

Innovating Energy Technology

Programmable Operator Interface

MONITOUCH

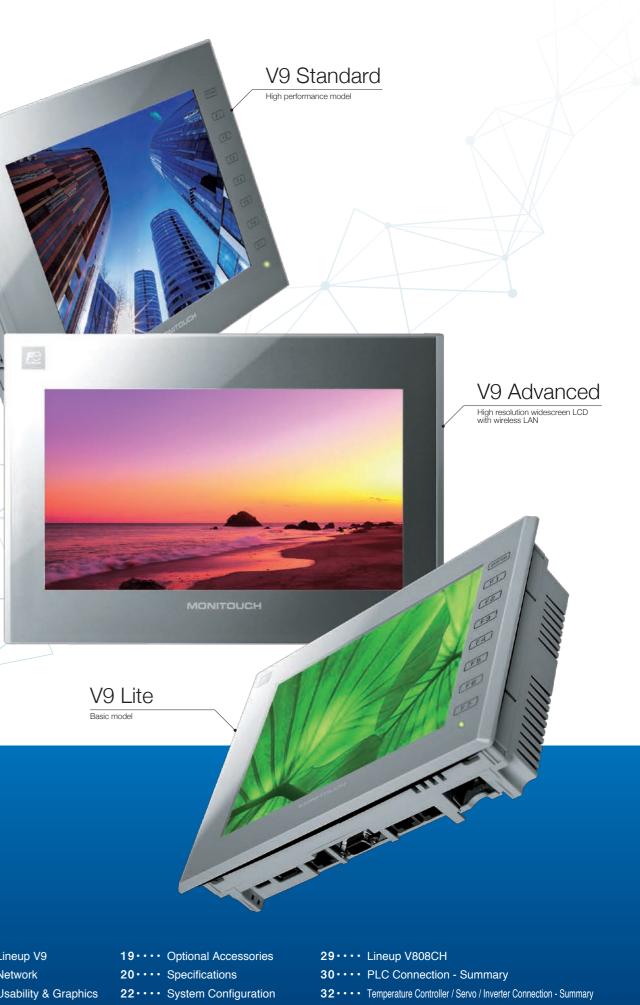


Satisfying, intuitive control Impressive ability to convey data. **Boosts efficiency in the field** through enhanced performance.

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





MONITOUCH V9 series

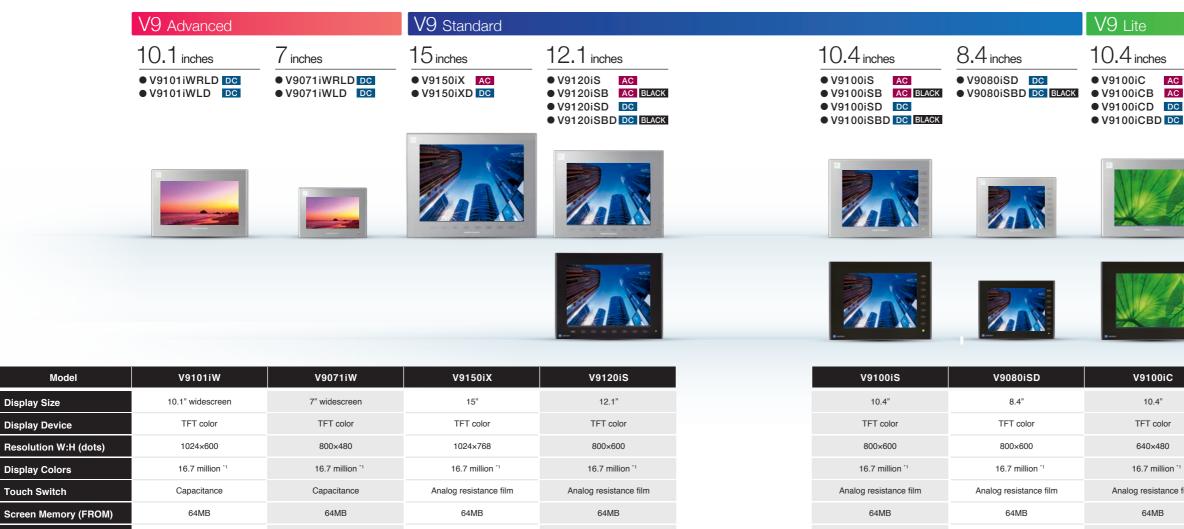
04···· Lineup V9
06 · · · · Network
10···· Usability & Graphics
12···· Storage
14···· Security
15···· Information
16 · · · · V-SFT Ver.6

24···· Dimensions & Part Names 26 · · · · Product Details 27 · · · · Optional Accessories List 28 · · · · Lineup TS2000

34···· Service & Support

35 ···· Product Warranty

Meeting customer needs with a product lineup suited to all kinds of applications.



Display 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)	\checkmark	\checkmark	\checkmark	✓
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 (CUR-XX)	\checkmark	\checkmark	~	✓
Expansion Unit I/F (GUR-XX)	\checkmark	-	~	√
SD Card I/F	\checkmark	\checkmark	√	✓
USB (Type A)	\checkmark	\checkmark	√	✓
USB (Type mini-B)	\checkmark	~	~	√
Sound Output	√	-	\checkmark	√

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

 V9100iS AC V9100iSB AC BLACK V9100iSD DC V9100iSBD DC BLACK 	V9080iSD DC V9080iSBD DC BLACK	 V9100iC AC V9100iCB AC BLACK V9100iCD DC V9100iCBD DC BLACK 	V9080iCD DC V9080iCBD DC BLACK	• V9060iTD DC • V9060iTBD DC ELACK
-				
V9100iS	V9080iSD	V9100iC	V9080iCD	V9060iTD
10.4"	8.4"	10.4"	8.4"	5.7"
TFT color	TFT color	TFT color	TFT color	TFT color
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
\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
△*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
\checkmark	\checkmark	\checkmark	√	\checkmark
\checkmark	\checkmark	-	_	-
\checkmark	\checkmark	√	\checkmark	\checkmark
\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
\checkmark	1	-	_	_

*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.

5.7 inches

8.4 inches



Tablet PC

Google Pla

VNC Server

Remote Connection from Tablet PCs

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



*1 Wireless LAN compatible products only

VNC 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

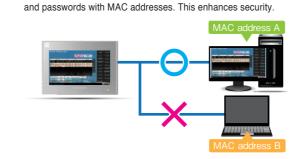


*2 Android, Google Play and the Google Play logo are trademarks of Google LLC.

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.



For PC client connection authentications, it is possible to prevent

connections from unspecified devices by supplementing usernames

Selecting Priority for VNC Connections When using a single MONITOUCH unit to remotely monitor and

connection, the client will not change suddenly.

Authentication by MAC Address for

VNC Connections

control more than one client device, you can choose the priority

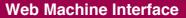
First connection

Later connection

as either priority-first or priority-last. If you have a priority-first

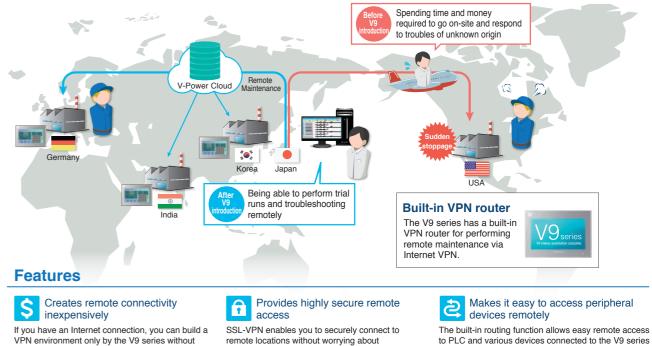


IP address/subnet mask/gateway



VPN Remote Access / Cloud Data Utilization Solution

The Web Machine Interface is a solution service that makes remote monitoring safe, easy, and inexpensive, It consists of two services: "VPN Remote Access Service" which enables secure remote monitoring by VPN and "Cloud Data Utilization Service" which can receive various types of data via a cloud server. By performing remote maintenance, it is possible to check for signs of abnormality in advance and ensure proper maintenance of the machine. It also helps to reduce the number of sudden stoppages and implements preventive maintenance.

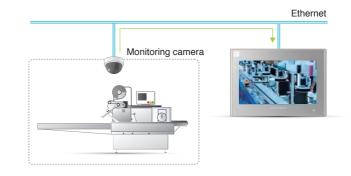


Network Camera Compatible

Real-time Monitoring of Remote Site

using a VPN router

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.



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.



*3 The DHCP server is only available for wireless LAN-compatible products

eavesdropping or tampering.

to PLC and various devices connected to the V9 series by Ethernet

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

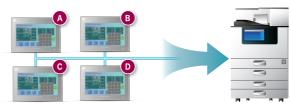




Network Printer Compatible^{*4}

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.

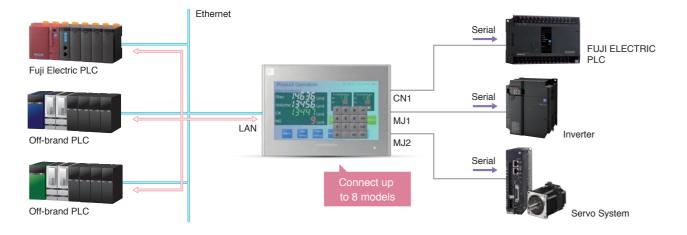


*4 Compatible only with EPSON ESC/P-R. Wireless LAN connection is possible for wireless LAN compatible products.

8-Way Communication

Connection and Data Transmission with Multiple Devices

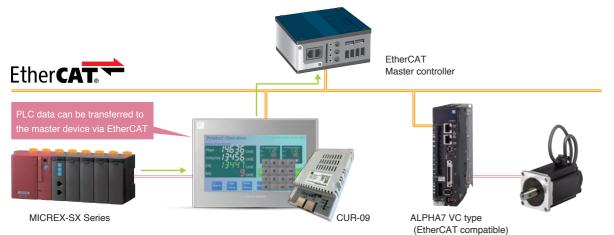
You can connect up to eight different models, off-brand PLC and other peripheral devices at the same time via both Ethernet and serial connection.



Supports EtherCAT^{*1} Connection

EtherCAT (Slave) Connection

The "CUR-09" communication unit for EtherCAT connection allows for general connection to EtherCAT compatible models. It can also serve as a gateway between devices connected to the V9 series and the EtherCAT master equipment.

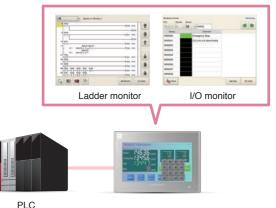


*1 EtherCAT® is a patented technology and registered trademark licensed by Beckhoff Automation GmbH (Germany).

Ladder Monitoring Function

Enable PLC Monitoring

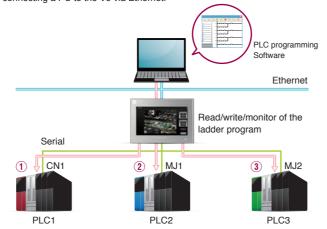
PLC ladder monitoring is available on the V9 series screen. It is possible to search for the target address freely or to switch programs during RUN mode in case there are multiple programs.



Path-through Programming

Ladder Program Transmission (3-way)

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



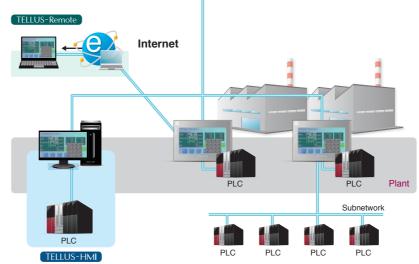
TELLUS and V-Server

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 equipments.

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





MES^{*2} 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.



08

V-Server

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.

TELLUS-Remote

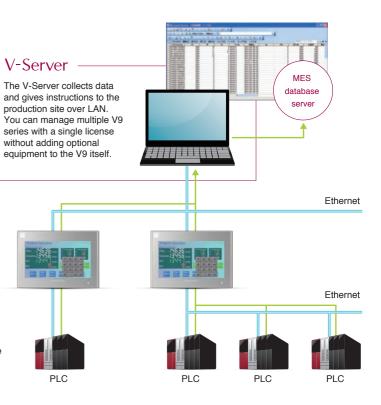
Easy, low-cost monitoring and operation from remote locations

- •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.



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 screen¹. It can be reduced to its original size by pinching it in.





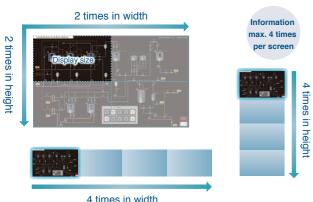
Pinch in

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

Abundant Quantity of Information

First in industry 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

Scrolling Magnified Images

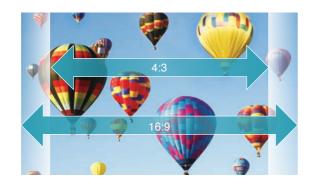
You can view a particular

part of a magnified image

in close-up while scrolling

around the screen.

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.



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

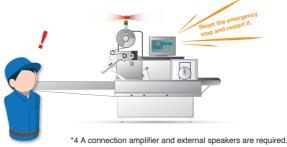
TrueType Font as Standard

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.



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.



*5 V9101iW/V9 Standard only

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/client functions, which allows you to check data without having to ao to the production site.



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



Compatible with Vertical Placement

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



V9101iW



V9100iS





Video/RGB Input-Output

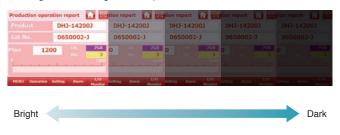
By attaching an optional unit, videos and RGB images can be displayed on the V9. Also, images displayed on the V9 can be sent to external displays.



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

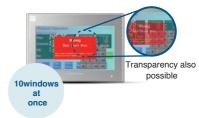
Dimmer Function

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.



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.





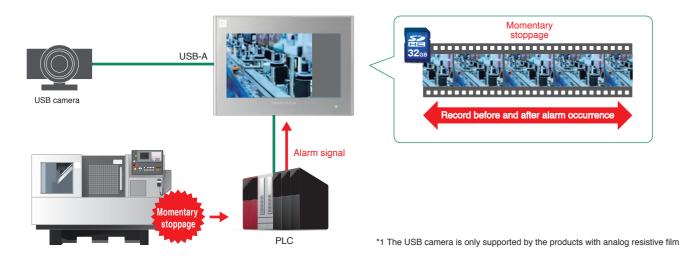
Easily check different screens by scrolling



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

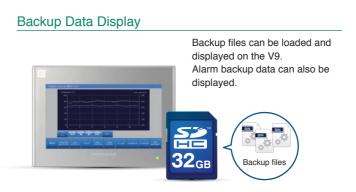
Play Video Data Saved to Storage

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 commande. It supports MP4 (MPEC 4)

played via switch and PLC controller commands. It supports MP4 (MPEG-4) video files to ensure high compression and high quality.



Trend Data Display



Easy Creation of Backup Files

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



Alarm Display

Scrolling of the Alarm Messages



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

Scrolling the alarm 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.



Filter Settings

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

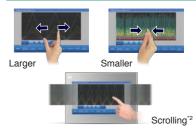


Coordination with the Scheduler

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 scroll² by touching and dragging zoomed-in graphs.

*2 Supports only horizontal scrolling.

Running Emergency Messages



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

Convenient tools for scrolling







PDF Viewer Function

PDF Viewer Function

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



Fast navigation to the desired page, using bookmarks.



Security

Various setting functions for improving usability



Operation Log

Improved Operation Log Viewer



Search Function

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



Filter and sort can be set for displayed items.

Filter/Sort Settings

-106

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.



Communication Setting

Buzzer Setting

Buzzers settings can be modified on the V9.



Buzzer Setting

E-mail Setting

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

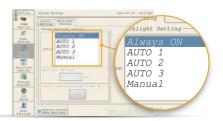


E-mail Setting



Backlight Setting

Backlight settings can be modified on the V9.



Backlight Setting

Network Query

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



Network Test

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.

E-Mail Setting	IO Check			2018-03-14	15.55.3
SPAN	Touch switches and media	Network Test	Duplcate IP Test	RGB Adjustment	SY1
Setting	Setting 1	orizontal : 0.000	kH2		
St. Comm	Not Used V	ertical : 0.000	Hz		#1
Sating	Adjustment	Clear Sa			
System Setting	Setting 2	orizontal : 48.960	NHE		
57	Used	ersical : 60.000	Hz		Ð
Date/Time Setting	Adjustment	Clear Ser			1994
Storage Transfer					1
9) 					n
User Settings					F

RGB Adjustment

Achieve sleeker screens with simple, easy-to-understand operations

Backward Compatibility with Previous Models

V8 series Compatibility

series

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

a x Switch . PC OFF Hakko Electronics Co., Lt GL-002 +123 456 UREA-AZ23 POWER GENERATION LA-Coil 1234 1234 1234 1234 08-115 +123 456 System Setting Select Option Font Setting Hardware Setting Thermet Communication Atarm Server AREA-PP01 CONTROLLER LA-Coil 1234 1234 1234 1234 71-005 +123 456 C DW 08-115 #123.456 д. +123,456 ZL-005 +123 456 GL-002 +123 456 BB-A1 +123,456 08-115 +123,456 Ē c Locking Serve 88-62 +123,456 ZL-005 +123,456 Recipe Recipe Scheduler Add/Deleta A 88-U5 Generated Energy 3 456 88-K7 H123 456 UNIT A #123/456 Select. Key,Bla,BLpns BB-Z2 +123,456 UNIT 8 +123, 456 Registration Ren Select Option Apply to All Patterno. -F Other Settings) lacre Block DA INN GI Add/Delet (800, 40) (5, 20) (0,520)-(000, 00) (0,525) (0,525) (0,525) (0,525) (0,525) (0,525) (0,526)-(0,70,71) (0,525) (0,526)-(0,70,71) (0,526)-(0,526)-(0,70,71) (0,526)-(oous Line Other Settings -Finish Cancel V-SFT Ver.6

Computer	PC/AT compatible computer running Windows
OS*	Windows XP/XP 64Edition/Windows Vista (32bit, 64bit)/ Windows 7 (32bit, 64bit)/Windows 8 (32bit, 64bit)/ Windows 8.1(32bit, 64bit)/Windows 10 (32bit, 64bit)
CPU	Pentium 4 2.0GHz or higher is recommended
Memory	1.0GB or higher (2.0GB or higher is recommended)
Hard disk	When installed: 4.0GB or higher

Disc drive	DVD-ROM drive
Display	1024 × 768 (XGA) resolution or higher
Display colors	High color (16 bits) or higher
Others	Microsoft .NET Framework 4.0 or 4.5 (Microsoft .NET Framework 4.0 is installed automatically on computers that do not have either Microsoft .NET Framework 4.0 or 4.5 installed.)

Configuration of Easy-to-view Screens

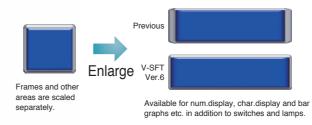
Wider Range of Parts

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.



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.



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

Copy/Paste of Microsoft Office Data

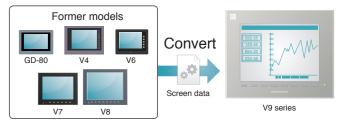
Graphics created in Microsoft Office Word, Excel and PowerPoint can be copied and pasted into V-SFT files by converting them to pictures, patterns or parts.



*Administrator privileges are required for installation

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.



Simple Icons

A wide range of modern icon designs reminiscent of smartphones have been added



Line Width Setting

Real World Icons

V-SFT adds more real world icons.



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

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.

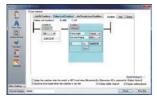
Upgraded Operability

Integration of Search Menu



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

Enhanced Interlock Setting

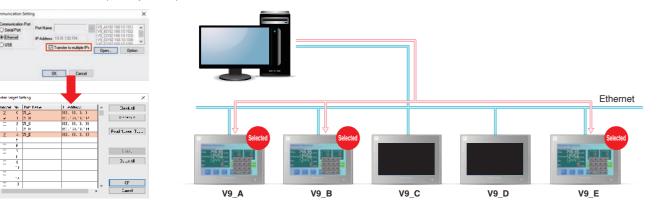


Interlock can be set with a ladder drawing screen. The condition settings are easy to understand and convenient even when setting multiple conditions. It is possible to set interlocking for keypad indication conditions in addition to s witch conditions. Up to five conditions (AND or OR) for a bit device,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

Data Batch Transfer Function

Screen Data Batch Transfer (Ethernet)

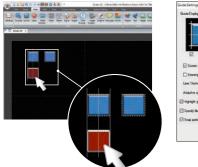
Screen data can be transferred sequentially to multiple V9 series selected from the network.

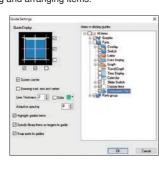


V-SFT Ver.6 New Functionality

Guideline Function

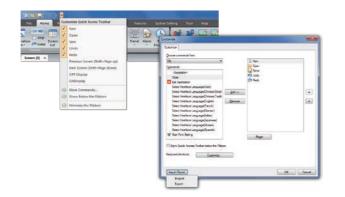
After arranging the items, this function displays guidelines by detecting surrounding items as you move and scale them. It enables user customization, such as whether to show or hide guidelines on an item-by-item basis, in order to increase your efficiency when aligning and arranging items.



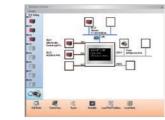


Quick Access Toolbar

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.



Intuitively Grasp the Connection Device Configuration



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

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, text and multi 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 PC images through two channels on V9 simultaneously.

Communication Units

CUR-03 Ethernet	CUR-09 EtherCAT
CUR-02 CC-Link	CUR-08 FL-net
CUR-01 T-Link	CUR-07 DeviceNet
CUR-00 OPCN-1	CUR-06 SX Bus

CUR-04 PROFIBUS-DP

Other Accessories



V-I/O (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.



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



V9xxx-GS/V9xxx-GSN10 Protection sheets for panels. N10 is a non-glare type sheet. (5 sheets per set). See P.27 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.

V9080C-PW



This is an AC to DC power converter for the V9080iCD. It can be used to replace existing GD-80E and V609E30M AC power supply models with the V9080iCD without having to change to a DC power supply.

Configuration Software

V-SFT Ver.6

Windows XP/XP 64Edition/Windows Vista (32bit, 64bit)/ Windows 7 (32bit, 64bit)/Windows 8 (32bit, 64bit)/ Windows 8.1 (32bit, 64bit)/Windows 10 (32bit, 64bit)

Editable Models

V9/TS2000/V8/TELLUS Ver.4/TELLUS Ver.3

Cables

Model	Configuration	Configuration
V-CP	RS-232C Modular 8pin D-Sub9pin(鬥) ▶ ₩ Length: 3m	PC
V6-BCD	RS-232C Modular 8pin P ELIDE Length: 3m	Barcode reader
V6-MLT	RS-485 Modular 8pin	MONITOUCH V9/V8/V7/V6 /TS2000
V6-TMP	RS-232C/485 Modular 8pin	Temperature controller, Inverter, etc.
UA-FR	Type A	Card reader/writer, USB memory, etc.

DUR-00 (Dedicated optional unit for V907xiW, V9060iTD, TS2060i)

Used for serial connection with D-Sub9pin.



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. Length: 0.3m

V9-ANT Antenna for V9 models compatible with wireless LAN. Length: 3m

High-end specifications realize smooth and accurate operation.

		V9 Adv	vanced		V9 Sta	andard		
	Item	V9101iW	V9071iW	V9150iX	V9150iXD	V9120iS/V9120iSB	V9120iSD/V9120iSBD	
	Rated Voltage	DC	24V	AC100~240V	DC24V	AC100~240V	DC24V	
Power Supply	Permissible Range of Voltage	±1(0%	-15%,+10%	±10%	-15%,+10%	±10%	
	Permissible Momentary Power Failure	Withir	n 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 Resist	ance			DC500V 10	VΩ or more			
	Ambient Temperature	0~50	0°C *1	0~40	°C *1	0~50	0°C *1	
	Ambient Humidity			85%RH or less (withou	t dew condensation) *1			
	Operating Altitude			2,000m	or less			
Physical	Operating Atmosphere	No exposure to corrosive gas or conductive dust						
Environment	Storage Temperature	-10~6	0°C *1	-10~50°C *1		-10~60°C *1		
	Storage Humidity	85%RH or less (without dew condensation) *1						
	Pollution Degree	Pollution degree 2						
Mechanical Operating	Resistance to Oscillation	JIS B 3502 (IEC61131-2) compliant, Vibration frequency 5 to 9Hz, Half amplitude: 3.5mm, 9 to 150Hz, Constant acceleration: 9.8m/s ² (1G), X, Y, Z 3 directions 10 times each						
Conditions	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	Resistance to Noise	pulse wi	pulse width:1µs, pulse width:1µs, pulse width:1µs, pulse width:1µs,			e: 1,500Vp-p, dth: 1μs, time: 1ns		
Conditions	Resistance to Static Discharge			Complies with IEC61000-4	1-2, contact: 6kV, air: 8kV	1		
	Grounding	Grounding resistance: Less t	han 100Ω, FG/SG separation	Grounding resistance: L	ess than 100Ω, FG=SG	Grounding resistance: Less t	han 100Ω, FG/SG separatio	
	Structure	Protection structure: Fro	Protection structure: Front case: IP66, Type 4X/13'2'3(when water-proof gasket is used), Rear case: IP20, single unit, installation method: panel mount					
Installation	Cooling System			Natural ai	r cooling			
Conditions	Dimensions W*H*D (mm)	278.5 × 198.5 × 54.4	201.6 × 147.6 × 60.3	382.8 × 31	2.8 × 80.8	327.8 × 26	01.0 × 54.9	
	Panel Cutout (mm)	257.0 × 183.0 (+0.5/-0) mm	187.2 × 133.4 (+0.5/-0) mm	369.4 × 299.4	(+0.5/-0) mm	313.0 × 246.2	(+0.5/-0) mm	
	Weight	Approx. 1.7 kg	Approx. 1.0kg	Approx	. 4.7kg	Approx	. 2.5kg	
Case Color		Light	Light gray		Front case: Silver, Rear case: Light gray		Light gray (black front housing for black model)	
Material		PC r	esin	Front case: Aluminum. Rear case: PC resin		PC r	resin	

1 Use at a wet-bulb temperature of 39°C or less	s because higher temperatures may cause failure.
---	--

Performance Specifications

10---

	Item	V9 Adv	vanced	V9 St	andard	
	nem	V9101iW	V9071iW	V9150iX	V9120iS	
Screen Memory (F	ROM)			64MB		
Backup Memory (\$	SRAM)			800KB		
	Display Device			TFT color		
	Resolution W:H (dots)	1024×600	800×480	1024×768	800×600	
Display	Display Size	10.1" widescreen	7" widescreen	15 Inch	12.1 inches	
Jispiay	Display Colors	16.7 million *4				
	Backlight			LED		
	Backlight Life	50,000 hours		100,000 hours	70,000 hours	
Fouch Switch	Туре	Capac	itance	Analog res	sistance film	
Function Switch	Quantity	-	-		8	
D-Sub 9-pin (CN1) "5 Modular 8-pin (MJ1/MJ2)		Asynchronous Baud rate: 4	RS-232C/RS-422/RS-485 s, Data length: 7, 8 bits Parity: Even, odd, none St 800, 9600, 19200, 38400. 57600, 76800, 115200, 1	op bit: 1, 2 bits 87500 ⁻⁶ bps		
		RS-232C/RS-422/RS-485 (2-wire type) ⁷⁷ Asynchronous, Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115,200 bps				
External Interface	SD Card	One card slot provided as standard				
	Ethernet	2ch, Baud rate: 100Mbps, 10Mbps 1ch, Baud rate : 100Mbps, 10			100Mbps, 10Mbps	
	Wireless LAN	Complies with IEEE802.11b/g/n (2.4GHz) *8				
	USB	Type A, Type mini-B (Ver.2.0)				
	Sound Output	1ch provided as standard	_	1ch provide	d as standard	
	Backup Period			5 years (Ambient temperature 25°C)		
Clock	Calendar Accuracy		Gap ±90 sec. pe	er month (Ambient temperature 25°C, When the bat	tery is backed up)	
	CE Marking *2	EN61000-6-2, EN6	1000-6-4, EN50581	EN61000-6-2, EN6	1000-6-4, EN50581 ^{*9}	
	UL·cUL *2		UL61010 -1/UL610)10-2-201(E313548) ^{*10}	UL61010 -1/UL61010-2-201(E313548) ^{*10} , ANSI/ISA12.12.01 ^{*11}	
Standard	кс	Comp	atible	Compatible ^{'9 '12}		
	Radio Act ^{'8}	Japan: TELEC USA: FCC Canada: IC RS	CC South Korea: KC Janan' TELEC		TELEC	
	Classification Standard *2 *12	-	-	Nippon Kaiji Kyokai (NK) Am Lloyd's Register of Shipping (LR) Det	erican Bureau of Shipping (ABS) '9 Norske Veritas (DNV) '13	

	V9100iSD/V9100iSBD	V9080iSD/V9080iSBD	V9100iC/V9100iCB	
AC100~240V	DC24V	DC24V	AC100~240V	
-15%,+10%	±10%	±10%	-15%,+10%	
Within 20ms (100VAC or higher)	Within	n 1ms	Within 20ms (100VAC or higher)	
70VA or less	28W 0	or less	50VA or less	
30A or less, 3ms	17A or le	ess, 6ms	30A or less, 3ms	
			DC500V 10MQ or more	
			0~50°C *1	
		85%RH o	r less (without dew conder	ns
			2,000m or less	
		No exposur	e to corrosive gas or cond	du
			-10~60°C *1	
		85%RH o	r less (without dew conder	ns
			Pollution degree 2	
JIS B 3502 (IEC61131	-2) compliant, Vibration fr	equency 5 to 9Hz, Half an	plitude: 3.5mm, 9 to 150H	١z
	JIS B 3502 (IEC61131	-2) compliant, Peak accel	eration: 147m/s² (15G), X,	Y
		Noise voltage: 1,50	0Vp-p, pulse width: 1μs, p	οι
		. .	0Vp-p, pulse width: 1μs, p h IEC61000-4-2, contact:	
		Complies wit		6
Protection	structure: Front case: IP66	Complies wit	h IEC61000-4-2, contact: tance: Less than 100Ω, F(6 3/
Protection	structure: Front case: IP66	Complies wit Grounding resist	h IEC61000-4-2, contact: tance: Less than 100Ω, F(6 3/
	structure: Front case: IP66 31.0x54.0	Complies wit Grounding resist	h IEC61000-4-2, contact: tance: Less than 100Ω, FC ter-proof gasket is used), F	61 3/
303.8×23		Complies wit Grounding resis 5, Type 4X/13' ^{2'3} (when wa	h IEC61000-4-2, contact: tance: Less than 100Ω, F(ter-proof gasket is used), F Natural air cooling	61 3/ Re
303.8×23 289.0 × 216.2	81.0x54.0	Complies wit Grounding resis 5, Type 4X/13 ⁺²⁺³ (when wat 235.0×180.0×48.9	h IEC61000-4-2, contact: tance: Less than 100Ω, F(ter-proof gasket is used), F Natural air cooling 303.8×23	6 3. 3. 81
303.8×23 289.0 × 216.2	81.0×54.0 ? (+0.5/-0) mm	Complies wit Grounding resis 5, Type 4X/13 ⁺²⁺³ (when wat 235.0×180.0×48.9 220.5 × 165.5 (+0.5/-0) mm Approx. 1.3kg	h IEC61000-4-2, contact: tance: Less than 100Ω, F(ter-proof gasket is used), F Natural air cooling 303.8×23 289.0 × 216.2	6 3/ Re

V9 Standard

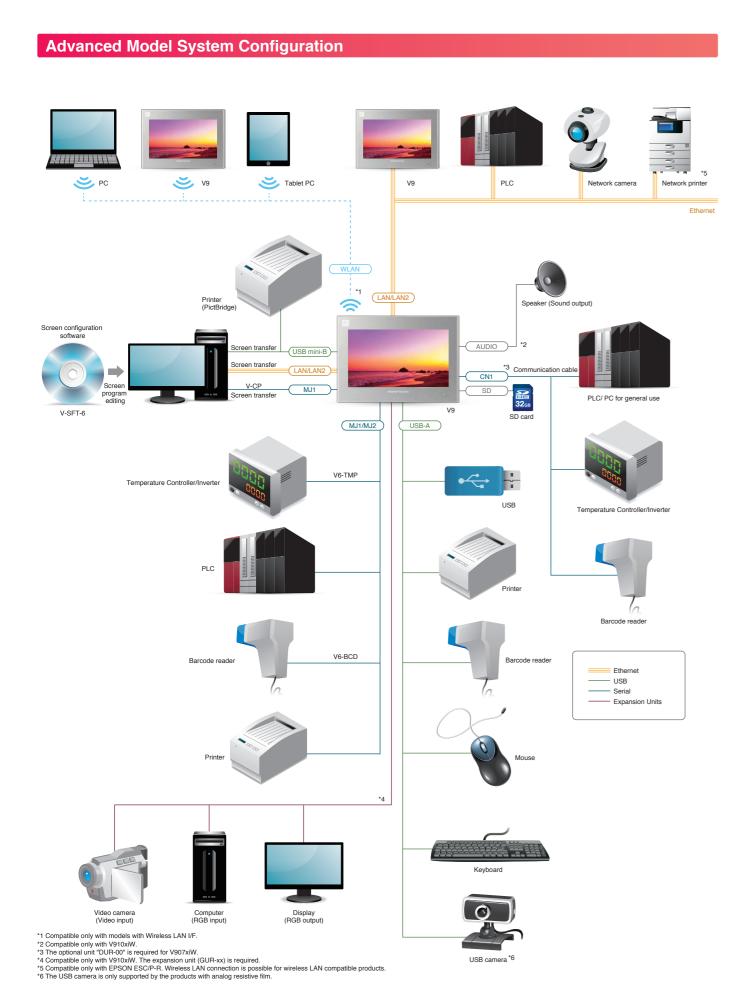
V9 Star	ndard		V9 Lite					
V9100iS	V9080iSD	V9100iC	V9080iCD	V9060iTD				
		64MB						
800KB								
		TFT color						
800×	600	640×480						
10.4 Inch	8.4 Inch	10.4 Inch	5.7 Inch					
		16.7 million *4		260 thousand *4				
		LED						
		70,000 hours		50,000 hours				
Analog resistance film								
8 6								
RS-232C/RS-485 Data length: 7, 8 bits Parity: Even, odd, none Stop bits: 1, 2 bits Baud rate : 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500 ¹⁶ bps								
RS-232C/RS-422/RS-485 (2-wire type) ¹⁷ Asynchronous, Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115,200 bps								
	One	card slot provided as standard						
	1ch,	Baud rate : 100Mbps, 10Mbps						
Complies with IEEE80	2.11b/g/n (2.4GHz) *8		_					
	Tj	ype A,Type mini-B (Ver.2.0)						
1ch provided	as standard		-					
	5 yea	rs (Ambient temperature 25°C)						
	Gap ±90 sec. per month (Amb	pient temperature 25°C, When the	battery is backed up)					
EN61000-6-2, EN610	00-6-4, EN50581 *9	Ef	N61000-6-2, EN61000-6-4, EN50	0581				
UL61010 -1/UL61010-2-201(E31	3548) ^{*10} , ANSI/ISA12.12.01 ^{*11}	UL61010 -1/UL610	10-2-201(E313548) ^{*10}	UL61010 -1/UL61010-2-201(E313548)** ANSI/ISA12.12.01**1				
Compatil	ble *9 *12		Compatible *12					
Japan: ⊺	TELEC		-					
ppon Kaiji Kyokai (NK) Am oyd's Register of Shipping (LR) Det	erican Bureau of Shipping (ABS) '9 Norske Veritas (DNV) '13	-	_	Nippon Kaiji Kyokai (NK) American Bureau Lloyd's Register of Shipping (ABS) of Shipping (LR) Det Norske Veritas (D)				

*7 187,500 bps (four-wire system) for the V9071iW and V9060iTD MJ2 only. *8 Wireless LAN-compatible products only. *9 Wireless LAN compatible products are not supported. *10 Only for Hardware Ver. for later. Applicable standard for Hardware Ver. a to e is UL 508. *11 V9120iSD/V9080iSD: Hardware of Ver.b or later V9060iTD: All versions *12 Black model not certified *13 V9150iXD/V9060iTD: All V9120iSD: Hardware Ver.b or higher, V9100iSD/V9080iSD: Hardware Ver.c or higher.

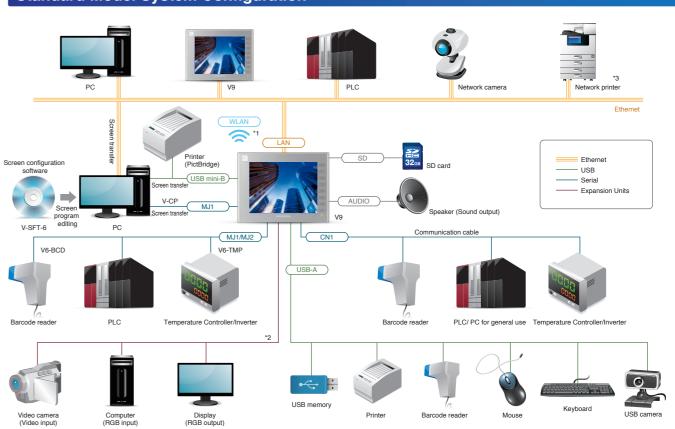
*2 DC products only. *3 V9101iW: Hardware of Ver.c or later V9120iSD/V9100iSD/V9100iCD/V9080iCD: Hardware of Ver.b or later V9071iW/V9150iXD/V9060iTD:All versions *4 For displaying pictures, 3D parts, video, and RGB input (excluding high-speed mode) only. Other parts are displayed in 65,536 colors. *5 Optional unit (DUR-00) is required for the V9071iW and V9060iTD. *6 Only for Siemens MPI (Incompatible with DUR-00).

	V9	Lite						
	V9100iCD/V9100iCBD	V9080iCD/V9080iCBD	V9060iTD/V9060iTBD					
	DC24V	DC24V	DC24V					
	±10%	±10%	±10%					
	Within 1ms							
17W or less 13W or less								
17A or less, 6ms 8A or less, 7ms								
91	nsation) *1							
c	ductive dust							
91	nsation) *1							
ŀ	z, Constant acceleration:	9.8m/s² (1G), X, Y, Z 3 di	rections 10 times each					
.,	Y,Z 3 directions, 3 times e	each (18 times in total)						
1	oulse rise time: 1ns		Noise voltage:1,000Vp-p, pulse width:1µs, pulse rise time : 1ns					
	6kV, air: 8kV							
(G/SG separation							
F	Rear case: IP20, single uni	t, installation method: pane	el mounting					
3	31.0×54.0	235.0×180.0×48.9	182.5×138.8×53.0					
2	(+0.5/-0) mm	220.5 × 165.5 (+0.5/-0) mm	174.0 × 131.0 (+0.5/-0) mm					
x	2.0kg	Approx. 1.3kg	Approx. 740g					
0	ack model)							

Flexible system configuration meets diversified requirements.

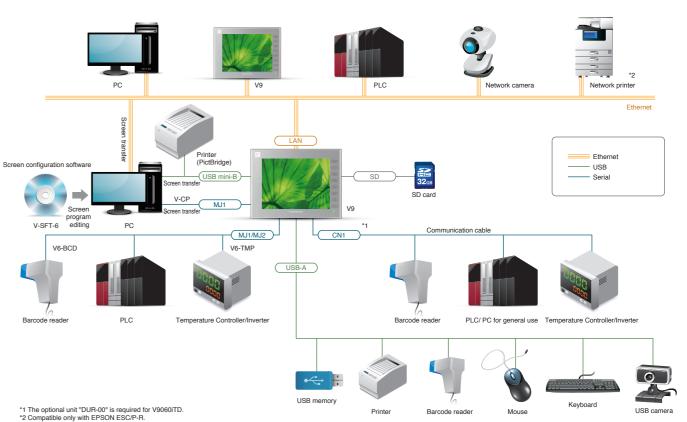


Standard Model System Configuration

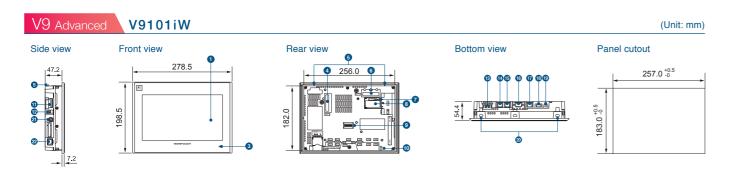


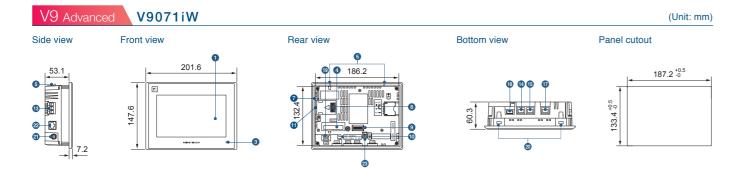
*1 Compatible only with models with Wireless LAN I/F. *2 The expansion unit "GUR-xx" is required. *3 Compatible only with EPSON ESC/P-R. Wireless LAN connection is possible for wireless LAN compatible products.

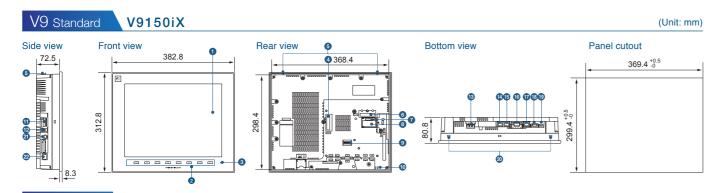
Lite Model System Configuration



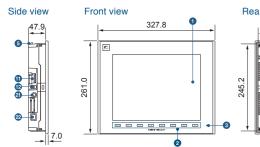
Dimensions & Part Names

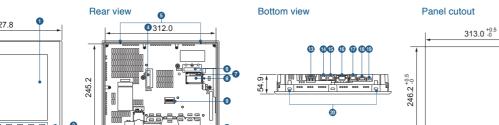






V9 Standard V9120iS/V9120iSB

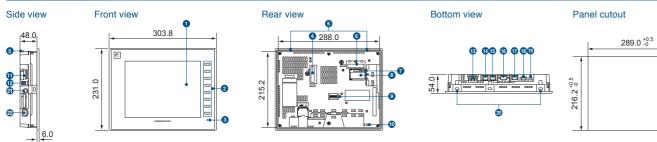


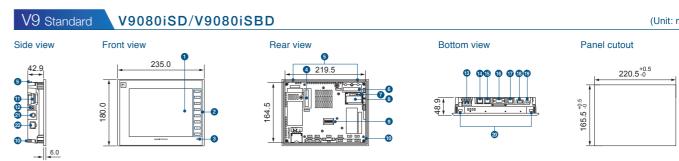


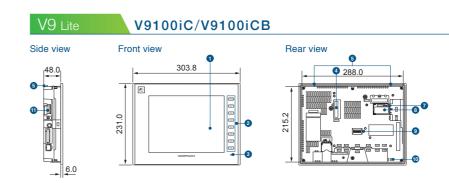
(Unit: mm)

(Unit: mm)

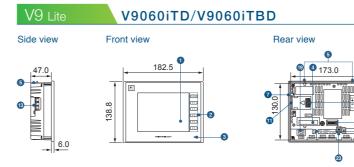








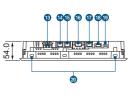
V9080iCD/V9080iCBD Side view Front view Rear view 6 235.0 42.9 ● ● ● ● 4 219.5 64 **0**----É 6.0



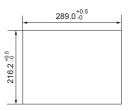
1 Display	SD card access LED	13	Po
Punction switch	8 Battery compartment	14	Μ
9 Power lamp	IP switch	15	Μ
Ocommunication unit connector (EXT1)	USB cable retention	16	ΡI
Fall prevention hook	SD card connector	1	10
Expansion unit connector (EXT2)	Sound output connector (AUDIO)	18	U

(Unit: mm)

(Unit: mm)

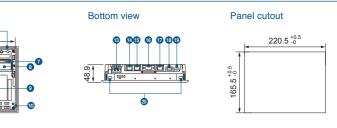


Bottom view



Panel cutout

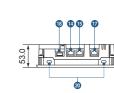
(Unit: mm)



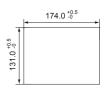
(Unit: mm)

Panel cutout





Bottom view



- Power input terminal block
- Modular jack 1 (MJ1)
- Modular jack 2 (MJ2)
- PLC connector (CN1)
- 100BASE-TX/10BASE-T connector (LAN) 3 Slide switch
- USB-A(U-A)
- USB mini-B(U-B)
- Mounting point
- Wireless LAN external antenna connector (WLAN)
- 100BASE-TX/10BASE-T connector (LAN2)

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

Product Details

Advanced

			Specifications									Delivery
Model	Display Size	Resolution	Touch screen	Video/ RGB ⁻¹	AUDIO Output	Wireless LAN	Extended Cable LAN	UL	CE	кс	Power supply	Standard: ✓ Made to order:△
V9101iWRLD			Capacitance	\checkmark	~	~	~	\checkmark	~	~		1
V9100iWRLD			Analog resistance film	\checkmark	\checkmark	~	~	\checkmark	\checkmark	~	DC	\bigtriangleup
V9101iWLD	10.1" widescreen	1024×600	Capacitance	\checkmark	~	-	~	\checkmark	~	~		1
V9100iWLD			Analog resistance film	\checkmark	\checkmark	-	~	\checkmark	\checkmark	~		\bigtriangleup
V9071iWRLD			Capacitance	-	-	~	~	\checkmark	~	~		~
V9070iWRLD			Analog resistance film	-	-	~	~	\checkmark	\checkmark	~		\bigtriangleup
V9071iWLD	7" widescreen	n 800×480	Capacitance	-	-	-	~	\checkmark	~	~	DC	~
V9070iWLD			Analog resistance film	-	-	-	~	~	~	~		\bigtriangleup

Standard

						Spec	ifications					Delivery
Model	Display Size	Resolution	Touch screen	Video/ RGB ⁻¹	AUDIO Output	Wireless LAN	Extended Cable LAN	UL	CE	кс	Power supply	Standard: ✓ Made to order:△
V9150iX				~	~	-	-	-	-	~	AC	~
V9150iXD	15"	1024×768	Analog resistance film	~	~	-	-	\checkmark	~	~		~
V9150iXLD	15	1024×700	Analog resistance him	~	~	-	~	\checkmark	~	~	DC	
V9150iXRD				~	~	√*2	-	\checkmark	-	-		
V9120iS				~	~	-	-	-	-	~	40	~
V9120iSB	-	800×600	Analog resistance film	~	~	-	-	-	-	-	AC	
V9120iSD				~	~	-	-	\checkmark	~	~		~
V9120iSBD	12.1"			~	~	-	-	\checkmark	~	-	DC	
V9120iSLD	12.1			~	~	-	~	\checkmark	~	~		
V9120iSLBD	-			~	~	-	~	\checkmark	~	-		\bigtriangleup
V9120iSRD				~	~	√*2	-	\checkmark	-	-		
V9120iSRBD	-			~	~	√*2	-	\checkmark	-	-		\bigtriangleup
V9100iS				~	~	-	-	-	-	~	AC	1
V9100iSB				~	~	-	-	-	-	-		\bigtriangleup
V9100iSD	-			~	~	-	-	\checkmark	~	~	-	~
V9100iSBD				~	~	-	-	\checkmark	~	-		\bigtriangleup
V9100iSLD	10.4"	800×600	Analog resistance film	~	~	-	~	\checkmark	~	~		\bigtriangleup
V9100iSLBD				~	~	-	~	\checkmark	~	-	DC	\bigtriangleup
V9100iSRD	-			~	~	√*2	-	\checkmark	-	-		\bigtriangleup
V9100iSRBD				~	~	√*2	-	\checkmark	-	-		
V9080iSD				~	~	-	-	~	~	~		1
V9080iSBD				~	~	-	-	\checkmark	~	-	1	
V9080iSLD				~	~	-	~	\checkmark	~	~		
V9080iSLBD	8.4"	800×600	Analog resistance film	~	~	-	~	\checkmark	~	-	DC	
V9080iSRD				~	~	√*2	-	\checkmark	-	-		
V9080iSRBD				~	~	√*2	-	\checkmark	-	-	1	

Lite

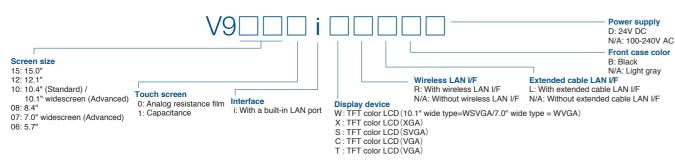
Screen size

15: 15.0" 12: 12.1"

			Specifications								Delivery	
Model	Display Size	Resolution	Touch screen	Video/ RGB ⁻¹	AUDIO Output	Wireless LAN	Extended Cable LAN	UL	CE	кс	Power supply	Standard: ✓ Made to order:△
V9100iC				-	-	-	-	-	-	~		√
V9100iCB		040 400	Analog resistance film	-	-	-	-	-	-	-	AC	\bigtriangleup
V9100iCD	10.4"	640×480		-	-	-	-	\checkmark	~	~	-	~
V9100iCBD				-	-	-	-	\checkmark	~	-		\bigtriangleup
V9080iCD	8.4"	040,400	Annala a secietara a film	-	-	-	-	\checkmark	~	~	DC	~
V9080iCBD		640×480	Analog resistance film	-	-	-	-	\checkmark	~	-	00	\bigtriangleup
V9060iTD	5.7"	640×480	Analog resistance film	-	-	-	-	\checkmark	~	~		~
V9060iTBD				-	-	-	-	~	1	-	1	

*1 Supported via the expansion unit GUR-xx. *2 Only for use in Japan.

V9 Models



Optional Accessories List

		Compatible Model								
Model	Product	Adv	ranced			andard	-		Lite	
		V910xiW	V907xiW	V9150iX	V9120iS	V9100iS	V9080iS	V9100iC	V9080iC	V9060i
onfiguration Software SFT-6	MONITOUCH screen configuration software Ver.6	1	~	√	~	~	~	√	~	~
pansion Units	Morth Coort bloch bonightaibh boninaic voile			:				:		
JR-00	Video 4ch input	~		~	~	~	\checkmark			
UR-01	RGB 1ch input	~		~	~	~	~			
UR-02	RGB 1ch output	√		√	√	~	√			
UR-04	Video 1ch input	~		~	√ √	~	√ √			
UR-10 UR-11	Video 2ch input/ RGB 1ch input RGB 2ch input	~		√ √	~	~	~			
JR-00	Optional unit for V907xiW/V9060iTD/TS2060i		~							1
ommunication Units										
JR-00	OPCN-1 (V9/TS2060i)	\checkmark	√	√	\checkmark	~	√	√	~	~
JR-01	T-Link (V9/TS2060i)	~	~	~	~	~	~	~	~	~
JR-02	CC-Link (V9/TS2060i)	√	√	√	√	√	√	√	√	~
JR-03	Ethernet (V9/TS2060i)	~	1	1	~	1	~	1	~	~
JR-04 JR-06	PROFIBUS-DP (V9/TS2060i)	~	√ √	~	✓ ✓	~	√ √	~	√ √	√ √
JR-07	SX Bus (V9/TS2060i) DeviceNet (V9/TS2060i)	~	~	~	~	~	~	~	~	√ √
JR-08	FL-net (V9/TS2060i)	1	1	1	1	1	~	1	1	1
JR-09	EtherCAT (V9)	~	√	1	1	~	~	√	1	1
ables ^{*1}										
СР	Screen transfer cable (3m)	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	~
A-FR	USB-A extension cable (1m)	\checkmark	~	~	\checkmark	~	~	~	~	~
S-MLT	Multi-link 2 master cable (3m)	~	1	1	~	1	1	1	1	1
6-TMP	Temperature controller cable (3m)	~	~	1	~	1	√ ,	√ ,	1	1
6-TMP-5M 6-TMP-10M	Temperature controller cable (5m)	~	√ √	√ √	✓ ✓	~	√ √	~	√ √	√ √
B-TMP-10M B-BCD	Temperature controller cable (10m) Barcode reader cable (3m)	~	~	~	~	~	~	~	~	~
9-FU-SPBCPU-2M		~	✓ *3	~	~	~	~	~	√ √	✓ *3
P-FU-SPBCPU-3M	– Fuji Electric	1	*3	~	~	~	~	~	1	*3
9-FU-SPBCPU-5M	SPH ^{*2} , SPB CPU (MJ) RS-485 (4-cable type)	1	*3	1	1	1	~	1	1	*3
9-FU-SPFCPU-2M	Euli Electric	~	*3	√	~	~	~	~	~	*3
-FU-SPFCPU-3M		~	∆*3	√	~	~	~	~	~	*3
-FU-SPFCPU-5M	SPF CPU (Mini DIN4) RS-232C	~	∆*3	~	~	~	\checkmark	~	√	_*3
9-MB-CPUQ-2M		~	∆*3	~	~	~	~	~	√	*3
9-MB-CPUQ-3M	MITSUBISHI ELECTRIC	~	∆*3	~	~	~	\checkmark	√	~	*3
9-MB-CPUQ-5M	A series / QnA series CPU (Dsub25) RS-422	√	*3	√	~	~	~	√	1	*3
9-MB-CPUQ-10M 9-MB-CPUQ-15M		~	*3 *3	~	✓ ✓	~	√ √	~	√ √	*3 *3
9-MB-CPUQ-15M 9-QCPU2-2M		~	∆*3	~	~	~	~	~	√ √	∆ ³ ∆*3
9-QCPU2-3M		~	*3	↓	~	~	~	~	↓ ↓	3
9-QCPU2-5M	MITSUBISHI ELECTRIC	1	*3	1	1	1	1	1	1	
9-QCPU2-10M	Q series CPU (Mini DIN6) RS-232C	~	*3	√	√	~	~	~	~	*3
9-QCPU2-15M		~	∆*3	~	~	~	~	~	~	*3
9-MI2-09-2M		~	∆*3	~	~	~	~	~	~	*3
9-MI2-09-3M	MITSUBISHI ELECTRIC	~	∆*3	~	~	~	~	~	~	∆*3
9-MI2-09-5M	link unit (Dsub9) RS-232C	~	*3	~	~	~	~	√	~	*3
9-MI2-09-10M		1	*3 *3	1	1	1	~	1	1	*3
9-MI2-09-15M 9-MI4-FX-2M		~	△ *3 △ *3	√ √	~	√ √	√ √	√ √	√ √	*3 *3
9-MI4-FX-2M		~	*3	~	~	~	↓ ↓	~	~	3
9-MI4-FX-5M	MITSUBISHI ELECTRIC	1	*3	1	1	~	~	~	~	^*3
9-MI4-FX-10M	FX series CPU (Mini DIN8) RS-422	~	*3	~	~	~	~	~	~	
9-MI4-FX-15M		~	∆*3	~	~	~	~	~	~	*3
9-D25	Dsub9-Dsub25 conversion cable (0.3m)	~	∆*3	√	~	~	\checkmark	~	~	*3
J2-PLC	MJ2-Dsub25 conversion cable		\checkmark							\checkmark
erial Expansion I/O Uni										
	Serial expansion I/O unit	~	~	~	~	~	~	~	~	~
ommunication Termina		1	∆*3			1		/		*3
C-D9 attery	V9/TS2000/V8 series terminal converter	~	<u>∆</u> 3	1	~	~	√	1	1	∆ 3
9-BT	Replacement battery for V9	~		√	~	~	~	√	~	
7-BT	Replacement battery for V907xiW/V9060iTD/V8		~							~
ireless LAN Antenna		·		·		·	·	·		·
9-ANT	V9 external antenna with cable (3m)	~	\checkmark	√	√	~	~			
ower Supply Unit										
0080C-PW	V9080iCD AC power supply unit				1				~	
otection Sheets										
715-GS	V9150iX/V815/V715 Surface protection sheet			√ √	√	~	~			
715-GSN10 912S-GS	V9150iX/V815/V715 Surface protection sheet (Non-glare) V9120iS protection sheets			×	~	×	v			
9125-GS 912S-GSN10	V9120IS protection sheets V9120IS protection sheets (Non-glare)				~					
910S-GS	V9100iS/V9100iC protection sheets					~		~		
910S-GSN10	V9100iS/V9100iC protection sheets (Non-glare)					~		√		
910W-GS	V9100iW protection sheets	~								
010W-GSN10	V9100iW protection sheets (Non-glare)	~								
008S-GS	V9080iS/V9080iC protection sheets						~		~	
008S-GSN10	V9080iS/V9080iC protection sheets (Non-glare)						~		~	
907W-GS	V9070iW protection sheets		~							
907W-GSN10	V9070iW protection sheets (Non-glare)		√							
906T-GS	V9060iTD/TS2000 protection sheets									~
906T-GSN10	V9060iTD/TS2000 protection sheets (Non-glare)					1				\checkmark

*1 PLC connection cables other than those listed above are also available. For details, please contact our technical helpdesk *2 It may not be available depending on the hardware version of your CPU. A separately available D9-FU-SPHCPU- M cable is required. Please contact us for more details.

MONITOUCH wide-variety product lineup

TECHNOSHOT

5.7 QVGA 64K TFT LED 2ch USB DC Backlight Serial USB Power supply

TS2000 series

V8 Handy Type



With Ethernet port 12.5M 512K Ether No Ethernet port 4.5_M 128_K V808CH

ernet	V808

Spe	ecificati	ons						
			V808iCHx	V808CHx				
	Display Si	ze	7.5 inch					
	Display De	evice	TFT cold	r LCD				
		n W:H (dots)	640 × 48	0 dots				
B	Display Co	olors	65,536 colors (no blink) / 32,768 colors (with blink)					
lsic	Screen Me	emory(FROM)	FROM (12.5M byte)	FROM (4.5M byte)				
<u>ö</u>	Backup M	emory(SRAM)	SRAM (512K byte)	SRAM (128K byte)				
Basic Specs	Clock		Equipped					
S	Ethernet		100BASE-TX/10BASE-T provided as standard	N/A				
	CF Card I/	F	Equipped					
	USB I/F		Туре В (\	/er 1.1)				
s	Quantity		12 (4 : external output)					
Function Switch	Туре		Membrane	e switch				
Ξg	Mechanical	Life Expectancy	1,000,000 tim	ies or more				
	Туре		Push lock system (b-	contact, 2 circuits)				
Touch Switch	Mechanical	Life Expectancy	100,000 time	es or more				
tch	Rated Voltage		DC2	4V				
	Rated Cur	rent	1A (load re	sistance)				
Key Switch Specs	Contact		a-contact, 1 circuit					
Swi		Life Expectancy	250,000 times or more					
* tch	Electrical L	ife Expectancy	100,000 times or more (operating cycles: 1200 times/hour)					
D		Туре	3-position output (a-c	contact, 2 circuits ^{*1})				
adr	3-position	Mechanical Life Expectancy	OFF→ON 1,000,000 times or more OFF→ON	→OFF (direct circuit): 100,000 times or mo				
nan	3-position	Rated Voltage	DC24					
Deadman Switch Specs		Rated Current	1A (load re	sistance)				
tch	Momentary	Туре	Momer	,				
	monitary	Mechanical Life Expectancy	1,000,000 tim	les or more				
_			RS232C, Data lei	• • •				
	TB2		Parity: Even, odd, non Baud rate: 4800, 9600, 19200,					
ern			Daud Tale. 4000, 5000, 19200,	30400, 70000, 113,200 bps				
External VF	твз		RS-422/485, Asynchronous type; Data length: 7, 8 bits					
ΤÌ	103		Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 76800, 115200, 187500'2bps					
st-p				,,				
plicab	CE Markin	Ig	EN61000-6-2, EN61	000-6-4, EN50581				

*1 Only V808(i)CH4 comes with a-contact and 2 circuits. V808(i)CH2,3 only have 1 circuit. *2 187500 bps only applies to Siemens MPI/PPI connections.

FO MO



TS2060

Crassificati



2.5M 128K *1 "DUR-00" or "CUR-xx" is mountable.

Specifications							
		TS2060	TS2060i				
Screen Memory (FROM)		2.5Mbyte	10.5Mbyte				
Backup Memory (SRAM)		128Kbyte	512Kbyte				
Stroke Font		- Compatible					
Display	Display Device	TFT	color				
	Resolution W:H (dots)	320 >	: 240				
	Display Size	5.7 inch	(QVGA)				
	Display Colors	65,536 colors(The software is compatible with displays i	n 32K colors, 256 colors, 128 colors and monochrome.)				
	Backlight	LED					
	Backlight Life	50,000 hours					
Touch Switch	Туре	Analog resistance film					
Function Switch	Quantity	6					
External Interface	D-Sub 9-pin ⁻²		RS-232C/RS-422/RS-485, asynchronous type, Data length: 7, 8 bits, Parity : odd, even, none, Stop bit: 1, 2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps				
	Modular 8-pin(MJ1/2)	RS-232C/RS-422 (4-wire system) ⁻³ /RS-485 (2-wire system), As Stop bit: 1, 2 bits, Baud rate: 4800, 9600, 1920					
	SD Card		One card slot provided as standard (SD/SDHC card)				
	Ethernet		1ch, Baud rate: 100Mbps, 10Mbps				
	USB	Type mini-B(Ver. 2.0)	Type A, Type mini-B (Ver. 2.0)				
	Communication Units	-	CUR-xx compatible				
Power Supply	Permissible Range of Voltage	24V DC	± 10%				
	Power Consumption (max. rating)	13W c	r less				
Physical Environment	Ambient Temperature	0°C to -	+50°C*⁵				
-	Ambient Storage Temperature	-10°C to	+60°C ⁻⁵				
	Ambient Humidity	85% RH or less (without	ut dew condensation) ^{*5}				
	Ambient Storage Humidity	85% RH or less (without	ut dew condensation)*5				
	Operating Altitude	2.000m	or less				
	Operating Atmosphere	Not exposed to corrosive gas or exc					
	Contamination Level	Contamina	tion level2				
Installation Conditions	Grounding	Grounding resistance: Less th	nan 100Ω, FG/SG separation				
	Protective Structure	Front panel : Compatible with IP65 (when gask	· ·				
	Cooling System	Natural a					
	Dimensions W×H×D	182.5 × 138.	0				
	Panel Cutout	174.0 ^{+0.5} ₋₀ × 131.0 ^{+0.5} ₋₀ mm (equivalen					
Standard		CE (EN61000-6-2, EN61000-6-4, EN50581), KC, UL61010-1, UL61010-2-201 (E313548)					
Case Color		Black					
Battery		Built-in button battery / Battery life : 5 years (ambient temperature 25°C)					

*2 Only when mounting the optional unit (DUR-00) to the TS2060i. *3 Only MJ2 is compatible with 4-wire system. *4 187500 bps only applies to Siemens MPI/PPI connections. MPI/PPI supports only MJ2. *5 Use at a wet-bulb temperature of 39°C or less because higher temperatures may cause failure.

V808CH



V808CH Models

	Kov owitch	Doddinan ownon		
	Rey Switch	Туре	External output	
0	N/A	Momentary	N/A	
. 1	Equipped	Momentary	N/A	
2	N/A	3-position	1-contact	
3	Equipped	3-position	1-contact	
4	N/A	3-position	2-contact	
	0 1 2 3	0 N/A 1 Equipped 2 N/A 3 Equipped	Key switch Type 0 N/A Momentary 1 Equipped Momentary 2 N/A 3-position 3 Equipped 3-position	

Feature Specifications N/A: No built-in LAN port i: Built-in LAN port

Optional Accessories List					
Model	Product				
V8H-C	V808CH external connection cable (=3, 5,15, 20m)				
V7-BT	V8, V7, V606e battery				
V8H-SWG	V808CH switch guard				
V6H-WF	V808CH wall mounting bracket set				
V6H-WF1	V808CH wall mounting bracket (wall side)				
V8H-WFV	V808CH fixing bracket (VESA compliant)				
V8H-ST	V808CH stand				
V608CH-GSN10	V808CH/V608CH protection sheets (Non-glare)				

Deedman awite



Power supply (24 V)

PLC Connection - Summary

M	Madala			tion form			Compatible models						
Manufacturer	Models		1:n Multi-drop	n : 1 Multi-link2	n : 1 Multi-link		TS2060i	TS2060	V8i	V8			
	MICREX-F series MICREX-F series V4-compatible	↓ ↓	√ √	✓ ✓	~	↓ ↓	√ √	↓ ↓	√ √	4			
	MICREX-F T-Link	<u> </u>				√ "1	√ "1		√ "1	√ "			
	MICREX-F T-Link V4-compatible SPB (N mode) & FLEX-PC series			1		√ " ✓	√ " √	1	√ "I √	√ " √			
uji Electric	SPB (N mode) & FLEX-PC CPU	~		1		1	1	1	1	1			
	MICREX-SX (T-Link) MICREX-SX (OPCN-1)					√ " √ "	רי √ עיז		√ "1 √ "1	√ " √ "			
	MICREX-SX (SX bus)					√ " √	√ " √		√ "	√ " (
	MICREX-SX SPH/SPB/SPM/SPE/SPF series MICREX-SX SPH/SPB/SPM/SPE/SPF CPU	4		√ √		√ √	√ √	4	1	4			
	MICREX-SX (Ethernet) PLC-5	√ √	4	~		↓ ↓	√ √		1	1			
	PLC-5 (Ethernet)	~	1			1	1		1				
	SLC500 SLC500 (Ethernet TCP/IP)	√ √	1	~		√ √	1	~	1	~			
	NET-ENI (SLC500 Ethernet TCP/IP)	~	~			1	1		1				
Allen-Bradley	NET-ENI (MicroLogix Ethernet TCP/IP) MicroLogix	√ √	√ √	√		√ √	√ √	√	1	√			
	MicroLogix (Ethernet TCP/IP) ControlLogix / CompactLogix	√ √	√			1	1	1	1	1			
	ControlLogix (Ethernet)	~	1			~	1		1				
	Micro800 Controllers Micro800 Controllers (Ethernet TCP/IP)	√ √	~	~		√ √	√ √	~	1	1			
utomationdirect	Direct LOGIC (K-Sequence) Direct LOGIC (Ethernet UDP/IP)	√ √	1	~		√ √	√ √	~	1	√ √ "2			
	Direct LOGIC (MODBUS RTU)	1	1	~		1	~	~	~	1			
Azbil Baumuller	MX series BMx-x-PLC	√ √	~	√ √		1	1	1	1	1			
BECKHOFF	ADS protocol (Ethernet)	~	1			1	1		1	√ 2			
	Tag ADS Protocol (Ethernet TCP/IP) BP series	√ √	~	~		√ √	4	~	4	~			
CIMON	CP series XP series	4		√ √		1	√ √	1	1	1			
	S series	~	1	~		~	~	· ·	1	1			
	S series (Ethernet) DVP series	√ √	√ √	√		√ √	4	1	1	√ ⁷			
DELTA	DVP series (MODBUS ASCII) DVP series (MODBUS TCP/IP)	4	1	1		1	1	1	1	1			
ATON Cutler-Hammer	ELC	~	~	1		1	1	1	1	1			
MERSON ANUC	EC10/20/20H (MODBUS RTU) Power Mate	√ √	~	√ √		√ √	√ √	√ √	1	4			
atek Automation ESTO	FACON FB series FEC	↓ ↓	~	↓ ↓		1 1	1 1	↓ ↓	1	1			
UFENG	APC series Controller	~	~	~		~	~	√ √	1	4			
	90 series 90 series (SNP-X)	4	~	✓ ✓		1	4	4	1	1			
GE Fanuc	90 series (SNP)	~		√ √		1	1	√ √	1	~			
	90 series (Ethernet TCP/IP) RX3i (Ethernet TCP/IP)	√ √	4			↓ ↓	4		1				
	HIDIC-S10/2a,S10mini	~		~		~		~	1	17			
14	HIDIC-S10/2a,S10mini (Ethernet) HIDIC-S10/4a	√ √	~	~		√ √	√ √	1	1	12			
litachi	HIDIC-S10 (OPCN-1) HIDIC-S10V	4		4		√ "I √	√ " √	4	√ "1 √	√ " ./			
	HIDIC-S10V (Ethernet)	1	~			1	1		1	n √ n √ n √ n √ n √ n √ n √ n √ n √ n √			
tachi Industrial uipment Systems	HIDIC-H HIDIC-H (Ethernet)	1	1	~	~	√ "5 √	√ ¹⁵	₹ \	17				
quipment Systems	HIDIC-EHV	↓ ↓	√ √	~	1	1	1	~	1				
HYUNDAI	HIDIC-EHV (Ethernet) Hi5 Robot (MODBUS RTU)	1	~	1		√ √	√ √	~	√ √				
TIONDAI	Hi4 Robot (MODBUS RTU) MICRO 3	1	1	1		1	1	1	1	1			
DEC	MICRO Smart	1	1	1		1	1	1	~	1			
	MICRO Smart pentra MICRO Smart (Ethernet TCP/IP)	√ √	√ √	1		√ √	4	1	1	1			
Jetter	JetControl series2/3 (Ethernet UDP/IP)	√ √	↓ ↓	~	1	1	1	1	1	√ ⁷²			
	TOYOPUC TOYOPUC (Ethernet)	1	~	~	~	1	1		1	12			
ITEKT	TOYOPUC (Ethernet PC10 mode) TOYOPUC-Plus	1	1	1		1	1	1	1	√ ⁷			
	TOYOPUC-Plus (Ethernet)	1	1			1	1		1	√ [™]			
	TOYOPUC-Nano (Ethernet) KZ series Link	√ √	√ √	~	1	√ √	√ √	~	1	√ ⁷ 2 √			
	KZ-A500 CPU KZ/KV series CPU	√ √		√ √		1	1	1	1	1			
	KZ24/300 CPU	√		~		~	~	~	1	1			
	KV10/24 CPU KV-700	√ √		√ √		√ √	√ √	√ √	1	4			
EYENCE	KV-700 (Ethernet TCP/IP) KV-1000	4	~				4		4				
	KV-1000 (Ethernet TCP/IP)	~	~			1	1		1				
	KV-3000/5000 KV-3000/5000 (Ethernet TCP/IP)	√ √	~	1		√ √	4	1	1	1			
	KV-7000/8000 (Ethernet TCP/IP)	~	~			1	~		1				
	KV Nano KV Nano (Ethernet TCP/IP)	√ √	~			1	√ √	~	1	~			
	SU/SG SR-T (K protocol)	√ √	~	↓ ↓		1	1	↓ ↓	1	4			
OYO ELECTRONICS	SU/SG (K-Sequence)	~		1		1	1	1	1	1			
	SU/SG (MODBUS RTU) MASTER-KxxxS	√ √	1	√ √		√ √	4	√ √	1	4			
	MASTER-KxxxS CNET	√	1	~		~	~	~	~	1			
	MASTER-K series (Ethernet) GLOFA CNET	√ √	√ √	~		1	√ √	~	1	√ ⁷ √			
	GLOFA GM7 CNET GLOFA GM series CPU	↓ ↓	1	√ √		↓ ↓	↓ ↓	↓ ↓	√ √	1			
S	GLOFA GM series (Ethernet UDP/IP)	~	~			1	1		~	√ 2			
	XGT/XGK series CNET XGT/XGK series CPU	√ √	~	√ √		1	√ √	√ √	1	4			
	XGT/XGK series (Ethernet)	~	1			~	1		~	√ 2			
	XGT/XGI series CNET XGT/XGI series CPU	4	~	√ √		1	4	4	1	4			
	XGT/XGI series (Ethernet) A series link	√ √	↓ ↓		~	↓ ↓	4	4	1	√ ⁷²			
	A series CPU		~	√ √	~	1	1	4	~	1			
	A series (OPCN-1) QnA series link	√	√	1		√ " √	√ "1 √	1	√ "1 √	√ " √			
	QnA series CPU	~		~		1	1	~	1	1			
	QnA series (Ethernet) QnH (Q) series link	√ √	√ √	~		√ √	√ √		1	√ ² √			
	QnH (A) series CPU	~	· · · · · ·	1		√ 3	√ "3		√ "4	√ ^{*4}			
IITSUBISHI ELECTRIC	QnH (Q) series CPU QnU series CPU	4		√ √		√ √	4	4	1	4			
	Q00J/00/01 CPU			1				· · · · · · · · · · · · · · · · · · ·		√ √ ⁷ 2			
	QnH (Q) series (Ethernet) QnH (Q) series link (multi CPU)	~	~	√		~	~	~	1	1			
	QnH (Q) series (multi CPU) (Ethernet)	1	~			↓ ↓	4		1	√ ¹²			
		.1		./									
	QnH (Q) series (PU (multi CPU) QnH (Q) series (Ethernet ASCII) QnH (Q) series (multi CPU) (Ethernet ASCII)		✓ ✓	1						√ ²			

Manufacturer	Models		Connec 1:n Multi-drop	tion form n : 1 Multi-link2	n : 1 Multi-link	V9	C TS2060i	Compatible mode	V8i	V		
	QnU series (multi CPU) (built-in Ethernet)	4	↓ ↓	4			4	4				
	L series (built-in Ethernet)	~	~			~	~		~			
	L series CPU A series (CC-LINK)	~		1		√ √ 1	√ √ "1	1	√ "1			
	QnA series (CC-LINK) QnH (Q) series (CC-LINK)					√ "I	√ "I		√ "1 √ "1			
	FX series CPU	~		~		√ "3	√ "3		√ *4			
	FX2N/1N series CPU FX1S series CPU	1		1		1	1	1	1			
MITSUBISHI ELECTRIC	FX series link (A protocol)	1	~	~	~			1	1			
	FX-3U/3UC/3G series CPU FX-3U/3GE series (Ethernet)	1	~	~		1	~	1	1			
	FX-3U/3UC/3UG series link (A protocol) FX-5U/5UC series	1	1	1	~	1	1	1	1			
	FX-5U/5UC series (Ethernet)	1	1			1	1		1			
	A-link + Net10 Q170MCPU (multi CPU)	√	~	√		4	√ √	4	1			
	Q170 series (multi CPU) (Ethernet) iQ-R series (Built-in Ethernet)	4	4			4	1		1			
	iQ-R series link	~	1	~		~	~	~	1			
MODICON	IQ-R series (Ethernet) MODBUS RTU	1	~	1		1	1	~				
MOELLER	PS4	1		1		~	~	1	1			
	SYSMAC C SYSMAC C (OPCN-1)	~	~	1	~	√ √ "1	√ √ "1	1	√ *1			
	SYSMAC CV SYSMAC CS1/CJ1/CJ2	1	1	1	1	1	1	1	1			
OMRON	SYSMAC CS1/CJ1/CJ2 DNA	4	√ √	~		√ √	1	√ √	1			
	SYSMAC CS1/CJ1/CJ2 (Ethernet) SYSMAC CS1/CJ1/CJ2 (Ethernet Auto)	1	1			1	1		1			
	SYSMAC CS1/CJ1/CJ2 DNA (Ethernet)	1	1			~	1		1			
	NJ Series (EtherNet/IP) FP series (RS232C/422)	4	√ √	1	~	4	1	√	1			
	FP series (TCP/IP)	~	~			1	~		1			
Panasonic	FP series (UDP/IP) FP-X (TCP/IP)	1	√ √			↓ ↓	1		~			
Panasonic RS Automation SAIA SAMSUNG	FP7 series (RS232C/422) FP7 series (Ethernet)	4	√ √	1		4	↓ ↓	1	1			
	NX7/NX Plus series (70P/700P/CCU+)	1	1	~	~	~	~	~	1			
RS Automation	N7/NX series (70/700/750/CCU) NX700 series (Ethernet)	1	√ √	~	~	1	1	~	1	-		
NS Automation	X8 series	1	~	1	~	1	1	1	1			
SAIA	X8 series (Ethernet) PCD	↓ ↓	√ √	√		↓ ↓	√ √	√	1			
JAIM	PCD S-BUS (Ethernet) SPC series	4	√ √	1	1	4	1		1			
SAMSUNG	N_plus	1	1	1	~	~	1	1	1			
	SECNET JW series	1	√ √	1	√ √	1	1	1	1			
	JW100/70H COM port	~	~	1	~	1	~	1	~			
SHARP	JW20 COM port JW series (Ethernet)	1	√ √	1	~	4	1	1	1			
	JW300 series	~	~	~	~	1	1	~	~			
	JW311/312/321/322 series (Ethernet) JW331/332/341/342/352/362 series (Ethernet)	√ √			√ √	√ √		1				
	S5 PG port S7	1	~			1	1	1	1			
	S7-200 PPI	~	-	~	~	~	~	√ √	1			
	S7-200 (Ethernet ISOTCP) S7-300/400 MPI	1				1	1		1			
Siemens	S7-300/400 (Ethernet ISOTCP)	1	1			~	1		1			
	S7-300/400 (Ethernet TCP/IP PG Protocol) S7-1200/1500 (Ethernet ISOTCP)	1	√ √			1	1		√ √			
	S7 PROFIBUS-DP T1500/505					√ "I ✓	√ *1 √	4	√ "1	-		
	TI500/505 V4 Compatible	√ √	~	√ √		~	~	~	1			
SINFONIA TECHNOLOGY TECO	SELMART TP-03 (MODBUS RTU)	1	1	1	~	1	1	1	1			
Telemecanique	TSX Micro	×	· ·	• •	~	~	1	~	1			
	T series /V series (T compatible) T series /V series (T compatible) (Ethernet UDP/IP)	1	√ √	~	~	1	1	~	1			
Siemens SINFONIA TECHNOLOGY TECO Telemecanique TOSHIBA	EX series	1	1	~		~	~	~	1			
TOSHIBA MACHINE	nv series (Ethernet UDP/IP) TC200	1	√ √	~		√ √	1	√	√ √			
	µGPCsx (OPCN-1)					√ "I	√ "I		√ "1 √ "1			
MITSUBISHI ELECTRIC MODICON MOELLER OMRON Panasonic RS Automation SAIA SAMSUNG SHARP Siemens SinFONIA TECHNOLOGY TECO TOSHIBA TOSHIBA MACHINE TOYO DENKI TUTCK UITRONICS VIGOR WAGO XINJE Yaskawa Electric SS-Smart Software Solutic	μGPCsx (SX bus) μGPCsx series	~		~		√ " √	√ *1 √	~	√ "1 √			
	μGPCsx CPU μGPCsx series (Ethernet)	1		1		- J - J	1	~	1			
Turck	BL series Distributed I/O (MODBUS TCP/IP)	1	√ √			~	~		1			
Ultra Instruments	UIC CPU (MODBUS ASCII) M90/M91/Vision series (ASCII)	1	4	1		1	1	1	1			
UNITRONICS	Vision series (ASCII Ethernet TCP/IP)	1	1			~	~		1			
	M series 750 series (MODBUS RTU)	4	√ √	1		1	1	4	1			
	750 series (MODBUS Ethernet)	1	1			1	1		~			
AINJE	XC series (MODBUS RTU) Memobus	√ √	4	√ √		√ √	√ √	√ √	V8i J			
	CP9200SH/MP900	1	√ √	1		4	↓ ↓	1	1			
	MP2300 (MODBUS TCP/IP) CP MP expansion memobus (UDP/IP)	1	1			1	~		1			
Yaskawa Electric	MP2000 series MP2000 series (UDP/IP)	4	√ √	1		↓ ↓	√ √	1	V8i V <t< td=""><td></td></t<>			
	MP3000 series	~	1	~		~	~	~				
	MP3000 series (Ethernet UDP/IP) MP3000 series expansion memobus (Ethernet)	4	√ √			↓ ↓	1					
	FA-M3	1	1	1	1	~	~	1	1			
	FA-M3R FA-M3/FA-M3R (Ethernet UDP/IP)	√ √	√ √	~	~	1	1	~				
Vokogowa Flastria	FA-M3/FA-M3R (Ethernet UDP/IP ASCII)	~	~			~	~		1			
токоgawa Electric	FA-M3/FA-M3R (Ethernet TCP/IP) FA-M3/FA-M3R (Ethernet TCP/IP ASCII)	√ √	√ √			1	1					
	FA-M3V	1	~	1	~	1	~	1	1			
	FA-M3V (Ethernet) FA-M3V (Ethernet ASCII)	√ √	√ √			√ √	√ √					
3S-Smart Software Solutions	CODESYS V3 (Ethernet)	~	~			1						
	Universal serial FL-Net	√	1			√ √ "1	√ √ *1	~				
	PROFIBUS-DP					√ "1	√ *1		√ "1			
	DeviceNet EtherCAT					√ " √ "	√ "		√ 1			
Others	Without PLC Connection					~	1	1				
	MODBUS RTU MODBUS RTU EXT Format	4	√ √	1		√ √	√ √	√ √	1			
	MODBUS TCP/IP (Ethernet)	1	1			~	1		1			
	MODBUS TCP/IP (Ethernet) Sub Station MODBUS TCP/IP (Ethernet) EXT Format	1	√ √			1	1		1			

¹¹ For V9 and TS2060i, 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 and TS2060i, an optional unit *DUR-00* is required. *4 For V806, an optional unit *DU (N)-10* is required. *5 An optional unit *DUR-00* is required when connecting V907xW, V906, or TS2060i using RS-232C. *6 RS-232C connection is not supported. *7 An optional unit *DU (N)-10* is required when connecting V806 using RS-232C.

Temperature Controller / Servo / Inverter Connection - Summary

			Connect	tion form		Compatible models						
Manufacturer	Models		1:n Multi-drop	n : 1 Multi-link2	n : 1 Multi-link	V9	TS2060i	TS2060	V8i	V8		
	PYX (MODBUS RTU)	~	√	√		~	√	√	~	√		
	PXR (MODBUS RTU)	1	~	~		~	~	~	~	~		
	PXF (MODBUS RTU)	✓ ✓	✓ ✓	1		1				√ √		
	PXG (MODBUS RTU) PXH (MODBUS RTU)	~	✓ ✓	√ √		√ √				✓ ✓		
	PUM (MODBUS RTU)	~	√ √	~		~				√ 		
	F-MPC04P (loader)	~	~	~		~	~	~	~	1		
	F-MPC series/FePSU	~	~	~		~	~	~	~	~		
	FVR-E11S	~	~	~		~	~	~	~	~		
	FVR-E11S (MODBUS RTU)	~	~	~		~				√		
	FVR-C11S (MODBUS RTU) FRENIC5000 G11S/P11S	√ √	√ √	√ √		√ √				√ √		
	FRENIC5000 G11S/P11S (MODBUS RTU)	~	v √	~		~						
	FRENIC5000 VG7S (MODBUS RTU)	~	~	~		~	~	~	~	√		
	FRENIC-Ace (MODBUS RTU)	~	~	~		~	~	~	~	~		
	FRENIC-Eco (MODBUS RTU)	~	~	~		~	~	~	~	~		
	FRENIC-HVAC/AQUA (MODBUS RTU)	~	~	~		~				~		
	FRENIC-MEGA (MODBUS RTU)	√ √	√ √	1		√ √				√ √		
	FRENIC-MEGA SERVO (MODBUS RTU) FRENIC-Mini (MODBUS RTU)	~	✓ ✓	1		~				✓ ✓		
Fuji Electric	FRENIC-Multi (MODBUS RTU)	· ·	· ·									
	FRENIC-VG1 (MODBUS RTU)	~	1	~		~	1	√	√	1		
	FRENIC series (loader)	~	~	~		~	~	√	√	~		
	HFR-C9K	~	~	~		~	~	~	~	~		
	HFR-C11K	1	~	~		1	√	√ 	√	1		
	HFR-K1K PPMC (MODBUS RTU)	√ √	√ √	1		√ √				√ √		
	PPMC (MODBUS RTU) FALDIC-a series	√ √	~	1		1				1		
	FALDIC-d series	✓ ✓	√ √	✓ ✓		√ √	√ √	√ √	√ √	√ √		
	PH series	~	~	1		~	~	~	~	~		
	PHR (MODBUS RTU)	~	~	~		~	~	~	~	~		
	WA5000	~	~	~		~	~	√	~	~		
	APR-N (MODBUS RTU)	√	√	~		~	√	√ 	√	1		
	ALPHA5 (MODBUS RTU) ALPHA5 Smart (MODBUS RTU)	√ √	√ √	√ √		۰ ۰				1		
	ALPHAS Smart (MODBUS RTU)	~	~	√ √		~				√ √		
	WE1MA (Ver. A)(MODBUS RTU)	√	· ·					· ·	· ·			
	WE1MA (Ver. B)(MODBUS RTU)	√	~	~		~	~	√	√	1		
	WSZ series	~	~	~		~	~	~	~	~		
	WSZ series (Ethernet)	~	~			~	~		~			
Agilent	4263 series	√		~		~				~		
ASAHI ENGINEERING	Stepping Motor SDC10	√ √	~	√ √		~				√ √		
	SDC15	v √	v √	√ √		~				√ √		
	SDC20		~	-		-	~	√		- -		
	SDC21	~	~	~		~	~	~	~	~		
	SDC25/26	~	~	~		~	~	~	~	~		
	SDC30/31	~	~	~		~				~		
	SDC35/36	√ √	√ √	1		1				√ (
	SDC45/46 SDC40A	~	✓ ✓	✓ ✓		~				1 1		
Azbil	SDC40A SDC40G	~	~	~		~						
	DMC10	~	~	~		~	~	~	~	~		
	DMC50 (COM)	~	~	~		~	~	√	~	~		
	AHC2001	~	~	~		~	~	√	~	~		
	AHC2001+DCP31/32	~	~	~		~				~		
	DCP31/32 NX (CPL)	√ √	✓ ✓	√ √		1				√ √		
	NX (MODBUS RTU)	✓ ✓	✓ ✓	√ √		✓ ✓				✓ ✓		
	NX (MODBUS TCP/IP)	1	~	-		1	~		1	-		
440	AD4402 (MODBUS RTU)	~	~	~		~	~	~	~	~		
A&D	AD4404 (MODBUS RTU)	~	~	~		~	~	~	~	~		
Banner	Presence PLUS (Ethernet/IP (TCP/IP))	~	√ 			√	√ 		√ 			
Bosh Rexroth	Indra Drive		1			1				1		
	LT400 series (MODBUS RTU) DP1000	√ √	√ √	√ √		√ √				√ √		
	DB1000B (MODBUS RTU)	↓ ↓	 ✓	↓ ↓		↓ ↓	 ✓	v √	v √	↓ ↓		
CHINO	KR2000 (MODBUS RTU)	~	~	1		~	~	√ 	~	1		
	LT230 (MODBUS RTU)	~	~	~		~	~	~	~	~		
	LT300 (MODBUS RTU)	~	~	~		~	~	~	~	~		
	LT830 (MODBUS RTU)	~	~	~		~	~	√ 	~	~		
DELTA TAU DATA SYSTEMS	PMAC PMAC (Ethernet TCP/IP)	√ √	~	~		√ √		~		√		
	PMAC (Ethernet TCP/IP) TTC2100	~	~	~		~		1		1		
Gammaflux	G24 (Ethernet TCP/IP)	v √	v √			v √	TS20601TS20801TS20801TS2080VBI33333333333433333333333433333433333533333533333633333633333633333633333733333733333733333733333833333933333933333933333933333933333933333933333933333933333933333933333933 <td></td>					
Hitachi Industrial	SJ300 series	~	1	~		1		√		~		
Equipment Systems	SJ700 series	~	~	~		~				~		
	X-SEL controller	~	~	~		~				√		
IAI	ROBO CYLINDER (RCP2/ERC)	√ √	√ √	√ √		√ √				√ √		
	ROBO CYLINDER (RCS/E-CON) PCON/ACON/SCON (MODBUS RTU)	√ √	✓ ✓	✓ ✓		✓ ✓				✓ ✓		
KEYENCE	DL-RS1A (SK-1000)	v √		√ √		↓ ↓				√ √		
Koatsu Gas Kogyo	R-BLT	~	~			~				√		
	IBFL-TC	~	~	~		~				√		
KOGANEI		~		~		~	~		~			
	Servo Drive 9400 (Ethernet TCP/IP)		~	1		1				√		
	Servo Drive 9400 (Ethernet TCP/IP) FR-*500	~				~				1		
	FR-*500 FR-V500	~	~	~								
KOGANEI Lenze	FR-'500 FR-V500 MR-J2S-'A	√ √	~	~		~	~	~	~	√		
	FR-*500 FR-V500 MR-J2S-*A MR-J2S-*CL	√ √ √	√ √	√ √		√ √	√ √	√ √	√ √	√ √		
Lenze	FR-'500 FR-V500 MR-J2S-'A MR-J2S-'CL MR-J3-'A	√ √ √ √	√ √ √	√ √ √		√ √ √	√ √ √	√ √ √	√ √ √	1 1 1		
Lenze	FR-'500 FR-V500 MR-J2S-'A MR-J2S-'CL MR-J3-'A MR-J3-'T	√ √ √	√ √	√ √		√ √		イ イ イ イ	イ イ イ イ	√ √		
Lenze	FR-'500 FR-V500 MR-J2S-'A MR-J2S-'CL MR-J3-'A	\ \ \ \ \ \ \ \ \ \		ノ ノ ノ ノ ノ		ノ ノ ノ ノ	イ イ イ イ イ イ	イ イ イ イ イ	ノ イ イ イ イ イ イ イ イ イ イ イ イ イ	1 1 1 1 1		

		Connection form Compatible models								
Manufacturer	Models	1:1	1:n Multi-drop	n : 1 Multi-link2	n : 1 Multi-link	V9	TS2060i	TS2060	V8i	,
M-SYSTEM	R1M series (MODBUS RTU)	~	~	~		√	~	~	~	
NITTOKU	ITS-HRW110	\checkmark	~	~		~	~	~	~	
	E5AK	~	~	~		~	~	~	~	
	E5AK-T	~	~	~		~	~	~	~	
	E5AN/E5EN/E5GN	~	~	~		~	~	~	~	
	E5AR/E5ER	√	~	√		√	√	~	~	
	E5CC/E5EC/E5AC/E5DC/E5GC	~	~	~		1	~	~	√ 	
	E5CK E5CK-T	۲ ۲	√ √	1 1		√ √	√	√	√ 	
	ESCN-HT		~	√ √		~	√ √	√ √	√ √	-
OMRON	ESEK	 √	~	v √		~	~	~	v √	-
	ESZD	~	~	· √		~	1	~	~	
	ESZE	~	~	- -		~	~		· ·	
	E5ZN	~	~	~		~	~	~	~	
	V600/620/680	~	~	~		~	~	~	~	
	KM20	~	~	~		~	~	~	~	
	KM100	\checkmark	~	~		~	~	~	~	
	V680S (Ethernet TCP/IP)	\checkmark	~			~	~		~	
	EJ1	~	~	~		~	~	~	~	
Oriental Motor	High-efficiency AR series (MODBUS RTU)	~	~	~		~	~	~	√	
	CRK series (MODBUS RTU)	~	~	~		~	~	~	~	
Danagania	LP-400	√ /		1		1	~	~	√ /	
Panasonic	KW series	۲ ۲	√ √	√ √		√ √	√ √	1	√ ./	
	MINAS A4 series SR-Mini (MODBUS RTU)	√ √	~	√ √		√ √	~	√ √	√ √	
	CB100/CB400/CB500/CB700/CB900 (MODBUS RTU)	√ √	√ √	√ √		~	√ √	~	~	
	SR-Mini (Standard Protocol)	√ √	~	√ √		~	~	~	~	
	REX-F400/F700/F900 (Standard Protocol)	~	~	√ 		~	~	~	~	
RKC	REX-F9000 (Standard Protocol)		~	~		~	~	~	√ √	
	SRV (MODBUS RTU)	√	~	√		~	~	~	~	
	MA900/MA901 (MODBUS RTU)	~	~	~		~	~	~	~	
	SRZ (MODBUS RTU)	\checkmark	~	~		~	~	~	~	
	FB100/FB400/FB900 (MODBUS RTU)	\checkmark	~	~		~	~	~	~	
RS Automation	CSD5 (MODBUS RTU)	\checkmark	~	~		~	~	~	~	
	Moscon-F50 (MODBUS RTU)	~	~	~		~	~	~	~	
SANMEI	Cuty Axis	~	~	~		~	~	~	~	
SanRex	DC AUTO (HKD type)	~	~	~		~	~	~	~	
SHARP	DS-30D	\checkmark	~	~		~	~	~	~	
	DS-32D	~	~	~		~	~	~	~	
SHIMADEN	SHIMADEN standard protocol	1	~	1		~	~	~	✓ ✓	
	C series	۲ ۲	√ √			√ √	√ √	√ √	√ √	-
	FC series GC series	√ √	✓ ✓	√ √		~	~	~	~	
	DCL-33A	√ √	~	√ √		~	~	~	~	
	JCx-300 series	√	-	- -		~	~	~	~	
SHINKO TECHNOS	PC-900	~	~	- 		1	1	~	~	
	PCD-33A	~	~	~		~	~	~	~	
	ACS-13A	~	~	~		~	~	~	~	
	ACD/ACR series	~	~	~		~	~	~	~	
	WCL-13A	~	~	~		~	~	~	~	
Siemens	S120 (Ethernet ISOTCP)	~	~			~	~		~	
SUS	XA-A*	~		~		~	~	~	~	
	TTM-000	~	~	~		~	~	~	~	
ТОНО	TTM-00BT	~	~	1		~	~	~	~	
	TTM-200 (MODBUS RTU)	~	~	~		~	~	~	~	
Tokyo Chokoku Marking Products	MB3315/1010	\checkmark				~	~	~	~	
	VF-S7	~	~	~		~	~	~	~	
	VF-S9	√	1	√		1	1	~	~	
	VF-S11	~	~	1		~	~	~	~	
	VF-S15	~	~	~		~	~	~	~	
	VF-A7	\checkmark	~	~		~	~	~	~	
TOSHIBA	VF-AS1	\checkmark	~	~		~	~	~	~	
	VF-P7	\checkmark	~	~		~	~	~	~	
	VF-PS1	~	~	1		~	~	~	~	
	VF-FS1	~	~	1		1	~	√	√ 	-
	VF-MB1	1	1	1		1	1	√ /	√ √	
	VF-nC1	√ 	1	√ (1	1	√ /	√ /	
TOSHIBA MACHINE	VF-nC3 VELCONIC series	√	√ √	√		√ √	√ √	√ √	✓ ✓	
ULVAC	VELCONIC series	1	~	1		~	~	~	✓ ✓	
ULVAU	G-TRAN series F340A	√ √	~	√ √		√ √	~	√ √	✓ ✓	
	F340A F371	~	~	√ √		~	~	~	✓ ✓	
UNIPULSE	F371 F800	√ √	~	√ √		~	~	~	~	
	F720A	~	~	√ 		~	~	~	v √	
	F805A	√	· ~	~		~	· ·	· ·	· ·	
YAMAHA	RCX142	√		√		~	~	√	~	
Yaskawa Electric	DX200 (High-Speed Ethernet)	~	~			~	~		~	
Laskawa Electric	UT100	√	1	~		~	~	~	√	
	UT750	~	~	~		~	~	~	~	
	UT550	~	~	~		~	~	~	~	
	UT520	~	~	~		~	~	~	~	
	UT350	\checkmark	~	~		~	~	~	~	
Yokogawa Electric	UT320	\checkmark	~	~		~	~	~	~	
.o.oyuma Litotiilo	UT2400/2800	\checkmark	~	~		~	~	~	~	
	UT450	~	~	~		~	~	~	~	
	UT32A/35A (MODBUS RTU)	\checkmark	~	~		~	~	~	~	
	UT52A/55A (MODBUS RTU)	~	~	~		~	~	~	~	
	UT75A (MODBUS RTU)	~	1	~		1	1	~	√	
	µR10000/20000 (Ethernet TCP/IP)	√	~			1	~		~	-
	MODBUS RTU	~	1	~		1	√	1	✓	· ·

*1 A communication unit "CU (N)-03-x" is required. It does not support TCP/IP connection.

Worldwide service network for trouble-free

FAX

TEL

TEL. +81-76-274-2144 FAX. +81-76-274-5136

E-mail

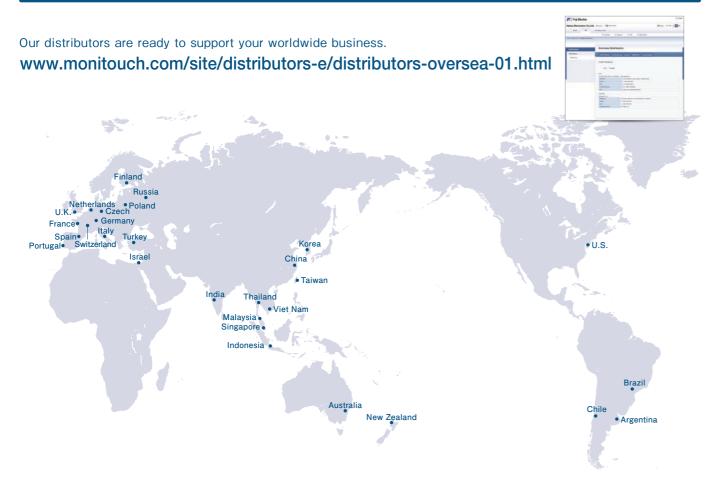
sales@hakko-elec.co.jp

WEB

www.monitouch.com







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.

distributor from which you purchased the product, or Fuji Electric / Hakko Electronics for further information. management and maintenance of the product prior to accepting it.

1 Period and Coverage of the Warranty

1-1 Period

1-2 Coverage

- the warranty does not apply to the following cases:
- 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.
- 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.

2 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.

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

4 Deliverv

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.

5 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.

6 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.

- The purpose or area of use may be limited, and a routine checkup may be required depending on the product. Please contact the
- Please conduct inspection of the product promptly upon purchase or delivery. Also, please give sufficient consideration to

(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) 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,

1) The malfunction occurs due to inappropriate conditions, environment, handling or usage that is not specified in the catalog,

6) The malfunction occurs due to factors that were not foreseeable by the practical application of science and technology at

▲ 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

Sales company : Fuji Electric Co.,Ltd.

URL : www.fujielectric.com Gate City Ohsaki, East Tower, 11-2, Osaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan Phone: +81-3-5435-7066 Fax:+81-3-5435-7475

Manufacturer : Hakko Electronics Co., Ltd.

URL : www.monitouch.com 890-1 Kamikashiwano-machi. Hakusan, Ishikawa 924-0035, Japan Phone: +81-76-274-2144 Fax:+81-76-274-5136 E-mail : sales@hakko-elec.co.jp





- Product specifications and design are subject to modification.
 Combined images are used for the screen images.
 Product colors may differ from colors in brochure photos due to printing.
 - * Microsoft and Windows are trademarks of Microsoft (USA) in the U.S. and other countries. * Other company and product names in this brochure are registered trademarks.

www.monitouch.fujielectric.com/site/v9-e/