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		Revision: No.1	Page 1 of 16	File Name: KFE-DIS000070 Rev.1 (User Manual)

Model Name: KFE-DIS000070

17" OPEN FRAME MONITOR WITH 5W RESISTIVE TOUCHSCREEN AND RS232 INTERFACE


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Revision History

REV.No.	DATE	DESCRIPTION	CHECKED	APPROVED	NOTE
1	17/11/2008		17/11/2008 Mr.Galeotti	Q3 from customer	

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Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any item does not accord with the table, please contact immediately your dealer.

	On Screen Display (OSD) Keyboard
	European power cable
	VGA cable
	RS232 touchscreen controller
	RS232 data cable & PS2 power cable for touchscreen's controller
	17" Monitor TFT (front and rear view)
	

Drivers

Please contact your dealer to ask for the latest version.


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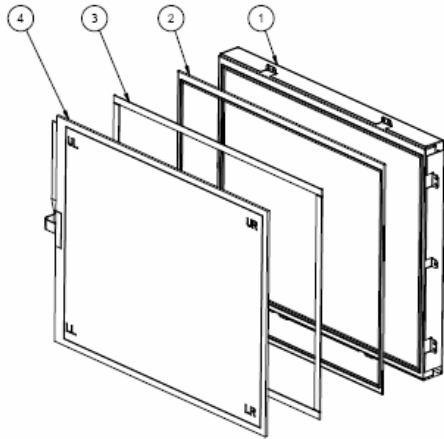
Safety Instructions

- a) Use the monitor after reading the manual carefully.
- b) Please grasp the plug to unplug the connector from the wall outlet. Don't pull the power cord to unplug it.
- c) Disconnect this equipment from AC outlet before cleaning.
- d) Keep 3 inch (76mm) away from the wall or other goods.
- e) Do not use liquid or spray detergents for cleaning.
- f) For pluggable equipment, the power outlet shall be installed near the equipment and shall be easily accessible.
- g) To prevent the risk of fire or shock hazards, do not expose this product to rain or moisture.
- h) Please do not open or disassemble the products as this may cause electric shock.
- i) Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- j) Do not leave this equipment in an environment unconditioned where the storage temperature is under -20 C (-4° F) or above 55° C (131° F), it may damage the equipment.
- k) The openings on the enclosure are for air convection hence protects the equipment from overheating. **DO NOT COVER THE OPENINGS.**
- l) Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- m) Place the power cord such a way that people can not step on it. Do not place anything over the power cord. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.
- n) All cautions and warnings on the equipment should be noted.
- o) If the equipment is not used for long time, disconnect it from the power source to avoid being damaged by over-voltage transient.
- p) As safety measure, this monitor is equipped with a three-wires ground style plug. If you can't insert the plug into the outlet, contact your electrician to replace your outlet. Don't defeat the safety purpose of the grounding-type plug.
- q) Never pour any liquid into ventilation openings. This could cause fire or electrical shock.
- r) Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- s) If any of the following situations arises, get the equipment checked by service personnel:
 1. The power cord or plug is damaged.
 2. Liquid has penetrated into the equipment.
 3. The equipment has been exposed to moisture.
 4. The equipment does not work well, or you cannot get it to work according to the user's manual.
 5. The equipment has been dropped and damaged.
 6. The equipment has obvious signs of breakage.
 7. The equipment exhibits a distinct change in performance.

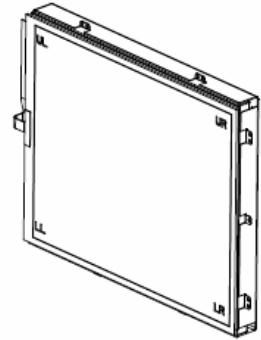
Warning

This product consists of devices that may contain mercury, which must be recycled or disposed of in accordance with local, state, or federal laws. (Within this system, the backlight lamps in the monitor display contain mercury)

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4	17" 5W Resistive Touch Screen
3	BIADHESIVE TAPE
2	POLYIMIDE ADHESIVE TAPE
1	MONITOR 17" Open Frame w/VGA+power cables+Ext.AC/DC
POS	PART/COMPONENT



General information

This monitor is a high-performance intelligent multi-scanning colour monitor. It is made with 17" TFT LCD screen and MCU digital control without radiation and glare.


Specifications

Note: The monitor's specifications are affected by the TFT model which is installed inside the monitor. The TFT model is subject to change with regard to the availability of TFT models on the market. Please refer to the paragraph named "Disclaimer" on the page No.1 of this document.

At present the TFT used into this monitor is the model **LM170E03-TLL1**. Here below the specs mentioned on the official documents of the TFT's manufacturer.

TFT' s General Features :

Active screen size	17.0 inch (43.27cm) diagonal		
Outline Dimension	358.5(H) x 296.5(V) x 16.0(D)	mm(Typ.)	
Pixel Pitch	0.264 mm x 0.264 mm		
Pixel Format	1280 horiz. by 1024 vert. Pixels. RGB stripe arrangement		
Display Colors	16.7M colors		
Luminance, white	300 cd/m2(Typ. Center 1 point)		
Power Consumption	21.1 Watts(Typ.)		
Weight	1600g (Typ.)		
Display operating mode	Transmissive mode, normally white		
Surface treatments	Hard coating (3H), Anti-glare treatment of the front polarizer		

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Absolute Maximum Ratings :

Parameter	Symbol	Values		Units	Notes
		Min.	Max.		
Power Supply Input Voltage	VCC	- 0.3	+ 5.5	V dc	At 25°
Operating Temperature	TOP	0	+ 50	°C	1
Storage Temperature	TST	- 20	+ 60	°C	1
Operating Ambient Humidity	HOP	10	+ 90	%RH	1
Storage Humidity	HST	10	+ 90	%RH	1

Start up and Connections

Note: Before connecting the touch monitor and the PC, be sure they are turned off.

1. Connect one end of the power adapter to the monitor and the other end to the connector of the power cord.
2. Connect one end of the serial (RS232) cable to the touchscreen controller and the other end (which has got a DB9 connector) to the computer;
3. Connect the first PS2 connector on the PS2 power cable to the computer and the second to the keyboard (if it's used);
4. Connect one end of the video cable to the rear side of computer and the other end to the LCD monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding.
5. Press the power button on the OSD keyboard to turn on the monitor.

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OSD Keyboard Instructions

Power on/off switch

This is a slight touch digital control key. It is used to turn the monitor on or off.

Power LED indicator

When the monitor is working, the power LED is green or blue. If the monitor is in saving power mode, the power LED will be red and flashing. If you turn off the computer, the power led is off. When the LED is off, the monitor is off, but the power adapter is on. In order to security, you should turn off power adapter while you don't use the monitor.

Auto key

This key is used to complete auto-adjusting function.

+/- Selection key

These two keys will move the cursor left and right to carry out the parameters adjustment.

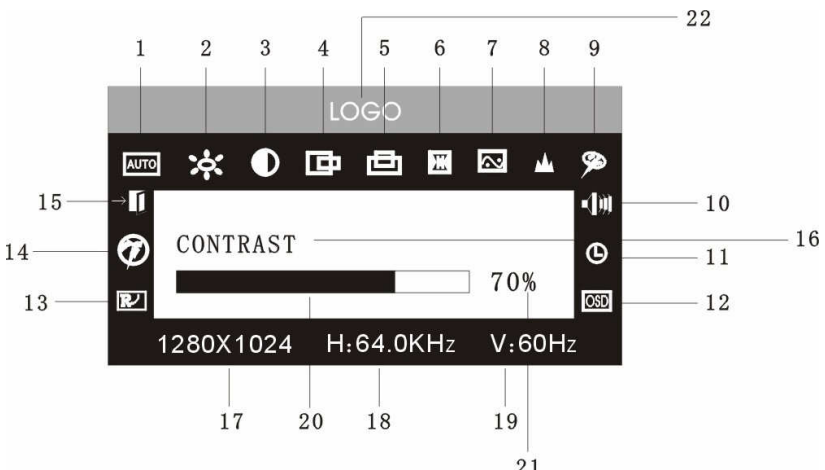
Confirmation key



















The confirmation key is used to show the menu and complete the confirmation function.

OSD menu description

The meaning of the menu:

1 auto adjustment	9 color adjustment	17 resolution
2 brightness	10 volume(optional)	18 H-frequency
3 contrast	11 OSD menu display time	19 V-frequency
4 H-position	12 OSD position / transparency adjustment	20 progressive bar of adjustment
5 V-position	13. recall	21 percentage of adjustment
6 clock	14 language	22. customer LOGO
7 phase	15 exit	
8 sharpness	16 selected function name	



	Display contents	Function
	AUTO ADJUSTMENT	Automatically adjust to obtain the best setting
	BRIGHTNESS	Adjust the brightness
	CONTRAST	Adjust the contrast
	H-POSITION	Move the screen toward left or right
	V-POSITION	Move the screen upward or downward
	CLOCK	Adjust the frequency of pixel
	PHASE	Adjust the phase of pixel clock
	SHARPNESS	Adjust the sharpness of the picture
	COLOR	Adjust the colors of the picture
9300	9300K color temperature	set 9300k color temperature
7800	7800K color temperature	set 7800k color temperature
6500	6500K color temperature	set 6500k color temperature
USER	USER mode	set USER mode
W-B	Auto color balance	Auto color balance
	VOLUME	Adjust the volume
	OSD DISPLAY TIME	Adjust the OSD display time
	OSD ADJUSTMENET	Adjust the parameter of OSD
	OSD H-Position	Move the menu toward left of right
	OSD V-Position	Move the menu upward or downward
	OSD Transparency	OSD Transparency Setting
	RECALL	Reset factory setting
	LANGUAGE	Language selection
	EXIT	Exit the menu

Auto adjustment :

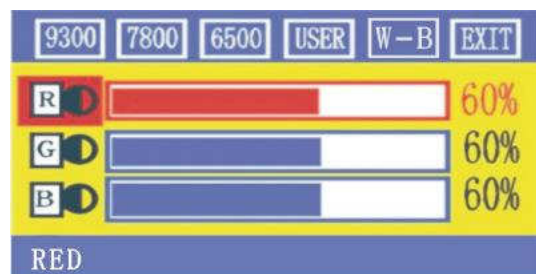
When you choose this function, the monitor will come into the automatically adjustment mode.
The figure here on the right will display on the screen.
After a few seconds, the monitor will be in the best visual display mode.

AUTO ADJUSTMENT...

Color adjustment :

when the function is selected , the monitor will come into the sub-menu (as shown here to the right), there are five functions that can be selected:

- a,9300°K
- b,7800°K
- c,6500°K
- d, USER
- e, W-B.




Selecting USER, you will enter into the user selection mode and you can make adjustment to R/G/B contents to obtain your satisfaction colour.

Selecting W-B, it will enter into the colour balance mode ,and the monitor will automatically adjust the white-black colour reference voltage to obtain optimal colour balance.

R, G, B adjustment :


In "USER mode", the monitor will automatically enter into R/G/B the adjustment mode, push the " ← " key, the relative options will flash, then adjust it by "+/-" key. Then push " ← " again to exit.


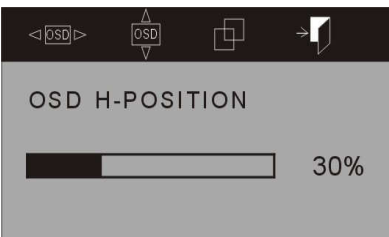
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Language:
 There are six languages to select.
 (As mentioned in the picture to the right)

ENG.: English
 FRE.: French
 DEU.: German
 ITA.: Italian
 ESP.: Spanish
 PYC.:Russian (TUR.:Turkish or POR.:Portuguese)

Position :
 When you select the item, you can adjust the H-position and V-position of OSD menu and transprence

Sharpness adjustment ():
 Adjust the sharpness of the picture on the screen.


Timing guide

NO.	Mode	Resolution	Ver.Frequency (Hz)	Hor.frequency (KHz)	Pixel clock (MHz)
1	VGA	640×480	60	31.5	25.175
2			72	37.9	31.5
3			75	37.5	31.5
4	SVGA	800×600	60	37.9	40
5			72	48.1	50
6			75	46.9	49.5
7	XGA	1024×768	60	48.4	65
8			70	56.5	75
9			75	60	78.75
10			1152×864	75	67.5
11	SXGA	1280×960	60	60	108
12			60	64.0	108
13			75	80.0	135

Recommended mode: 1280×1024@60Hz

Plug & Play

This monitor meets the standards of VESA DDC. When using video card with VESA DDC1/2B, it will auto-scan video frequency, output power, function and others data to windows when computer is turned on. It will go to proper connection mode and proper resolution frequency.

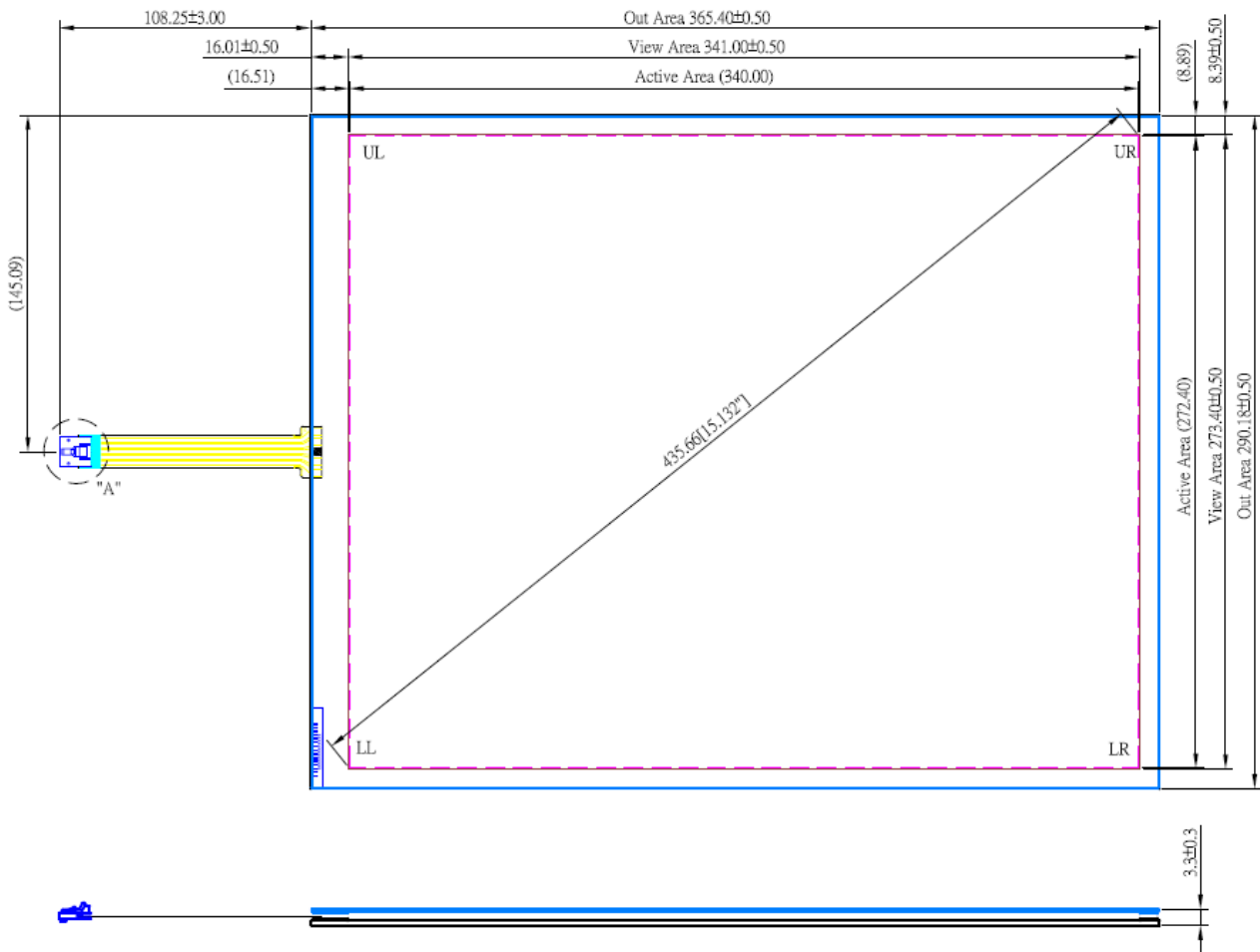
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Power management

This monitor complies with EPA energy star requirement and meets VESA DPMS standards. The following is the description of the power indicator for the power saving mode

MODE	Power indicator	Power consumption
On	Green or blue	< 40W
Stand by / suspended	Red flashing	< 5W
Off	off	< 3W (include power adapter ' s consumption)

Touchscreen's Drawing



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HT-EBS5-2

5-wire RS232 Touch Panel Controller

HT-EBS5-2 was launched to meet latest Restriction of Hazardous Substances (RoHS) Directive. This touch panel controller provides the optimal performance of your analogue resistive touch panels for 5-wire models. It communicates with PC system directly through RS232 connector. You can see how superior the design is in sensitivity, accuracy and friendly operation. The touch panel driver emulates mouse left and right button function and supports the O.S. mentioned below.

Drivers :

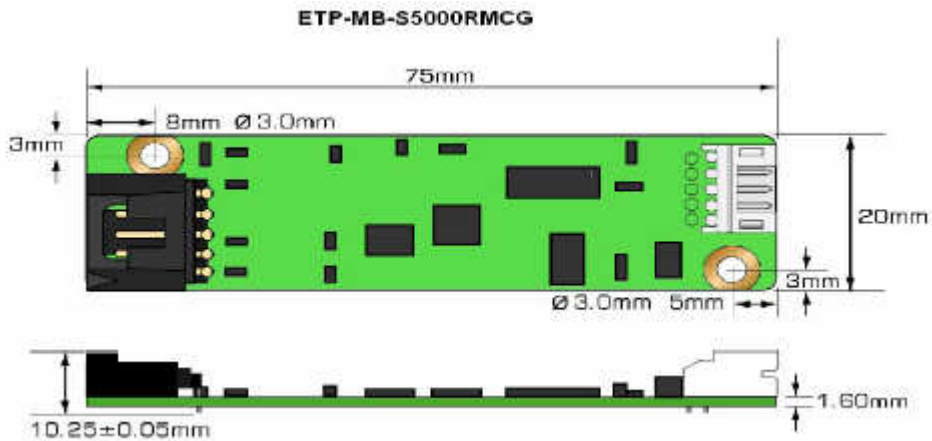
OS	Version
Windows	Windows Vista, XP/2000, 9x/ME Windows CE 2.12/3.0/.net/5.0/6.0 , Windows Embedded, Windows XP Tablet PC edition ,Windows NT4
Linux	Mandrake (Mandrake 9.1/9.2/10, Mandriva 2005, Mandriva 2006), Red Hat (7.3/8.0/9.0), Fedora (Core I/II/III/IV/V/VI), Yellow Dog (3.X) , SuSE (9.2/9.3/10/10.1), Ubuntu (5.1/6.06), Debian (3.1, Kernel 2.4.x/2.6.x)
DOS	DOS

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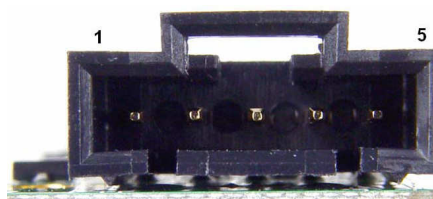
Specifications of HT-EBS5-2 :


Circuit Board Dimension	20mm x 75mm (0.79inches x 2.95inches)----(5-Wire)
Power Requirements	D.C. + 5V (100mA typical,50mV peak to peak maximum ripple and noise)
Operating Temperature	0 to 50 °C
Storage Temperature	-40 to 80 °C
Relative Humidity	95% at 60 °C
Interface	Bi-directional RS-232 serial communication
Protocol	No parity,8 data bits,1 stop bit,9600 baud(N,8,1,9600)
Resolution	2048 x 2048 resolution
Report rate	RS232 Model: Max. 160 points/sec
Response time	Max. 20 ms
Attached Cable	6' shielded cable with 9-pin D-sub connector
Regulatory Approvals	FCC-B , CE, Unaffected by EMI from other nearby CRTs and other display devices
EMI	Unaffected by environmental EMI
Panel resistance	5 wire resistive model: 50 ~ 200 ohm
MTBF	200,000 hrs

Layout :



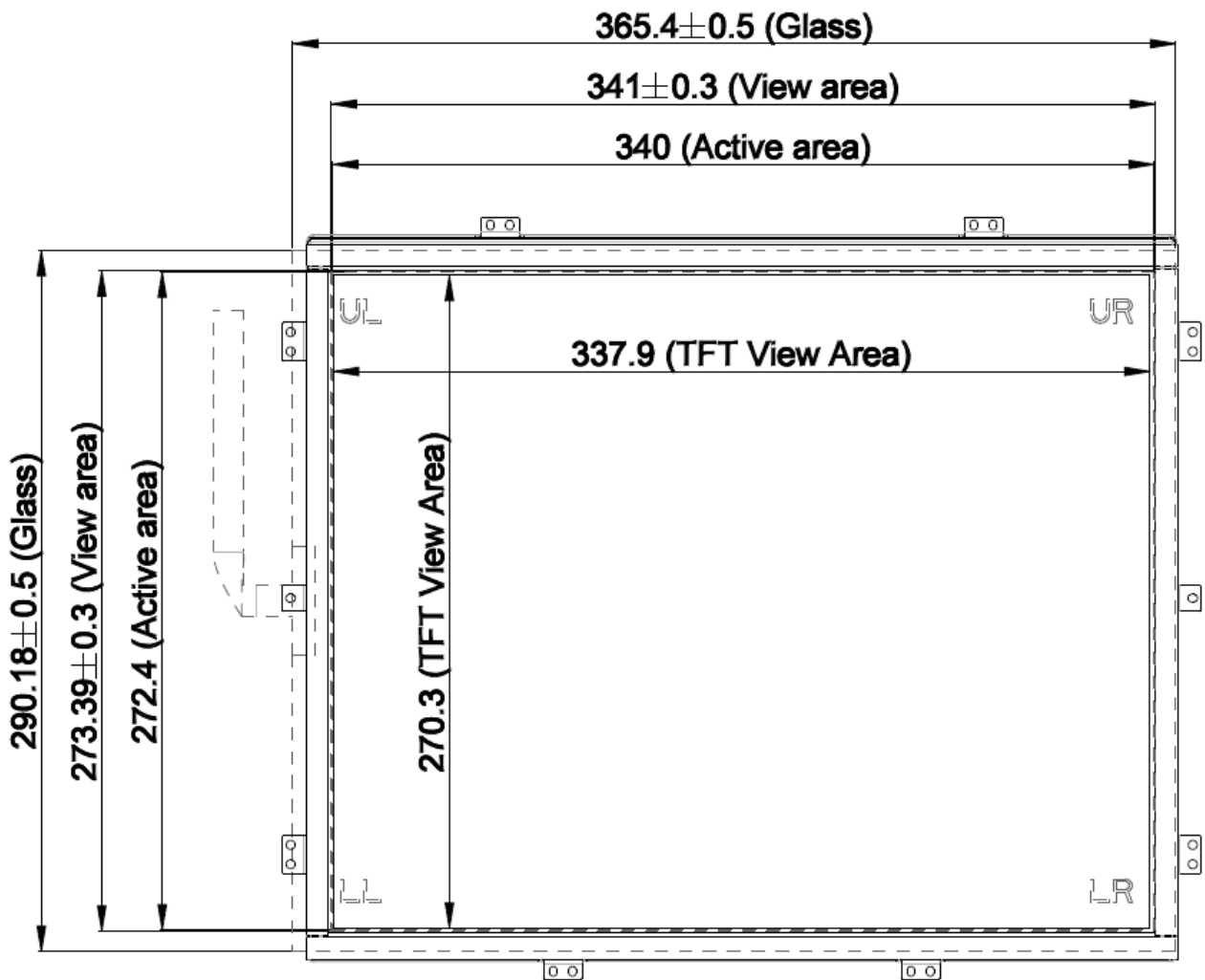
Touchscreen Connector :



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Drawing of KFE-DIS 00 00 70
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Front View





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WITH 5W RESISTIVE
TOUCHSCREEN
AND RS232 INTERFACE

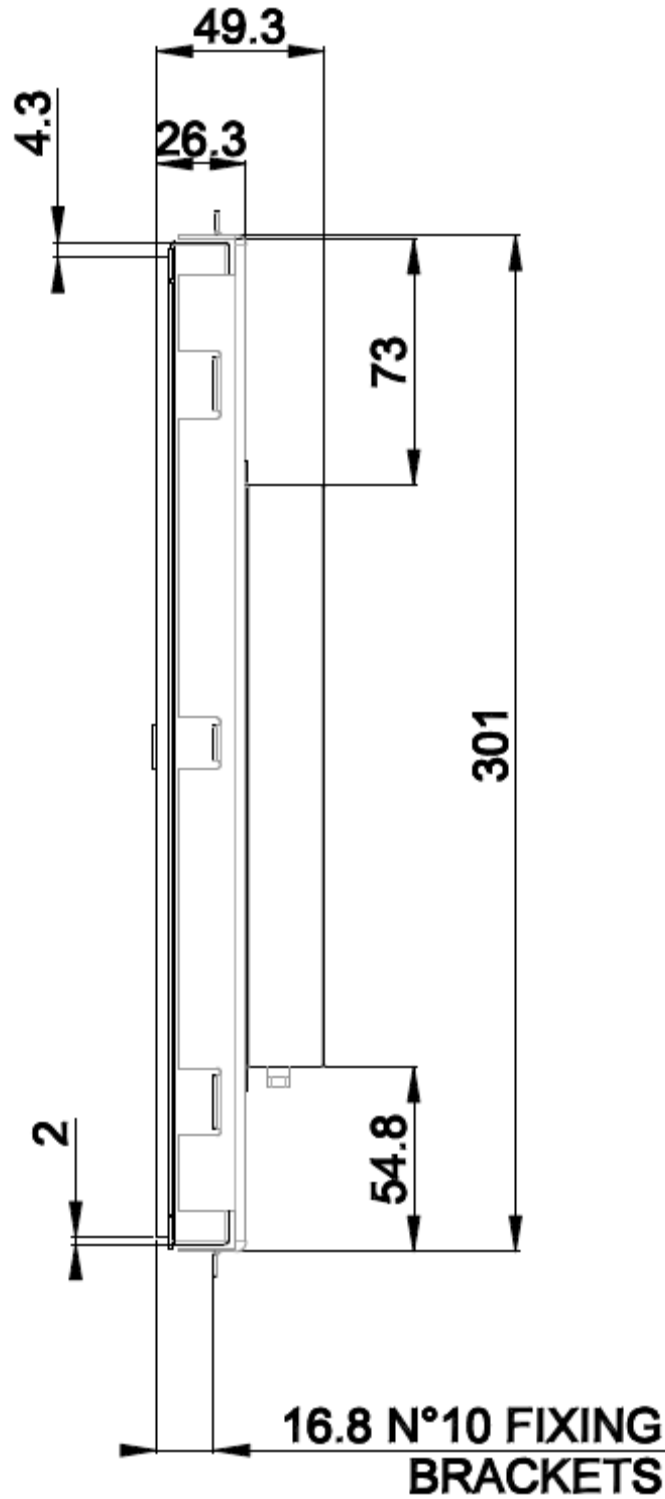
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Side View



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APPENDIX A

A.1 Introduction

If the monitor fails to operate correctly, please refer to the following instructions before calling the KF srl service department or your dealer.

A.2 No image appears on screen

1. Checking that all the I/O and power connectors are correctly installed and connected.
2. Make sure that none of the connectors are crooked, broken or loose.
3. Make sure that the OSD power on LED is turned on.
4. Make sure that the brightness is not set with the minimum value.
5. Make sure that the screen resolution is set to the correct setting for the type of LCD, and that the setting does not exceed the resolution specified for the particular model of LCD.

A.3 The image is incorrectly displayed, or the full screen image does not appear

Please make sure the screen resolution on the motherboard is correct.

A.4 The position of screen is not in the centre

Adjust the H-position and V-position or Perform "Auto-Adjustment."

A.5 No Signal

If the display is powered on but it can't receive the video signal from the computer, please check that all power switches, power cables and VGA signal cables are connected correctly on both sides.