1. General Specifications

1.1 General Specifications

1.1.1 Specifications

Operating environment

-0.2 to 40°C (ambient temperature range) 5% to 95% (non-condensing)

Storage environment

-20 to 60°C (ambient temperature range) 10% to 90% (non-condensing)

Vibration resistance

5 to 8.4 Hz - 3.5 mm 10 times in each X, Y, and Z axis

8.4 to 150 Hz 4.9 m/s²

Shock resistance

113(4.45) (W) × 74(2.92) (H) × 27(1.07) (D) mm*10

Refer to the GOT2000 Series User's Manual (Hardware).

1.1.2 Connector specifications

Connector shape: 9-pin terminal block

1.3 Power Supply Specifications

Input power supply

8.4 to 150 VDC; 19200/9600/4800 bps

1.4 Mounting Specifications

MOUNTING PRECAUTIONS

Do not press the GOT display section with a pointed material as a pen or driver. Overtightening can cause a drop, short circuit or malfunction due to the damage specified torque range (0.20 N·m to 0.25 N·m) with a Phillips-head screwdriver for the installation on the GOT panel. Not doing so may result in a damage or failure of the display section.

*2 The GOT main unit can be mounted by four holes on all the four sides of the panel. The unit cannot be mounted on the panel with only two or three holes.

*3 The GOT main unit is attached to the panel with screws (90°) and CSB φ2.5 x 6.0 mm. Not doing so may cause a fire or failure.

*4 Touch switches are mounted on the touch panel and function as the switch buttons. Do not touch the touch panel inadvertently. This may cause an unexpected operation due to the touch switches.

*5 If you touch two or more points on the touch panel simultaneously and a switch is placed between the two points, the switch may be activated. Do not touch two or more areas on the touch panel simultaneously. This may cause an unexpected operation due to the touch switches.

*6 Except 5 V power supply type.

*7 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*8 The GOT supports communication with DCS systems via OPC-UA and is certified with the OPC-UA standard. (OPC-UA) See page 9 for more information.

*9 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

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*11 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*12 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*13 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*14 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*15 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*16 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

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*19 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*20 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*21 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

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*25 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.

*26 The suffix "F" of IP67F is a symbol that indicates protection rate against oil. It is described in the Appendix of Japanese Industrial Standard JIS C 0920.
1. GOT series User’s Manual Specifications

1.1 General Specifications

- **1.1.1 Operating environment**
  - Indoor, temperature: -10°C to 50°C, humidity: 90% or less, non-condensing

- **1.1.2 Storage environment**
  - Indoor, temperature: -20°C to 60°C, humidity: 90% or less, non-condensing

- **1.1.3 Vibration resistance**
  - Vibration level: 0.8/1.6g from 8.4 to 150 Hz, direction: X, Y, or Z direction

- **1.1.4 Shock resistance**
  - Shock level: 9.8m/s², duration: 11ms, direction: X, Y, or Z direction

- **1.1.5 Signal transmission**
  - 1 channel Transmission speed: 115200/57600/38400/19200/9600/4800/2400/1200/9600/4800/2400/1200

- **1.1.6 Connector shape**
  - Terminal block 5-pin
  - Connector shape: 9-pin terminal block

- **1.1.7 Power supply voltage**
  - 5V ±5%, 110V ±5%, 230V ±5%, 24V ±5%, 24V ±10%, 24V ±5%

- **1.1.8 Interface**
  - RS-422

- **1.1.9 Terminal shape**
  - R4-8P, GT10-C

1.2 Performance Specifications

- **1.2.1 Memory capacity**
  - Memory for storage (ROM): 3 MB

- **1.2.2 Display**
  - Display section of the GOT is an analog-resistive touch panel

- **1.2.3 Display resolution**
  - 11.6" black line: 1600×1200 pixels

- **1.2.4 Sound**
  - Buzzer output: Single tone (tone length adjustable)

- **1.2.5 Communication function**
  - Communication interface: MC, RS-422, Ethernet

1.3 Power Supply Specifications

- **1.3.1 Input power source**
  - 110V ±5%, 230V ±5%, 24V ±5%, 24V ±10%, 24V ±5%

- **1.3.2 Power consumption**
  - 110V ±5%: 65W, 230V ±5%: 100W, 24V ±5%: 9W

2. Wiring of connection cable

- **2.1 Connection cable**
  - Terminal block 5-pin
  - Connector shape: 9-pin terminal block

- **2.2 Recommended connection cable**
  - Cable: R4-8P, GT10-C (3 m)

- **2.3 Connection method**
  - Connect the terminal block and the terminal block with a crimping tool.

3. Grounding

- **3.1 Grounding method**
  - Self-cooling

- **3.2 Ground resistance**
  - 100Ω or less by using a ground cable that has a cross-sectional area of 0.14 to 1.5 mm²

4. Display

- **4.1 Display resolution**
  - 11.6" black line: 1600×1200 pixels

- **4.2 Display type**
  - Analog resistive film

- **4.3 Touch panel function**
  - Touch switch. An external monitoring circuit should be provided to check for failure or malfunction due to false output or malfunction.

5. Software

- **5.1 Interface**
  - Interface: MC, RS-422, Ethernet

- **5.2 Communication function**
  - Communication interface: MC, RS-422, Ethernet

6. Safety Precautions

- **6.1 Precautions when using**
  - The precautions given in this manual are concerned with this product. Introduce this manual carefully and pay full attention to safety to handle the product whenever necessary. Always forward it to the end user. And, store this manual in a safe place so that you can take it out and read it fully to acquire proficiency in handling and operating the product. Make sure to refer to the GOT2000 Series User’s Manual (Hardware) for the drawing software used.

- **6.2 Precautions when the GOT is subject to shock or vibration**
  - Do not drop the module or subject it to strong shock. A module damage may result in a product failure or malfunction. Furthermore, the GOT must be properly installed and fastened to the equipment to prevent it from falling and causing a product failure.

- **6.3 Precautions when the SD card is mounted**
  - If the SD card mounted on drive A of the GOT is removed while the GOT is being accessed, the SD card and files may be damaged. Therefore, before removing the SD card, always turn off the GOT and wait for the SD card access LED to turn off.

- **6.4 Precautions when the terminal block is mounted**
  - Do not insert or remove the terminal block while applying power. This may cause an operational error due to the terminal block being inserted or removed while applying power.

- **6.5 Precautions when the external monitoring circuit is used**
  - An external monitoring circuit must be provided to check for failure or malfunction due to the touch panel being touched in a situation where the touch panel is not intended to be touched.


- **7.1 User’s Manual**
  - This manual describes the part names, dimensions, mounting, and specifications of the product. Before use, read this manual and manuals of relevant products of the same series for operation and connection.

- **7.2 User’s Manual for Drawing Software**
  - This manual describes the part names, dimensions, mounting, and specifications of the product. Before use, read this manual and manuals of relevant products of the same series for operation and connection.

8. MOUNTING PRECAUTIONS

- **8.1 MOUNTING PRECAUTIONS**
  - Always use the front panel screws or unit (excluding the GOT2000 Series) when mounting the GOT. Failure to do so can cause the unit to fail or malfunction.

- **8.2 MOUNTING PRECAUTIONS**
  - Use the front panel screws or unit (excluding the GOT2000 Series) when mounting the GOT. Failure to do so can cause the unit to fail or malfunction.

- **8.3 MOUNTING PRECAUTIONS**
  - Use the front panel screws or unit (excluding the GOT2000 Series) when mounting the GOT. Failure to do so can cause the unit to fail or malfunction.

- **8.4 MOUNTING PRECAUTIONS**
  - Use the front panel screws or unit (excluding the GOT2000 Series) when mounting the GOT. Failure to do so can cause the unit to fail or malfunction.

9. TRANSFORMATION CONDITIONS

- **9.1 TRANSFORMATION CONDITIONS**
  - The transformation function can be used by using the switches of a device other than the GOT on the assumption that it is being used as a non-resetting digital resistor.

- **9.2 TRANSFORMATION CONDITIONS**
  - The transformation function can be used by using the switches of a device other than the GOT on the assumption that it is being used as a non-resetting digital resistor.

- **9.3 TRANSFORMATION CONDITIONS**
  - The transformation function can be used by using the switches of a device other than the GOT on the assumption that it is being used as a non-resetting digital resistor.

- **9.4 TRANSFORMATION CONDITIONS**
  - The transformation function can be used by using the switches of a device other than the GOT on the assumption that it is being used as a non-resetting digital resistor.

10. Certification of UL, cUL standards

- **10.1 Certification of UL, cUL standards**
  - This product is designed for use in industrial applications.
GT2103-PMBD, GT2103-PMBDS, GT2103-PMBDS2, GT2103-PMBLS

GT21 General Description

1. GOT series User's Manual Specifications

1.1 General Specifications

- Operating ambient temperature: 0 to 55°C (When mounted horizontally), 0 to 50°C (When mounted vertically)
- Storage ambient temperature: -20 to 60°C
- Operating altitude: 2000 m or less
- Operating humidity: 5 to 80% RH (non-condensing)
- Power consumption: 2.9 W
- Power supply: 24V DC
- Display section: Analog resistive type touch panel
- Display color: Monochrome (black and white) 32 scales
- Screen size: 3.8"
- Display device: TFT monochrome display
- Key size: Minimum 2 x 2 dots (per a key)
- Crimper type: CRIMPFOXZA3 (Phoenix Contact Inc.)
- Connector shape: RJ-45 (modular type)
- Connector shape: MINI-DIN6-pin

1.2 User Memory

- Life: 1 million times or more (Operating force: 0.98 N or less)

1.3 System Memory

- Built-in: 32,768 bytes

1.5 Security

- User creation monitor screen: When performing the test operations of the user creation monitor screen (such as monitoring the SD card and files), the input operation of the touch switch(s) cannot be judged. The GOT backlight failure can be checked with a system signal of the crystal section or the backlight on the GOT, the input operation of the touch switch(s). Thus, operators cannot operate the GOT due to false output or malfunction.

1.6 Terminal Port

- Connector shape: RJ-45 (modular type)
- Connector shape: MINI-DIN6-pin
- terminator: OPEN/110
- Connector shape: D-SUB25-pin (RS-232C)
- Connector shape: D-SUB37-pin (RS-422/485)

1.7 Communication

- Communication: GT-communications
- Communication: GT-communications
- Communication: GT-communications

1.8 Clock

- Clock: Internal real-time clock
- Clock: Real-time clock

1.9 Security

- Security: Encryption
- Security: Encryption

1.10 Bus Interface

- Bus interface: RS-232C
- Bus interface: RS-422

1.11 Motor Control

- Motor control: 32 levels

1.12 Power Supplies

- Input power supply voltage: 24V DC
- Input power supply voltage: 24V DC

2. Wiring of connection cable

- Wiring of connection cable: "Connect the connector of the GOT to the connector of the battery."