APD-250M060

Vishay Dale

VISHAY

Plasma Panel Display Monitors
250 Character Display, Drive Electronics, Controller
Audio Alarm, Enclosure, Illuminated Control Panel

FEATURES

- High brightness - Sunlight readable.
- Auto/Manual brightness control.
- Wide viewing angle.
- Large character size.
- Fully self contained.
- Can be daisy chained.
- Audible alarm.
- Simple RS-232D interface.
- Compact size.

STANDARD ELECTRICAL SPECIFICATIONS

	MIN.	TYP.	MAX.	UNITS
Voltage	102	120	138	VAC
Current	—	—	0.75	A
Frequency	57	60	63	Hz
Interface (Per RS-232D)				
Logic One	3	—	12	VDC
Logic Zero	- 3	—	- 12	VDC

The APD-250M060 monitor consists of 250 character DC plasma display panel, drive circuitry, display controller, audible alarm, enclosure and illuminated control panel. The enclosure may be mounted on a flat surface or in a suspended configuration. Its large characters, wide viewing angle and high brightness (with an auto or manual brightness control) provides excellent visibility in a wide range of ambient light conditions from total darkness to bright sunlight.
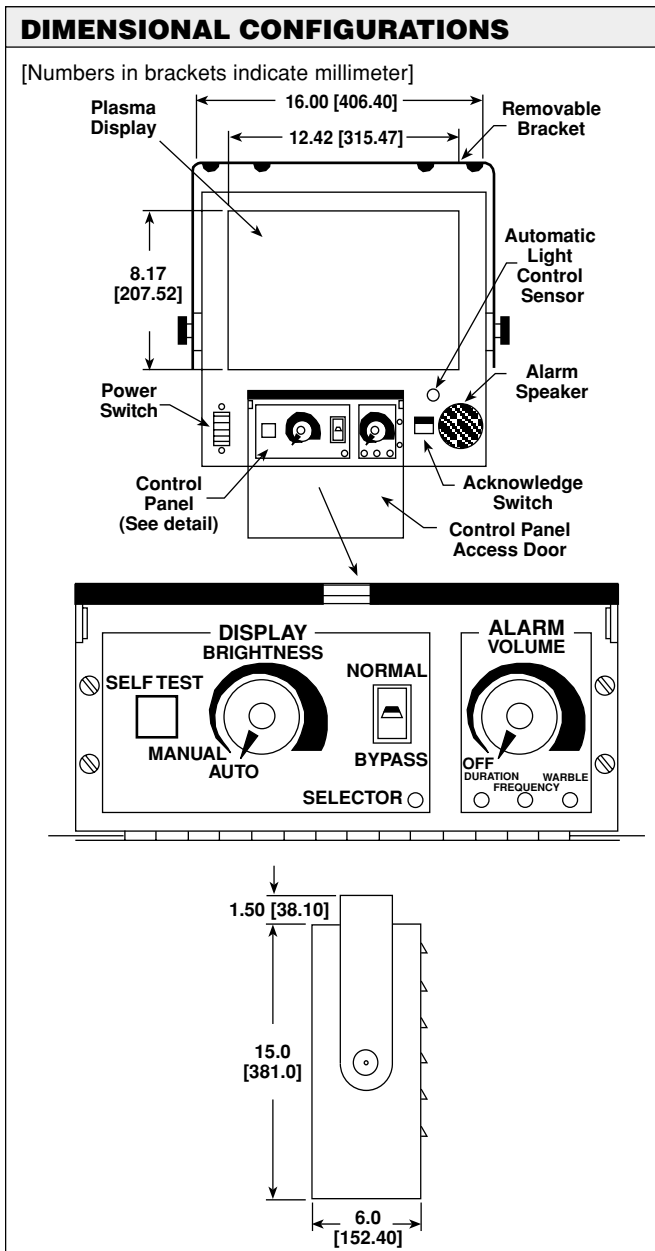
Interfacing is via RS-232D at 9600 baud with no handshaking (a FIFO buffer is used to capture data when the display is busy). The byte format is 1 start bit, 8 data bits and 1 stop bit. As each monitor receives a data byte, it automatically sends it to the next unit in the daisy (up to 8 monitors maximum) chain. Returning data from the monitors are handled in the same way. A front panel bypass switch is provided to allow the operator to instantly route the input channel to the output channel in the event of a monitor failure.

Single byte and two byte commands allow simplified code generation, yet accomplish complex display tasking such as scrolling or inserting lines and characters. The character generator is an 8K x 8 bit EPROM which has capacity for two 256 character sets. It is preprogrammed with two ASCII character sets (128 characters each including control codes). Other character sets may be factory programmed per the user's special requirements.

The audio alarm operation is under the complete control of the host system. The alarm is a warble of two tones which can be user adjusted. The volume may be adjusted by the operator from 65 to 85 dbA by a front panel control.

User controls are power, self test, auto/manual brightness adjustment, I/O bypass, alarm volume control and alarm acknowledge.

The APD-250M060 monitor is a DTE device and will operate with a host that is either a DTE or DCE type device. Interface is through standard DB25, RS-232D connectors.

MECHANICAL SPECIFICATIONS

Dimensions: 16" [406.40mm] W x 15" [381.0mm] H x 6" [152.40mm] D.

Weight: 30 pounds [13.61 kilogram].

OPTICAL SPECIFICATIONS

Viewing Area: 12.42" [315.47mm] W x 8.17" [207.52mm] H.

Number of Characters: 250.

Character Size: 0.420" [10.67mm] W x 0.610" [15.49mm] H.

Luminance: 50 foot lamberts maximum (through the filter).

Contrast Ratio: 3:1 minimum at 2000 fc ambient.

Color: Neon orange.

Viewing Angle: 120° cone.

AUDIO SPECIFICATIONS

Sound Pressure: 60 to 85 dbA at 3 feet (1 meter).

Warble: Two alternating tones.

DIMENSIONAL CONFIGURATIONS

[Numbers in brackets indicate millimeter]

MONITOR FUNCTION SUMMARY

CONTROL CODES	DATA
NO OPERATION	00
BELL	07
CURSOR LEFT	08
CURSOR RIGHT	09
CURSOR DOWN/LINE FEED	0A
CURSOR UP	0B
CLEAR SCREEN AND CURSOR HOME	0C
CARRIAGE RETURN	0D
CURSOR HOME	OE
CHARACTER INSERT	OF
CHARACTER DELETE	10
ALTER CURSOR COLUMN POSITION	11
CURSOR COLUMN ADDRESS (0-18)	##
CURSOR ON	12
ALTER CURSOR ROW POSITION	13
CURSOR ROW ADDRESS (0-9)	##
CURSOR OFF	14
START OFF BLINK FIELD	15
LINE INSERT	16
LINE DELETE	17
END OF BLINK FIELD	18
ENABLE ALARM	19
DISABLE ALARM	1A
POLL	1C
BROADCAST TO ALL MONITORS	1D
MONITOR SELECT	1E
ID NUMBER (0-7)	nn
DESELECT ALL MONITORS	1F

ESCAPE CONTROL CODES	
ERASE TO END OF LINE	1B, 0D
ERASE TO END OF SCREEN	1B, 18
ERASE LINE	1B, 13
ERASE LINE AND CARRIAGE RETURN	1B, 25
SCROLL MODE	1B, 1A
OVERWRITE OF LAST SCREEN CHARACTER	1B, 1C
AUTO WRAP	1B, 20
BLANK MONITOR/SCREEN SAVER	1B, 11
UNBLANK MONITOR	1B, 12
SELECT ALTERNATE CHARACTER SET	1B, 0F
*SELECT STANDARD CHARACTER SET	1B, 0E
DISPLAY CONTROL CHARACTERS	1B, 1E
*DISABLE CONTROL CHARACTERS DISPLAY	1B, 26
START CONFIDENCE TEST	1B, 1F
*DISABLE CONFIDENCE TEST (ANY CODE)	00
RESET	1B, 19

*Indicates power up condition.
 All codes are hexadecimal format.

PIN DESCRIPTION

CONNECTOR	PIN	SIGNAL
J1	1	Ground (Shield)
	2	Transmit Data
	3	Receive Data
	7	Ground
	4, 5, 6, 8-25	No connection
J2	1	Ground (Shield)
	2	Receive Data
	3	Transmit Data
	7	Ground
	4, 5, 6, 8-25	No connection

WARNING: Wrong connections may cause permanent damage to the monitor and host system.

ORDERING INFORMATION

DESCRIPTION	PART NUMBER
Complete Display Monitor and Alarm System	APD-250M060