Fuji Electric VICPAS HMI Parts Center *Innovating Energy Technology*

November 2016

Programmable Operator Interface

MONITOUCH

⚠ 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.

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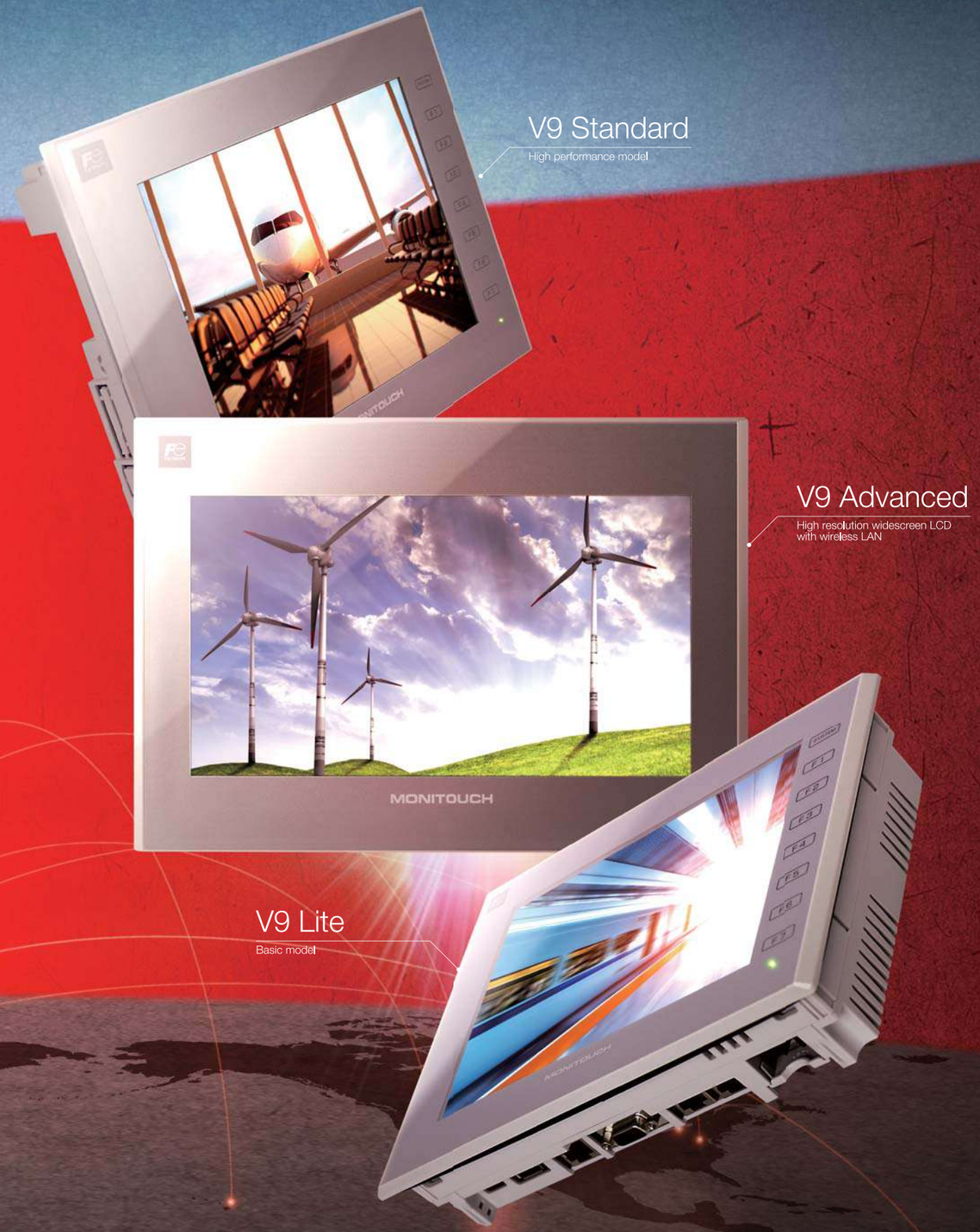
The new MONITOUCH series scales new heights of excellence; optimum operability, intuitive controls, and extended capability to display and utilize your application.

On its release in 1988 as the first ever programmable display*, MONITOUCH augured 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.

Now, Hakko Electronics Co., Ltd. has introduced its new range with an impressive array of exciting new cutting-edge features expressly designed to meet the needs of our clients.

The MONITOUCH PREMIUM series, the next generation of programmable displays, is here.

*According to our own research.



MONITOUCH V9 series

We provide a wide range of display, with wide range of functionalities. The V9 series lineup helps to establish the most efficient information system fulfilling the needs of automation.

V9 Advanced

10.1 inches
- V9101iWRLD DC
- V9101iWLD DC

7 inches
- V9071iWRLD DC
- V9071iWLD DC

V9 Standard

15 inches
- V9150iX AC
- V9150iXD DC

12.1 inches
- V9120iS AC
- V9120iSD DC

10.4 inches
- V9100iS AC
- V9100iSD DC

8.4 inches
- V9080iSD DC

V9 Lite

10.4 inches
- V9100iC AC
- V9100iCD DC

8.4 inches
- V9080iCD DC

5.7 inches
- V9060iTD DC

Model	V9101iW	V9071iW	V9150iX	V9120iS
Display size	10.1" wide	7" wide	15"	12.1"
Display device	TFT color LCD	TFT color LCD	TFT color LCD	TFT color LCD
Resolution W:H (dots)	1024×600	800×480	1024×768	800×600
Colors	16.7 million*1	16.7 million*1	16.7 million*1	16.7 million*1
Touch switch	Capacitance	Capacitance	Analog resistance film	Analog resistance film
Screen memory (FROM)	64MB	64MB	64MB	64MB
Backup memory (SRAM)	800KB	800KB	800KB	800KB
Ethernet(LAN)	○	○	○	○
Extended cable LAN	○	○	△*2	△*2
Wireless LAN	△*2	△*2	△*2	△*2
Serial (CN1)	RS-232C/422/485	RS-232C/422/485 *3	RS-232C/422/485	RS-232C/422/485
Serial (MJ1)	RS-232C/485	RS-232C/485	RS-232C/485	RS-232C/485
Serial (MJ2)	RS-232C/485	RS-232C/422/485	RS-232C/485	RS-232C/485
Communication I/F	○	○	○	○
Optional unit I/F (GUR-XX)	○	–	○	○
SD card I/F	○	○	○	○
USB (Type A)	○	○	○	○
USB (Type mini-B)	○	○	○	○
Sound output	○	–	○	○

Please refer to page 24 for the details of each model.

V9100iS	V9080iSD	V9100iC	V9080iCD	V9060iTD
10.4"	8.4"	10.4"	8.4"	5.7"
TFT color LCD	TFT color LCD	TFT color LCD	TFT color LCD	TFT color LCD
800×600	800×600	640×480	640×480	640×480
16.7 million*1	16.7 million*1	16.7 million*1	16.7 million*1	260 thousand *1
Analog resistance film	Analog resistance film	Analog resistance film	Analog resistance film	Analog resistance film
64MB	64MB	64MB	64MB	64MB
800KB	800KB	800KB	800KB	800KB
○	○	○	○	○
△*2	△*2	–	–	–
△*2	△*2	–	–	–
RS-232C/422/485	RS-232C/422/485	RS-232C/422/485	RS-232C/422/485	RS-232C/422/485 *3
RS-232C/485	RS-232C/485	RS-232C/485	RS-232C/485	RS-232C/485
RS-232C/485	RS-232C/485	RS-232C/485	RS-232C/485	RS-232C/422/485
○	○	○	○	○
○	○	–	–	–
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	–	–	–

*1: Only for pictures, 3D parts and videos. Other items are displayed in 65,536 colors. *2: Depending on the model. *3: When optional unit DUR-00 is installed.

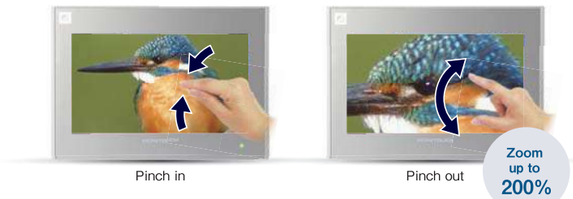
Kindness to our customers is the origin of evolution of MONITOUCH.

*1: Only V9 Advanced model.

Smooth Operation with Your Fingers

Zooming In and Out with Two Fingers V9 Advanced

The displayed image can be magnified up to 200% by pinching out the screen*2, and reduced to the original size by pinching it in.



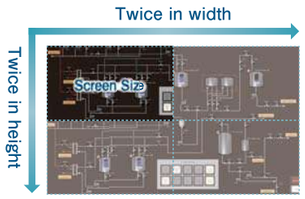
*2: The image can be scaled up and down by double tapping for V9 Standard/Lite.

Scrolling Magnified Images

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

Abundant Quantity of Information

Displaying Four Times the Screen Size First in industry *3



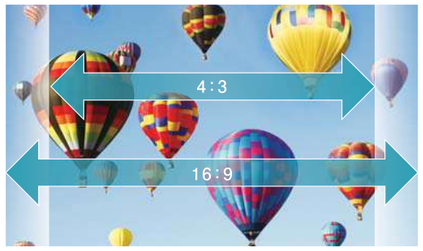
The whole area of a large image can be confirmed easily by scrolling the screen without the need of switching it. The navigation window helps you to recognize the current displayed position instantly.

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

*3: According to our own research.

Widescreen LCD V9 Advanced

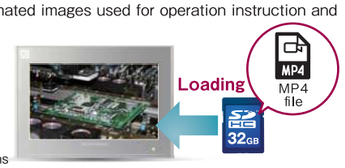
V9 Advanced models are equipped with a high-precision, high-resolution widescreen (16:9). Greater volume and variety of information can be displayed on the screen.



Enhanced Display Capacity

Video Player Function

A video player function is provided with all models of the V9 series. The video player can be operated by a switch on the V9 or a command from the system menu or PLC. Animated images used for operation instruction and other operations will reduce the down time of machines and facilitate the standardization of operation.



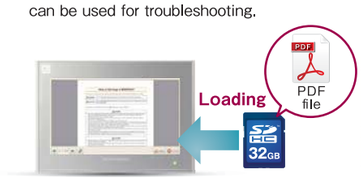
*4: Please see the specifications (P18) for models with sound output function.

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.

PDF Viewer Function

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



Fast navigation to the desired page, using bookmarks.

Video/RGB Input-Output Support

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.

Model	Item
GUR-00	Video 4ch input
GUR-01	RGB 1ch input
GUR-02	RGB 1ch output
GUR-04	Video 1ch input
GUR-10	Video 2ch input/ RGB 1ch input
GUR-11	RGB 2ch input

Versatile Screen Transition Functions

15 kinds*6 of functions are available for screen switching and overlapping.

E.g.) Slide-in

*6: Four types for overlapping windows.

15 kinds of screen change

Compatible with Vertical Placement

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

E.g.)

Main Menu Screen can also be displayed vertically.

For all models

*5: For the display of pictures, 3D parts and video/RGB images only. Other parts are displayed in 65,536 colors.

Easy and safe network monitoring and control

VNC Server Function

Remote Connection from Tablet PCs

All of the V9 family has remote monitoring/maintenance capabilities via Ethernet, thanks to its VNC feature.

Direct communication with your tablet PC

Wireless LAN models has built-in access point so that you can establish connection with wireless LAN devices without setting up extra access points.

Wireless LAN Function *1

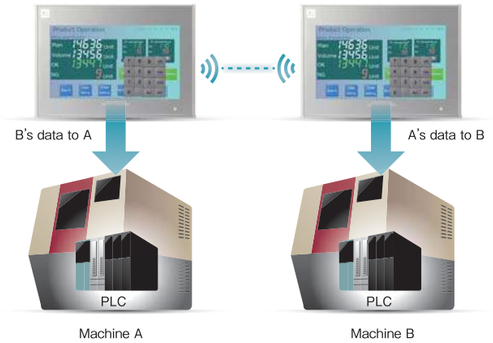
Wireless Data Transfer

By connecting a PC to a V9 via wireless LAN, transmission of screen program and the reading and writing of files through FTP server/client function becomes available. On-site debugging can be conducted easily, without the need for a cable connection.

*1 Wireless LAN-compatible products only.

Data Transfer via V9 Panels

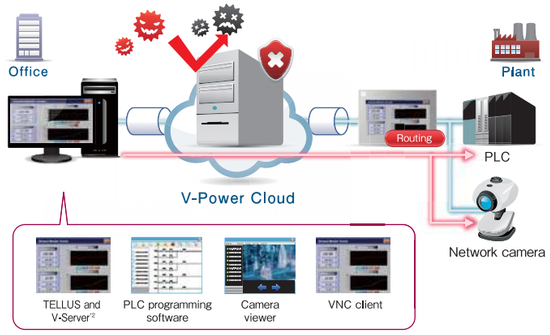
With macro EREAD/EWRITE, data can be transferred between machines using V9 panels as a gateway.



Networking

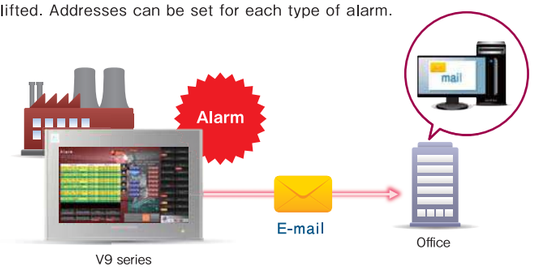
Secure, easy and low cost remote control by VPN

MONITOUCH, equipped with VPN (Virtual Private Network) function, facilitates secure remote control through a public network.
In addition, VPN's routing function enables a V9 series unit to connect with PLC and network cameras via Ethernet.



E-mail Transmission Function

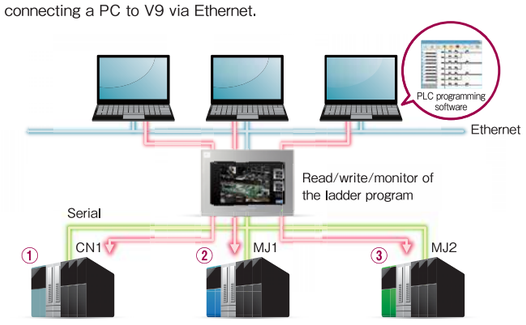
E-mails can be sent to preset addresses when alarms are issued or lifted. Addresses can be set for each type of alarm.



Secure **Enhanced Security**
SSL/TLS transmission is supported, so you can work with peace of mind.

Ladder Program Transmission (3-way) Support

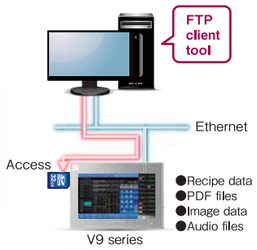
Up to 3 PLCs are accessible to monitor and revise PLC programs by connecting a PC to V9 via Ethernet.



FTP Server/Client Support

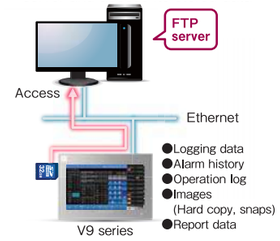
FTP Server Function

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 a V9. It is also possible to use a V9 as an FTP server and access its stored data.



Easy verification of daily data and error reports

Trend Data Display

Backup Data Display

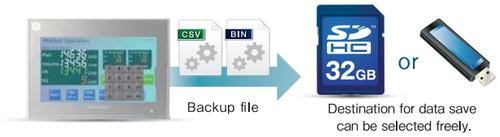
Backup files can be loaded and displayed on V9. Alarm backup data can also be displayed.

Coordination with the Scheduler

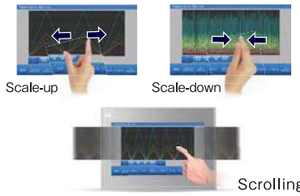
Operations such as bit output and execution of macro programs can be scheduled on a specific date and time. Also, start and stop of logging, and data saving can be conducted by setting the logging conditions.

Easy Creation of Backup Files

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



Magnification of Trend Graph Scale



The time scale of trend graph can be magnified, and the display can be scrolled by touch and drag.

Alarm Display

Scrolling of the Alarm Messages

Scrolling the alarm messages

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

Running Emergency Messages

Alarm messages run automatically at a specified position when alarms are occured.

Convenient tools for scrolling

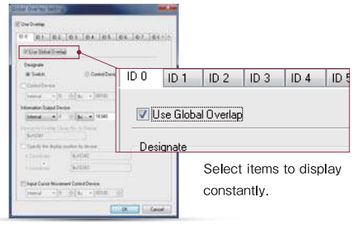
Screen Overlapping

Improved Overlapping Functions

Up to 10 windows can be overlapped on the screen. No limit on the size of each window.

You can make all ten windows transparent at the same time.

All of the ten windows can be left displayed even when the screen is changed.



Select items to display constantly.

Four-times of Normal Overlapping Windows

Four times more information than of normal overlapping windows can be registered and used as sub screen.

Various Screen Transition Functions

Four kinds of functions such as slide-in and fade-out are available for screen switching and overlapping.

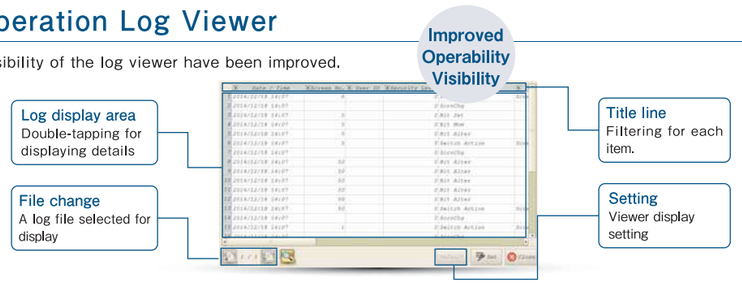
E.g.) Slide-in

Easy and smooth operation with new functions

Operation Log

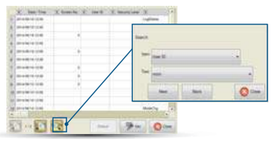
Improved Operation Log Viewer

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.

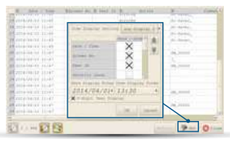


Filter/Sort Settings

Filter and sort can be set for displayed items.

Display Item Settings

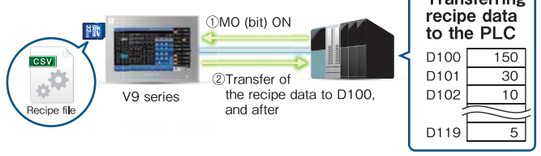
It is possible to select items to display in the operation log.



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.



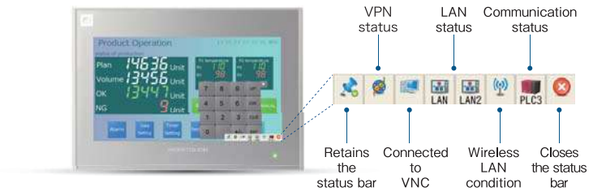
Filter Settings

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

Unit Display

Display of V9 Status

The status of V9 is displayed in the status bar.*1



*1: The contents of the status indication are subject to change.

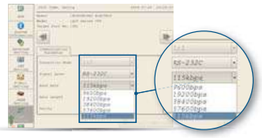
System Keyboard Available

A versatile keyboard for inputting upper and lower case letters and numbers is available for easy setting.
Select the system keyboard from the set menu.

Local Screen Settings

Transmission Settings

Transmission settings with connected devices can be modified on the V9.



Communication setting

Backlight Settings

Backlight settings can be modified on the V9.

Backlight setting

Buzzer Settings

Buzzers settings can be modified on the V9.

Buzzer setting

Network Query

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

Network Test

E-mail Settings

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

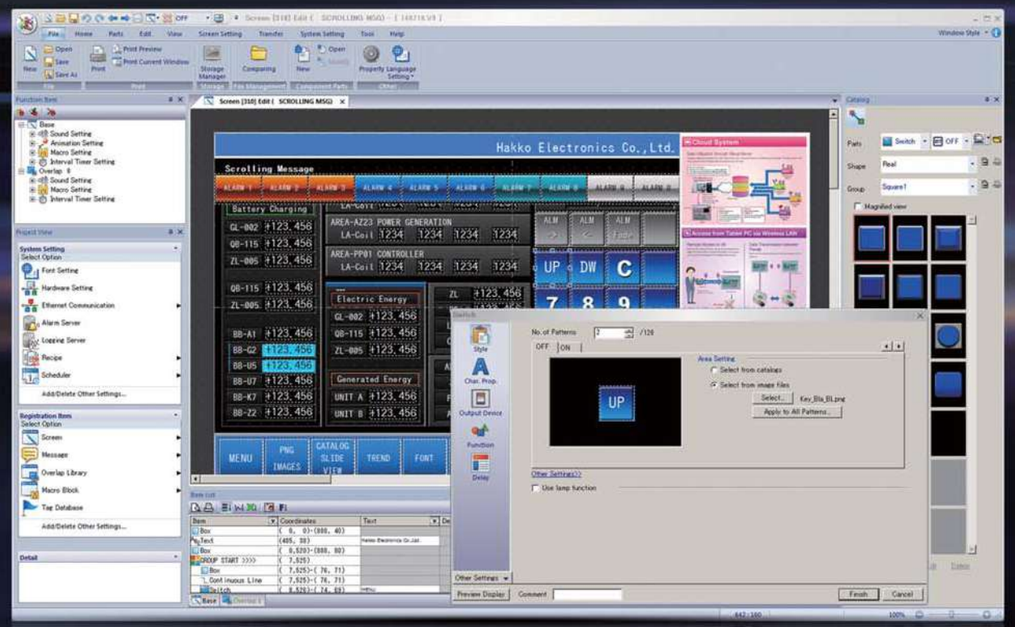
E-mail Setting

User Settings

User data can be edited, added and deleted, and user permissions such as the security level can be modified.

User Setting

Simple configuration of beautiful screens



V-SFT Ver.6

PC	PC/AT compatible machine with Windows
OS*	Windows XP/XP 64Edition/Vista (32 bit, 64 bit) / 7 (32 bit, 64 bit) /8 (32 bit, 64 bit) /8.1 (32 bit, 64 bit) / 10 (32 bit, 64 bit)
CPU	Pentium 4 2.0GHz or higher recommended.
Memory	2.0GB or more
Hard disk	For installation: 2.0GB or more available space

* For installing the OS, administrator authority is required.

Disc drive	DVD-ROM drive
Display	Resolution: 1024×768 (XGA) or more
Color indication	High color (16 bit) or higher
Others	Microsoft .NET Framework 4.0 or 4.5 is required. (When .NET Framework 4.0 or 4.5 has not been installed in PC, Framework 4.0 is installed automatically.)

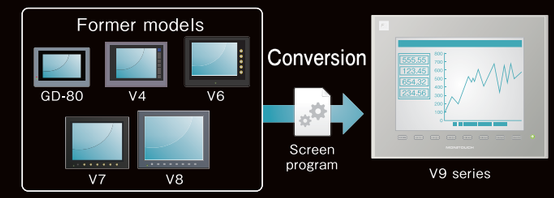
Compatibility with Previous Models

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 V8 series.

Compatible with Program from Legacy Products

Screen program produced using previous versions of V-SFT can be converted for use in the current model. It is possible to use former screen program assets.



Configuration of Easy-to-view Screens

Wider Range of Parts

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

Simple icons added

Popular simple icons that are used widely on smartphones have been introduced.

Increased picture icons

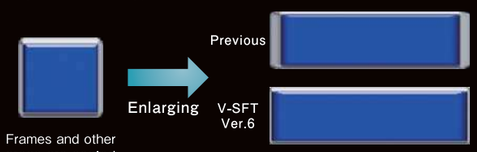
The number of the picture icons has been increased.

Picture icons with realistic design

Picture icons with simple design

Improved 3D Parts Scaling Function

3D parts can be scaled up and down without changing the widths of frames. Frame size can be modified by batch, or individually according to the item type.



Frames and other areas are scaled separately.

Available for numbers, characters and bar graphs in addition to switches and lamps.

* For V9 series square picture icons and 3D parts with frames (excluding some icons and parts)

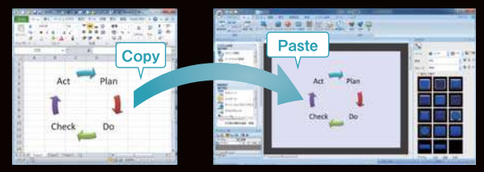
Line Width Setting

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.

* Excluding thick lines

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.



Pasting 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.

Upgraded Operability

Ribbon Menu

Home menu

Edit menu

Parts menu

Display menu

The ribbon-shaped menu bar is available. Enlarged icons are easily visible also improves the operability remarkably.

Graphic Indication of System Configuration

The improved hardware setting screen makes it easy to grasp exactly how devices are connected together in the system.

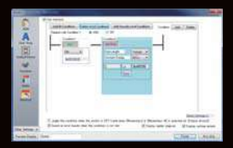
Docking Windows

The project view windows and item view windows can be docked or floated easily.

Integration of Search Menu

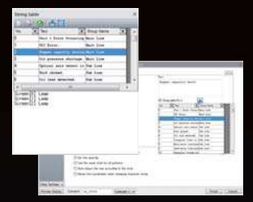
The search menu, which used to be displayed separately, has now been integrated for easy operation.

Enhanced Interlocking Setting



Interlock can be set with a ladder drawing screen. Multiple conditions for interlocking can be easily set. It is possible to set interlocking for keypad indication conditions in addition to switch conditions. Up to five conditions (AND or OR) for a bit device, word device or security device can be set, which is suitable for setting complicated conditions.

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.

* Switches, lamps, text, and multi text only.

Facilitation of Screen Configuration

Guided Setting Process

With the help of the clear instructions in the dialog, setting can be conducted smoothly and collectively.

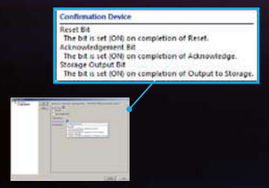
A Wider Range of Colors for 3D parts

65,536 colors are available for 3D Parts.

Visualization of Setting

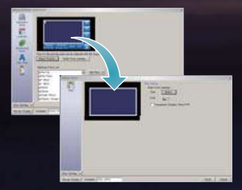
Set conditions can be confirmed on the preview screen before completing setting. By switching the preview screen and setting dialog, the setting can be confirmed easily even on a PC with low resolution.

Tool Hints to Support Configuration



Tool hints are provided at many points to support configuration. When you hover the mouse over the item, a hint for operation will appear. You can learn the procedure for configuration without referring to the manual.

Direct Editing with the Item View



In the item view, an indication range and component parts consisting of various parts including switches are selected. Since there is no need to select various items respectively, smooth and efficient editing is possible.

Optional Units

Extension 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 a video camera 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 PC images through two channels on V9 simultaneously.

Communication Units

CUR-00 OPCN-1

CUR-01 T-link

CUR-02 CC-Link

CUR-03 Ethernet

CUR-04 PROFIBUS-DP

CUR-06 SX bus

CUR-07 DeviceNet

CUR-08 FL-net

Configuration software

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

Cables

Type	Configuration	Connected to
V-CP	RS-232C Modular 8pin — D-Sub9pin(F) Length: 3m	PC
V6-BCD	RS-232C Modular 8pin Length: 3m	Barcode reader
V6-MLT	RS-485 Modular 8pin Length: 3m	MONITOUCH V8/V9
V6-TMP	RS-232C/485 Modular 8pin Length: 3・5・10m	Temperature controller, inverter, etc.
UA-FR	Type A Length: 1m	Card reader/ writer, USB memory, etc.

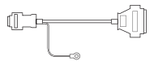
DUR-00 (Dedicated optional unit for V907xiW/ V9060iTD)

Used for serial connection with D-Sub9pin.

Other Units

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

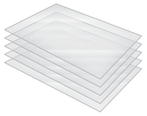
V7-BT
A replacement lithium battery for the V907xiW, V9060iTD and V8 series.



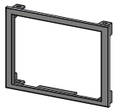
D9-D25
Replacement cable for CN1 cable of V6/V7 series.

V9-ANT
Antenna for V9 models compatible with wireless LAN.

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



V9xxx-GS/V9xxx-GSN10
Protection sheets for panels (5 sheets per set).
N10 is a non-glare type sheet.
See P.25 for details.



Panel adapter (PAD-Vxxx)
Used when fitting V9 into V4/GD-80/GD-65/GD-64 panel cutout.
Contact our technical helpdesk for details.

High-end specifications realize smooth and accurate operation.

General Specifications

Item		V9 Advanced		V9 Standard			
		V9101iW	V9071iW	V9150iX	V9150iXD	V9120iS/V9120iSB	V9120iSD/V9120iSBD
Power supply	Rated voltage	24VDC		100-240VAC	24VDC	100-240VAC	24VDC
	Permissible range of voltage	±10%		-15%,+10%	±10%	-15%,+10%	±10%
	Permissible Momentary Power Failure	Within 1ms		Within 20ms (100VAC or higher)	Within 1ms	Within 20ms (100VAC or higher)	Within 1ms
	Power Consumption (Max. Rating)	27W or less	22W or less	90VA or less	40W or less	70VA or less	28W or less
	Rush Current	17A or less, 6ms	10A or less, 6ms	30A or less, 3ms	19A or less, 7ms	30A or less, 3ms	18A or less, 5ms
Insulation resistance		DC500V 10MΩ or more					
Physical environment	Ambient temperature	0~50℃*1		0~40℃*1		0~50℃*1	
	Ambient humidity	85%RH or less (without dew condensation)*1					
	Operation altitude	2,000 meters or lower					
	Atmosphere	Not to be exposed to corrosive gas, or conductive dust					
	Storage temperature	−10~60℃*1		−10~50℃*1		−10~60℃*1	
	Storage humidity	85%RH or less (without dew condensation)*1					
	Contamination level	Level 2					
Mechanical operating conditions	Resistance to oscillation	JIS B 3502 (IEC61131-2) compliant, Vibration frequency: 5~9Hz, Half-amplitude: 3.5mm, Vibration frequency: 9~150Hz,Constant acceleration: 9.8m/s^2 (1G), X, Y, Z: 3 directions (10 times each)					
	Resistance to shock	JIS B 3502 (IEC61131-2) compliant, Peak acceleration: 147m/s^2(15G), X,Y,Z:3 directions, 3 times each (18 times in total)					
Electric operating conditions	Resistance to noise	Noise voltage:1,000Vp-p, pulse width:1μs, pulse rise time : 1ns		Noise voltage:1,500Vp-p, pulse width:1μs, pulse rise time : 1ns	Noise voltage:1,000Vp-p, pulse width:1μs, pulse rise time : 1ns	Noise voltage:1,500Vp-p, pulse width:1μs, pulse rise time : 1ns	
	Resistance to static Discharge	Complies with IEC61000-4-2, contact: 6KV, air: 8KV					
Installation conditions	Grounding	Grounding resistance: Less than 100Ω, FG/SG separation		Grounding resistance: Less than 100Ω, FG=SG		Grounding resistance: Less than 100Ω, FG/SG separation	
	Structure	Protection structure: Front case: IP66, TYPE4X/13*7*8 (when water-proof gasket is used), Rear case: IP20, single unit, installation method: panel mounting					
	Cooling system	Natural air cooling					
	Dimensions W*H*D (mm)	278.5×198.5×54.4	201.6×147.6×60.3	382.8×312.8×80.8		327.8×261.0×54.9	
	Panel cutout (mm)	257.0×183.0(+0.5/-0)	187.2×133.4(+0.5/-0)	369.4×299.4(+0.5/-0)		313.0×246.2(+0.5/-0)	
	Weight	Approx. 1.7 kg	Approx. 1.0 kg	Approx. 4.7 kg		Approx. 2.5 kg	
Case color		Light gray		Front case: Silver, Rear case: Light gray		Light gray (black front housing for black model)	
Material		PC resin		Front case: Aluminum, Rear case: PC resin		PC resin	

V9 Standard			V9 Lite			
V9100iS/V9100iSB	V9100iSD/V9100iSBD	V9080iSD/V9080iSBD	V9100iC/V9100iCB	V9100iCD/V9100iCBD	V9080iCD/V9080iCBD	V9060iTD/V9060iTBD
100-240VAC	24VDC	24VDC	100-240VAC	24VDC	24VDC	24VDC
-15%,+10%	±10%	±10%	-15%,+10%	±10%	±10%	±10%
Within 20ms (100VAC or higher)	Within 1ms		Within 20ms (100VAC or higher)	Within 1ms		
70VA or less	28W or less		50VA or less	17W or less		13W or less
30A or less, 3ms	17A or less, 6ms		30A or less, 3ms	17A or less, 6ms		8A or less, 7ms
DC500V 10MΩ or more						
0~50℃*1						
85%RH or less (without dew condensation)*1						
2,000 meters or lower						
Not to be exposed to corrosive gas, or conductive dust						
−10~60℃*1						
85%RH or less (without dew condensation)*1						
Level 2						
JIS B 3502 (IEC61131-2) compliant, Vibration frequency: 5~9Hz, Half-amplitude: 3.5mm, Vibration frequency: 9~150Hz, Constant acceleration: 9.8m/s^2 (1G), X, Y, Z: 3 directions (10 times each)						
JIS B 3502 (IEC61131-2) compliant, Peak acceleration: 147m/s^2(15G), X,Y,Z:3 directions, 3 times each (18 times in total)						
Noise voltage: 1,500Vp-p, pulse width: 1μs, pulse rise time: 1ns						Noise voltage:1,000Vp-p, pulse width:1μs, pulse rise time : 1ns
Complies with IEC61000-4-2, contact: 6KV, air: 8KV						
Grounding resistance: Less than 100Ω, FG/SG separation						
Protection structure: Front case: IP66, TYPE4X/13*7*8 (when water-proof gasket is used), Rear case: IP20, single unit, installation method: panel mounting						
Natural air cooling						
303.8×231.0×54.0		235.0×180.0×48.9	303.8×231.0×54.0		235.0×180.0×48.9	182.5×138.8×53.0
289.0×216.2(+0.5/-0)		220.5×165.5(+0.5/-0)	289.0×216.2(+0.5/-0)		220.5×165.5(+0.5/-0)	174.0×131.0(+0.5/-0)
Approx. 2.0 kg		Approx. 1.3 kg	Approx. 2.0 kg		Approx. 1.3 kg	Approx. 740 g
Light gray (black front housing for black model)						
PC resin						

*1: Wet-bulb temperature should be 39℃ or lower to prevent malfunction.

Performance Specifications

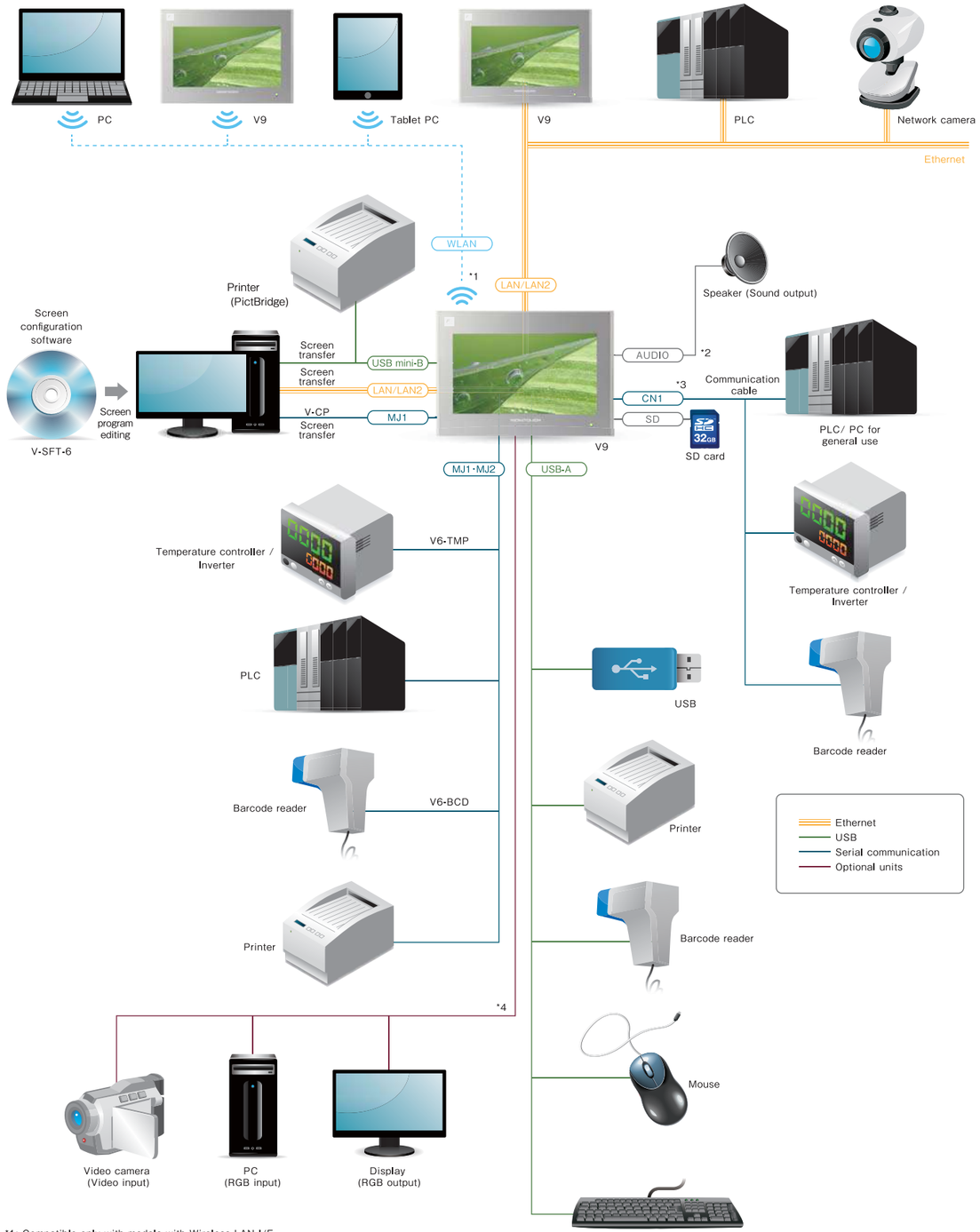
Item		V9 Advanced		V9 Standard	
		V9101iW	V9071iW	V9150iX	V9120iS
Screen memory (FROM)		64MB			
Backup memory (SRAM)		800KB			
Display	Display device	TFT color LCD			
	Resolution	1024×600	800×480	1024×768	800×600
	Display size	10.1″Wide	7″Wide	15″	12.1″
	Colors	16.7 million*2			
	Backlight	LED			
	Backlight life	50,000 hours	100,000 hours		70,000 hours
Touch switch	Type	Capacitance		Analog resistance film	
Function switch	Quantity	None		8	
External interface	D-Sub 9-pin (CN1) *3	RS-232C/ RS-422/RS-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*4bps			
	Modular 8-pin (MJ1/ MJ2)	RS-232C/ RS-422/ RS-485 (two-wire system),*5 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			
	SD card	One card slot provided as standard			
	Ethernet	2ch, Baud rate: 100Mbps, 10Mbps		1ch, Baud rate: 100Mbps, 10Mbps	
	Wireless LAN	Complies with IEEE802.11b/g/n (2.4GHz)*6			
	USB	Type A,Type mini-B (Ver.2.0)			
	Sound output	1ch provided as standard	–	1ch provided as standard	
Clock	Backup period	5 years (Ambient temperature 25°C)			
	Calendar accuracy	Gap ±90 sec. per month (Ambient temperature 25°C, When the battery is backed up)			
Standard	CE marking*7	EN61000-6-2、EN61000-6-4			
	UL・cUL*7	UL508			UL508, ANSI/ISA12.12.01*9
	KC	Compliant*10			
	Radio Act*8	Japan: TELEC USA: FCC Canada: IC RSS	EU: R&TTE South Korea: KC	Japan: TELEC	

V9 Standard		V9 Lite		
V9100iS	V9080iSD	V9100iC	V9080iCD	V9060iTD
64MB				
800KB				
TFT color LCD				
800×600		640×480		
10.4″	8.4″	10.4″	8.4″	5.7″
16.7 million*2				260,000 *2
LED				
70,000 hours				50,000 hours
Analog resistance film				
8				6
RS-232C/ RS-422/ RS-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*4bps				
RS-232C/ RS-422/ RS-485 (two-wire system),*5 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				
One card slot provided as standard				
1ch, Baud rate: 100Mbps, 10Mbps				
Complies with IEEE802.11b/g/n (2.4GHz)*6		–		
Type A,Type mini-B (Ver.2.0)				
1ch provided as standard		–		
5 years (Ambient temperature 25°C)				
Gap ±90 sec. per month (Ambient temperature 25°C, When the battery is backed up)				
EN61000-6-2、EN61000-6-4				
UL508, ANSI/ISA12.12.01*9		UL508		UL508, ANSI/ISA12.12.01*9
Compliant*10				
Japan: TELEC		–		

*2: Only for pictures, 3D parts and videos. Other items are displayed in 65,536 colors. *3: Optional unit (DUR-00) is required for the V9071iW and V9060iTD.
*4: Only for Siemens MPI (Incompatible with DUR-00). *5: 187,500bps (four-wire system) for the V9071iW and V9060iTD MJ2 only. *6: Wireless LAN-compatible products only. *7: DC products only.
*8: V9101iW: Hardware of Ver.c or later V9120iSD/V9100iSD/V9080iSD/V9100iCD/V9080iCD: Hardware of Ver.b or later V9071iW/V9150iXD/V9060iTD:All versions
*9: V9120iSD/V9100iSD/V9080iSD: Hardware of Ver.b or later V9060iTD: All versions *10: Black model not certified

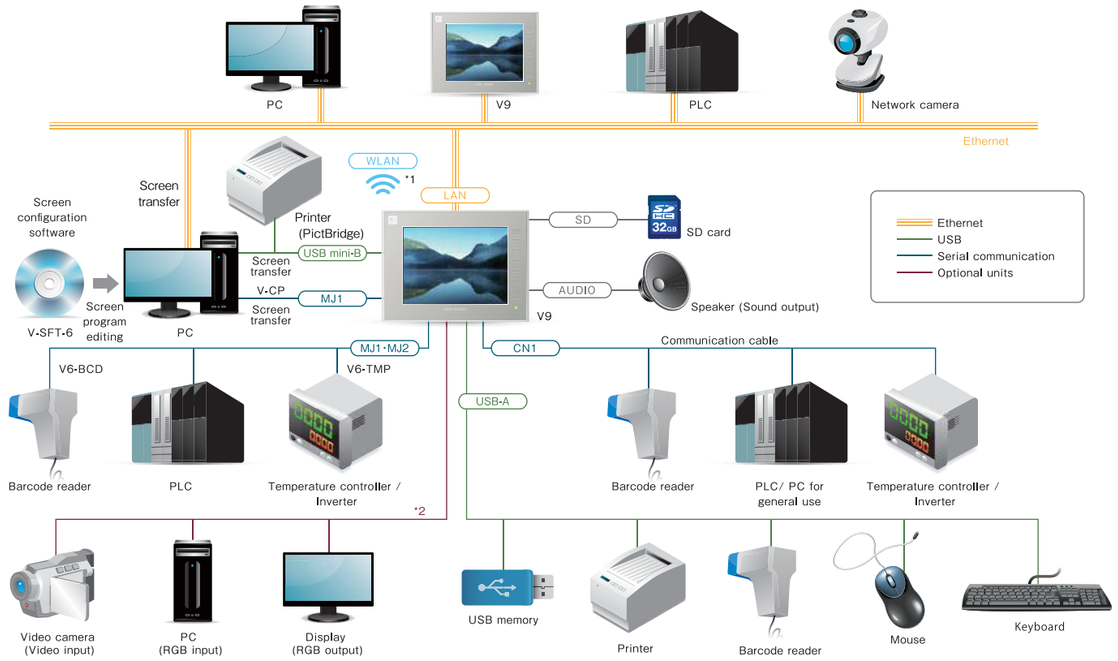
Flexible system configuration meets diversified requirements.

Advanced Model System Configuration



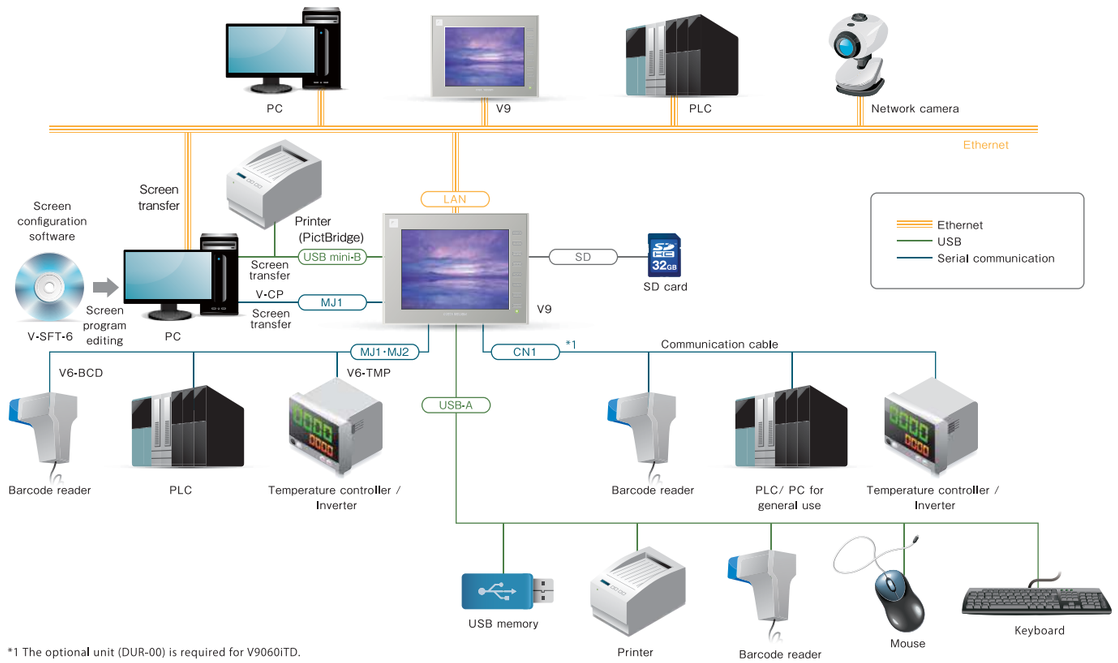
*1: Compatible only with models with Wireless LAN I/F.
*2: V910xiW only
*3: Optional unit DUR-00 is required when using the V907xiW.
*4: V910xiW only. Optional unit GUR-XX is required.

Standard Model System Configuration



*1: Compatible only with models with Wireless LAN I/F.
*2: The optional unit (GUR-xx) is required.

Lite Model System Configuration



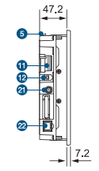
*1 The optional unit (DUR-00) is required for V9060iTD.

Dimensions and Part Names

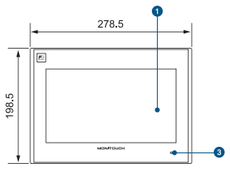
V9 Advanced V9101iW

(Unit: mm)

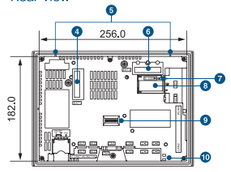
Side view



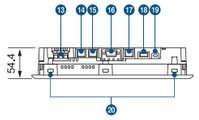
Front view



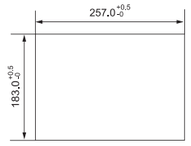
Rear view



Bottom view



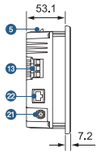
Panel cutout



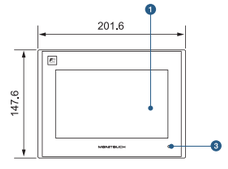
V9 Advanced V9071iW

(Unit: mm)

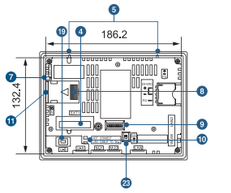
Side view



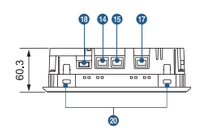
Front view



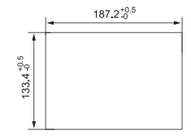
Rear view



Bottom view



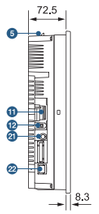
Panel cutout



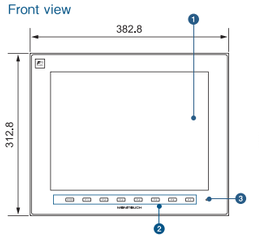
V9 Standard V9150iX

(Unit: mm)

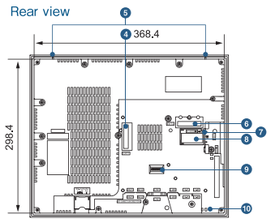
Side view



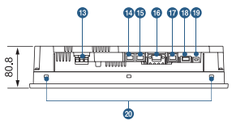
Front view



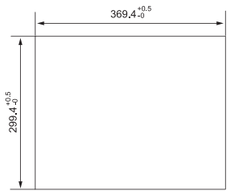
Rear view



Bottom view



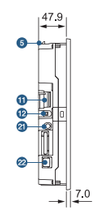
Panel cutout



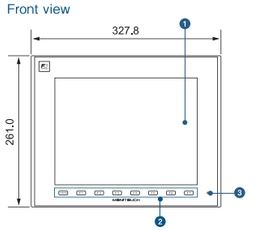
V9 Standard V9120iS

(Unit: mm)

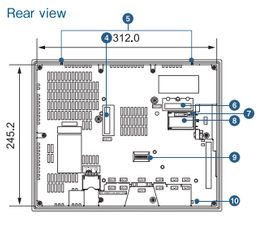
Side view



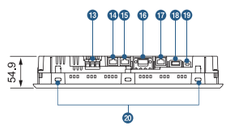
Front view



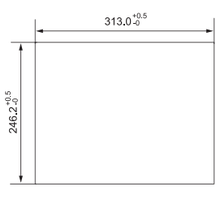
Rear view



Bottom view



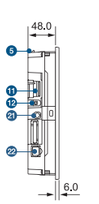
Panel cutout



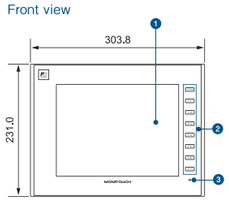
V9 Standard V9100iS

(Unit: mm)

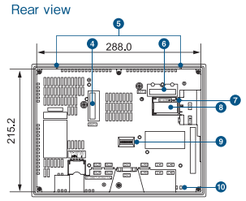
Side view



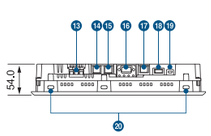
Front view



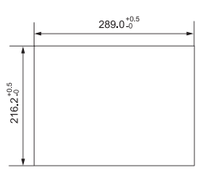
Rear view



Bottom view



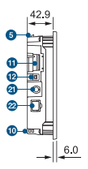
Panel cutout



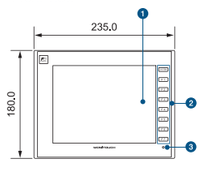
V9 Standard V9080iSD

(Unit: mm)

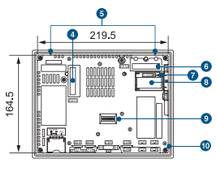
Side view



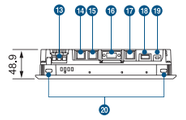
Front view



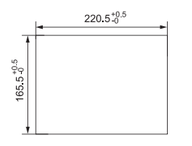
Rear view



Bottom view



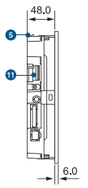
Panel cutout



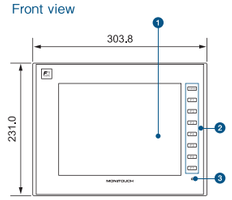
V9 Lite V9100iC

(Unit: mm)

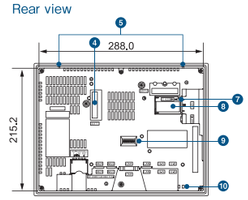
Side view



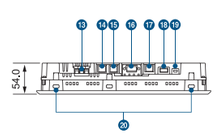
Front view



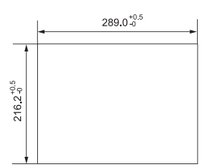
Rear view



Bottom view



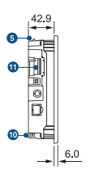
Panel cutout



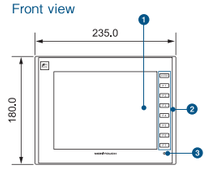
V9 Lite V9080iCD

(Unit: mm)

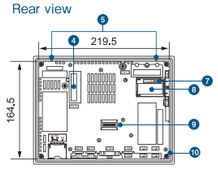
Side view



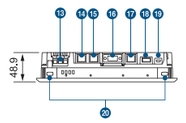
Front view



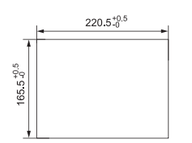
Rear view



Bottom view



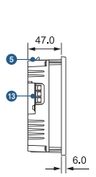
Panel cutout



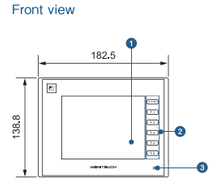
V9 Lite V9060iTD

(Unit: mm)

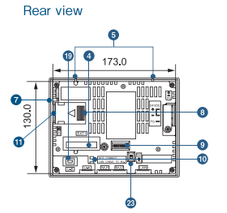
Side view



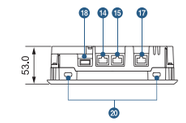
Front view



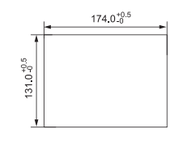
Rear view



Bottom view



Panel cutout



Part Names

❶ Display	❼ SD card access LED	⓭ Power input terminal block	⓳ USB mini-B (U-B)
❷ Function switch	❽ Battery holder	⓮ Modular jack 1 (MJ1)	⓴ Screw hole
❸ Power lamp	❾ DIP switch	⓯ Modular jack 2 (MJ2)	㉑ Wireless LAN external antenna connector (WLAN)
❹ Communication unit connector (EXT1)	❿ USB cable holding hole	⓰ PLC connector (CN1)	㉒ 100BASE-TX/10BASE-T port (LAN2)
❺ Fall prevention hook	⓫ SD card connector	⓱ 100BASE-TX/10BASE-T port (LAN)	㉓ Slide switch
❻ Optional unit connector (EXT2)	⓬ Sound output connector (AUDIO)	⓲ USB-A (U-A)	

Remarkable cost effectiveness enabled by our product lineup and optional units.

Product List

Advanced

Model	Display Size	Resolution	Specification									Delivery Standard: ✓ Made to order: △
			Touch Switch	Video/ RGB	AUDIO Output	Wireless LAN	Extended Cable LAN	UL508	CE	KC	Power	
V9101iWRLD	10.1″ Wide	1024×600	Capacitance	✓	✓	✓	✓	✓	✓	✓	DC	✓
V9100iWRLD			Analog resistance film	✓	✓	✓	✓	✓	✓	✓		△
V9101iWLD			Capacitance	✓	✓	—	✓	✓	✓	✓		✓
V9100iWLD			Analog resistance film	✓	✓	—	✓	✓	✓	✓		△
V9071iWRLD	Wide	800×480	Capacitance	—	—	✓	✓	✓	✓	✓	DC	✓
V9070iWRLD			Analog resistance film	—	—	✓	✓	✓	✓	✓		△
V9071iWLD			Capacitance	—	—	—	✓	✓	✓	✓		✓
V9070iWLD			Analog resistance film	—	—	—	✓	✓	✓	✓		△

Standard

Model	Display Size	Resolution	Specification									Delivery Standard: ✓ Made to order: △
			Touch Switch	Video/ RGB	AUDIO Output	Wireless LAN	Extended Cable LAN	UL508	CE	KC	Power	
V9150iX	15″	1024×768	Analog resistance film	✓	✓	—	—	—	—	✓	AC	✓
V9150iXD				✓	✓	—	—	✓	✓	✓	DC	✓
V9150iXLD				✓	✓	—	✓	✓	✓	✓		△
V9150iXRD				✓	✓	✓ *1	—	✓	—	—		△
V9120iS	12.1″	800×600	Analog resistance film	✓	✓	—	—	—	—	✓	AC	✓
V9120iSB				✓	✓	—	—	—	—	—		△
V9120iSD				✓	✓	—	—	✓	✓	✓	DC	✓
V9120iSBD				✓	✓	—	—	✓	✓	—		△
V9120iSLD				✓	✓	—	✓	✓	✓	✓		△
V9120iSLBD				✓	✓	—	✓	✓	✓	—		△
V9120iSRD				✓	✓	✓ *1	—	✓	—	—		△
V9120iSRBD				✓	✓	✓ *1	—	✓	—	—		△
V9100iS	10.4″	800×600	Analog resistance film	✓	✓	—	—	—	—	✓	AC	✓
V9100iSB				✓	✓	—	—	—	—	—		△
V9100iSD				✓	✓	—	—	✓	✓	✓	DC	✓
V9100iSBD				✓	✓	—	—	✓	✓	—		△
V9100iSLD				✓	✓	—	✓	✓	✓	✓		△
V9100iSLBD				✓	✓	—	✓	✓	✓	—		△
V9100iSRD				✓	✓	✓ *1	—	✓	—	—		△
V9100iSRBD				✓	✓	✓ *1	—	✓	—	—		△
V9080iSD	8.4″	800×600	Analog resistance film	✓	✓	—	—	✓	✓	✓	DC	✓
V9080iSBD				✓	✓	—	—	✓	✓	—		△
V9080iSLD				✓	✓	—	✓	✓	✓	✓		△
V9080iSLBD				✓	✓	—	✓	✓	✓	—		△
V9080iSRD				✓	✓	✓ *1	—	✓	—	—		△
V9080iSRBD				✓	✓	✓ *1	—	✓	—	—		△

Lite

Model	Display Size	Resolution	Specification									Delivery Standard: ✓ Made to order: △
			Touch Switch	Video/ RGB	AUDIO Output	Wireless LAN	Extended Cable LAN	UL508	CE	KC	Power	
V9100iC	10.4″	640×480	Analog resistance film	—	—	—	—	—	—	✓	AC	✓
V9100iCB				—	—	—	—	—	—	—		△
V9100iCD				—	—	—	—	✓	✓	✓	DC	✓
V9100iCBD				—	—	—	—	✓	✓	—		△
V9080iCD	8.4″	640×480	Analog resistance film	—	—	—	—	✓	✓	✓		✓
V9080iCBD				—	—	—	—	✓	✓	—		△
V9060iTD	5.7″	640×480	Analog resistance film	—	—	—	—	✓	✓	✓		✓
V9060iTBD				—	—	—	—	✓	✓	—		△

*1: Only for use in Japan.

V9 Model

V9□□□i□□□□□

- Display size
  - 15: 15.0"
  - 12: 12.1"
  - 10: 10.4" (Standard)/ 10.1" widescreen (Advanced)
  - 08: 8.4"
  - 07: 7.0" widescreen (Advanced)
  - 06: 5.7"
- Touch switch
  - 0: Analog resistive
  - 1: Capacitance
- Interface
  - i: With a built-in LAN port
- Display device
  - W: TFT color LCD (10.1" wide type=WSVGA/7.0" wide type = WVGA)
  - X: TFT color LCD(XGA)
  - S: TFT color LCD(SVGA)
  - C: TFT color LCD(VGA)
  - T: TFT color LCD(VGA)
- Wireless LAN I/F
  - R: With wireless LAN I/F
  - N/A: Without wireless LAN I/F
- Extended wire LAN I/F
  - L: With extended wire LAN I/F
  - N/A: Without wireless LAN I/F
- Front case color
  - B: Black
  - N/A: Light gray
- Power supply
  - D: 24V DC
  - N/A: 100-240V AC

Optional Accessories List

Type	Product	Compatible Model								
		Advanced		Standard				Lite		
		V9101iW	V9071iW	V9150iX	V9120iS	V9100iS	V9080iS	V9100iC	V9080iC	V9060iT
Configuration Software										
V-SFT-6	V8/V9 screen configuration software Ver.6 (Manual not included)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Extension Units										
GUR-00	Video 4ch input	✓		✓	✓	✓	✓			
GUR-01	RGB 1ch input	✓		✓	✓	✓	✓			
GUR-02	RGB 1ch output	✓		✓	✓	✓	✓			
GUR-04	Video 1ch input	✓		✓	✓	✓	✓			
GUR-10	Video 2ch input/ RGB 1ch input	✓		✓	✓	✓	✓			
GUR-11	RGB 2ch input	✓		✓	✓	✓	✓			
DUR-00	V9071iW/ V9060iTD optional unit		✓							✓
Communication Units										
CUR-00	OPCN-1	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUR-01	T-link	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUR-02	CC-Link	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUR-03	Ethernet	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUR-04	PROFIBUS-DP	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUR-06	SX bus	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUR-07	DeviceNet	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUR-08	FL-net	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cables										
V-CP	Screen transfer cable (3m)	✓	✓	✓	✓	✓	✓	✓	✓	✓
UA-FR	USB-A extension cable (1m)	✓	✓	✓	✓	✓	✓	✓	✓	✓
V6-MLT	Multi-link 2 master cable (3m)	✓	✓	✓	✓	✓	✓	✓	✓	✓
V6-TMP	Temperature controller cable (3m)	✓	✓	✓	✓	✓	✓	✓	✓	✓
V6-TMP-5M	Temperature controller cable (5m)	✓	✓	✓	✓	✓	✓	✓	✓	✓
V6-TMP-10M	Temperature controller cable (10m)	✓	✓	✓	✓	✓	✓	✓	✓	✓
V6-BCD	Barcode reader cable (3m)	✓	✓	✓	✓	✓	✓	✓	✓	✓
D9-MB-CPUQ-2M	MITSUBISHI ELECTRIC A series / QnA series CPU (Dsub25) RS-422	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MB-CPUQ-3M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MB-CPUQ-5M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MB-CPUQ-10M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MB-CPUQ-15M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-QCPU2-2M	MITSUBISHI ELECTRIC Q series CPU (Mini DIN6) RS-232C	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-QCPU2-3M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-QCPU2-5M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-QCPU2-10M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-QCPU2-15M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI2-09-2M	MITSUBISHI ELECTRIC link unit (Dsub9) RS-232C	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI2-09-3M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI2-09-5M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI2-09-10M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI2-09-15M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI4-FX-2M	MITSUBISHI ELECTRIC FX series CPU (Mini DIN8) RS-422	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI4-FX-3M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI4-FX-5M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI4-FX-10M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-MI4-FX-15M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-FU-SPHCPU-2M	FUJI ELECTRIC SPH CPU RS-485 (4-wire)	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-FU-SPHCPU-3M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-FU-SPHCPU-5M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-FU-SPBCPU-2M	FUJI ELECTRIC SPH CPU RS-485 (4-wire)	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-FU-SPBCPU-3M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-FU-SPBCPU-5M		✓	△*1	✓	✓	✓	✓	✓	✓	△*1
D9-D25	Dsub9-Dsub25 conversion cable (0.3m)	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
MJ2-PLC	MJ2-Dsub25 conversion cable		✓							✓
Communication Terminal Block										
TC-D9	Terminal converter for V9/V8	✓	△*1	✓	✓	✓	✓	✓	✓	△*1
Battery										
V9-BT	Replacement battery for V9	✓		✓	✓	✓	✓	✓	✓	
V7-BT	Replacement battery for V9071iW/V9060iTD/V8		✓							✓
Wireless LAN Antenna										
V9-ANT	V9 external antenna with cable (3m)	✓	✓							
Protection Sheets										
V715-GS	V9150iX/V815/V715 Surface protection sheet			✓						
V715-GSN10	V9150iX/V815/V715 Surface protection sheet (Non-glare)			✓						
V912S-GS	V9120iS protection sheets				✓					
V912S-GSN10	V9120iS protection sheets (Non-glare)				✓					
V910S-GS	V9100iS/V9100iC protection sheets					✓		✓		
V910S-GSN10	V9100iS/V9100iC protection sheets (Non-glare)					✓		✓		
V908S-GS	V9080iS/V9080iC protection sheets						✓		✓	
V908S-GSN10	V9080iS/V9080iC protection sheets (Non-glare)						✓		✓	
V906T-GS	V9060iTD protection sheets									✓
V906T-GSN10	V9060iTD protection sheets (Non-glare)									✓

*1 : Optional unit DUR-00 is required.

PLC Connection

As of November 2016

Manufacturer	Models	Connection form				Compatible models		
		1:1	1:n Multi-drop	n:1 Multi-link2	n:1 Multi-link	V9	V8i	V8
Allen-Bradley	PLC-5	✓	✓	✓	✓	✓	✓	✓
	PLC-5 (Ethernet)	✓	✓			✓	✓	
	ControlLogix / CompactLogix	✓		✓		✓	✓	✓
	ControlLogix (Ethernet)	✓	✓			✓	✓	
	SLC500	✓	✓	✓		✓	✓	✓
	SLC500 (Ethernet TCP/IP)	✓	✓			✓	✓	
	NET-ENI (SLC500 Ethernet TCP/IP)	✓	✓			✓	✓	
	NET-ENI (MicroLogix Ethernet TCP/IP)	✓	✓			✓	✓	
	MicroLogix	✓	✓	✓		✓	✓	✓
	MicroLogix (Ethernet TCP/IP)	✓	✓			✓	✓	
	Micro800 Controllers	✓		✓		✓	✓	✓
	Micro800 Controllers (Ethernet TCP/IP)	✓	✓			✓	✓	
Automationdirect	Direct LOGIC (K-Sequence)	✓		✓		✓	✓	✓
	Direct LOGIC (Ethernet UDP/IP)	✓	✓			✓	✓	✓*2
	Direct LOGIC (MODBUS RTU)	✓	✓	✓		✓	✓	✓
Azbil	MX series	✓	✓	✓		✓	✓	✓
Baumuller	BMx-x-PLC	✓		✓		✓	✓	✓
BECKHOFF	ADS protocol (Ethernet)	✓	✓			✓	✓	✓*2
CIMON	BP series	✓		✓		✓	✓	✓
	CP series	✓		✓		✓	✓	✓
	S series	✓	✓	✓		✓	✓	✓
	S series (Ethernet)	✓	✓			✓	✓	✓*2
DELTA	DVP series	✓	✓	✓		✓	✓	✓
	DVP series (MODBUS ASCII)	✓	✓	✓		✓	✓	✓
	DVP series (MODBUS TCP/IP)	✓	✓			✓	✓	
EATON Cutler-Hammer	ELC	✓	✓	✓		✓	✓	✓
EMERSON	EC10/20/20H (MODBUS RTU)	✓	✓	✓		✓	✓	✓
FANUC	Power Mate	✓		✓		✓	✓	✓
Fatek Automation	FACON FB series	✓	✓	✓		✓	✓	✓
FUFENG	APC series Controller	✓	✓	✓		✓	✓	✓
Fuji Electric	MICREX-F series	✓	✓	✓	✓	✓	✓	✓
	MICREX-F series V4-compatible	✓	✓	✓		✓	✓	✓
	MICREX-F T-Link					✓*1	✓*1	✓*1
	MICREX-F T-Link V4-compatible					✓*1	✓*1	✓*1
	SPB (N mode) & FLEX-PC series	✓	✓	✓		✓	✓	✓
	SPB (N mode) & FLEX-PC CPU	✓		✓		✓	✓	✓
	MICREX-SX (T-Link)					✓*1	✓*1	✓*1
	MICREX-SX (OPCN-1)					✓*1	✓*1	✓*1
	MICREX-SX (SX bus)					✓*1	✓*1	✓*1
	MICREX-SX SPH/SPB/SPM/SPE series	✓		✓		✓	✓	✓
	MICREX-SX SPH/SPB/SPM/SPE CPU	✓		✓		✓	✓	✓
	MICREX-SX (Ethernet)	✓	✓			✓	✓	
GE Fanuc	90 series	✓	✓	✓		✓	✓	✓
	90 series (SNP-X)	✓		✓		✓	✓	✓
	90 series (SNP)	✓	✓	✓		✓	✓	✓
	90 series(Ethernet TCP/IP)	✓	✓			✓	✓	
	RX3i (Ethernet TCP/IP)	✓	✓			✓	✓	
Hitachi	HIDIC-S10/2a,S10mini	✓		✓		✓	✓	✓
	HIDIC-S10/2a,S10mini (Ethernet)	✓	✓			✓	✓	✓*2
	HIDIC-S10/4a	✓		✓		✓	✓	✓
	HIDIC-S10V	✓		✓		✓	✓	✓
	HIDIC-S10V (Ethernet)	✓	✓			✓	✓	✓*2
Hitachi Industrial Equipment Systems	HIDIC-H	✓	✓	✓	✓	✓*5	✓*6	✓*6
	HIDIC-H (Ethernet)	✓	✓			✓	✓	✓*2
	HIDIC-EHV	✓	✓	✓	✓	✓	✓	✓
	HIDIC-EHV (Ethernet)	✓	✓			✓	✓	✓*2
HYUNDAI	Hi5 Robot (MODBUS RTU)	✓	✓	✓		✓	✓	✓
	Hi4 Robot (MODBUS RTU)	✓	✓	✓		✓	✓	✓
IDEC	MICRO 3	✓	✓	✓		✓	✓	✓
	MICRO Smart	✓	✓	✓		✓	✓	✓
	MICRO Smart pentra	✓	✓	✓		✓	✓	✓
Jetter	JetControl series2/3 (Ethernet UDP/IP)	✓	✓				✓	✓*2
JTEKT	TOYOPUC	✓	✓	✓	✓	✓	✓	✓
	TOYOPUC (Ethernet)	✓	✓			✓	✓	✓*2
	TOYOPUC (Ethernet PC10 mode)	✓	✓			✓	✓	✓*2
	TOYOPUC-Plus	✓	✓	✓		✓	✓	✓
	TOYOPUC-Plus (Ethernet)	✓	✓			✓	✓	✓*2
KEYENCE	KZ series Link	✓	✓	✓	✓	✓	✓	✓
	KZ-A500 CPU	✓		✓		✓	✓	✓
	KZ/KV series CPU	✓		✓		✓	✓	✓
	KZ24/300 CPU	✓		✓		✓	✓	✓
	KV10/24 CPU	✓		✓		✓	✓	✓
	KV-700	✓		✓		✓	✓	✓
	KV-700 (Ethernet TCP/IP)	✓	✓			✓	✓	
	KV-1000	✓		✓		✓	✓	✓
	KV-1000 (Ethernet TCP/IP)	✓	✓			✓	✓	
	KV-3000/5000	✓		✓		✓	✓	✓
	KV-3000/5000 (Ethernet TCP/IP)	✓	✓			✓	✓	
	KV-7000 (Ethernet TCP/IP)	✓	✓			✓	✓	
KOYO ELECTRONICS	SU/SG	✓	✓	✓		✓	✓	✓
	SR-T (K protocol)	✓		✓		✓	✓	✓
	SU/SG (K-Sequence)	✓		✓		✓	✓	✓
	SU/SG (MODBUS RTU)	✓	✓	✓		✓	✓	✓
LS	MASTER-KxxxS	✓		✓		✓	✓	✓
	MASTER-KxxxS CNET	✓	✓	✓		✓	✓	✓
	MASTER-K series(Ethernet)	✓	✓			✓	✓	✓*2
	GLOFA CNET	✓	✓	✓	✓	✓	✓	✓
	GLOFA GM7 CNET	✓	✓	✓		✓	✓	✓
	GLOFA GM series CPU	✓		✓		✓	✓	✓
	XGT/XGK series CNET	✓	✓	✓		✓	✓	✓
	XGT/XGK series CPU	✓		✓		✓	✓	✓
	XGT/XGK series (Ethernet)	✓	✓			✓	✓	✓*2
	XGT/XGI series CNET	✓	✓	✓		✓	✓	✓
	XGT/XGI series CPU	✓		✓		✓	✓	✓
	XGT/XGI series (Ethernet)	✓	✓			✓	✓	✓*2
MITSUBISHI ELECTRIC	A series link	✓	✓	✓	✓	✓	✓	✓
	A series CPU	✓		✓		✓	✓	✓
	A series (OPCN-1)					✓*1	✓*1	✓*1
	QnA series link	✓	✓	✓		✓	✓	✓
	QnA series CPU	✓		✓		✓	✓	✓
	QnA series (Ethernet)	✓	✓			✓	✓	✓*2
	QnH (Q) series link	✓	✓	✓		✓	✓	✓
	QnH (Q) series CPU	✓		✓		✓	✓	✓
	QnU series CPU	✓		✓		✓	✓	✓
	Q00J/00/01 CPU	✓		✓		✓	✓	✓
	QnH (Q) series (Ethernet)	✓	✓			✓	✓	✓*2
	QnH (Q) series link (multi CPU)	✓	✓	✓		✓	✓	✓
	QnH (Q) series (multi CPU) (Ethernet)	✓	✓			✓	✓	✓*2
	QnH (Q) series CPU (multi CPU)	✓		✓		✓	✓	✓
	QnH (Q) series (Ethernet ASCII)	✓	✓			✓	✓	✓*2
	QnH (Q) series (multi CPU) (Ethernet ASCII)	✓	✓			✓	✓	✓*2
	QnU series (built-in Ethernet)	✓	✓			✓	✓	✓*2
	L series link	✓	✓	✓		✓	✓	✓
	L series (built-in Ethernet)	✓	✓			✓	✓	✓*2

*1 For V9, a communication unit "CUR-xx" is required. For V8, a communication unit "CU(N)-xx" is required. *2 A communication unit "CU(N)-03-x" is required. It does not support TCP/IP connection.
*3 For V907xW, V906, an optional unit "DUR-00" is required.

Manufacturer	Models	Connection form				Compatible models		
		1:1	1:n Multi-drop	n:1 Multi-link2	n:1 Multi-link	V9	V8i	V8
MITSUBISHI ELECTRIC	L series CPU	✓		✓		✓	✓	✓
	A series (CC-LINK)					✓*1	✓*1	✓*1
	QnA series (CC-LINK)					✓*1	✓*1	✓*1
	QnH (Q) series (CC-LINK)					✓*1	✓*1	✓*1
	FX series CPU	✓		✓		✓*3	✓*4	✓*4
	FX2N/1N series CPU	✓		✓		✓	✓	✓
	FX1S series CPU	✓		✓		✓	✓	✓
	FX series link (A protocol)	✓	✓	✓	✓	✓	✓	✓
	FX-3U/3UC/3G series CPU	✓		✓		✓	✓	✓
	FX-3U/3GE series (Ethernet)	✓	✓			✓	✓	✓*2
	FX-3U/3UC/3UG series link (A protocol)	✓	✓	✓	✓	✓	✓	✓
	FX-5U/5UC series	✓	✓	✓		✓	✓	✓
	FX-5U/5UC series (Ethernet)	✓	✓			✓	✓	✓*2
	A-link + Net10		✓			✓	✓	✓
	Q170MCPU (multi CPU)	✓		✓		✓	✓	✓
	Q170 series (multi CPU) (Ethernet)	✓	✓			✓	✓	✓*2
	iQ-R series(Built-in Ethernet)	✓	✓			✓	✓	✓*2
	iQ-R series link	✓	✓	✓		✓	✓	✓
	iQ-R series (Ethernet)	✓	✓			✓	✓	✓*2
MODICON	MODBUS RTU	✓		✓		✓	✓	✓
MOELLER	PS4	✓		✓		✓	✓	✓
OMRON	SYSMAC C	✓	✓	✓	✓	✓	✓	✓
	SYSMAC C (OPCN-1)					✓*1	✓*1	✓*1
	SYSMAC CV	✓	✓	✓	✓	✓	✓	✓
	SYSMAC CS1/CJ1	✓	✓	✓		✓	✓	✓
	SYSMAC CS1/CJ1 DNA	✓	✓			✓	✓	✓
	SYSMAC CS1/CJ1 (Ethernet)	✓	✓			✓	✓	✓*2
	SYSMAC CS1/CJ1 (Ethernet Auto)	✓	✓			✓	✓	✓*2
	SYSMAC CS1/CJ1 DNA (Ethernet)	✓	✓			✓	✓	✓*2
	NJ Series (EtherNet/IP)	✓	✓			✓	✓	
Panasonic	FP series (RS232C/422)	✓	✓	✓	✓	✓	✓	✓
	FP series (TCP/IP)	✓	✓			✓	✓	
	FP series (UDP/IP)	✓	✓			✓	✓	✓*2
	FP-X (TCP/IP)	✓	✓			✓	✓	
	FP7 series (RS232C/422)	✓	✓	✓		✓	✓	✓
	FP7 series (Ethernet)	✓	✓			✓	✓	✓*2
RS Automation	NX7/NX Plus series (70P/700P/CCU+)	✓	✓	✓	✓	✓	✓	✓
	N7/NX series (70/700/750/CCU)	✓	✓	✓	✓	✓	✓	✓
	NX700 series (Ethernet)	✓	✓			✓	✓	✓*2
	X8 series	✓	✓	✓	✓	✓	✓	✓
	X8 series (Ethernet)	✓	✓			✓	✓	✓*2
	CSD5 (MODBUS RTU)	✓	✓	✓		✓	✓	✓
SAIA	PCD	✓	✓	✓		✓	✓	✓
	PCD S-BUS (Ethernet)	✓	✓			✓	✓	✓*2
SAMSUNG	SPC series	✓	✓	✓	✓	✓	✓	✓
	N_plus	✓	✓	✓	✓	✓	✓	✓
	SECNET	✓	✓	✓	✓	✓	✓	✓
SHARP	JW series	✓	✓	✓	✓	✓	✓	✓
	JW100/70H COM port	✓	✓	✓	✓	✓	✓	✓
	JW20 COM port	✓	✓	✓	✓	✓	✓	✓
	JW series (Ethernet)	✓	✓			✓	✓	✓*2
	JW300 series	✓	✓	✓	✓	✓	✓	✓
	JW311/312/321/322 series (Ethernet)	✓	✓			✓	✓	✓*2
	JW331/332/341/342/352/362 series (Ethernet)	✓	✓			✓	✓	✓*2
Siemens	S5 PG port	✓	✓	✓		✓	✓	✓
	S7	✓		✓		✓	✓	✓
	S7-200 PPI	✓	✓		✓	✓	✓	✓
	S7-200 (Ethernet ISOTCP)	✓	✓			✓	✓	
	S7-300/400 MPI	✓	✓			✓	✓	✓
	S7-300/400 (Ethernet ISOTCP)	✓	✓			✓	✓	
	S7-300/400 (Ethernet TCP/IP protocol)	✓	✓			✓	✓	
	S7-1200/1500 (Ethernet ISOTCP)	✓	✓			✓	✓	
	S7 PROFIBUS-DP					✓*1	✓*1	✓*1
	TI500/505	✓	✓	✓		✓	✓	✓
SINFONIA TECHNOLOGY	SELMART	✓	✓	✓	✓	✓	✓	✓
TECO	TP-03 (MODBUS RTU)	✓	✓	✓		✓	✓	✓
Telemecanique	TSX Micro				✓	✓	✓	✓
TOSHIBA	T series /V series (T compatible)	✓	✓	✓	✓	✓	✓	✓
	T series /V series (T compatible) (Ethernet UDP/IP)	✓	✓			✓	✓	✓*2
	EX series	✓	✓	✓		✓	✓	✓
	nv series(Ethernet UDP/IP)	✓	✓			✓	✓	✓*2
TOSHIBA MACHINE	TC200	✓	✓	✓		✓	✓	✓
TOYO DENKI SEIZO	μGPCsx (OPCN-1)					✓*1	✓*1	✓*1
	μGPCsx (SX bus)						✓*1	✓*1
	μGPCsx series	✓		✓		✓	✓	✓
	μGPCsx CPU	✓		✓		✓	✓	✓
	μGPCsx (Ethernet)	✓	✓			✓	✓	
Turck	BL series Distributed I/O (MODBUS TCP/IP)	✓	✓			✓	✓	
Ultra Instruments	UIC CPU (MODBUS ASCII)	✓		✓		✓	✓	✓
UNITRONICS	M90/M91/Vision series (ASCII)	✓	✓	✓		✓	✓	✓
VIGOR	Vision series (ASCII Ethernet TCP/IP)	✓	✓			✓	✓	
	M series	✓	✓	✓		✓	✓	✓
WAGO	750 series (MODBUS RTU)	✓	✓	✓		✓	✓	✓
	750 series (MODBUS Ethernet)	✓	✓			✓	✓	
XINJE	XC series (MODBUS RTU)	✓	✓	✓		✓	✓	✓
Yaskawa Electric	Memobus	✓	✓	✓		✓	✓	✓
	CP9200SH/MP900	✓	✓	✓		✓	✓	✓
	MP2000 series	✓	✓	✓		✓	✓	✓
	MP2300 (MODBUS TCP/IP)	✓	✓			✓	✓	
	CP MP expansion memobus (UDP/IP)	✓	✓			✓	✓	✓*2
	MP2000 series (UDP/IP)	✓	✓			✓	✓	✓*2
	MP3000 series	✓	✓	✓		✓	✓	✓
	MP3000 series (Ethernet UDP/IP)	✓	✓			✓	✓	✓*2
	MP3000 series expansion memobus (Ethernet)	✓	✓			✓	✓	✓*2
Yokogawa Electric	FA-M3	✓	✓	✓	✓	✓	✓	✓
	FA-M3R	✓	✓	✓	✓	✓	✓	✓
	FA-M3/FA-M3R (Ethernet UDP/IP)	✓	✓			✓	✓	✓*2
	FA-M3/FA-M3R (Ethernet UDP/IP ASCII)	✓	✓			✓	✓	✓*2
	FA-M3/FA-M3R (Ethernet TCP/IP)	✓	✓			✓	✓	
	FA-M3/FA-M3R (Ethernet TCP/IP ASCII)	✓	✓			✓	✓	
	FA-M3V	✓	✓	✓	✓	✓	✓	✓
	FA-M3V (Ethernet)	✓	✓			✓	✓	✓*2
	FA-M3V(Ethernet ASCII)	✓	✓			✓	✓	✓*2
None	Universal serial	✓	✓			✓	✓	✓
	FL-Net					✓*1	✓*1	✓*1
	PROFIBUS-DP					✓*1	✓*1	✓*1
	DeviceNet					✓*1	✓*1	✓*1
	Without PLC Connection					✓	✓	✓
	MODBUS RTU	✓	✓	✓		✓	✓	✓
	MODBUS RTU EXT Format	✓	✓	✓		✓	✓	✓
	MODBUS TCP/IP (Ethernet)	✓	✓			✓	✓	
	MODBUS TCP/IP (Ethernet) Sub Station	✓	✓			✓	✓	
	MODBUS TCP/IP (Ethernet) EXT Format	✓	✓			✓	✓	
	MODBUS ASCII	✓	✓	✓		✓	✓	✓

*4 For V806, an optional unit "DU(N)-10" is required. *5 An optional unit "DUR-00" is required when connecting V907xW, V906 using RS-232C.
*6 An optional unit "DU(N)-10" is required when connecting V806 using RS-232C.

Temperature Controller/ Servo/ Inverter Connection

As of November 2016

Manufacturer	Models	Connection form		Compatible models		
		1:1	1:n Multi-drop	V9	V8i	V8
Agilent	4263 series	✓		✓	✓	✓
ASAHI ENGINEERING	Stepping Motor	✓			✓	✓
Azbil	SDC10	✓	✓	✓	✓	✓
	SDC15	✓	✓	✓	✓	✓
	SDC20	✓	✓	✓	✓	✓
	SDC21	✓	✓	✓	✓	✓
	SDC25/26	✓	✓	✓	✓	✓
	SDC30/31	✓	✓	✓	✓	✓
	SDC35/36	✓	✓	✓	✓	✓
	SDC45/46	✓	✓	✓	✓	✓
	SDC40A	✓	✓	✓	✓	✓
	SDC40G	✓	✓	✓	✓	✓
	DMC10	✓	✓	✓	✓	✓
	DMC50 (COM)	✓	✓	✓	✓	✓
	AHC2001	✓	✓	✓	✓	✓
	AHC2001+DCP31/32	✓	✓	✓	✓	✓
	DCP31/32	✓	✓	✓	✓	✓
	NX (CPL)	✓	✓	✓	✓	✓
	NX (MODBUS RTU)	✓	✓	✓	✓	✓
	NX (MODBUS TCP/IP)	✓	✓	✓	✓	
A&D	AD4402 (MODBUS RTU)	✓	✓	✓	✓	✓
	AD4404 (MODBUS RTU)	✓	✓	✓	✓	✓
Banner	Presence PLUS (Ethernet/IP (TCP/IP))	✓	✓	✓	✓	
Bosh Rexroth	Indra Drive		✓	✓	✓	✓
CHINO	LT400 series (MODBUS RTU)	✓	✓	✓	✓	✓
	DP1000	✓	✓	✓	✓	✓
	DB1000B (MODBUS RTU)	✓	✓	✓	✓	✓
	KR2000 (MODBUS RTU)	✓	✓	✓	✓	✓
	LT230 (MODBUS RTU)	✓	✓	✓	✓	✓
	LT300 (MODBUS RTU)	✓	✓	✓	✓	✓
	LT830 (MODBUS RTU)	✓	✓	✓	✓	✓
DELTA TAU DATA SYSTEMS	PMAC	✓		✓	✓	✓
	PMAC (Ethernet TCP/IP)	✓	✓	✓	✓	
Fuji Electric	PYX (MODBUS RTU)	✓	✓	✓	✓	✓
	PXR (MODBUS RTU)	✓	✓	✓	✓	✓
	PXF (MODBUS RTU)	✓	✓	✓	✓	✓
	PXG (MODBUS RTU)	✓	✓	✓	✓	✓
	PXH (MODBUS RTU)	✓	✓	✓	✓	✓
	PUM (MODBUS RTU)	✓	✓	✓	✓	✓
	F-MPC04P (loader)	✓	✓	✓	✓	✓
	F-MPC series/FePSU	✓	✓	✓	✓	✓
	FVR-E11S	✓	✓	✓	✓	✓
	FVR-E11S (MODBUS RTU)	✓	✓	✓	✓	✓
	FVR-C11S (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC5000 G11S/P11S	✓	✓	✓	✓	✓
	FRENIC5000 G11S/P11S (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC5000 VG7S (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-Ace (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-HVAC/AQUA (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-Mini (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-Eco (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-Multi (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-MEGA (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-MEGA SERVO (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC-VG1 (MODBUS RTU)	✓	✓	✓	✓	✓
	FRENIC series (loader)	✓	✓	✓	✓	✓
	HFR-C9K	✓	✓	✓	✓	✓
	HFR-C11K	✓	✓	✓	✓	✓
	HFR-K1K	✓	✓	✓	✓	✓
	PPMC (MODBUS RTU)	✓	✓	✓	✓	✓
	FALDIC-α series	✓	✓	✓	✓	✓
	FALDIC-W series	✓	✓	✓	✓	✓
	PH series	✓	✓	✓	✓	✓
	PHR (MODBUS RTU)	✓	✓	✓	✓	✓
	WA5000	✓	✓	✓	✓	✓
	APR-N (MODBUS RTU)	✓	✓	✓	✓	✓
	ALPHA5 (MODBUS RTU)	✓	✓	✓	✓	✓
	ALPHA5 Smart (MODBUS RTU)	✓	✓	✓	✓	✓
	WE1MA (Ver. A)(MODBUS RTU)	✓	✓	✓	✓	✓
	WE1MA (Ver. B)(MODBUS RTU)	✓	✓	✓	✓	✓
	WSZ series	✓	✓	✓	✓	✓
	WSZ series (Ethernet)	✓	✓	✓	✓	
Gammaflux	TTC2100	✓	✓	✓	✓	✓
Hitachi Industrial Equipment Systems	SJ300 series	✓	✓	✓	✓	✓
	SJ700 series	✓	✓	✓	✓	✓
IAI	X-SEL controller	✓	✓	✓	✓	✓
	ROBO CYLINDER (RCP2/ERC)	✓	✓	✓	✓	✓
	ROBO CYLINDER (RCS/E-CON)	✓	✓	✓	✓	✓
	PCON/ACON/SCON (MODBUS RTU)	✓	✓	✓	✓	✓
KOGANEI	IBFL-TC	✓	✓	✓	✓	✓
Lenze	Servo Drive 9400 (Ethernet TCP/IP)	✓		✓	✓	
MITSUBISHI ELECTRIC	FR-*500	✓	✓	✓	✓	✓
	FR-V500	✓	✓	✓	✓	✓
	MR-J2S-*A	✓	✓	✓	✓	✓
	MR-J3-*A	✓	✓	✓	✓	✓
	MR-J3-*T	✓	✓	✓	✓	✓
	FR-E700	✓	✓	✓	✓	✓
MOOG	J124-04x series	✓	✓	✓	✓	✓

Manufacturer	Models	Connection form		Compatible models		
		1:1	1:n Multi-drop	V9	V8i	V8
M-SYSTEM	R1M series (MODBUS RTU)	✓	✓	✓	✓	✓
OMRON	E5AK	✓	✓	✓	✓	✓
	E5AK-T	✓	✓	✓	✓	✓
	E5AN/E5EN/E5CN/E5GN	✓	✓	✓	✓	✓
	E5AR/E5ER	✓	✓	✓	✓	✓
	E5CK	✓	✓	✓	✓	✓
	E5CK-T	✓	✓	✓	✓	✓
	E5CN-HT	✓	✓	✓	✓	✓
	E5EK	✓	✓	✓	✓	✓
	E5ZD	✓	✓	✓	✓	✓
	E5ZE	✓	✓	✓	✓	✓
	E5ZN	✓	✓	✓	✓	✓
	V600/620/680	✓	✓	✓	✓	✓
	KM20	✓	✓	✓	✓	✓
	KM100	✓	✓	✓	✓	✓
	V680S (Ethernet TCP/IP)	✓	✓	✓	✓	
Oriental Motor	High-efficiency AR series (MODBUS RTU)	✓	✓	✓	✓	✓
	CRK series (MODBUS RTU)	✓	✓	✓	✓	✓
Panasonic	LP-400	✓		✓	✓	✓
	KW series	✓	✓	✓	✓	✓
	MINAS A4 series	✓	✓	✓	✓	✓
RKC	SR-Mini (MODBUS RTU)	✓	✓	✓	✓	✓
	CB100/CB400/CB500/CB700/CB900 (MODBUS RTU)	✓	✓	✓	✓	✓
	SR-Mini (Standard Protocol)	✓	✓	✓	✓	✓
	REX-F400/F700/F900 (Standard Protocol)	✓	✓	✓	✓	✓
	REX-F9000 (Standard Protocol)	✓	✓	✓	✓	✓
	SRV (MODBUS RTU)	✓	✓	✓	✓	✓
	MA900/MA901 (MODBUS RTU)	✓	✓	✓	✓	✓
	SRZ (MODBUS RTU)	✓	✓	✓	✓	✓
	FB100/FB400/FB900 (MODBUS RTU)	✓	✓	✓	✓	✓
RS Automation	CSD5 (MODBUS RTU)	✓	✓	✓	✓	✓
	Moscon-F50 (MODBUS RTU)	✓	✓	✓	✓	✓
SANMEI	Cuty Axis	✓	✓	✓	✓	✓
SanRex	DC AUTO (HKD type)	✓	✓	✓	✓	✓
SHARP	DS-30D	✓	✓	✓	✓	✓
	DS-32D	✓	✓	✓	✓	✓
SHIMADEN	SHIMADEN standard protocol	✓	✓	✓	✓	✓
SHINKO TECHNOS	C series	✓	✓	✓	✓	✓
	FC series	✓	✓	✓	✓	✓
	GC series	✓	✓	✓	✓	✓
	DCL-33A	✓	✓	✓	✓	✓
	JCx-300 series	✓	✓	✓	✓	✓
	PC-900	✓	✓	✓	✓	✓
	PCD-33A	✓	✓	✓	✓	✓
	ACS-13A	✓	✓	✓	✓	✓
	ACD/ACR series	✓	✓	✓	✓	✓
	WCL-13A	✓	✓	✓	✓	✓
Siemens	S120 (Ethernet ISOTCP)	✓	✓	✓	✓	
SUS	XA-A*	✓		✓	✓	✓
TOHO	TTM-000	✓	✓	✓	✓	✓
	TTM-00BT	✓	✓	✓	✓	✓
	TTM-200 (MODBUS RTU)	✓	✓	✓	✓	✓
Tokyo Chokoku Marking Products	MB3315/1010	✓		✓	✓	✓
TOSHIBA	VF-S7	✓	✓	✓	✓	✓
	VF-S9	✓	✓	✓	✓	✓
	VF-S11	✓	✓	✓	✓	✓
	VF-S15	✓	✓	✓	✓	✓
	VF-A7	✓	✓	✓	✓	✓
	VF-AS1	✓	✓	✓	✓	✓
	VF-P7	✓	✓	✓	✓	✓
	VF-PS1	✓	✓	✓	✓	✓
	VF-FS1	✓	✓	✓	✓	✓
	VF-MB1	✓	✓	✓	✓	✓
	VF-nC1	✓	✓	✓	✓	✓
	VF-nC3	✓	✓	✓	✓	✓
TOSHIBA MACHINE	VELCONIC series		✓	✓	✓	✓
ULVAC	G-TRAN series	✓	✓	✓	✓	✓
UNIPULSE	F340A	✓	✓	✓	✓	✓
	F371	✓	✓	✓	✓	✓
	F800	✓	✓	✓	✓	✓
	F805A	✓	✓	✓	✓	✓
	F720A	✓	✓	✓	✓	✓
YAMAHA	RCX142	✓		✓	✓	✓
Yokogawa Electric	UT100	✓	✓	✓	✓	✓
	UT750	✓	✓	✓	✓	✓
	UT550	✓	✓	✓	✓	✓
	UT520	✓	✓	✓	✓	✓
	UT350	✓	✓	✓	✓	✓
	UT320	✓	✓	✓	✓	✓
	UT2400/2800	✓	✓	✓	✓	✓
	UT450	✓	✓	✓	✓	✓
	UT32A/35A (MODBUS RTU)	✓	✓	✓	✓	✓
	UT52A/55A (MODBUS RTU)	✓	✓	✓	✓	✓
	UT75A (MODBUS RTU)	✓	✓	✓	✓	✓
	μR10000/20000 (Ethernet TCP/IP)	✓	✓	✓	✓	
None	MODBUS RTU	✓	✓	✓	✓	✓
	MODBUS TCP/IP (Ethernet)	✓	✓	✓	✓	

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Our distributors are ready to support your worldwide business.

http://monitouch.fujielectric.com/site/distributors-e/distributors-oversea-01.html

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 Electronis 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.

3 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 Hakko Electronics or its service providers for further information.

4 Delivery

Standard products that do not entail application setting or adjustment are regarded as received by the purchaser upon delivery. Hakko Electronics is not responsible for local adjustments and test runs.

5 Service

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

6 Scope of Application

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