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TM Series

15.6" Wide

LCD Touchscreen Monitor

Model 「G」

Model 「H」

Product Specification

Model: TMG-156FH01-01

TMH-156FH01-01

DMC Co. Ltd.

<https://www.dush.co.jp/english/>

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Appendix: Outline drawings

▪ TMG-156FH01-01, TMH-156FH01-01

Drawing No. : SM3-002307-12

1. Summary

This is a touchscreen monitor equipped with 15.6" wide LCD touchscreen.

There are two type of touchscreens: analog resistive and projection capacitive.

Product will be referred to as TM herein

2. Product Model

Model	Specification			
	LCD size	Touchscreen type	Power Supply	USB HOST I/F*
TMG-156FH01-01	15.6" Wide	Projected capacitive type	HDMI	USB3.0Type-B (USB2.0Type-B can be connected also)
TMH-156FH01-01		Analog resistive type	HDMI	USB3.0Type-B (USB2.0Type-B can be connected also)

*Connect an USB cable when using as a touchscreen monitor.

3. Items Included in Package

The following items are included in the package:

- TM main unit 1unit

4. Option items

■AC Adaptor

Model	Specification
ATS065T-P120B15210	IN : 100~240VAC/50~60Hz AC INLET: C14 AC cord: included (3P) OUT : 12VDC 0~5A (60W) DC Plug : $\Phi 5.5 \times \Phi 2.1 \times 7.5$ mm with thread locks

※ Please prepare an AC cord that conforms to the standards specified for the country or region in which it will be used.

5. Specification

5-1 Function

Items			Specification	
			TMG-156FH01-01	TMH-156FH01-01
LCD	LCD Size		15.6inch Wide-size	
	Resolution		Full HD (1,920 (H) x1,080 (V) dot)	
	Display Area		344.16mm (W) ×193.59mm (H)	
	Pixel Pitch		0.17925mm (W) ×0.17925mm (H)	
	Color		Approx. 16.77million colors	
	View Angle (Typ.)	Vertical	178° (89°/89°)	
		Horizontal	178° (89°/89°)	
	Brightness (Typ.)		390 cd/m ²	340 cd/m ²
	Backlight Method		LED	
	Backlight Life (Typ.)		50,000 hours※1	
Input Signal	Digital		HDMI 1.3b	
	Maximum Input Resolution		Full HD (1,920 (H) x1,080 (V) dot)	
	Horizontal Scanning Cycle		30KHz - 80KHz	
	Vertical Scanning Cycle		50Hz – 60Hz	

※1 Time until surface brightness declines to 50% from the initial value at maximum brightness. (at ambient temperature of 25°C).

5-2 Touchscreen

5-2-1 Projected Capacitive

Items	Specification	
	TMG-156FH01-01	
Type	Projected Capacitive	
Input Method	Finger	
Maximum Simultaneous Input	5 points※1	
Operating Life	Continuous Typing (finger input): 50 million times	
Communication Method	USB	
Supporting OS※1	Microsoft® Windows® 10 (32bit/64bit) ※2	
	Microsoft® Windows® 11 (32bit/64bit) ※2	

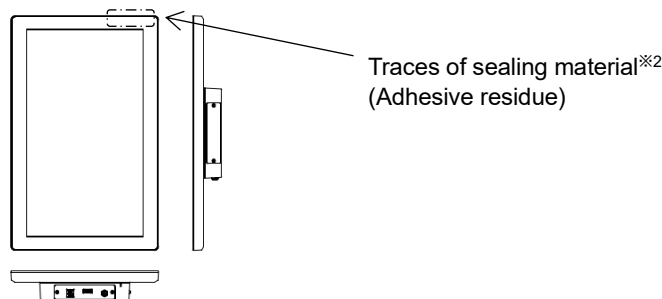
※1 Operation confirmed of gesture operation to 5 points.

※2 The standard Windows touchscreen driver can be used, but operations may become unstable depending on the environment installed. Please perform calibration according to the instructions in “Section 4.4 Calibration” in the Instruction Manual.

5-2-2 Analog Resistive

Items		Specification
		TMH-156FH01-01
Type		Analog Resistive
Input Method		Finger or R0.8 Polyacetal pen
Maximum Simultaneous Input		One point (Gesture supported)
Operating Life	Typing (Finger Input)	10 million times
	Character input (by pen)	100 thousand characters
Communication Method		USB
Supported OS※1		Microsoft® Windows® 10 (32bit/64bit)
		Microsoft® Windows® 11 (32bit/64bit)

※1 Dedicated driver installation required. Please refer to “Chapter 4 Touchscreen Setup Tool” in the Instruction Manual for details.



※2 Due to the structure of the touchscreen, sealing material may be visible at the edge (upper right corner viewed from the front) of the touchscreen.

Please refer to the Shipping Standards for details. (Please contact our sales representative).

5-3 Power

Items	Specification	
	TMG-156FH01-01	TMH-156FH01-01
Rated Voltage	12VDC	
Voltage Tolerance	12VDC±10%	
Power Consumption	25W or lower	
SG-FG Connection	SG (Signal GND) and FG (Frame GND) are connected inside the unit. FG is connected to the VESA mounting holes marked (■). Connect Field GND to the FG accordingly.	

5-4 Environment

Items	Specification	
	TMG-156FH01-01	TMH-156FH01-01
Ambient Operating Temperature (Inside of cabinet and display side)	0~40°C	
Ambient Storage Temperature	-10~60°C	
Ambient Operating Humidity	10%RH to 85%RH (Non-condensing, Wet bulb temperature is 39°C or less)	
Ambient Storage Humidity	10%RH to 85%RH (Non-condensing, Wet bulb temperature is 39°C or less)	
Corrosive Gas	Prohibited	
Dust	Prohibited	
Altitude Resistance (Operating Altitude)	800 to 1114hPa (Altitude of 2000m or lower)	
Vibration Resistance	5Hz to 9Hz Single amplitude: 3.5mm 9Hz to 150Hz Constant Accelerated Velocity 9.8m/s ² 10 times in each direction (X, Y, Z) (100minutes)	

5-5 Installation

Items	Specification	
	TMG-156FH01-01	TMH-156FH01-01
Installation	Standard installation: Vertical display installation Vertical and horizontal display installation can be changed. ※1	
Structure	VESA 100 x 100mm compliant (M4 screw, Dept 8mm at max)	
Body Color	Black	
Protective Structure	Equivalent to IP55(Display side only)※2	
Cooling Method	Natural Cooling	
External Dimension	390 (W) x 245 (H) x 48 (D) mm	
Weight	Approx. 2,900g	Approx. 2,700g

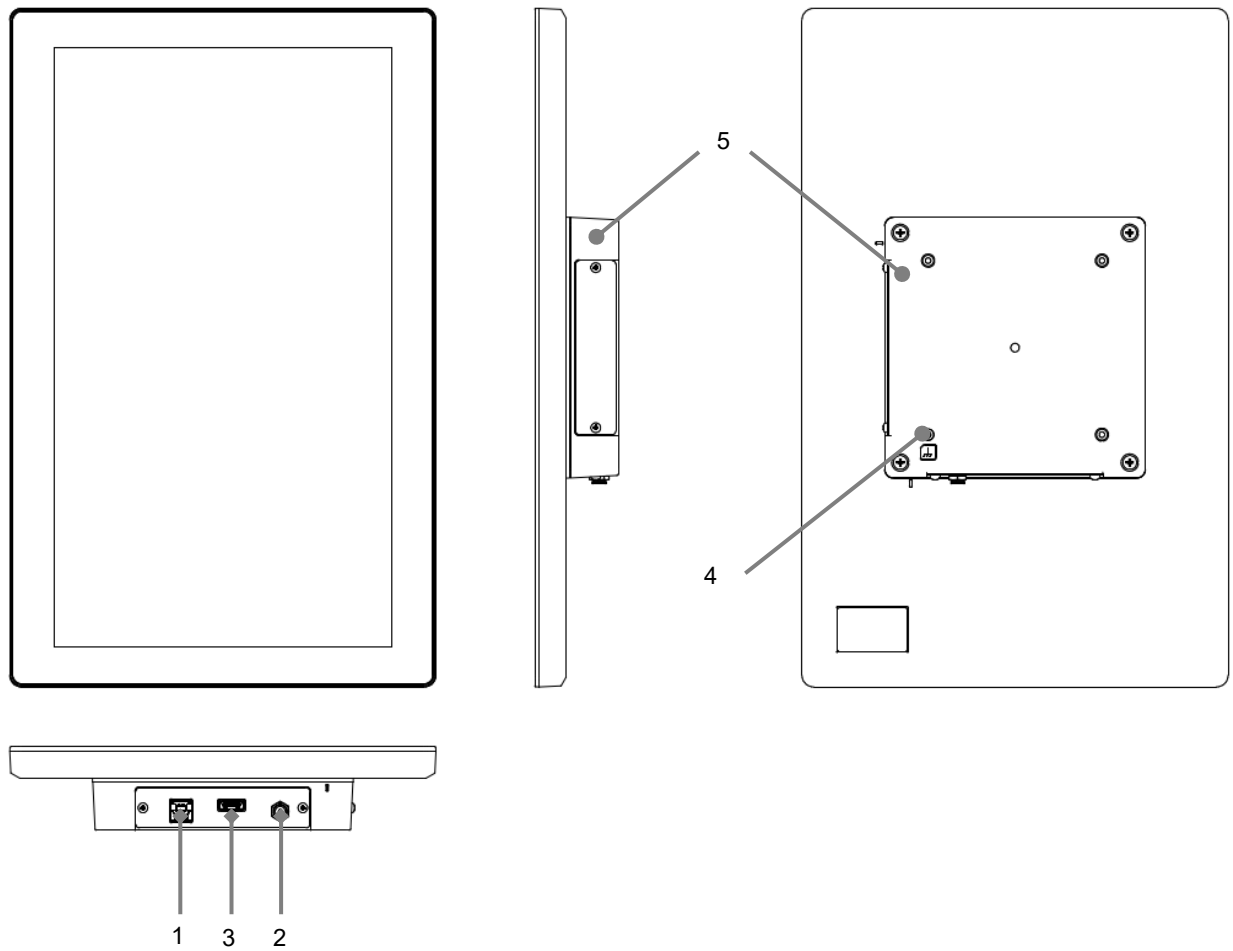
※1 By changing the mounting angle of the VESA box, the IF cable withdrawal direction can be changed freely.
(Angle: 90degrees)

※2 The VESA box and I/F cable are not drip-proof.

Operation is not guaranteed under all conditions of actual use.

5-6 Name of Each Parts

5-6-1 TMG-156FH01-01, TMH-156FH01-01

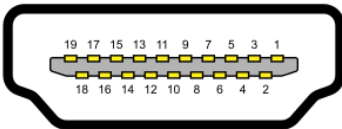


NO	Name	Function
1	USB interface	USB3.0 Standard Type-B connector (USB2.0 Type-B can be connected also)
2	Power Input	Input power (12VDC±10%)
3	Video input (Digital)	HDMI connector
4	FG terminal	Use to connect to Field GND
5	VESA box	Can be rotated by customer

6. External Interface

6-1 Image Input (Digital [HDMI])

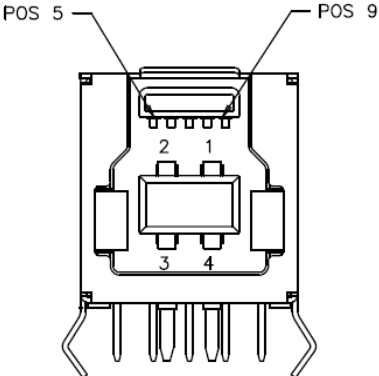
Interface: HDMI 1.3b

Schematic Diagram			
			
Pin	Signal	Pin	Signal
1	TMDS Data2+	2	TMDS Data2 Shield
3	TMDS Data2-	4	TMDS Data1+
5	TMDS Data1 Shield	6	TMDS Data1-
7	TMDS Data0+	8	TMDS Data0 Shield
9	TMDS Data0-	10	TMDS Clock+
11	TMDS Clock Shield	12	TMDS Clock-
13	CEC (NC)	14	Reserved
15	DDC Clock	16	DDC Data
17	DDC GND	18	+5V Power
19	Hot Plug Detect		

6-2 USB HOST I/F (Upstream)

Interface: USB3.0

Connector: USB3.0 Type-B

Schematic Diagram		
		
Pin	Signal	Description
1	VBUS (5V)	Power
2	D-	USB 2.0
3	D+	
4	GND	GND for power return
5	StdB_SSTX-	SuperSpeed transmitter
6	StdB_SSTX+	
7	GND_DRAIN	GND for signal return
8	StdB_SSRX-	SuperSpeed receiver
9	StdB_SSRX+	
10	Shield	

6-3 Power Input

Connector: DC Jack

Compliant Plug: Outer diameter $\varnothing 5.5$, inner diameter $\varnothing 2.1$

Pin	Signal	Schematic
+	+12V	
-	GND	

7. Main Functions

7-1 Multi-scanning

Image is automatically scaled to match the input resolution and the LCD display resolution.

However, the scaling of image to fit the resolution may cause distortion of the input image and/or collapsing of the text.

7-2 Support Timing

No	Resolution	Aspect Ratio	Refresh Rate
1	640×480p	4:3	60Hz
2	720×480p	4:3	60Hz
3	800×600p	4:3	56Hz
4	800×600p	4:3	60Hz
5	1024×768p	4:3	60Hz
6	1280×720p	16:9	60Hz
7	1280×960p	4:3	60Hz
8	1280×1024p	5:4	60Hz
9	1600×900p	16:9	60Hz
10	1600×1200p	4:3	60Hz
11	1680×1050p	16:10	60Hz
12	1920×1080p	16:9	60Hz

8. Installation

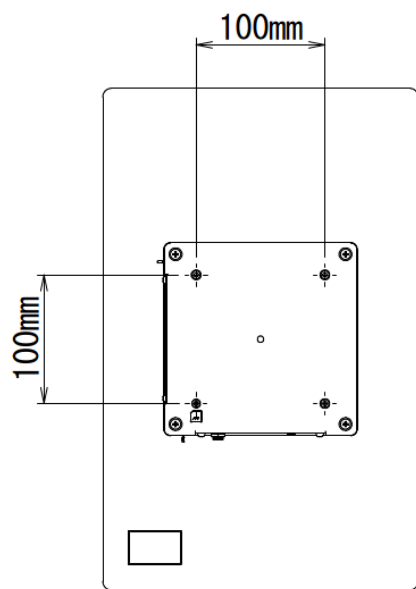
8-1 Mounting a “VESA Standard” Arm

Commercially available arms can be mounted

Please refer to the instruction manual of the arm for mounting instructions.

The dimensions of the mounting holes are as shown in the diagram below.

◆ VESA Standard 100mm×100mm



Fix with M4 screws. Torque range to tighten is 0.7 to 0.8N · m.

Select M4 screws so that the penetration depth is 8mm or less from the back side of the TM case

9. Compliant Standards

9-1 RoHS Directives

- TM is compliant to the EU RoHS Directives.
- Lead-free solder is used for mounting on printed wiring boards.

9-2 CE Marking

Compliant to the EU EMC Directives.

Compliant standards EMI: 61000-6-4 : 2019

EMS : 61000-6-2 : 2019

9-3 FCC

The FCC requires the following notes to be issued in accordance with the FCC guidelines.

Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the interference at their own expense.

Changes or modifications to this unit that are not expressly approved by DMC could void the user's authority to operate the equipment.

Industry Canada requires the following note to be published:

Note:

This Class A digital apparatus complies with Canadian CAN ICES-3 (A) /NMB-3 (A).

9-4 UL Certification

Compliant to the below UL certifications.

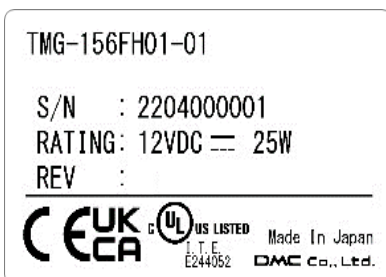
UL 62368-1, 2nd Ed, 2014-12-01

CAN/CSA C22.2 No. 62368-1-14, 2nd Ed-

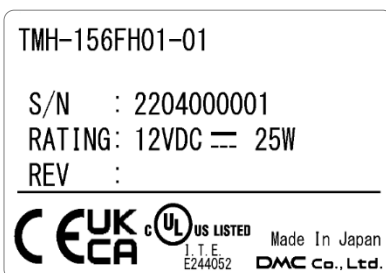
(Audio/video, information and communication technology equipment Part 1: Safety requirements)

10. Product Labels

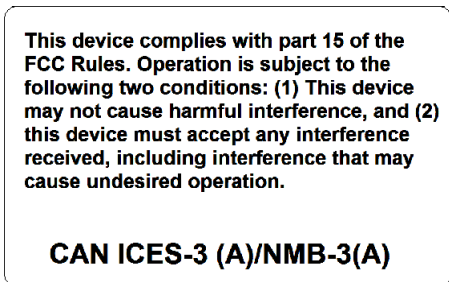
10-1 TMG-156FH01-01



10-2 TMH-156FH01-01

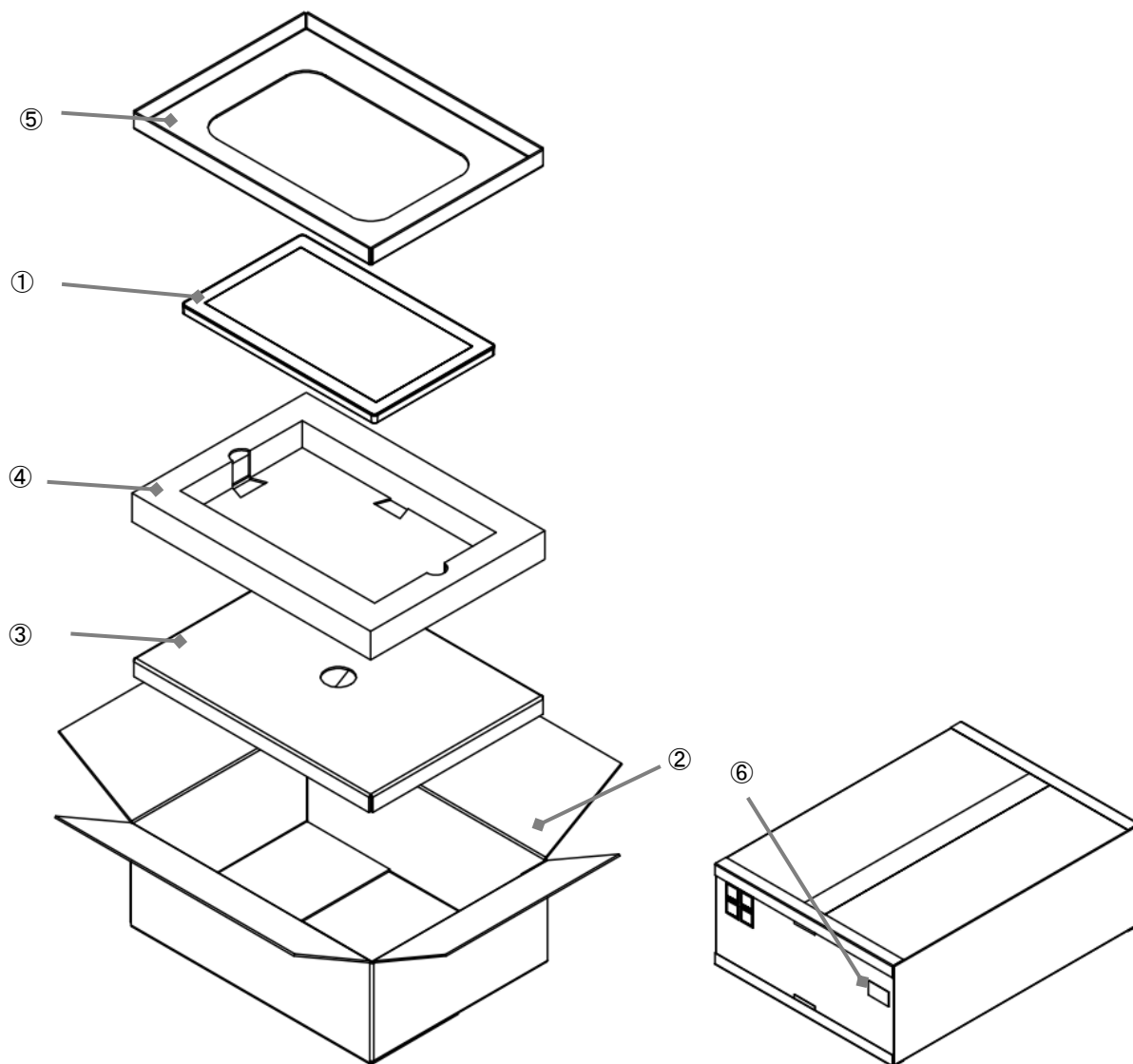


11. FCC Labels



12. Packaging

No.	Part Name	Qty
①	TMG (H) Main Unit (in anti-static bag)	1
②	Outer box (Dimensions: W490xD348xH170)	1
③	Bottom Pad	1
④	Center Pad	1
⑤	Top Pad	1
⑥	Packaging label (Model)	1



13. Warranty

The warranty period is limited to 12 months (1 year) from the date of shipment. Any defects that occur upon normal use under the conditions specified herein will be repaired (factory repair) free of charge. (Warranty for any repair needed to the same repaired part of the same product is three months.)

You will be liable for all repair fees even within the warranty period for any conditions listed below.

- (1) Any malfunctions, defects, and/or damages that occurred during transport, transfer, or mishandling by the user after delivery.
- (2) Any malfunctions, defects, and/or damages caused by natural or human-made disaster.
- (3) If the product is used under any condition, environment, or method other than those specified in the specifications, catalogs, manuals, notes, and/or other documents.
- (4) Any replacement of consumables.
- (5) Any malfunctions, defects, and/or damages caused by connected equipment and/or usage of inappropriate consumables and media.
- (6) If the product is repaired, remodeled, modified, or disassembled by a party other than DMC Co., Ltd, or if a serial number label cannot be verified.
- (7) Any failure, damage, or malfunction is deemed to be caused on your behalf.

This warranty covers only the product itself. Any damages, on-site repairs, and replacements driven by the failure of the product, will be decided upon discussion by both parties as necessary.

14. Production Discontinuance

In the event of production discontinuance, an announcement will be made six months prior to the last possible order reception date.

15. Others

If you have comments or questions, please feel free to contact us.

Office hours: 9:00a.m to 5:00 p.m. (JST)

(Except Saturdays, Sundays, national holidays, and year-end and New Year holidays)

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FAQ



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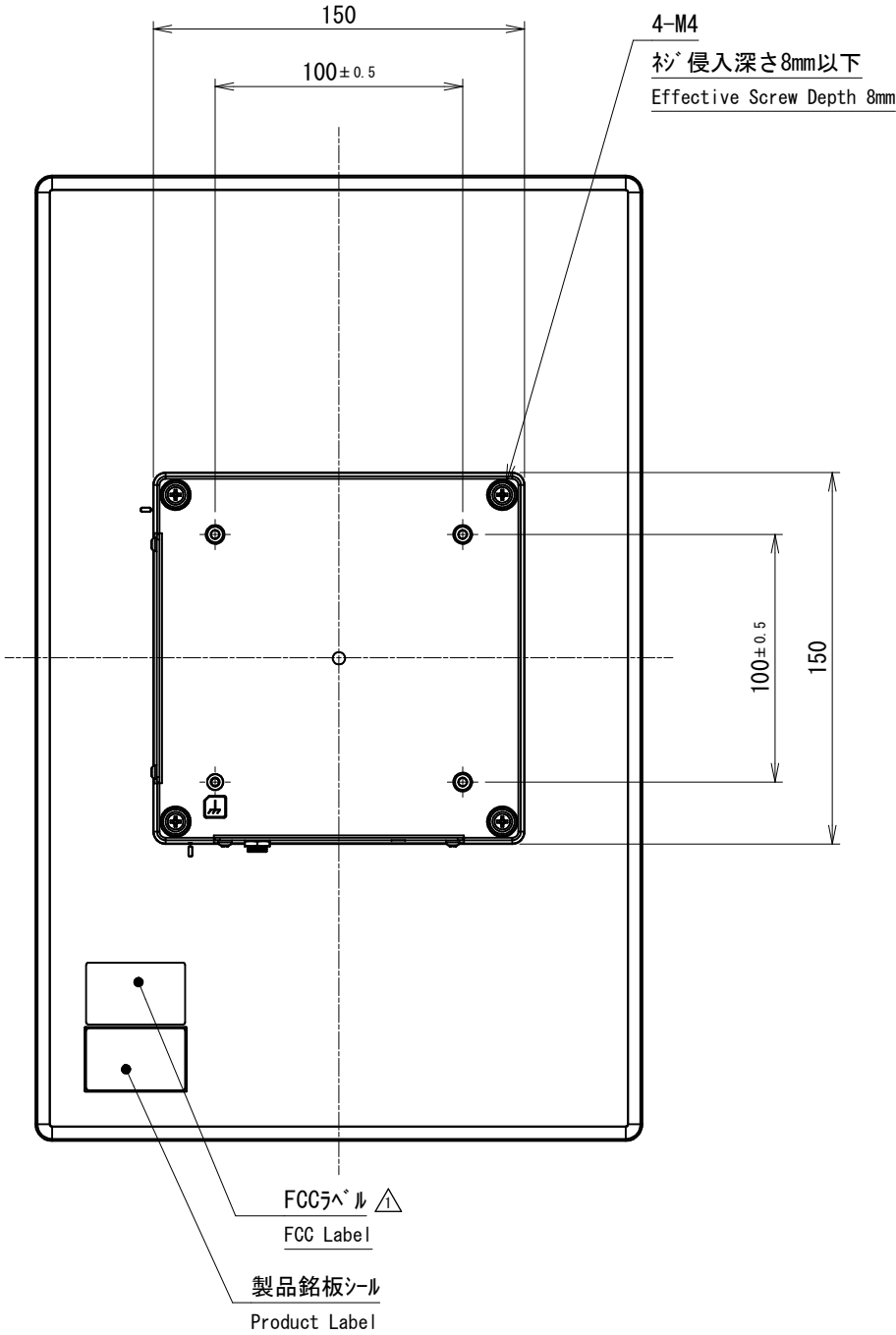
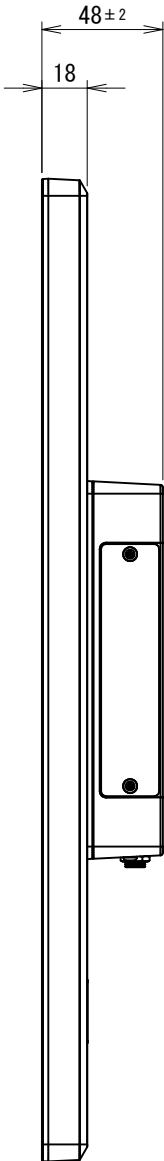
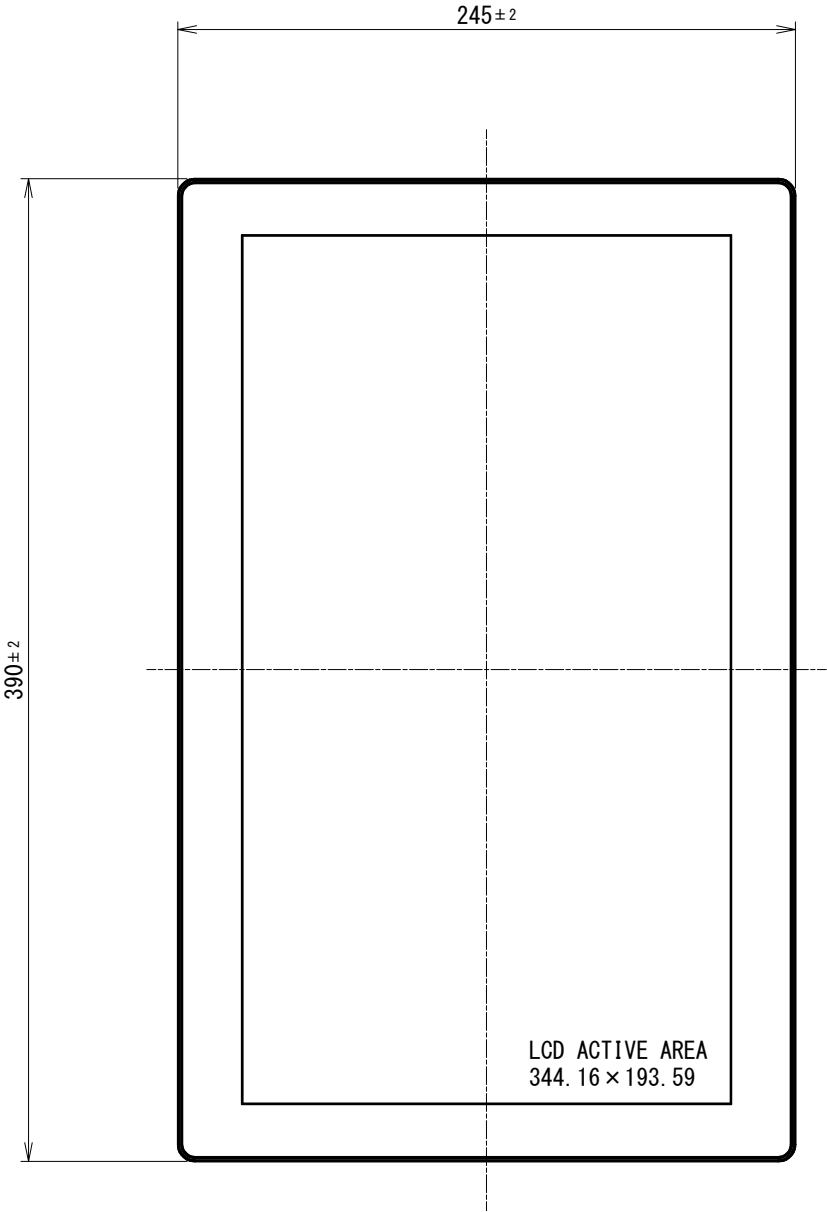
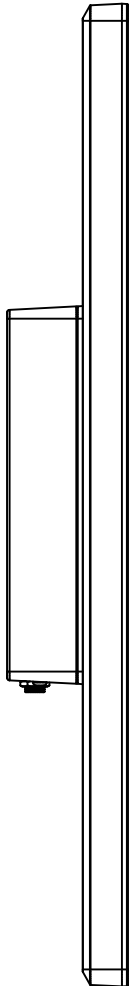
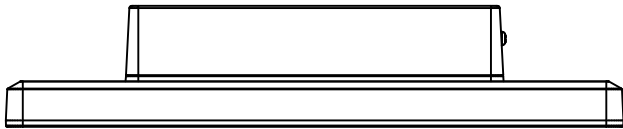
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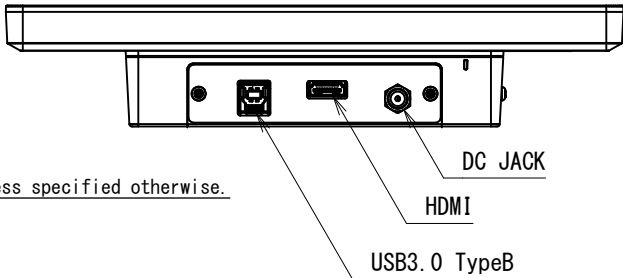
寸法公差表 (公差等級 IT15) Tolerance (Tolerance Class IT15)	
呼び寸法 Nominal Dimensions	
$L \leq 3$	± 0.4
$3 < L \leq 6$	± 0.48
$6 < L \leq 10$	± 0.58
$10 < L \leq 18$	± 0.7
$18 < L \leq 30$	± 0.84
$30 < L \leq 50$	± 1.0
$50 < L \leq 80$	± 1.2
$80 < L \leq 120$	± 1.4
$120 < L \leq 180$	± 1.6
$180 < L \leq 250$	± 1.85
$250 < L \leq 315$	± 2.1
$315 < L \leq 400$	± 2.3
$400 < L \leq 500$	± 2.5

SYM	改訂日 DATE	改訂内容 DESCRIPTION	ページ PAGE	担当 DESIGNED
	2022.04.22	新規図面登録 New Diagram Registration	—	S. Yoshimoto
△	2022.09.07	英語併記、FCCラベル追加 English added、FCC Label added	—	M. Mitani
△	2023.12.07	表題欄社名変更 Company name change in title block.	—	S. Takada



NOTES

- 指示なき寸法公差は一般寸法公差とする。
Tolerance shall be of general dimensional tolerance unless specified otherwise.
- 製品型式
投影型静電容量方式タッチパネルモジュール : TMG-156FH01-01
パワリ抵抗膜方式タッチパネルモジュール : TMH-156FH01-01
Product Model
Projected Capacitive Touchscreen Model : TMG-156FH01-01
Analog resistive Touchscreen Model : TMH-156FH01-01



製図日 ISSUED	2023, 12, 07		部署 SECTION	Technical Dept.		尺度 SCALE	CAD登録名 CAD FILE NAME	20K002_TMG(H)-156FH01-01_OUTLINE		RoHS対応品 RoHS compliant	
承認 APPROVED		検 図 CHECKED		製 図 DRAWN		設 計 DESIGNED		1 : 3		製品名 MODEL	
T. Okada		S. Yoshimoto		S. Takada		S. Takada		単 位 UNIT	TMG(H) -156FH01-01		
								mm	図 名 TITLE	OUTLINE	
DMC Co., Ltd.				A3				図 番 DWG No.	SM3-002307-12		