Product Manual

8 Channel Scanner
with USB Data Logger

MS-1248 U

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Product Inception

Technical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Display</td>
<td>(RED)</td>
</tr>
<tr>
<td>Lower Display</td>
<td>(GREEN)</td>
</tr>
<tr>
<td>USB Storage Full Indication</td>
<td></td>
</tr>
<tr>
<td>USB Port</td>
<td></td>
</tr>
<tr>
<td>To go to Parameter Setting</td>
<td></td>
</tr>
<tr>
<td>To change the value or select option</td>
<td></td>
</tr>
<tr>
<td>Channel and Alarm Indication</td>
<td></td>
</tr>
</tbody>
</table>

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Model | MS 1248U
Display | UPPER: 4 Digit 7 seg 0.70", RED LED Display
| LOWER: 4 Digit 7 seg 0.50", GREEN LED Display
Size (mm) | 96 (H) X 96 (W) X 50 (D) mm
Panel Cutout | 92 X 92 mm
Input | J TYPE, K TYPE, PT-100 3Wire Selectable
Temperature Range | J : 0 To 600°C / K: 0 TO 1200°C / PT-100: -99 To 400°C / PT.1: -99.0 To 400.0°C
Output | 4 Relay, (NO-C-NC) 1C/O 5A@230V AC , USB Data Logging Facility 5A for Resistive load
Power Supply | 100 to 250V AC,50/60 Hz, Approx 4VA
Operating Temperature | 0°C To 55°C
Relative Humidity | Up to 95% RH Non Condensing
Procedure

1) Do all connection as per the wiring diagram
2) To Configure:  
   1. Input Selection
   2. Relay mode
   - If 1 Relay per group
     - LOW
     - HIGH
   - If 2 Relay per group
     - LOW / HIGH
     - HIGH / TRIP
     - HIGH / LOW
   3. Set point Selection
   4. Offset Setting
   5. RTC Setting

Note: Dp selection for PT-100/3Wire Only.

3) If needed to add offset, press ▲ + ▼ together.
   Set offset for each channel if required.
   Off set range will be ±25°C for J, K, PT-100 temperature input.
   Off set range will be ±25.0°C for PT.1 when DP is selected YES.

4) Press & Hold key for auto scrolling or manual scrolling.
5) In hold mode use ▲ & ▼ key to select next channel.

Terminal Diagram
Main Menu: To change set value & hysteresis based on relay mode & grouping

For Example:

In Group No 1 If 1st channel, have a set point as a high alarm, 1 relay
In Group No 2 If 2nd channel, have a set point as a low alarm, 1 relay
For, 3rd, 4th, 5th, 6th, 7th, 8th channel have a set point as high & low alarm, 2 relay

MENU-1

Input Selection

Press ➔ + key.

Press key.

Use  or  key to Skip or Unskip Channel.

Press key.

To change the Input Type, Press  or  Key. (J, K, PT-100, PT.1).

Press key.

(Repeat the same procedure for all 8 channels).

Press key.

(Repeat the same procedure for all 8 channels).

Press key to save & exit.

Note: Set value can be changed by  or  key.
**Key Operation**

1) Press key to enter in set value menu.
2) Press & key to change the parameter setting.
3) Press + Key to enter in parameter menu (Input selection, skip-unskip selection)
4) Press + Key to enter in group menu for relay mode selection.
5) Press + Key to set OFFSET.
6) Press & hold key to enter in scroll & hold mode.

**Menu: 2**

To configurable no.of channel per group. (User can define maximum 4 group & maximum 8 channel/group), relay mode

**Relay menu**

Press + key

Repeat for 8 Channel

Set yes or no for channel by press or key.

Press key to go to next parameter

Press key to output relay select.

Select no of output relay by press & key.

Press key to go to next parameter

Set output of relay

Low
High
High and Low

by press or key

Press key to next group(if relay exist)

Press key to exit

---

Note: Set value can be changed by or key.
Note: Set value can be changed by \( \text{or} \) or key.

**MENU-3**

**Set point Selection**

Press \( \text{SET} \) key.

Press \( \text{SET} \) key.

Press \( \text{SET} \) key.

Press \( \text{SET} \) key.

Press \( \text{SET} \) key.

Press \( \text{SET} \) key.

Press \( \text{SET} \) key.

Press \( \text{SET} \) key.

Press \( \text{SET} \) key to save & exit.

**MENU-4**

**OFFSET Setting**

Press \( \text{SET} \) & \( \text{DOWN} \) or \( \text{UP} \) key to change offset.

Press \( \text{SET} \) key to change offset.

Press \( \text{SET} \) key to go to next channel.

(Repeat the same procedure for all 8 channels)

Change offset point -25 to +25 by using \( \text{or} \) or key.

Press set key to go to next channel.
**RTC Setting**

Press ▼ & ▲ key to access RTC Parameter.

1-999. USB Save Time.

Press SET key.

If password is not 25.

Press SET key.

If password is 25.

(0-59) Second.

Press SET key.

(0-59) Minute.

Press SET key.

(0-23) Hour.

Press SET key.

(1-31) Date.

Press SET key.

(1-12) Month.

Press SET key.

(0-99) Year.

Press SET key.

Press key to save & exit.

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Note: Set value can be changed by ▲ or ▼ key.
**USB Excel Sheet Format**

Note :- Up to 8000 Values can be stored in internal memory, and after internal memory reaches to 5800 values Memory full indication LED start blinking which means memory is about to full.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Channel 1</th>
<th>Channel 2</th>
<th>Channel 3</th>
<th>Channel 4</th>
<th>Channel 7</th>
<th>Channel 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/06/2018</td>
<td>14:22:31</td>
<td>45</td>
<td>42</td>
<td>39</td>
<td>35</td>
<td>35</td>
<td>33</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:32</td>
<td>46</td>
<td>42</td>
<td>39</td>
<td>36</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:33</td>
<td>46</td>
<td>42</td>
<td>39</td>
<td>36</td>
<td>36</td>
<td>34</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:34</td>
<td>46</td>
<td>43</td>
<td>39</td>
<td>36</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:35</td>
<td>46</td>
<td>43</td>
<td>39</td>
<td>36</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:36</td>
<td>46</td>
<td>43</td>
<td>40</td>
<td>36</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:37</td>
<td>46</td>
<td>43</td>
<td>40</td>
<td>37</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:38</td>
<td>46</td>
<td>43</td>
<td>40</td>
<td>37</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:39</td>
<td>46</td>
<td>43</td>
<td>40</td>
<td>37</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>1/06/2018</td>
<td>14:22:40</td>
<td>46</td>
<td>43</td>
<td>40</td>
<td>37</td>
<td>37</td>
<td>34</td>
</tr>
</tbody>
</table>
### Mechanical Installation

**Top View**

**Right Side View**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS</td>
<td>100mm</td>
<td>100mm</td>
<td>90mm</td>
<td>90mm</td>
<td>3mm</td>
<td>53mm</td>
<td>56mm</td>
</tr>
</tbody>
</table>
Safety Precautions
All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.
If all the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment.
=> Read complete instructions prior to installation and operation of the unit.

WARNING: Risk of electric shock.

Warning Guidelines
1) To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement. Do not touch the terminals while power is being supplied.
2) To reduce electro magnetic interference, use wire with adequate rating and twists of the same of equal size shall be made with shortest connection.
3) Cable used for connection to power source, must have a cross section of (1mm)$^2$ or greater. These wires should have insulations capacity made of at least 1.5kV.
4) When extending the thermocouple lead wires, always use thermocouple compensation wires for wiring for the RTD type, use a wiring material with a small lead resistance (5Ω max per line) and no resistance differentials among three wires should be present.
5) A better anti-noise effect can be expected by using standard power supply cable for the instrument.

Installation Guidelines
1) This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.
2) Do not allow pieces of metal, wire clippings, or fine metallic fillings from installation to enter the product or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
3) Circuit breaker or mains switch must be installed between power source and supply terminal to facilitate power ‘ON’ or ‘OFF’ function. However this mains switch or circuit breaker must be installed at convenient place normally accessible to the operator.
4) Use and store the instrument within the specified ambient temperature and humidity ranges as mentioned in this manual.

Mechanical Installation
1) Prepare the panel cutout with proper dimensions as show above.
2) Fit the unit into the panel with the help of clamp given.
3) The equipment in its installed state must not come in close proximity to any heating source, caustic vapors, oils steam, or other unwanted process by products.
4) Use the specified size of crimp terminal (M3.5 screws) to wire the terminal block. Tightening the screws on the terminal block using the tightening torque of the range of 1.2 N.m.
5) Do not connect anything to unused terminals.

Maintenance
1) The equipment should be cleaned regularly to avoid blockage of ventilating parts.
2) Clean the equipment with a clean soft cloth. Do not use isopropyl alcohol or any other cleaning agent.
3) Fusible resistor must not be replaced by operator.
Note:
Product improvement and upgrade is a constant procedure. So for more updated operating information and support, please contact our helpline: +91-9978991474/76/82 or Email at: service@multispanindia.com