



Product Description

The AI-LCD201HPB is a thin panel LCD monitor combining high resolution and the latest LCD technology for display quality in 16 million colors. The state of the art TFT thin film transistor active matrix drive system ensures brilliant color reproduction and excellent contrast. The thin film transistor attached to each pixel allows accurate control, suppresses crosstalk, and produces high contrast images. The fast response time provides a superior image with no distortion or smearing.

Features

The following list provides an overview of features for the AI-LCD201HPB:

- Operates directly from 28 VDC
- Compact, lightweight package
- Solid state circuitry
- AI proprietary RS-485 digital data bus compatible
- Composite NTSC and PAL video formats
- Auto-detect SXGA video input
- On screen menus to guide the user through brightness, color, and other settings
- External configuration switch (SP-LCD3) provided with each monitor
- Internal cooling fan ventilates internal components and prevents heat buildup
- Infrared remote control capability
- Standard plating options available

Application Notes

1. The SP-LCD3 provides configuration control via RS-485 digital data bus communication. This unit may be removed and stored after the monitor is set up or can be mounted near the monitor for frequent use.
2. A remote control infrared transmitter/receiver (IFR-485) and hand-held infrared transmitter (AI-RC1) are required for remote control operation. The AI-RC1 includes the same buttons as those on the external menu selection switch and utilizes the "on-screen" menu for adjustments.
3. The monitor on/off function (P1-5) is transition level sensitive. Either a constant ground input or a momentary ground input may be used. If a constant ground input is used, the monitor will activate to the 'on' state when the constant ground is present. If no constant ground is present, then this input will float to a high level causing the monitor to be in the 'off' state. If a momentary ground input is used, the monitor will alternate between 'on' and 'off' states with each momentary ground pulse of a duration between 50msec and 250msec. If momentary ground logic is used, then the monitor will power up to an 'off' state.
4. If power is interrupted for any duration, the monitor will go blank. Once power is restored, the monitor image will be restored 5 seconds after power is restored.

Installation Guidelines

1. Insure that all power and ground wires are 22 AWG minimum and grounded within twelve inches of the unit. Protect power wires with circuit breakers or fuses located close to the electrical power source bus
2. Insure all video input/output lines are shielded coaxial cable, RG-179 or equivalent. Cable shields must be grounded at the source.
3. Threaded mounts are located on all sides and on the back of the monitor. The mounting depth is 2.45 inches. The monitor is supplied with a front bezel and integrated mounting hardware. Locate the monitor as close to source equipment as possible to reduce the possibility of noise introduction into the video signal or video distribution equipment.
4. To prevent overheating, ventilation exhaust holes are located on the back and ventilation intake holes are located on the



right side of the monitor. Adequate ventilation for the unit must be allocated when choosing the installation location. The closeout around the monitor must have an opening of two square inches minimum for the air inlet and exit areas. The closeout around the monitor case shall not block more than 50% of the air inlet or exhaust openings in the monitor case.

5. The maximum length of the connection to SXGA input is 15 feet.

Technical Specifications

Electrical	Power	2.0A at 28 VDC
	Screen Size	20.1" diagonal
	Resolution	1280 vertical x 1024 horizontal pixels (Non-interlaced)
	Brightness	180 cd/m ²
	Contrast Ratio	220:1
	Viewing Angle	160 ° Horizontal 160 ° Vertical
	Backlight	Fluorescent Tube
	Video Format	Composite NTSC, PAL and SXGA
	Data Bus Type	RS-485
	Operating Voltage Range	18 – 30 VDC
	Operating Temperature	0 ° to 40 ° C
	Storage Temperature	-20 ° to + 60 ° C
	Video Input	1V p-p, 75-ohms
	Mechanical	Dimensions
Weight		12.78 lbs.

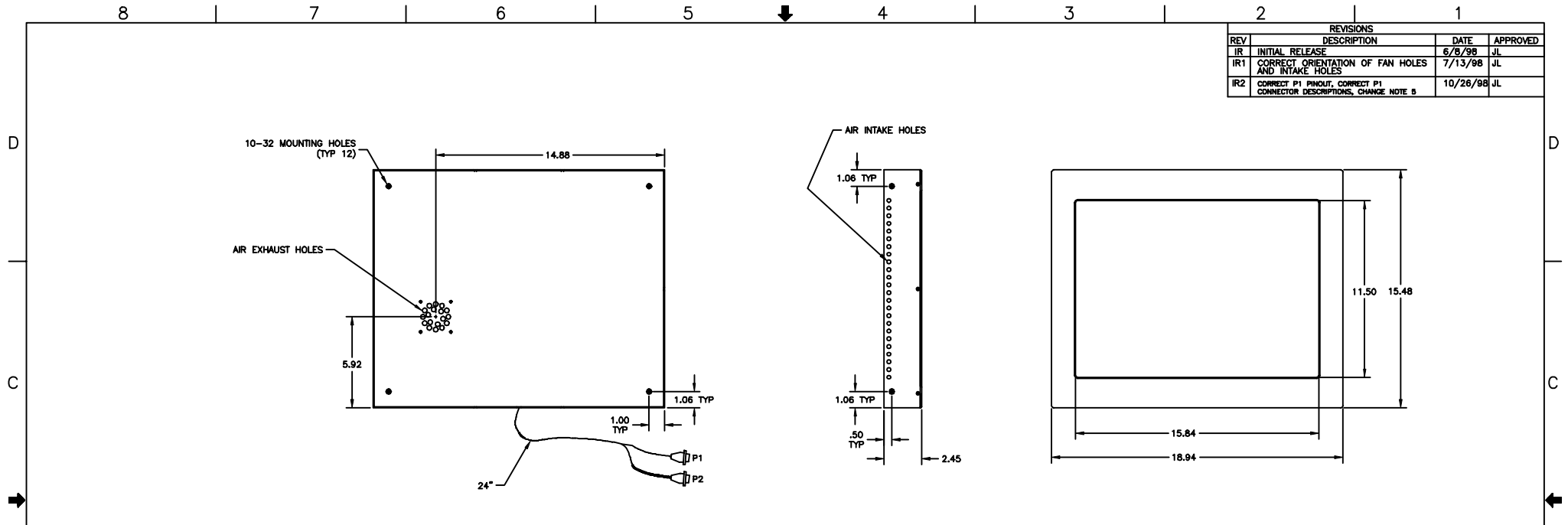
Drawings	Description
522161 Rev IR2	AI-LCD201HPx Outline Drawing
SP-LCD3 Rev A	SP-LCD3 Assembly Drawing

Document # 530178 – Revision History		
Level	Date	Description
IR	7/1998	Initial Release

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
IR	INITIAL RELEASE	6/8/98	JL
IR1	CORRECT ORIENTATION OF FAN HOLES AND INTAKE HOLES	7/13/98	JL
IR2	CORRECT P1 PINOUT, CORRECT P1 CONNECTOR DESCRIPTIONS, CHANGE NOTE 5	10/26/98	JL

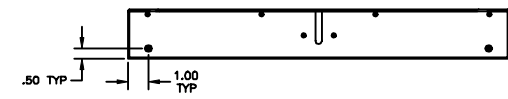


P1 PINOUT	
A	+28VDC POWER INPUT
B	GROUND
C	VIDEO IN +
D	VIDEO IN -
E	MONITOR ON/OFF GND INPUT (SEE NOTE 5)
F	MONITOR ON/OFF STATUS GND OUTPUT (OPEN COLLECTOR 400mA)

P2 PINOUT	
1	+28VDC POWER OUTPUT
2	GROUND
3	DATABUS A
4	DATABUS B
5	DATABUS SHIELD
6	ID0
7	ID1
8	ID2
9	ID COMMON

P1 CONNECTOR DESCRIPTION	
MS3126F10-8P	CONNECTOR
MS3122E10-6S	MATING CONNECTOR

P2 CONNECTOR DESCRIPTION	
DEMA-9S	CONNECTOR
DEMA-8P	MATING CONNECTOR
DE24657	BACKSHELL
D20419-18	MALE SCREWLOCK



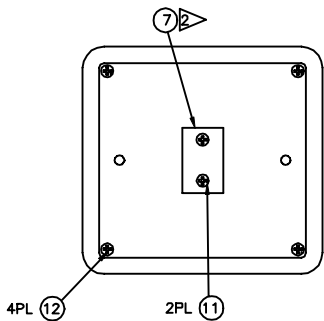
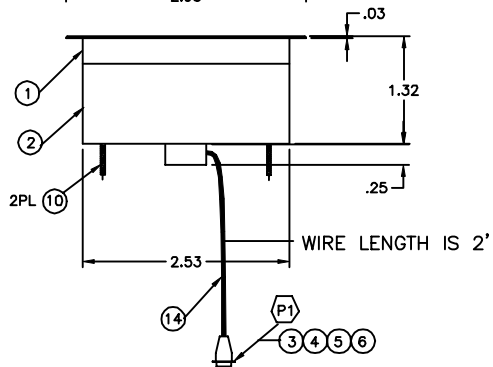
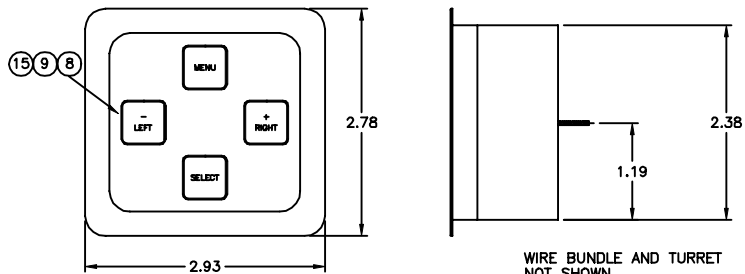
5. P1-E IS TRANSITION LEVEL SENSITIVE. EITHER A CONSTANT GROUND OR MOMENTARY GROUND LOGIC MAY BE USED. CONSTANT GROUND: AN EXTERNAL RELAY MUST BE USED WITHIN 3 FT. OF THE MONITOR. THIS WILL HELP PREVENT HIGH NOISE LEVELS FROM INTERFERING WITH THE INTERNAL TRANSITION LOGIC IN THE MONITOR. WHEN A CONSTANT GROUND IS APPLIED THE MONITOR WILL SWITCH TO THE "ON" STATE. WHEN THE CONSTANT GROUND IS REMOVED THE MONITOR WILL TURN OFF AND PIN E WILL FLOAT. MOMENTARY GROUND: A MOMENTARY GROUND MAY BE USED TO ALTERNATE BETWEEN POWER STATES. IF MOMENTARY GROUND LOGIC IS USED, THE MONITOR WILL POWER UP IN THE "OFF" STATE WHEN VOLTAGE IS APPLIED TO P1-A. A MOMENTARY PULSE TO GROUND WILL TURN THE MONITOR "ON". IT IS NOT NECESSARY TO USE AN EXTERNAL RELAY AS REQUIRED FOR CONSTANT GROUND LOGIC. WHEN P1-A IS USED AS MONITOR ON/OFF CONTROL, P1-E MUST BE STRAPPED TO P1-B. STATUS GROUND OUTPUT: P1-F PROVIDES A CONSTANT GROUND OUTPUT (OPEN COLLECTOR 400mA MAX) WHEN THE MONITOR IS IN THE "ON" STATE.
4. MONITOR TO BE CONFIGURED USING SP-LCD3 EITHER CONNECTED DIRECTLY TO P2 CONNECTOR OR CONNECTED VIA DATABUS CONNECTION.
3. THIS UNIT GENERATES CONSIDERABLE HEAT. AN INTERNAL FAN IS USED TO EXHAUST HEAT FROM THE UNIT. PROPER VENTILATION FOR THE UNIT MUST BE ALLOWED FOR WHEN SPECIFYING THE INSTALLATION LOCATION. THE CLOSEOUT AROUND THE MONITOR MUST HAVE AN OPENING OF 2 SQUARE INCHES MINIMUM FOR THE AIR INLET AND EXIT AREAS. THE CLOSEOUT AROUND THE MONITOR CASE SHALL NOT BLOCK MORE THAN 50% OF THE AIR INLET OR EXHAUST OPENINGS IN THE MONITOR CASE.
2. WEIGHT: 12.78 LBS.
1. POWER REQUIREMENTS: 4.0A @ 28VDC.

7300 INDUSTRY DRIVE, N. LITTLE ROCK, AR 72117

DRAWN BY:	SIGNATURE	DATE	TITLE
CHECKED BY:	J.LASSITER	5/12/98	OUTLINE AI-LCD201HPA
APPROVED BY:			REV. NO. 522161
RELEASED:			REV. IR2
NEXT ASSY		USED ON	DO NOT SCALE DRAWING
CAD DRAWING		SCALE: 3:1	SHEET 1 OF 1

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 TOLERANCES ARE:
 DECIMALS ANGLES
 .X ±.02
 .XX ±.01 ±1°
 .XXX ±.005
 .XXXX ±.0030



WIRING DESCRIPTION	
1	+28VDC POWER INPUT
2	POWER GROUND
3	SERIAL DATABUS A (HI)
4	SERIAL DATABUS B (LO)
5	SERIAL DATABUS SHIELD
6	UNIT ID 0
7	UNIT ID 1
8	UNIT ID 2
9	UNIT ID COMMON

- NOTES:
- OVERLAY MATERIAL AND COLOR PER APPLICABLE PURCHASE ORDER
 - TURRET AND WIRE BUNDLE ORIENTATION FOR REFERENCE ONLY
 - TOP OF SWITCH PANEL IS OVERLAY ONLY
 - BEZEL TO BE RAW UNLESS OTHERWISE SPECIFIED

REVISIONS						
REV	DESCRIPTION	ECN	BY	CHECKED	APPROVED	DATE
IR	SP-LCD3 REPLACES 522072		VLH			
A	CORRECTED BEZEL NUMBER WAS 110391 IS 110390	2463	VLH			

QTY	PART NUMBER	DESCRIPTION	ITEM NO.
			20
			19
			18
			17
			16
1	310835-1	SUB ASSEMBLY	15
A/R	P80-00006	SNAKE SKIN	14
-	-	-	13
4	P102-0025618B0	SCREW 2-56 X 1 1/8 FHM	12
2	P102-0025606B0	SCREW 2-56 UNC-2B X .38 LG	11
2	P107-00011	PEM STUDS 6-32 X .75 LONG	10
1	132085-1	OVL - SP-LCD3	9
1	140135-1	PLASTIC	8
1	80-800-1	TURRET	7
1	P42-00109	STD BACKSHELL	6
9	P41-00104	PINS	5
1	P43-00100	FEMALE SCREW LOCK	4
1	P40-00108	CONNECTOR	3
1	120113-1	BACKPLATE	2
1	110390-1	BEZEL	1



7800 INDUSTRY DRIVE, N. LITTLE ROCK, AR 72117

ELECTRICAL SPECIFICATIONS
POWER REQUIREMENTS: 80 mA AT 28 VDC MAX
SWITCH BACKLIGHTING: GREEN
STATUS/IND LED COLOR: N/A
DIGITAL DISPLAY COLOR: N/A
WIRE BUNDLE LENGTH: 24 INCHES +/- 1 INCH

MATING CONNECTOR REFERENCE	
(P1) D-SUB	DEMA-9S
POSITRONIC	N/A
D-SUB	N/A
POSITRONIC	N/A
D-SUB	N/A
POSITRONIC	N/A

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DASH NO.	NEXT ASSY	USED ON

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES ARE:
 DECIMALS ANGLES
 .X ±.02 ±1°
 .XX ±.01
 .XXX ±.005
 .XXXX ±.0030

DO NOT SCALE DRAWING

SIGNATURE	DATE
V HAMBLIN	05/16/98
J. SPERRY	05/26/98
T DOVE	05/28/98
D LAU	05/28/98
J BARTON	05-29-98

TITLE	DRAW. NO.	REV
ASSEMBLY DRAWING	SP-LCD3	A
TALK SCALE: 1.5	WT.	DRZ 1 OF 1