



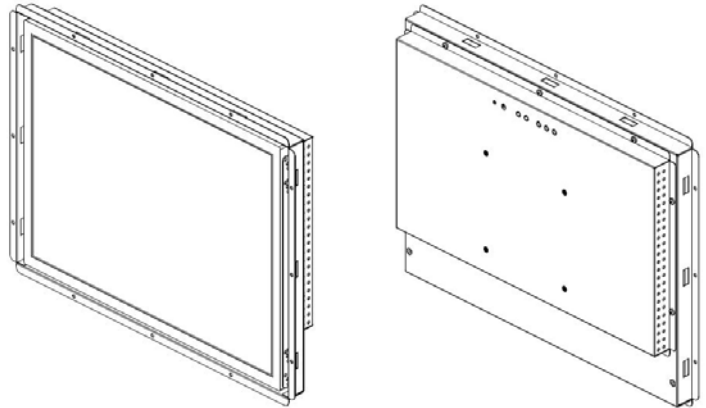
FLAT DISPLAY TECHNOLOGY

12.1" Open Frame Monitor
Model Number: LOF1216xx-KxxR



This product is RoHS compliant

SPEC No.: SAS-1211001
Version: 1.0
Issue Date: November 25, 2014



1. Introduction:

1.1 About the Product

The LOF1216xx 12.1" Open Frame Monitor series are rugged, high performance Industrial LCD Monitors, designed for commercial and industrial applications, such as kiosks, arcade games, ATM Machines, aviation simulators, military, medical, marine, security, industrial equipment, and instrumentation equipment. This product can provide high brightness and contrast to achieve better viewing effect.

1.2 Features

- 12.1 inch XGA Active Matrix Color TFT LCD Monitor
- High Contrast 700:1 Typical
- Recommend resolution: 1024x768(XGA)
- OSD controls: Allow on-screen adjustments of Brightness, Contrast, RGB Auto Color Balance, H-Position, V-position
- Multi system Video Input and auto detection video system.
- Signal loss backlight will be off / signal feed again backlight will be on
- Quick and easy integrations for Client solutions
- Universal AC Power input
- Panel Mount (option)
- Touch screen (option)
- Water Proof (IP54) (option)
- Front Bezel (option)

2. Contents

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3. Specifications

Parameter	Specifications	Unit	Remark
Model Name	LOF1216xx		
Screen Size	12.1" (diagonal)	inch	
Display Format	1024 x (R.G.B) x 768	dot	
TFT-LCD Active Area	249.0 (H) x 187.5 (V)	mm	
Pixel Pitch	0.240 (H) x 0.240 (V)	mm	
Contrast Ratio	700:1(Typ.)		
Brightness	500(Typ.)	Cd/m ²	
Viewing Angle	-80~80(H); -70~70(V)(Typ.)	deg	
	Video and S-video /		
Input/Output Interface	D-Sub 15 pin female for VGA / USB or RS-232 (DB9 Female) for Touch Screen Driver (Option)		
Power Source	100-240V _{AC} 50-60Hz, Universal / +12V _{DC} @ 3A		
Power Consumption	< 9W		
Touch Screen Controller	5 wire Resistive Driver USB/ RS232 (Option)		
Operating Temperature	-20~70 (With Touch -10~70)	°C	
Storage Temperature	-30~80	°C	
LED Life Time	30000 (Min)	Hr	25±2°C

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4. Ordering Information

Parameter	LOF121600-K00R	LOF12165A-K00R	LOF12165B-K00R	Unit
CVBS	1	1	1	
S-Video	1	1	1	
VGA	XGA (1024x768)	XGA (1024x768)	XGA (1024x768)	
Touch Panel Type	-	5W Resistive	5W Resistive	
Touch Screen Interface	-	USB	RS232	
Outline Dimension	306(W) x 236(H) x 39.5(D)	306(W) x 236(H) x 39.5(D)	306(W) x 236(H) x 39.5(D)	
Weight (Include Accessory)	1.49(2.29)	1.76 (2.56)	1.76(2.56)	Kg
Frame Material (Color)	Iron	Iron	Iron	

Note: Weight \pm 10%

Parameter	LOF121600-K10R	LOF12165A-K10R	LOF12165B-K10R	Unit
CVBS	-	-	-	
S-Video	-	-	-	
VGA	XGA (1024x768)	XGA (1024x768)	XGA (1024x768)	
Touch Panel Type	-	5W Resistive	5W Resistive	
Touch Screen Interface	-	USB	RS232	
Outline Dimension	306(W) x 236(H) x 39.5(D)	306(W) x 236(H) x 39.5(D)	306(W) x 236(H) x 39.5(D)	
Weight (Include Accessory)	1.48(2.28)	1.75 (2.55)	1.75 (2.55)	Kg
Frame Material (Color)	Iron	Iron	Iron	

Note: Weight \pm 10%

Parameter	LOF121603-K00R	LOF121603-K10R	Unit
CVBS	1	-	
S-Video	1	-	
VGA	XGA (1024x768)	XGA (1024x768)	
PMMA	⊙	⊙	
Touch Panel Type	-	-	
Touch Screen Interface	-	-	
Outline Dimension	306(W) x 236(H) x 39.5(D)	306(W) x 236(H) x 39.5(D)	
Weight (Include Accessory)	1.75(2.55)	1.74(2.54)	Kg
Frame Material (Color)	Iron	Iron	

Note: Weight \pm 10%

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■ LOF1216xx V1.0 

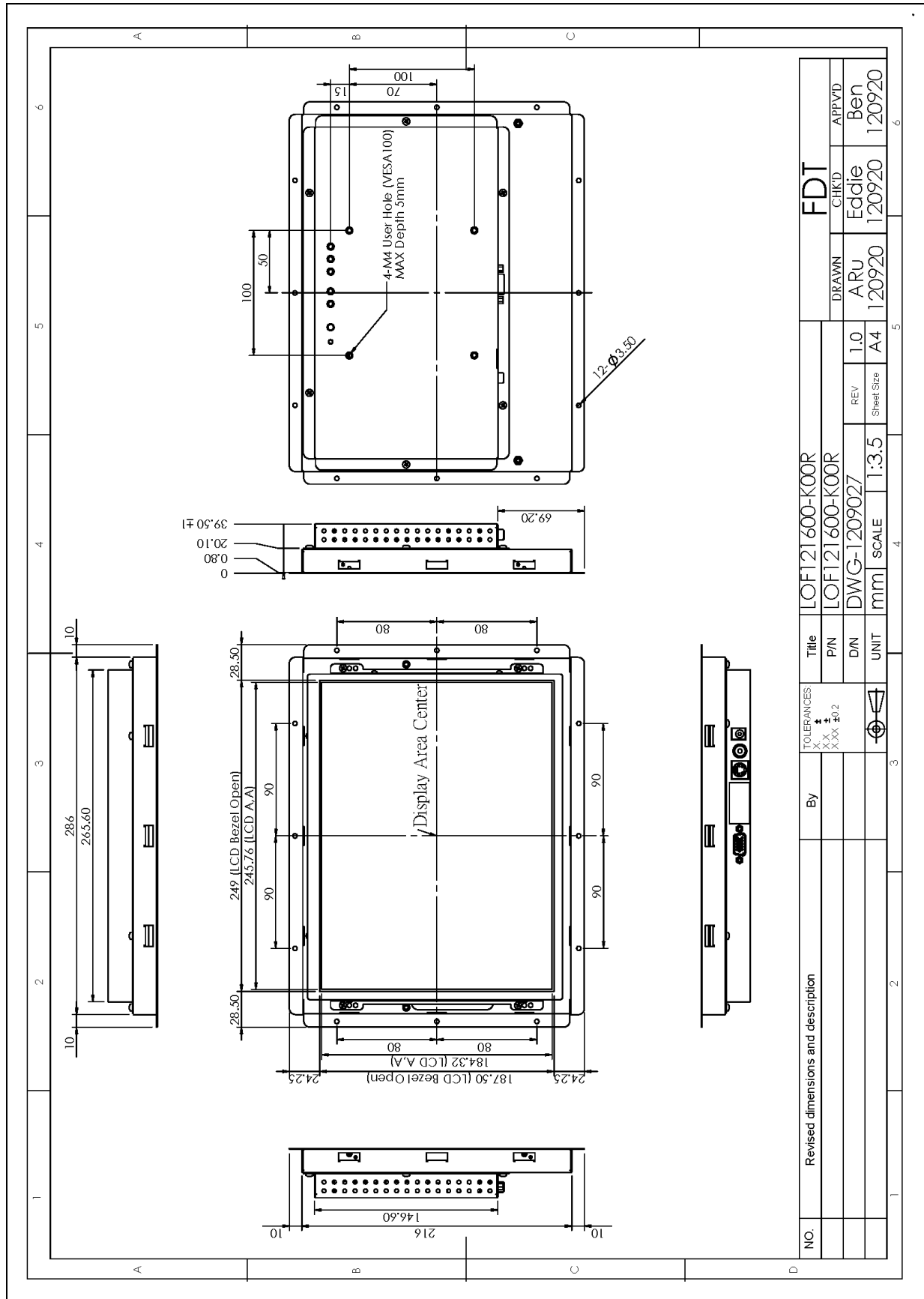
5. VGA Input Format

	Mode	Family	Resolution	H-Freq. (KHz)		V-Freq. (Hz)	
1	Mode 1	PC	640x480	31.47	(-)	59.9	(-)
2	Mode 2	VESA	800x600	35.16	(+)	56.3	(+)
3	Mode 3	VESA	800x600	37.88	(+)	60.3	(+)
4	Mode 4	VESA	1024x768	48.36	(-)	60.0	(-)
5	Mode 5	VESA	1024x768	56.48	(-)	70.1	(-)
6	Mode 6	VESA	1024x768	60.02	(+)	75.0	(+)
7	Mode 7	VESA	1280x1024	63.98	(+)	60.0	(+)

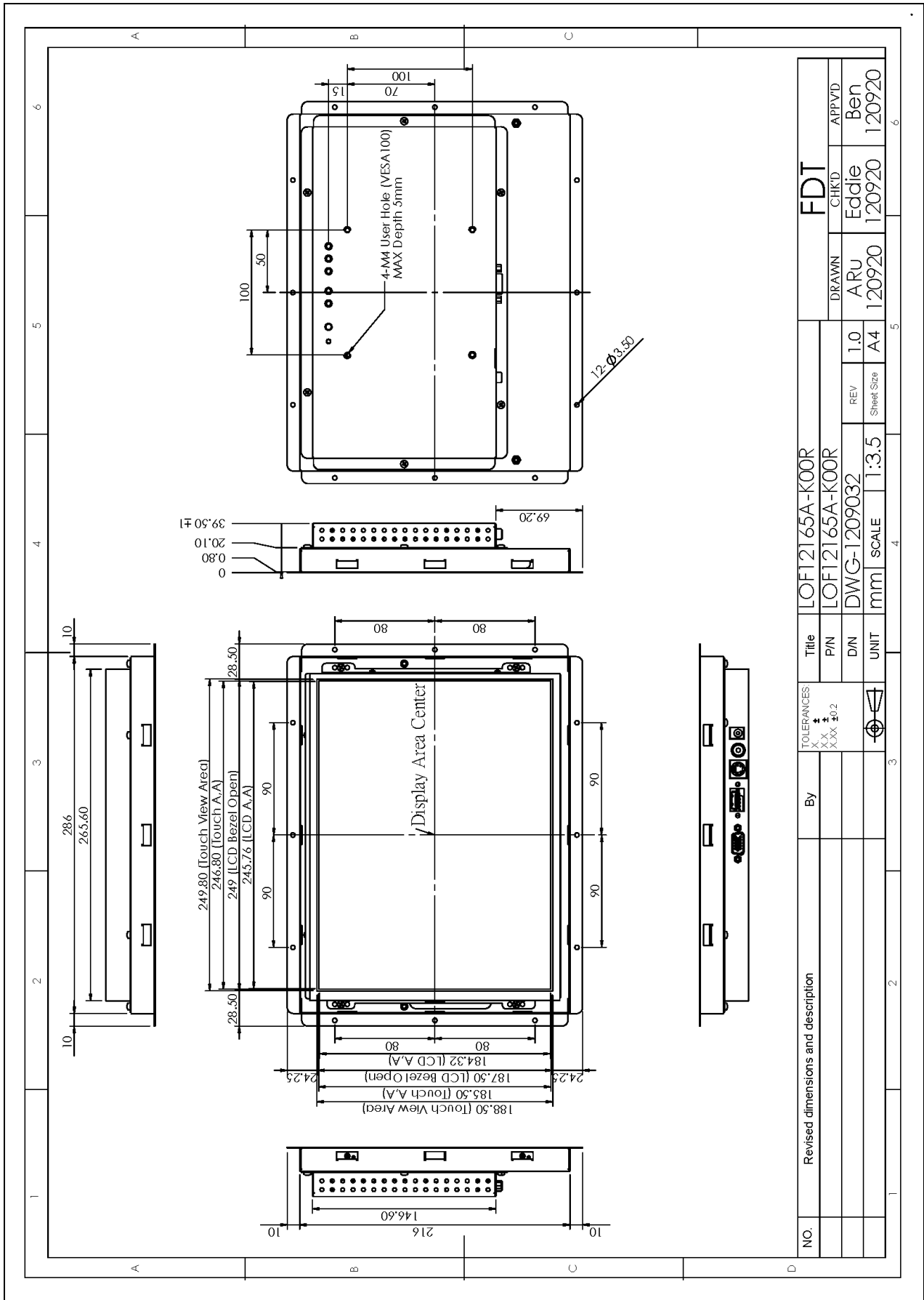
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6. Mechanical Drawing

6.1 LOF121600-K00R



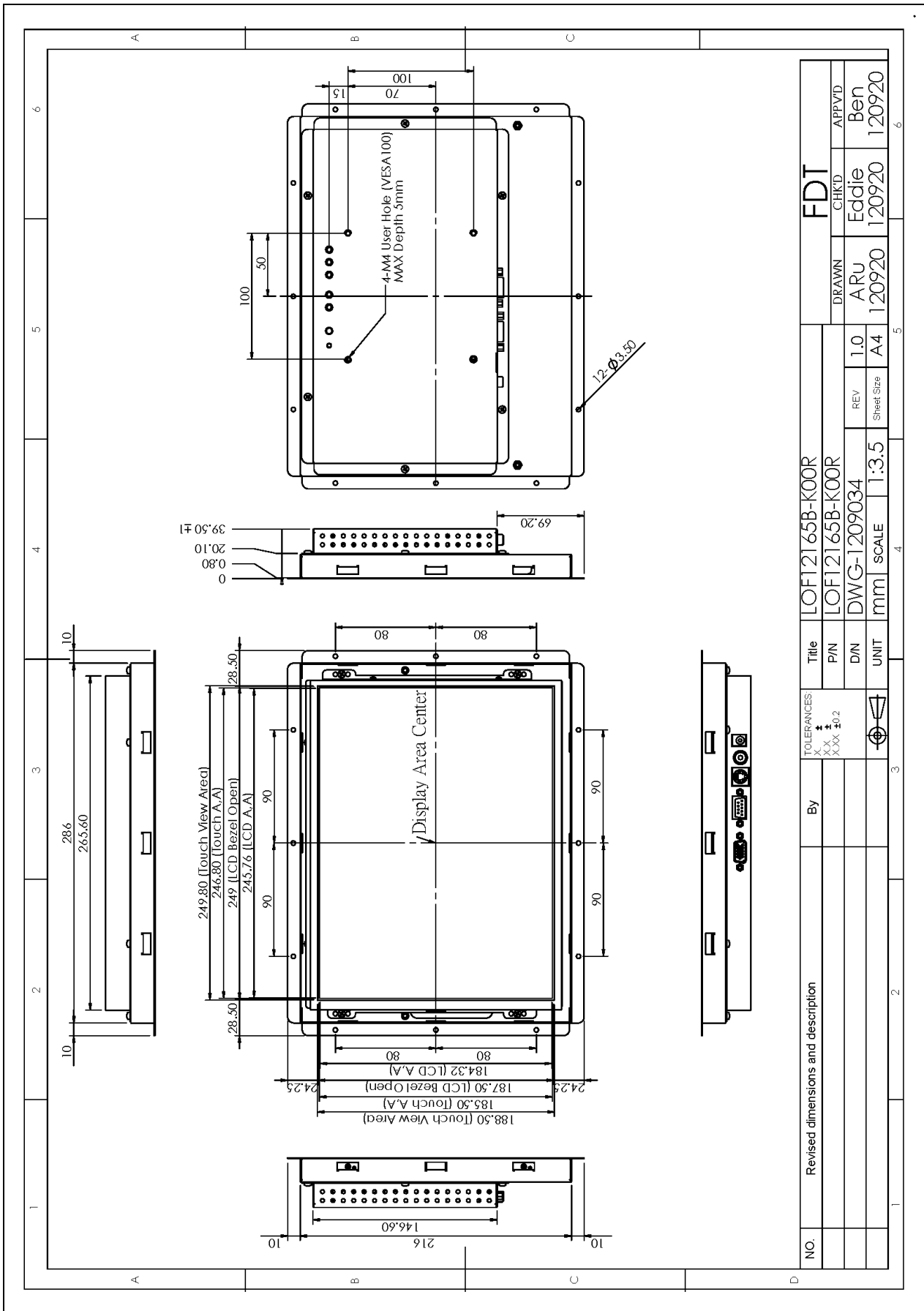
6.2 LOF12165A-K00R



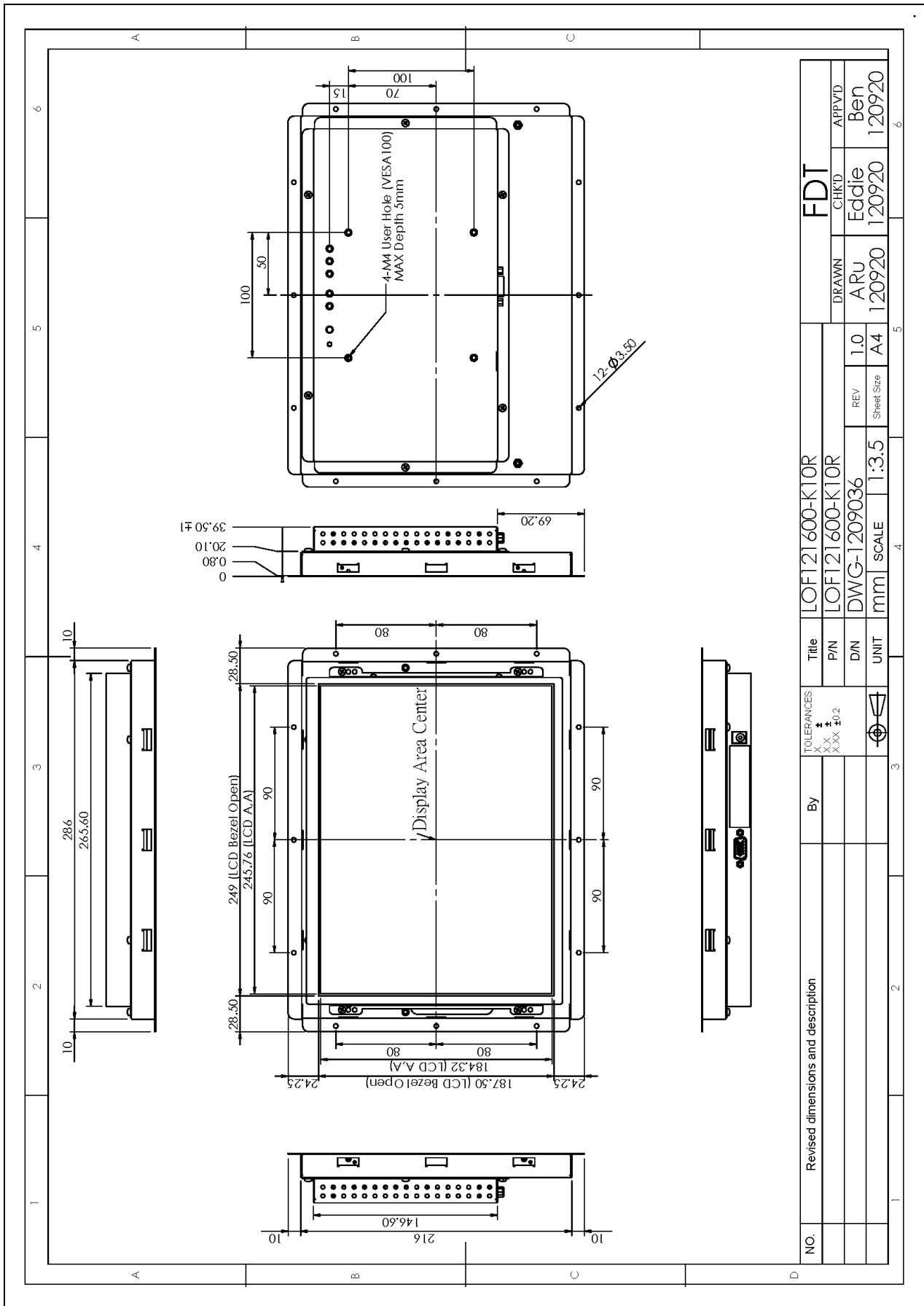
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6.3 LOF12165B-K00R



6.4 LOF121600-K10R

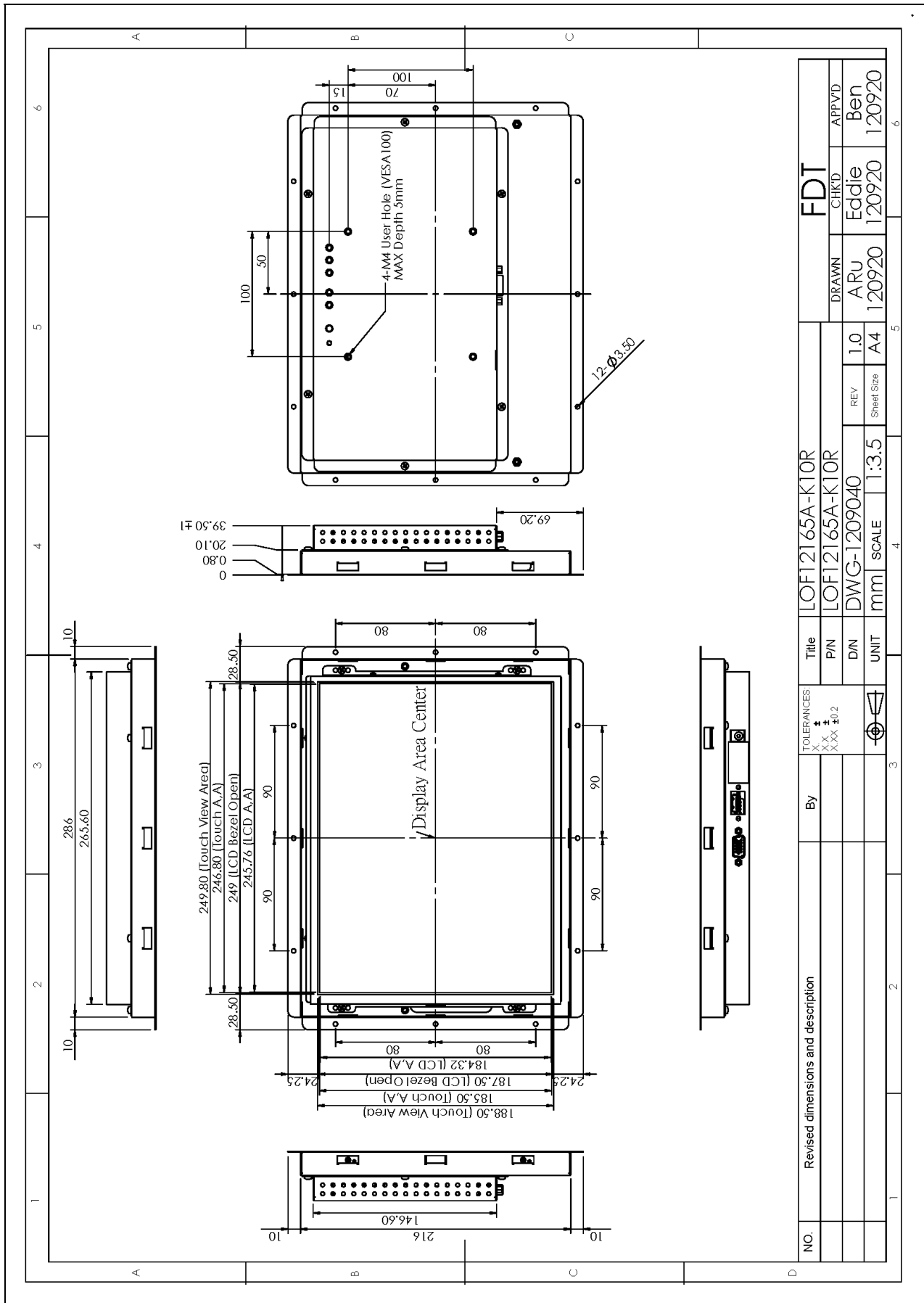


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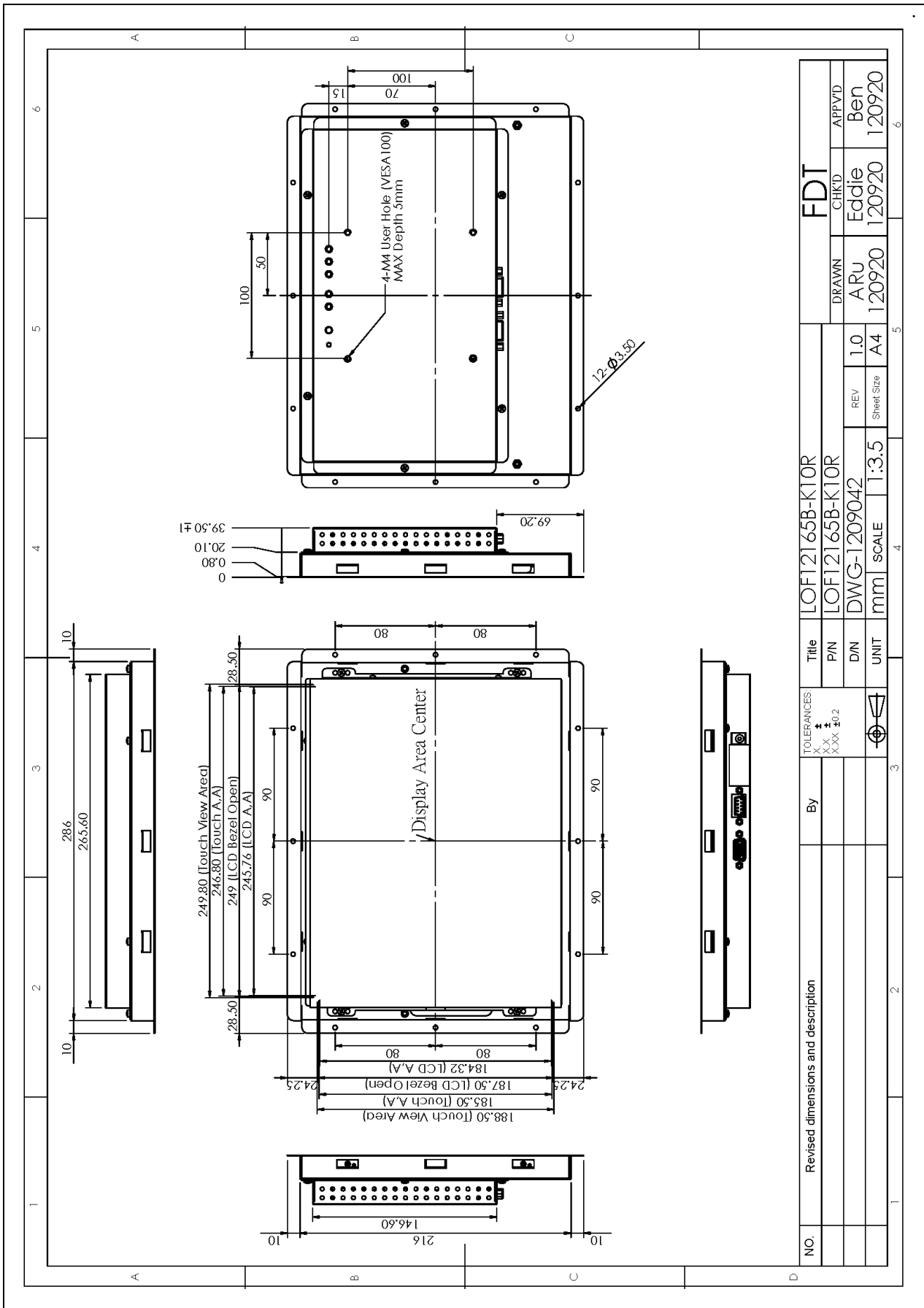


6.5 LOF12165A-K10R



NO.	Revised dimensions and description	By	Title	LOF12165A-K10R		FDT	
				PIN	LOF12165A-K10R	CHK'D	APP'VD
			DIN	DWG-1209040	REV	1.0	ARU
			UNIT	mm	Scale	A4	Eddie
							120920
							Ben
							120920
							120920

6.6 LOF12165B-K10R

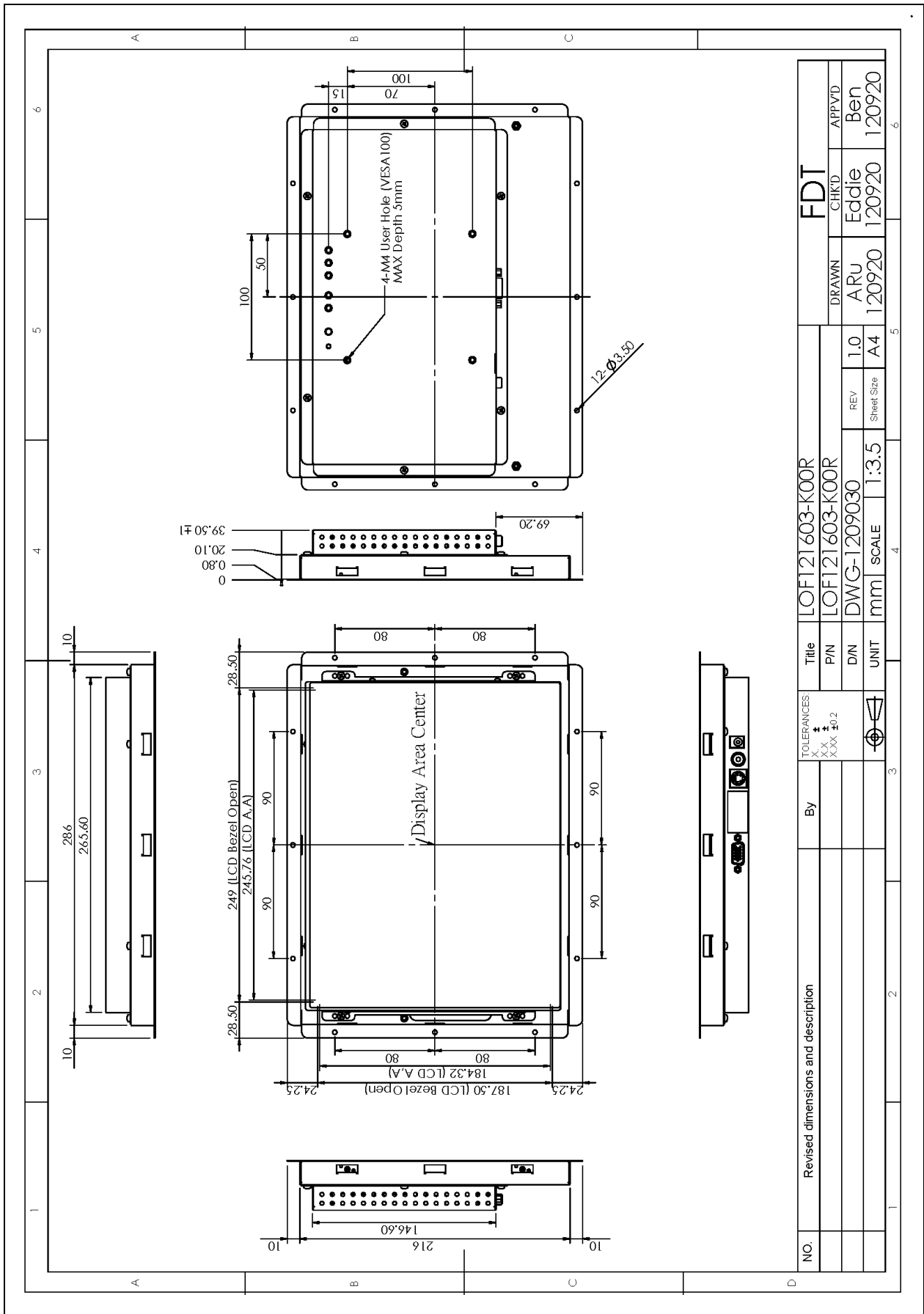


NO.	Revised dimensions and description	By	TOLERANCES XXX ± XXX ± XXX ±0.2	UNIT	SCALE	1:3.5	REV	1.0	Sheet Size	A4	120920	120920	120920
					mm						ARU	Eddie	Ben
											120920	120920	120920
											120920	120920	120920
											APPVD	APPVD	APPVD

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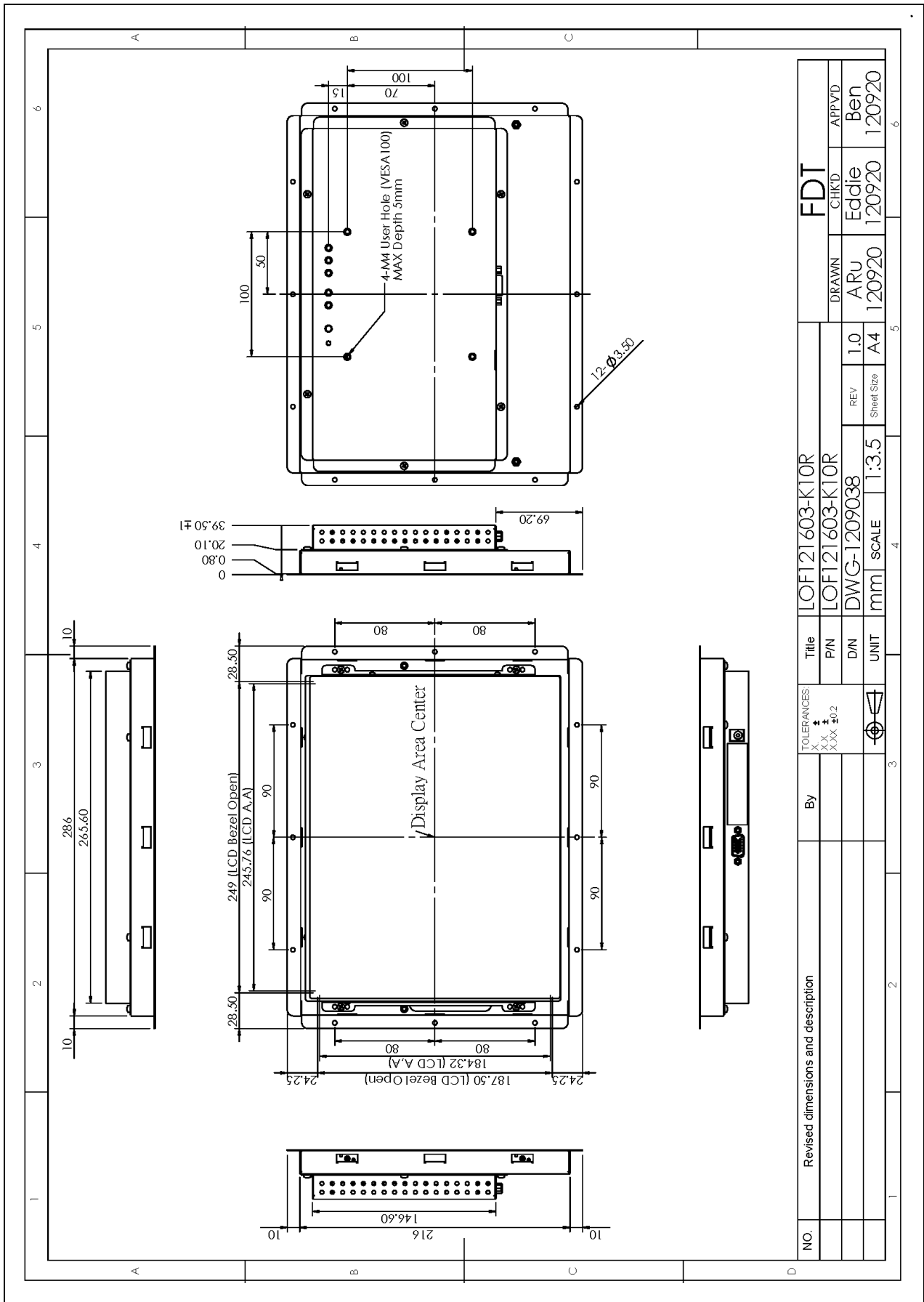
■ LOF1216xx V1.0 

6.7 LOF121603-K00R



NO.	Revised dimensions and description	By	TOLERANCES + X X XXX ±0.2	UNIT	SCALE	REV	Sheet Size	DRAWN	CHKD	APPVD	FDT
				mm	1:3.5	1.0	A4	ARU	Eddie	Ben	
								120920	120920	120920	

6.8 LOF121603-K10R



NO.	Revised dimensions and description	By	Title	LOF121603-K10R		FDT	
				PIN	LOF121603-K10R	DRAWN	CHK'D
			DIN	DWG-1209038	REV	1.0	Eddie
			UNIT	mm	Sheet Size	A4	Ben
			SCALE	1:3.5	120920	120920	120920



7. Packing List

Before you begin installing the Open Frame Monitor, please make sure that the following materials have been shipped:



- A. AC to DC Adapter (100-240V_{AC} 50-60Hz to +12V_{DC} @ 3A)
- B. Power Cord (L: 1800mm, Plug Type B for USA)
- C. Video Cable (L: 1800mm, LOF1216~~xx~~-K00R Only)
- D. S-Video Cable (L: 1800mm, LOF1216~~xx~~-K00R Only)
- E. VGA Cable (L: 1600mm)
- F. USB Cable (L: 1800mm, LOF12165A Only)
- G. RS-232 Cable (L: 1800mm, LOF12165B Only)
- H. Touch Screen Driver CD Disk (LOF12165A & LOF12165B Only) / User Manual
- I. M4x8 Screw x4 pcs
- J. Mount Clamp and Screw x6 pcs

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

8. Installing the Monitor

8.1 Power cable connection:

Connect the power cord to the AC outlet, and connect the power to the monitor through the AC/DC adapter.

8.2 VGA signal cable connection:

Plug one end of the 15-pin signal cable to the VGA connector at the rear of the PC system and the other end to the Open Frame monitor.

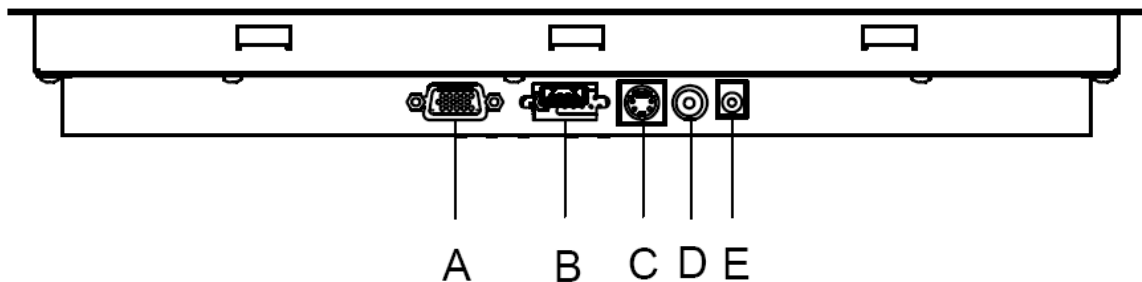
Secure the connectors with the screws on the cable connector at both ends.

8.3 Video / S-Video Cable connection:

If required, connect Video / S-Video Cable from the Open Frame Monitor to the DVD or CCD Camera.

8.4 Switch on the power:

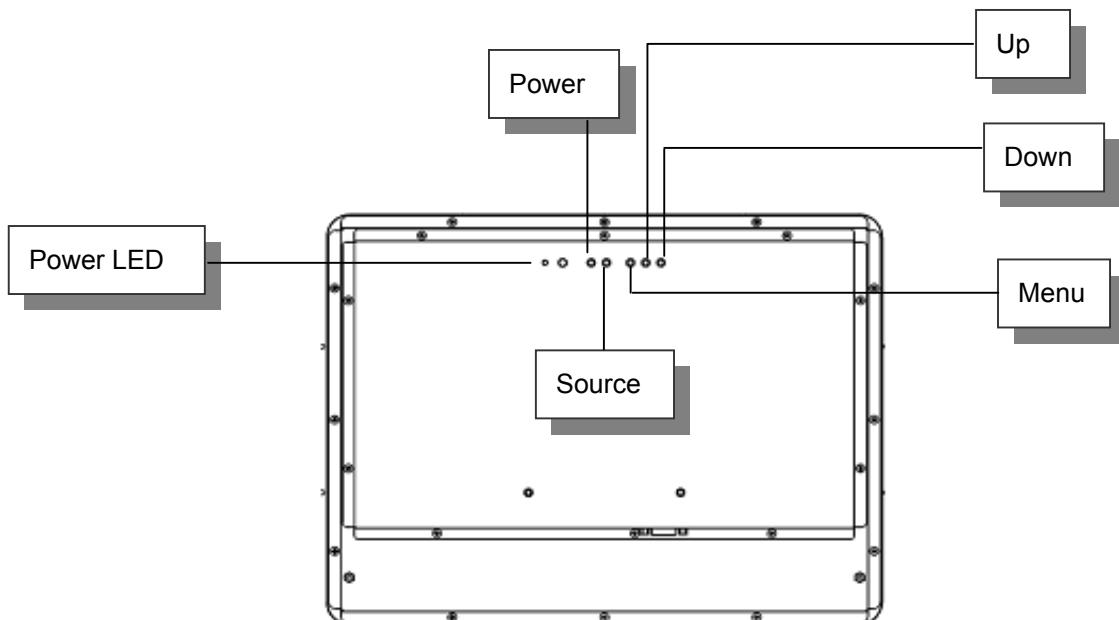
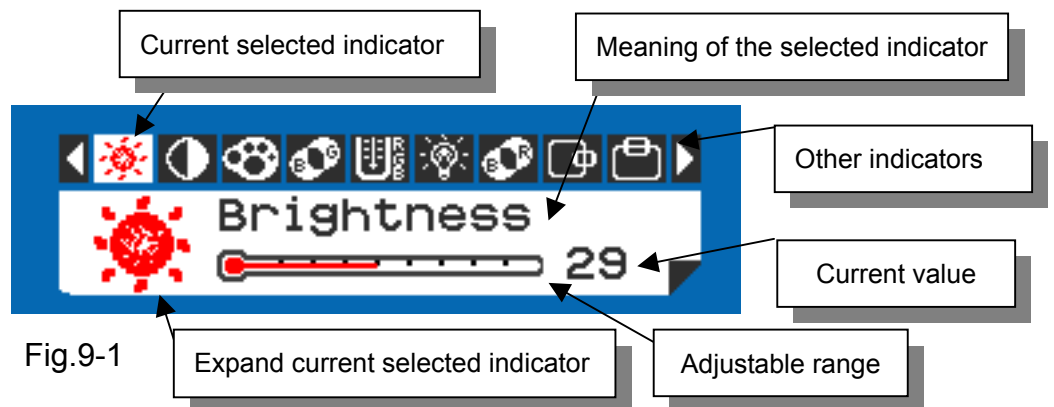
Switch on the power switch on the rear cover of the Open Frame Monitor.



- A. VGA D-sub 15 (Female)
- B. USB / RS-232 Port (For Controller)
- C. S-Video (Y/C Video) In
- D. Video (CVBS) In
- E. DC-In (+12V_{DC} The DC jack core is positive)

9. OSD Control

9.1 Menu Operation



Operations of key board :

1. To navigate the menu, press [MENU]. (Fig.9-1)
2. The indicator lighting up in white color is the selected adjustment item.
3. To Next Item of the menu, press [MENU] again.
4. The operations below are only available when "Menu" is started.
5. Press [UP] / [DOWN] to adjust the value of the selected item.

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■ LOF1216xx V1.0

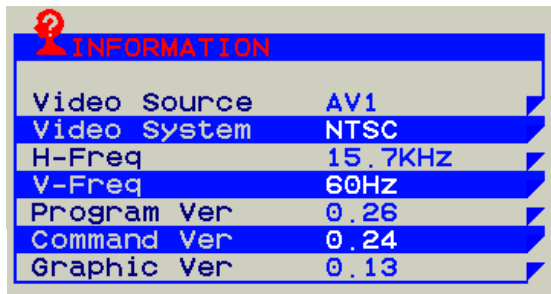


Overview of the menu :

Firmware Version must be \geq VER 0.26

Indicator	Meaning	Adjustable range	For	Remark
	Brightness	0 ~ 64	AV / S-Video / VGA	Adjust-Bar
	Contrast	0 ~ 64	AV / S-Video / VGA	Adjust-Bar
	Color	0 ~ 64	AV / S-Video	Adjust-Bar
	Tint	0 ~ 32	AV / S-Video	Adjust-Bar
	Sharpness	0 ~ 16	AV / S-Video	Adjust-Bar
	Dimmer	0 ~ 9	AV / S-Video / VGA	
	Color Tone	Normal / Warm / Cool	AV / S-Video / VGA	
	H-Position	-25 ~ +25	AV / S-Video / VGA	Balance-Bar
	V-Position	-10 ~ +10	AV / S-Video / VGA	Balance-Bar
	Auto		VGA	
	Scan	Over Scan / Under Scan	AV / S-Video	
	Information		AV / S-Video / VGA	Fig.9-2
	Setup		AV / S-Video / VGA	Fig.9-3
	Factory Set		AV / S-Video / VGA	
	Exit		AV / S-Video / VGA	







Fig.9-2



Setup Menu :



Fig.9-3

Indicator	Meaning	Adjustable range	Function	Remark
	Show Status	ON / OFF	Show signal status.	ON: Show OFF: Hidden
	Blue Screen	ON / OFF	If loss signal will put on the blue or black screen.	ON: Blue OFF: Black
	Auto Power On	ON / OFF	Power input module will be auto turn on.	ON: Auto OFF: Manual
	Auto Saving	OFF / 3s / 5s / 15s / 30s	If signal lost over setting times will be power off.	ON: Auto OFF: Normal
	Detect Source	ON / OFF	Auto detection which source is existence and change.	ON: Auto OFF: Normal
	Return			

Note: VGA only type don't have Detect Source function.

9.2 Operations

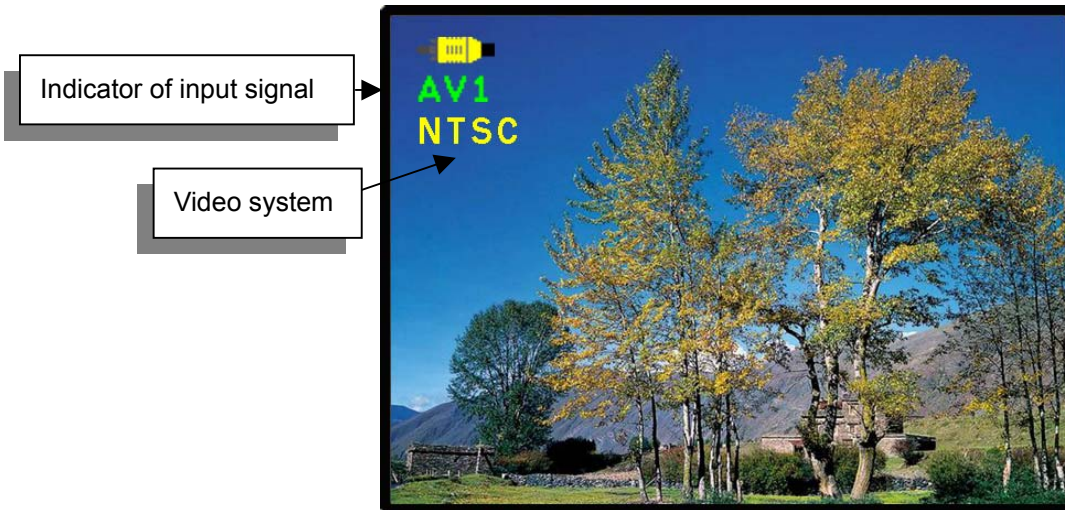





Fig.9-4

[Power] : Monitor power on / off

[Source] : Input signal switch

Overview of input signals :

Indicator	Input signal	Interface	Video system
	AV1	Composite	NTSC / PAL / SECAM
	S-Video1	Y/C	NTSC / PAL / SECAM
	VGA	Analog RGB	640x480_60 / 800x600_60 / 1024x768_60 / 1280x1024_60

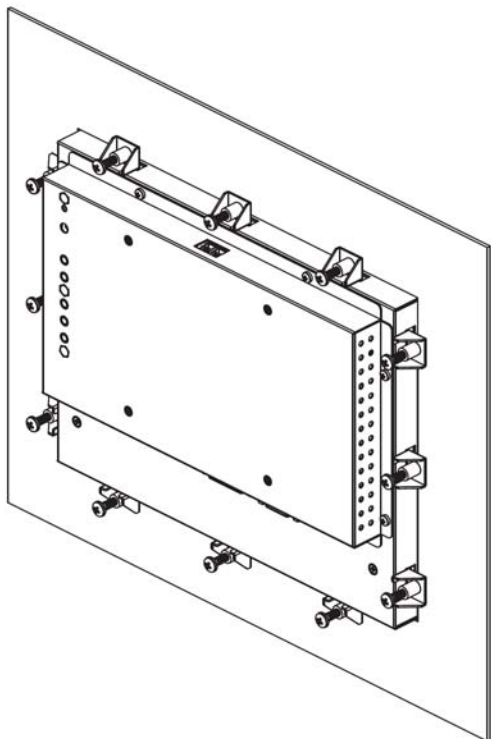
10. Trouble Shooting

If experiencing trouble with the monitor, or it fails to operate correctly, please refer to the following instructions before calling for repairs.

Condition	Check Point
1. The picture does not appear	<ul style="list-style-type: none">● Check to see that all the I/O and power cables is firmly seated in the socket.● Check the Power LED is Lighting When the monitor was turned ON.● Check if the brightness control is at the appropriate position, not at the minimum.
2. The screen is not synchronized	<ul style="list-style-type: none">● Check if the I/O signal cable is firmly seated in the socket.● Check if the output level matches the input level.● Make sure the signal timings of the computer system are within the specification of the monitor.
3. The position of the screen is not in the center	<ul style="list-style-type: none">● Adjust the H-position, and V-position, or perform the auto adjustment Or Factory Set.
4. The screen is too bright (too dark).	<ul style="list-style-type: none">● Check if the brightness or contrast control is at the appropriate position, not at the Maximum (Minimum).
5. The Screen is shaking or waving	<ul style="list-style-type: none">● Press the Auto adjustment control to adjust. Moving all objects which emit a magnetic field such as motor or transformer, away from the monitor. Check if the specific voltage is applied.● Check if the signal timing of the computer system is within the specification of monitor.

If you are unable to correct the fault by using this chart, stop using your monitor and contact us.

11. Panel Mount Installation (Mount Clamp and Screw)



12. Revision History

NO.	Date	Description	Page	Note
1.0	November 25, 2014	· First draft	22	