

TOP-2000

User's Manual

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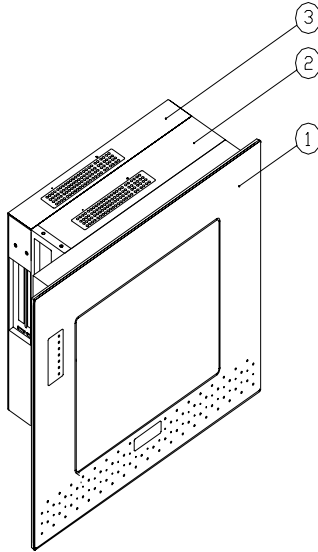
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CHAPTER

1

General Information

Overview



Item	Name
1	Display Unit.
2	PC Unit.
3	Expansion Unit.

Features

- Intelligent System Temperature Control.
- • Infrared/Resistive touch screen.
- • Shockproof hard disk mobile module.
- • Isolation on I/O ports.
- • Liquid-proof and dust-proof in front panel. Meet IP65/NEMA 4/12 standard.
- • Expansion capabilities: two ISA or one PCI , one ISA.
- • Networking: On-board 10/100BaseT auto-sensing Fast Ethernet port.

General specifications

- **Construction:** Inside/outside heavy duty stainless steel.
- **Cooling system:** Three 11.5 CFM(flow-out) fans.
- **CPU :** Pentium MMX 133-233 or compatible.
- **System Memory:** 8-128MB SIMM or DIMM.
- **LCD display panel:**

Size	10.4"	12.1"	15"
Display Type	Color TFT	Color TFT	Color TFT
Resolution	640 x 480	800 x 600	1024 x 768
Luminance (cd/m ²)	250	250	200

• **I/O ports:**

Four COM ports (2xRS-232, 2x232/422/485).

One parallel port.

Two USB ports.

One PS/2 mouse and keyboard interface.

One VGA output connector.

10/100MHz fast LAN.

• **HDD:** EIDE HDD interface (2.5" industrial grade).

• **FDD:** 3.5" slim line FDD.

• **Expansion capabilities:** two ISA or one PCI, one ISA.

• **Dimensions** (WxHxD) (mm):

Model	Dimension
T2-10AI, T2-10AR	360.6 x 297.6 x 189.9
T2-10DI, T2-10DR	360.6 x 297.6 x 170.4
T2-12AI, T2-12AR	386.6 x 311.6 x 189.9
T2-12DI, T2-12DR	386.6 x 311.6 x 170.4
T2-15DI	508.0 x 396.0 x 170.4

Power supply

AC input:

Input Voltage: 90-264Vdc@47-63HZ.

Output Voltage: +5V@12A, +12V@1A, -12v@0.5A

Output Power: 90W(MAX)

Safety: Meets UL, CSA, CE

EMC: Meets CE/FCC Class B

MTBF: 100,000 hrs.

DC input:

Input voltage: 18-36Vdc

Output voltage: +5v@15A, +12V@2A

Output power: 100W(max)

MTBF: 100,000 hrs.

Environmental specifications

- **Operating temperature:** 0 to 50 °C.
- **Relative humidity:** 5-85% non-condensing.
- **EMC:** CE.

Touch screens

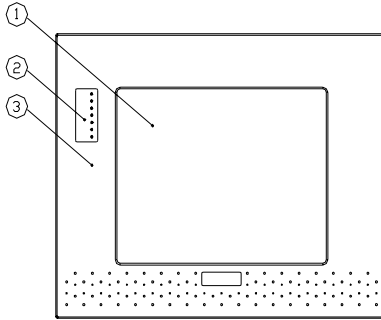
Infrared touch type

- **Touch-point density:** 16tps/cm² physical, 64tps/cm² interpolated.
- **Response time:** 2.5-6.5ms(software programmable).
- **Light Transmission:** 100%.
- **Touch sensor life:** unlimited.
- **MTBF-controller:** >500000 hrs.
- **Controller:** RS-232 interface.
- **Power consumption:** 5V@219mA(max).

Analog resistive type

- **Resolution:** 1024 touch points per axis within the calibrated area.
- **Response time:** 8-15ms.
- **Light Transmission:** 80%.
- **Touch sensor life:** >35 million touches.
- **MTBF-controller:** >500000 hrs.
- **Controller:** RS-232 interface.
- **Power consumption:** 5V@70mA(typical).

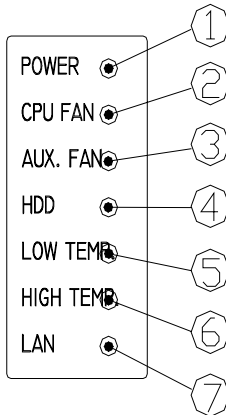
Front panel



<i>Item</i>	<i>Name</i>
1	LCD panel and Touch screen
*2	System status indicator
3	Aluminum panel

* For further information, please read section " System status indicator".

System status indicator



Item	Name	Active Color	Status
1	Power	Green	System Power On
2	CPU Fan	Green	Operating
3	AUX Fan	Green	Operating
4	HDD	Green	Operating
* 5	Low Temp.	Green	System temperature is in normal temperature level
* 6	High Temp.	Red	System temperature is in abnormal temperature level
7	Lan	Flash	Operating

* The warning temperature is determined in CMOS setup, Please refer to "Chipset feature setup" in ***TOP-2000 Main Board User's Manual***.

Touch screen driver and user's manual

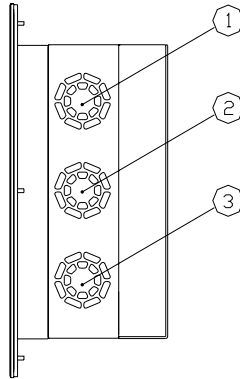
(1) Infrared type touch screen:

For further information, please see the user's manual in \CITRON directory of the ***TOP-2000 driver and utility disk*** CD-ROM for detail.

(2) Resistive type touch screen:

For further information, please see the user's manual in \MICROT-OUCH directory of the ***TOP-2000 driver and utility disk*** CD-ROM for detail.

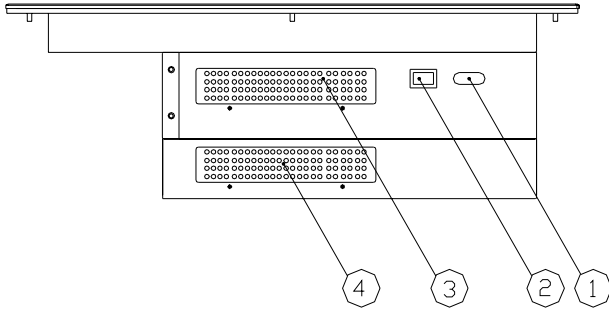
Cooling system



Item	Name	Normal Status
1 , 3	System Fan	Operating
* 2	Auxiliary Fan	Controlled by BIOS setting

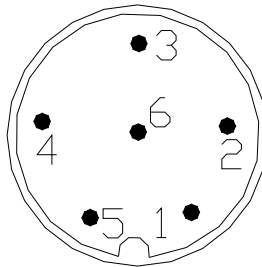
* For further information, please see the *TOP-2000 Main Board User's Manual* for detail.

Power input and power switch



Item	Name
* 1	Power input connector
2	Power switch
3, 4	Filter

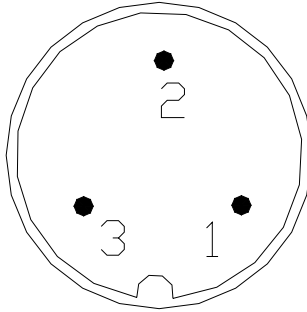
* (1) For DC input model:



Pin 1, 2 : Ground

Pin 4, 5 : DC 18-36 Volts

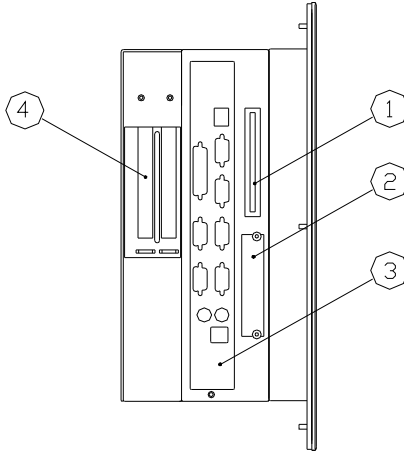
*** (2) For AC input model:**



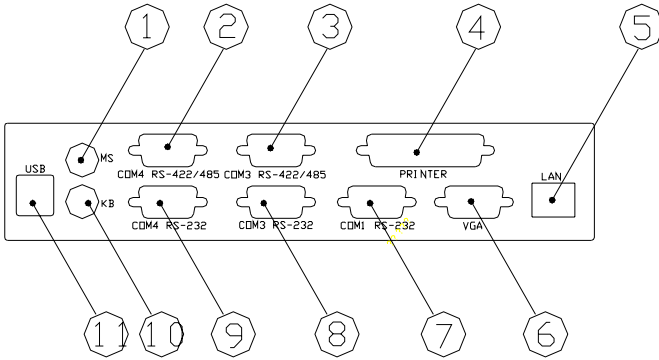
Pin 1, 3 : AC line in

Pin 2 : Earth ground

I/O ports and peripherals



Item	Name
1	Floppy disk drive
2	Hard disk drive
3	I/O ports
4	Add-on card slot in expansion unit



Item	Name
1	PS/2 mouse port
* 2	COM4 RS-422/RS-485
* 3	COM3 RS-422/RS-485
4	Printer port
5	Lan port
6	VGA port
7	COM1 RS-232
* 8	COM3 RS-232
* 9	COM4 RS-232
10	PS/2 keyboard port
11	USB port

* For further information, please see the **TOP-2000 Main Board User's Manual** for detail.

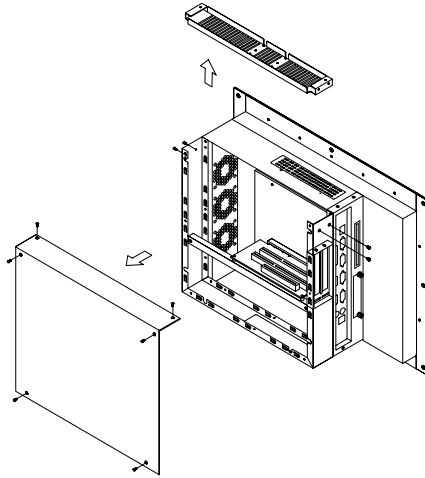
CHAPTER

2

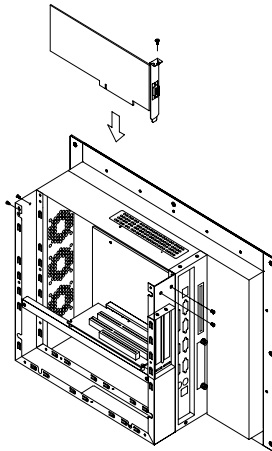
System Installation

Install Add-on Card in TOP-2000

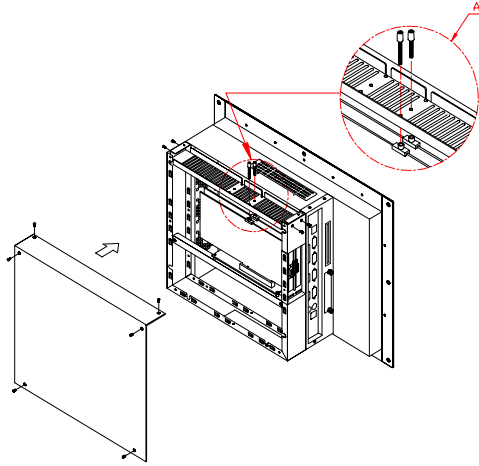
Step A : Remove the following items.



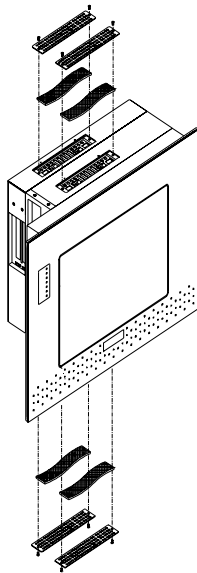
Step B : Insert your add-on card in system



Step C : Secure your add-on card



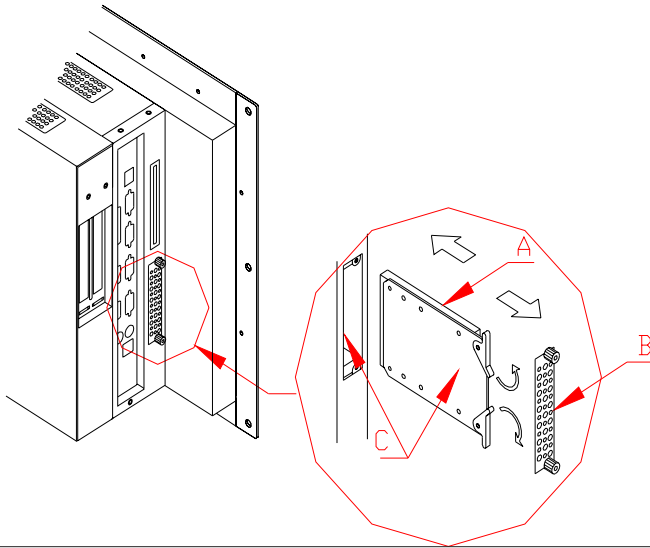
Replace filters



* You can find four filters in the TOP-2000 accessory box.

Install / Maintain hard disk drive in TOP-2000

Warning *Disclaimer : HDD is a highly sensitive device, thus installation can only be handled by authorized personnel. Any damage results from improper installation by unauthorized personnel is not climbable”.*

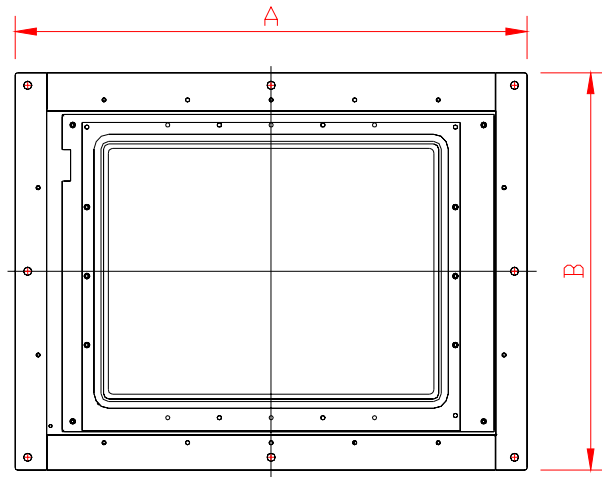


Comments	
A	HDD module should be installed carefully with correct orientation.
B	HDD door can be removed / closed manually or by screw driver.
C	Slide HDD module along the rail in HDD bay until the end is reached. Push two black plastic ejectors toward the unit by both hands gently and carefully to set HDD in final position.

Outside view of TOP-2000

TOP-2000 without aluminum frame (open frame)

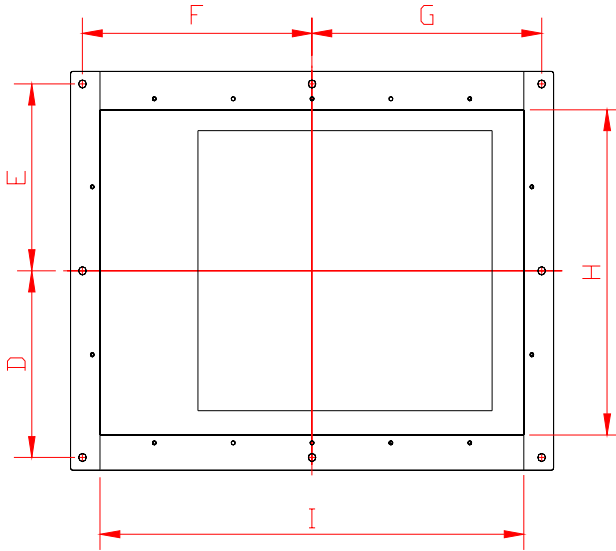
(1) Front view



Size	A	B
15.1"	490.0	380.0
12.1"	386.6	311.6
10.4"	360.6	297.6

(Unit: mm)

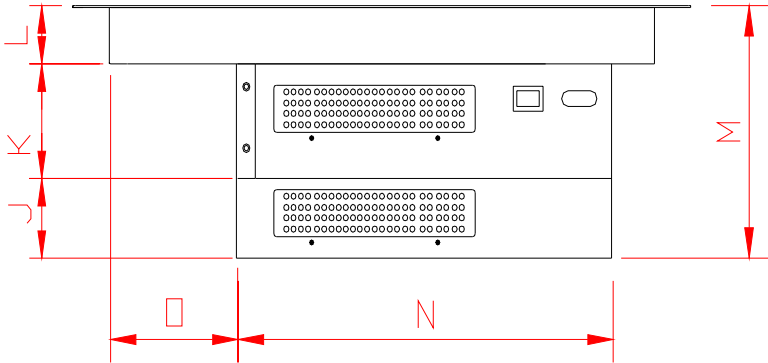
(2) Back view



	D	E	F	G	H	I
15.1"	178.0	178.0	233.0	233.0	312.0	432.0
12.1"	146.5	146.5	184.0	184.0	264.0	341.0
10.4"	139.5	139.5	171.0	171.0	240.0	315.0

(Unit: mm)

(3) Bottom view

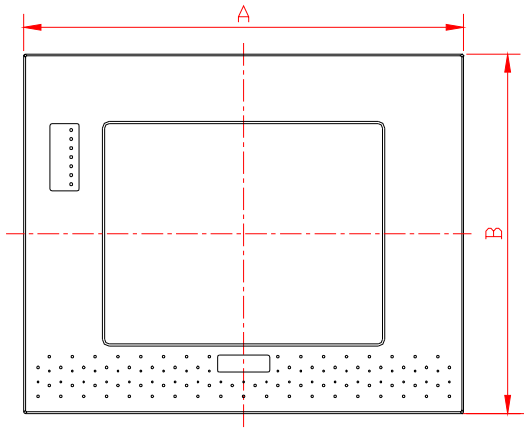


	J	K	L	M	N	O
15.1"	47.5	AC=91.0 DC=75.5	38.0	AC=176.5 DC=161.0	265.0	82.5
12.1"	47.5	AC=91.0 DC=75.5	38.0	AC=176.5D C=161.0	265.0	63.0
10.4"	47.5	AC=91.0 DC=75.5	38.0	AC=176.5D C=161.0	265.0	50.0

(Unit: mm)

TOP-2000 with aluminum frame

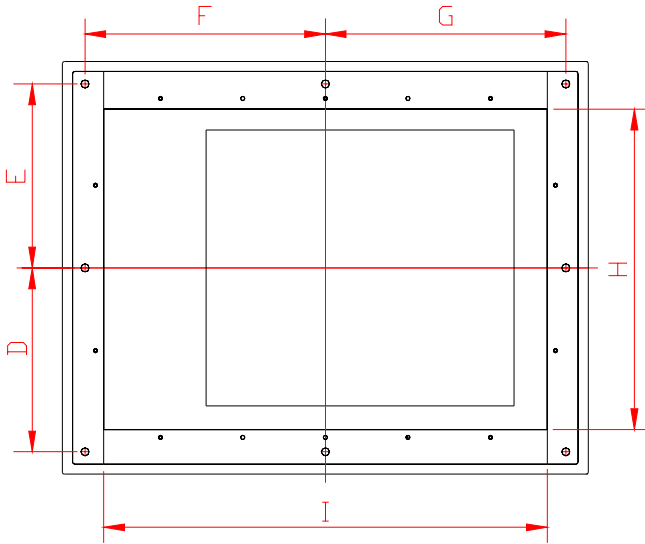
(1) Front view



	A	B
15.1"	508.0	398.0
12.1"	386.6	329.6
10.4"	378.6	315.6

(Unit: mm)

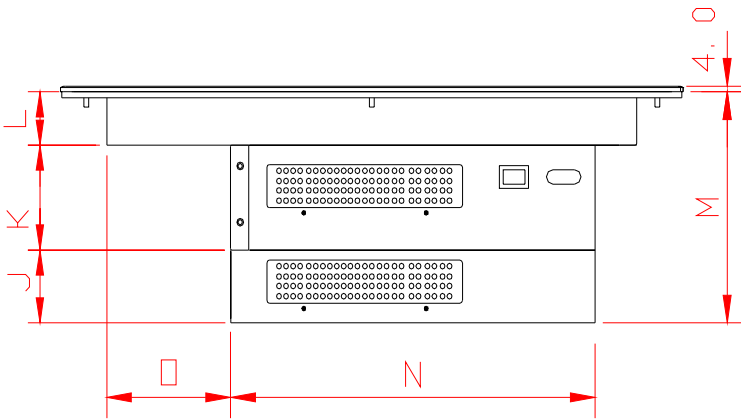
(2) Back view



	D	E	F	G	H	I
15.1"	178.0	178.0	233.0	233.0	312.0	430.0
12.1"	146.5	146.5	184.0	184.0	264.0	641.0
10.4"	139.4	139.5	171.0	171.0	240.0	315.0

(Unit: mm)

(3) Bottom view

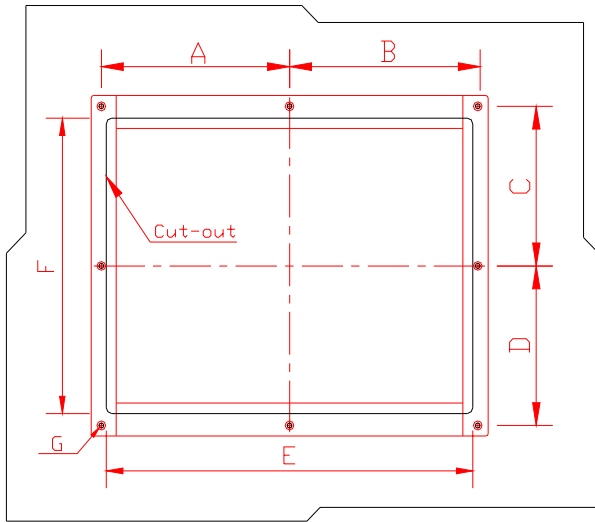


	J	K	L	M	N	O
15.1"	47.5	AC=91.0 DC=75.5	38.0	AC=176.5 DC=161.0	265.0	82.5
12.1"	47.5	AC=91.0 DC=75.5	38.0	AC=176.5 DC=161.0	265.0	63.0
10.4"	47.5	AC=91.0 DC=75.5	38.0	AC=176.5 DC=161.0	265.0	50.0

(Unit: mm)

Install TOP-2000 with aluminum frame in your system

Cut-out for a TOP-2000 with aluminum frame in your panel.

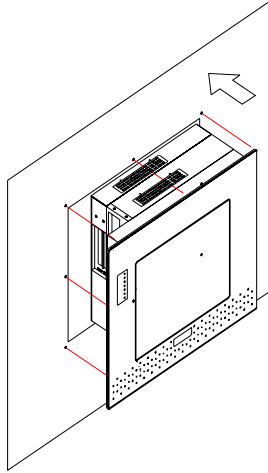


	A	B	C	D	E	F	G
15.1"	233.0	233.0	178.0	178.0	452.0	336.0	Φ4.5
12.1"	184.0	184.0	146.5	146.5	359.0	282.0	Φ4.5
10.4"	171.0	171.0	139.5	139.5	333.0	258.0	Φ4.5

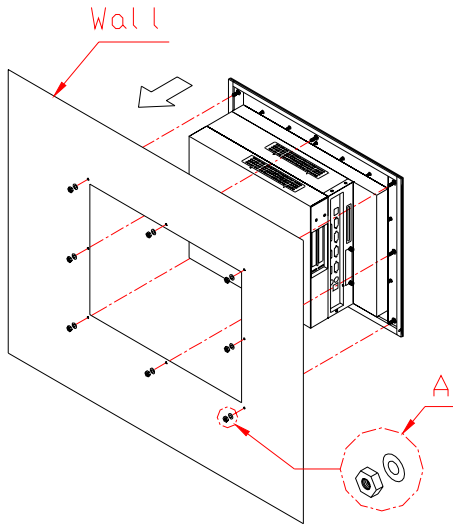
(Unit: mm)

Installation

(1)

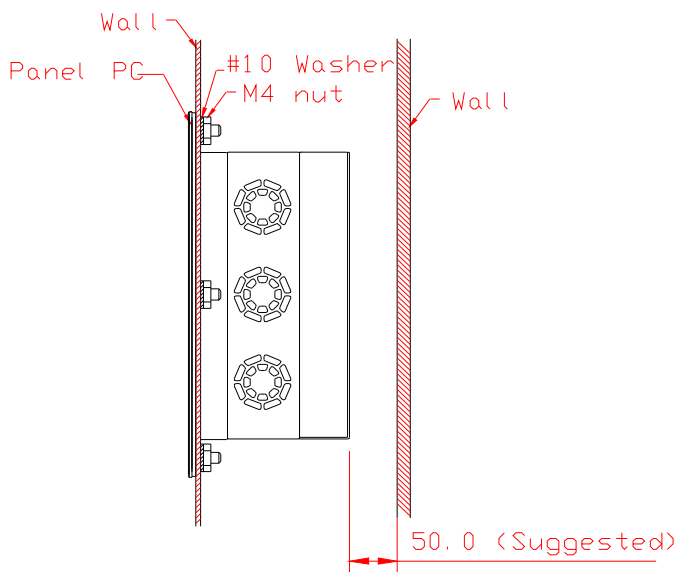


(2)



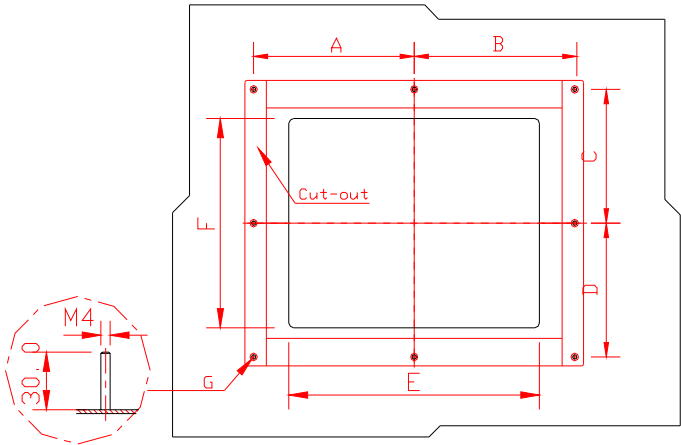
Comments

- A (1) #10 washer, M4 nut.
- (2) You can find them in the TOP-2000 accessory box.



Install TOP-2000 without aluminum frame (open frame) in your system

Cut-out for a TOP-2000 without aluminum frame (open frame) in your panel.



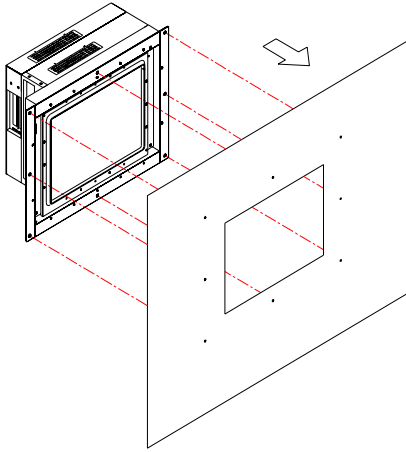
	A	B	C	D	E	F	G
15.1"	233.0	233.0	178.0	178.0	344.0	267.0	* M4x30
12.1"	184.0	184.0	146.5	146.5	283.0	230.0	M4x30
10.4"	171.0	171.0	139.5	139.5	248.0	195.0	M4x30

(Unit: mm)

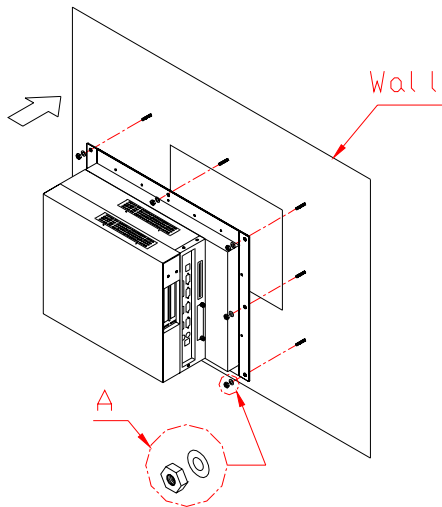
* To mount open frame TOP-2000, you need to plant M4x30 bolts with thread in the wall as shown in the cut-out drawing.

Installation

(1)

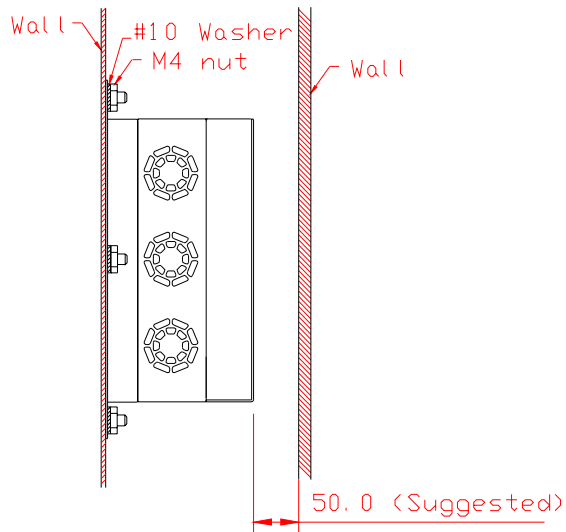


(2)

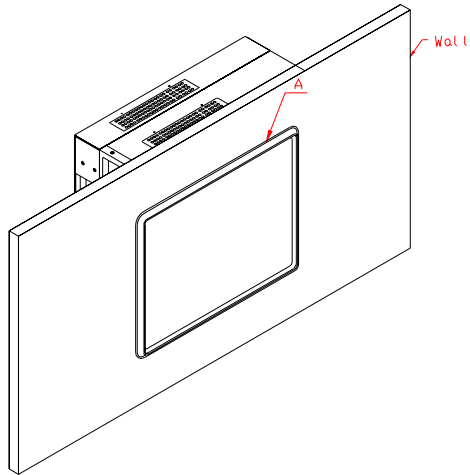


Comments	
A	(1) #10 washer, M4 nut. (2) You can find them in the TOP-2000 accessory box.

(3)



(4)



Comments	
A	The gap between TOP-2000 and wall must be sealed carefully to repel water and dust.