**GT2104-RTBD**

**GT21 General Description**

This manual describes the product features, dimensions, mounting, and specifications of the product. Before using this manual, be sure to read all of the instructions and safety precautions. This manual is intended for use by authorized electricians, persons responsible for installing and servicing the equipment, and those responsible for managing and maintaining the equipment. Special care must be taken when using the product to prevent accidents or equipment malfunctions.

**Safety Precautions** (Read these precautions before using.)

Before using the product, please read the manual and the relevant instructions introduced in this manual carefully and pay full attention to safety to handle the product properly.

*Note that proper handling is essential to ensure the product's safe and effective operation.*

**Warning**

- Improper use, such as using the product for a purpose other than the specified purpose, may cause fatal accidents. The user must ensure that the product is used within its specified range and that it is not subject to any conditions that may cause a failure or malfunction. If any non-conformities are found, cease use immediately.

- Be sure to read the manuals that came with the product before it is put into use. Failure to do so may result in an accident.

- Use only the accessories that came with the product. If any non-conformities are found, cease use immediately.

**Notice**

- Use only the accessories that came with the product. If any non-conformities are found, cease use immediately.

**CAUTION**

- Improper use, such as using the product for a purpose other than the specified purpose, may cause fatal accidents. The user must ensure that the product is used within its specified range and that it is not subject to any conditions that may cause a failure or malfunction. If any non-conformities are found, cease use immediately.

- Be sure to read the manuals that came with the product before it is put into use. Failure to do so may result in an accident.

- Use only the accessories that came with the product. If any non-conformities are found, cease use immediately.

**Important**

- Improper use, such as using the product for a purpose other than the specified purpose, may cause fatal accidents. The user must ensure that the product is used within its specified range and that it is not subject to any conditions that may cause a failure or malfunction. If any non-conformities are found, cease use immediately.

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**Mark**

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- Be sure to read the manuals that came with the product before it is put into use. Failure to do so may result in an accident.

- Use only the accessories that came with the product. If any non-conformities are found, cease use immediately.

1. **GOT Series User's Manual Specifications**

1.1 General Specifications

### Interface Specifications

#### Operation panel

- Display
  - Dots: 212 × 168 dots
  - Color: 65,536 colors
  - Display contrast: 100% (steady state) / 150% (under backlight off)

- Resolution
  - X-axis: 212 dots
  - Y-axis: 168 dots

#### Built-in interface

- Serial interface
  - Data rate: 115,200 bps (max)
  - Format: 7-bit UART
  - Parity: None

- Ethernet interface
  - Data rate: 10/100 Mbps
  - Medium: Cat5e or higher

- USB interface
  - Data rate: 480 Mbps
  - Connectors: Type A

#### Power consumption

- Under continuous display operation: 3.7 W
- Under the backlight off: 2.9 W

### Appearance

- Dimension: 118(4.65) (W) × 92(3.63) (H) mm

### Key specifications

- Display resolution: 34.0 dots/mm (X-axis) × 24.7 dots/mm (Y-axis)
- Number of characters: 30 characters × 17 lines (two-byte characters)
- Displayed characters: 16-dot standard font
- Key size: Minimum 2 × 2 dots per key
- Key position: 4 keys per row
- Number of keys: 9 keys
- Display: 4-line, 40-character display
- LED indicators: 6 LED indicators
- Power indicator: LED indicator

### Physical specifications

- Weight: 230 g
- Dimension: 118.0 × 92.0 × 32.0 mm

### Environmental conditions

- Operating ambient temperature
  - Temperature: 0°C to 50°C

- Storage ambient temperature
  - Temperature: -20°C to 60°C

- Operating ambient humidity
  - Humidity: 10% RH to 90% RH, non-condensing

- Storage ambient humidity
  - Humidity: 10% RH to 90% RH, non-condensing

### Power consumption

- Under continuous display operation: 3.7 W
- Under the backlight off: 2.9 W

### Rated voltage

- 10 to 30 V DC

### Compliance with regulations

- CE Marking: Conforms to the following regulations:
  - DIRECTIVE 2014/35/EU: Electromagnetic compatibility directive
  - DIRECTIVE 2014/30/EU: Low Voltage directive
  - DIRECTIVE 2014/53/EU: RoHS directive
  - DIRECTIVE 2009/125/EC: Energy-related Products directive

2. **Wiring of connection cable**

- When connecting the GOT to the RS-232 interface, connect the D-sub connector to the other device's D-sub connector. Make sure that the key positions and pin assignments match up correctly.

- When connecting the GOT to the RS-485 interface, connect the RS-485 connector to the other device's RS-485 connector. Make sure that the key positions and pin assignments match up correctly.

- When connecting the GOT to the Ethernet interface, connect the Ethernet connector to the other device's Ethernet connector. Make sure that the key positions and pin assignments match up correctly.

3. **Operation panel maintenance**

- Before performing maintenance, be sure to turn off the power supply to the GOT and disconnect the power supply cable.

- When cleaning the GOT, use a soft, dry cloth to wipe down the surface. Do not use harsh chemicals or solvents.

- If any non-conformities are found, cease use immediately.

- Before starting cleaning or terminal screw retightening, always switch off the power supply to the GOT.

- When disposing of this product, treat it as industrial waste.

- Before removing the SD card from the GOT, follow the procedure for removal on the GOT. Failure to do so may result in an electric shock, product damage or malfunction.

- When the GOT is connected to the Ethernet network, the available IP address is 192.168.3.18 for the controllers except the GOT in the network.

- Before removing the SD card from the GOT, follow the procedure for removal on the GOT. Failure to do so may result in an electric shock, product damage or malfunction.

- Do not bundle the control and communication cables with main-circuit, power or control cables, or a single wire directly, or use a rod terminal with an insulation sleeve.

- Keep away from children. Do not disassemble and do not dispose of in fire.

- Before using the product, be sure to read the instruction manuals. For details of CE marking, refer to the following.


**Related Manuals**


2.4 **Power Supply Specifications**

### General specifications

- Voltage: 10 to 30 V DC
- Current consumption: 0.5 A

### Appearance

- Dimension: 118.0 × 92.0 × 32.0 mm

### Environmental conditions

- Operating ambient temperature
  - Temperature: 0°C to 50°C

- Storage ambient temperature
  - Temperature: -20°C to 60°C

### Compliance with regulations

- CE Marking: Conforms to the following regulations:
  - DIRECTIVE 2014/35/EU: Electromagnetic compatibility directive
  - DIRECTIVE 2014/30/EU: Low Voltage directive
  - DIRECTIVE 2014/53/EU: RoHS directive
  - DIRECTIVE 2009/125/EC: Energy-related Products directive

**For Safe Use**

- This product has been manufactured as a general-purpose product for general industrial products, and has not been designed or manufactured for use in equipment or a system where failure can cause loss of human life or serious injury or damage to property. Therefore, the user shall ensure that this product is used under conditions that suitably limit the risk of injury to persons or damage to property. This product is not designed or manufactured for use in equipment or a system where failure can cause loss of human life or serious injury or damage to property. Therefore, the user shall ensure that this product is used under conditions that suitably limit the risk of injury to persons or damage to property.

1.1 General Specifications

1.1.1 Dimensions

- Width: 95.0 mm (3.75"")
- Height: 53.8 mm (2.12"")
- Depth: 18.5 mm (0.73"")

1.1.2 Weight

- Approximately 200 grams

1.1.3 Power Consumption

- 4.4 W maximum

1.1.4 Environment

- Temperature rating: more than 70°C
- Humidity rating: 90% or less (non-condensing)
- Altitude rating: up to 2,000 meters

1.1.5 Display

- 12-dot standard font: 40 characters × 22 lines (two-byte characters)
- 12-dot large font: 80 characters × 22 lines (two-byte characters)

1.1.6 Communication Interfaces

- RS-232C (D-sub 9-pin)
- Ethernet (RJ-45 block)
- USB (4-pin)

1.1.7 Other

- Temperature coefficient: ±0.02% per °C
- Power supply: DC 24 V ±10%
- Display color: RDB (red, blue, green), Yellow, Black

1.2 Performance Specifications

- Resolution: 1280 × 720 pixels
- Brightness: more than 1,000 nits
- Contrast: more than 1000:1

1.3 Power Supply Specifications

- Instantaneous current consumption: 0.2 A maximum
- Average consumption: 0.1 A maximum

2. Wiring of connection cable


3. Certification of UL, cUL standards

- This product has been manufactured in compliance with the relevant standards and tests for electromagnetic compatibility (EMC), safety, and other relevant regulations. For detailed information, please refer to the Got2000 Series User's Manual.
GT2104-RTBD

GT21 General Description

This manual describes the precautions, dimensions, mounting, and specifications of the product. Before using the manual and manuals of relevant products, fully read through all the sections to ensure proper handling and use.

The content of this manual is composed of the English, Chinese, and Japanese versions. For the Chinese and Japanese versions, refer to the corresponding manuals provided by Mitsubishi Electric Corporation.

The precautions given in this manual are concerned with this product. And, store this manual in a safe place so that you can take it out and read it when necessary.

Shock-resistant
Compliant with JIS B3502 and IEC61131-2 147m/s² (15G)
Three times in each X, Y, or Z direction

Installation location
Inside control panel

Display section
*1*2

Vibration resistance
Life (number of write times) 100,000 times

User memory capacity

嵯 comedian

Power supply specifications

12VDC (optional)

2. Wiring of connection cable

GT2104-RTBD is specified for connection with the GOT port.

For details, refer to GT2100 Series Connection Manual

For more details please contact your local Mitsubishi Electric sales site.

For safe use

This product has been manufactured as a general-purpose product for general industrial purposes, and has not been designated or approved for use in environments where high reliability, precision, or safety are required. Furthermore, the product has not been manufactured under strict quality control. Therefore, this product is not suitable for use in environments where high reliability, precision, or safety are required. Use the product only for industrial applications.

For details, refer to the GT2100 Series User's Manual (Hardware).
GT21概述

1. 规格

- 使用环境湿度：10%RH~90%RH，无凝露
- 使用环境温度（带电池）：0~55℃（水平放置）、0~50℃（垂直放置）
- 使用海拔：2000m以下
- 电池：GT11-50BAT锂电池
- 用户存储器容量：存储用存储卡（ROM）：9MB
- 触摸屏：使用后可能会有闪烁现象

2. 连接电缆

- 电缆：GT10-C□□□R4-8P、GT10-C□□□R4-25P、GT10-C30R2-6P
- LAN（WAN）：1ch
- 串行通讯：Baudrate：9600~115200bps
- USB（设备）：1ch
- 以太网：1ch

3. 电源

- 电源电压：DC24V（±10%、-15%）
- 耗电量：最大负载时4.4W以下
- 频率磁场：EMI对应所有相关联标准

4. 性能规格

- 冲击电流：18A以下（2ms，环境温度25℃，最大负载时）
- 背景灯熄灭时：2.9W
- 冷却方式：自冷
- 过电压类别：IEC 61131-2：2007，Ⅱ以下
- 抗振：适用JIS B 3502
- 寿命：100万次以上（操作力度0.98N以下）

5. 配线注意事项

- 请勿将控制线及通讯电缆与主电路及动力线等捆扎在一起或相互靠得太近。应相隔10cm以上。
- 请勿使产品掉落或受到强烈撞击。否则可能造成模块损坏。
- 请勿在显示屏上同时按压2点以上。按压点的中心附近有开关，该开关将可能动作。请勿在显示屏上同时按压2点以上。

6. 产品中有害物质的名称及含量

<table>
<thead>
<tr>
<th>部件名称</th>
<th>有害物质</th>
<th>环境</th>
<th>含量</th>
<th>部件名称</th>
<th>有害物质</th>
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<th>含量</th>
</tr>
</thead>
<tbody>
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<td>铅(63)，汞</td>
<td>否</td>
<td>否</td>
<td>外壳</td>
<td>铅(63)，汞</td>
<td>否</td>
<td>否</td>
</tr>
</tbody>
</table>

7. 标识

- 含有有害物质的名称及含量：
  - 有害物质名称及含量：
  - 有害物质名称及含量：

8. 随机配件

- 各产品均随附以下配件：
  - GT2104-RTBD GOT主机（以下配件随主机附送）
  - 操作手册
  - 产品说明单
  - 质量保证书

9. 产品中有害物质限制使用标志

「电器电子产品有害物质限制使用标识要求」的表示方式

- 产品中有害物质限制使用标识要求：
  - ×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限制要求。
  - ○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限制要求内。

10. 安全使用注意事项

- 安全使用注意事项：
  - 使用前请务必仔细阅读。
  - 使用时请将保护膜揭下。如果不揭下就使用，日后可能无法将其揭下。

11. 确认对话框后，再用手抵住SD卡将其取出。否则可能会因为脱落而导致SD卡损坏或数据丢失。

12. 如果螺栓拧得过紧，有可能导致螺栓及产品损坏而导致脱落、短路、误动作。

13. 如果端子螺栓拧得过松，有可能导致短路、误动作。如果端子螺栓拧得过紧，有可能导

14. 请勿将控制线及通讯电缆与主电路及动力线等捆扎在一起或相互靠得太近。应相隔10cm以上。

15. 安全使用注意事项

- 安全使用注意事项：
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  - 使用时请将保护膜揭下。如果不揭下就使用，日后可能无法将其揭下。

16. 请勿将控制线及通讯电缆与主电路及动力线等捆扎在一起或相互靠得太近。应相隔10cm以上。

17. 安全使用注意事项

- 安全使用注意事项：
  - 使用前请务必仔细阅读。
  - 使用时请将保护膜揭下。如果不揭下就使用，日后可能无法将其揭下。
手册编号（型号代码）
规格
在本手册中，用“警告”和“注意”对安全注意事项进行等级区分。
本手册中所述注意事项仅为本产品直接相关内容。
为安全事宜，正确使用。

1.1 一般规格
项目
规格
使用环境湿度 10%RH~90%RH，无凝露*2
内置接口
电池 GT11-50BAT 锂电池
使用环境温度*1 0~55℃（水平放置），0~50℃（垂直放置）
保存环境湿度 10%RH~90%RH，无凝露*2
使用环境 无油烟、腐蚀性气体、可燃性气体，一般尘埃不严重
蜂鸣器输出 单音（音长可调整）
抗冲击 适用JIS B 3502、IEC 61131-2 147 m/s²（X、Y、Z方向各3次）
接地 以接地电阻100Ω以下，接地线截面积 单线0.14~1.5 mm²，绞线0.14~1.0 mm²，带绝缘套管的棒状端子0.25~0.5 mm²进行接地。
冷却方式 自冷
安装场所 控制柜内
*2 境温度超过40℃时，不可超过40℃90%的绝对湿度。

在未告之的情况下产品的规格可能有所变更，请预先了解。

应各公司的名称，产品名称。
用。
读本手册以及各相关手册，了解机器本身的功能和安全信息以及注意事项之后使
此外，即使是重要的事项，因具体情况不同，也可能引发重大事故。

在本手册中，用“警告”和“注意”对安全注意事项进行等级区分。

1. 规格
   - 使用环境湿度 10%RH~90%RH, 无凝露
   - 用户存储器容量: 存储用存储卡(ROM): 9MB
   - 显示部:
     - 背光灯故障: 可通过GOT的系统信号进行确认
     - 错误输出、误动作可能导致事故发生。
     - 请勿将GOT作为报警装置使用，这样有可能导致重大事故。

   - 显示器连接于外部报警输出的装置时，可能会有错误输出。例如，显示重要的报警GOT、电缆的故障，可能导
   - 应设置外部监控电路。误输出或误动作可能导致事故发生。

2. 设计注意事项
   - 对应软件包 GT Works3 Version1.122C以后
   - 面板开口尺寸: 118 (W) ×92 (H) mm
   - 外形尺寸: 128 (W) ×102 (H) ×40 (D) mm
   - 使用环境: 无油烟、腐蚀性气体、可燃性气体，一般尘埃不严重
   - 电源后重新启动。误输出或误动作有可能导致事故发生。
   - 为防止屏幕处于保护状态，想要解除屏保而去触摸显示部位，从而导致触摸开关

3. 配线注意事项
   - 有断续的振动时: 5~8.4Hz - 3.5mm X、Y、Z各方向10次
   - 8.4~150Hz 9.8m/s²
   - 通电时请勿触摸端子。可能引起触电。
   - 请勿通过测试操作更改其数据。否则可能导致误输出、误动作。

4. 安装注意事项
   - 误动作。如果螺栓拧得过紧，有可能由于螺栓或模块损坏引起短路、误动作。
   - 应注意防止切屑及线头等杂物掉入产品内。否则可能导致火灾、故障、误动作。
   - 请勿使产品掉落或受到强烈撞击。否则可能造成模块损坏。

5. 启动/维护注意事项
   - 请勿拆解或改造产品。可能导致故障、误动作、人身伤害、火灾。
   - 使用后的电池请立即废弃。请勿让儿童接近。请勿拆解或者投入火中。
   - 废弃电池时应根据各地区制定的法令单独进行。

6. 质保
   - (关于限制对象机种的详细内容，请参阅所使用的GOT的本体使用说明书 (硬件篇) SH-081202CHN(1D7MK4)。
   - (关于欧盟国家的电池规定的详细内容请参阅所使用的GOT的全体使用说明书。)