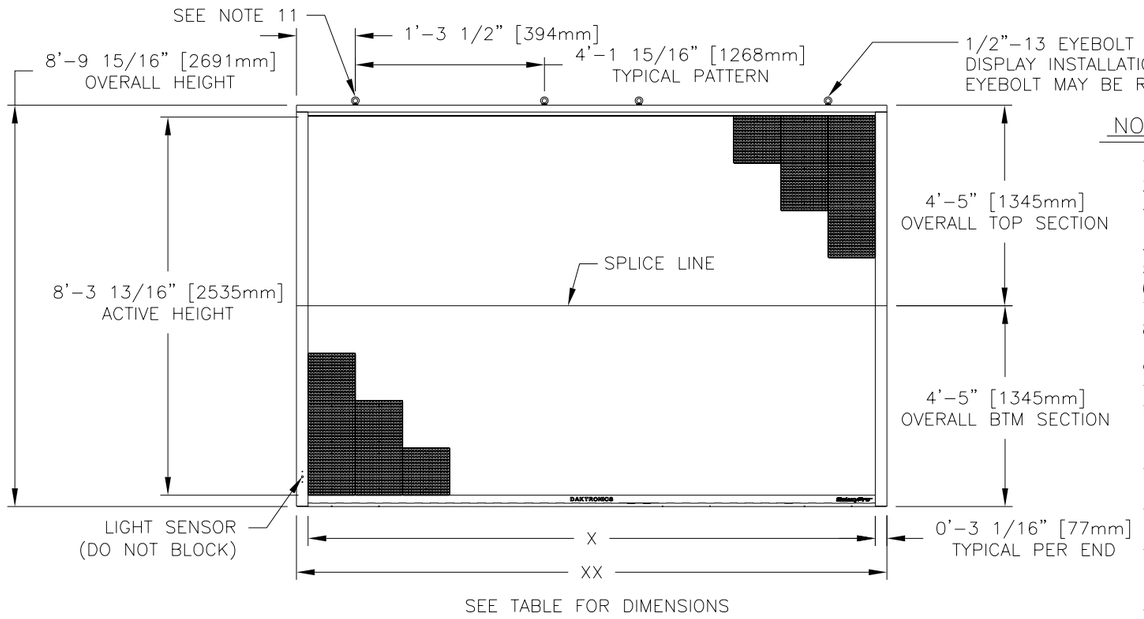
DES. BY: MMAMMEN DRAWN BY: BHAROLD DATE: 26JUN07

REVISION 00 APPR. BY:

SCALE: 1=40

1375-E10B-310159

REV.	DATE	DESCRIPTION	BY	APPR.



FRONT VIEW

	ACTIVE LENGTH (X DIMENSION)		OVERALL LENGTH (XX DIMENSION)		EST. WEIGHT	
PIXELS	INCHES	METERS	INCHES	METERS	LBS.	KG.
48	37.44	0.95	43.54	1.11	280	128
64	49.92	1.27	56.02	1.42	360	164
80	62.40	1.59	68.5	1.74	440	200
96	74.88	1.90	80.98	2.06	520	236
112	87.36	2.22	93.46	2.37	600	273
128	99.84	2.54	105.94	2.69	680	309
144	112.32	2.85	118.42	3.01	760	345
160	124.80	3.17	130.90	3.33	840	382
176	137.28	3.49	143.38	3.64	920	418
192	149.76	3.80	155.86	3.96	1000	454
208	162.24	4.12	168.34	4.28	1080	490
224	174.72	4.44	180.82	4.59	1160	527
240	187.20	4.76	193.30	4.91	1240	563
256	199.68	5.07	205.78	5.23	1320	599
272	212.16	5.39	218.26	5.54	1400	636
288	224.64	5.71	230.74	5.86	1480	675
304	237.12	6.02	243.22	6.18	1560	708
320	249.60	6.34	255.70	6.50	1640	744
336	262.08	6.66	268.18	6.81	1720	781
352	274.56	6.97	280.66	7.13	1800	817
368	287.04	7.29	293.14	7.45	1880	853
384	299.52	7.61	305.62	7.76	1960	890

NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES [MILLIMETERS].
2. DISPLAY IS ALL ALUMINUM CONSTRUCTION.
3. THIS DISPLAY WILL BE SHIPPED IN TWO SECTIONS; ASSEMBLY OF SECTIONS IS REQUIRED ON SITE (SEE SPLICE LINE).
4. BOLTS TO ATTACH SECTIONS ARE PROVIDED BY DAKTRONICS.
5. DISPLAY CABINET COLOR IS SEMI-GLOSS BLACK.
6. FRONT ACCESS FOR SERVICE.
7. DAKTRONICS IS NOT RESPONSIBLE FOR THE MAIN ELECTRICAL DISCONNECT.
8. DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING HARDWARE OR THE INTEGRITY OF THE STRUCTURE THE DISPLAY IS MOUNTED TO.
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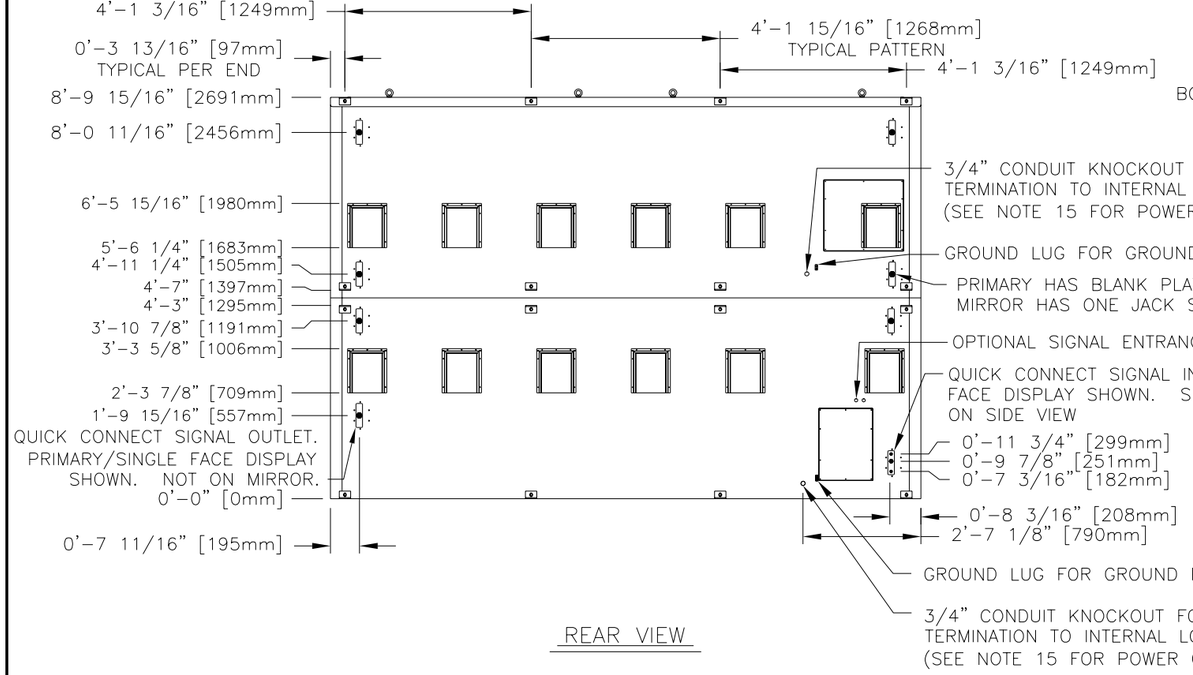
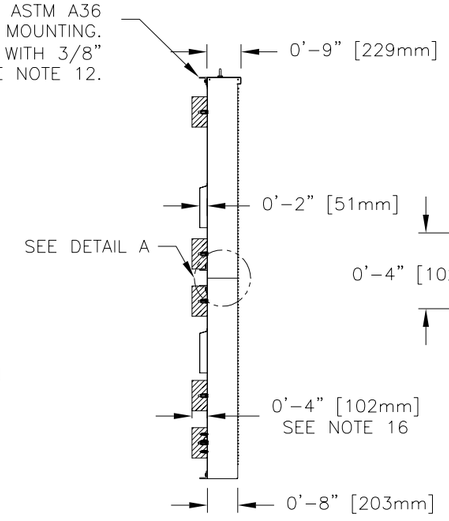
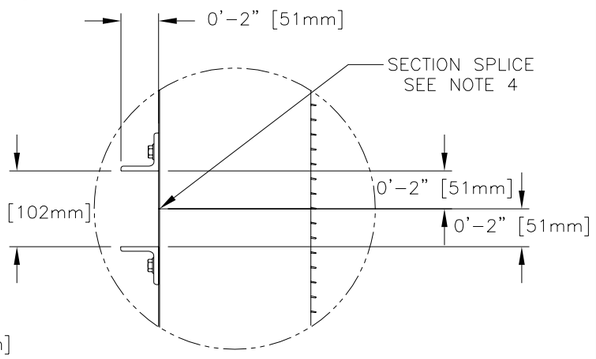
15. REFER TO DRAWING 1375-R10B-310532 FOR POWER REQUIREMENTS.
16. SHADED AREA INDICATES CLEARANCE NEEDED FOR QUICK CONNECTS.



REAR VIEW



SIDE VIEW



DETAIL: A
(5 X SCALE)

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GALAXYPRO AF-3700 20MM

TITLE: SHOP DWG, AF-3700-128X***-20

DES. BY: MMAMMEN DRAWN BY: BHAROLD DATE: 26JUN07

REVISION 00 | APPR. BY: | SCALE: 1=40

1375-E10B-310161

REV.	DATE	DESCRIPTION	BY	APPR.

Appendix B: Glossary

Definitions of Terms

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: The LEDs are mounted directly onto the module. This board is also responsible for the on/off and intensity levels of the LEDs.

GalaxyPro®: Daktronics trademarked name for LED RGB matrix displays.

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

Louver: Black plastic ledge positioned horizontally above each pixel row. The louvers block sunlight, thus increasing the level of 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: 20 mm GalaxyPro® modules are 16 pixels high by 16 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: Name given to the software on the control computer that is used to create messages and send them to the displays. The Venus 1500 manual is included on the installation disk.

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:

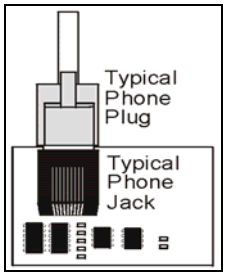


Figure 62: *RJ11/RJ45 Connector*

Ribbon Cable Connectors:
A typical ribbon connector is shown in **Figure 58**. 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.

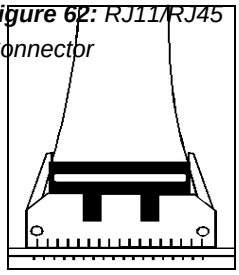


Figure 58: *Ribbon Cable Connector*

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 59**.

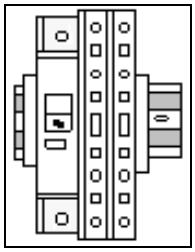


Figure 59: *One Breaker Termination Block*

Phoenix™-Style Connectors:
Phoenix-style connectors, which are usually green, are often used for communication signal termination on circuit boards. Refer to **Figure 60**. 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.

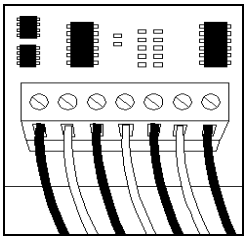


Figure 60: *Phoenix Connector*

Mate-n-Lok® Connectors:
The Mate-n-Lok connectors found in the displays are white and come in a variety of sizes. **Figure 61** 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.

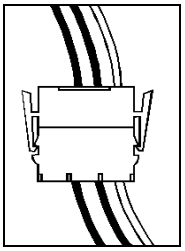
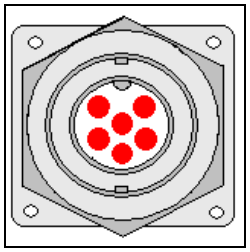


Figure 61: *Mate-n-Lok Connector*

Phone/Network Jacks (RJ11/RJ45 Connectors):
RJ connectors, as seen in **Figure 62**, 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.

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.



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 63** illustrates the six-pin quick-connect jack.

Figu
pin Q

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. A four-fiber cable is shown in **Figure 64**.

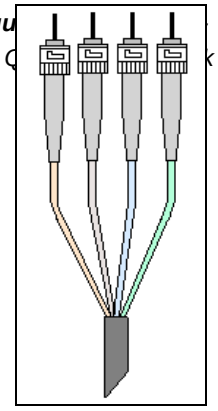


***Figure 64**: Fiber-Optic Cable*

Appendix C: Temperature Sensor Installation

Temperature Sensor Mounting For Galaxy AF-3700 and AF-3500 Displays

Reference Drawings:

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

1.1 Temperature Sensor Overview

The temperature sensor enclosure, shown in **Figure 1**, is composed of eight plastic disks, a metal mounting bracket, and a 25-foot weather-resistant cable.

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

It may be necessary to disassemble the enclosure or rewire the temperature sensor board. Instructions are provided for those situations.

Refer to the following chart for part numbers if replacement or additional parts are needed.

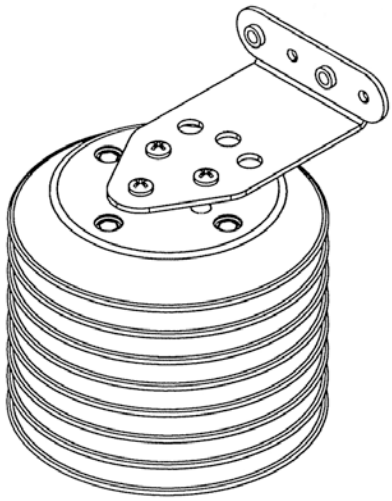


Figure 1: *Temperature Sensor*

Parts List	
Part Description	**Daktronics Part Number**
Temperature Sensor Housing	0A-1151-0005
4-pin Male Cable, 25 feet	W-1819
22 AWG 2-pair Shielded Cable	W-1234

1.2 Mounting Locations

For greater temperature accuracy, follow these mounting recommendations:

- **Mount sensor vertically**.
- An ideal location is under a north eave or on a northern exposure away from direct sunlight, as shown in **Figure 2**. In these cases, the quick-connect cable is not used. Four-conductor, 22-AWG, shielded cable must be pulled from the display to the temperature sensor location. Route the cable through conduit when exposed to outdoor conditions. The maximum length of the cable should be no more than 500 feet.
- Mount the sensor above grass or vegetation rather than concrete or other pavement.
- Mount at least 20 feet away from chimneys, vents, air conditioners, or other items that would influence correct temperature readings.
- Do not mount the sensor between displays or locations that restrict air movement.
- Mount the sensor so the cable is protected from weather and vandalism.

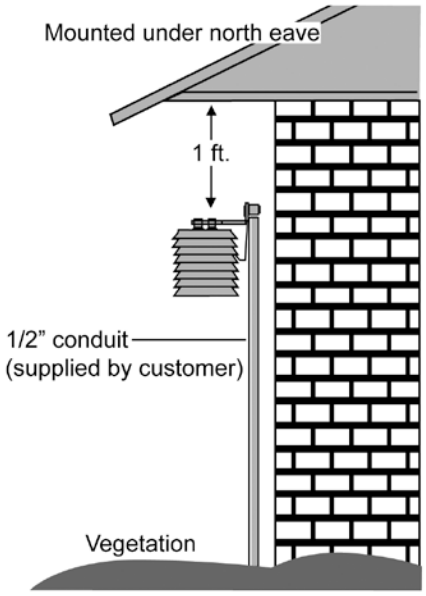


Figure 2: *Located on the North Eave*

201 Daktronics Drive PO Box 5128, Brookings, SD 57006-5128
tel: 866-343-3122 fax: 605-697-4700
www.daktronics.com

The most common location for the temperature sensor is on the display structure, as shown in **Figure 3**. To keep the sensor shaded, locate it below or on a northern edge of the display.

Note: Always mount the sensor in a location so it can easily be connected to the primary display.

Figure 3: *Located on Structure*

1.3 Using the provided 25-foot quick-connect cable (most common)

1. The temperature sensor is connected to the display through a quick-connect input plug on the back of the first face. The temperature sensor is provided with 25 feet of weather resistant cable. The cable does not need to be in conduit. The sensor connects to the display at J31. **Figure 4** and **Figure 5** show the location of the quick-connect plug.

2. The quick-connect signal cable between displays connects both communication and temperature signal. No additional wiring is required from display to display for the temperature sensor.

3. Coil any excess cable and secure it to discourage vandalism, as shown in **Figure 4**.

Figure 4: *AF-3700 Quick-Connect Cable*

Figure 5: *AF-3500 Quick-Connect Panel*

201 Daktronics Drive PO Box 5128, Brookings, SD 57006-5128
tel: 866-343-3122 fax: 605-697-4700
www.daktronics.com

1.4 Using more than 25-feet of cable and no quick-connect plug (rare use)

1. Run ½″ conduit from the temperature sensor location to a knockout on the back of the primary display. The cable must be routed through ½″ metal conduit that is 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 4-position terminal block in the display labeled TB4. Connect to the controller as shown in **Figure 6**.

3. Open the temperature sensor housing by removing the four nuts from the bottom and removing the five bottom disks. Refer to **Drawing A-198371** for details on sensor housing disassembly.

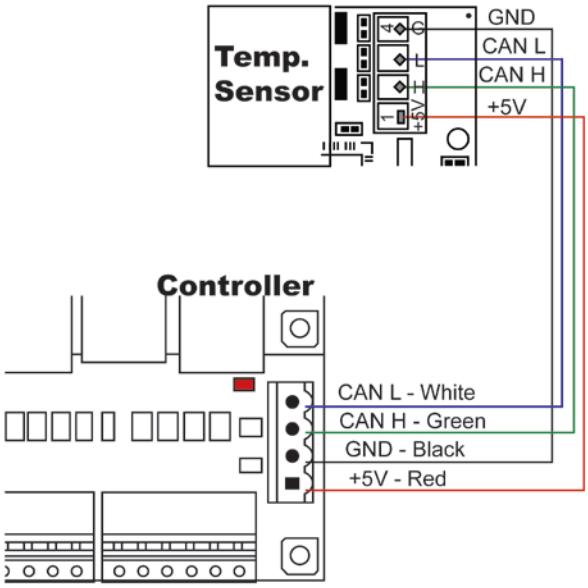


Figure 6: *CAN Temperature Sensor Connection Controller*

4. Disconnect the quick-connect CAN temperature sensor cable from the temperature sensor terminal block in the CAN temperature sensor housing.

5. Connect the cable coming from the controller's terminal block to the temperature sensor board in the temperature sensor housing. Refer to **Figure 6 a**nd the following table for wiring locations and connections at the sensor and to the controller.

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

6. Route cable around the sensor board as shown in **Drawing A-197884**.

7. Connect the cable and reassemble the sensor.

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

201 Daktronics Drive PO Box 5128, Brookings, SD 57006-5128
tel: 866-343-3122 fax: 605-697-4700
www.daktronics.com

1.5 Temperature Interconnection (for primary-primary setups)

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

When the interconnect cable is not used, a 4-conductor shielded cable is needed to terminate the temperature sensor from display one to display two.

One end terminates at the 4-position terminal block (TB4) on the primary display. The other end terminates at the 4-position terminal block (TB4) in the second display. Refer to **Figure 7** and the following table for correct interconnect locations.

Note: Do not connect the wire to pin one on either display.

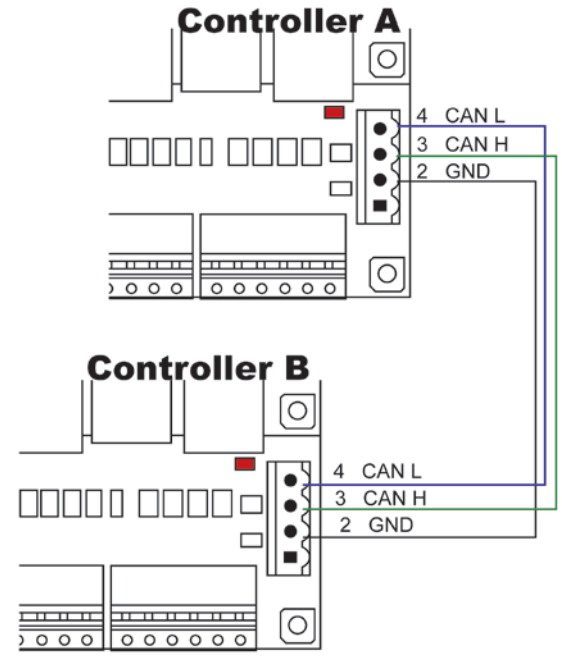


Figure 7: *CAN Controller Interconnect*

Interconnect Locations – M3 Controller		
Primary (A31-TB4)	**Field Cabling**	**Secondary (A31-TB4)**
Pin 2 (GND CAN)	Black	Pin 2 (GND CAN)
Pin 3 (CAN H)	Green	Pin 3 (CAN H)
Pin 4 (CAN L)	White	Pin 4 (CAN L)

1.6 Sensor Replacement

If the temperature sensor board or wiring malfunctions, access it by:

1. Open the temperature sensor housing by removing the four nuts from the bottom and then removing the five bottom disks. Refer to **Figure 8** for details on sensor housing disassembly.

2. Label the wires connected to the temperature sensor board and then disconnect the cable from the sensor terminal block in the temperature sensor housing.

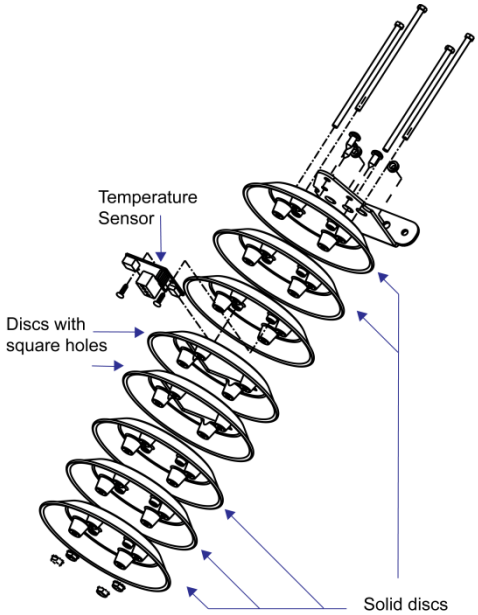


Figure 8: *Temperature Sensor Diagram*

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www.daktronics.com

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 wires make a good electrical connection.

5. Route wires around the sensor board as shown in **Figure 9** and reassemble the sensor enclosure.

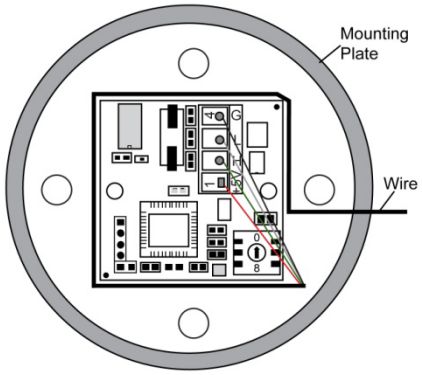

Figure 9: *Temperature Sensor Wiring*

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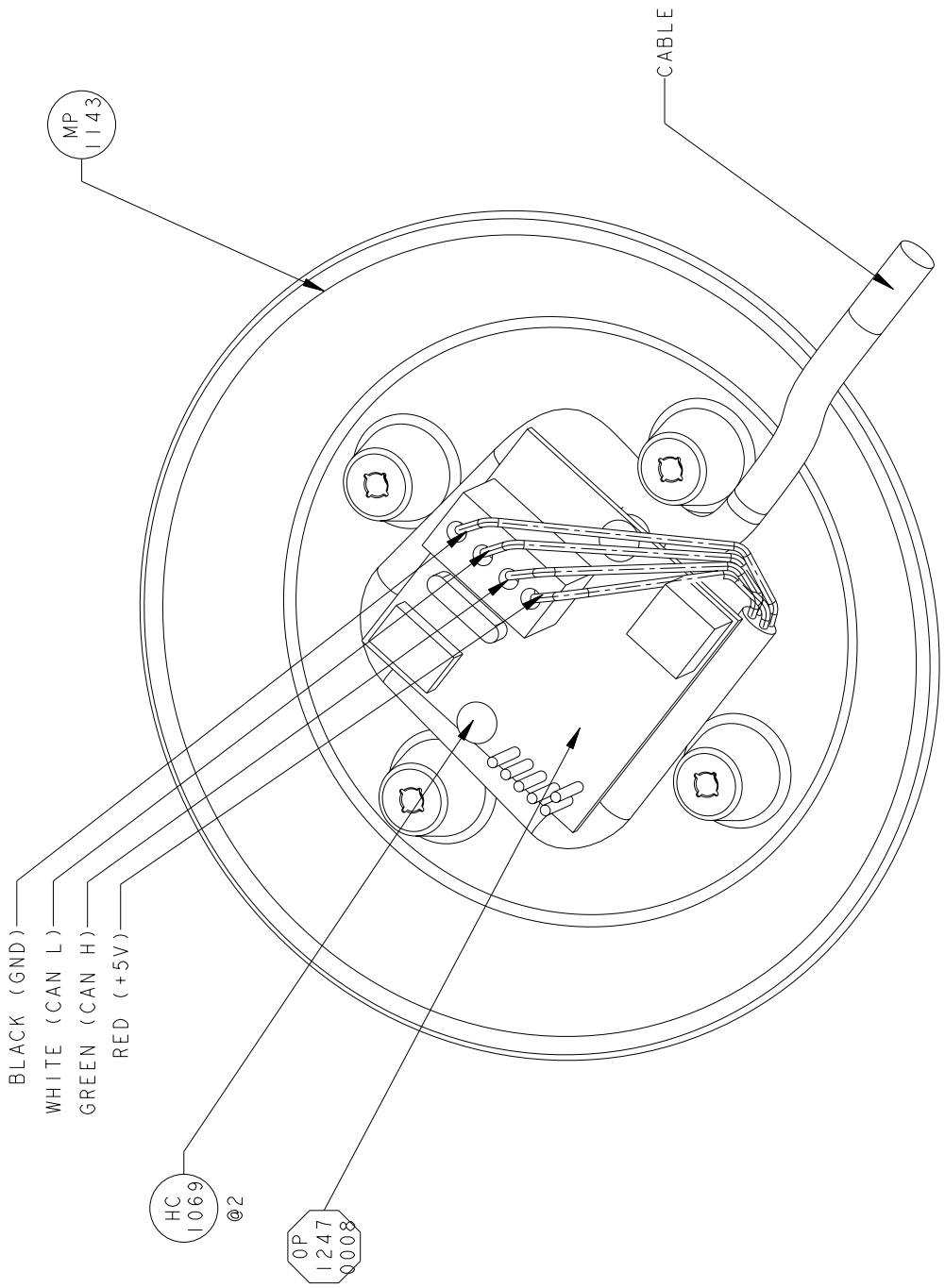


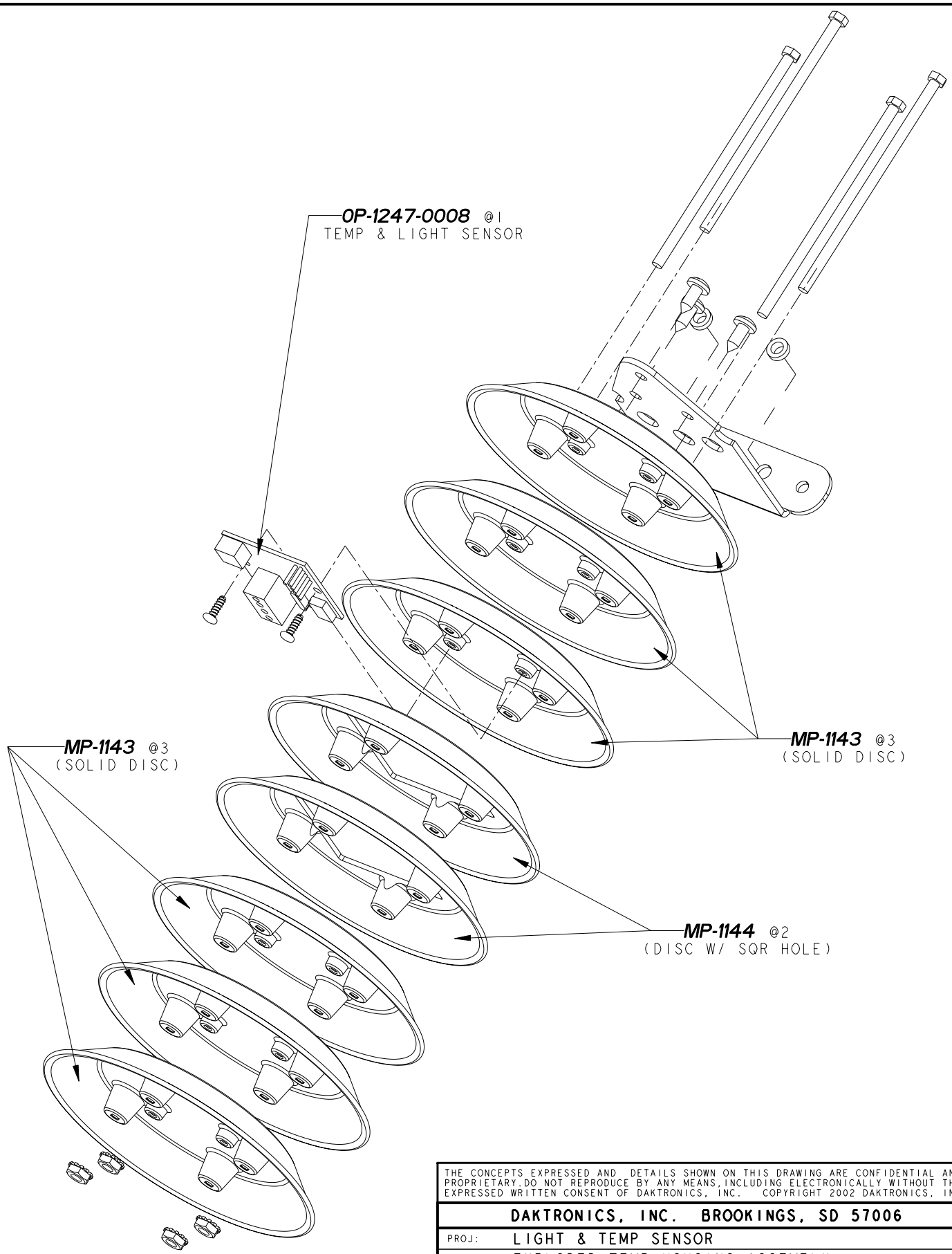
ASSEMBLY INSTRUCTIONS:

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