**GT16 Handy GOT User’s Manual**

**Model Name:** GT16 Handy GOT

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**Safety Precautions**

- **Warning:**束縛品が取付されている場合、分離して使用する必要がある場合があります。束縛品の取付または取り外しに伴う事故を防止するために、束縛品の取扱いを正しく行うことが大切です。
- **Notice:**束縛品の使用を制限される場合があります。束縛品の取扱いを正しく行うことが大切です。

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**1. Features**

- **Interoperability:** Excellent performance and connectivity to PLCs.
- **Communication:** Supports high-speed communication with PLCs.
- **Operability:** Easy to use and intuitive operation.

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**2. Precautions**

- **1.1 Precautions when using the GOT**
  - When using the GOT in a hazardous environment, ensure that the GOT is used in a way that complies with the appropriate standards.
  - When using the GOT in a high-temperature environment, ensure that the temperature does not exceed the specified limit.

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**3. GOT Specifications**

- **Display:**
  - **Panel:** 15.0" WVGA (800 x 480 dots)
  - **Power:** 15W
  - **Certification:** CE, UL, cUL

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**4. Environmental Considerations**

- **Warning:**束縛品が取付されている場合、分離して使用する必要がある場合があります。束縛品の取扱いを正しく行うことが大切です。
- **Notice:**束縛品の使用を制限される場合があります。束縛品の取扱いを正しく行うことが大切です。

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**5. Technical Support**

- **Customer Support:** Mitsubishi Electric Corporation
  - Telephone: 1-800-231-2353
  - Website: www.mitsubishielectric.com

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**6. Product References**

- **Reference:** GT16 Handy GOT User's Manual
  - Mitsubishi Electric Corporation
  - Page: 1-24

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**7. Conclusion**

- **Warning:**束縛品が取付されている場合、分離して使用する必要がある場合があります。束縛品の取扱いを正しく行うことが大切です。
- **Notice:**束縛品の使用を制限される場合があります。束縛品の取扱いを正しく行うことが大切です。
**Remark**

**Name**

**User Made Cables**

**Contents**

Depending on circumstances, procedures indicated by "CAUTION" may also be required.

Safety Precaution

- Effective April 2018

- 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 if necessary. 

**Remark**

**Name**

**User Made Cables**

**Contents**

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- Effective April 2018

- 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 if necessary.
### 3. Specifications

#### 3.1 General Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating ambient temperature</strong></td>
<td>-20 to 60°C</td>
</tr>
<tr>
<td><strong>Input power</strong></td>
<td>200 to 240V AC / 50 or 60Hz</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>11.6W (480mA/24V DC) or less</td>
</tr>
<tr>
<td><strong>Operating altitude</strong></td>
<td>2000 m (6562 ft) max.</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>C drive</td>
</tr>
</tbody>
</table>

#### 3.2 Performance Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration resistance</td>
<td>3G, 22Hz, 307m/s²</td>
</tr>
<tr>
<td>Storage ambient temperature</td>
<td>-20 to 60°C</td>
</tr>
<tr>
<td><strong>Insulation resistance</strong></td>
<td>10MΩ or larger</td>
</tr>
<tr>
<td><strong>Display size</strong></td>
<td>W132.5 (5.22&quot;)</td>
</tr>
<tr>
<td><strong>Display angle</strong></td>
<td>Left/Right: 80 degrees, Top: 60 degrees, Bottom: 80 degrees (Horizontal format)</td>
</tr>
<tr>
<td><strong>Display character</strong></td>
<td>16-dot standard font: 80 characters</td>
</tr>
<tr>
<td><strong>Life</strong></td>
<td>Approx. 41,000h. (Operating ambient temperature: 25°C)</td>
</tr>
<tr>
<td><strong>Intensity adjustment</strong></td>
<td>8-level adjustment</td>
</tr>
<tr>
<td><strong>Touch panel</strong></td>
<td>2-notch type (Manual stop at each position/A key can be inserted and removed on only the left side./On the right side, a key cannot be removed./Two keys are provided.)</td>
</tr>
<tr>
<td><strong>Switch</strong></td>
<td>2 N/C contacts, Maximum rating 1A/24VDC (resistance load), Maximum rating 0.3A/24VDC (induction load), Life: 100,000 times</td>
</tr>
<tr>
<td><strong>Key size</strong></td>
<td>Minimum 2</td>
</tr>
</tbody>
</table>

#### 3.3 Power Supply Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply voltage</strong></td>
<td>20.4 to 26.4V DC</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>Type: Magnesium manganese dioxide lithium primary battery</td>
</tr>
<tr>
<td><strong>Backup target</strong></td>
<td>Clock data and maintenance time notification data, system log data</td>
</tr>
</tbody>
</table>

#### 3.4 External Dimensions

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height</strong></td>
<td>127.1 (5.0&quot;)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>210.2 (8.3&quot;)</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>165.1 (6.5&quot;)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Approx. 1.2kg (GT16 Handy GOT main unit only)</td>
</tr>
</tbody>
</table>

### 4. Maintenance and Inspection

#### 4.1 Daily Inspection

1. **Power supply voltage check**
   - Use a multimeter to check the power supply voltage.

2. **Battery check**
   - Check the battery voltage with a multimeter.

#### 4.2 Periodic Inspection

**Yearly or half-yearly inspection items**

- **Power supply voltage check**
- **Battery check**
- **Screen data check**
- **Alarm check**

**Every 3 years**

- **Alarm check**
- **Backup target check**
- **Software check**

### 5. Precautions

#### 5.1 Caution on Using Emergency Stop Switch

1. **When using the emergency stop switch in the handy GOT, judge the validity to use the emergency stop switch.**
2. **Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with MITSUBISHI ELECTRIC CORPORATION.**

#### 5.2 Exclusion of Loss in Opportunity and Secondary Loss from Warranty Liability

MITSUBISHI ELECTRIC CORPORATION shall not be responsible for any problems involving industrial property rights or other such laws and regulations in the system, and in the event of a claim for damages from a third party, MITSUBISHI ELECTRIC CORPORATION shall not bear any liability for claims exceeding the cost of repairs of the damaged apparatus under warranty.
3. Specifications

3.1 General Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating ambient temperature</td>
<td>0°C to 50°C, non-condensing (CA-67 only when used)</td>
</tr>
<tr>
<td>Storage and transport temperature</td>
<td>-20°C to 60°C, non-condensing (CA-67 only when used)</td>
</tr>
</tbody>
</table>
| Vibration resistance | 2mm peak-peak, 10 to 55Hz, 90°, in 5 directions per test, for 15 minutes each, 60 minutes total (excluding condition)
| Shock resistance | 30g, half-sine wave, 11ms, 4 directions per test (excluding condition) |
| Temperature change | 10°C/24 hours, temperature variation ≤ ±1°C, 120 minutes (excluding condition) |

4. Maintenance and Inspection

The GOT does not include consumable components that will cease the warranty. However, replace the battery if the battery life is over 4 years (only for GT16 Handy GOT). After 4 years, although the GOT may work properly, the battery voltage is not displayed and the data written in the flash memory is not retained. If the battery replacement procedure is not performed, use the emergency stop switch in accordance with the risk assessment in your application environment.

5. Precautions

5.1 Cautions on Using Emergency Stop Switch

1. When using the panel switch (which disables the emergency stop switch while the Handy GOT is connected), the system may not conform to the safety requirements defined in this manual. Use the emergency stop switch in accordance with the risk assessment in your application environment.

Note: This symbol is for China only.

6. Related Product

<table>
<thead>
<tr>
<th>GT16 Handy GOT User's Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT1665HS-VTBD</td>
</tr>
</tbody>
</table>

For safe use

- This product has been manufactured as a general-purpose product for general use. It has been designed and manufactured to be safe when used by experienced users. However, do not use the product for special purposes such as customer power, electric power, and emergency stop functions. For safe use, refer to the user manual for each product.

- Please use the product according to the instructions provided. If you have any concerns or questions, please contact the nearest service center.

- Please ensure that the product is used in accordance with the manufacturer's recommendations and instructions. Any unauthorized modifications or alterations may void the warranty and/or result in damage to the product or injury to the user.

- Please store the product in a cool, dry place. Avoid exposure to direct sunlight or extreme temperatures. Do not place heavy objects on top of the product.

- Please use the product only for the purposes for which it was designed. Do not use the product for any other purposes.

- Please follow all safety guidelines and recommendations provided by the manufacturer and/or relevant authorities.
**Bundled Items**

The following manuals are relevant to this product. When these loose manuals are not included in the product, carefully read all the manuals in the product to fully acquire proficiency in handling and operating the product. Make sure to read this manual and manuals of relevant products before use.

- GT16 Handy GOT General Description
- GT1665HS-VTBD
- GT1665HS-VBTD

**Design Precautions**

- **WARNING**
  - **Notice**
  - **Contents**
  - **Warning**

**Connection**

- **CAUTION**
  - **Notice**
  - **Contents**

**Operating Conditions**

- **CAUTION**
  - **Notice**
  - **Contents**

**Wiring Precautions**

- **CAUTION**
  - **Notice**
  - **Contents**

**Transportation**

- **CAUTION**
  - **Notice**
  - **Contents**

**Certificate of UL, cUL Standards**

- **Note**
  - **Contents**

**Compliance with EC directive (CE Marking)**

- **Note**
  - **Contents**

**Requirement for Compliance with EMC directive**

- **Note**
  - **Contents**

**Interchangeability**

- **Note**
  - **Contents**

**Attention**

- **Note**
  - **Contents**

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**PLC** (manufactured by other company), microcomputer, temperature controller, etc. are used as controlled devices and the display section is an analog-resistive type touch panel.

- Make sure to attach the back cover to the Handy GOT before turning on the power.
- Operate and store the GOT in environments without direct sunlight, high temperature, or humidity.
- Be sure to shut off all phases of the external power supply used by the system before wiring. Failure to do so may result in an electric shock, product damage or deterioration.
- When power is on, do not touch the terminals.
- The cables connected to the unit must be run in ducts or clamped.

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**Manuals**

- **Name**
  - **Contents**
  - **Warning**

**Design Precautions**

- **Notice**
  - **Contents**

**Connection**

- **CAUTION**
  - **Notice**
  - **Contents**

**Operating Conditions**

- **CAUTION**
  - **Notice**
  - **Contents**

**Wiring Precautions**

- **CAUTION**
  - **Notice**
  - **Contents**

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**Interchangeability**

- **Note**
  - **Contents**

**Attention**

- **Note**
  - **Contents**
3. Specifications

3.1 General Specifications

- Operating ambient temperature: 0 to 55 °C
- Storage ambient temperature: -20 to 60 °C
- Relative humidity: 20 to 95% RH, non-condensing
- Power supply: 24V DC ± 10% or 110V AC/220V AC ± 10%, 50/60 Hz
- Display character: 16-dot standard font: 80 characters
- Display color: 65536 colors
- Display matrix: 256 dots × 256 dots
- Display size: H169.6 (6.67) mm × W254.1 (9.98) mm
- Display notching: 23.8 mm × 23.8 mm
- Display luminance: 100,000 to 3,000,000 cd/m²
- Lamp: 7-segment LED (for numeric data, 9-segment LED for character data)
- Power consumption: 2.4 W
- Noise voltage: 1000Vp-p, Noise width: 1 µs
- Power consumption during sleep: 0.4 W
- Permissible instantaneous power failure time: within 5ms
- Inrush current: 30A or less (maximum load)
- Max. output current: 2A
- Operation: 2 h
- Storage: 7 days
- Polluption degree: 2 or less
- Overvoltage category: CAT II
- Cooling method: Self-cooling
- Separate outdoor and indoor sections
- Shock resistance: Conforms to JIS B3502, IEC 61131-2 (147 m/s², 3 times each in X, Y and Z directions)
- Vibration resistance: Conforms to JIS B 0601 and B 0602
- Life: 1 million times or more (operating force: 0.98N max.)
- Operation switch: 6 switches (6 contacts/common), N/O contact, Maximum rating: 10mA/24VDC, Life: 1,000,000 times
- Life (Number of write times): 100,000 times
- Terminal block: 6 pin
- Battery: 9V battery
- Connector shape: Square 42 pins (male)
- Compact flash slot: 1ch
- Communication interface: USB (for data transfer, USB Gadget function)
- Application software: Mitsubishi GX Works3
- Display temperature: 0 to 40 °C or 0 to 104 °F
- Dimensions: W201.3 (7.91") × D220 (8.66") × H99.4 (3.91") mm
- Weight: 0.8 kg
- Cautions on using emergency stop switch
- Use it at replacement.

3.2 Performance Specifications

- Display color: 65536 colors
- Display character: 16-dot standard font: 80 characters
- Display size: H169.6 (6.67) mm × W254.1 (9.98) mm
- Display notching: 23.8 mm × 23.8 mm
- Display luminance: 100,000 to 3,000,000 cd/m²
- Lamp: 7-segment LED (for numeric data, 9-segment LED for character data)
- Power consumption: 2.4 W
- Noise voltage: 1000Vp-p, Noise width: 1 µs
- Power consumption during sleep: 0.4 W
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- Inrush current: 30A or less (maximum load)
- Max. output current: 2A
- Operation: 2 h
- Storage: 7 days
- Polluption degree: 2 or less
- Overvoltage category: CAT II
- Cooling method: Self-cooling
- Separate outdoor and indoor sections
- Shock resistance: Conforms to JIS B3502, IEC 61131-2 (147 m/s², 3 times each in X, Y and Z directions)
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- Operation switch: 6 switches (6 contacts/common), N/O contact, Maximum rating: 10mA/24VDC, Life: 1,000,000 times
- Life (Number of write times): 100,000 times
- Terminal block: 6 pin
- Battery: 9V battery
- Connector shape: Square 42 pins (male)
- Compact flash slot: 1ch
- Communication interface: USB (for data transfer, USB Gadget function)
- Application software: Mitsubishi GX Works3
- Display temperature: 0 to 40 °C or 0 to 104 °F
- Dimensions: W201.3 (7.91") × D220 (8.66") × H99.4 (3.91") mm
- Weight: 0.8 kg
- Cautions on using emergency stop switch
- Use it at replacement.

4. Maintenance and Inspection

4.1 Daily Inspection

- Check the GOT for dirt, dust, or moisture. If necessary, ensure that all dust and moisture are removed.
- Check the GOT for any abnormalities such as cracks, deformations, or deviations from the original design.

4.2 Periodic Inspection

- Yearly or half-yearly inspection items
  - Visual check: No dirt, foreign matter, visual check
  - Functional check: Test the touch panel and keyboard to ensure they are functioning properly.
  - Number of write times: 100,000 times
  - Simultaneous presses: Not allowed. (Only 1 point can be touched.)
  - Circuit board: Check for any signs of damage or deformation.
  - Battery: Check the battery for any signs of leakage or damage. Replace the battery if necessary.

5. Precautions

5.1 Cautions on Using Emergency Stop Switch

- Always turn off the emergency stop switch after using the emergency stop switch to avoid any potential hazards.
- Do not use the emergency stop switch for any other purpose than the intended use.
- Ensure that the emergency stop switch is turned off when not in use.
- Do not turn off the emergency stop switch while the emergency stop button is in use.

Note: This symbol mark is for China only.

- Contains harmful substances as defined by the Chinese government.
- May not meet all requirements for all countries.
- Some countries may have stricter regulations for certain substances.
- May not be applicable to all models.

This symbol indicates that the product is not intended for use in environments requiring high reliability or safety, such as medical devices or industrial control systems.

For details of battery status or how to output alarm, refer to the following:
- GT36 Handy GOT User’s Manual
- GT38 Handy GOT User’s Manual

For safe use

- This product has been manufactured as a general-purpose part for general-purpose machines, and has not been designed or manufactured for specific applications.
- Before using the product for special purposes such as customer power, electric power, communication lines, or transportation equipment, consult with Mitsubishi Electric Corporation.

- This product has been manufactured under strict quality control. However, Mitsubishi Electric Corporation cannot rule out the possibility of ruptures occurring in extremely rare cases due to misuse of the product. In such cases, Mitsubishi Electric Corporation shall not be liable for any damages that may be incurred.