MONITOUCH

V8 series

Expanding the Possibilities of the Future

Hakko Electronics Co., Ltd.

www.monitouch.com
MONITOUCH V8 series

For optimal performance, connectivity and usability
The MONITOUCH V8 series has expanded the potential of programmable operator interface panels.

Realize the Ideal

High Performance
The new MONITOUCH series has realized the best possible performance with a newly developed high-speed algorithm and a high level of visibility for efficient operation.

Connectivity
8-way communication with up to eight kinds of devices and two USB channels ensure high compatibility and expandability of your system.

Usability
User-friendly component parts and functional switches enable simple and speedy display configuration.
Our wide range of products allows you to select revolutionary features for production sites: 8-way communication and 16-million colors high-resolution video display. As well as V8 series have the same panel cutouts as V7 series, the V7 screen program can be utilized in V8 series. A multi-feature model with the ultimate operator interface panel.

### V8 series

- **NEW**
- Revolutionary features for production sites: 8-way communication and 16-million colors high-resolution video display. As well as V8 series have the same panel cutouts as V7 series, the V7 screen program can be utilized in V8 series. A multi-feature model with the ultimate operator interface panel.

<table>
<thead>
<tr>
<th>15.0 inches</th>
<th>12.1 inches</th>
<th>10.4 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>V815iX</strong></td>
<td><strong>V812iS/V812S</strong></td>
<td><strong>V810iS/V810S</strong></td>
</tr>
</tbody>
</table>

### V7 series

- Comes in a variety of models including large-size (15-inch XGA) and small-size (5.7-inch). A versatile and high-ranking series that can be widely used ranging from the net working to stand-alone.

<table>
<thead>
<tr>
<th>15.0 inches</th>
<th>12.1 inches</th>
<th>10.4 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>V715X</strong></td>
<td><strong>V712iS/V712S</strong></td>
<td><strong>V710iS/V710S</strong></td>
</tr>
</tbody>
</table>

### V6 series

- Has all of the basic functions. Entry-level models that will satisfy your needs in superior usability and cost-effectiveness.

<table>
<thead>
<tr>
<th>15.0 inches</th>
<th>12.1 inches</th>
<th>10.4 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>V65iX</strong></td>
<td><strong>V62iS/V62S</strong></td>
<td><strong>V60iS/V60S</strong></td>
</tr>
</tbody>
</table>

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*Note: The table above represents the configurations and models available in different series.*
Select the one that best fits your needs.

<table>
<thead>
<tr>
<th>inches</th>
<th>8.4 inches</th>
<th>7.7 inches</th>
<th>5.7 inches</th>
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<tbody>
<tr>
<td>V810iT/V810T</td>
<td>V808iSD/ V808SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V810iC/V810C</td>
<td>V808iCD/ V808CD</td>
<td>V808iCH/ V808CH</td>
<td>V806iTD/ V806TD</td>
</tr>
<tr>
<td>V806iCD/ V806CD</td>
<td></td>
<td></td>
<td>V806iMD/ V806MD</td>
</tr>
<tr>
<td>V710iT/V710T</td>
<td>V708iSD/ V708SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V710C</td>
<td>V708CD</td>
<td>V706TD</td>
<td>V706CD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V706MD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V608CH</td>
<td>V606eC</td>
<td>V606eM</td>
</tr>
</tbody>
</table>
Flagship model XGA 65,536 colors

**V815 series**

All information at the production site is displayed on the XGA wide screen! Flagship model in V8 series.

**15-inch model**

### Display/Operation Features

- **Software (V-SFT)**

### Communication Features

- **Expandability**
- **Usability**
- **Configuration**

### Display size (inches)

12.1 inches

### Resolution

3CH serial

### SRAM (byte)

512K

### Ethernet

100BASE-TX/10BASE-T

### Communication I/F

- Equipped
- RS-232C, RS-422/485, Asynchronous
- Data length: 7 bits, 8 bits, Parity: even, odd, none
- Stop bit: 1 bit, 2 bits
- Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500bps

### Modular 8-pin MJ1/MJ2

- RS-232C - RS-422/485(2-wire), Asynchronous
- Data length: 7 bits, 8 bits, Parity: even, odd, none
- Stop bit: 1 bit, 2 bits
- Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 1152000bps

### Ethernet

100BASE-TX/10BASE-T Built-in

### Communication unit

- Equipped
- Type A and B (Ver1.1)

### Interface Basic specification

#### Options

- CU-xx
- V-I/O

### Serial connection

- Modular 8-pin MJ1/MJ2
- Ethernet

### USB-A

- GU-xx

### USB-B

Legend of icons

- Under development
- *3 Only with 24V DC models
- CE Marking

### Power supply specifications/N: N/A: AC100-240V specifications

- D: 24V (CE/UL/cUL approved)
## High-performance model SVGA 65,536 colors

**V812 series**

**12.1-inch model**

**High visibility and stability of SVGA. Offers you high performance.**

### V812 models

<table>
<thead>
<tr>
<th>Model</th>
<th>V812iS</th>
<th>V812S</th>
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</thead>
<tbody>
<tr>
<td>Display size</td>
<td>12.1 inches</td>
<td></td>
</tr>
<tr>
<td>Display device</td>
<td>TFT color LCD</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>800x600 dots</td>
<td></td>
</tr>
<tr>
<td>Display colors</td>
<td>65,536 colors (without blinks)</td>
<td>32,768 colors (with blinks)</td>
</tr>
<tr>
<td>Display memory</td>
<td>FROM (12.5MB)</td>
<td></td>
</tr>
<tr>
<td>Backup memory</td>
<td>SRAM (512KB)</td>
<td></td>
</tr>
<tr>
<td>Communication I/F</td>
<td>Equipped</td>
<td></td>
</tr>
<tr>
<td>Extend I/F</td>
<td>Equipped</td>
<td></td>
</tr>
<tr>
<td>CF card I/F</td>
<td>Equipped</td>
<td></td>
</tr>
<tr>
<td>USB I/F</td>
<td>Type A and B (Ver 1.1)</td>
<td></td>
</tr>
</tbody>
</table>

### Options

- PLC
- Temperature controller
- Inverter
- Card recorder (CREC)
- Bar code reader
- V-Link
- Touch switch
- PLC ladder transfer
- Modbus slave
- Printer (serial)
- Video input + RGB input
- RGB input (2ch)
- Video input + sound output
- RGB input + sound output
- Sound output

### Specifications

- **Model**: V812iS, V812S
- **Display size**: 12.1 inches
- **Display device**: TFT color LCD
- **Resolution**: 800x600 dots
- **Display colors**: 65,536 colors (without blinks), 32,768 colors (with blinks)
- **Display memory**: FROM (12.5MB)
- **Backup memory**: SRAM (512KB)
- **Communication I/F**: Equipped
- **Extend I/F**: Equipped
- **CF card I/F**: Equipped
- **USB I/F**: Type A and B (Ver 1.1)

### Option List

- PLC
- Temperature controller
- Inverter
- Card recorder (CREC)
- Bar code reader
- V-Link
- Touch switch
- PLC ladder transfer
- Modbus slave
- Printer (serial)
- Video input + RGB input
- RGB input (2ch)
- Video input + sound output
- RGB input + sound output
- Sound output
- Communication unit
- Communication unit
- I/O unit
- V-Link
- Touch switch
- PLC ladder transfer
- Modbus slave
- Printer (serial)
- Video input + RGB input
- RGB input (2ch)
- Video input + sound output
- RGB input + sound output
- Sound output
- Communication unit

### Notes

1. Under development
2. When connected with SIEMENS MPI
3. Only with 24V DC models
4. Contact us if UL508/UL1604 needs to be supported.
V810 series

**High-performance model SVGA**
- V810iS
- V810T

**Highly-functional model VGA**
- V810iT
- V810iT

**Standard model VGA**
- V810iC
- V810C

**V810 models**
- V810

**Product Features**
- Display
- Communication
- Configurable Software (S-FT)
- Expandability
- Usability
- Configuration
- Option
- Option List
- System Configuration
- Display/Operation Features
- Communication Features
- Expandability with WEInet
- Component
- Compatibility with Part Numbers
- Specifications
- Descriptions
- Customer Service
- Product Warranty

**Specifications**
- Display size
- Display device
- Resolution
- Display colors
- Backup memory
- Communication I/F
- Communication V/F
- CF card I/F
- USB-A
- USB-B

**Options**
- Feature
- Ethernet
- VGA
- SVGA
- RS-232C
- RS-422/485
- RS-422
- USB
- Modular 8-pin
- Parallel (BCD, RS-422)
- Serial (RS-422, RS-485)

**Compatibility**
- CE Marking
- UL/CUL
- RoHS directive

**Notes**
- 1. FROM 4.5Mbytes + SRAM 128KBbytes
- 2. Optional ports are not available in V810iC
- 3. Under development
- 4. When connected with SIEMENS MPI
- 5. Only with 24V DC models
- 6. Contact us if UL1604 needs to be supported.

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**V810 models**

- V810iS (With Ethernet port)
- V810iT (With Ethernet port)
- V810iC (Without Ethernet port)
- V810T (Without Ethernet port)

**Display size**
- 10.4 inches

**Display resolution**
- 640×480 dots
- 800×600 dots

**Display colors**
- 65,536 colors
- 32,768 colors

**Backup memory**
- SRAM (512KB)

**Communication I/F**
- RS-232C
- RS-422/485
- RS-422
- USB

**Communication V/F**
- Equipped
- Equipped
- Equipped

**CF card I/F**
- Type A
- Type B

**USB-A**
- Equipped

**USB-B**
- Equipped

**Display**
- TFT color LCD (SVGA)
- TFT color LCD (VGA)
- TFT color LCD (VGA)

**Display size**
- 12.1 inches
- 10.4 inches

**Display resolution**
- 1280×1024 dots
- 800×600 dots

**Display colors**
- 65,536 colors
- 32,768 colors

**Backup memory**
- SRAM (512KB)

**Compatibility**
- CE Marking
- UL/CUL

**Optional ports**
- Modular 8-pin
- Parallel (BCD, RS-422)
- Serial (RS-422, RS-485)

**Communication I/F**
- RS-232C
- RS-422/485

**Communication V/F**
- Equipped
- Equipped
- Equipped

**CF card I/F**
- Type A
- Type B

**USB-A**
- Equipped

**USB-B**
- Equipped

**Display**
- TFT color LCD (SVGA)
- TFT color LCD (VGA)
- TFT color LCD (VGA)

**Display size**
- 12.1 inches
- 10.4 inches

**Display resolution**
- 1280×1024 dots
- 800×600 dots

**Display colors**
- 65,536 colors
- 32,768 colors

**Backup memory**
- SRAM (512KB)

**Compatibility**
- CE Marking
- UL/CUL

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**Notes**
- 1. FROM 4.5Mbytes + SRAM 128KBbytes
- 2. Optional ports are not available in V810iC
- 3. Under development
- 4. When connected with SIEMENS MPI
- 5. Only with 24V DC models
- 6. Contact us if UL1604 needs to be supported.
Compact yet functional panels in 65,536 colors. SVGA models are also available.

8.4-inch model

**V808 series**

- **High-performance model SVGA**
  - WIth Ethernet port
  - V808iSD
  - Without Ethernet port
  - V808SD

- **Standard model VGA**
  - With Ethernet port
  - V808iCD
  - Without Ethernet port
  - V808CD

**V808 models**

**V808 SD**

### Communication
- Network protocol
  - OPCN-1
  - CC-Link
  - Ethernet
  - PROFIBUS-DP
  - DeviceNet

### Serial connection
- Modular 8-pin
  - PLC
  - Temperature controller/Inverter
  - General PC
  - Bar code reader

### Optional units
- Video input + RGB input
- RGB input (2ch)
- Video input + sound output
- RGB input + sound output
- Sound output
- Option list
- OEC-1
- OPCN-1
- T-Link
- CC-Link
- Ethernet
- PROFIBUS-DP
- DeviceNet

### Interface
- Modular 8-pin
  - RJ-22C2C - RS-422/485
  - Asynchronous
  - Data length: 7 bits, 8 bits
  - Parity: even, odd, none
  - Stop bit: 1 bit, 2 bits
  - Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500bps

- 100BASE-TX

### Communication I/F
- Equipped

**Standard model VGA**

**V808iCD**

### Communication I/F
- Equipped

### Extend I/F
- Type A and B (Ver1.1)

### I/O unit
- V-I/O
- Communication unit
  - CU-00 – 08

### CE Marking
- EN61000-6-2, EN61000-6-4

### UL/ULC
- UL508/UL1604

### CE directive
- RoHS directive

**Option**

- **Software (V-SFT)**
- **Parts**
- **Expandability**
- **Usability**
- **Configuration**

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*1 FROM 4.5Mbytes - SRAM 128Kbytes
*2 Optional ports are not available in V808iCD.
*3 Under development
*4 When connected with SIEMENS MPI
*5 Contact us if UL1604 needs to be supported.
V806 series

High-performance compact models

5.7-inch model

With Ethernet port
V806iTD
Without Ethernet port
V806D

V806 models

V806 □ □ D

(optical properties] T: TFT color LCD (QVGA) C: STN color LCD (QVGA) M: STN monochrome LCD (QVGA)

[Functional properties] N/A: Without built-in LAN port  i: With built-in LAN port

Legend of icons

Display size (inches)  TFT  STN  Display device  VGA  Display resolution  Display colors  2MB  FROM capacity  SRAM (byte)  Serial port  Ethernet

### Standard model QVGA 65,536 colors

<table>
<thead>
<tr>
<th>Model</th>
<th>V806iTD</th>
<th>V806TD</th>
<th>V806iCD</th>
<th>V806CD</th>
<th>V806iMD</th>
<th>V806MD</th>
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<tbody>
<tr>
<td>Display size</td>
<td>5.7 inches</td>
<td>5.7 inches</td>
<td>5.7 inches</td>
<td>5.7 inches</td>
<td>5.7 inches</td>
<td>5.7 inches</td>
</tr>
<tr>
<td>Display device</td>
<td>TFT color LCD</td>
<td>STN color LCD</td>
<td>STN color LCD</td>
<td>STN monochrome LCD</td>
<td>STN monochrome LCD</td>
<td>STN monochrome LCD</td>
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<tr>
<td>Resolution</td>
<td>320×240 dots</td>
<td>65,536 colors (with blinks)</td>
<td>32,768 colors (without blinks)</td>
<td>16 gray scale (with blinks)</td>
<td>16 gray scale (with blinks)</td>
<td>16 gray scale (with blinks)</td>
</tr>
<tr>
<td>Display colors</td>
<td>65,536 colors</td>
<td>65,536 colors</td>
<td>65,536 colors</td>
<td>65,536 colors</td>
<td>65,536 colors</td>
<td>65,536 colors</td>
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<tr>
<td>Backup memory</td>
<td>SRAM (128KB)</td>
<td>SRAM (512KB)</td>
<td>SRAM (512KB)</td>
<td>SRAM (512KB)</td>
<td>SRAM (512KB)</td>
<td>SRAM (512KB)</td>
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<td>D-Sub 9-pin CNT*1</td>
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<td>Modular 8-pin MJ1/MJ2*2</td>
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<td>Ethernet</td>
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<td>100BASE-TX/10BASE-T</td>
<td>100BASE-TX/10BASE-T</td>
<td>100BASE-TX/10BASE-T</td>
<td>100BASE-TX/10BASE-T</td>
<td>100BASE-TX/10BASE-T</td>
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<td>Equipped</td>
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<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
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<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
<td>Type A and B (Ver1.1)</td>
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<td>Communication unit</td>
<td>CUI-00 – 08</td>
<td>CUI-00 – 08</td>
<td>CUI-00 – 08</td>
<td>CUI-00 – 08</td>
<td>CUI-00 – 08</td>
<td>CUI-00 – 08</td>
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<tr>
<td>I/O unit</td>
<td>V+IO</td>
<td>V+IO</td>
<td>V+IO</td>
<td>V+IO</td>
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<td>V+IO</td>
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<tr>
<td>CE Marking</td>
<td>EN61000-6-2; EN61000-6-4</td>
<td>EN61000-6-2; EN61000-6-4</td>
<td>EN61000-6-2; EN61000-6-4</td>
<td>EN61000-6-2; EN61000-6-4</td>
<td>EN61000-6-2; EN61000-6-4</td>
<td>EN61000-6-2; EN61000-6-4</td>
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<td>UL/ULc</td>
<td>UL508/UL1604</td>
<td>UL508/UL1604</td>
<td>UL508/UL1604</td>
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<td>RoHS directive</td>
<td>Complied</td>
<td>Complied</td>
<td>Complied</td>
<td>Complied</td>
<td>Complied</td>
<td>Complied</td>
</tr>
</tbody>
</table>

*1 SRAM 128Kbytes
*2 Concurrent use of Ethernet and CF card is not available

- Available only when connected with SIEMENS MPI (MJ2 only). Not compatible with D-Sub 9-pin (option)
- Available only when equipped with DU-10 (option)
- Under development

Legend of icons:
- Display size (inches)
- TFT
- STN
- Display device
- VGA
- Display resolution
- Display colors
- FROM capacity
- SRAM (byte)
- Serial port
- Ethernet
**V808CH series**

**Handy type model supporting Ethernet**

**V808CH models**

**7.5-inch model**

With Ethernet port

**V808iCH**

Without Ethernet port

**V808CH**

<table>
<thead>
<tr>
<th>Model</th>
<th>V808CHx</th>
<th>V808iCHx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display size</td>
<td>7.5 inches</td>
<td>V808CHx</td>
</tr>
<tr>
<td>Display device</td>
<td>TFT color LCD</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Resolution</td>
<td>640x480 dots</td>
<td>V808CHx</td>
</tr>
<tr>
<td>Display colors</td>
<td>65,536 colors (without blinks)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td></td>
<td>32,768 colors (with blinks)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Backup memory</td>
<td>SRAM (128KB)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td></td>
<td>SRAM (256KB)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Clock</td>
<td>Equipped</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Ethernet</td>
<td>10BASE-TX / 10BASE-T</td>
<td>V808iCHx</td>
</tr>
<tr>
<td></td>
<td>Built-in</td>
<td>V808iCHx</td>
</tr>
<tr>
<td></td>
<td>Unequipped</td>
<td>V808iCHx</td>
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<tr>
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<td>Type B (Ver1.1)</td>
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</tr>
<tr>
<td>USB I/F</td>
<td>Type B (Ver1.1)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Number of function switches</td>
<td>12 switches (4: External output)</td>
<td>V808iCHx</td>
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<tr>
<td>Switch type</td>
<td>Membrane switch</td>
<td>V808iCHx</td>
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<tr>
<td>Mechanical life</td>
<td>1 million times or more</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Switch type</td>
<td>Push lock type (b-contact point, 2 circuits)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>More than 100,000 times</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>DC24V</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Rated current</td>
<td>1A (load resistance)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Contact point</td>
<td>a-contact point, 1 circuit</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>More than 250,000 times</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Electrical life</td>
<td>More than 100,000 times (switching frequency 1,000 times/h)</td>
<td>V808iCHx</td>
</tr>
</tbody>
</table>

**Functional specifications**

N/A: Without built-in LAN port

<table>
<thead>
<tr>
<th>Options</th>
<th>V808CHx</th>
<th>V808iCHx</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF card I/F</td>
<td>Equipped</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>USB I/F</td>
<td>Type B (Ver1.1)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Number of function switches</td>
<td>12 switches (4: External output)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Switch type</td>
<td>Membrane switch</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>1 million times or more</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Switch type</td>
<td>Push lock type (b-contact point, 2 circuits)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>More than 100,000 times</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>DC24V</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Rated current</td>
<td>1A (load resistance)</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Contact point</td>
<td>a-contact point, 1 circuit</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>More than 250,000 times</td>
<td>V808iCHx</td>
</tr>
<tr>
<td>Electrical life</td>
<td>More than 100,000 times (switching frequency 1,000 times/h)</td>
<td>V808iCHx</td>
</tr>
</tbody>
</table>

**Specifications**

- **Ethernet port**
  - **V808iCH**
    - RS-422/485
    - Key switch output
    - Emergency stop switch output
    - Deadman switch output
  - **V808CH**
    - RS-232C
    - External output (4-point)

**Power supply** (DC24V)

**TB1**

- **Power supply (DC24V)**

**TB2**

- **RS-232C**
- **External output (4-point)**

**TB3**

- **RS-422/485**

**Options**

- **CF card I/F**
- **USB I/F**
- **Analog switch / Matrix switch**
- **Video input**
- **RGB input/output**
- **Sound output**
- **Option**

**CE Marking**

- EN61000-6-2, EN61000-6-4

**UL/cUL**

- UL508

**RoHS directive**

- Complied

*1 a-contact point and 2 circuits are available only in V808(i)CH4. Only one circuit is available in V808(i)CH2 and V808(i)CH3.

*2 When connected with SIEMENS MPI
Display Features

**Improved visibility for operator interface panels**

Great power of the visibility facilitates the operation by high-resolution and high-speed video display.

**High-resolution Display**

The image shown below is not an actual display image.

65,536 colors\(^1\)  
(32,768 colors with blinks)

High-resolution display of 65,536 colors without blinks and 32,768 colors with blinks enables clear display of JPG and BMP images. Realistic appearance of photos, illustrations and 3D parts improves visibility and makes it easy for operators to quickly grasp the conditions.

**High-level images are displayed in real time without missing any information**

Display of 30 fps video images in 16 million colors\(^2\)

High-speed displaying of 30 frames per second is possible. Even displays for production of a short tact time can be made without any delay.

Monochrome display with 256 gradations\(^2\)

Monochrome images that are often used by image processor can be displayed more clearly. The reproduction capacity for gradation and pattern-Indented surfaces has been drastically improved.

**Clear and smooth letters**

The stroke font can be displayed to appear smooth even for magnified characters.

The stroke font is defined by lines. Since it does not depend on the resolution of the device, which is different from the bitmap font, fonts can be magnified or shrunk freely. Unicode enables you to edit the project in various languages.

<table>
<thead>
<tr>
<th>Language</th>
<th>Japanese</th>
<th>English / European</th>
<th>Traditional Chinese</th>
<th>Simplified Chinese</th>
<th>Korean</th>
<th>Central European</th>
<th>Cyrillic</th>
<th>Greek</th>
<th>Turkish</th>
<th>Unicode(UTF-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bitmap font</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-gothic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gothic</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stroke font</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

\(^1\) Except V806iMD/V806MD

\(^2\) For V808iS, 260,000-color displays and 64-gradation monochrome displays are possible.
Operation Features

"User-oriented operationality" by high-speed and smooth display

High-speed accelerator and algorithm ensure stress-free operation.

Free switch layout with analog resistive switches

Analog resistive switch
Analog resistive switches are used for MONITOUCH. Freer switch layout facilitates screen designing while more intensive operation display can be produced.

Matrix resistive switch
Switches are detected by block.

When moving the button

The button can be arranged only along the specified grid line.

Analog resistive switch
Switches are detected by dot.

When moving the button

The switch detection area can be moved freely along with the button.

*The area outside the dotted lines is not detected.

Slider switch
Slider switches enable data entry without inputting data using the numeral key pad. Values can be modified easily and quickly, even for a fine adjustment.

Scroll bar
Messages and JPEG files out of the display area can be seen by scrolling the area.

Memo pad function
Analog resistive switches allow you to use MONITOUCH as a memo pad for hand writing. You can draw a picture or write a message on the display for use as a message board at production sites.

High-speed accelerator and algorithm ensure speedy, high-quality displays as well as higher usability in panel operation.

V8 series has drastically improved the processing capacity for drawing, calculation and communication in terms of smooth drawing and quick response.

**Speedy drawing**
V8 is equipped with a high-speed graphic accelerator, which improves speed for drawing graphics and characters.

**High-speed communication**
High-speed communication with PLCs is possible. By improving communication efficiency, the cycle speed can be shortened even when linked with more than two PLCs.

**Quick response**
Switch response speed has been shortened by efficient data processing and task assignment.
**Communication Features**

**Multi-communication using the gateway function**

Is capable of the connection with up to eight devices by combining Ethernet and serial communication. More advanced and expanded network can be now realized.

**Connectable with up to eight different kinds of devices and different manufacturers’ PLCs**

8-way communication
A combination of Ethernet (eight protocols) and serial communication (three protocols) allows the 8-way communication, which enables connection among a V8 and up to eight kinds of devices consisting of PLCs and peripherals of different manufacturers.

- Simultaneous communication and data transfer with eight kinds of devices
- Simultaneous monitoring and operation of multiple PLCs and peripherals
- Linkage between a V8 and various devices on the LAN network using the gateway function

**Network Examples**

**Example 1** Serial connection (three ports)
Making a network linked with various automation devices
PLCs and peripherals of up to three kinds of units can be connected by serial connection. Even though two or more types of temperature controllers and inverters are used, they can be connected with one V8.

![Network Example 1 Diagram]

**Example 2** Serial connection and Ethernet
Integrated management of up to eight kinds of devices
In addition to conventional connection with temperature controllers and PLCs via 2-way serial communication, connection via Ethernet is possible.

![Network Example 2 Diagram]

**Example 3** Ethernet
Used as a gateway for different types of networks
V8 can connect with eight kinds of PLCs via Ethernet. In addition, it can be used as a gateway with another network by adding an Ethernet port using the optional unit (CU-03-3). For example, data can be transferred between a production site and the office freely by using a V8. V8 works as the gateway of multiple networks of the production site and the office without increasing data load on the networks.

![Network Example 3 Diagram]
A variety of ingenious uses

8-way communication offers various functions and boosts your convenience

**Case 1** Analysis of trouble

Integrated management of different manufacturers’ PLCs

A production line that contains various manufacturers’ equipment has various types of PLCs. By using 8-way communication, you can monitor the condition of all the PLCs through a V8 and analyze trouble at a remote place without visiting the site.

**Case 2** Reading of production conditions and set data

Connectable with various kinds of equipment

Even when the system consists of various kinds of equipment, it is easy to read and write the data of the individual units via 8-way communication. By using a V8 as a gateway, it is possible to connect with the office host system.

**Case 3** Real-time indication of information

High-speed data sampling

A V8 is connected to a PLC via two communication lines: one for operation/ monitoring, and the other for sampling, a setup that enables high-speed and stable sampling.
Expandability (USB master/slave)

High compatibility with peripherals makes for more user-friendliness

All models are equipped with two types of USB interfaces fitted as standard feature.

High-speed transfer of large-volume data and easy connection to printers

Slave (USB-B)

PLC Ladder Program Transfer

PLC ladder programs can be written or monitored with your PC through the USB port of V8. High-speed ladder transfer is possible.

Compatible with PictBridge Printers

V8 is compatible with PictBridge printers. With PictBridge-compatible printers, production data such as daily and monthly reports can be printed out easily.

Master (USB-A)

Card Reader/Writer

Connection with our "USB-CFREC" or commercial CF card readers/writers increases the versatility.

Compatible with USB Keyboard

In addition to conventional software keyboards, a USB keyboard can be connected, which facilitates the entry of long product numbers and code numbers.

Compatible with USB Mouse

PC operation

By installing an optional RGB input unit "GU-01", "GU-10" or "GU-11", PC screen can be displayed on V8. You can operate the PC screen using a USB mouse.

Output on Large Displays

By installing the optional RGB output unit "GU-02", V8 screen program can be displayed on a large screen and it can be operated using a USB mouse.

Compatible with PC peripherals including a USB keyboard and a USB mouse

USB interfaces Fitted on the Front

Optional interfaces "UA-FR" and "UB-FR" enable USB ports to be fitted on the front of the display for easy access.
Expandability (CF Card)

For superior information management

Two-drive system for versatile uses of CF cards

CF card interface and USB reader/writer

Equipped with Two Drives
In addition to the built-in CF card interface, MONITOUCH is equipped with a USB interface for a CF card reader/writer, which can be used simultaneously. Since CF card data can be copied to another card while V8 is being used, the V8 performance will not be inhibited. These functions expand the versatility of MONITOUCH.

Built-in Drive for Constant Use

**case 1** Recipe Data
Production conditions can be saved in a CF card in CSV format. For preparation of production, data can be read out from a CF card and written in the PLC. It is also possible to read out data from PLC.

**case 2** Sampling
Production data and alarm history can be sampled and saved. Since the data is saved in CSV format, it can be easily edited in Excel.

USB Drive for Easy Data Delivery

**case 3** Screen Program Transfer
Because screen data can be saved on a CF card and read into V8 at a production site by means of a CF card reader/writer, there is no need to bring your PC.

**case 4** Data Transfer
While using a CF card as a built-in drive, the card data can be copied to another CF card via the USB interface. Sampling data and recipe data can be backed up easily while keeping the CF card in the slot.

PC-friendliness

Compatible with FAT32
FAT has some limitations. For example, a file name cannot exceed eight characters in length, and extensions must be within three characters. FAT32 allows a data file to have a longer file name, which improves compatibility with PCs.

Impressive Screen

Screen program capacity can be increased by means of a CF card
A CF card can be used as an extension unit for editing the screen. You can design an impressive screen freely without having to worry about data capacity.
**Easy Configuration 1**

**Highly functional switches**

Switches with various functions are standardized. No macro or PLC ladder programming is required.

**Various switches that meet the individual needs**

**Multi-output**
In order to meet diversified needs, switches with various functions are installed.

**Multi-output memory**
**Output up to 16 positions**

Switches have a multi-output function. Turning on just one switch makes the other switches turn off. It is also possible to output bit signals up to 16 positions.

For example, when you turn on one switch, the others turn off simultaneously.

![Automatic switch change is possible](image)

**Indication depends on the value**
In addition to the bit ON/OFF status, it is possible to set various switch conditions according to the value.

![Indication depends on the value](image)

**Setting the switch timing freely**

**ON delay**
It is possible to set switch functions such as requiring holding down the button for a certain time. This function prevents a false operation of the switch.

**OFF delay**
Switch output is retained for a certain time after reset of the switch.

**Indication according to individual production sites needs**

**Conditional Visibility**

**Static conditional visibility**
You can set whether or not to show an item while creating a screen, item by item. One screen data can be utilized for different applications.

**Dynamic conditional visibility**
Whether items are indicated or not is automatically determined according to the memory condition.

**Display for maintenance engineers**
**Display for operators**

The display can be arranged according to security level. The security level is controlled by passwords. For example, different displays are shown for a maintenance engineer and an operator.

**Display of conditional visibility according to the security level**

Different indication according to the security level.
Easy Configuration 2

Convenient functions to meet users’ demands

Flash ROM, a large capacity of SRAM and many other functions for more user friendliness

High-capacity memory facilitates screen design

12.5MB\(^1\) Flash ROM

V8 has 12.5MB\(^1\) Flash ROM as standard — twice\(^2\) the capacity of our previous model. In addition, by saving data in a CF card, you can design the screen without caring memory capacity.

\(^1\) SRAM capacity differs depending on the models. See Performance Specifications (P29) for details
\(^2\) Comparison with V7

For saving large-volume event history data

512KB\(^1\) SRAM as Standard

The built-in SRAM capacity has been expanded to 512KB\(^1\) — eight times larger than that of our previous model. The capacity for backup of sampling data, operation information, alarm information, etc. has been greatly increased to comply with the ISO standard for information management. The large memory capacity enables quick data processing.

\(^1\) SRAM capacity differs depending on the models. See Performance Specifications (P29) for details

Extended screen number

Enhanced configuration function

The upper limit of the number of configurable screens is extended to 9,999. Up to 4,000 screens can be stored in a V8. Additionally they can be saved in CF card, which means you do not need to care about screen data capacity.

Easy-to-make pop-up message

Pop-up Window

Pop-up window is standardised. No programming or individual message edit is required for making a dialog such as an alert.

To display an alert for each switch

Displaying a pop-up window

Message can be switched using the same dialog box from the library.

Switches are operative only when “OK” is pressed
Both a message and a parameter are loaded and displayed on the screen when any alarm happens. For example, if the water temperature gets more than 100°F, not only "caution" alarm but temperature data like "100°F Caution" can be displayed on the screen. It is facilitated to analyze causes of failure by more detailed information.

Setting image

<table>
<thead>
<tr>
<th>Parameter table</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

A parameter is loaded and a message that is corresponding to the situation is displayed when an alarm happens.

Message editing

Describe a parameter number that is registered when you edit a message. Then the memory that is set in the parameter is loaded and displayed when this message is displayed.

Displayed content can be saved in CF card as CSV formatted file, which makes it easier to analyze causes of failure.

Operation log

Operations such as pushing buttons on the screen and entering numbers are recorded in chronological order. By combining it with the password function, you can view "Who, When, What, & How" history to analyze causes of failure.

Refer to log data

By easy installation of checking "registration of operation log viewer", all functions of the viewer can be used.

CSV conversion

The binary file of operation history which was saved in a CF card can be converted to a CSV file by using a dedicated tool.
Conditional visibility of trend sampling data

You can select a waveform of trend sampling and display/hide it.

Supporting portrait orientation

You can edit V806 series screen as a longitudinal type image.

Function security

Security levels from 0 to 15 can be set per screen. By setting function limit appropriate for each user, highly secured environment can be established.

Interlock of the switch

Security levels can be set in the switches as well. Only those who login with an appropriate levels can use the switches.

Multi-link 2 via Ethernet

Multi-link 2 connection via Ethernet is supported. When connecting multiple V8s to one PLC, much faster transferring can be achieved comparing to existing multi-link.

Added macros

Mathematics/trigonometric function macros

Commands regarding to trigonometric function such as sine (SIN), cosine (COS) and tangent (TAN), absolute value and sign inversion are added.

CF card (sampling) macros

You can save a sampling data of buffering area in any file name as a CSV file.

Control statement macros

"IF ~ ELSE" statement is supported. You can write shortly and easily condition comparison macros.

CF card (hard copy) macros

You can save an image on the screen in any file name.
**Configuration Software [V-SFT]**

New V-SFT for easy screen configuration

Multiple windows provides immediate access to all application data.

---

**Overall View of All the Devices**

**Project View (1)**

- System tree diagrams show the configuration of files and screens in the entire system.
- Easy viewing and modification of the contents and configuration of each block.

---

**Quick Debugging on Your PC**

**Emulation function for Easy Debugging**

With the emulator of V-SFT Ver.5, data debugging is possible on your PC without V8 or PLC.

---

**Quick Arrangement with Component Parts**

**Parts View (2)**

- Various parts are listed for each item.
- Select a part, and drag & drop it on the configuration window.

---

**V-SFT Ver. 5**

**V-SFT Requirements**

<table>
<thead>
<tr>
<th>PC</th>
<th>PC/AT compatible machine with Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Windows 98/Me/NT Version 4.0/2000/XP/XP 64 edition/Vista 32bit*</td>
</tr>
<tr>
<td>CPU</td>
<td>Pentium III 800 MHz or higher (Pentium IV 2.0 GHz or higher is recommended)</td>
</tr>
<tr>
<td>Memory</td>
<td>512 MB or more</td>
</tr>
<tr>
<td>Hard disk</td>
<td>For installation: 850 MB or more available space</td>
</tr>
<tr>
<td>CD-ROM Disk drive</td>
<td>24 times or faster</td>
</tr>
<tr>
<td>Display</td>
<td>Resolution of 1,024 × 800 (32GA) or higher</td>
</tr>
<tr>
<td>Color indication</td>
<td>High color (16 bit) or higher</td>
</tr>
</tbody>
</table>

Easy and Speedy Display Configuration

Auto Size Change

When using screen data from a panel with different screen resolution, screen size is automatically adjusted to your selected model.

Since the screen size is automatically adjusted, no modification for arrangement is required.

Convenient Item View (3)

Direct editing

Memory condition, coordinates, switch names can be entered in the item view. Memory address, position, and text can be directly entered in the item list.

Coordinate items view

Utilize [Display setting] in the item list to minimize or maximize item properties in the windows. This system facilitates efficient management of information.

Enhanced Batch Change Functions

Additional items for batch change

More items can be changed simultaneously by batch change.

Batch change with the item view (4)

Multiple items can be selected to change the setting simultaneously on the item view window.

Available items

Switches, lamps, values, characters, messages, bar/circle graphs, panel meters, closed-area/statistical graphs

Select items to change, and select [Detailed setting].
Component Parts

“Component Parts” facilitate screen configuration.

Convenient tool assists you in creating functional screens instantly.

Quick screen configuration using integrated “Component Parts”

In “Component Parts,” various functions and macros have been arranged according to purpose. You can create a functional screen instantly by simply selecting a “Component Part” from the parts list and placing it on the screen.

Component Parts

First in Industry

Easy Screen Configuration

You can create multifunctional screens using integrated “Component Parts.” When arranging on a screen that contains other messages or setting windows, a “Component Part” can be used regardless of overlapping of settings or windows.

Point 1

Easy Screen Configuration

These screens can be used simply by placing a component part.

Point 2

Easy Utilization of Resource

“Component Parts” contain all necessary settings for operation, so they don’t need any additional settings when used on other displays. They can be reused simply by copying and pasting.

[“Component Part” for alarm]
Point 3 Simple Setting View
After placing “Component Parts,” they can be easily used simply by setting addresses and texts.

Example of Setting View ("Component Part" for alarm history)
Example of Setting View ("Component Part" for alarm history)
Set an address for alarm monitoring.

Set a text for each alarm message.

All settings for alarm history can be edited in one menu.

Memory setting

Text setting

Point 4 Batch Change of Addresses/Texts
When the same address or text is used for multiple screens, all the settings can be changed simultaneously on the setting view simply by registering it in the address/text table of a “Component Part.”

Point 5 Authorization by Passwords
Setting a password for a “Component Part” prevents the settings for the part from being changed by unauthorized persons. Customers can use a “Component Part” without having to worry about tampering of the setting.

Point 6 Various "Component Parts"
“Component Parts” with various functions are available. They can be selected from the parts list according to your purpose to configure displays promptly.

Examples of "Component Parts"

<table>
<thead>
<tr>
<th>Temperature controller</th>
<th>Inverter</th>
<th>Robot controller</th>
<th>I/O monitor</th>
<th>Date setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displays for monitoring and parameter setting of temperature controllers can be made easily.</td>
<td>Displays for monitoring and parameter setting of inverters can be made easily.</td>
<td>Displays for monitoring and operation setting of robots can be made easily.</td>
<td>Displays for I/O monitoring of PLCs can be made easily.</td>
<td>Displays for date setting can be made easily.</td>
</tr>
</tbody>
</table>
Efficient line monitoring by network cameras

Network camera
Displays images from cameras connected to Ethernet on a V8 screen. You can efficiently achieve monitoring of a remote location and a whole line.

Cameras that support spinning and zooming functions can receive a command from MONITOUCH.

[1] Spinning of a camera (supported cameras only)
You can change the direction of a network camera from a remote location.

[2] Zooming of a camera (supported cameras only)
You can zoom in and out an image from a remote location.

Application software that connects your office with your production site at low cost.

TELLUS and V-Server
"Ability of Factory" is enhanced by the remote function and the data collection function.
In the environment with a V-Server installed PC, you can monitor and control your production site from a remote location, even if you are in a foreign country.

[TELLUS and V-Server]
Features such as data collection and data management functions are available for collecting information on the production site in real time to manage it with Excel/CSV files. Additionally, you can monitor and control TELLUS-HMI and MONITOUCH from a remote location.

Expanded possibilities by working together with Windows applications.

1 Working with VB programs
By creating VB programs using TELLUS, you can access TELLUS. Complicated arithmetic processing are done by VB programs and the result is displayed on TELLUS.

2 Working with optional units
It can be smoothly connected to a Windows printer. You can easily print out daily reports, monthly reports, information on lines and machines operation. Additionally, you can use high-capacity storage and memory.

3 Working with database
By using TELLUS and V-Server, you can work together with database such as SQL Server. Tabulation of production achievement and storing of data on the number of rejected products and causes of failure can easily be done.

4 Working with MONITOUCH
You can monitor multiple MONITOUCH installed on the machines from a remote location. And you can also collect production data and change machine settings by the recipe function.
Remote Desktop

By connecting to Ethernet, the server PC’s screen is displayed on the V8 screen. At a production site where no PC can be set, you can operate the functions of PC from V8.

| Supported models: V815iX, V812iT, V810iT, V808iE, V810iC, V808iC, V808iCH, V806iT, V906iC |

Enhanced maintenance capacity led by Windows applications

Remote control

By Ethernet connection, no optional unit is needed. Remote Desktop can be used easily at low cost.

Application 1
Viewing operating instructions and manuals

By remote-controlling a PC connected via Ethernet from a V8 series, you can view operating instructions and manuals stored on the PC.

Application 2
Ladder monitoring/ladder editing

By starting a ladder software installed in the PC that is connected via Ethernet and activating the ladder transfer function, you can monitor/edit the ladder program of the connected PLC on V8.

Assembling process 1
Ladder monitoring/ladder editing

By Ethernet

Performance information

In the line operating

Data Base

Server

- Traceability
- Lot management
- Production performance data etc.

In the maintenance

Ladder transfer

PC for maintenance

Point 1
PLC Ladder program transfer via Ethernet

You can monitor/edit ladder programs on all machines that are connected via Ethernet.

<table>
<thead>
<tr>
<th>Supported PLCs</th>
<th>Mitsubishi Electric</th>
<th>QnH(Q)series CPU, Q00J100001 CPU, QnH(Q)series CPU, QnH(Q)series CPU(Multi CPU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuji Electric</td>
<td>MICREX-SX SPH/SPB CPU</td>
<td></td>
</tr>
</tbody>
</table>

Point 2
USB keyboard supported

Ladder editing is also possible by USB keyboard.

USB mouse

USB keyboard

Useful

You can easily modify circuits and edit comments on V8.
**MES**

**Supporting the construction of advanced MES**

V8 networking promotes the integration of sales, production management and manufacturing at low cost.

---

**Reinforcing your production management through connection to the database**

**MES** interface function

Data for production records, defect quantity, error causes and various kinds of information can be sent to the MES database server via V-Server in SQL. Communication with the database is possible without a gateway PC or complicated programming.

**No Programming Required**

Data can be saved in the database server by simple setting on V-SFT — no programming is required.

**Preventing data loss**

All data transferred to the database is saved with the error log so that it is completely secure.

**Decreasing system load**

Data can be transferred to the database server when conditions are fulfilled. The server does not need to keep monitoring production, so the load on the system can be decreased.

* (MES): The “Manufacturing Execution System” is for optimizing product quality, product quantity, delivery date, cost, etc. in the management/ control of production sites.

---

**Easy MES setting!**

1. **Setting to access ODBC**
   - Set a data source name, login name and password of the database.

2. **Setting of operation to access the database**
   - Three types (Writing, Loading, and Loading with search criteria) are supported:
     - [Writing]
       - Set contents to write to the database.
     - [Loading]
       - Set contents to load from the database.
     - [Loading with search criteria]
       - Set this when loading from the database with search criteria.

3. **Setting of items to access ODBC**
   - Set column names and data format to access the database.
Specifications

High-end specifications open up new possibilities.

### General Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V815X</th>
<th>V815XD</th>
<th>V812xS</th>
<th>V812xSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated voltage</td>
<td>AC100 − 240V</td>
<td></td>
<td>DC24V</td>
<td>AC100 − 240V</td>
<td>DC24V</td>
</tr>
<tr>
<td>Permissible range of voltage</td>
<td>AC100 − 240V</td>
<td></td>
<td>DC24V</td>
<td>AC100 − 240V</td>
<td>DC24V</td>
</tr>
<tr>
<td>Permissible momentary power failure</td>
<td>Within 20ms</td>
<td></td>
<td>Within 1ms</td>
<td>Within 20ms</td>
<td>Within 1ms</td>
</tr>
<tr>
<td>Demand (maximum rating)</td>
<td>90VA or less</td>
<td></td>
<td>40W or less</td>
<td>70VA or less</td>
<td>30W or less</td>
</tr>
<tr>
<td>Inrush current</td>
<td>30A,(10ms)(AC100V)</td>
<td>30A,(10ms)(DC24V)</td>
<td>20A,(10ms)(AC100V)</td>
<td>20A,(10ms)(DC24V)</td>
<td>30A,(10ms)(AC100V)</td>
</tr>
</tbody>
</table>

#### Insulation resistance

- DC500V: 10MΩ or more

#### 2 Contamination level

- Level 2: Only non-conductive substance is produced, but a temporary conductive state may occur due to dew concentration.

- Hardware version: j or later

### Performance Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V815X</th>
<th>V815XD</th>
<th>V812xS</th>
<th>V812xSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screen memory</td>
<td>12.5MB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display device</td>
<td>TFT color LCD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution (W/H)dots</td>
<td>1024x768</td>
<td></td>
<td>800x600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display size</td>
<td>15 inches</td>
<td></td>
<td>12.1 inches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colors</td>
<td>65,536 colors (without blinks)</td>
<td>32,768 colors (with blinks)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backlight</td>
<td>CCFL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backlight life</td>
<td>About 60,000 hours</td>
<td>About 50,000 hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backlight Auto OFF</td>
<td>Lit in normal condition</td>
<td>blinks in alarm condition such as blowout of backlight bulbs</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power lamp</td>
<td>Lit in normal condition</td>
<td>blinks in alarm condition such as blowout of backlight bulbs</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrast adjustment</td>
<td>Fixed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brilliance control</td>
<td>3 levels (Adjusted into 128 grades by macro command)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of characters</td>
<td>1/2-byte</td>
<td>127 columns x 96 lines</td>
<td>100 columns x 75 lines</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-byte</td>
<td>127 columns x 48 lines</td>
<td>100 columns x 37 lines</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-byte</td>
<td>64 columns x 48 lines</td>
<td>50 columns x 37 lines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlargement of characters</td>
<td>X: 1 ~ 8 times</td>
<td>Y: 1 ~ 8 times</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touch switch</td>
<td>Analog: 1.024x1.024</td>
<td>Analog: 1.024x1.024</td>
<td>Matrix: 60x30</td>
<td>Analog: 1.024x1.024</td>
<td></td>
</tr>
<tr>
<td>Mechanical life</td>
<td>1 million times or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface treatment</td>
<td>Hard coating, Non glare finish 5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function switch</td>
<td>8 switches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### External interface

- D-Sub 9-pin (CNI): RS-232C, RS-422/485, Asynchronous type, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500 bps
- Modular 8-pin (M/J/ M/J): RS-232C, RS-422/485 (two-wire system), Asynchronous type, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps
- CF card interface: Compatible with CompactFlash™
- Ethernet: Complies with IEEE802.3, Baud rate: 100Mbps, 10Mbps Cable: 100D Unsealed twist pair, Category 5, Max length: 100m
- USB: Type A, Type B (Ver1.1)

### Clock & Back up memory

- Battery: Coin-type lithium primary battery, 512KB
- Back up period: 5 years (Ambient temperature 25°C)
- Calendar accuracy: Gap 90 sec. per month (Ambient temperature 25°C)

*4 Standard equipment only for V8i series
*5 When the panel surface luminance drops to 50% of the initial value at normal temperature (25°C)
*6 Available only when connected with SIEMENS MPI.
### General Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V810</th>
<th>V810CD</th>
<th>V808</th>
<th>V808CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>V810</td>
<td>V810CD</td>
<td>V808</td>
<td>V808CD</td>
<td></td>
</tr>
<tr>
<td>Rated voltage</td>
<td>AC100 – 240V</td>
<td>DC24V</td>
<td>DC24V</td>
<td>DC24V</td>
<td></td>
</tr>
<tr>
<td>Permissible range of voltage</td>
<td>AC100 – 240V x 10%</td>
<td>DC24V x 10%</td>
<td>DC24V x 10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permissible momentary power failure</td>
<td>Within 20ms</td>
<td>Within 1ms</td>
<td>Within 1ms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand (maximum rating)</td>
<td>70VA or less</td>
<td>25W or less</td>
<td>20W or less</td>
<td>23W or less</td>
<td>20W or less</td>
</tr>
<tr>
<td>Inrush current</td>
<td>20A (AC100V)</td>
<td>16A, 8mA (AC100V)</td>
<td>30A, 1ms (DC24V)</td>
<td>20A, 1ms (DC24V)</td>
<td>30A, 1ms (DC24V)</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>DC500V</td>
<td>10MΩ or more</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Physical environment

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V810</th>
<th>V810CD</th>
<th>V808</th>
<th>V808CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>0°C ~ +50°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-10°C ~ +60°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient humidity</td>
<td>85%RH or less (without dew condensation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance to solvent</td>
<td>No attachment of cutting oil or organic solvent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atmosphere</td>
<td>Not exposed to corrosive gas or conductive dust</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation altitude</td>
<td>2,000 meter or lower</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contamination level</td>
<td>Level 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Mechanical operating conditions

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V810</th>
<th>V810CD</th>
<th>V808</th>
<th>V808CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to oscillation</td>
<td>Vibration frequency: 9.8ms/1(100G) pulsating width: 0.075mm, X, Y, Z: 3 directions 1 hour each way</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance to shock</td>
<td>Pulse shape: half-sine, peak acceleration: 147ms/s (150G), X, Y, Z: 3 directions, six times each way</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Electric operating conditions

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V810</th>
<th>V810CD</th>
<th>V808</th>
<th>V808CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise proof</td>
<td>1500Vp-p (pulse width 1μs, pulse rise time: 7μs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Static discharge</td>
<td>Complies with IEC61000-4-2, contact: 6kV, air: 8kV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Installation conditions

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V810</th>
<th>V810CD</th>
<th>V808</th>
<th>V808CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounding resistance</td>
<td>Less than 100Ω, FC/SG separation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure</td>
<td>Protect structure: Front panel: Compatible with IP65 (when water-proof gasket is used.) Rear cover: Compatible with IP20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling system</td>
<td>Natural air cooling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 2.5kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panel cutout (mm)</td>
<td>289.0x216.2 (+0.5/-0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions W×H×D(mm)</td>
<td>233.0x178.0 (65.8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Performance Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>V810</th>
<th>V810CD</th>
<th>V808</th>
<th>V808CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen memory</td>
<td>12.5MB</td>
<td>4.5MB</td>
<td>12.5MB</td>
<td>4.5MB</td>
<td></td>
</tr>
<tr>
<td>Display device</td>
<td>TFT color LCD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution W×H(tots)</td>
<td>800×600</td>
<td>640×480</td>
<td>800×600</td>
<td>640×480</td>
<td></td>
</tr>
<tr>
<td>Display size</td>
<td>10.4 inches</td>
<td>8.4 inches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colors</td>
<td>65,536 colors (without blinks) / 32,768 colors (with blinks)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backlight</td>
<td>CCFL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backlight life</td>
<td>About 50,000 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backlight Auto OFF</td>
<td>Lit in normal (Set by the user)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power lamp</td>
<td>Lit in normal condition, blinks in alarm condition such as blowout of backlight bulbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrast adjustment</td>
<td>Fixed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brilliance control</td>
<td>3 levels (Adjusted into 128 grades by macro command)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of characters</td>
<td>1/2-byte: 100 columns x 37 lines, 1-byte: 100 columns x 37 lines, 2-byte: 50 columns x 37 lines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlargement of characters</td>
<td>X: 1 – 8 times, Y: 1 – 8 times</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touch switch</td>
<td>Analog: 1,024×1,024</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical life</td>
<td>1 million times or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface treatment</td>
<td>Hard coating, Non glare finish 5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function switch</td>
<td>8 switches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External interface</td>
<td>D-Sub 9-pin (CN1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RS-232C, RS-422/485, Asynchronous type, Data length: 7,8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 78800, 115200, 187500 bps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modular 8-pin (M2/J2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RS-232C, RS-422/485 (two-wire system), Asynchronous type, Data length: 7,8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 78800, 115200 bps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CF card interface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compatible with CompactFlash™</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethernet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complies with IEEE802.3, Baud rate: 100Mbps, 10Mbps, Cable: 100G Unshielded twist pair, Category 5, Max length: 100m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>USB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type A, Type B (Ver1.1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clock &amp; Back up memory</td>
<td>Coin type lithium primary battery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back up memory (SRAM)</td>
<td>512KB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back up period</td>
<td>5 years (Ambient temperature 25°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calendar accuracy</td>
<td>Gaps99 sec. per month (Ambient temperature 25°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

1 Keep wet bulb temperature under 39°C to avoid an accident.
2 Contamination level is an index that shows the incidence rate of conductive substance. At Level 2, only nonconductive substance is produced, but a temporary conductive state may occur due to dew concentration.
3 Hardware version: j or later.

---

**Specifications**

- **Display/Component System**:
  - **Communication Option List**:
    - With MES/Operation Software (V-SFT)
    - Expansionability

- **Part Names**:
  - **Software (V-SFT)**
  - **Configuration**

- **Features**:
  - *1* Keep wet bulb temperature under 39°C to avoid an accident.
  - *2* Contamination level is an index that shows the incidence rate of conductive substance. At Level 2, only nonconductive substance is produced, but a temporary conductive state may occur due to dew concentration.
  - *3* Hardware version: j or later.

- **General Specifications**
  - **Rear cover**: Compatible with IP20
  - **Form**: Single unit
  - **Installation method**: Panel mounting

- **Performance Specifications**
  - **Caliber accuracy**: Gap 99 sec. per month (Ambient temperature 25°C)
Specifications

Compatible with CompactFlash
16 grayscale
Optional unit DU-10

- Keep wet bulb temperature under 39°C.
- Contamination level is an index that shows the incidence rate of conductive substance. At Level 2, only nonconductive substance is produced, but a temporary conductive state may occur due to dew concentration.
- Available only when connected with SIEMENS MPI.
- When the panel surface luminance drops to 50% of the initial value at normal temperature (25°C).
- Available only when connected with SIEMENS MPI.

General Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>V806</th>
<th>V806CHx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen memory</td>
<td>4.5MB</td>
<td>12.5MB</td>
</tr>
<tr>
<td>Display device</td>
<td>TFT color LCD</td>
<td>STN color LCD</td>
</tr>
<tr>
<td>Resolution W(H)(dots)</td>
<td>320×240</td>
<td>640×480</td>
</tr>
<tr>
<td>Display size</td>
<td>5.7 inches</td>
<td>7.5 inches</td>
</tr>
<tr>
<td>Colors</td>
<td>65,536 colors (without blinks) / 32,768 colors (with blinks)</td>
<td>65,536 colors (without blinks) / 32,768 colors (with blinks)</td>
</tr>
<tr>
<td>Backlight</td>
<td>CCFL</td>
<td></td>
</tr>
<tr>
<td>Backlight life</td>
<td>About 50,000 hours</td>
<td>About 75,000 hours</td>
</tr>
<tr>
<td>Power lamp</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Contrast adjustment</td>
<td>Fixed</td>
<td>Adjustable (Function switch or macro switch)</td>
</tr>
<tr>
<td>Brilliance control</td>
<td>3 levels (Adjusted into 128 grades by macro command)</td>
<td>Fixed</td>
</tr>
<tr>
<td>Number of characters</td>
<td>1/2-byte: 40 columns x 30 lines</td>
<td>80 columns x 60 lines</td>
</tr>
<tr>
<td></td>
<td>1-byte: 40 columns x 15 lines</td>
<td>80 columns x 30 lines</td>
</tr>
<tr>
<td></td>
<td>2-byte: 20 columns x 15 lines</td>
<td>40 columns x 30 lines</td>
</tr>
<tr>
<td>Enlargement of characters</td>
<td>X: 1 – 8 times</td>
<td>Y: 1 – 8 times</td>
</tr>
<tr>
<td>Touch switch</td>
<td>Analog: 1.024×1.024</td>
<td></td>
</tr>
<tr>
<td>Mechanical life</td>
<td>1 million times or more</td>
<td></td>
</tr>
<tr>
<td>Surface treatment</td>
<td>Hard coating, Non glare finish 5%</td>
<td></td>
</tr>
<tr>
<td>Function switch</td>
<td>6 switches</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 switches (4 switches: external output)</td>
<td></td>
</tr>
<tr>
<td>External interface</td>
<td>D-Sub 9-pin (CN1) *1, TB3 for V806CHx / V806iCHx</td>
<td>RS-232C, RS-422/485 (two-wire system), Asynchronous type, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1,2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps</td>
</tr>
<tr>
<td></td>
<td>Modular 8-pin (J1U1, M2J2) TB2 for V806CHx / V806iCHx</td>
<td>RS-232C, RS-422/485, Asynchronous type, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1,2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps</td>
</tr>
<tr>
<td></td>
<td>CF card interface</td>
<td>Optional unit DU-10</td>
</tr>
<tr>
<td></td>
<td>Ethernet *3</td>
<td>Compatible with IEEE802.3</td>
</tr>
<tr>
<td></td>
<td>USB</td>
<td>Type A, Type B (Ver1.1)</td>
</tr>
<tr>
<td></td>
<td>Battery</td>
<td>Coin-type lithium primary battery</td>
</tr>
<tr>
<td></td>
<td>Back up memory (SRAM)</td>
<td>512KB</td>
</tr>
<tr>
<td></td>
<td>Back up period</td>
<td>5 years (Ambient temperature 25°C)</td>
</tr>
<tr>
<td></td>
<td>Calendar accuracy</td>
<td>Gap 90 sec. per month (Ambient temperature 25°C)</td>
</tr>
</tbody>
</table>

Performance Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>V806</th>
<th>V806CHx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>Rated voltage</td>
<td>DC24V</td>
</tr>
<tr>
<td></td>
<td>DC24V×10%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demand (maximum rating)</td>
<td>15W or less</td>
</tr>
<tr>
<td></td>
<td>17A,3ms(DC24V)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Insulation resistance</td>
<td>DC500V 10MΩ or more</td>
</tr>
<tr>
<td>Physical environment</td>
<td>Ambient temperature</td>
<td>0°C ~ +50°C *1</td>
</tr>
<tr>
<td></td>
<td>Storage temperature</td>
<td>0°C ~ +40°C *1</td>
</tr>
<tr>
<td></td>
<td>Ambient humidity</td>
<td>85%RH or less/without dew condensation, Max. wet bulb temperature: 39°C or lower *1</td>
</tr>
<tr>
<td></td>
<td>Resistance to solvent</td>
<td>No attachment of cutting oil or organic solvent</td>
</tr>
<tr>
<td></td>
<td>Atmosphere</td>
<td>Not exposed to corrosive gas or conductive dust</td>
</tr>
<tr>
<td></td>
<td>Operation altitude</td>
<td>2,000 meter or lower</td>
</tr>
<tr>
<td></td>
<td>Contamination level *1</td>
<td>Level 2</td>
</tr>
<tr>
<td>Mechanical operating conditions</td>
<td>Resistance to oscillation</td>
<td>Vibration frequency: 10~150Hz, acceleration: 9.8m/s²(1G), pulsating width: 0.075mm, X, Y, Z: 3 directions 1 hour each way</td>
</tr>
<tr>
<td></td>
<td>Resistance to shock</td>
<td>Pulse shape: half-sine, peak acceleration: 147m/s²</td>
</tr>
<tr>
<td>Electric operating conditions</td>
<td>Noise proof</td>
<td>1500Vp-p (pulse width 1μs, pulse rise time: 1ns)</td>
</tr>
<tr>
<td></td>
<td>Static discharge</td>
<td>1000Vp-p (pulse width 1μs, pulse rise time: 1ns)</td>
</tr>
<tr>
<td>Installation conditions</td>
<td>Grounding</td>
<td>Grounding resistance: Less than 100Ω, FG/SG separation</td>
</tr>
<tr>
<td></td>
<td>Structure</td>
<td>Protect structure: Front panel Compatible with IP66 (when water-proof gasket is used)</td>
</tr>
<tr>
<td></td>
<td>Rear cover</td>
<td>Compatible with IP20</td>
</tr>
<tr>
<td></td>
<td>Installation method</td>
<td>Panel mounting</td>
</tr>
<tr>
<td></td>
<td>Cooling system</td>
<td>Natural air cooling</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>Approx.740g</td>
</tr>
<tr>
<td></td>
<td>Approx.1.2kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dimensions W(H)(D)(mm)</td>
<td>182.5×138.8×50.8</td>
</tr>
<tr>
<td></td>
<td>259.0×232.0×55.0 (Excluding the emergency stop switch)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Panel cutout (mm)</td>
<td>174x131(+0.5/-0)</td>
</tr>
<tr>
<td></td>
<td>Case color</td>
<td>Gray</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>PC/ABS</td>
<td></td>
</tr>
</tbody>
</table>

*1 Keep wet bulb temperature under 39°C to avoid an accident.
*2 Contamination level is an index that shows the incidence rate of conductive substance. At Level 2, only nonconductive substance is produced, but a temporary conductive state may occur due to dew concentration.
*3 Standard equipment only for V806.
*6 Available only when an option unit [DU-10] is used for V806.
MONITOUCH V8 series

Dimensions and Part Names

Provided with plentiful kinds of interfaces

V815iX / V815iXD

Side view

Front view

Rear view

Bottom view

Panel cutout

V812iS / V812S

Side view

Front view

Rear view

Bottom view

Panel cutout

V810iS / V810S / V810iT / V810T / V810iC / V810C

Side view

Front view

Rear view (V810S / V810T)

Rear view (V810C)

Bottom view

Panel cutout
System Configuration

Flexible system configuration meets diversified requirements

V8i series

V8iC series

V8 series

V8C series

Component Parts

Expandability

Usability

Specification

Display/ Operation Features

Communication Features

Components and Parts Names

Product Warranty

Specifications

Dimensions and Part Notes

System Configuration

Screen program editing

Ethernet

USB

Serial communication

Optional units

Communication cable

USB-A

USB-B

V-SFT-5

V812S

V810S/T/C

V808S/C

V8iC series

PC

V-CPU

V8i

V8i

V8 series

PC

PLC

Ethernet

USB

Serial communication

Optional units

Communication cable

USB-A

USB-B

V-SFT-5

V812S

V810S/T/C

V808S/C

Temperature controller / Inverter

PLC

V6-TMP

Temperature controller / Inverter

Bar code reader

Video camera (Video input)

Display

(RGB output)

Speaker

(Sound output)

Bar code reader

CREC card recorder

Printer (PictBridge)

Keyboard

Mouse

Printer

Mouse

Keyboard

*1 V8i series only. Optional unit (GU-xx) is required.
Option Units

Various units for greater expandability and usability

**Expansion/ Communication Units**

- Expansion units
  - GU-00 (Video input + sound output unit)
    Displays images from a video camera on V8 and outputs sound files through external speakers.
  - GU-01 (RGB input + sound output unit)
    Displays PC images on V8 and outputs sound files through external speakers.
  - GU-02 (RGB output + sound output unit)
    Displays images of V8 on PC display and outputs sound files through external speakers.
  - GU-03 (Sound output unit)
    Outputs sound files through external speakers.
  - GU-10 (Video input(2ch) + RGB input)
    Displays images from video cameras and PC images on V8 simultaneously.
  - GU-11 (RGB input(2ch))
    Displays RGB images such as PC images through two channels on V8 simultaneously.
  - DU-10 (V806)
    Compatible with a D-Sub 9-pin/CF card.

- Communication units
  
<table>
<thead>
<tr>
<th>Type</th>
<th>Configuration</th>
<th>Connected to</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-CP</td>
<td>RS-232C</td>
<td>PC</td>
</tr>
<tr>
<td>V6-BCD</td>
<td>RS-232C</td>
<td>Bar code reader</td>
</tr>
<tr>
<td>V6-MLT</td>
<td>RS-422</td>
<td>MONITOUCH V8/V7/V6 series</td>
</tr>
<tr>
<td>V6-TMP</td>
<td>RS-232C/485</td>
<td>Temperature controller and inverter etc.</td>
</tr>
<tr>
<td>UA-FR</td>
<td>USB-CFREC</td>
<td>USB-CFREC Card reader/ writer</td>
</tr>
<tr>
<td>UB-FR</td>
<td>USB-CFREC</td>
<td>PC PictBridge Printer</td>
</tr>
</tbody>
</table>

**Application Software**

- Configuration software
  - V-SFT-5 (Ver.5)
    For Windows 98/Me/NT Version 4.0/2000/XP/XP 64 Edition/Vista 32bit

**Cables**

- USB-CFREC
  - (USB ports for CF card recorder)
    Used for recording or reading data onto or from a CF card. Fitted on the front of the panel.

- TC-D9 (Terminal converter)
  - Connects V8 with other units via RS-422/485 terminal.

- CREC (Card recorder)
  - Used for recording data onto a card for back-up. Also used for recording data by memory manager or data logging functions.

- V-MDD (ACPU/QnACPU/FXCPU dual port interface)
  - Used to double the port of the connector for programmer units. Useful when connecting to ACPU/QnACPU/FXCPU (MITSUBISHI) directly.

**Optional units**

- V-7BT (Battery)
  - Lithium battery for V8 series

- V8xx-GS/V8xx-GSN10
  - Protection sheet for panels. 5 sheets per set. N10 is a non-glare type sheet. See P37 for details.

- V8xx-FL
  - Backlight for V8
    See P37 for details.

- Panel Adapter
  - Used when fitting V8 into V4/GD-80/GD-65/GD-64 panel cutout.
### Optional units that expand V8’s performance

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-SFT-5</td>
<td>Configuration software for V series (Installation CD) ver.5</td>
</tr>
</tbody>
</table>

### Communication units
- **DU-10**: Optional unit dedicated to V806 (Double+CF card)
- **GU-1**: RGB 2ch input
- **GU-10**: VIDEO 2ch input, RGB 1ch input
- **GU-03**: Audio output
- **GU-02**: RGB 1ch output, Audio output

### Cable
- **D9-D25**: Dsub9-Dsub25 conversion cable (0.3M)
- **MJ-D25**: MJ-Dsub25 conversion cable

### Configuration software
- **V-SFT-5**: Configuration software for V series (CD+Japanese manual set) ver.5
- **V6-TMP**: Temperature controller connecting cable (3M)
- **V6-MLT**: Multi-link 2 master cable (3M)

### Communication terminal block
- **CU-08**: FL-net Ver.2(OPCN-2)
- **CU-06**: SX Bus
- **CU-04**: PROFIBUS-DP
- **CU-03**: Ethernet
- **CU-02**: CC-Link
- **CU-01**: T-Link
- **CU-00**: OPCN-1

### Products
- **V815**: V812, V810, V808, V806
- **iX**: iS, S, iS, iT, T, iC, C, iCH, CH, iT, T, iC, C, iM, M

### Option List

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V806-SG</td>
<td>Surface protection sheet for V806</td>
</tr>
<tr>
<td>V806-GSN10</td>
<td>Surface protection sheet for V806 (nonpare)</td>
</tr>
<tr>
<td>V806-GSN30</td>
<td>Surface protection sheet for V806 (nonpare)</td>
</tr>
<tr>
<td>V806-GF</td>
<td>Surface protection sheet for V806</td>
</tr>
<tr>
<td>V806-SS</td>
<td>Surface protection sheet for V806</td>
</tr>
<tr>
<td>V810-SG</td>
<td>Surface protection sheet for V810</td>
</tr>
<tr>
<td>V810-GSN10</td>
<td>Surface protection sheet for V810 (nonpare)</td>
</tr>
<tr>
<td>V810-GSN30</td>
<td>Surface protection sheet for V810 (nonpare)</td>
</tr>
<tr>
<td>V810-GF</td>
<td>Surface protection sheet for V810</td>
</tr>
<tr>
<td>V810-GS</td>
<td>Surface protection sheet for V810</td>
</tr>
<tr>
<td>V810-SS</td>
<td>Surface protection sheet for V810</td>
</tr>
<tr>
<td>V812-SG</td>
<td>Surface protection sheet for V812</td>
</tr>
<tr>
<td>V812-GSN10</td>
<td>Surface protection sheet for V812 (nonpare)</td>
</tr>
<tr>
<td>V812-GSN30</td>
<td>Surface protection sheet for V812 (nonpare)</td>
</tr>
<tr>
<td>V715-SG</td>
<td>Surface protection sheet for V715/V715</td>
</tr>
</tbody>
</table>

1. The optional unit: DU-10 is required.
2. Used both M1/M2 ports.
Customer Service

Global service network
Please contact our customer service department for information and advice.

TEL
Tel +81-76-274-2144

FAX
Fax +81-76-274-5208

E-mail
sales@hakko-elec.co.jp

Website
http://www.monitouch.com
Includes FAQs for troubleshooting, instruction manuals, sample screens, and information for upgrading of configuration software.

http://www.monitouchv8.com
MONITOUCH V8 series
Visit our website for MONITOUCH V8 Series.

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To the purchasers of Hakko Electronics products:

The warranty of this product is as follows, unless there are special instructions that state otherwise in the quote, contract, catalog, or specifications at the time of the quote or order.

The purpose or area of use may be limited, and a routine checkup may be required depending on the product. Please contact the distributor from which you purchased the product, or Hakko Electronics for further information.

Please conduct inspection of the product promptly upon purchase or delivery. Also, please give sufficient consideration to management and maintenance of the product prior to accepting it.

1. Period and Coverage of the Warranty

1-1 Period

1) The period of the warranty is effective until twenty-four (24) months from the date of manufacture printed on the plate.
2) The above period may not be applicable if the particular environment, conditions or frequency of use affects the lifetime of the product.
3) The warranty for the parts repaired by Hakko Electronics’ service department is effective for six (6) months from the date of repair.

1-2 Coverage

1) If malfunction occurs during the period of warranty due to negligence on the part of Hakko Electronics, the malfunctioning parts are exchanged or repaired free of charge at the point of purchase or delivery. However, the warranty does not apply to the following cases:
   1. The malfunction occurs due to inappropriate conditions, environment, handling or usage that is not specified in the catalog, instruction book or users’ manual.
   2. The malfunction is caused by factors that do not originate in the purchased or delivered product.
   3. The malfunction is caused by another device or software design that does not originate in a Hakko Electronics product.
   4. The malfunction occurs due to an alteration or repair that was not performed by Hakko Electronics.
   5. The malfunction occurs because the expendable parts listed in the instruction book or catalog were not maintained or replaced in an appropriate manner.
   6. The malfunction occurs due to factors that were not foreseeable by the practical application of science and technology at the time of purchase or delivery.
   7. The malfunction occurs because the product is used for a purpose other than that for which it is intended.
   8. The malfunction occurs due to a disaster or natural disaster that Hakko Electronics is not responsible for.

2) The warranty is only applicable to the single purchased and delivered product.
3) The warranty is only valid for the conditions stated in (1) above. Any damage induced by the malfunction of the purchased or delivered product, including damage or loss to a device or machine and passive damage, is not covered by the warranty.

1-3 Malfunction Diagnosis

The initial diagnosis of malfunction is to be made by the purchaser. The diagnosis can be conducted by Hakko Electronics or its delegated service provider with due charge upon the request of the purchaser. The charge is to be paid by the purchaser at the rate stipulated in the rate schedule of Hakko Electronics.

2. Liability for Opportunity Loss

Regardless of the time of occurrence, Hakko Electronics is not liable for damage caused by factors that Hakko Electronics is not responsible for, opportunity loss on the part of the purchaser caused by the malfunction of a Hakko Electronics product, passive damage, damage due to a special situation regardless of whether it was foreseeable or not, or secondary damage, accident compensation, damage to products that were not manufactured by Hakko Electronics, or compensation towards other operations.

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Discontinued models (products) can be repaired for seven (7) years from the date of discontinuation. Also, most spare parts used for repair are provided for seven (7) years from the date of discontinuation. However, some electric parts may not be available due to their short life cycle. In this case, it may be difficult to repair or provide the parts during the seven-year period. Please contact Hakko Electronics or its service providers for further information.

4. Delivery

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5. Service

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- For safe operation, read the instruction manual or user manual that comes with the product carefully or consult the distributor from which you purchased the product, before using the product.
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- Customers, who want to use the products introduced in this catalog for special systems or devices such as for atomic-energy control, aerospace use, medical use, passenger vehicle, and traffic control, are requested to consult the Hakko Overseas Sales Section.
- Customers are requested to prepare safety measures when they apply the products introduced in this catalog to such systems or facilities that will affect human lives or cause severe damage to property if the products become faulty.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.

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- Colors in the catalog may differ from the actual colors due to printing inaccuracies.
- Consult your distributor or us for further information about products in this catalog.

www.monitouch.com

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