Programmable Operator Interface

MONITOUCH

V9 series
V9 makes automation complete.
Satisfying, intuitive control
Impressive ability to convey data.
Boosts efficiency in the field
through enhanced performance.

On its release in 1988 as the first ever programmable display*, MONITOUCH ushered in a new era of human-machine interface technology. It is now used as an information terminal for countless different purposes in production sites all over the world. The total number of shipments has reached around one million.

We have continuously pioneered the field of programmable displays through an impressive array of exciting new cutting-edge features specifically designed to meet the needs of our clients.

MONITOUCH THE PREMIUM.

We are confident that this lineup will meet your requirements for all types of application.

*According to our own research.
Meeting customer needs with a product lineup suited to all kinds of applications.

<table>
<thead>
<tr>
<th>Model</th>
<th>V9101iW</th>
<th>V9071iW</th>
<th>V9150iX</th>
<th>V9120iS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Size</td>
<td>10.1&quot; widescreen</td>
<td>7&quot; widescreen</td>
<td>15&quot;</td>
<td>12.1&quot;</td>
</tr>
<tr>
<td>Display Device</td>
<td>TFT color</td>
<td>TFT color</td>
<td>TFT color</td>
<td>TFT color</td>
</tr>
<tr>
<td>Resolution W:H (dots)</td>
<td>1024x600</td>
<td>800x480</td>
<td>1024x768</td>
<td>800x600</td>
</tr>
<tr>
<td>Display Colors</td>
<td>16.7 million</td>
<td>16.7 million</td>
<td>16.7 million</td>
<td>16.7 million</td>
</tr>
<tr>
<td>Touch Switch</td>
<td>Capacitance</td>
<td>Capacitance</td>
<td>Analog resistance film</td>
<td>Analog resistance film</td>
</tr>
<tr>
<td>Screen Memory (FROM)</td>
<td>64MB</td>
<td>64MB</td>
<td>64MB</td>
<td>64MB</td>
</tr>
<tr>
<td>Backup Memory (SRAM)</td>
<td>800KB</td>
<td>800KB</td>
<td>800KB</td>
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<tr>
<td>Ethernet(LAN)</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Wireless LAN</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Communication IF (CUR-XX)</td>
<td>√</td>
<td>√</td>
<td>√</td>
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</tr>
<tr>
<td>Expansion Unit IF (GUR-XX)</td>
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<td>√</td>
<td>√</td>
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<tr>
<td>SD Card IF</td>
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<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>USB (Type A)</td>
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<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>USB (Type mini-B)</td>
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<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Sound Output</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Please refer to page 26 for the details of each model.

*1 For pictures, 3D parts, video and RGB input (excluding high-speed mode) only. Other items are displayed in 65,536 colors.  *2 Depending on the model.  *3 When optional unit DUR-00 is installed.

04

05
Network
Enhanced safety features while connecting to various types of network

VNC Server
Remote Connection from Tablet PCs
All of the V9 family has remote monitoring/maintenance capabilities via Ethernet, thanks to its VNC feature.

Selecting Priority for VNC Connections
When using a single MONITOUCH unit to remotely monitor and control more than one client device, you can choose the priority as either priority-first or priority-last. If you have a priority-first connection, the client will not change suddenly.

Authentication by MAC Address for VNC Connections
For PC client connection authentications, it is possible to prevent connections from unspecified devices by supplementing usernames and passwords with MAC addresses. This enhances security.

DHCP Server*3 / DHCP Client
Easy Communication with DHCP
The information required for network connectivity can be acquired from a server as a DHCP client or can assign to a client as a DHCP server.

DHCP App: Simple Remote
By installing Simple Remote on your Android device, you can get connected remotely right away. The app is available for free on Google Play.*2

Built-in VPN router
The V9 series has a built-in VPN router for performing remote maintenance via Internet VPN.

Features
- Provides highly secure remote access
- SSL-VPN enables you to securely connect to remote locations without worrying about eavesdropping or tampering
- Makes it easy to access peripheral devices remotely
- The built-in routing function allows easy remote access to PLC and various devices connected to the V9 series by Ethernet

Network Camera Compatible
Real-time Monitoring of Remote Site
By connecting to a network camera, it is possible to display camera images in real time on the V9 series screen. It is especially useful for monitoring and checking the inside of clean rooms.

FTP Compatible
Easily Retrieve Files in Storage from Remote Locations
FTP Server Function
Files in a storage media inserted in a V9 can be read out and written using a PC.

FTP Client Function
Files on an FTP server can be read and written using the V9 series.

Remote Desktop
Control the PC Screen from the V9 series
By connecting to Ethernet, you can display the screen of the PC directly on the V9 series. You can view work instructions and manuals located on PCs even at manufacturing sites that do not allow you to carry in PCs. It improves the efficiency of maintenance.

Network Printer Compatible*4
Share Printers with Multiple V9 series
Printing jobs from multiple V9 series can be shared via a single network printer. Network printer connection supports both wired and wireless LAN, and that helps to achieve space and cable savings.

*1 Wireless LAN compatible products only
*2 Android, Google Play and the Google Play logo are trademarks of Google LLC.
*3 The DHCP server is only available for wireless LAN-compatible products.
*4 Compatible only with EPSON ESC/P-R. Wireless LAN connection is possible for wireless LAN compatible products.
TELLUS and V-Server
Remote Monitoring and Operation Solutions
This application software connects remotely located V9 series to office computers in order to provide on-site information and to monitor and control equipment.

You can allocate jobs based on the operation conditions of the line, respond quickly to trouble, and achieve more efficient and cost-effective production.

TELLUS-Remote
Real-time collection of on-site information
- Data can be collected in real time by capturing site status and production information.
- It can be linked with databases such as SQL Server. Or save data in CSV or Excel format.
- It supports operations suited to the site via various operation directives based on event monitoring.

V-Server
Easy, low-cost monitoring and operation from remote locations
- You can use the same screen data as the on-site V9 series, eliminating the need to create a new remote monitoring screen.
- Multiple startups allow you to monitor and operate more than one V9 series via a single PC.

TELLUS-HMI
Use V9 series features directly on your PC
- Display and operation can be performed on your PC instead of on the V9 series.
- It enables you to easily connect to peripheral devices such as printers. There is no need to worry about selecting peripheral devices.

MES² Interface Features
Operation Monitoring and Production Management Solutions
Various types of information such as aggregation of production results, number of defects and stoppage factors are sent to the database using SQL statements from the V9 series through the V-Server. Communication with the database can be accomplished without a gateway PC or cumbersome programming.

Programming not required
By simply specifying the data to be stored in the database on V-SFT, you can communicate with the database without the need for programming.

Prevents data loss
If transmission fails, it will produce an error log, so you do not have to worry about losing important data.

Reduces system load
When various conditions are fulfilled, data can be transmitted from the V9 series. It reduces the load on the system by eliminating the need for constant monitoring on the higher-level side.

*2 MES: Manufacturing Execution System
This “Manufacturing Execution System” has been designed to optimize quality, production volume, delivery time, and cost as a management and production control system for manufacturing sites.
Usability & Graphics
Render overwhelming beauty and outstanding visibility to the finest detail

Smooth Operation with Your Fingers

Zooming In and Out with Two Fingers
The displayed image can be magnified up to 200% by pinching out the screen. It can be reduced to its original size by pinching it in.

Scrolling Magnified Images
You can view a particular part of a magnified image in close-up while scrolling around the screen.

Pinch in
Pinch out
Enlarge up to 200%

*1 Image can be scaled up and down by double tapping when using V9 Standard/Lite.

Abundant Quantity of Information

Displaying Four Times the Screen Size
The whole area of a large image can be confirmed easily by scrolling the screen without the need of switching it. The navigation window helps you to recognize the current displayed position instantly.

Widescreen LCD
V9 Advanced models are equipped with a high-precision, high-resolution widescreen (16:9). Greater volume and variety of information can be displayed on the screen.

2 times in width
4 times in width
Information max. 4 times per screen

*2 Images can be laid out four times the screen size in height or width according to your needs.

*2 According to our own research.

Expression and Beauty

7-segment Fonts for Realistic Expression
7-segment fonts allow for realistic, highly visible expression of measuring instruments. Non-illuminated segments can be shown in a subtle color.

Before improvement
After improvement

TrueType Font as Standard
TrueType font has been added to the standard fonts. Smoother display is possible via antialiasing. Furthermore, space can be reduced relative to Windows fonts, thus enabling you to work without worrying about screen data memory.

Non-illuminated segments can be shown in a subtle color.

Audio Playback Function*
It comes standard with an output port for audio playback that allows you to play audio files saved to storage without any optional units. Even at night or in dark places, the screen is easy to see and not too dazzling, thus enabling smooth operation.

*4 A connection amplifier and external speakers are required.

Dimmer Function
Fine-grained adjustment is possible via 128-step setting. Even at night or in dark places, the screen is easy to see and not too dazzling, thus enabling smooth operation.

Compatible with Vertical Placement
The screen can also be displayed and edited while the panel is placed vertically (by left or right turning).

Main Menu Screen can also be displayed vertically.

Overlap Function
Up to 10 pop-up windows can be displayed on the screen at the same time. All of them can be displayed transparently without limiting the overlap size of each window. You can also use overlap screens as subscreens or check them by scrolling without switching to the main screen.

PDF
Easily check different screens by scrolling
10 windows at once
Transparency also possible

PDF files saved on storage can be transferred to PC in office using FTP server/client functions, which allows you to check data without having to go to the production site.

Compatible with Vertical Placement
By attaching an optional unit, videos and RGB images can be displayed on the V9. Also, images displayed on the V9 can be sent to external displays.

Video/RGB Input-Output

Supports various colors

Extended Datasheets
It also supports PDF output in addition to standard printer output. By converting various forms such as daily reports to PDF, the printer is no longer needed. It helps to achieve paper and space savings. PDF files saved on storage can be transferred to PC in office using FTP server functions, which allows you to check data without having to go to the production site.

Overlay Function
Up to 10 pop-up windows can be displayed on the screen at the same time. All of them can be displayed transparently without limiting the overlap size of each window. You can also use overlap screens as subscreens or check them by scrolling without switching to the main screen.

PDF
Easily check different screens by scrolling

*3 For displaying pictures, 3D parts, video, and RGB input (excluding high-speed mode) only. Other parts are displayed in 65,536 colors.

*4 A connection amplifier and external speakers are required.

*5 V9101iW/V9 Standard only
Storage

Store and manage data and develop it with scalable functions.

Compatible with Event Record Functions

Instantaneous Video Recording and Playback

By using a commercially available USB camera*1, you can record video before and after alarm occurrences, such as those due to momentary stoppages, and save it in an SD card to support cause investigation and improve the operating efficiency of equipment.

Equipped with Video Player

Play Video Data Saved to Storage

By playing videos used for troubleshooting at time of abnormalities, operators can easily learn how to react to the issues quickly.

In addition to viewer initiated playback from the system menu, video can also be played via switch and PLC controller commands. It supports MP4 (MPEG-4) video files to ensure high compression and high quality.

Backup Data Display

Backup files can be loaded and displayed on the V9. Alarm backup data can also be displayed.

Easy Creation of Backup Files

By using the scheduler, backup files are automatically created at scheduled timings.

Backup files

Destination for data save

* Support only horizontal scrolling.

Alarm Display

Scrolling of the Alarm Messages

The entire alarm message can be displayed by scrolling the screen with touch and drag.

Flashing Messages

Recipe

Global Control Function

It is possible to read and write to specified files and record data, regardless of the screen displayed, by turning on or off a bit.

Recipe file

CSV

Filter Settings

The required data can be easily extracted using the recipe selection list dialog to narrow down file and record searches.

Trend Data Display

Coordination with the Scheduler

Operations such as bit output and execution of macro programs can be scheduled on a specific date and time. Also, start and stop of logging, and data saving can be conducted by setting the logging conditions.

Zoom In and Out of Graphs

You can zoom in and out on the vertical and horizontal axes of trend graphs. You can also scroll*2 by touching and dragging zoomed-in graphs.

PDF Viewer Function

PDF files stored on an SD card can be displayed. PDF instruction manuals can be used for troubleshooting.

Loading

PDF file

Convenient

Filter Settings

The required data can be easily extracted using the recipe selection list dialog to narrow down file and record searches.

*1 The USB camera is only supported by the products with analog resistive film.

*2 Supports only horizontal scrolling.

Compatible with Event Record Functions

Good for gathering records and investigating causes of abnormalities.

Save video data to an SD card

USB-A

USB camera

Alarm signal

A momentary stoppage

Record before and after alarm occurrence

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Security
Various setting functions for improving usability

Operation Log
Improved Operation Log Viewer
The operability and visibility of the log viewer have been improved.

Search Function
Operation log can be searched for by specifying an operator or date and time.

Filter/Sort Settings
Filter and sort can be set for displayed items.

Display Item Settings
It is possible to select items to display in the operation log.

Security Features
Security Level Setting
A security level between 0 and 15 can be set for each screen. You can create a high-level security environment by restricting features based on security level.

Switch Interlock
A security level can also be set for a switch. Only users who log in at the authorized level will be able to operate the switch.

Local Screen Settings
Transmission Setting
Transmission settings with connected devices can be modified on the V9.

Backlight Setting
Backlight settings can be modified on the V9.

Buzzer Setting
Buzzer settings can be modified on the V9.

Network Query
Ethernet network status and IP redundancy within the network can be verified.

E-mail Setting
E-mail addresses and SMTP IP addresses can be modified.

RGB Adjustment
It displays the frequency of the connected device as a real value. Frequencies that cannot be displayed on the screen are displayed in red, so you can check the availability of a connection at a glance.
Achieve sleeker screens with simple, easy-to-understand operations

V-SFT Ver. 6 provides intuitive operation, with easy-to-use visual tools and refined displays. In addition to the V9 series, V-SFT Ver. 6 is also compatible with the VB series.

Configuration of Easy-to-view Screens

Wider Range of Parts

The number of real world icons has been increased, and the icons with simple design have been added. Pick from the wide range of ready-made icons for sophisticated representation.

Copy/Paste of Microsoft Office Data

Graphics created in Microsoft Office Word, Excel and PowerPoint can be copied and pasted into V-SFT files by converting them to pictures, patterns or parts.

Backward Compatibility with Previous Models

V8 series Compatibility

V-SFT Ver. 6 provides intuitive operation, with easy-to-use visual tools and refined displays. In addition to the V9 series, V-SFT Ver. 6 is also compatible with the VB series.

Line Width Setting

The line widths of graphic items and trend items (graph lines, reference lines) can now be set in eight steps. Effective screens can be created using a variety of drawing tools and graph representations.

Configurable Line Widths

Available for various display settings and trend graphs.

V8 series Compatibility

Compatible with Program from Legacy Products

Screen data from previous models created in an older version of V-SFT can be converted as is to data for the current model. This allows anyone to leverage their screen data assets from previous models.

Copy/Paste of an Image File

It is possible to paste a PNG file directly onto the screen. JPG, BMP and GIF formats are also supported as image files, allowing you to create whatever visually impressive screen you choose.

Configuration of Easy-to-view Screens

V-SFT Ver. 6 provides intuitive operation, with easy-to-use visual tools and refined displays.

In addition to the V9 series, V-SFT Ver. 6 is also compatible with the VB series.

High color (16 bits) or higher

Computer

OS

CPU

Memory

Hard disk

*Administrator privileges are required for installation.

<table>
<thead>
<tr>
<th>Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC/AT compatible computer running Windows</td>
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</table>

<table>
<thead>
<tr>
<th>OS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows XP/XP 64Edition/Windows Vista (32bit, 64bit)/Windows 7 (32bit, 64bit)/Windows 8 (32bit, 64bit)/Windows 10 (32bit, 64bit)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CPU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentium 4 2.0GHz or higher is recommended</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0GB or higher (2.0GB or higher is recommended)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hard disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>When installed: 4.0GB or higher</td>
</tr>
</tbody>
</table>

*Administrator privileges are required for installation.
**Upgraded Operability**

**Integration of Search Menu**
The search menu, which used to be displayed separately, has now been integrated for easy operation.

**Enhanced Interlock Setting**
Interlock can be set with a ladder drawing screen. The condition settings are easy to understand and convenient even when setting multiple conditions. It is possible to set interlocking for keypad indication conditions in addition to a switch condition. Up to five conditions (AND or OR) for a bit device, word device or security level can be set, which is suitable for setting complicated conditions.

**Data Batch Transfer Function**
Screen data can be transferred sequentially to multiple V9 series selected from the network.

**V-SFT Ver.6 New Functionality**
Guideline Function
After arranging the items, this function displays guidelines by detecting surrounding items as you move and scale them. It enables user customization, such as whether to show or hide guidelines on an item-by-item basis, in order to increase their efficiency when aligning and arranging items.

**Quick Access Toolbar**
Quick Access toolbar is displayed at the top of the toolbar. The display icons can be freely customized by the user, as well as exported and imported. Therefore, they can be edited in the same environment even when switching or replacing computers.

**Character String Table**
Text for switches, lamps and other parts can be managed centrally using the character string table. Frequently used text can be registered in the table for easy reference and batch modification. When a change occurs, you can make bulk changes simply by changing the string table.

* Switches, lamps and text only.

**Optional Accessories**

**Expansion Units**
- **GUR-00 (Video input 4ch)**
  Displays images from video cameras on V9 directly.
- **GUR-01 (RGB input 1ch)**
  Displays RGB input on V9.
- **GUR-02 (RGB output 1ch)**
  Displays images of V9 on a monitor.
- **GUR-04 (Video input 1ch)**
  Displays images from video cameras on V9 directly.
- **GUR-10 (Video input 2ch + RGB input 1ch)**
  Displays images from video camera and RGB input on V9 simultaneously.
- **GUR-11 (RGB input 2ch)**
  Displays RGB images such as a PC image through two channels on V9 simultaneously.

**Communication Units**
- **CUR-00/PCN-1**
- **CUR-01/TLi-1k**
- **CUR-02/GC-Link**
- **CUR-03/Ethernet**
- **CUR-04/PORTUS-0P**
- **CUR-06/SX Bus**
- **CUR-07/DeviceNet**
- **CUR-08/FL-net**
- **CUR-09/EtherCAT**

**Cables**
- **V-CP**
- **V6-BCD**
- **V6-MLT**
- **V6-TMP**
- **UA-FR**
- **DUR-00** (Dedicated optional unit for V907xiW, V9060iTD, TS2060i)

**Optional Accessories**
- **V-IO (Serial expansion I/O unit)**
  This is an expansion I/O unit that connects to the MONITOUCH modular jack. Maximum 16 points can be used for both input and output.

**Configuration Software**
- **V-SFT Ver.6**
  Windows XP/XP64/Windows Vista (32bit, 64bit)/
  Windows 7 (32bit, 64bit)/Windows 8 (32bit, 64bit)/
  Windows 8.1 (32bit, 64bit)/Windows 10 (32bit, 64bit)

**Other Accessories**
- **V9-BT**
  A replacement lithium battery for V9 series.
  * Excluding the V907xiW and V9060iTD.

**Connectors**
- **TC-D9** (Terminal converter)
  Connects V9 with other units via RS-422/485 terminal.

**Expansion Units**
- **V9080C-PW**
  An AC to DC power converter for the V9080iCD.
  It can be used to replace existing GD-80E and V6080iCD power supply models with the V9080C-PW without having to change to a DC power supply.
## General Specifications

### Power Supply

<table>
<thead>
<tr>
<th>Item</th>
<th>V9 Advanced</th>
<th>V9 Standard</th>
<th>V9 Lite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>DC24V</td>
<td>DC24V</td>
<td>DC24V</td>
</tr>
<tr>
<td>Portable Range of Voltage</td>
<td>±10%</td>
<td>±10%</td>
<td>±10%</td>
</tr>
<tr>
<td>Portable Reserve/Non-Fuse</td>
<td>Without fuse</td>
<td>Without fuse</td>
<td>Without fuse</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>27W or less</td>
<td>27W or less</td>
<td>36W or less</td>
</tr>
<tr>
<td>Standby Current</td>
<td>17A or less, 6mA</td>
<td>17A or less, 6mA</td>
<td>38A or less, 3mA</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>DC250V/1000V or more</td>
<td>DC250V/1000V or more</td>
<td>DC250V/1000V or more</td>
</tr>
</tbody>
</table>

### Physical Environment

<table>
<thead>
<tr>
<th>Item</th>
<th>V9 Advanced</th>
<th>V9 Standard</th>
<th>V9 Lite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Temperature</td>
<td>0~60ºC</td>
<td>0~40ºC</td>
<td>0~50ºC</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>85%RH or less (without dew condensation)</td>
<td>85%RH or less (without dew condensation)</td>
<td>85%RH or less (without dew condensation)</td>
</tr>
<tr>
<td>Operating Altitude</td>
<td>2,000m or less</td>
<td>2,000m or less</td>
<td>2,000m or less</td>
</tr>
<tr>
<td>Operating atmosphere</td>
<td>No exposure to corrosive gases or conductive dust</td>
<td>No exposure to corrosive gases or conductive dust</td>
<td>No exposure to corrosive gases or conductive dust</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>0~60ºC</td>
<td>0~60ºC</td>
<td>0~60ºC</td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>85%RH or less</td>
<td>85%RH or less</td>
<td>85%RH or less</td>
</tr>
<tr>
<td>Pollution Degree</td>
<td>Pollution degree 2</td>
<td>Pollution degree 2</td>
<td>Pollution degree 2</td>
</tr>
</tbody>
</table>

### Environmental Conditions

<table>
<thead>
<tr>
<th>Item</th>
<th>V9 Advanced</th>
<th>V9 Standard</th>
<th>V9 Lite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to Shock</td>
<td>JIS B 5003/DIN1501-1 (Complex vibration frequency 5 Hz, half-sine impulse 30G, 10 to 100%): Constant acceleration 8.9m/s² (X, Y, Z 2 directions) 3 times each (10 times total)</td>
<td>JIS B 5003/DIN1501-1 (Complex vibration frequency 5 Hz, half-sine impulse 30G, 10 to 100%): Constant acceleration 8.9m/s² (X, Y, Z 2 directions) 3 times each (10 times total)</td>
<td>JIS B 5003/DIN1501-1 (Complex vibration frequency 5 Hz, half-sine impulse 30G, 10 to 100%): Constant acceleration 8.9m/s² (X, Y, Z 2 directions) 3 times each (10 times total)</td>
</tr>
<tr>
<td>Resistance to Noise</td>
<td>Note: voltage 1,200Vp-p, pulse width 1μs, pulse time line: 1mA</td>
<td>Note: voltage 1,200Vp-p, pulse width 1μs, pulse time line: 1mA</td>
<td>Note: voltage 1,200Vp-p, pulse width 1μs, pulse time line: 1mA</td>
</tr>
</tbody>
</table>

### Display Group

<table>
<thead>
<tr>
<th>Item</th>
<th>V9 Advanced</th>
<th>V9 Standard</th>
<th>V9 Lite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Type</td>
<td>TFT color</td>
<td>TFT color</td>
<td>TFT color</td>
</tr>
<tr>
<td>Display Size</td>
<td>10.4 Inch</td>
<td>10.4 Inch</td>
<td>10.4 Inch</td>
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<tr>
<td>Display Color</td>
<td>16.7 million</td>
<td>16.7 million</td>
<td>16.7 million</td>
</tr>
<tr>
<td>Resolution</td>
<td>800×600</td>
<td>640×480</td>
<td>640×480</td>
</tr>
<tr>
<td>Contrast Ratio</td>
<td>4:1</td>
<td>4:1</td>
<td>4:1</td>
</tr>
<tr>
<td>Brightness</td>
<td>500 cd/m²</td>
<td>500 cd/m²</td>
<td>500 cd/m²</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
</tr>
<tr>
<td>Viewing Angle (H/V)</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
</tr>
<tr>
<td>Height Weight</td>
<td>289.0×216.2 (+0.5/-0) mm</td>
<td>289.0×216.2 (+0.5/-0) mm</td>
<td>289.0×216.2 (+0.5/-0) mm</td>
</tr>
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</table>

## Performance Specifications

### Display

<table>
<thead>
<tr>
<th>Item</th>
<th>V9 Advanced</th>
<th>V9 Standard</th>
<th>V9 Lite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>10.4 Inch</td>
<td>10.4 Inch</td>
<td>10.4 Inch</td>
</tr>
<tr>
<td>Display Color</td>
<td>16.7 million</td>
<td>16.7 million</td>
<td>16.7 million</td>
</tr>
<tr>
<td>Resolution</td>
<td>800×600</td>
<td>640×480</td>
<td>640×480</td>
</tr>
<tr>
<td>Brightness</td>
<td>500 cd/m²</td>
<td>500 cd/m²</td>
<td>500 cd/m²</td>
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<tr>
<td>Viewing Angle</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
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<tr>
<td>Viewing Angle (H/V)</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
<td>160º/140º/50º</td>
</tr>
<tr>
<td>Height Weight</td>
<td>289.0×216.2 (+0.5/-0) mm</td>
<td>289.0×216.2 (+0.5/-0) mm</td>
<td>289.0×216.2 (+0.5/-0) mm</td>
</tr>
</tbody>
</table>

## Note

- *1 Use at a wet-bulb temperature of 39°C or less because higher temperatures may cause failure.
- *2 *12 *8 *10 *13
- *3 Optional unit (DUR-00) is required for the V9071iW and V9060iTD.
- *4 Only for Siemens MPI (Incompatible with DUR-00).
- *5 Only for Siemens MPI (Incompatible with DUR-00).
- *6 Only for Siemens MPI (Incompatible with DUR-00).
- *7 RS-232C/RS-422/RS-485 (2-wire type) for the V9071iW and V9060iTD MJ2 only.
- *8 Wireless LAN-compatible products only.
- *9 EN61000-6-2, EN61000-6-4, EN50581
- *10 JIS B 3502 (IEC61131-2) compliant, Vibration frequency 5 to 9Hz, Half-sine impulse 30G, 10 to 100%: Constant acceleration 8.9m/s² (X, Y, Z 2 directions) 3 times each (10 times total)
- *11 ANSI/ISA12.12.01
- *12 Suitable for on-board use only.
Flexible system configuration meets diversified requirements.

Advanced Model System Configuration

Standard Model System Configuration

Lite Model System Configuration

* Compatible only with models with Wireless LAN I/F.
*2 Compatible only with V910xiW.
*3 The optional unit “DUR-00” is required for V907xiW.
*4 Compatible only with V910xiW. The expansion unit (GUR-xx) is required.
*5 Compatible only with EPSON ESC/P-R. Wireless LAN connection is possible for wireless LAN compatible products.
*6 The USB camera is only supported by the products with analog resistive film.

**Note:** The USB camera is only supported by the products with analog resistive film.
Remarkable cost effectiveness enabled by our product lineup and optional units.

### Product Details

#### Advanced

<table>
<thead>
<tr>
<th>Model</th>
<th>Display Size</th>
<th>Resolution</th>
<th>Touch screen</th>
<th>Video/Img</th>
<th>Audio Output</th>
<th>Wireless LAN</th>
<th>Ethernet Cable/LAN</th>
<th>UL</th>
<th>CE</th>
<th>KC</th>
<th>Power supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>V9100iSDRD</td>
<td>10.1&quot; wide screen</td>
<td>1024×600</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>V9100iSRD</td>
<td>10.1&quot; wide screen</td>
<td>1024×600</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
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</tr>
<tr>
<td>V9100iSRBD</td>
<td>10.1&quot; wide screen</td>
<td>1024×600</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>V9080iSRBD</td>
<td>8.4&quot; wide screen</td>
<td>800×600</td>
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<tr>
<td>V9080iSRD</td>
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</tr>
<tr>
<td>V9100iWLD</td>
<td>10.1&quot; wide screen</td>
<td>1024×600</td>
<td>-</td>
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<tr>
<td>V9100iWLD</td>
<td>10.1&quot; wide screen</td>
<td>1024×600</td>
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#### Standard

<table>
<thead>
<tr>
<th>Model</th>
<th>Display Size</th>
<th>Resolution</th>
<th>Touch screen</th>
<th>Video/Img</th>
<th>Audio Output</th>
<th>Wireless LAN</th>
<th>Ethernet Cable/LAN</th>
<th>UL</th>
<th>CE</th>
<th>KC</th>
<th>Power supply</th>
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<tbody>
<tr>
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<td>15.0&quot;</td>
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<td>V9060iTBD</td>
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</tr>
<tr>
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<tr>
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#### Lite

<table>
<thead>
<tr>
<th>Model</th>
<th>Display Size</th>
<th>Resolution</th>
<th>Touch screen</th>
<th>Video/Img</th>
<th>Audio Output</th>
<th>Wireless LAN</th>
<th>Ethernet Cable/LAN</th>
<th>UL</th>
<th>CE</th>
<th>KC</th>
<th>Power supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>V9060iTS2060i</td>
<td>15&quot;</td>
<td>15.0&quot;</td>
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<td>V9060iTBD</td>
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<td>-</td>
</tr>
<tr>
<td>V9060iTD</td>
<td>15&quot;</td>
<td>15.0&quot;</td>
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<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>V9080iTS2060i</td>
<td>8.4&quot;</td>
<td>800×600</td>
<td>-</td>
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<tr>
<td>V9080iTD</td>
<td>8.4&quot;</td>
<td>800×600</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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</tbody>
</table>

1. Supported via the expansion unit GUR-xx.
2. Only in sale in Japan.

### Optional Accessories List

#### V9 Models

- Touch screen: 10.1" wide screen, 8.4" wide screen, 5.7"
- Panel mount: with a built-in LAN port
- Display device: 10.1" wide screen (V9100iSDRD, V9100iSRD), 8.4" wide screen (V9080iSRBD, V9080iSRD), 5.7" (V9050iSDRD, V9050iSRD)
- Power supply: 24V DC, 15V DC

### Configuration Software

<table>
<thead>
<tr>
<th>Model</th>
<th>Product</th>
<th>Compatible Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>V9100iSDRD</td>
<td>CUR-00</td>
<td>CUR-01</td>
</tr>
<tr>
<td>V9080iSRBD</td>
<td>CUR-XX</td>
<td>CUR-XX</td>
</tr>
<tr>
<td>V9080iSRD</td>
<td>CUR-XX</td>
<td>CUR-XX</td>
</tr>
<tr>
<td>V9080iSRBD</td>
<td>CUR-XX</td>
<td>CUR-XX</td>
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### Expansion Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Product</th>
<th>Compatible Model</th>
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<tbody>
<tr>
<td>V9071iWLD</td>
<td>CUR-XX</td>
<td>CUR-XX</td>
</tr>
<tr>
<td>V9100iWLD</td>
<td>CUR-XX</td>
<td>CUR-XX</td>
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### Communication Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Product</th>
<th>Compatible Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>V9071iWLD</td>
<td>CUR-XX</td>
<td>CUR-XX</td>
</tr>
<tr>
<td>V9100iWLD</td>
<td>CUR-XX</td>
<td>CUR-XX</td>
</tr>
</tbody>
</table>

### Cables

- USB-A extension cable (1m)
- D-sub9-D-sub25 conversion cable (0.3m)
- EtherCAT (V9)
- SX Bus (V9/TS2060i)
- CC-Link (V9/TS2060i)

### Screen Transfer Cables

- MITSUBISHI ELECTRIC A series / QnA series CPU (Dsub25) RS-422
- MITSUBISHI ELECTRIC A series (Dual) RS-422

### Protection Sheets

- MITSUBISHI ELECTRIC A series Protection sheet (Dual) RS-422

### Protection Shields

- MITSUBISHI ELECTRIC A series Protection sheet (Dual) RS-422

### Panel Mount: with a built-in LAN port

- With extended cable LAN 1/F, 2/F, 3/F, 4/F, 5/F, 6/F, 7/F, 8/F, 9/F, 10/F

*1: If PHY connection cables other than those listed above are also available. For details, please contact our technical helpdesk.
*2: Only in sale in Japan.
*3: Optional unit DUR-00 is required.
**MONITOUCH wide-variety product lineup**

### TS2000 series

**With Ethernet port**

- **TS2060i**
  - 105 PROM
  - 512 Memory A
  - SD Card
  - Ethernet

**No Ethernet port**

- **TS2060**
  - 2.5 PROM
  - 128 Memory A

---

### TechNOSLOT

- **Display**
  - 5.7 inch
  - 64K (VGA)
  - TFT
  - LED

- **Backlight**
  - 2ch

- **Power Supply (DC)**
  - 12V

---

**Optional Accessories List**

- **Communication Units**
  - Ethernet

---

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>TS2060i</th>
<th>TS2060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen Memory (ROM)</td>
<td>2.5kbyte</td>
<td>2kbyte</td>
</tr>
<tr>
<td>Backup Memory (SRAM)</td>
<td>128kbyte</td>
<td>512kbyte</td>
</tr>
<tr>
<td>Display</td>
<td>TFT</td>
<td>Black</td>
</tr>
<tr>
<td>Resolution (WXH)</td>
<td>512 x 384</td>
<td>320 x 240</td>
</tr>
<tr>
<td>Display Size</td>
<td>5 inch</td>
<td>3.5 inch</td>
</tr>
<tr>
<td>Display Colors</td>
<td>262K colors</td>
<td>128 colors and monochrome</td>
</tr>
<tr>
<td>Backlight</td>
<td>LCD</td>
<td></td>
</tr>
<tr>
<td>Backlight Life</td>
<td>50,000 hours</td>
<td></td>
</tr>
<tr>
<td>Touch Switch</td>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>Function Switch</td>
<td>Quantity</td>
<td>1</td>
</tr>
<tr>
<td>External Interface</td>
<td>5pin D-sub</td>
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</tr>
<tr>
<td>Module (pin)</td>
<td>RS-232C/RS-422/485 (3-wire system)</td>
<td>-</td>
</tr>
<tr>
<td>SD Card</td>
<td>One card slot provided as standard (SD/SDHC card)</td>
<td></td>
</tr>
<tr>
<td>Ethernet</td>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>USB</td>
<td>Type A</td>
<td>Type mini-B (Ver. 2.0)</td>
</tr>
<tr>
<td>Communication Units</td>
<td>USB</td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td>24V DC ± 10%</td>
<td>12V or less</td>
</tr>
<tr>
<td>Temperature</td>
<td>0°C to +50°C</td>
<td>0°C to +35°C</td>
</tr>
<tr>
<td>Ambient Humidity</td>
<td>85% RH or less (without dew condensation)</td>
<td>85% RH or less (without dew condensation)</td>
</tr>
<tr>
<td>Operating Altitude</td>
<td>2,000m or less</td>
<td>2,000m or less</td>
</tr>
<tr>
<td>Operating Atmosphere</td>
<td>Not exposed to corrosive gas or excessive dust (free of conductive dust)</td>
<td>Not exposed to corrosive gas or excessive dust (free of conductive dust)</td>
</tr>
<tr>
<td>Grounding</td>
<td>Grounding resistance: Less than 100Ω, FG/SG separation</td>
<td>Grounding resistance: Less than 100Ω, FG/SG separation</td>
</tr>
<tr>
<td>Protective Structure</td>
<td>Front panel: Compatible with IP65 when gasket is used, Rear cover: Compatible with IP50</td>
<td>Front panel: Compatible with IP65 when gasket is used, Rear cover: Compatible with IP50</td>
</tr>
<tr>
<td>Installation Grounding</td>
<td>Grounding resistance: Less than 100Ω, FG/SG separation</td>
<td>Grounding resistance: Less than 100Ω, FG/SG separation</td>
</tr>
<tr>
<td>Protective Structure</td>
<td>Front panel: Compatible with IP65 when gasket is used, Rear cover: Compatible with IP50</td>
<td>Front panel: Compatible with IP65 when gasket is used, Rear cover: Compatible with IP50</td>
</tr>
<tr>
<td>Dimensions WXHxD</td>
<td>182.5 x 138 x 45.8mm</td>
<td>174.0 x 131.0 x 20.0mm (reduced to 159.0 x 126.0 x 18.8mm)</td>
</tr>
<tr>
<td>Standard</td>
<td>CE (EN61000-6-2, EN61000-6-4, EN50606), KC, UL1010, TUV Ul1010 (Type I) (E31584)</td>
<td>EN61000-6-2, EN61000-6-4, EN50606, KC, UL1010, UL1010-3-2 (Type I) (E31584)</td>
</tr>
</tbody>
</table>

---

**V8 Handy Type**

- **Display**
  - 7.5 inch
  - 64K (VGA)
  - TFT
  - LED

- **Backlight**
  - 2ch

---

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
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<th>V808CH</th>
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<tbody>
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<tr>
<td>Display Device</td>
<td>TFT color</td>
<td>TFT color</td>
</tr>
<tr>
<td>Resolution (WXH)</td>
<td>1024 x 600</td>
<td>1024 x 600</td>
</tr>
<tr>
<td>Screen Memory (SRAM)</td>
<td>512kbyte</td>
<td>512kbyte</td>
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<tr>
<td>Backup Memory (SRAM)</td>
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<td>512kbyte</td>
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<td>Equipable</td>
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<td>USB XT</td>
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<td>Type B (Ver 1.1)</td>
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<tr>
<td>Contact</td>
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<td>1 (a-contact)</td>
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<tr>
<td>Mechanical Life Expectancy</td>
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**Optional Accessories List**

- **Function Specifications**
  - N/A: No button or LAN port
  - Built-in LAN port

- **Model**
  - V8H-CH
  - V8H-SWG
  - V8H-C
  - V8H-BT
  - V8H-ST

- **Specifications**
  - Built-in LAN port
  - 9-pin D SUB (VIA 100% compatible)
  - 2-ch CF card slot: Equipped
  - 2-ch USB: Equipped
  - 2-ch RJ45 port: Equipped
  - 2-ch Ethernet: Equipped
  - 2-ch USB: Equipped

- **V808CH Models**
  - V8H-ST
  - V8H-BT
  - V8H-C
  - V8H-SWG
  - V8H-BT

---

*1 Only V808CH comes with a-contact and 2 circuits. V808CH only have 1 circuit.
*2 187500 bps only applies to Siemens MPI/PPI connections.
*3 Only MJ2 is compatible with 4-wire system.
*4 Only 10/100 bps only applies to Siemens MPI/PPI connections.
*5 Only use at a wet-bulb temperature of 36°C or less because higher temperature may cause failure.
# PLC Connection - Summary

**As of September 2020**

<table>
<thead>
<tr>
<th>PLC Brand</th>
<th>Model</th>
<th>Communication Methods</th>
<th>VS</th>
<th>VB</th>
<th>VDN</th>
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* For VS and VB, 1:n connection is supported. For VDN, VS is not supported. For VB, VS is not supported. 
* For communication with VD1-D4, 1:n communication is not supported. 
* For VB700, VS is not supported. 
* For communication with VD1-D4, VS is not supported. 
* For VB700, VS is not supported. 
* For communication with VD1-D4, VS is not supported. 

---

*1 For optional unit "SU/FI" is required when connecting SIS100/10, or TOS800 using RS-232C. For RS-422 connection, it is not supported. 
*2 For optional unit "SU/FI" is required when connecting SIS100/10, or TOS800 using RS-232C.
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<th>Manufacturer Models</th>
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</table>

*1: A communication unit or "*1 J2* (OP)" is required. It does not support TCP/IP communication.
Operations

To the purchasers:

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 Fuji Electric / 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 our 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 Fuji Electric / 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 Fuji Electric / Hakko Electronics product.

4. The malfunction occurs due to an alteration or repair that was not performed by Fuji Electric / 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 Fuji Electric / Hakko Electronics are 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 Fuji Electric / Hakko Electronics or our 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 Fuji Electric / Hakko Electronics.

1.4 Liability for Opportunity Loss

Regardless of the time of occurrence, Fuji Electric / Hakko Electronics are not liable for damage caused by factors that Fuji Electric / Hakko Electronics are not responsible for, opportunity loss on the part of the purchaser caused by the malfunction of a Fuji Electric / 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 Fuji Electric / Hakko Electronics, or compensation towards other operations.

1.5 Period for Repair and Provision of Spare Parts after Production is Discontinued (Maintenance Period)

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 Fuji Electric / Hakko Electronics or our service providers for further information.

1.6 Delivery

Standard products that do not entail application setting or adjustment are regarded as received by the purchaser upon delivery.

Fuji Electric / Hakko Electronics are not responsible for local adjustments and test runs.

1.7 Service

The price of the delivered or purchased products does not include the service fee for the technician. Please contact Fuji Electric / Hakko Electronics or our service providers for further information.

1.8 Scope of Application

The above contents shall be assumed to apply to transactions and product use in the country where a Fuji Electric / Hakko Electronics product is purchased. Please consult your local supplier or Fuji Electric / Hakko Electronics for details.

Worldwide service network for trouble-free

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WEB

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Global Sales Network

Our distributors are ready to support your worldwide business.

www.monitouch.com/site/distributors-e/distributors-oversea-01.html
Safety Considerations

- 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.
- Products introduced in this catalog have not been designed or manufactured for such applications in a system or equipment that will affect human bodies or lives.
- 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.

Notes to consider before purchasing

- Appearance and specifications are subject to modification without prior notice due to technical improvements.
- 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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E-mail: sales@hakko-elec.co.jp

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