

**Petroleum Price Displays
DF-2100 Series
Single-face 10" to 60"**

Installation and Operation Manual

ED-16637

Rev 1

5 June 2007

DAKTRONICS

Please fill in the information below for this DataMaster display and controller. Use it for reference when calling Daktronics for assistance. Refer to the cover page of the manual for Daktronics Customer Call Center contact information.

Display Serial No. _____

Display Model No. _____

Date Installed _____

DataMaster Serial No. _____

DAKTRONICS, INC.

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ED-16637 – P1356
DF-2100 Single-face Series Displays

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4. All sections and Appendices are to be tabbed with the following labels. Wording in bold goes on the labels.

Section 1: **Introduction**
Section 2: **Mechanical Installation**
Section 3: **Electrical Installation**
Section 4: **Diagnostics and Troubleshooting**
Section 5: **Parts Replacement**
Section 6: **RC-100 Controller**
Section 7: **DM-100 Controller**
Section 8: **RC-50 Controller**
Section 9: **POS Interface Installation and Operation**
Appendix A: **Reference Drawings**
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7. Please direct questions and suggestions to Engineering Support.

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Section 1: Introduction

This manual explains the installation, maintenance, and operation of Daktronics DataMaster™ DF-2100 Outdoor LED Petroleum Price Displays. If questions arise regarding the safety, installation, operation, or service of these systems, contact Daktronics Customer Service at the contact numbers listed on the cover page of this manual.

1.1 Product Overview

DataMaster Petroleum Price displays are part of a family of Daktronics products designed for easy installation, readability, and reliability. Microprocessor control assures consistent operation and accuracy. These displays are available in two full-cabinet styles, with a backlit caption either above the digits or to the left of the digits, as shown in **Figure 1**.



Figure 1: DF-2100 with Top Caption DF-2100 with Side Caption

DataMaster displays use light-emitting diodes (LEDs) to illuminate their numeric digits. LEDs are high-intensity, low-energy lighting units that use a semiconductor to transform electrical current into light. All DataMaster displays may be configured with red, amber, or green LEDs. Because of their LED technology, the displays consume little power, some barely more than a household lamp.

The DataMaster outdoor LED displays have been designed for use with a DataMaster™ 100 hand-held controller, a radio controlled RC-100 system, or the RC-50 mini remote control.

In this manual, the complete structure will be referred to as a "sign." Each sign typically consists of a number of digit displays. Refer to **Figure 2**.

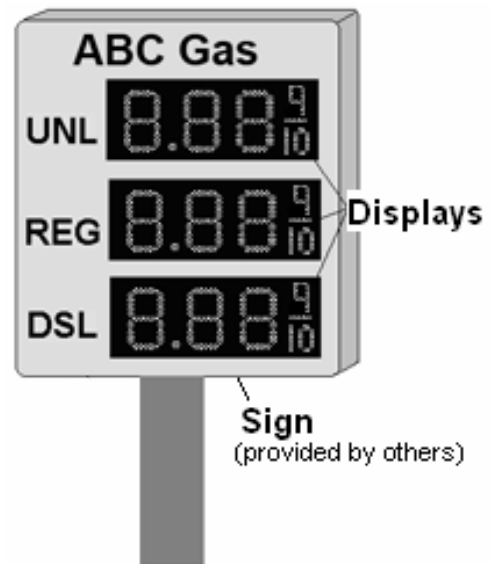


Figure 2: Sign with Digit Displays

Model Number

The DataMaster model number for these displays is described as follows:

DF-2100-HH-C-X#-SF		
DF-2100	=	Outdoor digit display with backlit ID panel
HH	=	Digit height in inches
C	=	LED Color- R (Red), A (Amber), or G (Green)
X#	=	Illuminated product ID, options: L# - Left product panel, # indicates nominal cabinet width (ft) T# - Top product panel, # indicates nominal cabinet width (ft)
SF	=	SF – Single Face, one cabinet

1.2 Drawing and Label Information

Drawings are sometimes referenced at the beginning of a section. Daktronics identifies drawings with a number which is located in the bottom right corner of each drawing (**Figure 3**). This reference number includes the last set of digits and the letter preceding them. The drawing in this example would be referred to as **Drawing A-244838**.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2005 DAKTRONICS, INC.		
DAKTRONICS, INC. BROOKINGS, SD 57006		
PROJ: DATAMASTER LED DISPLAYS		
TITLE: SYSTEM RISER DIAGRAM; DATAMASTER, RC-100		
DES. BY: KBIERBA		DATE: 9 JUN 05
DRAWN BY: KBIERBA		
REVISION	APPR. BY: MMILLER	1279-R01A-244838
01	SCALE: NONE	

Drawing number —

Figure 3: Daktronics Drawing Label

The serial and model numbers of a Daktronics display can be found on the ID label inside the display. The label will be similar to the one shown in **Figure 4**. When calling Daktronics Customer Service, please have this information available to ensure that your request is serviced as quickly as possible. For future reference, note the display model number, serial number, and installation date inside the front page of this manual.


 ASSY. NO SER. NO MFG DATE DAKTRONICS, INC. 331 32ND AVE P.O. BOX 5128 BROOKINGS, SD 57006 PHONE 1-805-697-4000		
		LL-2306

Figure 4: Display Identification Label

Section 2: Mechanical Installation

Important Safeguards



- Read and understand these instructions before installing the display.
- Do not drop the controller or allow it to get wet.
- Properly ground the display with a ground rod at the sign location.
- **Disconnect power when servicing the display.**
- Do not modify the display structure or attach any panels or coverings without the written consent of Daktronics, Inc.

2.1 Shop Drawings

The table below gives the shop drawing number for each display model. All drawings are inserted into **Appendix A**.

Single-faced displays with left side captions	
Drawing Title/Display Type	Drawing Number
Shop Drawing, DF-2100-10-L5-SF	Drawing B-304066
Shop Drawing, DF-2100-13-L6-SF	Drawing B-304229
Shop Drawing, DF-2100-18-L8-SF	Drawing B-304719
Shop Drawing, DF-2100-24-L10-SF	Drawing B-304808

Single-faced displays with top captions	
Drawing Title/Display Type	Drawing Number
Shop Drawing, DF-2100-10-T3-SF	Drawing B-303105
Shop Drawing, DF-2100-13-T3.5-SF	Drawing B-303309
Shop Drawing, DF-2100-18-T5.5-SF	Drawing B-303675
Shop Drawing, DF-2100-24-T6-SF	Drawing B-303900
Shop Drawing, DF-2100-24-T8-SF	Drawing B-303983
Shop Drawing, DF-2100-36-T8-SF	Drawing B-269576
Shop Drawing, DF-2100-48-T11-SF	Drawing A-236905
Shop Drawing, DF-2100-60-T14-SF	Drawing A-232509

2.2 Specifications

DataMaster Petroleum Price Double-Faced Displays with Left Caption					
Model	Dimensions	Weight	Digit Size	Maximum Power	Circuit
DF-2100-10-R-L5-SF DF-2100-10-A-L5-SF DF-2100-10-G-L5-SF	H1'-3", W5'-0", D0'-6" (381 x 1524 x 152 mm)	50 lb (23 kg)	10" (254 mm)	120 W	120 VAC 15 A
DF-2100-13-R- L6- SF DF-2100-13-A-L6- SF DF-2100-13-G- L6- SF	H1'-6", W6'-0", D0'-6" (457x 1829 x 152 mm)	60 lb (27 kg)	13" (330 mm)	135 W	120 VAC 15 A
DF-2100-18-R- L8- SF DF-2100-18-A-L8- SF DF-2100-18-G- L8- SF	H2'-0", W8'-0", D0'-6" (610 x 2438 x 152 mm)	70 lb (32kg)	18" (457 mm)	275 W = Red, Amber 350 W =Green	120 VAC 15 A
DF-2100-24-R- L10- SF DF-2100-24-A-L10- SF DF-2100-24-G- L10- SF	H2'-6", W10'-0", D0'-6" (762 x 3048 x 152 mm)	80 lb (36 kg)	24" (610 mm)	275 W = Red, Amber 350 W =Green	120 VAC 15 A
DF-2100-10-R-T3-SF DF-2100-10-A-T3-SF DF-2100-10-G-T3-SF	H1'-9", W3'-0", D0'-6" (533 x 914 x 152 mm)	45 lb (20 kg)	10" (254 mm)	135 W	120 V AC 15 A
DF-2100-13-R-T3.5-SF DF-2100-13-A-T3.5-SF DF-2100-13-G-T3.5-SF	H2'-2", W3'-6", D0'-6" (660 x 1067 x 152 mm)	55 lb (25 kg)	13" (330 mm)	150 W	120 V AC 15 A
DF-2100-18-R-T5-SF DF-2100-18-A-T5- SF DF-2100-18-G-T5- SF	H3'-0", W5'-0", D0'-6" (914 x 1524 x 152 mm)	100 lb (45 kg)	18" (457 mm)	275 W = Red, Amber 350 W =Green	120 V AC 15 A
DF-2100-24-R-T6- SF DF-2100-24-A-T6- SF DF-2100-24-G-T6- SF	H4'-0", W6'-0", D0'-6" (1219 x1829 x152 mm)	110 lb (50 kg)	24" (610 mm)	275 W = Red, Amber 350 W =Green	120 V AC 15 A
DF-2100-36-R-T10-SF DF-2100-36-A-T10-SF DF-2100-36-G-T10-SF	H5'-6", W8'-0", D0'-8" (1676 x 2438 x 203 mm)	190 lb (86 kg)	36" (914 mm)	1300 W	120 V AC 15 A
DF-2100-48-R-T11-SF DF-2100-48-A-T11-SF DF-2100-48-G-T11-SF	H7'-0", W11'-0", D0'-8" (2134 x 3353 x 203 mm)	350 lb (159 kg)	48" (1219 mm)	1336 W	120 V AC 15 A
DF-2100-60-R-T14-SF DF-2100-60-A-T14-SF DF-2100-60-G-T14-SF	H9'-0", W14'-0", D0'-8" (2743 x 4267 x 203 mm)	600 lb (272 kg)	60" (1524 mm)	1636 W	120 V AC 15 A

2.3 Lifting the Displays

While DataMaster outdoor digit displays are designed for pole mounting, every installation will be different. Actual site demands will dictate the appropriate mounting method.

Daktronics strongly recommends using a spreader or lifting bar to lift the display. Using a spreader bar ensures that the force on the eyebolts is straight up, minimizing lifting stress. **Figure 5** illustrates the correct and incorrect lifting methods.

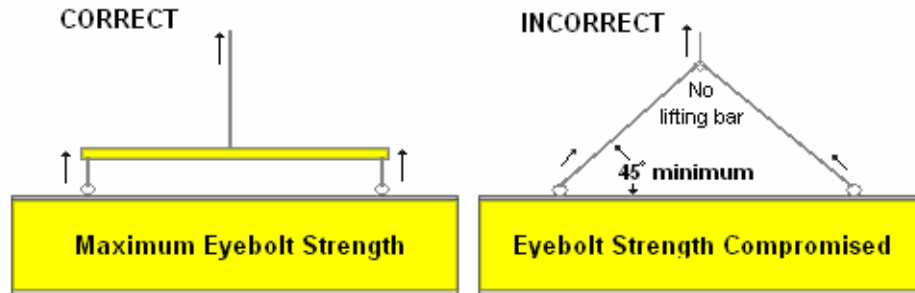


Figure 5: *Lifting the Display*



Note: Daktronics assumes no liability for display damage or injury resulting from incorrect setup or incorrect lifting methods.

Eyebolts are intended for lifting during installation only. Do not attempt to permanently support the display by the eyebolts.

Eyebolts may be removed once the display is in place. The bolt sizes and threads vary based on the size and weight of the display. Common bolts used are 1/4"-20, 3/8"-16, 1/2"-13, and 5/8"-11.

Section 3: Electrical Installation

Reference Drawing:

Specifications; Gas Price Driver, 4 Col.....	Drawing A-250728
Wiring Schematic, DF-2000/4000 Series.....	Drawing A-263988
Address Dip Switch Settings.....	Drawing B-256001

Electrical installation consists of the following processes, as illustrated in **Figure 6**:

- providing power and ground to a disconnect near the display.
- routing power and ground from the main disconnect to the display driver/power enclosure.
- connecting the display ground to a ground rod at the sign location.
- routing the control signal cable from the control location to the sign location. Signal options include the DM-100, RC-100, and RC-50.

Each of these steps is covered in the following section.

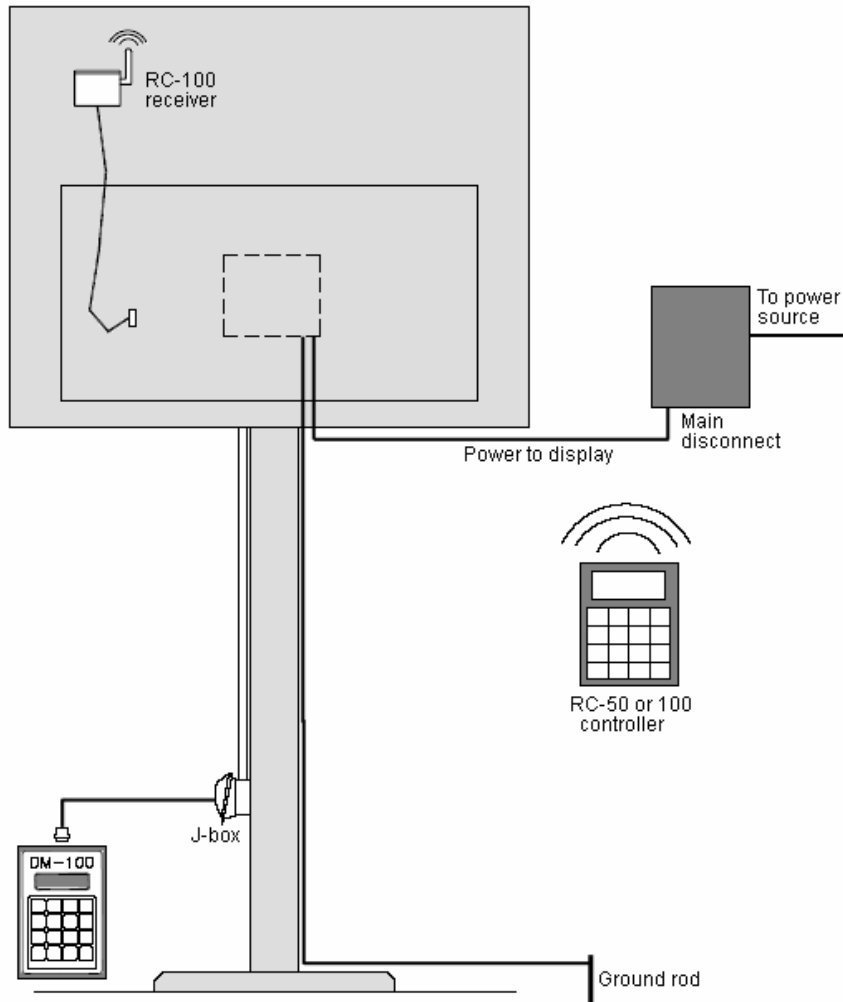


Figure 6: Power and Signal Routing

3.1 Power Installation



Only qualified individuals should perform power termination to the display.

It is the responsibility of the electrical contractor to ensure that all electrical work meets or exceeds local and national codes.

Daktronics DataMaster displays have been designed for simple hook-up of power and signal. Correct power installation is imperative for proper display operation. Improper installation could result in serious damage to the equipment and could be hazardous to personnel.

The DataMaster outdoor displays require a dedicated, 120 V circuit for incoming power. The display itself has no breakers or fuses. Refer to **Drawing A-263988** and to the chart in **Section 2** to determine maximum power requirements for this model.

It is critical that the display circuit be fused at 15 A, and that all conductors used must be designed to pass a 15 A current in normal operation. Failure to meet wiring and over-current protection device requirements is a violation of the National Electrical Code® and will void the display warranty.

Grounding



Displays **MUST** be grounded according to the provisions outlined in Article 250 of the National Electrical Code and according to the specifications in this manual.

The display system *must* be connected to an earth electrode installed at the display. Proper grounding is necessary for reliable equipment operation. It also protects the equipment from damaging electrical disturbances and lightning. **The display must be properly grounded or the warranty will be void.** Refer to **Schematic Drawing A-263988**.

Important points about grounding:

- Follow local and national codes: The material of an earth-ground electrode differs from region to region and from conditions present at the site. Consult the National Electrical Code and any local electrical codes that may apply.
- Support structure **cannot** be used as an earth-ground electrode: The support is generally embedded in concrete. If embedded in earth, the steel is either primed or it corrodes, making it a poor ground.
- One grounding electrode for each display face: The grounding electrode 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.
- 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 wire inside the display.

Power Disconnect

The National Electrical Code requires the use of a lockable power disconnect within sight of or at the display. Follow these guidelines for correct connection:

- Connect the grounding electrode cable at the local disconnect, never at the display driver/power enclosure.
- Use a disconnect that opens all of the ungrounded phase conductors.

In order for this device to provide protection, the power *must* be disconnected when the display is not in use. The controller should also be disconnected from power and from the signal j-box when the system is not being used. The same surges that may damage the display's driver can also damage the controller's circuit.

Power Installation

For this type of installation, the power circuit *must* contain an isolated earth-ground conductor. Power connects to the pigtail inside the display (**Figure 7**). The pigtail has three wires: black (120 V AC line), white (neutral) and green (ground), and a 5-pin plug on one end. The plug is connected to the mating plug on the transformer. Use wire nuts to connect power wires to the pigtails.

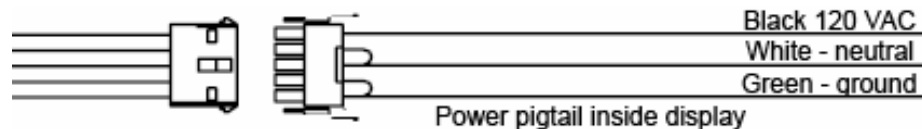


Figure 7: Power Connection

To access the power pigtail inside the display, open the latch access fasteners on the digit panels. Smaller models have a single door that opens from the right. Larger models have two doors that open near the center. Use a screwdriver to turn the fasteners a half-turn counterclockwise to open the panel. Remove two wing nuts to open the left panel, if present.

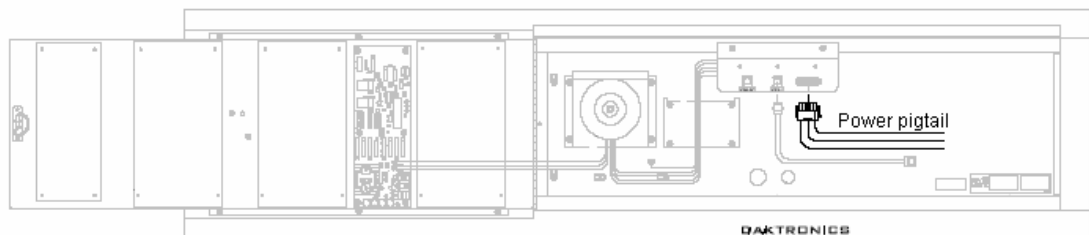


Figure 8: Example of Power Pigtail Location

3.2 Signal Connection

LED Drivers

In the display, the LED driver performs the task of switching digits on and off. One driver at each sign installation is designated as the “host driver.” This driver receives its signal directly from the controller on the Signal In connector J6. The Signal Out connector J8 is used to connect to “client drivers,” the drivers in other displays in this network.

Other communication types are initially connected as shown in the chart: J11 (Radio, RC-100 system) and J12 (RC-50 receiver). These initial connections are then routed to the J6 Input jack. Refer to **Drawings A-250728** for a complete listing of driver connector functions and wiring pin numbers.

4-Column LED Driver	
Connector No.	Function
J1 – 4	Digits
J5	Not loaded
J6	CL Input
J7	Program
J8	CL Output
J9	Not loaded
J10	Modem
J11	Radio
J12	RC-50 Input

Signal Wiring

Signal wires are terminated with a telephone-type RJ14 connector. Route the cable from the jack in the j-box to J6 on the host driver (**Figure 9**). Run another RJ14 connector from J8 (Output) to the next (client) display, connecting at J6 (Input). Follow this sequence to all displays in the sign network.

Address Dip Switch Settings

Every driver, either host or client, must have a unique address. The address is set by moving the individual toggle switches in the eight-position dip switch case located on the driver (**Figure 10**). The dark area shows that the switch has been pushed down. In the example, switches 2 and 4 are on.

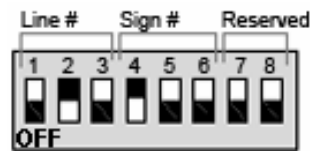


Figure 10: Dip Switches

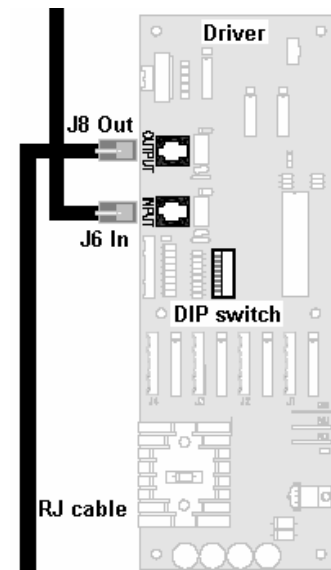


Figure 9: Driver

Addresses allow the user to set both line number (switches 1-3) and sign number (switches 4-6) in as many as eight sign groups. All displays with the same line number will show the same price.

Refer to **Drawing B-256001** for an illustration of the client/host driver setups and for a chart showing line number and sign number settings.

3.3 Power Up Self-test

Every time the display is powered up, it will run through a verification sequence. This is a good way to check that the displays are set up and working correctly. The following items will be shown on the digit displays. The second column explains the significance of each item.

Information shown on display	Meaning of information
rNN	Revision number of software
XLY	X = sign #; L is constant, Y = line #

Section 4: Diagnostics and Troubleshooting

Important Notes



Disconnect power before doing any repair or maintenance work on the display.

Allow only qualified service personnel access to internal display electronics.

Disconnect power when not using the display.

Daktronics displays are built for long life and require little maintenance. However, at times, displays may not work correctly. Use this section to define the problems and find solutions.

4.1 Component Location and Access

To access the components of these displays, open the latch access fasteners on the digit panels. Some models have one door that opens from the right. Other models have two doors that open near the center. Use a screwdriver to turn the fasteners a half-turn counterclockwise to open the panel. Remove two wing nuts to open the left panel, if present.

The internal components of the display are located as shown in **Figure 11** and **Figure 12**. The driver is typically mounted between two digit boards. The power pigtail will be connected to the power source wiring with wire nuts.

Note: Disconnect power before servicing the display. Disconnect power, also, when the display is not in use.

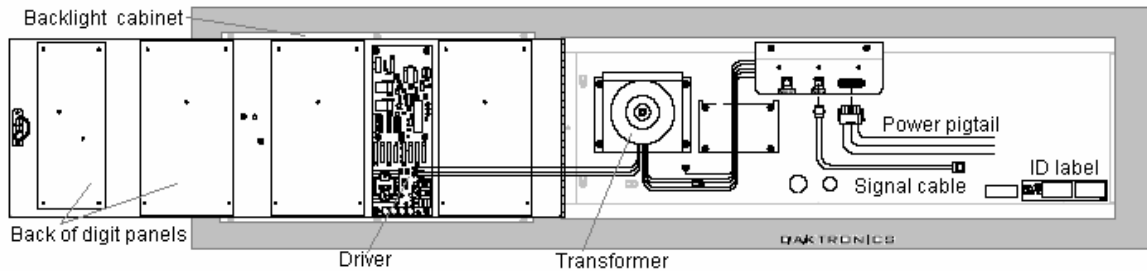


Figure 11: Inside View of Left Panel, Single-door Display

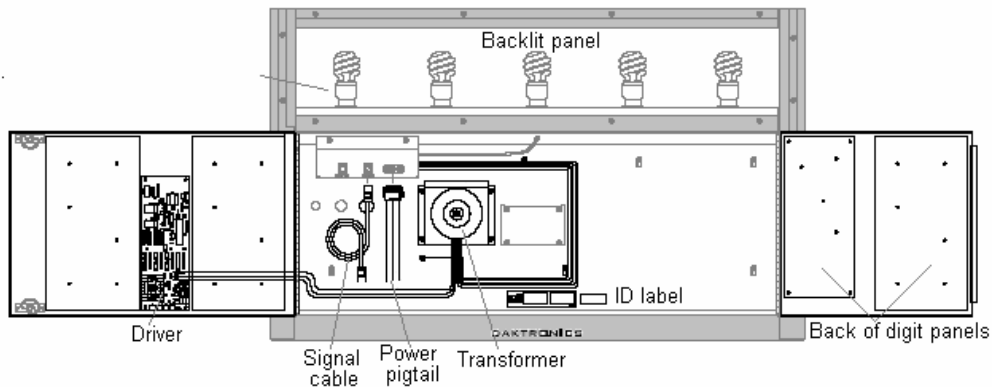


Figure 12: Inside View of Top Panel, Two-door Display

4.2 Diagnostics

Driver LEDs

The driver inside the display contains three LEDs that provide information about the working of the display. Refer to **Figure 13** for their location. These LEDs can help pinpoint problems with driver set-up or operation.

The LEDs give the following information:

LED	Color	Status
DS1	Green	Continuous light when driver has power.
DS2	Red	Blinks when driver receives signal.
DS3	Amber	Blinks when driver is running.

Power On Self-Test

A useful troubleshooting tool is the power on self-test performed by the host driver every time the display powers up: The display should show the information listed in the left column. Every "X" in the chart refers to a number.

Information shown on display	Meaning of information
rNN	Revision number of software
XLY	X = sign #; L is constant, Y = line #

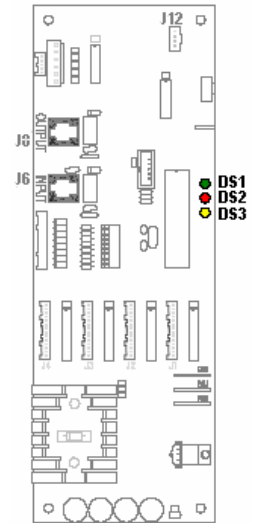


Figure 13: Driver Diagnostics

4.3 Troubleshooting

This section lists potential problems with the display, indicates possible causes, and suggests corrective action. This list does not include every possible problem, but it does represent some of the more common situations that may occur. (Refer to the appropriate manual for a list of potential problems with add-on or separately mounted message centers.

Symptom/ Condition	Possible Cause	Solution
No displays in the sign will light	<ul style="list-style-type: none"> • Power incorrectly set up. • Addresses not set correctly. 	<ul style="list-style-type: none"> • Open display with host driver and check Power LED (Section 4.2). • Check each driver to verify correct address settings (Section 3.2).
Multiple line sign with all lines showing same prices	<ul style="list-style-type: none"> • Addresses not set correctly. 	<ul style="list-style-type: none"> • Set up different address for each line of sign (Section 3.2).
Digit will not light	<ul style="list-style-type: none"> • Black wire to digit broken. • Poor contact at driver connection. • Driver malfunction. 	<ul style="list-style-type: none"> • Replace harness. • Clean contacts. • Replace driver.
Segment or several LEDs will not light	<ul style="list-style-type: none"> • Broken LEDs. • Driver failure. • Broken wire between driver and digit. • Poor contact at driver connector. 	<ul style="list-style-type: none"> • Replace segment or digit. • Replace driver. • Replace harness. • Clean contact or replace harness.
Segment or digit stays lit	<ul style="list-style-type: none"> • Driver failure. • Short circuit on digit. 	<ul style="list-style-type: none"> • Replace driver. • Replace harness.
Data appears in the wrong place on the sign	<ul style="list-style-type: none"> • Signal connections are not correct. 	<ul style="list-style-type: none"> • Reconnect signal wiring to drivers (Section 3.2).
Data appears on the wrong line of the display	<ul style="list-style-type: none"> • Incorrect address settings on drivers. 	<ul style="list-style-type: none"> • Change addresses on drivers (Section 3.2).
Display shows "E4".	<ul style="list-style-type: none"> • No Message Error: This code is shown when no messages are downloaded to the display. 	<ul style="list-style-type: none"> • Download a new message to the display using the [Update Display] key on the DataMaster 100 controller.

Section 5: Parts Replacement

Daktronics Petroleum Price Displays are built for long life and easy maintenance. On occasion, however, a part may need to be replaced. In that case, follow these steps.

1. Find the part number label on a part or refer to the list in **Section 5.1** for the correct part number.
2. Read **Section 5.3, Daktronics Exchange and Repair & Return Programs**, for step-by-step instructions on obtaining a new part.
3. When the part is received, follow the instructions in this section for replacing it.

5.1 Replacement Parts List

Description	Daktronics Part No.
Driver & Internal Components for Digits 24" & smaller	
Toroid Transformer, Display	T-1124
Digit cable, 1 ft.	W-1575
Digit cable, 3 ft.	W-1576
Digit cable, 4 ft.	W-1577
Digit cable, 6 ft.	W-1578
Digit cable, 8 ft.	W-1579
Gas Price Driver, 4-col	0P-1356-0002
Signal Surge Card	0P-1356-0001
Decimal / Driver, red	0P-1192-0353
Decimal / Driver, amber	0P-1192-0355
Decimal / Driver, green	0P-1192-0354
Driver & Internal Components for Digits 36" & larger	
Driver, 4-column MASC, LED	0P-1192-0068
Light sensor	0A-1279-0203
Protocol plug (Protocol 4)	0A-1279-0089
Power supply, 24 V DC, 1 KW	A-1856R
Transformer, Pri. 115V; Sec. 10 VCT @1.2A	T-1072
Address #1 Plug	0A-1150-0122
8-Segment breakout board	0P-1192-0326
Communication Boards and Accessories	
Signal surge suppression board	0P-1110-0011
Modem, RS232 coated, internal,	0P-1279-0003
J-box, signal converter, w/modem	0A-1279-0162
J-box, signal converter, radio	0A-1279-0161
RJ11 to RJ45, M-M, straight, 18" cable	0A-1137-0300
Server Radio, outdoor	0A-1146-0079
Client Radio, w/Quick Connect	0A-1146-0078
Cable, 6-cond., 18 AWG, j-box to Server Radio	W-1370
Junction box, outdoor, 9-pin D-male	0A-1196-0093
Junction box, indoor, 9-pin D, male	0A-1196-0099

Description	Daktronics Part No.
RC-50 Radio with overlay	0A-1356-0064
Receiver card	0P-1192-0355
Antenna	A-2015
Transformer, wall pack	T-1118
RC-100 Price Display insert	LL-2617
RC-100 hand held assembly	0A-1110-0046
RC-100 receiver	0A-1110-0045
DM-100 hand-held controller	0A-1196-0088
DM-100 outdoor wired installation kit	0A-1356-0002
DM-100 indoor wired installation kit	0A-1356-0105
Cable, serial, DB9 male to DB9 female	W-1267
DM100 Insert Time & Temp/Petroleum Price	0G-164998
Digits and Accessories 24" and smaller	
10" Digit 7-segment, Red	0P-1192-0356
10" Digit, 7-segment, Amber	0P-1192-0359
10" Digit, 7-segment, Green	0P-1192-0357
13" Digit, 7-segment, Red,	0P-1192-0347
13" Digit, 7-segment, Amber	0P-1192-0348
13" Digit, 7-segment, Green	0P-1192-0349
18" Digit, 7-segment, Red	0P-1192-0341
18" Digit, 7-segment, Amber	0P-1192-0342
18" Digit, 7-segment, Green	0P-1192-0343
22", Digit segment, Red, Horizontal	0P-1192-0293
22", Digit segment Amber, Horizontal	0P-1192-0297
22", Digit segment, Green, Horizontal	0P-1192-0295
24", Digit segment, Red, Vertical	0P-1192-0372
24", Digit segment, Amber, Vertical	0P-1192-0374
24", Digit segment, Green, Vertical	0P-1192-0373
7" 9/10 Red, 14 pin, 24 V	0P-1192-0350
7" 9/10 digit, Amber, 14 pin, 24 V	0P-1192-0351
7" 9/10 digit, Green, 14 pin, 24 V	0P-1192-0352
13", 9/10 digit, Red, 14 pin, single stroke	0P-1192-0378
13", 9/10 digit, Amber, 14 pin, single stroke	0P-1192-0379
13", 9/10 digit, Green, 14 pin, single stroke	0P-1192-0380
13", 9/10 digit, Red, 14 pin, double stroke	0P-1192-0344
13", 9/10 digit, Amber, 14 pin, double stroke	0P-1192-0345
13", 9/10 digit, Green, 14 pin, double stroke	0P-1192-0346
Digits and Accessories 36" and larger	
Speed nut, M3 Kingnut black nylon, Push nut	HS-1453
Spacer, washer with steel backing	HC-1221
Indicator, 4" Red, pc board	0P-1192-0244
Indicator, 4" Amber, pc board	0P-1192-0245
Indicator, 4" Green, pc board	0P-1192-0248
36" Digit segment, Red, Vertical	0P-1192-0208
36" Digit segment, Red Horizontal	0P-1192-0209
36" Digit segment, Amber, Vertical	0P-1192-0222

Description	Daktronics Part No.
36" Digit segment, Amber Horizontal	OP-1192-0223
36" Digit segment, Green, Vertical	OP-1192-0333
36" Digit segment, Green Horizontal	OP-1192-0334
48" Digit segment, Red, Vertical	OP-1192-0212
48" Digit segment, Red Horizontal	OP-1192-0213
48" Digit segment, Amber, Vertical	OP-1192-0226
48" Digit segment, Amber Horizontal	OP-1192-0227
48" Digit segment, Green, Vertical	OP-1192-0337
48" Digit segment, Green, Horizontal	OP-1192-0338
60" 1/2 segment, Red, Vertical	OP-1192-0281
60" 1/2 segment, Red Horizontal	OP-1192-0280
60" 1/2 segment, Amber, Vertical	OP-1192-0283
60" 1/2 segment, Amber Horizontal	OP-1192-0282
60" 1/2 segment, Green, Vertical	OP-1192-0323
60" 1/2 segment, Green, Horizontal	OP-1192-0321
24" 9/10 Red, pc board	OP-1192-0232
24" 9/10 Amber, pc board	OP-1192-0233
24" 9/10 Green, pc board	OP-1192-0325
24" 9/10 Red, w/faceplate	OA-1192-2359
24" 9/10 Amber, w/faceplate	OA-1192-2360
24" 9/10 Green, w/faceplate	OA-1192-3082
Additional Replacement Parts	
Lamp, 15 W spiral compact fluor.	DS-1563
Lamp, 30" T12 fluorescent	DS-1034
Lamp, 36" T12 fluorescent	DS-1521
Lamp, 42" T12 fluorescent	DS-1501
Lamp, 48" T12 fluorescent	DS-1036
Lamp, 60" T12 fluorescent	DS-1049
Lamp, 72" T12 fluorescent	DS-1037
Lamp, 84" T12 fluorescent	DS-1038
Lamp, 96" T12 fluorescent	DS-1048
Lamps 5'4"	DS-1053
Lamps 10'	DS-1213
Ballast, 1.65 A fluorescent	A-1368
Ballast, 2.5 A fluorescent	A-1369
Ballast, 2.8 A fluorescent	A-1370
Ballast 4, 5, 6 lamps (24-48 feet)	A-1371

5.2 Instructions for Replacing Parts

Replacing a Digit Panel

The digit circuit board is the platform for the LEDs and is mounted to the back of the digit panel. Refer to **Figure 14**. If some LEDs are not working, do not attempt to remove an individual LED. Replace the entire digit panel.

To remove a display digit panel, follow these steps:

1. Open the digit panel as described in **Section 4.1**.
2. Disconnect the power/signal connector from the back of the digit. Release the connector by squeezing together the locking tabs as the plug is pulled free.
3. The digits are secured to the inside of the panel with fixed machine screws, spacers, and push nuts. Remove the nuts and lift the digit off the standoff screws. The push nuts can be removed in several ways, but Daktronics recommends using a 9/32" nut driver.
4. Move the new digit into place and install the pushnuts.
5. Reconnect the power/signal connector plug. **Note:** This is a keyed connector and will attach in one way only. Do not attempt to force the connection!
6. Replace the back panel of the display, latching it securely.

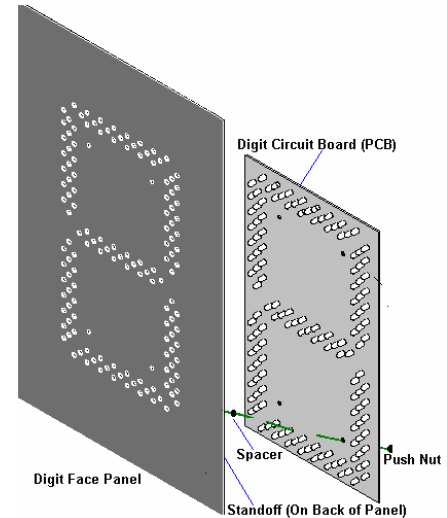


Figure 14: Digit Assembly

Replacing a Digit Segment

Large digits are constructed in segments, as shown in **Figure 15**. In this case, it may be possible to replace only the defective segment. As with smaller digits, the segment circuit boards are mounted to the back of the digit panel. **Do not attempt to remove individual LEDs.** Replace a malfunctioning colon, decimal, or indicator assembly in the same manner.

To remove a digit segment, follow these steps:

1. Open the digit panel as described in **Section 4.1**.
2. Disconnect the 2-pin power/signal connector from the back of the individual segment. Release the connector by squeezing together the locking tabs as the connector is pulled free.
3. The individual segments are secured to the inside of the panel with fixed machine screws, spacers, and push nuts. Remove the nuts and lift the segment off the standoff screws.
4. Position a new segment over the screws and tighten the nuts.
5. Reconnect the power/signal connector. **Note:** This is a keyed connector it will attach in one way only. Do not attempt to force the connection!
6. Close and secure the digit panel and test the display.

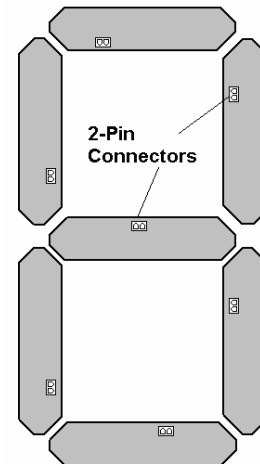


Figure 15: Digit Segments

Replacing a Driver

The driver is mounted to the front panel between digit boards. The back panel will need to be removed to replace the driver.

To replace a driver, follow these steps:

1. Open the display as described in **Section 4.2**.
2. Disconnect and label all connectors from the driver. Release each connector by squeezing together the locking tabs and pulling on the plug.
3. Remove the screws and nuts securing the driver to the inside of the enclosure.
4. Carefully lift the driver from the display.
5. Move the new driver into place and fasten securely.
6. Reconnect all the connectors. **Note:** Remember that these are keyed connectors and will attach in one way only. Do not attempt to force the connections.
7. Replace the back panel and securely fasten the latches.
8. Test the display to make sure that it is working correctly.

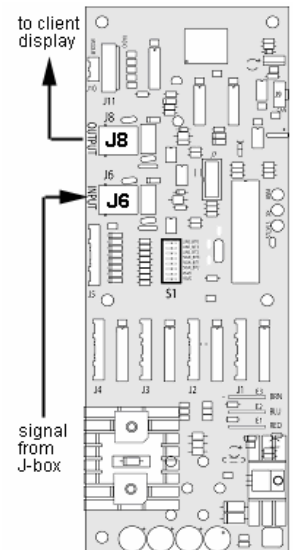


Figure 16: Driver

5.3 Daktronics Exchange and Repair & Return Programs

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

Before Contacting Daktronics

Fill in this chart before calling Customer Service:

Display Serial No. _____

Display Model No. _____

Date Installed _____

DataMaster Serial No. _____

Exchange Program

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

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 was made, please contact Customer Service immediately. Daktronics expects immediate return of an exchange part if it does not solve the problem. The company also reserves the right to refuse parts that have been damaged due to acts of nature or causes other than normal wear and tear.

Repair & Return Program

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

1. **Call or fax Daktronics Customer Service:**
Phone: 866-343-3122 Fax: 605-697-4444
2. **Receive a Return Materials Authorization (RMA) number before shipping.**
This expedites repair of the part.
3. **Package and pad the item carefully to prevent damage during shipment.**
Electronic components, such as printed circuit boards, should be placed in an antistatic bag before boxing. Daktronics does not recommend Styrofoam peanuts in packaging.
4. **Enclose:**
 - your name
 - address
 - phone number
 - the RMA number
 - a clear description of symptoms

Shipping Address

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

Section 6: DM-100 Controller

This section describes the set up and operation of the DataMaster 100 (DM-100) Controller. The DM-100 may be used with either an indoor or outdoor j-box, both of which are explained in this section. Note also the information on the DataMaster Insert.

Reference Drawing:

Address Dip Switch Settings..... **Drawing B-256001**
 Insert, LL-2551 Price/T&T Display **Drawing A-167856**

6.1 DM-100 Overview

The DataMaster 100 Series controller, shown in **Figure 9**, is a hand-held controller designed to operate Daktronics LED DataMaster displays. This lightweight controller is encased in ABS plastic, making it a durable and convenient control option. The console's liquid crystal display (LCD) guides the user through the operation of the system.

The DM-100 can be configured to display petroleum price, motel rates, and time and temperature data. Refer to **Drawing B-256001** for information on possible control options and connection procedures.

Note: When the carrier delivers this Daktronics order, open the packages and inspect for shipping damage such as rattles and dents. See that all equipment is included as shown on the packing slip. If deficiencies are found, immediately report them to Daktronics. Save all packing materials in case warranty repair or exchange is needed.

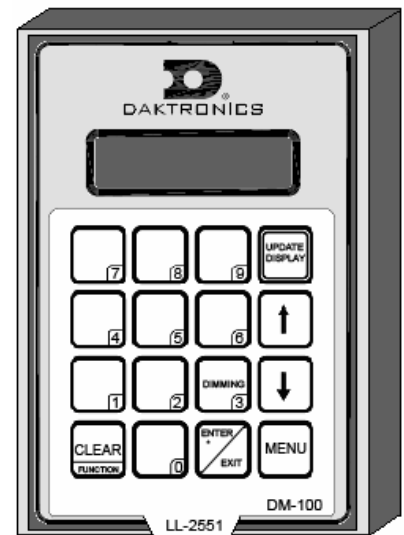


Figure 17: DataMaster (DM) 100

Replacement Parts List

The following is a list of possible replacement parts for the DM-100 controller. When re-ordering a part, be sure to use its corresponding part number. To obtain a part from Daktronics, refer to **Section 5.3** for instructions.

Description	Daktronics Part No.
Wall pack transformer	T-1118
DM-100 controller	0A-1196-0088
Control Insert	LL-2551
Cable, DB-9 male to DB-9 female, 10'	W-1267

6.2 Connecting the DM-100 to the Display

The DataMaster displays may be controlled from a location inside a building or from the base of the display, depending on customer preference. **Drawing B-256001** and the subsections that follow provide greater detail on both installations using signal wire.

Wire Control from the Base of the Sign

This outdoor control option (**Figure 18**) permits operation of the sign from the base of the display. The controller is connected to an outdoor junction box mounted on the display pole, which routes the signal to the sign through one 2-pair cable, 22 AWG. Cable is in conduit where required.

This control option does not require the controller to be connected to a power outlet. In this configuration, the DM-100 uses the sign as a power source.

To operate the display using this setup, connect the 9-pin to 9-pin cable from the DM-100 controller to the 9-pin j-box mounted on the display pole.

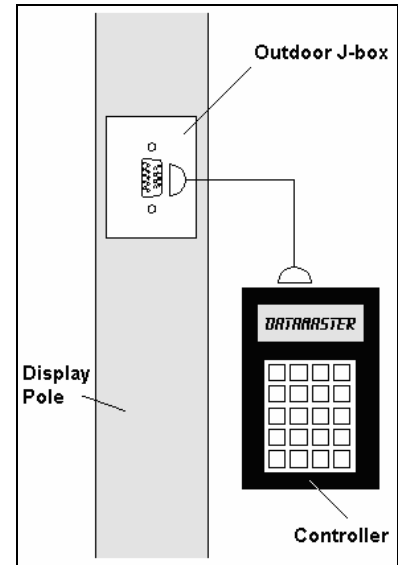


Figure 18: Wire Control Outdoors

Wire Control from a Building Location

The indoor control option is illustrated in **Figure 19**. The handheld controller is connected to an indoor junction box (j-box), which routes the signal to the sign through one 2-pair cable, 22 AWG. Cable is in conduit where required.

To operate the display using this setup, connect the 9-pin to 9-pin cable from the DM-100 controller to the 9-pin j-box, and plug the controller's wall pack transformer into a 120 VAC outlet.

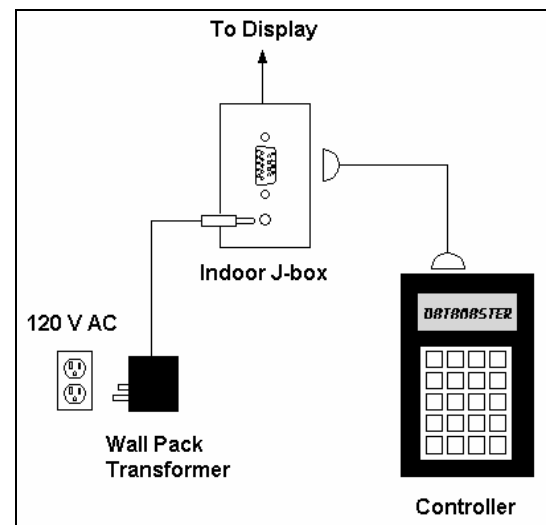


Figure 19: Wire Control from Building Location

6.3 DataMaster Insert and Code

The DM-100 uses a keypad insert to program rate information into Daktronics LED DataMaster Rate Displays. The DM-100 insert illustrated in **Figure 20** is used to control the displays.

If an insert is lost or damaged, make a copy of the insert from **Drawing A-167856** located in **Appendix A**. Cut this to size and slide it into the DM-100 pocket. Use this as a reference until a replacement is received.

To start the controller and use the insert to program information into the display driver, read the next section carefully to fully understand operation instructions.

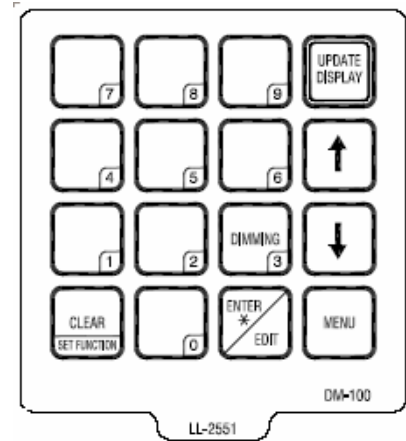


Figure 20: DM-100 Insert

6.4 Petroleum Price Display Operation

The DM-100 controller can be configured to program petroleum price variances displayed on the LED DataMaster Petroleum Price sign. The instructions provided in this section discuss the functions the operator uses to control the Petroleum Price display.

Petroleum Price Display Startup

To operate the DataMaster Petroleum Price displays, the DM-100 must first be programmed to the gas price function. Use the [Set Function] key on start-up. Use the following table as a guide to start-up procedures.

LCD Screen	Action
<div style="border: 2px solid black; padding: 5px; text-align: center;"> <p>CURRENT FUNCTION GAS PRICE</p> </div>	<p>Plug the wall pack transformer into a 120 V AC power outlet and connect it to the DM-100.</p> <p>This display appears briefly.</p>
<div style="border: 2px solid black; padding: 5px; text-align: center;"> <p>CHANGE FUNCTION? PRESS SET FUNCT</p> </div>	<p>This message appears next on the screen.</p> <p>If <i>GAS PRICE</i> was shown on the bottom line of the LCD during startup, do nothing. The controller will automatically default to previous Gas Price settings.</p> <p>If a function other than <i>GAS PRICE</i> was shown on the bottom line of the LCD during startup, press the [Set Function] key while the second LCD prompt is displayed.</p>
<div style="border: 2px solid black; padding: 5px; text-align: center;"> <p>SELECT FUNCTION GAS PRICE ↓↑</p> </div>	<p>Press the arrow up or down keys <↑↓> until the gas price option is shown. Press the [Enter] key to accept.</p>

The DM-100 handheld controller should now be ready for use. The controller will “remember” the last function setting, so this step should only need to be done with a new controller, or one that is configured for different displays. To operate the DM-100, press any of the keys listed in the following gas price sections.

Petroleum Price Controller Operation

The Petroleum Price Controller LCD display will default to showing the current display settings on power up. The following text will be shown on the LCD.

LCD Screen	Action
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> LINE PRICE 1 ↓ \$1.23 9/10 </div> <div style="border: 1px solid black; padding: 5px;"> <EDIT> TO MODIFY 1 ↓ \$1.23 9/10 </div>	<p>The display will toggle between these two screens.</p> <p>Press the up or down arrow keys <↑↓> to scroll through the current setting for any of the lines on the display.</p> <p>Press the [Enter/Edit] key to modify any of the line settings.</p>

Modifying Price Line Settings

The gas price can be modified either by pressing the **[Edit]** key during operation or by using the **[Menu]** key (refer to **Menu Items** chart following this screen). The following keys identify items to be edited:

- L = Current line number to be edited
- D.CC = Current dollars and cents value to edit
- T = Current tenths of cent value to edit

LCD Screen	Action
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> EDIT LINE L \$D.CC T/10 ↓ </div>	<p>Press any of the number keys to edit the price value for this line. Press the down arrow key <↓> to modify the value of the 1/10-cent data for this line (read Note following).</p> <p>Press [Enter] to accept the new value or press [Clear] to abort the changes.</p> <p>Note: The flashing asterisk on the LCD shows the current data being edited.</p> <p>Many displays do not have a changeable 1/10-cent digit. Changing the tenths-cent value from 9 on these digits will make the digit appear incorrect.</p>

Menu Items

Pressing the [Menu] key accesses the following settings:

Key	Setting
1	Price Line 1
2	Price Line 2
3	Price Line 3
4	Price Line 4
5	Price Line 5
6	LED Test?
7	Display Option
8	Modem Settings
9	Display Status
10	Set Time 12HR

Use Menu items 1-5 to edit the price on each line of the display. Lines are typically numbered top to bottom with 1 being the top of the display. For further details, refer to **Modifying Price Line Settings** discussed previously in this section.

For more information about the Modem Settings submenu, refer to **ED-13953: DataMaster Modem Installation Manual**. For additional information about the Display Status or the Set Time submenus, refer to **ED-13894: DataTime Radio Installation Manual**. This manual provides complete details on installation and setup for a bi-directional radio system.

Modem Settings

The following items for a modem can be set using the DM-100:

Key	Setting
1	Dial Number
2	Dial out prefix
3	Disconnect time
4	Multiple Dial

Display Status

The Display Status menu item can be used with a bi-directional display setup to get display status back from the driver. The controller will cycle through various LCD message screens, illustrated below and on the following page, that show display status. Press [Clear] at any time to exit the Display Status submenu.

LCD Screen	Action
Display status Get status?	Press [Enter] to get the status of the display that is connected to the DM-100. The LCD will scroll through the status sent back from the display. Following is a list of responses:
Driver Firmware version x.x	<i>Firmware Version</i> This is the firmware version programmed on the host MASC driver in the display.
Current day/time mm/dd/yy HH:MM	<i>Current Day/Time</i> This is the Day/Time value set in the driver. The time format used will be 24-hour. Note: To set the Day/Time, see the "Set Time" section of your DataTime display system's operation manual.
Last reset time Mm/dd/yy hh:mm	<i>Last Reset Time</i> This time represents the last time the driver was reset. Note that the time format used will be 24-hour.
Current temp Xx °f	<i>Current Temp</i> This is the temperature read at the display by the temp sensor. (This value does not include the offset, if applicable).
TEMP SENSOR OFFSET Xx °C	<i>Temp Sensor Offset</i> This is the temp sensor offset value programmed into the driver.

Set Time

This allows the time and date to be set with the DM-100.

LCD Screen	Action
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> SET TIME-12HR HH:MM AM ↓ </div>	<p>HH – Current hours value MM – Current minutes value AM – Current AM/PM setting (not shown when 24-hour time is selected)</p> <p>Using the number keys, enter the Time in the 12-hour (or 24-hour) format. Press the down arrow key <↓> to modify the AM/PM setting.</p> <p>Note: The flashing asterisk shows the current data being edited.</p> <p>To save changes, press the [Enter] key when finished editing.</p> <p>Press the [Clear] key to cancel changes.</p>


After setting the time you will need to set the date. If the date is already correct, enter through the date and press [Enter] to send the time to the display.

LCD Screen	Action
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> DIM level xx 0=dim 63=bright </div>	<p>Dim Level</p> <ul style="list-style-type: none"> This is the intensity level of the display; 0 is the dimmest setting, and 63 is the brightest setting.
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Dimming mode Automatic </div>	<p>Dimming Mode</p> <p>This is the current mode of dimming used by the display.</p> <ul style="list-style-type: none"> <i>Automatic Dimming</i> – The light sensor controls dimming. <i>Manual Dimming</i> – The DM-100 console is used to enter all display dimming information.


Dimming

The dimming level of the Rate display can be adjusted in two ways. A light sensor, mounted on each driver, can detect the level of ambient light at the display location and dim the sign's LEDs accordingly. This function is known as automatic dimming. When the manual dimming function is selected, the LEDs remain at the same level of brightness regardless of the level of light detected at the display.

To select either of these functions, press **[Dimming]**. The current setting is shown on the bottom line of the LCD.

LCD Screen	Action
	<p>Press the down arrow key <↓> to toggle through dim settings:</p> <p>Automatic – The display automatically dims based on the light detected at the display</p> <p>Manual – The display dimming level is set manually. Once set, this value remains regardless of the level of light detected at the display.</p>

If AUTOMATIC dimming is selected, the following LCD prompt will be shown:

LCD Screen	Action
	<p>Press the [Enter/Edit] key to edit the auto dimming max intensity. This is the maximum intensity that the display will use in full-bright modes (during daylight hours).</p> <p>Press [Clear] to keep the current auto dimming maximum setting.</p>

The following LCD prompt is shown for either Manual or Automatic dimming selections:

LCD Screen	Action
<div data-bbox="310 352 636 449" style="border: 2px solid black; padding: 5px; text-align: center;">INTENSITY XX↓↑ ENTER TO SET</div> <p data-bbox="298 491 602 554">XX – Current intensity (1-16) Max Intensity - 16</p>	<p data-bbox="675 359 1154 491">Press the up or down arrow key <↑ ↓> to modify the current intensity of the display (Note: The DataMaster must be connected to the display)</p> <p data-bbox="675 533 1162 730">Press [Enter] to accept this intensity. If the manual-dimming mode is selected, this will be the new intensity for the display. If the automatic dimming mode is selected, the display will illuminate in full-bright mode, which is the maximum intensity level.</p>

Update Display

Once connected to the display with a j-box, radio, or modem, press [Update Display] to display the new sequence on the display. This button will also allow for a preview of the new sequence on the LCD.

Section 7: RC-50 Controller

The RC-50 controller can be configured to program petroleum price variances displayed on the LED DataMaster Petroleum Price sign. The instructions provided in this section discuss the functions used by the operator to control the Petroleum Price display.

Reference Drawing:

RC-50 Quick install Guide..... **Drawing A-257189**

7.1 RC-50 Operation

The RC-50 controller can control four unique prices on multiple signs. The instructions provided in this section discuss the functions used by the operator to control the rate display.

Editing the Display

To edit the price on the display, press and hold any button for five seconds. When the sign is in Edit mode, the decimal LEDs blink.

On the RC-50, each pair of buttons corresponds to a price line on the display. Each line is numbered to indicate the corresponding line on the display.

Increasing the price

To increase the price by one cent, press **[+]** for the corresponding line.
Note: Make sure the display is in Edit mode.

Decreasing the price

To decrease the price, press **[-]** for the corresponding line.
Note: Make sure the display is in Edit mode.

Turbo mode

To rapidly increase or decrease a price, press and hold the button for the corresponding line.

Note: When a button is not pressed for more than 10 seconds, the display exits the Edit Mode. The prices are saved and the display returns to its normal state.

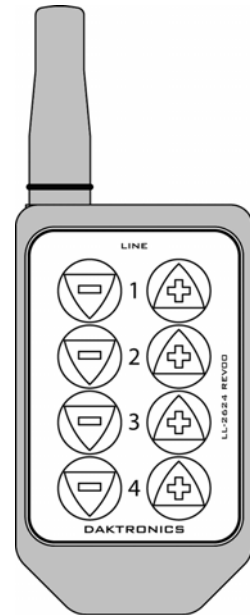


Figure 21: RC-50 Controller

Section 8: RC-100 Controller

The RC-100 controller can be configured to program petroleum price variances displayed on the LED DataMaster Petroleum Price sign. The instructions provided in this section discuss the functions used by the operator to control the Petroleum Price display.

Note: Although multiple wireless handheld controllers may be connected to a single wireless base station server, the rate display application allows for only one handheld device to be connected at a time.

Reference Drawing:

System Riser Diagram; RC-100, DataMaster..... **Drawing A-244838**

8.1 Petroleum Price Display Operation

The RC-100 controller can be configured to program petroleum price variances displayed on the LED DataMaster Petroleum Price sign. Refer to **Drawing A-244838** for correct set-up of the RC-100 system.

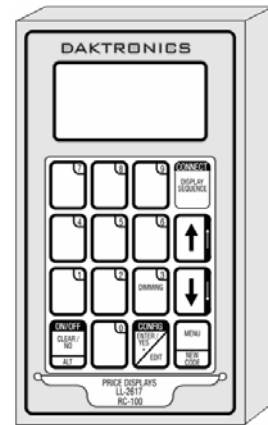


Figure 22: RC-100 Controller

Petroleum Price Display Startup

To operate the DataMaster Petroleum Price displays, the RC-100 must first be programmed to the gas price function. Use the **[Set Function]** key on startup. Use the following table as a guide to startup procedures.

LCD Screen	Action
<div style="border: 2px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>CURRENT FUNCTION GAS PRICE</p> </div>	<ul style="list-style-type: none"> • Plug the wall pack transformer into a 120 V AC power outlet and connect it to the RC-100. • This display appears briefly.

<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>CHANGE FUNCTION? PRESS SET FUNCT</p> </div>	<ul style="list-style-type: none"> • This message appears next on the screen. • If “GAS PRICE” was shown on the bottom line of the LCD during startup, do nothing. The controller will automatically default to previous Gas Price settings. • If a function other than “GAS PRICE” was shown on the bottom line of the LCD during startup, press the [Set Function] key while the second LCD prompt is displayed.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>SELECT FUNCTION GAS PRICE ↓↑</p> </div>	<ul style="list-style-type: none"> • Press the arrow up or down keys <↑ ↓> until the gas price option is shown. Press the [Enter] key to accept.

The RC-100 handheld controller should now be ready for use. The controller will “remember” the last function setting, so this step should only need to be done with a new controller or one that is configured for different displays. To operate the RC-100, press any of the keys listed in the following petroleum price sections.

RC-100 Controller Operation

The Petroleum Price Controller LCD display will default to showing the current display settings on power up. The following text will be shown on the LCD.

LCD Screen	Action
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>LINE PRICE 1 ↓ \$1.23 9/10</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p><EDIT> TO MODIFY 1 ↓ \$1.23 9/10</p> </div>	<ul style="list-style-type: none"> • The display will toggle between these two screens. • Press the up or down arrow keys <↑ ↓> to scroll through the current setting for any of the lines on the display. • Press the [Enter/Edit] key to modify any of the line settings.

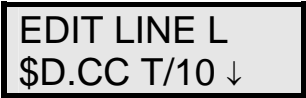
Modifying Price Line Settings

The petroleum price can be modified either by pressing the **[Edit]** key during operation (previous section) or using the **[Menu]** key (see **Menu Items**). Refer to the following key to identify the item to be edited.

L = Current line number to be edited

D.CC = Current dollars and cents value to edit

T = Current tenths of cent value to edit

LCD Screen	Action
	<ul style="list-style-type: none"> • Press any of the number keys to edit the price value for this line. Press the down arrow key <↓> to modify the value of the 1/10-cent data for this line (see note below). • Press [Enter] to accept the new value or press [Clear] to abort the changes. • Note: The flashing asterisk on the LCD shows the current data being edited. • Many displays do not have a changeable 1/10-cent digit. Changing the tenths-cent value from 9 on these digits will make the digit appear incorrect.

Dimming

The dimming level of the rate display can be adjusted in two ways. A temperature/light sensor mounted near the display can detect the level of ambient light at the display location and dim the sign's LEDs accordingly. This function is known as automatic dimming. When the manual dimming function is selected, the LEDs remain at the same level of brightness regardless of the level of light detected at the display. To select either of these functions, press [Dimming]. The current setting is shown on the bottom line of the LCD.

LCD Screen	Action
<div style="border: 1px solid black; padding: 5px; text-align: center;"> DIMMING AUTOMATIC ↓ </div>	<ul style="list-style-type: none"> • Press the down arrow key <↓> to toggle through dim settings: • Automatic – The display automatically dims based on the light detected at the display • Manual – The display dimming level is set manually. Once set, this value remains regardless of the level of light detected at the display. • Blank Sign – The display can be blanked out without powering down. Refer to the blank sign section for details.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> SET AUTO DIMMING MAX INTENSITY? </div>	<ul style="list-style-type: none"> • Press the [Enter/Edit] key to edit the auto dimming max intensity. This is the maximum intensity that the display will use in full-bright modes (during daylight hours.) • Press [Clear] to keep the current auto dimming maximum setting
<div style="border: 1px solid black; padding: 5px; text-align: center;"> INTENSITY XX↓↑ ENTER TO SET </div> <p>XX – Current intensity (1-16) Max Intensity - 16</p>	<ul style="list-style-type: none"> • Press the up or down arrow key <↑ ↓> to modify the current intensity of the display (Note: The DataMaster must be connected to the display) • Press [Enter] to accept this intensity. If manual dimming mode is selected, this will be the new intensity for the display. If the automatic dimming mode is selected, the display will illuminate in full-bright mode, which is the maximum intensity level.

DIMMING
BLANK SIGN ↓

BLANK THE
SIGN?
<ENT> YES
<CLR> NO

- Press **[Enter]** to accept this option.
- The next LCD dialog will ask whether to blank the screen or escape. The LCD toggles between Yes and No. Pressing **[Clear]** resumes normal operation; pressing **[Enter]** actually blanks the sign.

Section 9: POS Interface Installation and Operation

A Point of Sale (POS) interface option is available with DataMaster LED Petroleum Price Displays. Displays with this option automatically update when product prices are changed in the POS. Displays with the POS interface option will be supplied with a POS Interface Kit (see table below for part numbers).

P.O.S. Interface Type	Interface Kit Required	Interface Cable	Riser Diagram
Gilbarco G-Site	0A-1279-0400	0A-1279-0402	200195
Gilbarco PAM 1000	0A-1279-0452	0A-1279-0229	224628
Allied	0A-1279-0443	0A-1279-0144	215840
Verifone Sapphire	0A-1279-0146	0A-1279-0145	200195

9.1 System Installation

1. Ensure that the P.O.S. system has a price sign output port. Refer to the P.O.S. manuals to enable and/or configure the port.
2. Locate the following parts:
 - a) POS Interface Kit containing:
 - i) DataMaster 100 w/POS option (0A-1196-0133)
 - ii) Wall mounting bracket for DM-100 (0M-200082)
 - iii) POS Interface Cable (refer to table 7-1 for part number)
 - iv) POS riser diagram (refer to table 7-1)
 - b) 10' cable, DB9 to DB9 (W-1267)
 - c) Indoor junction box (0A-1196-0099) for direct wired installations or Radio Interface junction box (0A-1279-0161) for wireless installations.
 - d) Wallpack transformer (T-1118).
3. Mount the wall bracket (0M-200082) to provide convenient storage for the DM-100 controller. When using the wall-mount bracket for the DM-100, ensure that clearance is sufficient above the bracket to allow the DM-100 to be removed from the bracket with both cables attached. Also ensure that the POS interface cable will reach from the DM-100 location to the price sign output of the POS. Fasten the wall-mount bracket if desired. The DM-100 can be permanently attached to the wall mounting bracket by removing the two screws in the bottom edge of the DM-100, sliding the DM-100 into the wall mount bracket, and reinstalling the screws through the slots in the bottom bracket flange.
4. Mount the junction box (refer to step 1.c. above). Ensure that the DB9 to DB9 cable (W-1267) will reach from the DM-100 to the junction box.
5. Complete junction box to sign or junction box to radio wiring as shown on the riser diagram (drawing 200195).
6. Attach the P.O.S interface cable to the P.O.S price sign port. Coil any excess cable and cable-tie it out of the way.

7. Attach the DB9 to DB9 cable (W-1267) to the junction box as shown on the riser diagram. Coil any excess cable and cable-tie it out of the way.
8. Plug the transformer (T-1118) into an outlet and connect the output to the power jack on the j-box.
9. Verify that the DM-100 is running. Send a price change to the sign to check communications between the sign and the DM-100.

9.2 Configuring the DM-100 for Gilbarco G-Site Interface

Preparation

The DM-100 function must be set to "GAS PRICE." The current function of the DM-100 is displayed during power up. To change the function, cycle power to the DM-100, and press the <SET FUNCTION> key when prompted.

Configuration

1. Press the [Menu] key and use the <↑> and <↓> keys to scroll to the *POS SETTINGS* menu item.

```

POS SETTINGS
ENT TO MODIFY ↓↑
```

Press [Enter].

2. Select the POS type by using the <↑> and <↓> keys to scroll to *GILBARCO GSITE*.

```

POS INTERFACE
GILBARCO GSITE ↓↑
```

Press [Enter].

3. Each price in the Gilbarco G-Site is uniquely identified by 'price category'. Each price category corresponds to the price assigned to a particular grade/service level/price level. Use the menu shown below to configure which price category you would like displayed on each line of the display.

```

PRICE CATEGORY
LINE 1 : 1 ↓↑
```

Use the <↑> and <↓> keys to select a price category to be displayed on line 1 of the sign. Press [Enter] to accept the setting. Pressing [Enter] when the price category displayed is <None> will cause the price sign to ignore POS data for this line. (This may be useful for configuring some lines of a price sign to receive manual price changes only).

4. Select a price category to be displayed on each line of the sign, and press [Menu], or [Esc/Clear] when finished. The POS interface configuration is complete.

9.3 Configuring the DM-100 for Allied Interface

Preparation

The DM-100 function must be set to *GAS PRICE*. The current function of the DM-100 is displayed during power up. To change to function, cycle power to the DM-100, and press the [Set Function] key when prompted.

Configuration

1. Press the [Menu] key and use the <↑> and <↓> keys to scroll to the *POS SETTINGS* menu item.

```
POS SETTINGS
ENT TO MODIFY ↓↑
```

Press [Enter].

2. Select the POS type by using the <↑> and <↓> keys to scroll to *ALLIED*.

```
POS INTERFACE
ALLIED ↓↑
```

Press [Enter].

3. Each price in Allied is uniquely identified by grade, service level, and price level. Use the <↑> and <↓> keys to select a grade for the line. If a line is not used, select [None Displayed].

```
GRADE ON LINE 1
GRADE 1 ↓↑
```

Press [Enter].

4. Use the <↑> and <↓> keys to select a service level for the line.

```
SERVICE LINE 1
SELF SERVE ↓↑
```

Press [Enter].

5. Use the <↑> and <↓> keys to select a price level (cash or credit).

```
PRICE LINE 1
CASH PRICE ↓↑
```

Press [Enter].

6. Select a grade/service level/price level for each line of the sign, and press [Menu] or [Esc/Clear] when finished. The POS interface configuration is complete.

9.4 Configuring the DM-100 for PAM 1000 Interface

Preparation

The DM-100 function must be set to *GAS PRICE*. The current function of the DM-100 is displayed during power up. To change to function, cycle power to the DM-100, and press the **[Set Function]** key when prompted.

Note: The Gilbarco PAM 1000 is a pump access module that allows 3rd party P.O.S. systems to interface to and control Gilbarco pumps. The PAM 1000 does not have a dedicated price sign port. The DM-100 “listens” to the price data that is sent from the P.O.S. to the PAM 1000 when prices are changed on the pumps.

Configuration


1. Press the **[Menu]** key and use the <↑> and <↓> keys to scroll to the *POS SETTINGS* menu item.



POS SETTINGS
ENT TO MODIFY ↓↑

Press **[Enter]**.

2. Select the POS type by using the <↑> and <↓> keys to scroll to *PAM 1000*.

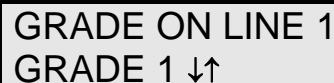


POS INTERFACE
PAM 1000 ↓↑

Press **[Enter]**.

3. Each price in the PAM 1000 is uniquely identified by a “system grade number” and a “price level” (cash or credit). For Verifone Ruby P.O.S. systems, the system grade numbers are the same as the product numbers in the Ruby (when setting prices in the Ruby, the first product listed is “system grade 1”). Use the <↑> and <↓> keys to select a grade for the line. If a line is not used, select **<None Displayed>**.

Note: Only self service prices may be displayed when using the Ruby.



GRADE ON LINE 1
GRADE 1 ↓↑

Press **[Enter]**.

4. Use the <↑> and <↓> keys to select a price level (cash or credit).



PRICE LINE 1
CASH PRICE ↓↑

Press **[Enter]**.

5. Select a grade for each line of the sign, and press **[Menu]** or **[Esc/Clear]** when finished. The POS interface configuration is complete.

9.5 Changing Prices Manually

Each display line for which a price category is configured will automatically update when the price is changed in the POS system. Attempting to manually edit prices that are configured for POS control will cause the following screen to appear:

THIS LINE POS
CTRLD. OVERRIDE?

Press [**Enter**] to manually edit the price or [**Esc/Clear**] to cancel.

Appendix A: Reference Drawings

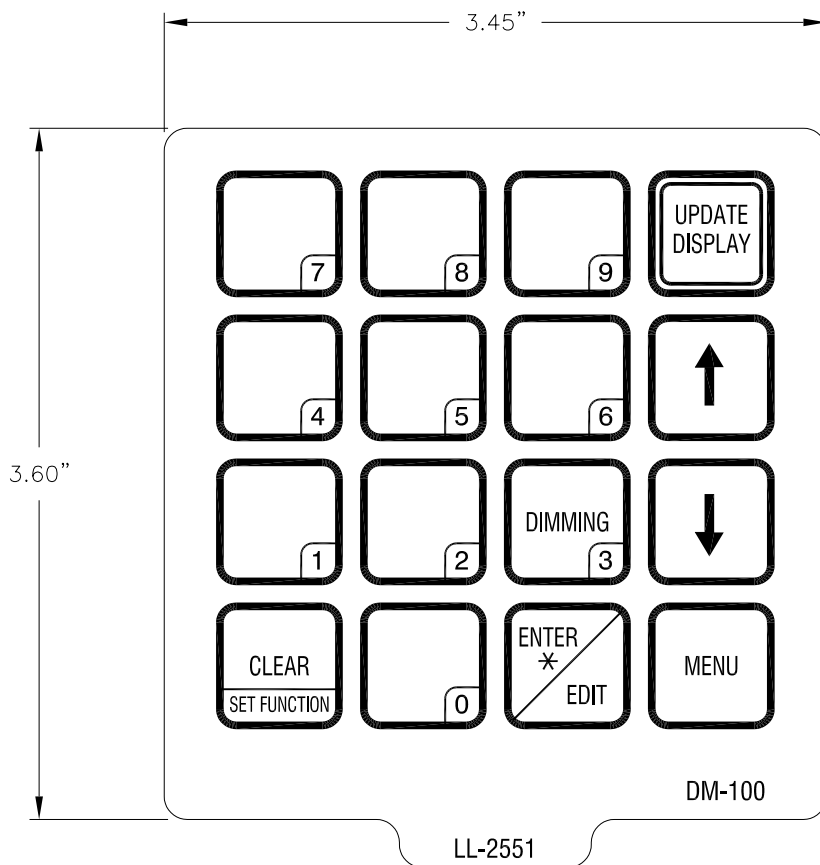
Following are the reference drawings for this manual. The first list contains the general drawings which pertain to all displays. The second list includes drawings that are display specific. These are listed by display size.

Reference Drawings

Insert, DM-100 Price/T&T Display	Drawing A-167856
System Riser Diagram; RC-100, DataMaster	Drawing A-244838
Specifications; Gas Price Driver, 4 Col.	Drawing A-250728
RC-50 Quick Install Guide	Drawing A-257189
Wiring Schematic, DF-2000/4000 Series	Drawing A-263988
Address Dip Switch Settings	Drawing B-256001

Shop Drawings, listed by display type and digit size

Shop Drawing DF-2100-10-L5-SF	Drawing B-304066
Shop Drawing DF-2100-13-L6-SF	Drawing B-304229
Shop Drawing DF-2100-18-L8-SF	Drawing B-304719
Shop Drawing DF-2100-24-L10-SF	Drawing B-304808
Shop Drawing DF-2100-10-T3-SF	Drawing B-303105
Shop Drawing DF-2100-13-T3.5-SF	Drawing B-303309
Shop Drawing DF-2100-18-T5-SF	Drawing B-303675
Shop Drawing DF-2100-24-T6-SF	Drawing B-303900
Shop Drawing DF-2100-24-T8-SF	Drawing B-303983
Shop Drawing DF-2100-36-T8-SF	Drawing B-269576
Shop Drawing DF-2100-48-T11-SF	Drawing A-236905
Shop Drawing DF-2100-60-T14-SF	Drawing A-232509



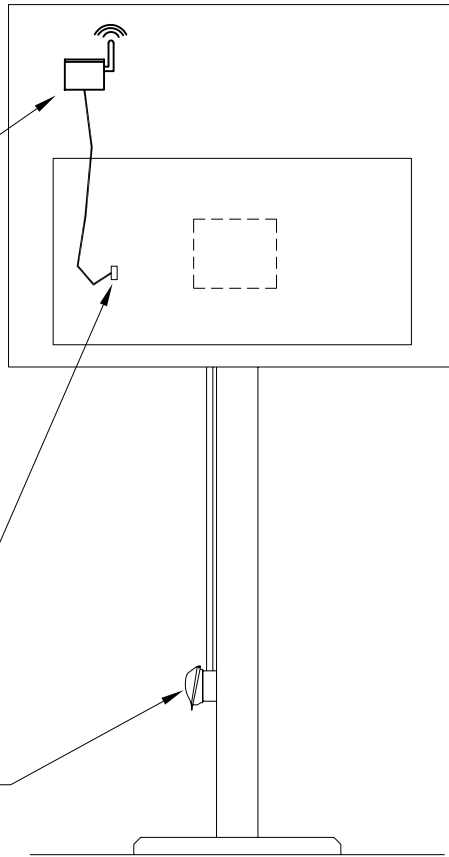
LL-2551

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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ:			
TITLE: INSERT, DM-100 PRICE/T&T DISPLAY			
DES. BY: EBRAVEK		DRAWN BY: EBRAVEK	
DATE: 28 MAY 02			
REVISION	APPR. BY:	1196-E07A-167856	
00	SCALE: 1=1		

REV.	DATE	DESCRIPTION	BY	APPR.

NOTE: THIS DETAIL SHOWS A GENERIC PRICE DISPLAY. ACTUAL DISPLAY MAY BE DIFFERENT FROM DRAWING.

FRONT VIEW



OA-1110-0045
FUNCTION SETTING = 3

NOTE: THE RC-100 RECEIVER BASE STATION NEEDS TO BE MOUNTED SO THAT THE ANTENNA IS IN LINE OF SIGHT WITH THE RC-100 HANDHELD.

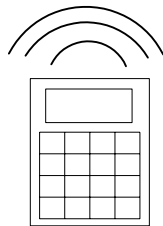
NOTE: THE RC-100 RECEIVER BASE STATION CONNECTS TO THE HOST DISPLAY THROUGH A 6 PIN JACK ON THE BACK OF THE DISPLAY.

OPTIONAL
DM-100 WIRED
CONTROL J-BOX

NOTE:
THE WIRELESS BASE STATION COMES PRE-SET TO CHANNEL 1. HOWEVER, CHANNELS 1-15 CAN BE USED.

FUNCTION TABLE

FUNCTION NUMBER	DESCRIPTION
0	DEFAULT FUNCTION (LAST POWER UP FUNCTION)
1	CAN HAND HELD (JUDGES) CONSOLE
2	BASEBALL/TENNIS SCOREBOARD CONTROLLER (ALLSPORT)
3	DATATIME/DATAMASTER DISPLAY CONTROL



OA-1110-0033
INSERT: LL-2617
(GAS PRICE DISPLAY)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: DATAMASTER LED DISPLAYS

TITLE: SYSTEM RISER DIAGRAM; DATAMASTER, RC-100

DES. BY: KBIERBA

DRAWN BY: KBIERBA

DATE: 9 JUN 05

REV.	DATE	DESCRIPTION	BY	APPR.
01	01 AUG 05	REVISED TEXT	CMG	

REVISION	APPR. BY:
01	MMILLER
	SCALE:
	NONE

1279-R01A-244838

GAS PRICE DECIMAL / DRIVER
 OP-1192-0353 RED
 OP-1192-0354 GRN
 OP-1192-0358 AMB
 OP-1192-0390 SEG TIMER

J10: MODEM

PIN	FUNCTION
5	MODEM_RX_P
4	GND
3	MODEM_TX_P
2	MODEM_RESET_P
1	MODEM_RTS_P

J11: RADIO

PIN	FUNCTION
1	RS232_TX_P
2	RS232_RX_P
3	GND_N
4	+V_UNREG_P
5	DCD_P
6	RESET_P

J8: CL_OUTPUT

PIN	FUNCTION
1	N/C
2	CL_OUT_TX_N
3	CL_OUT_TX_P
4	CL_OUT_RX_N
5	CL_OUT_RX_P
6	N/C

J6: CL_INPUT

PIN	FUNCTION
1	+10V_UNREG
2	CL_IN_TX_P
3	CL_IN_TX_N
4	CL_IN_RX_P
5	CL_IN_RX_N
6	GND

J5: SWITCH INPUTS

PIN	FUNCTION
14	N/C
13	N/C
12	N/C
11	N/C
10	+5V_P
9	SW_7_P
8	SW_6_P
7	SW_5_P
6	SW_4_P
5	SW_3_P
4	SW_2_P
3	SW_1_P
2	SW_0_P
1	GND_N

J12: RC 50 INPUT

PIN	FUNCTION
1	+3.3V_P
2	N/C
3	GND
4	DATA_INPUT_P

J7: PROGRAM

FUNCTION	PIN	PIN	FUNCTION
PGC_P	1	2	VPP_P
NC	3	4	GND_N
PGD_P	5	6	GND_N
PGM_P	7	8	+5V_P
NC	9	10	NC

S1: OPTIONS

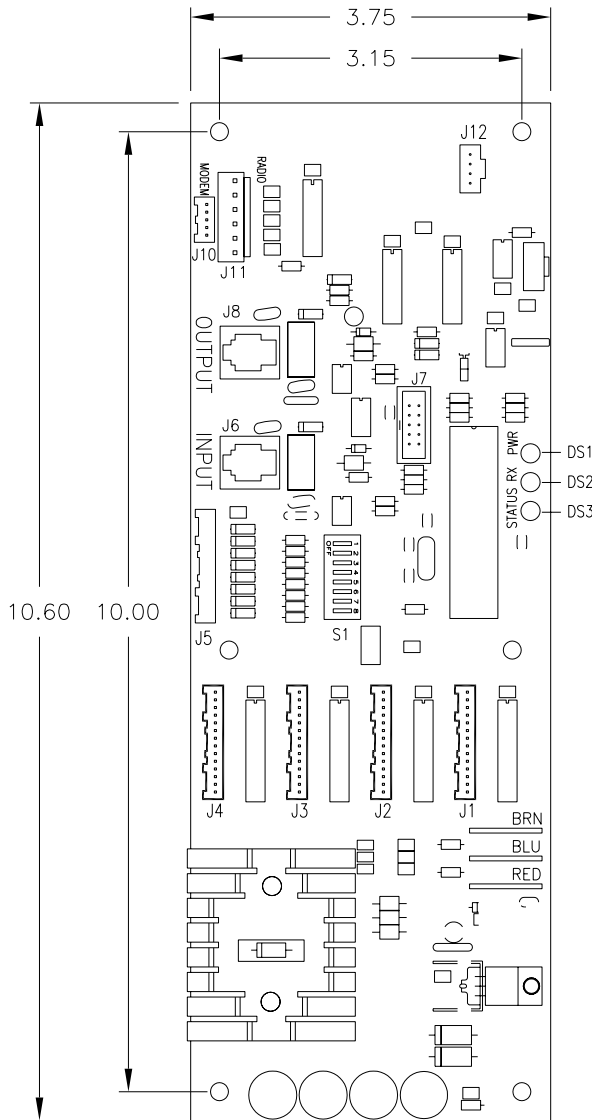
PIN	FUNCTION
1	LINE_BIT_0
2	LINE_BIT_1
3	LINE_BIT_2
4	SIGN_BIT_0
5	SIGN_BIT_1
6	SIGN_BIT_2
7	RESERVED
8	RESERVED

J1-4: DIGIT OUTPUTS

PIN	FUNCTION
14	+VBB_P
13	+VBB_P
12	+VBB_P
11	+VBB_P
10	+VBB_P
9	N/C
8	SEGH_N
7	SEGG_N
6	SEGF_N
5	SEGE_N
4	SEGD_N
3	SEGC_N
2	SEGB_N
1	SEGA_N

POWER INPUTS

PIN	FUNCTION
E3	20VAC_P_BRN
E2	10VAC_P_BLU
E1	VAC_N_RED

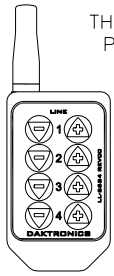


NOTES:

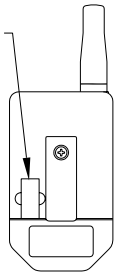
- GREEN LED DS1 INDICATES THAT THE DRIVER HAS POWER.
- RED LED DS2 WILL FLICKER WHEN THE DRIVER RECEIVES SIGNAL.
- AMBER LED DS3 WILL BLINK WHEN THE DRIVER IS RUNNING.
- IF DS3 IS ON OR OFF CONTINUOUSLY THE MICROCONTROLLER IS NOT WORKING.
- REFER TO DWG B-256001 FOR SWITCH SETTING DETAILS.

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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: REDUCED DEPTH GAS DISPLAYS			
TITLE: SPECIFICATIONS; GAS PRICE DRIVER, 4 COL.			
DES. BY: THENDRI		DRAWN BY: DULSCHM	DATE: 11 AUG 05
REVISION	APPR. BY:	1356-R04A-250728	
03	SCALE: 1 = 2		

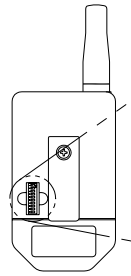
REV.	DATE	DESCRIPTION	BY	APPR.
03	22 AUG 06	CHANGED SEG TIMER TO OP-1192-0390	DJU	
02	28 FEB 06	REMOVED FUNCTION TABLE FOR J9: CAN ADDED FUNCTION TABLE FOR J12: RC 50	DJU	
01	04 OCT 05	UPDATED DRAWING FOR REV 01 PCB	DJU	



FRONT VIEW
RC-50
CONTROLLER

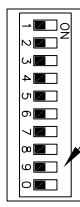


REAR VIEW
RC-50
CONTROLLER



REAR VIEW
RC-50
CONTROLLER

9 & 0 NOT USED



DIP SWITCH DETAIL
SCALE 2=1
(THIS IS AN EXAMPLE ONLY,
NOT THE ACTUAL SETTINGS)

REMOVE THE DIP SWITCH COVER ON THE BACK OF THE RC-50 CONTROLLER.

USE A THIN, POINTED OBJECT TO MOVE THE SWITCHES RIGHT OR LEFT TO TURN THEM ON OR OFF.

SET THE FIRST 8 SWITCHES OF THE RC-50 DIP SWITCH TO A RANDOM UNIQUE SETTING. RECORD YOUR SETTING IN THE TABLE BELOW.

ONLY THE FIRST 8 SWITCHES ARE USED. SWITCHES 9 AND 0 DO NOT AFFECT THE ADDRESS, REGARDLESS OF THEIR POSITIONS.

REPLACE THE COVER.

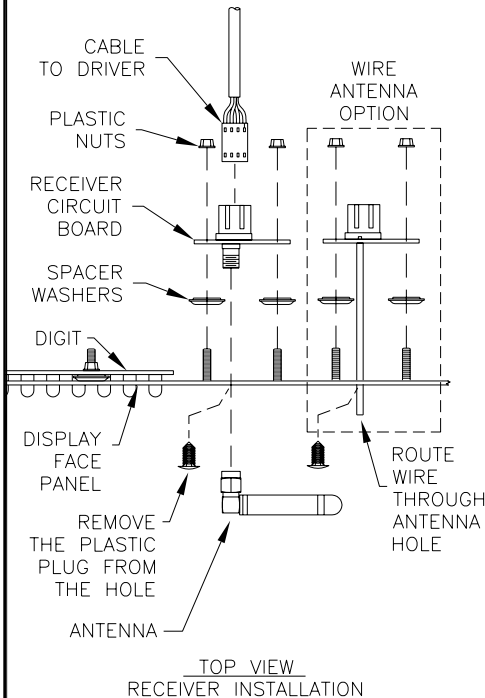
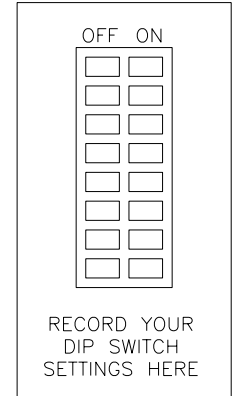
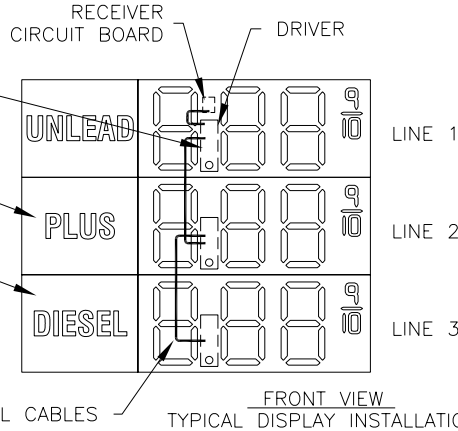
SET THE DIP SWITCH ON THIS DRIVER TO MATCH THE RC-50 DIP SWITCH. THIS DISPLAY WILL OPERATE AS LINE 1.

SET DRIVER DIP SWITCH TO SIGN 1 LINE 2

SET DRIVER DIP SWITCH TO SIGN 1 LINE 3

SEE DRAWING 1356-R10B-256001 FOR INFORMATION ON SETTING DRIVER DIP SWITCHES.

FOR A 2-SIDED SIGN, SET ADDRESS FOR ONE SIDE AS SIGN 1, AND USE SIGN 2 FOR THE OTHER SIDE.



TOP VIEW
RECEIVER INSTALLATION

1. SET THE FIRST 8 SWITCHES OF THE RC-50 DIP SWITCH TO A UNIQUE RANDOM SETTING. RECORD YOUR SETTING FOR FUTURE REFERENCE.

2. SET THE DIP SWITCH ON THE DRIVER THAT WILL BE CONNECTED TO THE RECEIVER, USING THE SAME SETTING AS THE 8 RC-50 SWITCHES.

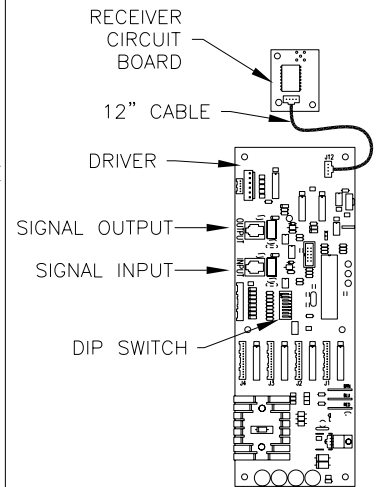
3. MOUNT THE RECEIVER CIRCUIT BOARD IN THE DISPLAY, AS SHOWN AT LEFT. ROUTE WIRE THROUGH ANTENNA HOLE IN DISPLAY FACE PLATE FOR WIRE ANTENNA OPTION.

4. CONNECT SIGNAL CABLE FROM OUTPUT ON THAT DRIVER TO INPUT ON THE NEXT DRIVER. CONTINUE CONNECTING FROM OUTPUT TO INPUT UNTIL ALL DRIVERS ARE CONNECTED.

5. SET THE DIP SWITCHES ON THE OTHER DRIVERS TO BE LINE 2, LINE 3, ETC. SEE DRAWING 1356-R10B-256001 FOR INFORMATION ON SETTING DRIVER DIP SWITCHES.

6. POWER UP THE SIGN AND OPERATE THE RC-50 CONTROLLER. LINE 1 WILL OPERATE THE DISPLAY WITH THE RECEIVER, ALONG WITH ANY OTHER DISPLAY THAT IS SET TO LINE 1.

7. PRESS AND HOLD ANY KEY ON THE RC-50 FOR 5 SECONDS. THE DECIMAL ON THE DISPLAY WILL FLASH. PRESS [-] OR [+] TO DECREASE OR INCREASE THE PRICE BY 1 CENT.



REAR VIEW
RECEIVER AND DRIVER

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GAS PRICE DISPLAYS

TITLE: RC-50 QUICK INSTALL GUIDE

DES. BY: KBIERBA

DRAWN BY: KBIERBA

DATE: 11 NOV 05

REVISION

APPR. BY:

02

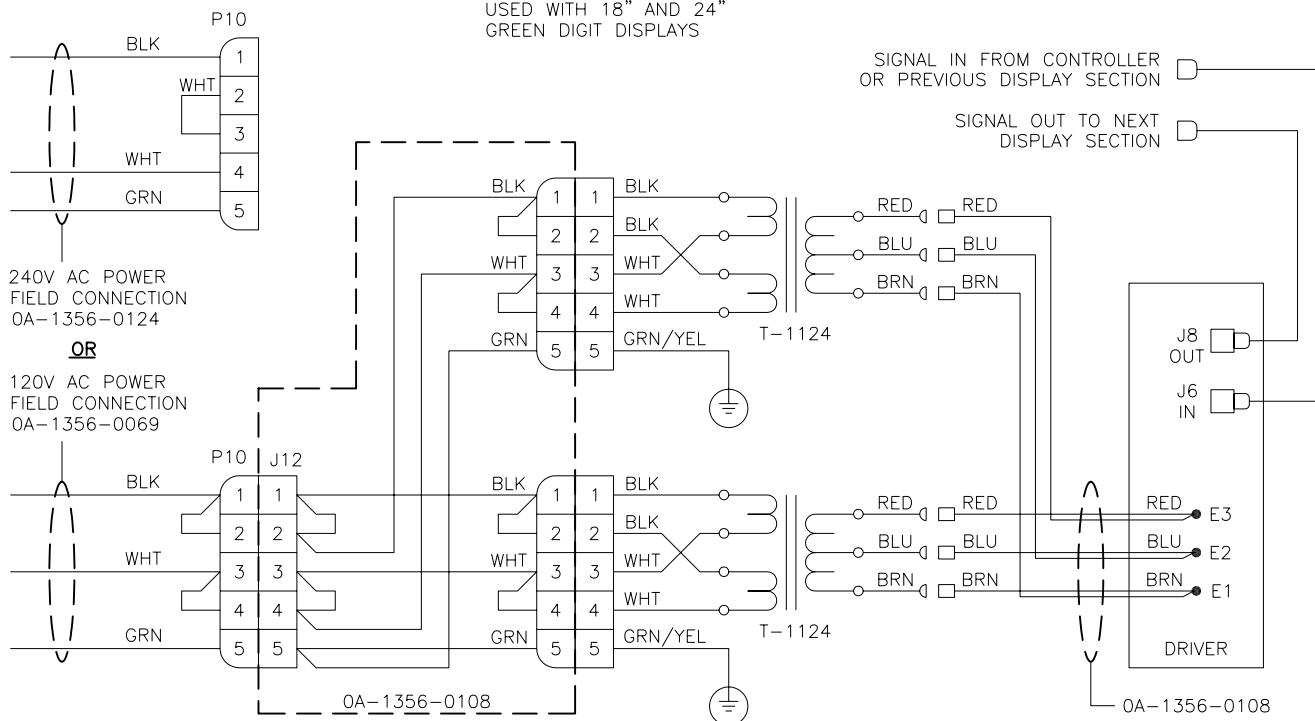
SCALE:

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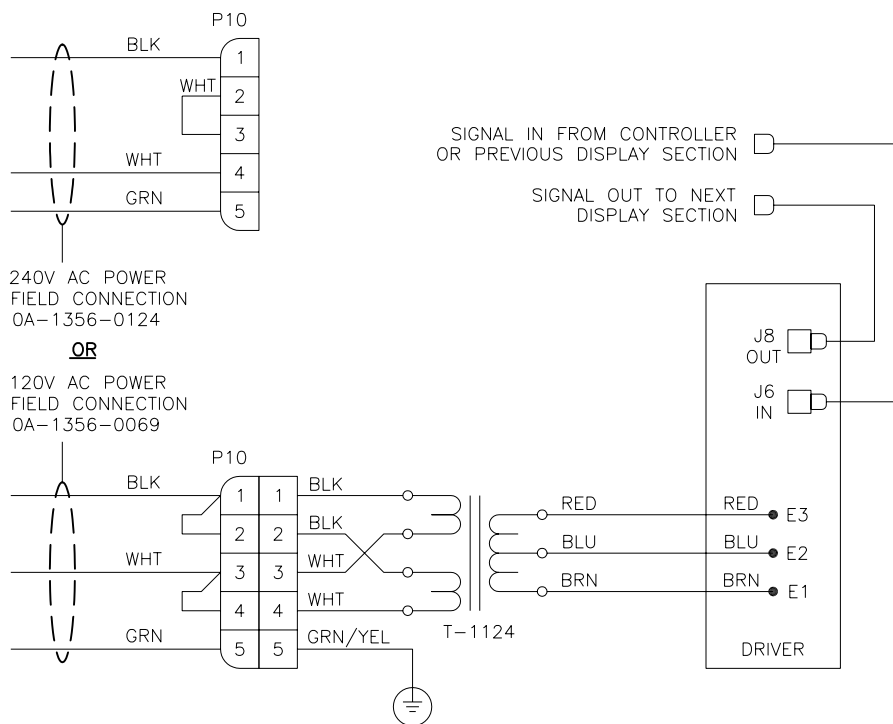
1356-R10A-257189

REV.	DATE	DESCRIPTION	BY	APPR.
02	21 JUL 06	ADDED DETAIL TO SHOW WIRE ANTENNA OPTION ADDED TEXT TO INSTALLATION INSTRUCTIONS	DJU	
01	08 JUN 06	CHANGED DIP SWITCH FIGURE TO SHOW 10 POSITION SWITCH WITH THE FIRST EIGHT BEING USED.	AVB	

DUAL TRANSFORMERS
 TWO TRANSFORMERS ARE
 USED WITH 18" AND 24"
 GREEN DIGIT DISPLAYS

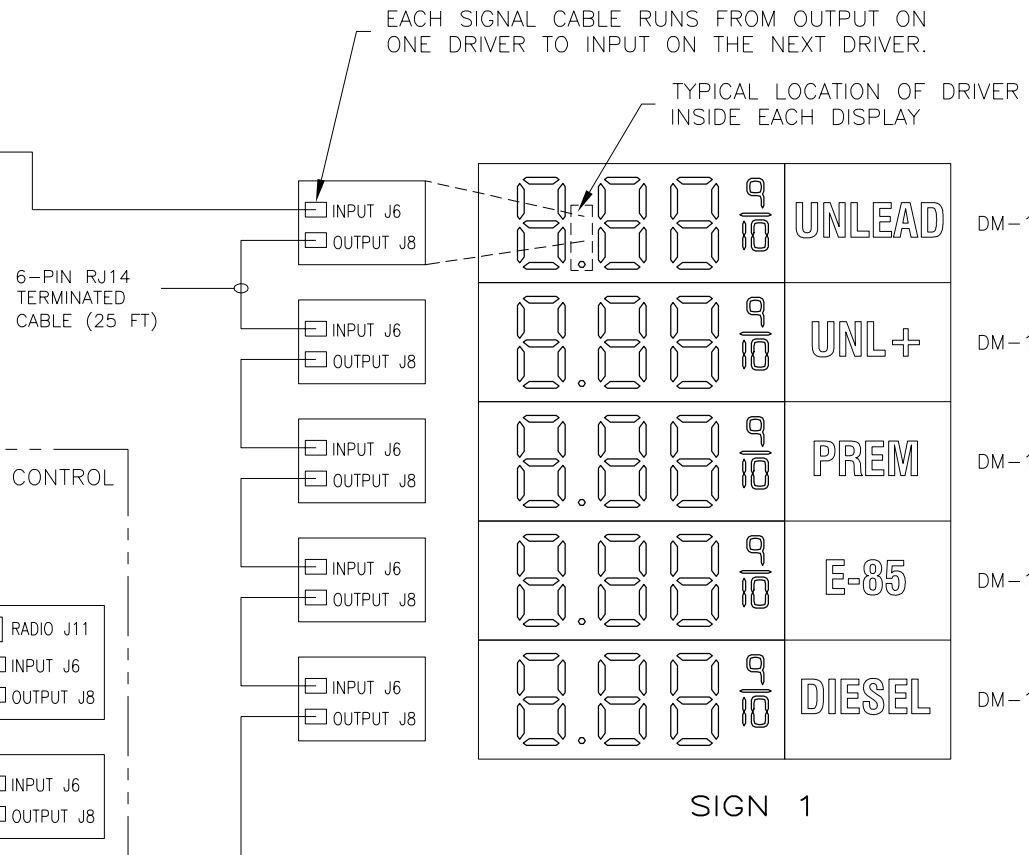
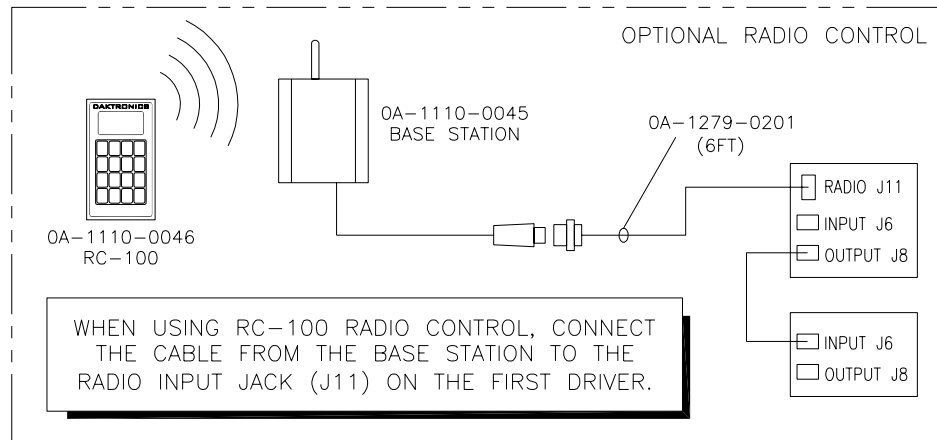
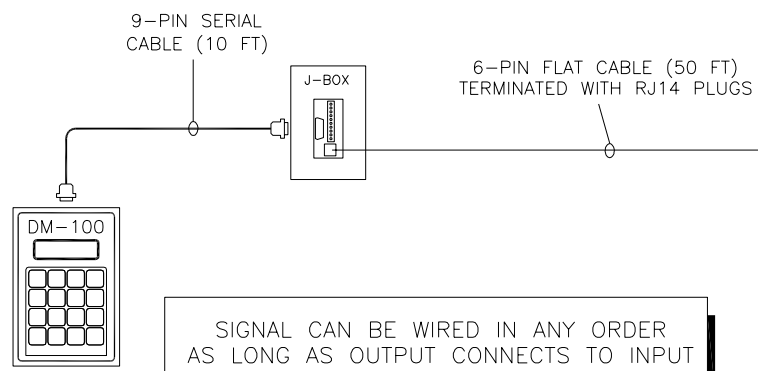


SINGLE TRANSFORMER

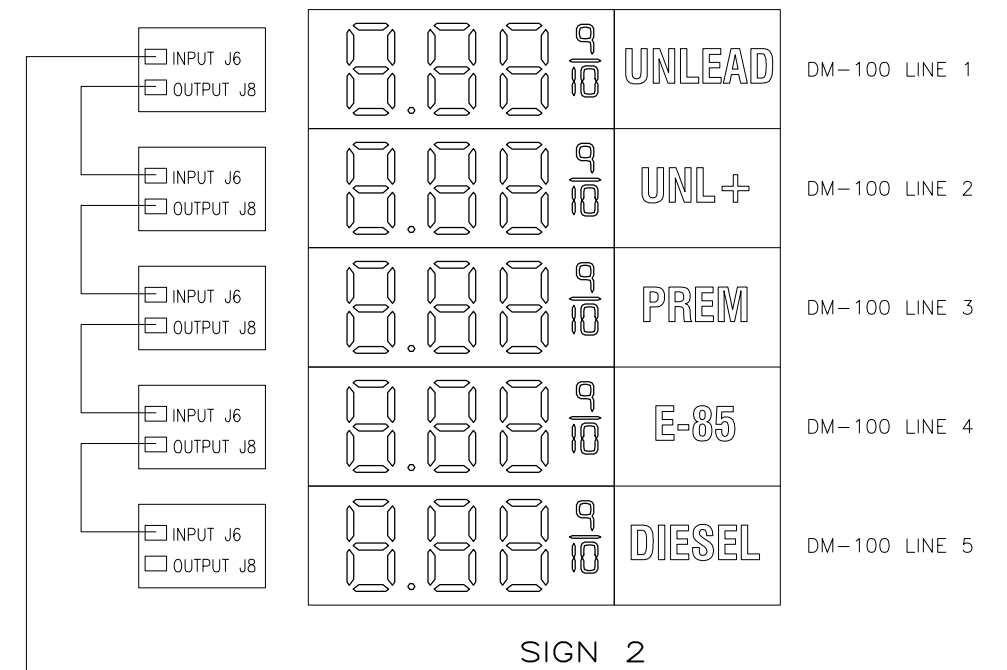


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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: GAS PRICE DISPLAYS			
TITLE: WIRING SCHEMATIC, DF-2000/4000 SERIES			
DES. BY: AVB	DRAWN BY: KBIERBA		DATE: 09 FEB 06
REVISION	APPR. BY:	1356-R03A-263988	
01	SCALE: NONE		

01	27 SEP 06	REDREW THE SCHEMATIC TO INCLUDE UPDATED HARNESSING.	MGL	
REV.	DATE	DESCRIPTION	BY	APPR.



FOR A 2-SIDED SIGN, SET ADDRESSES AS THOUGH THE TWO SIDES WERE TWO DIFFERENT SIGNS.



LINE NUMBER
SET LINE NUMBER USING ONE-OFFSET BINARY NOTATION.

LINE	LINE_BIT0	LINE_BIT1	LINE_BIT2	SWITCH 1	SWITCH 2	SWITCH 3
LINE 1	OFF	OFF	OFF	SWITCH 1	SWITCH 2	SWITCH 3
LINE 2	ON	OFF	OFF	SWITCH 1	SWITCH 2	SWITCH 3
LINE 3	OFF	ON	OFF	SWITCH 1	SWITCH 2	SWITCH 3
LINE 4	ON	ON	OFF	SWITCH 1	SWITCH 2	SWITCH 3
LINE 5	OFF	OFF	ON	SWITCH 1	SWITCH 2	SWITCH 3
LINE 6	ON	OFF	ON	SWITCH 1	SWITCH 2	SWITCH 3
LINE 7	OFF	ON	ON	SWITCH 1	SWITCH 2	SWITCH 3
LINE 8	ON	ON	ON	SWITCH 1	SWITCH 2	SWITCH 3

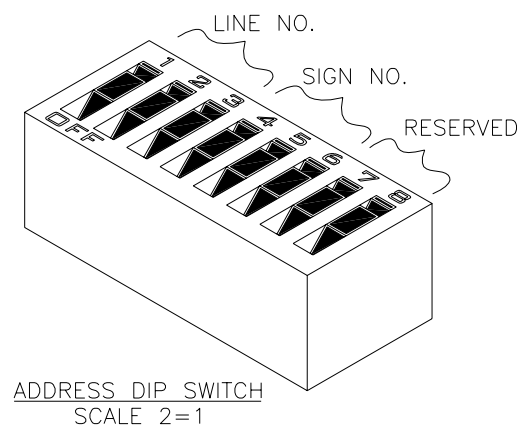
SIGN NUMBER
SET SIGN NUMBER USING ONE-OFFSET BINARY NOTATION.

SIGN	SIGN_BIT0	SIGN_BIT1	SIGN_BIT2	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 1	OFF	OFF	OFF	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 2	ON	OFF	OFF	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 3	OFF	ON	OFF	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 4	ON	ON	OFF	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 5	OFF	OFF	ON	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 6	ON	OFF	ON	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 7	OFF	ON	ON	SWITCH 4	SWITCH 5	SWITCH 6
SIGN 8	ON	ON	ON	SWITCH 4	SWITCH 5	SWITCH 6

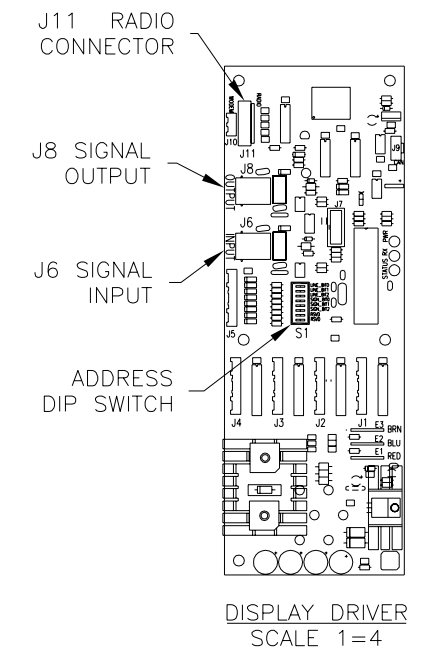
RESERVED

OFF	RESERVED	SWITCH 7
OFF	RESERVED	SWITCH 8

LEAVE RESERVED SWITCHES "OFF"



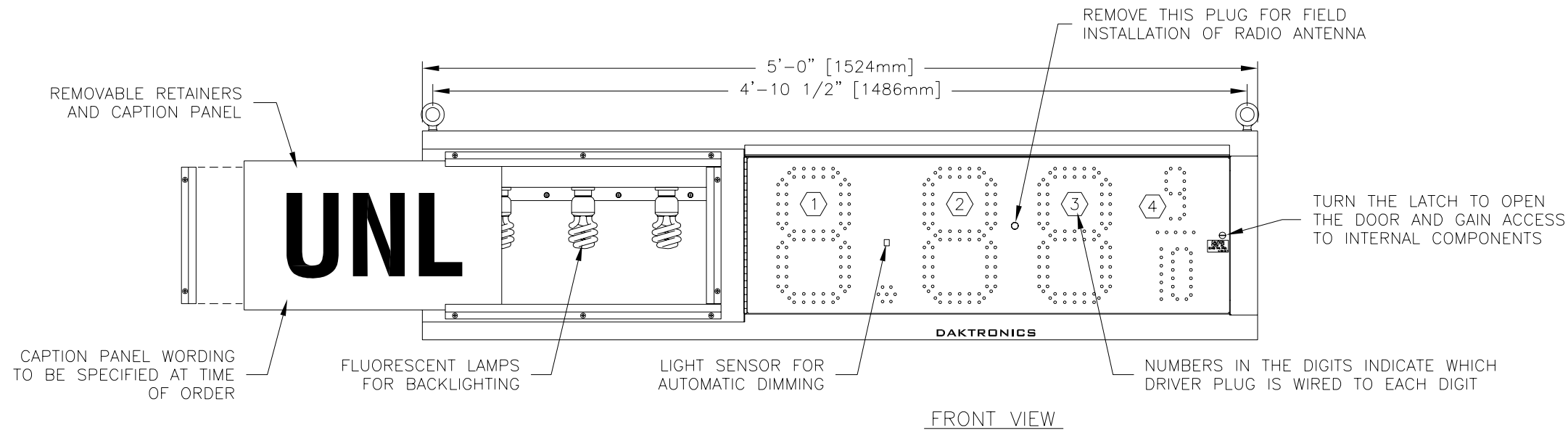
NOTES:
EVERY DRIVER MUST HAVE A UNIQUE ADDRESS.
THE ADDRESS IS SET BY FLIPPING THE SWITCHES IN AN 8 POSITION "DIP" SWITCH ON THE DRIVER, LOCATED IN EACH DISPLAY. A TYPICAL DRIVER IS SHOWN AT RIGHT.
THE DIP SWITCH IS SHOWN AT LEFT. ALL SWITCHES ARE SHOWN IN THE OFF POSITION IN THIS FIGURE.
THREE SWITCHES ARE USED TO SET THE LINE NUMBER, AND THREE SET THE SIGN NUMBER. TWO SWITCHES ARE NOT USED.
ADDRESSES ALLOW UP TO EIGHT SIGNS WITH UP TO EIGHT LINES EACH.
ALL DISPLAYS WITH THE SAME LINE NUMBER WILL SHOW THE SAME PRICE.
FOR A 2-SIDED SIGN, SET ADDRESSES AS THOUGH THE TWO SIDES WERE TWO DIFFERENT SIGNS.



REV.	DATE	DESCRIPTION	BY	APPR.
03	09 JUN 06	ADDED NOTE ABOUT ADDRESSING 2-SIDED SIGNS.	AVB	
02	09 FEB 06	ADDED FIGURE FOR OPTIONAL RADIO CONTROL.	AVB	
01	28 DEC 05	ADDED DRIVER FIGURE. ADDED SOME NOTES.	AVB	

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DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: GAS PRICE DISPLAYS	
TITLE: ADDRESS DIP SWITCH SETTINGS	
DES. BY: THENDRI	DATE: 27 SEP 05
REVISION	APPR. BY:
03	SCALE: NONE

1356-R10B-256001



FRONT VIEW

NOTES:

GENERAL

DIGITS ARE 10" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 40 LBS [18 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR FLANGES OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING STRUCTURE OR FOR THE ADEQUACY OF ATTACHMENT TO THE STRUCTURE. STRUCTURE AND ATTACHMENT MUST CONFORM TO ALL APPLICABLE BUILDING CODES.

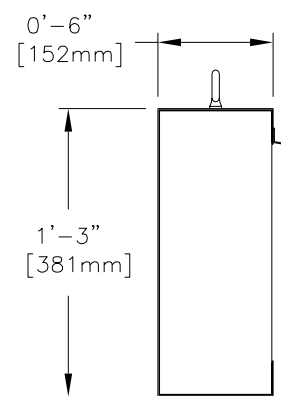
ELECTRICAL

MAXIMUM POWER CONSUMPTION IS ABOUT 120 WATTS. PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

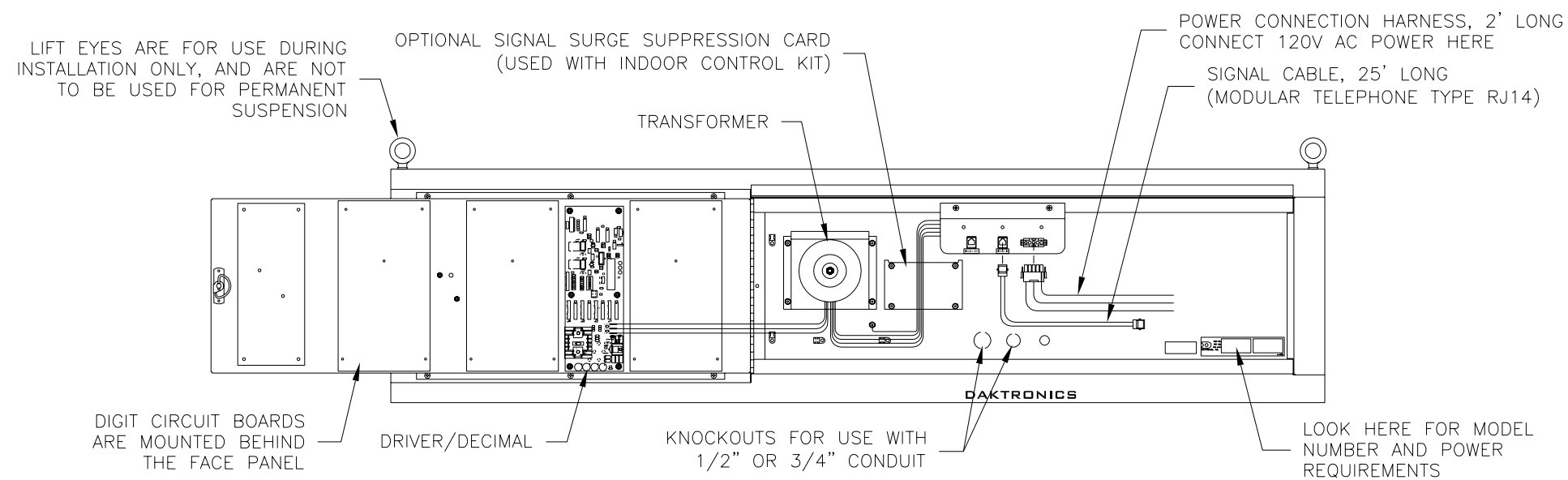
CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY. KNOCKOUTS ARE PROVIDED IN THE BACK OF THE CABINET FOR ROUTING OF POWER AND SIGNAL WIRES.

IF THE POWER TO THE DISPLAY IS TEMPORARILY INTERRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.



SIDE VIEW



FRONT VIEW
WITH DOOR OPEN
(NOT ALL WIRES ARE SHOWN)

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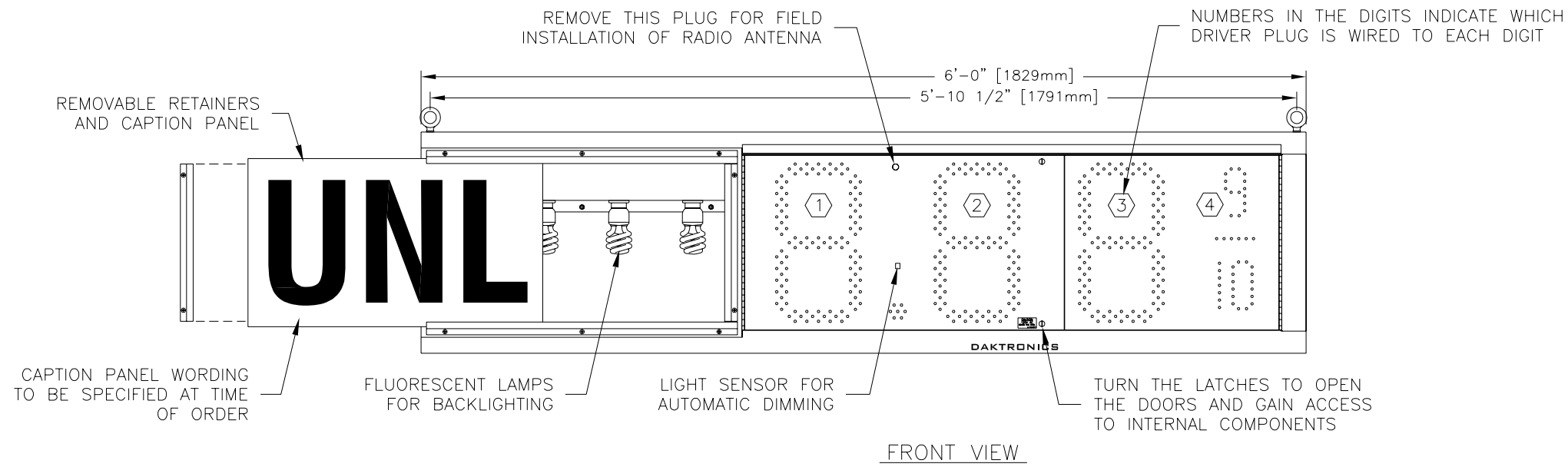
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-10-L5-SF

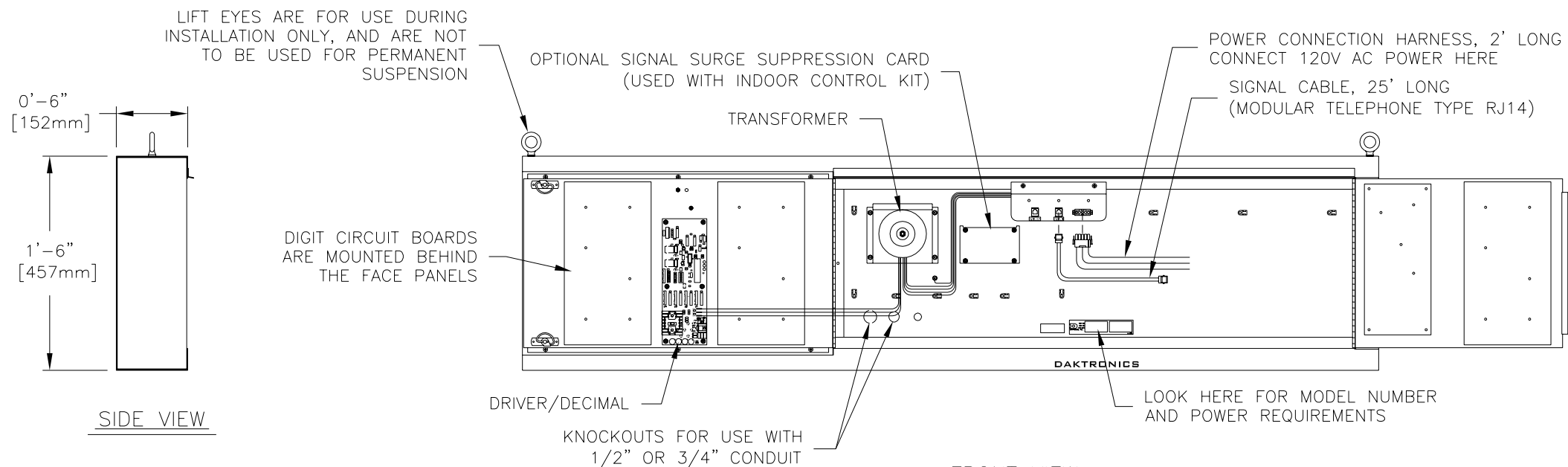
DES. BY: DRAWN BY: M LEOPOLD DATE: 02 MAY 07

REVISION 00 APPR. BY: SCALE: 1=10 1356-R04B-304066

REV.	DATE	DESCRIPTION	BY	APPR.



FRONT VIEW



SIDE VIEW

FRONT VIEW
WITH BOTH DOORS OPEN
(NOT ALL WIRES ARE SHOWN)

NOTES:

GENERAL

DIGITS ARE 13" NOMINAL HEIGHT. THE 9/10 DIGIT IS 12" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 50 LBS [23 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR FLANGES OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING STRUCTURE OR FOR THE ADEQUACY OF ATTACHMENT TO THE STRUCTURE. STRUCTURE AND ATTACHMENT MUST CONFORM TO ALL APPLICABLE BUILDING CODES.

ELECTRICAL

MAXIMUM POWER CONSUMPTION IS ABOUT 135 WATTS. PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY. KNOCKOUTS ARE PROVIDED IN THE BACK OF THE CABINET FOR ROUTING OF POWER AND SIGNAL WIRES.

IF THE POWER TO THE DISPLAY IS TEMPORARILY INTERRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.

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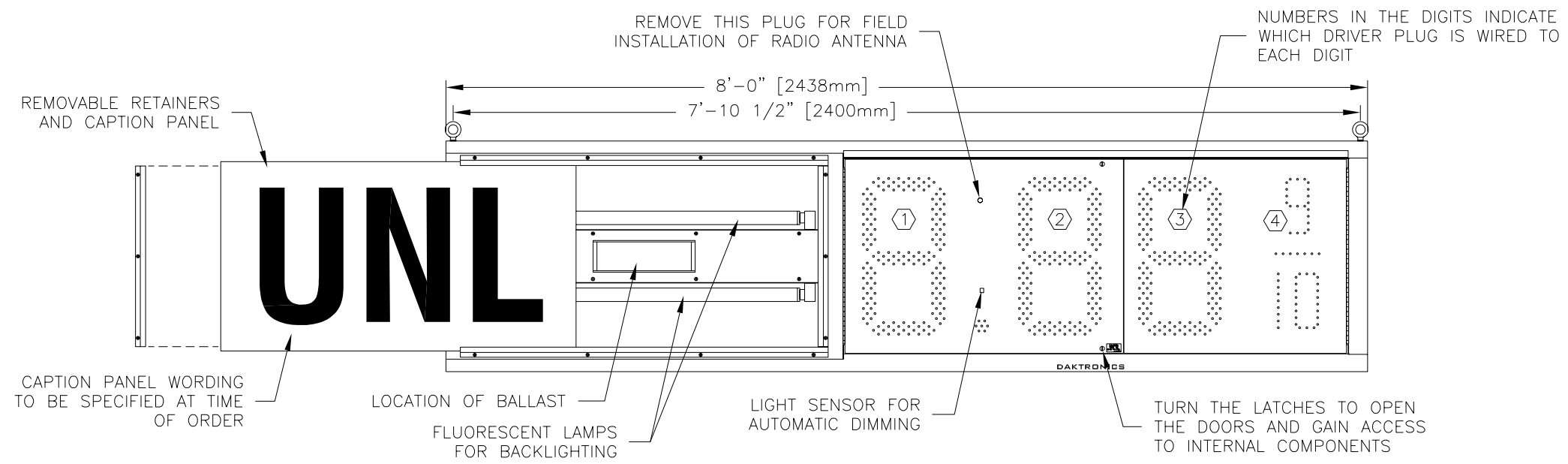
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-13-L6-SF

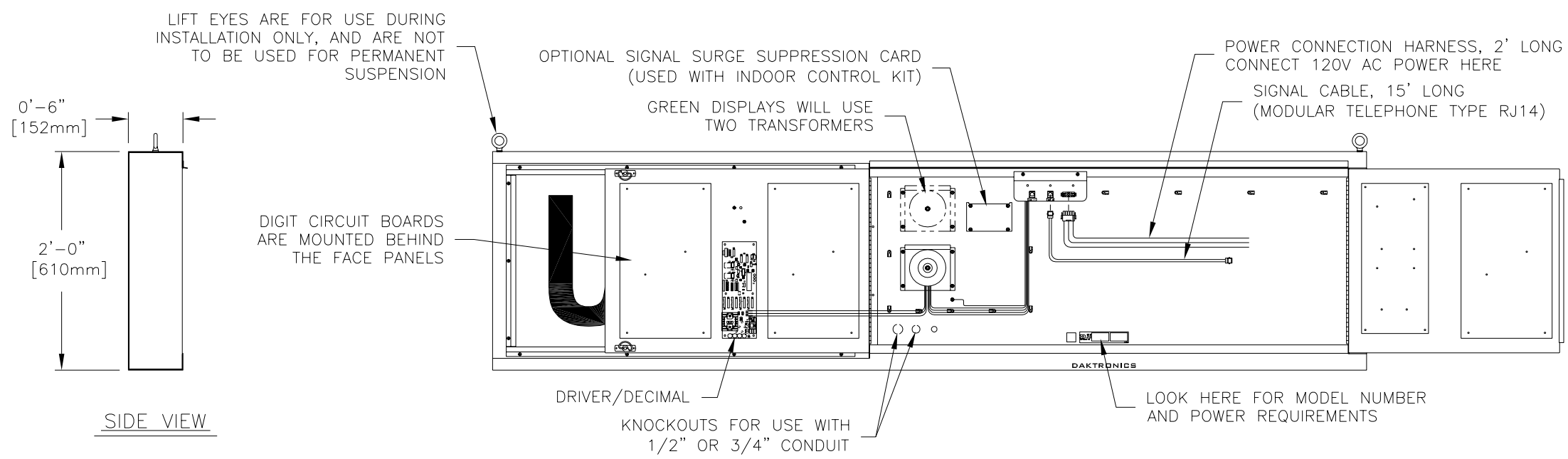
DES. BY: DRAWN BY: M LEOPOLD DATE: 03 MAY 07

REVISION 00 APPR. BY: SCALE: 1=12 1356-R04B-304229

REV.	DATE	DESCRIPTION	BY	APPR.



FRONT VIEW



SIDE VIEW

FRONT VIEW
WITH BOTH DOORS OPEN
(NOT ALL WIRES ARE SHOWN)

NOTES:

GENERAL

DIGITS ARE 18" NOMINAL HEIGHT. THE 9/10 DIGIT IS 16" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 70 LBS [32 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR FLANGES OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

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ELECTRICAL

MAXIMUM POWER CONSUMPTION IS 275 WATTS FOR DISPLAYS WITH RED OR AMBER DIGITS, OR 350 WATTS FOR DISPLAYS WITH GREEN DIGITS.

PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY. KNOCKOUTS ARE PROVIDED IN THE BACK OF THE CABINET FOR ROUTING OF POWER AND SIGNAL WIRES.

IF THE POWER TO THE DISPLAY IS TEMPORARILY DISRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.

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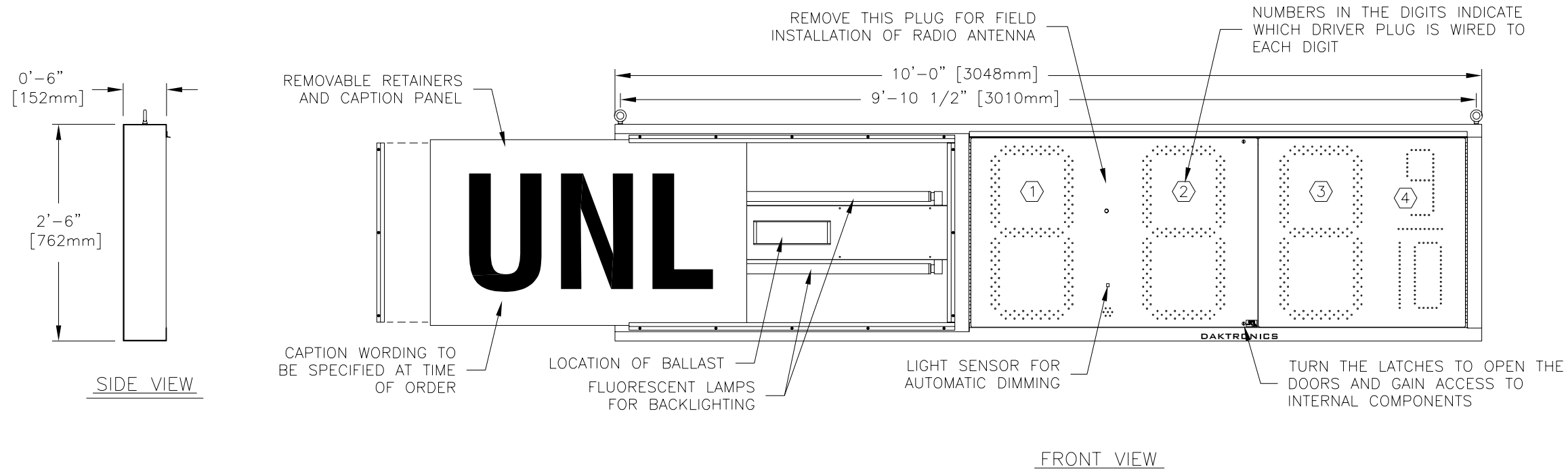
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-18-L8-SF

DES. BY: DRAWN BY: M LEOPOLD DATE: 09 MAY 07

REVISION 00 APPR. BY: SCALE: 1=15 1356-R04B-304719

REV.	DATE	DESCRIPTION	BY	APPR.



NOTES:

GENERAL

DIGITS ARE 24" NOMINAL HEIGHT. THE 9/10 DIGIT IS 22" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 90 LBS [41 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR FLANGES OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

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ELECTRICAL

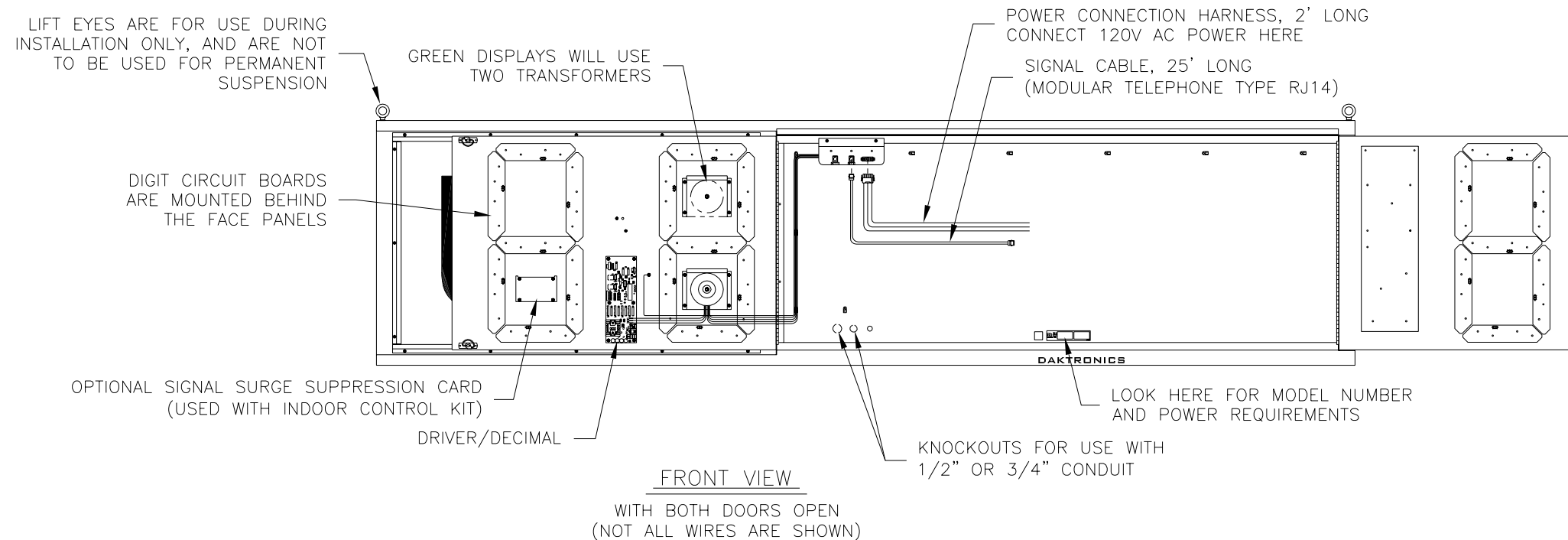
MAXIMUM POWER CONSUMPTION IS 275 WATTS FOR DISPLAYS WITH RED OR AMBER DIGITS, OR 350 WATTS FOR DISPLAYS WITH GREEN DIGITS.

PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

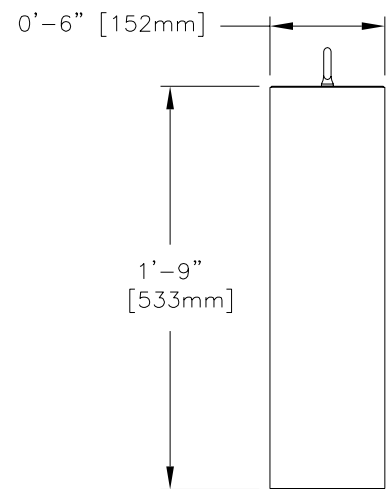
SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY. KNOCKOUTS ARE PROVIDED IN THE BACK OF THE CABINET FOR ROUTING OF POWER AND SIGNAL WIRES.

IF THE POWER TO THE DISPLAY IS TEMPORARILY DISRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.



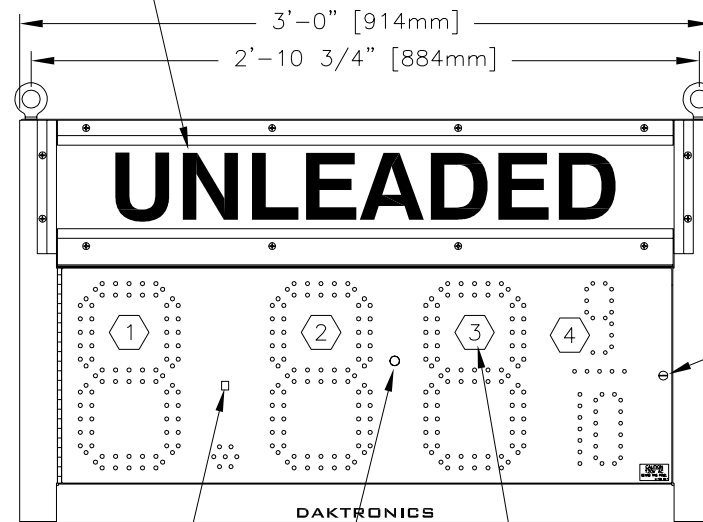
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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: GAS PRICE DISPLAYS			
TITLE: SHOP DRAWING, DF-2100-24-L10-SF			
DES. BY:		DRAWN BY: M LEOPOLD	
DATE: 10 MAY 07			
REVISION	APPR. BY:	1356-R04B-304808	
00	SCALE: 1=18		

REV.	DATE	DESCRIPTION	BY	APPR.



SIDE VIEW

CAPTION PANEL WORDING TO BE SPECIFIED AT TIME OF ORDER



TURN THE LATCH TO OPEN THE DOOR AND GAIN ACCESS TO INTERNAL COMPONENTS

LIGHT SENSOR FOR AUTOMATIC DIMMING

REMOVE THIS PLUG FOR FIELD INSTALLATION OF RADIO ANTENNA

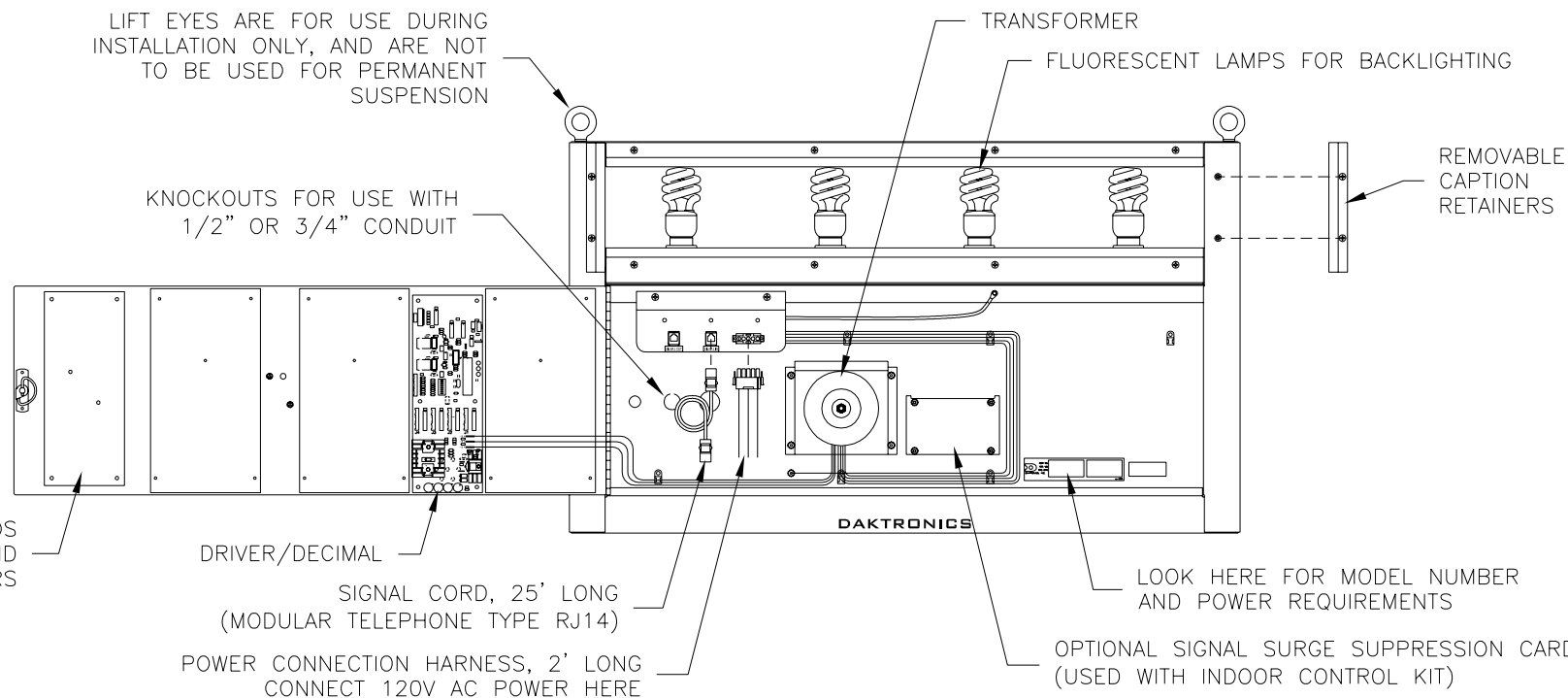
NUMBERS IN THE DIGITS INDICATE WHICH DRIVER PLUG IS WIRED TO EACH DIGIT

DAKTRONICS

FRONT VIEW

LIFT EYES ARE FOR USE DURING INSTALLATION ONLY, AND ARE NOT TO BE USED FOR PERMANENT SUSPENSION

KNOCKOUTS FOR USE WITH 1/2" OR 3/4" CONDUIT



DIGIT CIRCUIT BOARDS ARE MOUNTED BEHIND THE DOORS

DRIVER/DECIMAL

SIGNAL CORD, 25' LONG (MODULAR TELEPHONE TYPE RJ14)

POWER CONNECTION HARNESS, 2' LONG CONNECT 120V AC POWER HERE

TRANSFORMER

FLUORESCENT LAMPS FOR BACKLIGHTING

REMOVABLE CAPTION RETAINERS

LOOK HERE FOR MODEL NUMBER AND POWER REQUIREMENTS

OPTIONAL SIGNAL SURGE SUPPRESSION CARD (USED WITH INDOOR CONTROL KIT)

DAKTRONICS

FRONT VIEW

WITH BOTH DOORS OPEN (NOT ALL WIRES ARE SHOWN)

NOTES:

GENERAL

DIGITS ARE 10" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 45 LBS [20 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR BACK OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

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ELECTRICAL

MAXIMUM POWER CONSUMPTION IS ABOUT 135 WATTS.

PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY.

IF THE POWER TO THE DISPLAY IS TEMPORARILY INTERRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.

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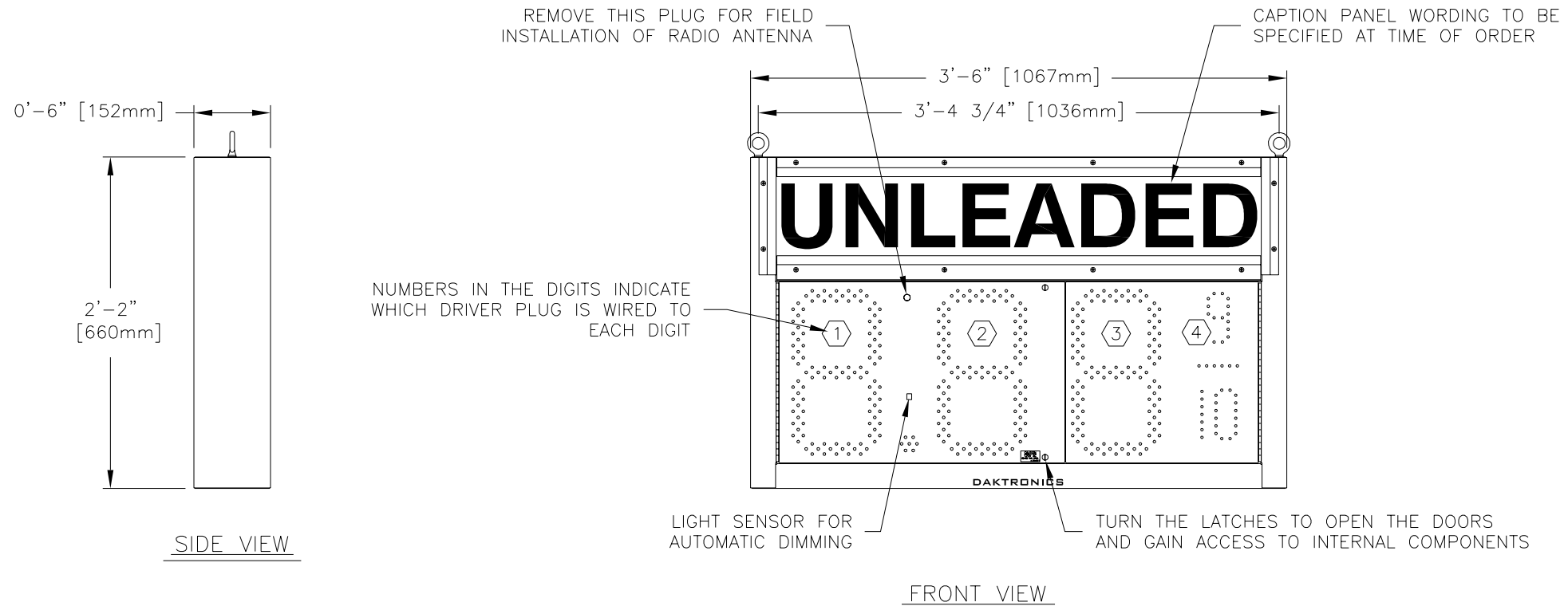
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-10-T3-SF

DES. BY: DRAWN BY: M LEOPOLD DATE: 20 APR 07

REVISION 00 APPR. BY: SCALE: 1=10 1356-R04B-303105

REV.	DATE	DESCRIPTION	BY	APPR.



NOTES:

GENERAL

DIGITS ARE 13" NOMINAL HEIGHT. THE 9/10 DIGIT IS 12" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 55 LBS [25 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR BACK OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING STRUCTURE OR FOR THE ADEQUACY OF ATTACHMENT TO THE STRUCTURE. STRUCTURE AND ATTACHMENT MUST CONFORM TO ALL APPLICABLE BUILDING CODES.

ELECTRICAL

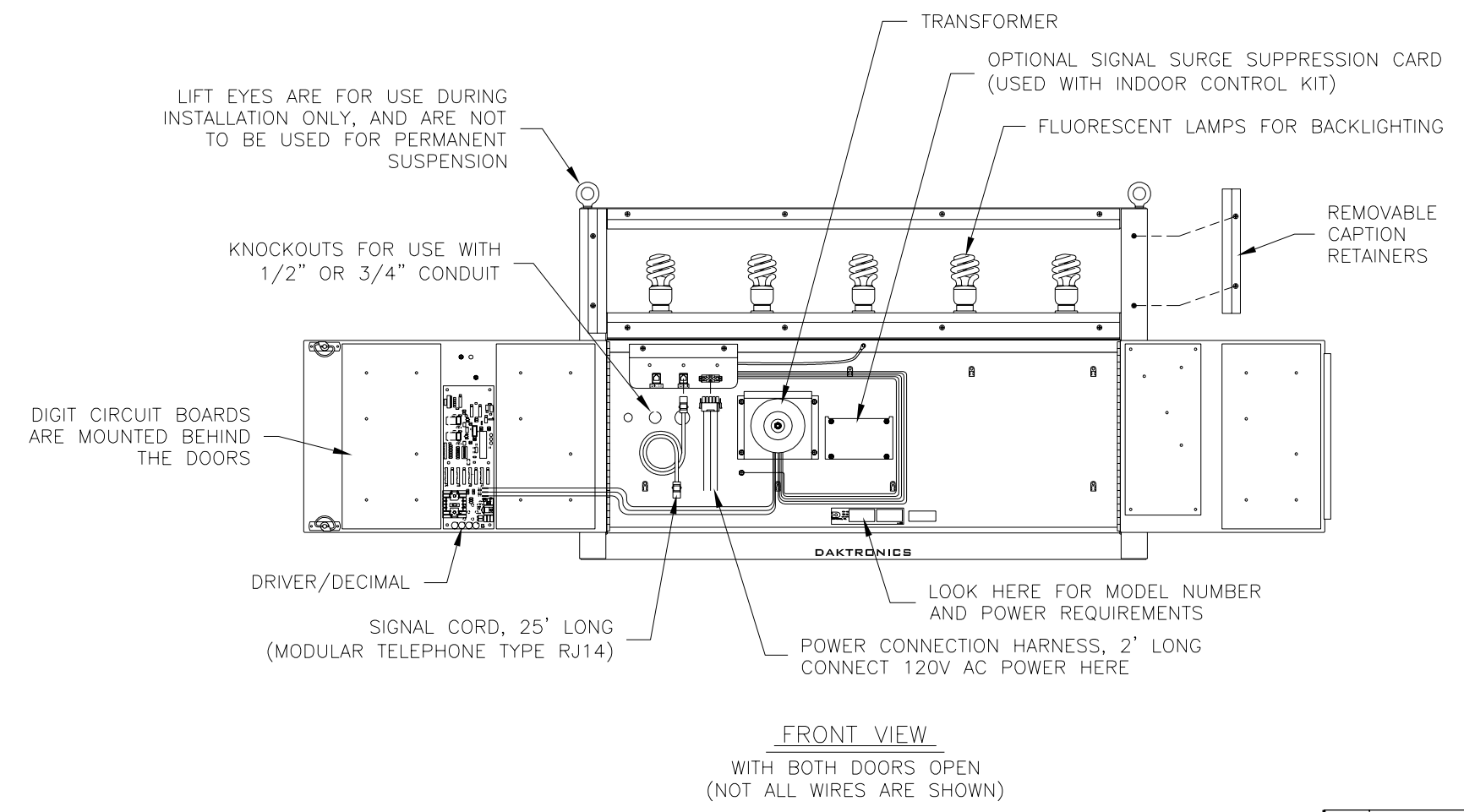
MAXIMUM POWER CONSUMPTION IS ABOUT 150 WATTS.

PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY.

IF THE POWER TO THE DISPLAY IS TEMPORARILY INTERRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.



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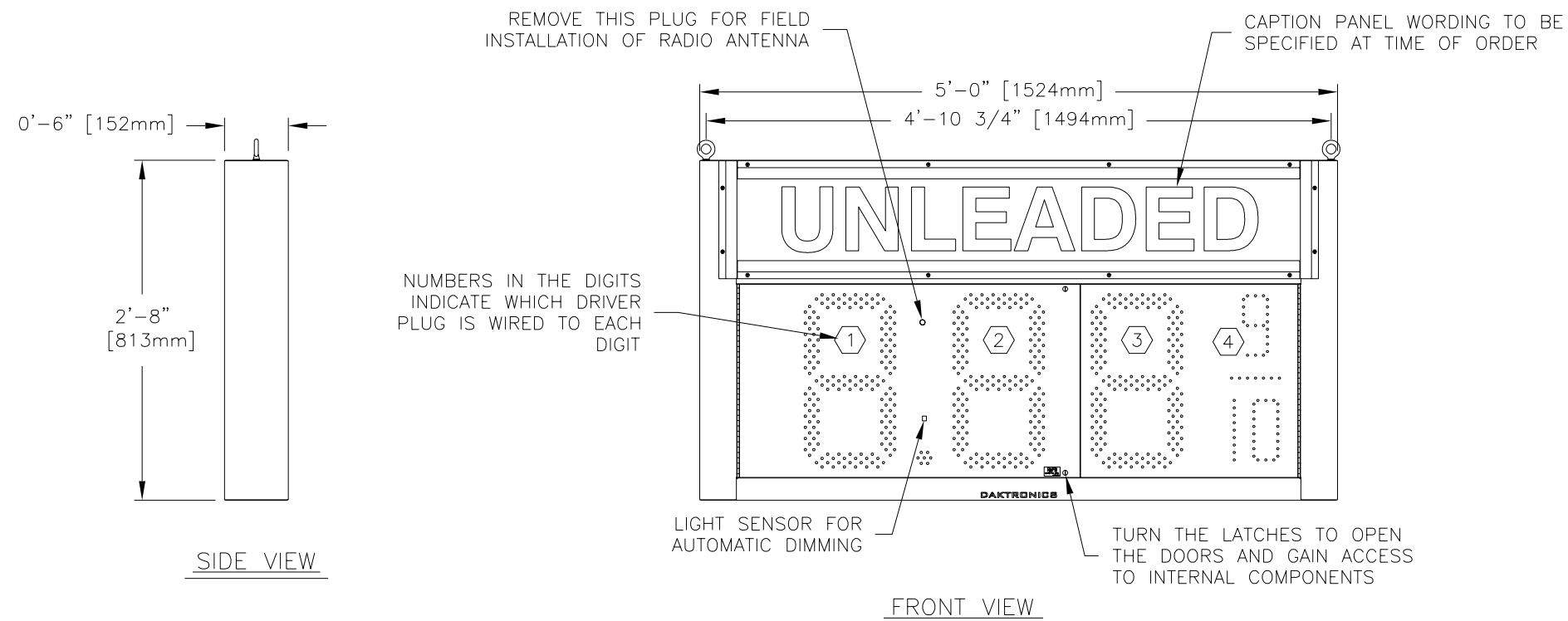
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-13-T3.5-SF

DES. BY: DRAWN BY: M LEOPOLD DATE: 24 APR 07

REVISION 00 APPR. BY: SCALE: 1=12 1356-R04B-303309

REV.	DATE	DESCRIPTION	BY	APPR.



NOTES:

GENERAL

DIGITS ARE 18" NOMINAL HEIGHT. THE 9/10 DIGIT IS 16" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 100 LBS [45 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR BACK OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING STRUCTURE OR FOR THE ADEQUACY OF ATTACHMENT TO THE STRUCTURE. STRUCTURE AND ATTACHMENT MUST CONFORM TO ALL APPLICABLE BUILDING CODES.

ELECTRICAL

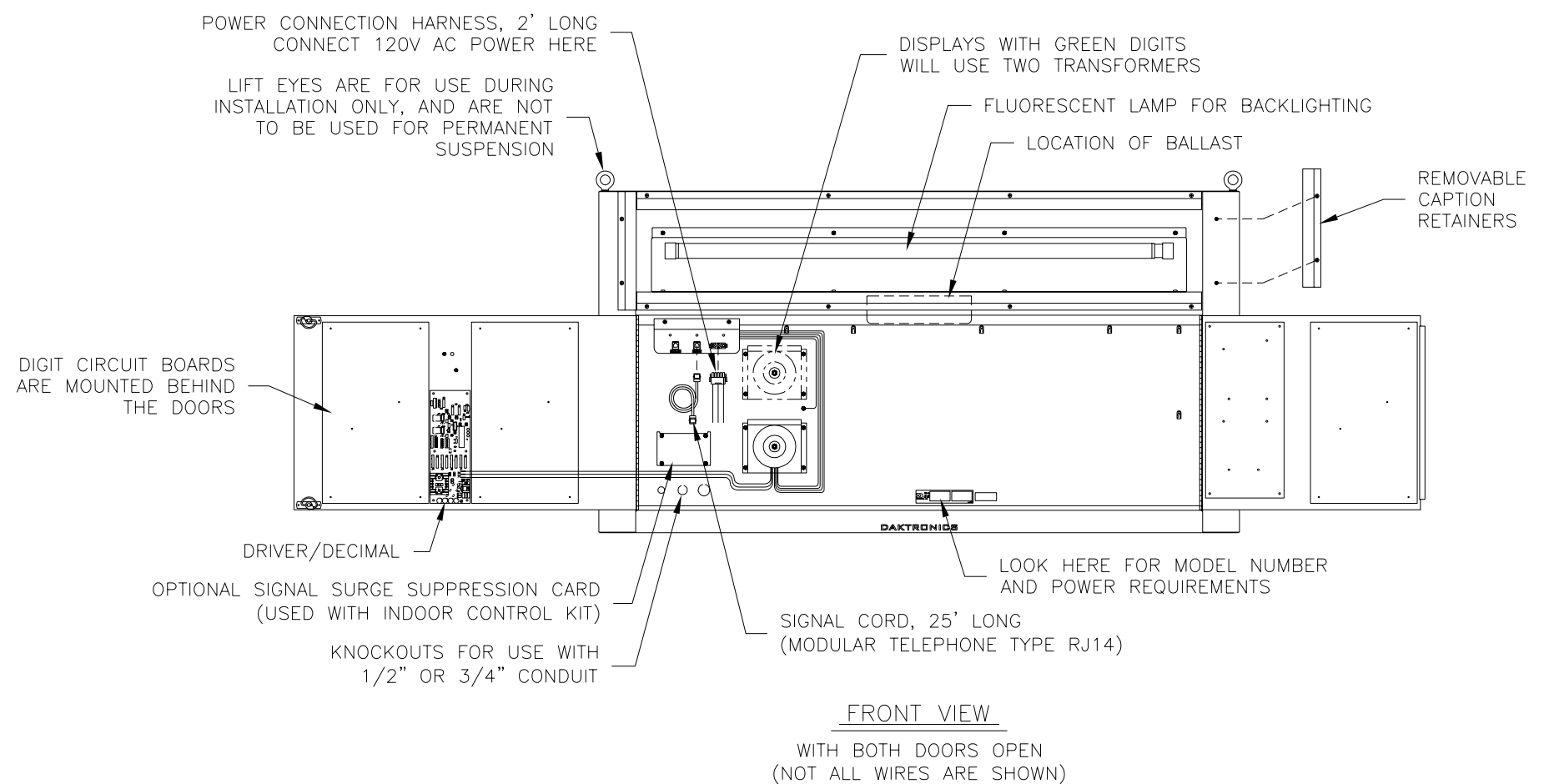
MAXIMUM POWER CONSUMPTION IS ABOUT 275 WATTS FOR DISPLAYS WITH RED OR AMBER DIGITS, AND 350 WATTS FOR DISPLAYS WITH GREEN DIGITS.

PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY.

IF THE POWER TO THE DISPLAY IS TEMPORARILY INTERRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.



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DAKTRONICS, INC. BROOKINGS, SD 57006

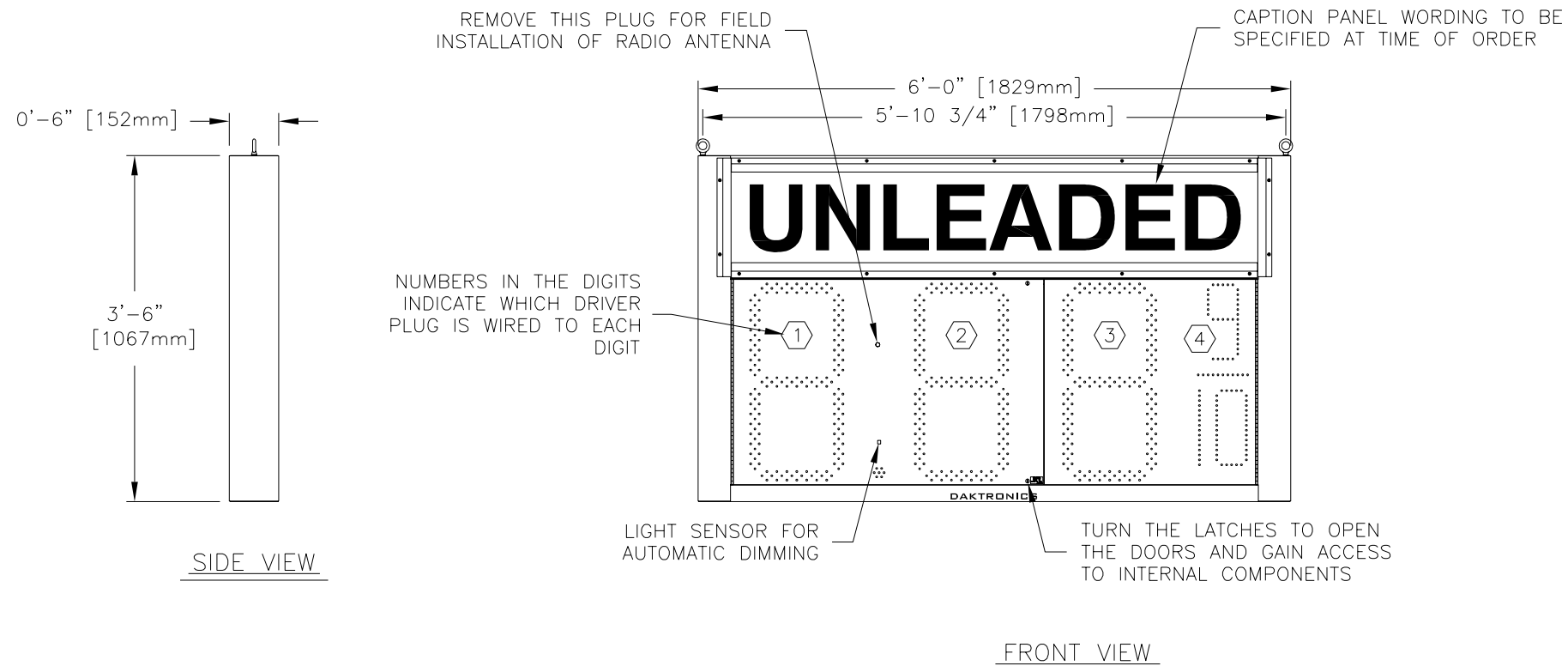
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-18-T5-SF

DES. BY: DRAWN BY: M LEOPOLD DATE: 26 APR 07

REVISION 00 APPR. BY: SCALE: 1=15 1356-R04B-303675

REV.	DATE	DESCRIPTION	BY	APPR.



NOTES:

GENERAL

DIGITS ARE 24" NOMINAL HEIGHT. THE 9/10 DIGIT IS 22" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 110 LBS [50 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR BACK OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING STRUCTURE OR FOR THE ADEQUACY OF ATTACHMENT TO THE STRUCTURE. STRUCTURE AND ATTACHMENT MUST CONFORM TO ALL APPLICABLE BUILDING CODES.

ELECTRICAL

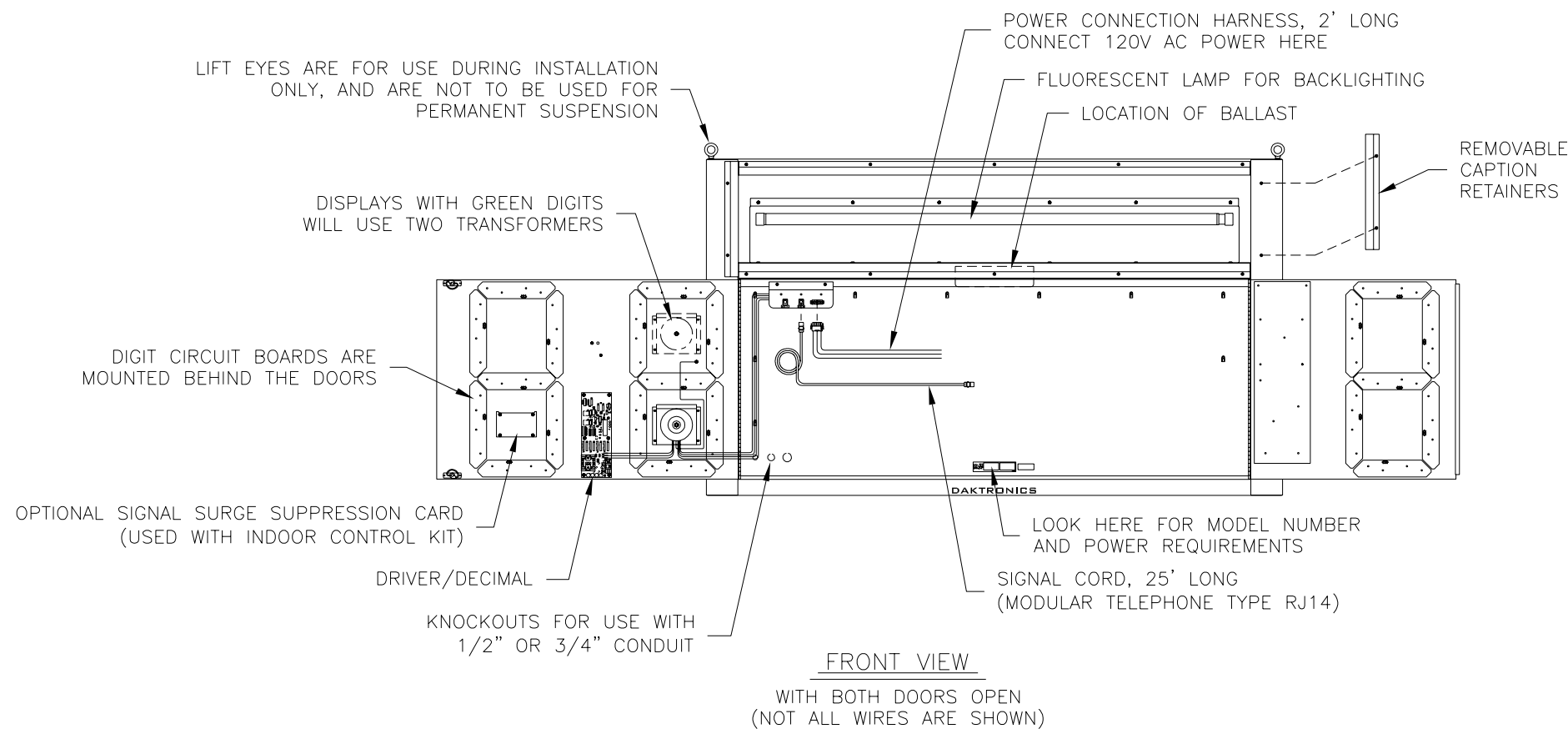
MAXIMUM POWER CONSUMPTION IS ABOUT 275 WATTS FOR DISPLAYS WITH RED OR AMBER DIGITS, AND 350 WATTS FOR DISPLAYS WITH GREEN DIGITS.

PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY.

IF THE POWER TO THE DISPLAY IS TEMPORARILY INTERRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.



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DAKTRONICS, INC. BROOKINGS, SD 57006

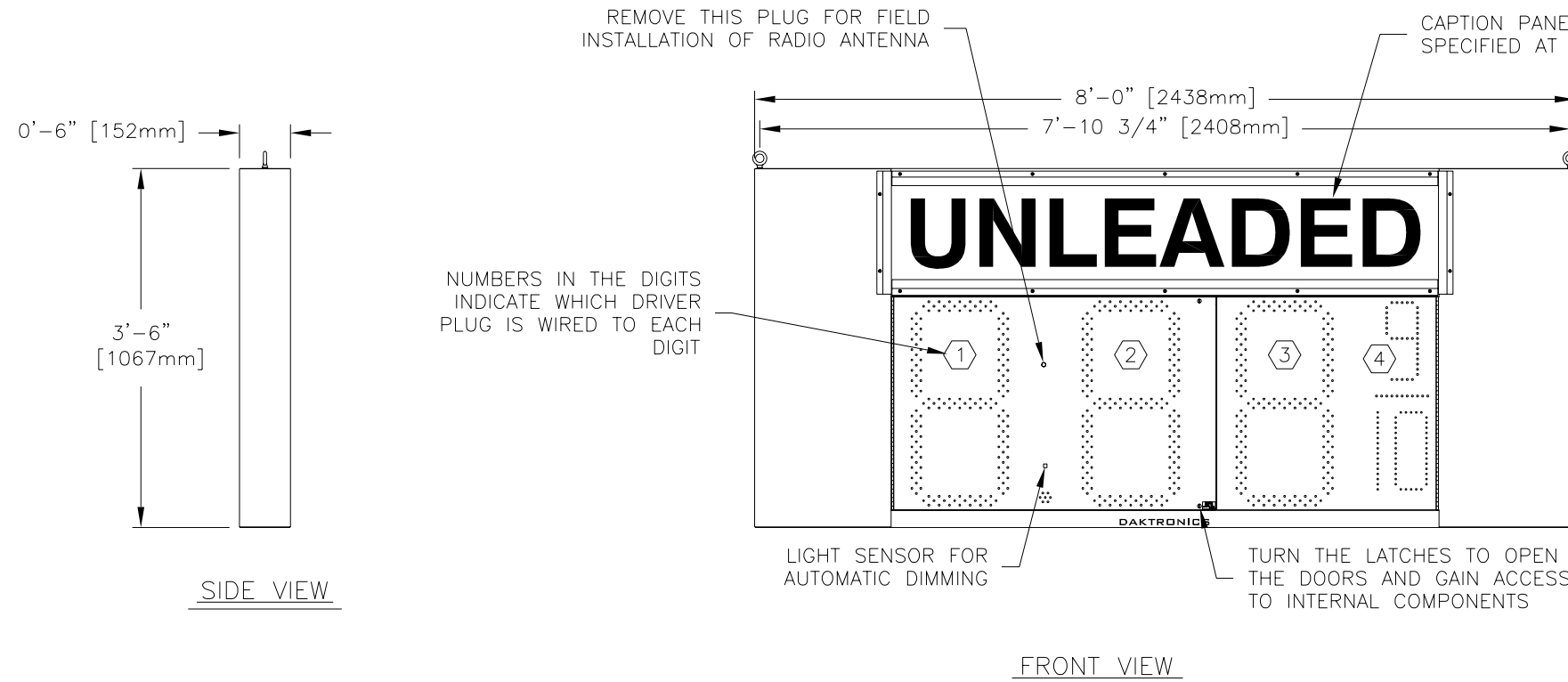
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-24-T6-SF

DES. BY: DRAWN BY: M LEOPOLD DATE: 01 MAY 07

REVISION 00 APPR. BY: SCALE: 1=20 1356-R04B-303900

REV.	DATE	DESCRIPTION	BY	APPR.



NOTES:

GENERAL

DIGITS ARE 24" NOMINAL HEIGHT. THE 9/10 DIGIT IS 22" NOMINAL HEIGHT. DIGIT LEDS MAY BE RED, AMBER, OR GREEN; TO BE SPECIFIED AT TIME OF ORDER.

MECHANICAL

CABINET IS CONSTRUCTED OF ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 130 LBS [59 KG].

IF THE EYEBOLTS ARE TO BE REMOVED AFTER INSTALLATION, PLUG HOLES BY THREADING IN 3/8"-16 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR BACK OF THE CABINET TO ATTACH THE DISPLAY TO BASE STRUCTURE USING APPROPRIATE HARDWARE FOR THE SITE CONDITIONS.

DAKTRONICS IS NOT RESPONSIBLE FOR THE MOUNTING STRUCTURE OR FOR THE ADEQUACY OF ATTACHMENT TO THE STRUCTURE. STRUCTURE AND ATTACHMENT MUST CONFORM TO ALL APPLICABLE BUILDING CODES.

ELECTRICAL

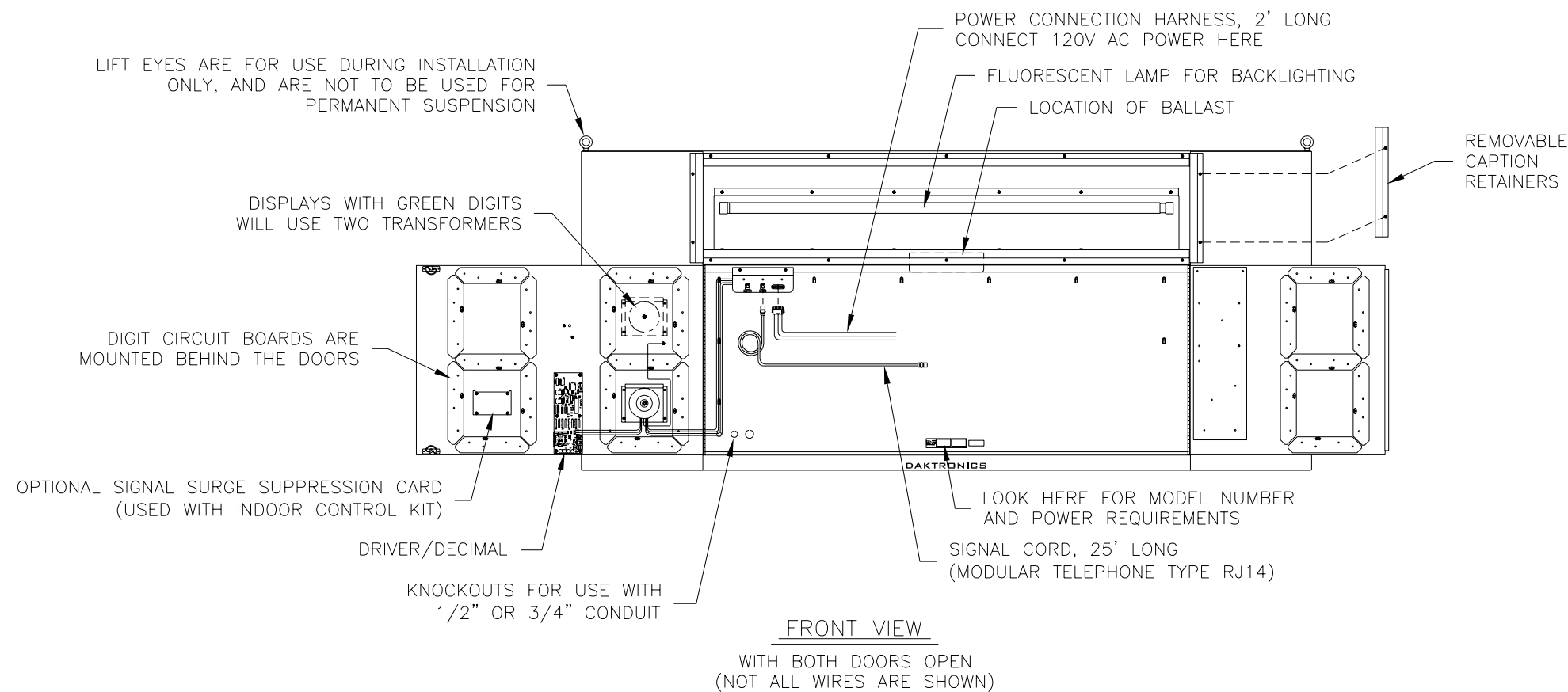
MAXIMUM POWER CONSUMPTION IS ABOUT 275 WATTS FOR DISPLAYS WITH RED OR AMBER DIGITS, AND 350 WATTS FOR DISPLAYS WITH GREEN DIGITS.

PROVIDE A 120V AC, 15 AMP CIRCUIT FOR POWER.

CONTROL CONNECTION REQUIRES 3-PAIR CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS THROUGH THE FRONT OF THE DISPLAY ONLY.

IF THE POWER TO THE DISPLAY IS TEMPORARILY INTERRUPTED, DISPLAY FUNCTIONS WILL BE RETAINED IN MEMORY TO CONTINUE OPERATION WHEN POWER IS RESTORED.



THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2006 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-24-T8-SF

DES. BY: DRAWN BY: M LEOPOLD DATE: 01 MAY 07

REVISION 00 APPR. BY: SCALE: 1=20 1356-R04B-303983

REV.	DATE	DESCRIPTION	BY	APPR.

0'-8 1/4"
[206mm]

8'-0" [2438mm]
7'-6" [2286mm]

5'-6"
[1676mm]

UNLEADED

CAPTION PANEL WORDING
TO BE SPECIFIED AT TIME
OF ORDER

NUMBERS IN THE DIGITS
INDICATE WHICH DRIVER
PLUG IS WIRED TO EACH
DIGIT

REMOVE PLASTIC PLUG
AND INSTALL THE LIGHT
SENSOR HERE

LOOK HERE FOR MODEL NUMBER
AND POWER REQUIREMENTS

SIDE VIEW

FRONT VIEW

DRILL THROUGH THE FLANGES
OR THE SIDES TO MOUNT THE
DISPLAY

NOTES:

GENERAL

DIGITS ARE 36" NOMINAL HEIGHT. THE 9/10
DIGIT IS 24" NOMINAL HEIGHT. DIGIT LEDS MAY
BE RED, AMBER, OR GREEN; TO BE SPECIFIED
AT TIME OF ORDER.

MECHANICAL

CABINET FRAME IS EXTRUDED ALUMINUM
CHANNEL, 0.140" THICK. FRONT AND BACK
ARE ALUMINUM SHEET, 0.063" THICK.

ESTIMATED WEIGHT IS ABOUT 190 LBS.

IF THE EYEBOLTS ARE TO BE REMOVED AFTER
INSTALLATION, PLUG HOLES BY THREADING IN
1/2"-13 BOLTS, NOT PROVIDED.

DRILL THROUGH THE SIDES OR FLANGES OF
THE CABINET TO ATTACH THE DISPLAY TO BASE
STRUCTURE USING APPROPRIATE HARDWARE FOR
THE SITE CONDITIONS.

DAKTRONICS IS NOT RESPONSIBLE FOR THE
MOUNTING STRUCTURE OR FOR THE ADEQUACY
OF ATTACHMENT TO THE STRUCTURE.
STRUCTURE AND ATTACHMENT MUST CONFORM
TO ALL APPLICABLE BUILDING CODES.

ELECTRICAL

MAXIMUM POWER CONSUMPTION IS ABOUT 1300
WATTS. PROVIDE A 120V AC, 15 AMP CIRCUIT
FOR POWER.

CONTROL CONNECTION REQUIRES TWO-PAIR
CABLE, 22 AWG.

SERVICE AND ELECTRICAL HOOKUP ACCESS IS
THROUGH THE FRONT OF THE DISPLAY ONLY.

IF THE POWER TO THE DISPLAY IS TEMPORARILY
DISRUPTED, DISPLAY FUNCTIONS WILL BE
RETAINED IN MEMORY TO CONTINUE OPERATION
WHEN POWER IS RESTORED.

LIFT EYES ARE FOR USE DURING
INSTALLATION ONLY, AND ARE NOT
TO BE USED FOR PERMANENT
SUSPENSION

FLUORESCENT LAMPS
FOR BACKLIGHTING

1000 WATT POWER SUPPLY
LOCATION OF BALLAST

REMOVE SCREWS TO REMOVE
THE END RAIL AND CAPTION
PANEL

TURN THE LATCHES TO OPEN
THE DOORS AND GAIN ACCESS
TO INTERNAL COMPONENTS

DIGIT CIRCUIT BOARDS ARE
MOUNTED BEHIND THE DOORS

SIGNAL SURGE
PROTECTION BOARD

CONNECT SIGNAL INPUT HERE

CONNECT 120V AC POWER HERE

DRIVER

KNOCKOUTS FOR USE WITH
1/2" OR 3/4" CONDUIT

FRONT VIEW

WITH ONE DOOR OPEN AND CAPTION PANEL REMOVED
(WIRES NOT SHOWN)

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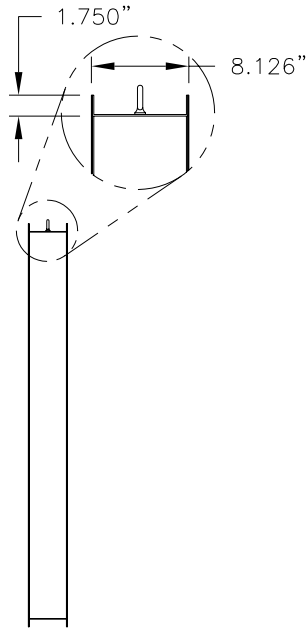
PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-36-T8-SF

DES. BY: DRAWN BY: M LEOPOLD DATE: 17 APR 06

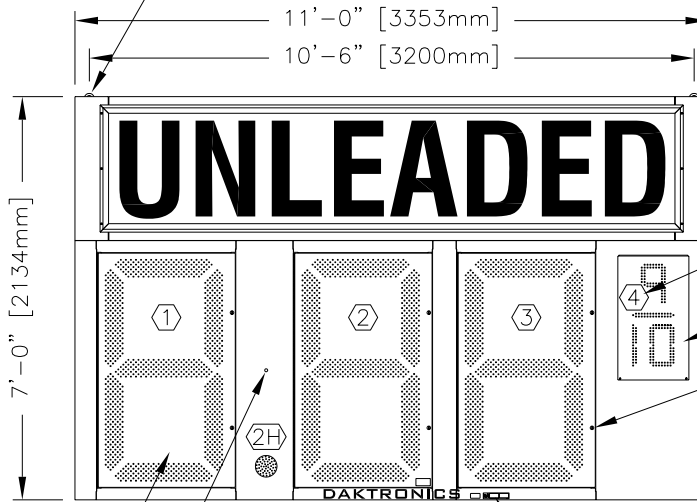
REVISION APPR. BY: 1319-R04B-269576
SCALE: 1=22

REV.	DATE	DESCRIPTION	BY	APPR.
01	22 FEB 07	CHANGED TO 1300 WATTS.	MGL	



SIDE VIEW

LIFT EYES ARE FOR USE DURING INSTALLATION ONLY, AND ARE NOT TO BE USED FOR PERMANENT SUSPENSION.



FRONT VIEW

NUMBER INDICATES DRIVER CONNECTION

24" 9/10 DIGIT

TURN LATCHES TO OPEN HINGED DIGIT PANELS AND GAIN ACCESS TO INTERNAL COMPONENTS.

LOOK HERE FOR MODEL NUMBER AND POWER REQUIREMENTS.

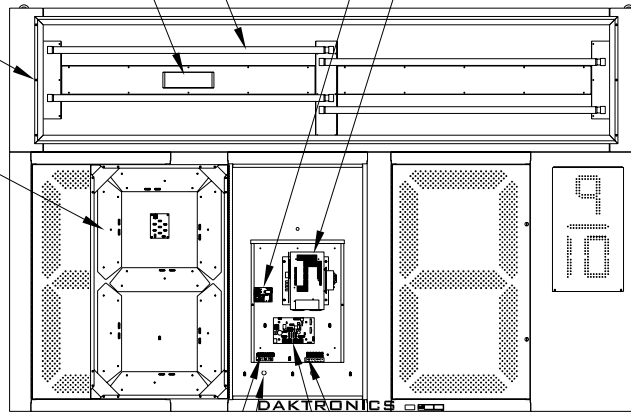
48" HINGED DIGIT PANELS

REMOVE THE PLASTIC PLUG AND INSTALL LIGHT SENSOR FOR AUTOMATIC DIMMING

5-FOOT FLUORESCENT LAMPS
FLUORESCENT BALLAST
SIGNAL SURGE SUPPRESSION CARD
1000 WATT POWER SUPPLY

REMOVE SCREWS IN THE CAPTION END RAILS TO REMOVE THE RAILS AND THE CAPTION PANEL.

DIGIT CIRCUIT BOARDS ARE ATTACHED TO THE BACK OF THE DOORS.



CONNECT SIGNAL INPUT HERE
KNOCKOUTS FOR USE WITH 3/4" OR 1/2" CONDUIT

CONNECT 120V AC POWER HERE.
DRIVER

FRONT VIEW

(WITH ONE DOOR OPEN)
(WIRES NOT SHOWN)

PROVIDE A 120V AC, 15 AMP CIRCUIT

ESTIMATED WEIGHT: 350 LBS [159 KG]

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: GAS PRICE DISPLAYS

TITLE: SHOP DRAWING, DF-2100-48-T11-SF

DES. BY: M LEOPOLD

DRAWN BY: M LEOPOLD

DATE: 17 MAR 05

REVISION

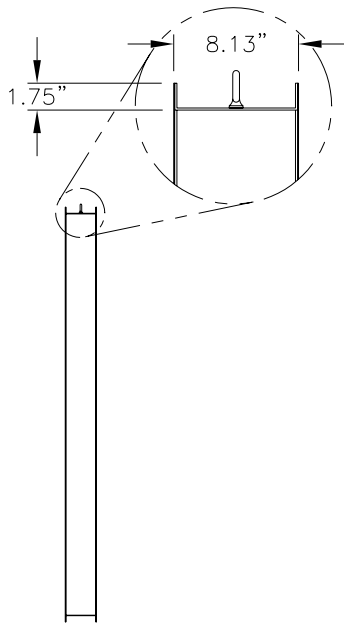
APPR. BY:

02

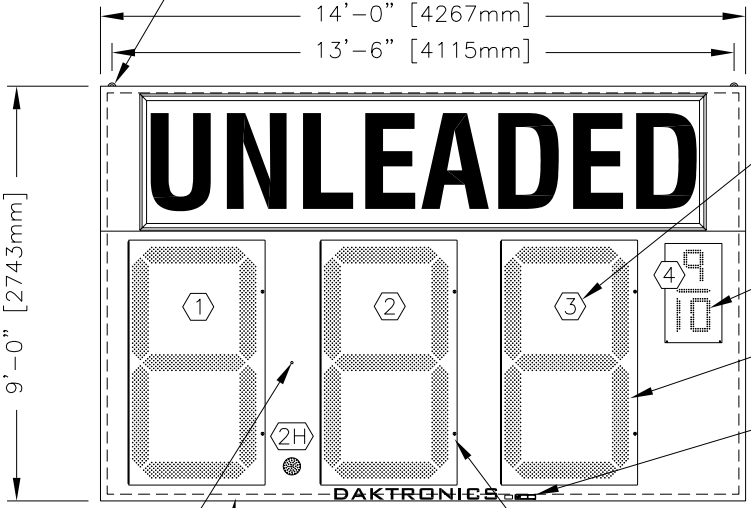
SCALE: 1=40

1319-R04A-236905

REV.	DATE	DESCRIPTION	BY	APPR.
02	16 MAY 06	CHANGED THE MODEL NAME FROM DF-1024-48 TO DF-2100-48-T11-SF.	MGL	
01	10 MAY 06	UPDATED DRIVER ENCLOSURE TO THE NARROWER 1000 WATT VERSION.	MGL	



EYEBOLTS IN THE TOP ARE FOR USE DURING INSTALLATION ONLY AND ARE NOT TO BE USED FOR PERMANENT SUSPENSION.



THE NUMBER ON EACH DIGIT INDICATES THE DRIVER CONNECTOR THAT CONTROLS THE DIGIT.

24" 9/10 DIGIT

60" DIGITS

LOOK HERE FOR MODEL NUMBER AND POWER REQUIREMENTS

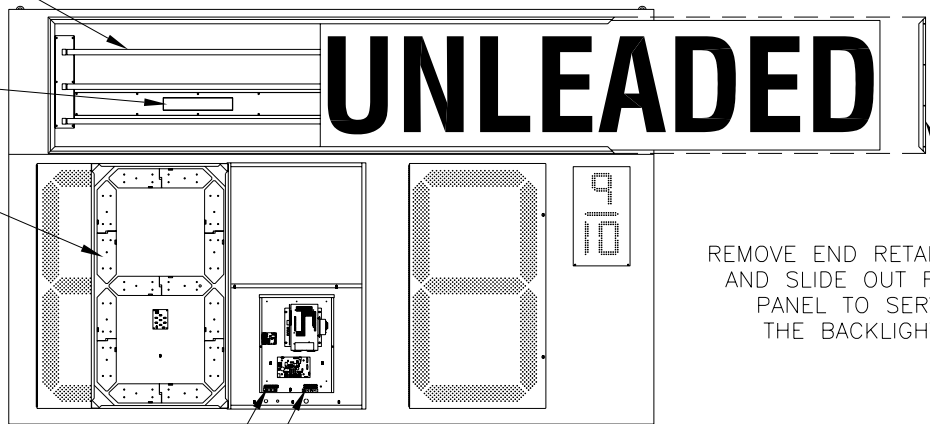
TURN THESE LATCHES TO OPEN HINGED DIGIT PANELS AND GAIN ACCESS TO INTERNAL COMPONENTS.

PERIMETER FRAME CHANNELS HAVE 1.75" FLANGES ALL AROUND THE DISPLAY. DRILL THROUGH THE REAR FLANGES TO MOUNT THE DISPLAY TO THE STRUCTURE.

6-FOOT FLUORESCENT LAMPS FOR CAPTION BACKLIGHTING

FLUORESCENT BALLAST

DIGIT CIRCUIT BOARDS ARE MOUNTED TO THE BACK OF THE DOORS



REMOVE END RETAINER AND SLIDE OUT FACE PANEL TO SERVICE THE BACKLIGHTING

CONNECT SIGNAL WIRES HERE
CONNECT 120V AC POWER HERE
TWO 15A CIRCUITS REQUIRED

FRONT VIEW
WITH ONE DOOR OPEN
FOR DRIVER ACCESS

POWER REQUIREMENT:

TWO 120V AC, 15 AMP CIRCUITS, ONE FOR THE DIGIT SECTION AND ONE FOR THE BACKLIT CAPTION.

MAX CURRENT IS ABOUT 8.3 AMPS FOR THE DIGITS, 5.3 AMPS FOR THE BACKLIT CAPTION.

ESTIMATED WEIGHT IS APPROXIMATELY 600 LBS. [272 KG]

DISPLAY CABINET IS CONSTRUCTED OF AN EXTRUDED ALUMINUM FRAME AND ALUMINUM SHEET. CAPTION FACE IS POLYCARBONATE.

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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: GAS PRICE DISPLAYS			
TITLE: SHOP DRAWING, DF-2100-60-T14-SF			
DES. BY: AVB		DRAWN BY: A VANBEMMEL	
		DATE: 26 JAN 05	
REVISION	APPR. BY:	1319-R04A-232509	
02	SCALE: 1=50		

02	16 MAY 06	CHANGED THE MODEL NAME FROM DF-1024-60 TO DF-2100-60-T14-SF.	MGL	
01	15 MAY 06	UPDATED DRIVER ENCLOSURE TO THE NARROWER 1000 WATT VERSION.	MGL	
REV.	DATE	DESCRIPTION	BY	APPR.