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Relevant Models: **GT2103, GT1020**

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Databank-**Technical Bulletin**

Information and precautions on replacing GOT1000 with GOT2000 (GT10 model → GT21 model)

Thank you for your continued support of Mitsubishi Graphic Operation Terminals (GOT).

We released the GOT2000 with high functions and performance as an alternative of the GOT1000 in September 2013. We highly recommend that you replace the GOT1000 with the GOT2000 for using new sophisticated features.

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1. Requests for customers

We released the GOT2000 with high functions and performance as an alternative of the GOT1000 in September 2013. We highly recommend that you replace the GOT1000 with the GOT2000 for using new sophisticated features.
For the replacement models, refer to "GT1020→ GT2103 Replacement model list" in Chapter 2 below.

2. Recommended replacement models

The recommended replacement for the GT1020-LB*** is its successor GT2103-PMB***. However, depending on usage conditions, another model maybe used. Examine your existing system and select a replacement model. During replacement, refer to the GT10 User's Manual JY997D24701.

GT1020→GT2103 Replacement model list

Used models (GOT1000)	Recommended replacement models (GOT2000)	Panel cutout compatibility	Use attachment	Cable compatibility	Use conversion cable
GT1020-LBD	GT2103-PMBDS	○	Not required	○	Not required
GT1020-LBDW					

3. Hardware specifications comparison

GT1020-LBD(W) and GT2103-PMBDS comparison

■: The same as that of GT1020

Item			Used models		Recommended replacement models
			GT1020-LBD	GT1020-LBDW	GT2103-PMBDS
Conformity standard			CE(EMC) and UL/cUL		←
Display section	Type		STN monochrome (white/black) liquid crystal		TFT monochrome (white/black) liquid crystal
	Screen size		3.7"		3.8"
	Resolution		160×64 dots (Horizontal format)		320×128 dots (Horizontal format)
	Display size		W86.4 (3.4) × H34.5 (1.35) [mm] (inch) (Horizontal format)		W89.0 (3.51) × H35.6 (1.41) [mm] (inch) (Horizontal format)
	Display character		16-dot standard font: 20 characters × 4 lines (Horizontal format)		16-dot standard font: 40 characters × 8 lines (Horizontal format)
	Display color		Monochrome (white/black)		Monochrome (white/black) 32 scales
	Display angle		Left/Right: 30 degrees, Top: 20 degrees, Bottom: 30 degrees (Horizontal format)		Nondisclosure
	Contrast adjustment		16-level adjustment		–
	Intensity of LCD only		200 [cd/m²] (in green)	300 [cd/m²] (in white)	Nondisclosure
	Intensity adjustment		–		32-level adjustment
	Life		Approx. 50000 h. (Time for display intensity to become 1/5 at operating ambient temperature of 25°C)		←
	Maximum number of screens that can be registered		1024 screens		←
Backlight	Color		LED with 3 available colors (green, red and orange) (no replacement required)	LED with 3 available colors (white, red and pink) (no replacement required)	5 colors LED (white, green, pink, orange and red) (Not replaceable)
	Simultaneous press		Status control (color, on/flashing/off) is available and screen save time setting can be set.		←
	Life		–		Approx. 50000 h (operating ambient temperature: 25°C, display intensity: 50%)
Touch panel	Method		Analog resistive film touch panel		←
	Number of touch keys		Maximum 50 keys/screen		←
	Key size		Minimum 2 × 2 dots (per key)		←
	Simultaneous press		Not supported		←
	Life		1 million times or more (operating force 0.98N max.)		←
Memory	User memory		Built-in flash memory (512 kB or less)		Built-in flash memory (3 MB or less)
	Life (Number of write times)		100000 times		←
Battery	Type		–		–
	Backed up data		–		–
	Life		–		–
Built-in interface	RS-422/485 (Combination)	Specifications	1 channel Connector shape: Connector terminal block 9 pins Application: PLC communication Terminating resistor: Open/110Ω/330Ω (Switched by terminating resistor selector switch)		←
		Cables	GT10-C[][][]R4-8P		←
	RS-232	Specifications	1 channel Connector shape: MINI DIN 6 pins (Female) Description: For connecting a personal computer, a barcode reader, or a serial printer.		1 channel Connector shape: MINI DIN 6 pins (Female) Description: For connecting a personal computer (Only the FA transparent function can be used. This cable cannot be used to transfer screen or OS data.), a barcode reader, or a serial printer.
		Cables	GT10-C[][][]R2-6P		←
	USB (Device)		Option GT10-RS2TUSB-5S needs to be equipped.		1 channel, maximum transfer rate: Full-Speed 12 Mbps Connector shape: USB Mini-B
	Memory loader		The separately sold GT10-LDR		The separately sold SD card unit (GT21-03SDCD) is required. SDHC card supported (max. 32 GB)
Buzzer output			Single tone (LONG/ SHORT/ OFF adjustable)		←
Protective structure			Equivalent to IP67 (JEM1030) (front section)		←
External dimensions			W113 (4.44) × H74 (2.91) × D27 (1.06) [mm] (inch) (Excluding mounting fixtures) (Horizontal format)		←
Panel cutting dimensions			W105 (4.13) × H66 (2.59) [mm] (inch) (Horizontal format)		←
Weight			0.2 kg (Excluding mounting fixtures)		←
Compatible software package			GT Designer2 Version 2.35V or later/ GT Designer3 Version 1.00A or later	GT Designer2 Version 2.55V or later/ GT Designer3 Version 1.00A or later	GT Designer3 Version 1.112S or later
Orientation			Horizontal or vertical		←
Product installation spacing			p6 reference		←
Installation Position			p6 reference		←
Power consumption	Backlight ON		1.9 W or less		←
	Backlight OFF		1.2 W or less		1.3 W or less
OS			Installed before shipment		Installed by user

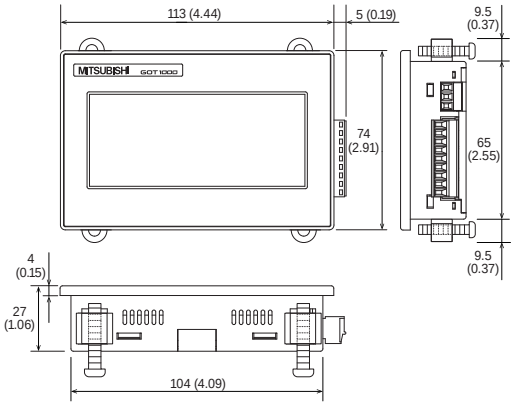
4. Software specifications comparison

GT1020 and GT2103 comparison

Used models				Recommended replacement models	Precaution during replacement
GT1020				GT2103	
Common setting	GOT environmental setting	'System security setting'	→	'Functional operation security' 'Data transfer security'	System security setting in GOT1000 becomes 'functional operation security' and 'data transfer security' in GOT2000.
	Comment	Basic comment	→	Comment group No. 256	Basic comment in GOT1000 becomes comment group No. 256 in GOT2000.
	Hard Copy	Abort trigger watch cycle	→	No setting (ordinary watch cycle)	Abort trigger watch cycle in GOT1000 does not exist in GOT2000. It operates as ordinary watch cycle.
	Alarm	Alarm history	→	User alarm observation (historical mode)	Alarm history in GOT1000 becomes user alarm observation (historical mode) in GOT2000.
		Alarm flow	→	Alarm popup display Flow	Alarm flow in GT1020 was changed to alarm popup display (flow) in GT2103.
	Recipe	Use a recipe file (read and write) Checkbox for 'Create a recipe file with the value set in this dialog if a recipe file is not available at the time of startup'	→	Record attribute 'Not to set the device value'	Checkbox for 'Create a recipe file with the value set in this dialog if a recipe file is not available at the time of startup' in GOT1000 becomes record attribute 'Not to set the device value' equivalent setting in GOT2000. If unchecked in GT1020, set check in GT2103.
	Status observation	Status observation	→	Trigger action	Status observation in GOT1000 becomes trigger action in GOT2000.
	GOT environmental setting	Startup logo	→	Startup logo	Startup logo is not automatically enlarged to fit new resolution.
Screen property	Backlight color	・Green/Red/Orange ・White/Red/Orange	→	・Green/Orange/ White/Pink/Red	Backlight colors were different depending on model in GT1020, but GT2103 has 5 backlight colors. When converting GT1020 project, select 'Green/Red/Orange' or 'White/Red/Pink' backlight color in the type setting window.
		Startup logo	→	Startup logo	GT2103 startup logo is displayed on white backlight (fixed). It does not display in green.
Object	Numerical input	Adjust decimal point range Input case	→	Adjust decimal point range Input case	If real number display format, adjust decimal point range, and display case settings were made for data type other than real number in GT1020, display case setting must be remade in GT2103. GT1020 checks the range of the actual input value. GT2103 checks the range of the value displayed on the screen. Example: Setting the display case as 0 to 100 In the case of 2 decimal points, <GT1020> Input display case setting: 0 to 1000 <GT2103> Input display case setting: remake setting as 0 to 100 required
	Numerical input Numerical display	Operation	→	Operation	If real number display format setting is made for data type other than real number in GT1020, GT1020 rounds down after the decimal point the result of division or any operation with decimal points. For the same settings in GT2103, decimal points are displayed. Decimal point processing (round off, round down, round up) setting can be made. After project conversion, this setting becomes round off. Example: ・Device type: BIN16 ・Format: Real ・Decimal points: 1 ・Operation: Monitor device (expression) $$/100 ・Input value: 156 <GT1020> Monitor value: 1.0 <GT2103> Round off: 1.6, Round down: 1.5, Round up: 1.6

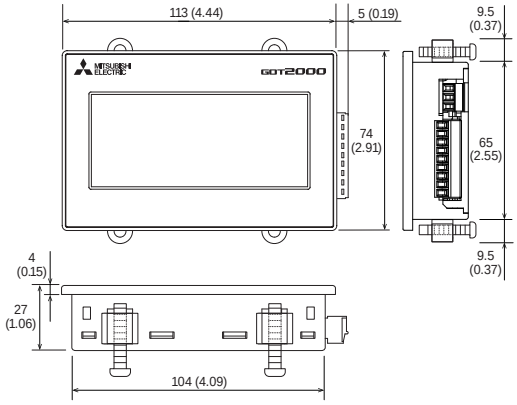
5. External dimensions comparison

■**GT1020 (GOT1000)**



■**GT2103 (GOT2000)**

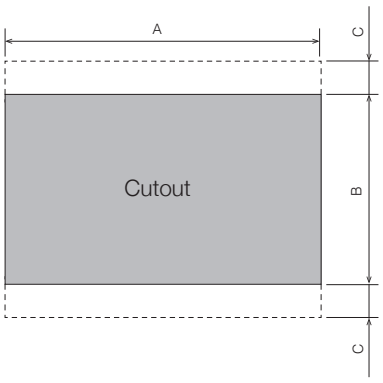
Unit: mm (inch)



6. Panel cutout dimensions comparison

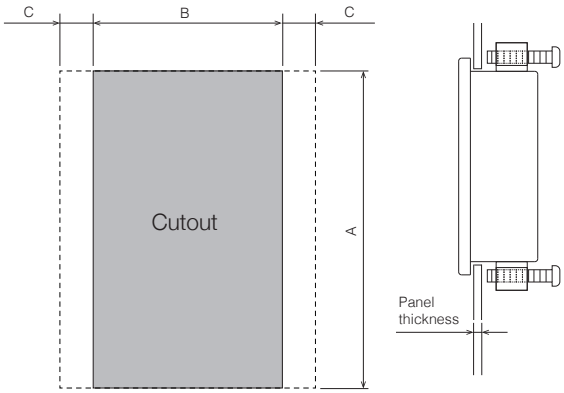
Make holes in the panel according to the dimensions below. Space at the top and bottom is required for mounting fixtures. There is no difference in the cutout dimensions between GT1020 and GT2103.

■**Horizontal**



■**Vertical**

Unit: mm (inch)



	Used models	Recommended replacement models
	GT1020 (GOT1000)	GT2103 (GOT2000)
A	105 (4.13) $^{+1(0.03)}_{0(0)}$	
B	66 (2.59) $^{+1(0.04)}_{0(0)}$	
C	13 (0.51) or more	
Panel thickness	Within 1 (0.03) to 4 (0.15)	

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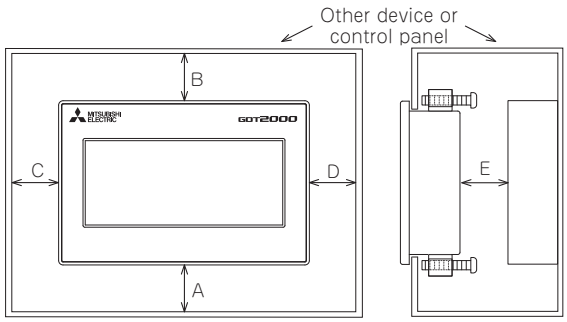
7. Product installation spacing

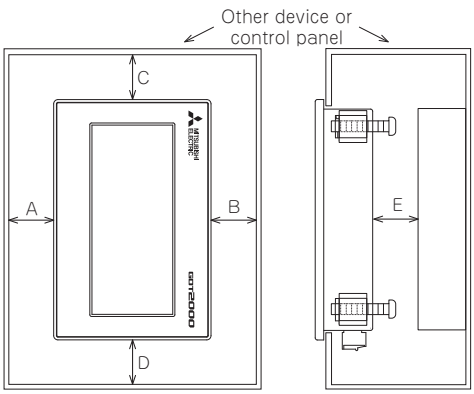
When mounting the GOT, clearances in the diagram below must be maintained from other structures and devices. Take the connector dimensions and bending radius of the cable into account.
Dimensions in parentheses in the table below are applicable in the case of no radiated-noise or heat-generating equipment nearby.

Unit: mm (inch)

■Horizontal



■Vertical



		Used models	Recommended replacement models
		GT1020 (GOT1000)	GT2103 (GOT2000)
A		50 (1.97) or more (20 (0.79) or more*2)	50 (1.97) or more (20 (0.79) or more)
B		50 (1.97) or more (20 (0.79) or more)	50 (1.97) or more (20 (0.79) or more)
C	When the SD card is used	–	50 (1.97) or more
	When the SD card is not used	50 (1.97) or more (20 (0.79) or more)	50 (1.97) or more (20 (0.79) or more)
D		50 (1.97) or more	50 (1.97) or more
E*1		80 (3.15) or more (20 (0.79) or more*3)	80 (3.15) or more (20 (0.79) or more)

*1: When an RS-232 cable or a personal computer connection cable is connected to GT2103-PMBDS: 80 mm (3.15) or more.
*2: 50 mm (1.97) or more if an RS-232/USB conversion adapter is used.
*3: 80 mm (3.15) or more if a PC connection cable is used or if an RS-232 interface for PC is used to connect multiple GOT units.
50 mm (1.97) or more if an RS-232/USB conversion adapter is used and is connected to the RS-232 interface for PC.

8. Caution on replacing the project data

To write project data into the recommended replacement GT2103-PMB***, GT Designer3 Version 1.112S or later included in GT Works3 is required. No changes to the project data are required.

9. Others

Product size and panel cutout dimensions are the same, so GT1020 options (communication cable, battery, protective cover for oil, SD card, extended USB waterproof cable and serial multi-drop connection unit) can be used.

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Revised History

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Mar. 2015	A	First Edition

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