



**FEATURES**

- 7" LCD with resistive touch
- Built in Buzzer
- 10 password levels
- Modbus protocol
- Alarms
- Recipe Management
- Serial Printing
- Data Logging

**SPECIFICATIONS**

|                              |                              |  |                       |
|------------------------------|------------------------------|--|-----------------------|
| <b>LCD MODULE</b>            | <b>Display Type</b>          | 7" TFT LCD (256 color), Resistive Touch Screen |                       |
|                              | <b>Resolution</b>            | 800 x 480 pixels                               |                       |
|                              | <b>Display Size(WxH)mm</b>   | 154.08 x 85.92                                 |                       |
|                              | <b>Backlight</b>             | LED backlight                                  |                       |
|                              | <b>Brightness Adjustment</b> | Auto/Manual via system menu                    |                       |
| <b>Keys</b>                  |                              | System key x 1, Function keys x 7              |                       |
| <b>MEMORY</b>                | <b>Internal</b>              | <b>Bitmap</b>                                  | 4 MB                  |
|                              |                              | <b>Font</b>                                    | 4 MB                  |
|                              |                              | <b>Application</b>                             | 512 KB                |
|                              |                              | <b>Upload</b>                                  | 2.5 MB                |
|                              |                              | <b>System Reserved</b>                         | 5 MB                  |
|                              |                              | <b>Total</b>                                   | 16 MB (System Memory) |
|                              | <b>External</b>              | Micro SD upto 2 GB (User Memory)               |                       |
| <b>COMMUNICATION</b>         | <b>Slave Port</b>            | RS232/485 (MODBUS RTU - Jumper Selectable)     |                       |
|                              | <b>Master Port</b>           | RS485 (MODBUS RTU)                             |                       |
|                              | <b>Printer Port</b>          | RS232 (ESCPAUSE)                               |                       |
|                              | <b>USB Slave</b>             | USB 2.0 (only for downloading)                 |                       |
| <b>Operation Voltage</b>     |                              | 18 - 30VDC                                     |                       |
| <b>Real Time Clock (RTC)</b> | <b>Backup Battery</b>        | Replaceable 3V CR2032                          |                       |
|                              | <b>Battery Life</b>          | 10 year at 25°C                                |                       |
|                              | <b>Accuracy</b>              | +/- 20 min per Year                            |                       |
| <b>Buzzer</b>                | <b>Type</b>                  | Electro Magnetic Buzzer                        |                       |
|                              | <b>Sound Output</b>          | 85 dB at 10cm                                  |                       |
|                              | <b>Operation</b>             | Software Programmable                          |                       |

|                              |                  |
|------------------------------|------------------|
| <b>Power Consumption</b>     | 7W Max           |
| <b>Operating Temperature</b> | 0° to 55°C       |
| <b>Storage Temperature</b>   | -30° to 80°C     |
| <b>Humidity</b>              | 95% RH           |
| <b>Certification</b>         | CE, UL (Pending) |
| <b>Dimensions(WxHxD)mm</b>   | 214 x 160 x 51.6 |
| <b>Panel Cutout(WxH)mm</b>   | 196.9 x 142.9    |
| <b>Weight</b>                | 730gms           |

**SAFETY PRECAUTIONS**

This manual is meant for personnel involved in wiring, installation, operation and routine maintenance of the equipment.

All safety related conditions, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure operator and instrument safety. Any misuse may impair the protection provided by the equipment.

**CAUTION :** Read complete instructions prior to installation and operation of the unit.

**INSTALLATION INSTRUCTIONS**

**CAUTION**

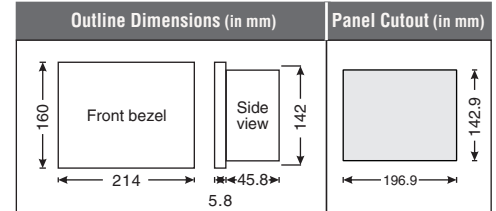
1. This equipment, being built-in-type, normally becomes a part of the main control panel and the terminals do not remain accessible to the user after installation.
2. Conductors must not come in contact with the internal circuitry of the equipment else it may lead to a safety hazard that may endanger life or cause electrical shock to the operator.
3. Circuit breaker or mains switch must be installed between the power source and supply terminals to facilitate power 'ON' or 'OFF' function.
4. The equipment shall not be installed in environmental conditions other than those specified in this manual.
5. Since this equipment forms part of the main control panel, its output terminals get connected to the host equipment. Such equipment shall also comply to EMI / EMC and safety requirements like CE standard procedure.
6. Thermal dissipation of equipment is met through ventilation holes provided on housing of equipment. Obstruction of these ventilation holes may lead to a safety hazard.
7. The output terminals shall be loaded strictly as per the values / range specified by the manufacturer.

**WIRING INSTRUCTIONS**

**CAUTION**

1. Wiring shall be done strictly according to the terminal layout provided in the operating manual.
2. To eliminate electromagnetic interference use short wire with adequate ratings and twists of equal size.
3. The power supply connection cable must have a cross section of 1sq.mm or greater and insulation capacity of at least 1.5KV.

**MECHANICAL INSTALLATION**



For installing the controller

1. Prepare the panel cutout with proper dimensions as shown above.
2. Remove the clamp from the SMI.
3. Fix the unit into the cutout. Insert the clamp from both sides and tighten the screws.

**CAUTION**

The equipment in its installed state must not come in close proximity to any heating sources, caustic vapors, oils, steam, or other unwanted process by products.

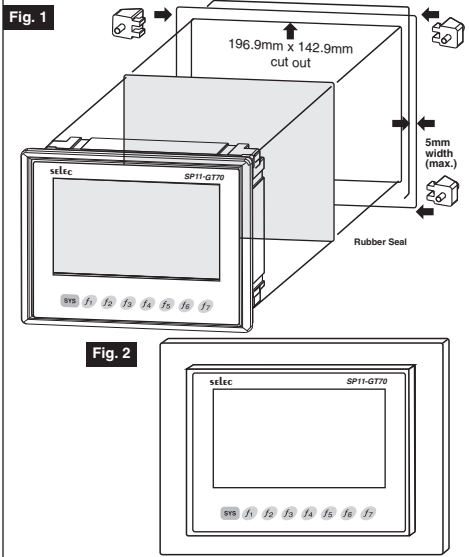
**EMC Guidelines :**

1. Use proper input power cables with shortest connections and twisted type.
2. Layout of connecting cables shall be away from any internal EMI source.

**MAINTENANCE**

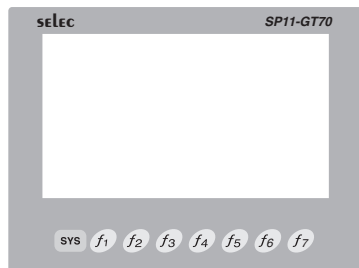
1. To avoid blockage of ventilation holes, clean the equipment regularly using a soft cloth.
2. Do not use Isopropyl alcohol or any other organic Solvents for cleaning.

## PANEL MOUNTING



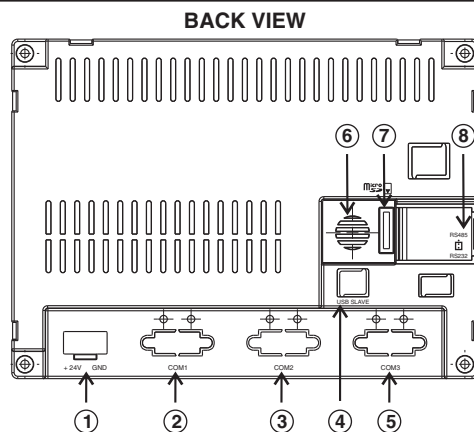
1. Before you begin, note that the mounting panel cannot be thicker than 5 mm (0.197").
2. Make a panel cut-out measuring 196.9mm x 142.9mm. (7.752" x 5.626")
3. Slide the controller into the cut-out, ensuring that the rubber seal is in place.
4. Push the 4 mounting brackets into their slots on the sides of the controller as shown in Fig. 1.
5. Tighten the bracket screws against the panel. Hold the bracket securely against the unit while tightening the screw.
6. When properly mounted, the controller is squarely situated in the panel cut out as shown in Fig. 2.

## USER GUIDE



| KEY      | DESCRIPTION  |
|----------|--|
| SYS      | Long press for 3 sec. to enter into internal menu for system info. Use for communications setting, backlight brightness control, touch calibration, to view memory usage and password setting. |
| f1       | After firmware update use for enter into calibration mode in internal menu and Programmable key in Run mode. Also use for alarm acknowledgment.  |
| f2 to f7 | Programmable keys in Run mode.   |
| f7       | At power ON press to enter into firmware update mode.  |

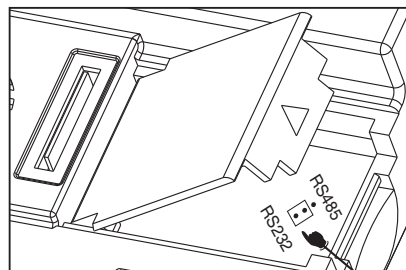
## UNDERSTANDING YOUR DEVICE



| ITEM | DESCRIPTION                    |
|------|--------------------------------|
| ①    | Supply Terminal                |
| ②    | COM 1                          |
| ③    | COM 2                          |
| ④    | USB Slave Port                 |
| ⑤    | COM 3                          |
| ⑥    | Buzzer                         |
| ⑦    | Micro SD Card Slot             |
| ⑧    | RS232/485 Slave Port selection |

## SLAVE PORT SELECTION

1. Open the battery cover.
2. RS232/485 slave can be selected by changing the jumper position as shown in the figure below.



Change jumper position to switch between RS232 and RS485

## PORT PIN CONFIGURATION

| COM 1<br>MASTER PORT (Male Connector)  | PIN | CONNECTION  |
|--|-----|-------------|
|  | 1   | —           |
|  | 2   | —           |
|  | 3   | —           |
|  | 4   | —           |
|  | 5   | —           |
|  | 6   | —           |
|  | 7   | RS485 (+)   |
|  | 8   | RS485 (-)   |
|  | 9   | —           |
| COM 2<br>SLAVE PORT (Female Connector) | PIN | CONNECTION  |
|  | 1   | —           |
|  | 2   | RS232 (TXD) |
|  | 3   | RS232 (RXD) |
|  | 4   | —           |
|  | 5   | GND         |
|  | 6   | RS485 (+)   |
|  | 7   | RS485 (-)   |
|  | 8   | —           |
|  | 9   | —           |
| COM 3<br>PRINTER PORT (Male Connector) | PIN | CONNECTION  |
|  | 1   | —           |
|  | 2   | RS232 (TXD) |
|  | 3   | RS232 (RXD) |
|  | 4   | —           |
|  | 5   | GND         |
|  | 6   | —           |
|  | 7   | —           |
|  | 8   | —           |
|  | 9   | —           |

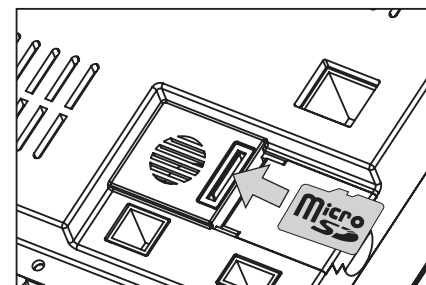
## USB SLAVE

|               |   |
|---------------|---|
| Connection    | USB Slave port can be connected with a PC                 |
| Port Function | The port is only used to download user program to the HMI |

## MEMORY INSTALLATION

### • Installing micro SD Card

- Push the micro SD Card into the slot until it clicks.
- See Below figure for mounting direction.



### • Removing micro SD Card

- Push on the micro SD Card until it clicks and is released.

## ORDERING INFORMATION

ORDER CODE SP11-GT70

## ACCESSORIES

|  |
|--|
| Window-Based Software for SMI                    |
| AC-USB-RS232-01 (For downloading from USB Port)  |
| ACH-001 (For downloading from Serial Port)       |
| ACH-002 (For Master Port)                        |
| AC-IO EXP-02 (For Master to slave communication) |
| PS-CF-24V-1.1A                                   |

## ? SERVICE DETAILS

This device contains no user serviceable parts and requires special equipment and specialized engineers for repair. Please contact service center for repair on the following numbers:

Toll free : 1800 227353 (BSNL/MTNL subscribers only)  
Others : 91-22-40394200/40394202

**NO WARRANTY ON UNIT DAMAGED DUE TO WRONG POWER SUPPLY.**

(Specifications subject to change as development is a continuous process.)

## Selec Controls Pvt. Ltd., India

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