International edition 6/2008

e-Front runners

MONITOUCH

V8 series

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Expanding the Possibilities of the Future

Hakko Electronics Co., Ltd.

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MONITOUCH V8 series

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

Realize the Ideal

High Performance

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

Connectivity

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

Usability

User-friendly component parts and functional switches enable simple and speedy display configuration.

Our wide range of products allows you to select the one that best fits your needs.

TFT Display device　SVGA Display resolution　64K Color Display color

		15.0 inches	12.1 inches	10.4 inches		8.4 inches	7.7 inches	5.7 inches		
NEW V8 series Revolutionary features for production sites: 8-way communication and 16-million colors high-resolution video display. As well as V8 series have the same panel cutouts as V7 series, the V7 screen program can be utilized in V8 series. A multi-feature model with the ultimate operator interface panel.	High-performance model	V815iX  TFT XGA 64K Color To be released in autumn 2008	V812iS/V812S  TFT SVGA 64K Color	V810iS/V810S  TFT SVGA 64K Color	V810iT/V810T  TFT VGA 64K Color	V808iSD/ V808SD  TFT SVGA 64K Color				
	Standard model				V810iC/V810C  TFT VGA 64K Color	V808iCD/ V808CD  TFT VGA 64K Color	V808iCH/ V808CH  TFT VGA 64K Color To be released in winter 2008	V806iTD/ V806TD  TFT QVGA 64K Color	V806iCD/ V806CD  STN QVGA 64K Color	V806iMD/ V806MD  STN QVGA MONO
V7 series Comes in a variety of models including large-size (15-inch XGA) and small-size (5.7-inch). A versatile and high-ranking series that can be widely used ranging from the net working to stand-alone.	High-performance model	V715X  TFT XGA 32K Color	V712iS/V712S  TFT SVGA 32K Color	V710iS/V710S  TFT SVGA 32K Color	V710iT/V710T  TFT VGA 32K Color	V708iSD/ V708SD  TFT SVGA 32K Color				
	Standard model				V710C  TFT VGA 128 Color		V708CD  STN VGA 128 Color	V706TD  TFT QVGA 32K Color	V706CD  STN QVGA 32K Color	V706MD  STN QVGA MONO
V6 series Has all of the basic functions. Entry-level models that will satisfy your needs in superior usability and cost-effectiveness.	Standard model					8.9 inches V609E  EL 640 × 400 2 Color	V608CH  STN VGA 128 Color	V606eC  STN QVGA 16 Color	V606eM  STN QVGA MONO	

V812 series

One of the flagship models in V8 series offers you the highest level of performance.

12.1-inch model CE cULus *3

High-performance model SVGA 65,536 colors

S

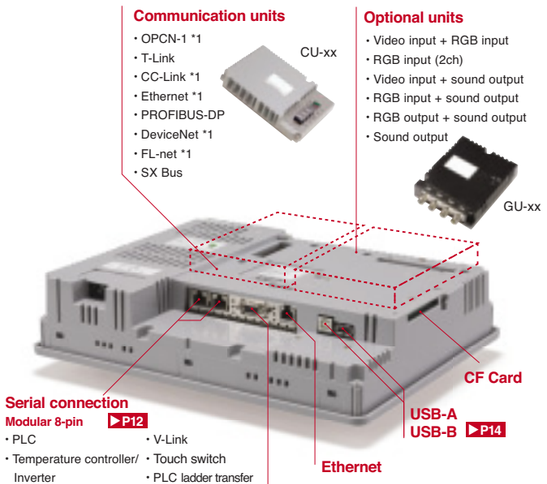
12.1 inches | TFT | SVGA | 64K color | 12.5M FROM | 512K SRAM | 3ch serial | COM I/F | CF | A•B USB

With Ethernet port
V812iS Ether option | RGB option | option

AC power	Analog	V812iS	
DC power	Analog	V812iSD	
AC power	Matrix	V812iSM	
DC power	Matrix	V812iSMD	

Without Ethernet port
V812S Ether option

AC power	Analog	V812S	
DC power	Analog	V812SD	
AC power	Matrix	V812SM	
DC power	Matrix	V812SMD	



Model	V812iS	V812S
Display size	12.1 inches	
Display device	TFT color LCD	
Resolution	800×600 dots	
Display colors	65,536 colors(without blinks) 32,768 colors(with blinks)	
Display memory	FROM (12.5MB)	
Backup memory	SRAM (512KB)	
Ethernet	100BASE-TX /10BASE-T Built-in	Option*1 (CU-03-3)
Communication I/F	Equipped	
Expansion I/F	Equipped	–
CF card I/F	Equipped	
USB I/F	Type A and B(Ver1.1)	
Options: Video (4ch)	GU-00	–
Options: RGB input	GU-01	–
Options: RGB output	GU-02	–
Options: Video (2ch)+RGB input	GU-10	–
Options: RGB input (2ch)	GU-11	–
Options: Sound output	GU-00 ~ 03	–
Options: Communication unit	CU-00 ~ 08	
Options: I/O unit	V-I/O	
Serial interface: D-Sub 9-pin CN1	RS-232C, RS-422/485, Asynchronous Data length: 7 bits, 8 bits, Parity: even, odd, none Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500bps*2	
Serial interface: Modular 8-pin MJ1/MJ2	RS-232C • RS-422/485(2-wire), Asynchronous Data length: 7 bits, 8 bits Parity: even, odd, none Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200	
Compatibility: CE Marking*3	EN61000-6-2, EN61000-6-4	
Compatibility: UL/cUL*3	UL508, UL1604(Class1,Division2)	
Compatibility: RoHS directive	Complied	

*1 Under development
*2 When connected with SIEMENS MPI
*3 Only with 24V DC models

V810 series

High-performance panels in 65,536 colors Three grades of models from standard to highly functional

10.4-inch model CE cULus *3

High-performance model SVGA

S

10.4 inches | TFT | SVGA | 64K color | 12.5M FROM | 512K SRAM | 3ch serial | COM I/F | CF | A•B USB

With Ethernet port
V810iS Ether option | RGB option | option

AC power	Analog	V810iS
DC power	Analog	V810iSD

Without Ethernet port
V810S Ether option

AC power	Analog	V810S
DC power	Analog	V810SD

Highly-functional model VGA

T

10.4 inches | TFT | VGA | 64K color | 12.5M FROM | 512K SRAM | 3ch serial | COM I/F | CF | A•B USB

With Ethernet port
V810iT Ether option | RGB option | option

AC power	Analog	V810iT	AC power	Matrix	V810iTM
DC power	Analog	V810iTD	DC power	Matrix	V810iTMD

Without Ethernet port
V810T Ether option

AC power	Analog	V810T	AC power	Matrix	V810TM
DC power	Analog	V810TD	DC power	Matrix	V810TMD

Standard model VGA

C

10.4 inches | TFT | VGA | 64K color | 12.5M FROM | 512K SRAM | 3ch serial | COM I/F | CF | A•B USB

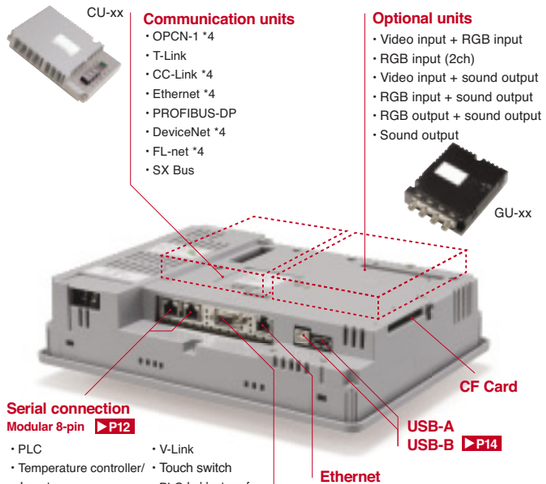
With Ethernet port
V810iC Ether

AC power	Analog	V810iC	AC power	Matrix	V810iCM
DC power	Analog	V810iCD	DC power	Matrix	V810iCMD

Without Ethernet port
V810C*1 Ether option

AC power	Analog	V810C	AC power	Matrix	V810CM
DC power	Analog	V810CD	DC power	Matrix	V810CMD

*1 FROM 4.5Mbytes • SRAM 128Kbytes



Model	V810iS	V810S	V810iT	V810T	V810iC	V810C
Display size	10.4 inches					
Display device	TFT color LCD					
Resolution	800×600 dots	640×480 dots				
Display colors	65,536 colors(without blinks) / 32,768 colors(with blinks)					
Display memory	FROM (12.5MB)					FROM (4.5MB)
Backup memory	SRAM (512KB)					SRAM (128KB)
Ethernet	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *4	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *4	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *4
Communication I/F	Equipped					
Expansion I/F	Equipped	–	Equipped	–	–	–
CF card I/F	Equipped					
USB I/F	Type A and B(Ver1.1)					
Options: Video (4ch)	GU-00	–	GU-00	–	–	–
Options: RGB input	GU-01	–	GU-01	–	–	–
Options: RGB output	GU-02	–	GU-02	–	–	–
Options: Video (2ch)+RGB input	GU-10	–	GU-10	–	–	–
Options: RGB input (2ch)	GU-11	–	GU-11	–	–	–
Options: Sound output	GU-00 ~ 03	–	GU-00 ~ 03	–	–	–
Options: Communication unit	CU-00~08					
Options: I/O unit	V-I/O					
Serial interface: D-Sub 9-pin CN1	RS-232C, RS-422/485, Asynchronous Data length: 7 bits, 8 bits, Parity: even, odd, none Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500bps*2					
Serial interface: Modular 8-pin MJ1/MJ2	RS-232C • RS-422/485(2-wire), Asynchronous Data length: 7 bits, 8 bits Parity: even, odd, none Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200					
Compatibility: CE Marking*3	EN61000-6-2, EN61000-6-4					
Compatibility: UL/cUL*3	UL508, UL1604(Class1,Division2)					
Compatibility: RoHS directive	Complied					

*2 When connected with SIEMENS MPI, *3 Only with 24V DC models
*4 Under development

Legend of icons

12.1 inches Display size (inches) | TFT Display device | SVGA Display resolution | 64K color Display colors | 12.5M FROM FROM capacity | 512K SRAM SRAM (byte) | 3ch serial Serial port | Ether Ethernet 100BASE-TX/10BASE-T | COM I/F Communication unit I/F | CF CF card I/F | A•B USB USB I/F | AC power Power Supply | Analog Matrix Analog switch / Matrix switch | option Video input | RGB option RGB input/output | option Sound output | option Option

V808 series

Compact yet functional panels in 65,536 colors. SVGA models are also available.

8.4-inch model

High-performance model SVGA

S

8.4 inches | TFT | SVGA | 64K color | 12.5M FROM | 512K SRAM | 3ch serial | COM I/F | CF | A•B USB | DC power | Analog

With Ethernet port
V808iSD Ether | CF option | RGB option | Sound output option

Without Ethernet port
V808SD Ether option

Standard model VGA

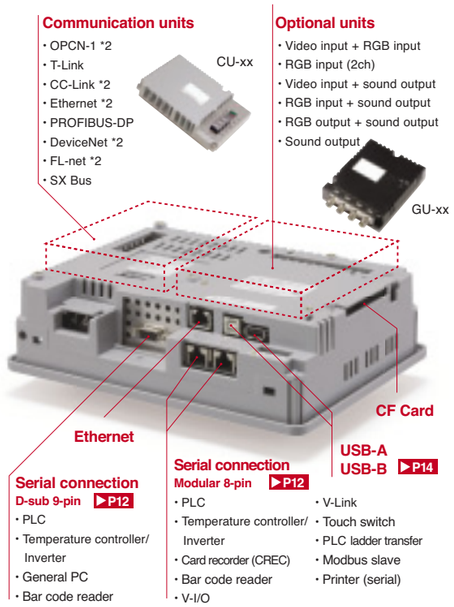
C

8.4 inches | TFT | VGA | 64K color | 12.5M FROM | 512K SRAM | 3ch serial | COM I/F | CF | A•B USB | DC power | Analog

With Ethernet port
V808iCD Ether

Without Ethernet port
V808CD*1 Ether option

*1 FROM 4.5Mbytes • SRAM 128Kbytes



Model	V808iSD	V808SD	V808iCD	V808CD
Display size	8.4 inches			
Display device	TFT color LCD			
Resolution	800×600 dots		640×480 dots	
Display colors	65,536 colors(without blinks) 32,768 colors(with blinks)			
Display memory	FROM (12.5MB)			FROM (4.5MB)
Backup memory	SRAM (512KB)			SRAM (128KB)
Ethernet	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *2	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *2
Communication I/F	Equipped			
Expansion I/F	Equipped	–	–	–
CF card I/F	Equipped			
USB I/F	Type A and B(Ver1.1)			
Options: Video (4ch)	GU-00	–	–	–
Options: RGB input	GU-01	–	–	–
Options: RGB output	GU-02	–	–	–
Options: Video (2ch)+RGB input	GU-10	–	–	–
Options: RGB input (2ch)	GU-11	–	–	–
Options: Sound output	GU-00 ~ 03	–	–	–
Options: Communication unit	CU-00 ~ 08			
Options: I/O unit	V-I/O			
Serial interface: D-Sub 9-pin CN1	RS-232C, RS-422/485, Asynchronous Data length: 7 bits, 8 bits, Parity: even, odd, none Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500bps*3			
Serial interface: Modular 8-pin MJ1/MJ2	RS-232C • RS-422/485(2-wire), Asynchronous Data length: 7 bits, 8 bits Parity: even, odd, none, Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200			
Compatibility: CE Marking	EN61000-6-2, EN61000-6-4			
Compatibility: UL/cUL	UL508, UL1604(Class1,Division2)			
Compatibility: RoHS directive	Complied			

*2 Under development *3 When connected with SIEMENS MPI

V806 series

High-performance compact models

5.7-inch model

Standard model QVGA 65,536 colors

T

5.7 inches | TFT | QVGA | 64K color | 4.5M FROM | 512K SRAM | 2ch serial | COM I/F | A•B USB | DC power | Analog

With Ethernet port
V806iTD Ether | CF option

Without Ethernet port
V806TD*1 Ether option

Standard model QVGA (16 grayscale)

C

5.7 inches | STN | QVGA | 64K color | 4.5M FROM | 512K SRAM | 2ch serial | COM I/F | A•B USB | DC power | Analog

With Ethernet port
V806iCD Ether | CF option

Without Ethernet port
V806CD*1 Ether option

Standard model QVGA (16 grayscale)

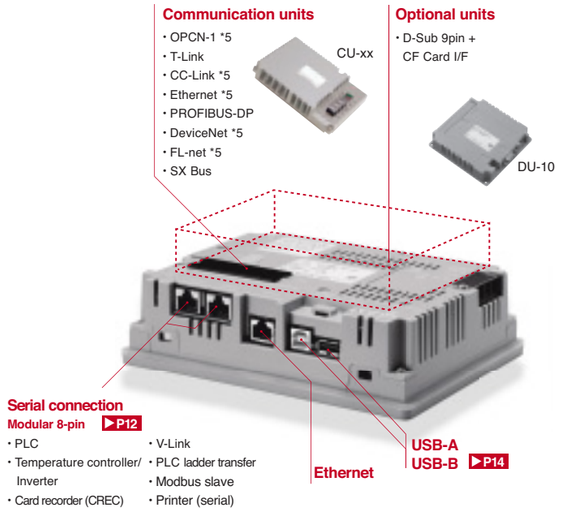
M

5.7 inches | STN | QVGA | MONO | 4.5M FROM | 512K SRAM | 2ch serial | COM I/F | A•B USB | DC power | Analog

With Ethernet port
V806iMD Ether | CF option

Without Ethernet port
V806MD*1 Ether option

*1 SRAM 128Kbytes



Model	V806iTD	V806TD	V806iCD	V806CD	V806iMD	V806MD
Display size	5.7 inches					
Display device	TFT color LCD		STN color LCD		STN monochrome LCD	
Resolution	320×240 dots					
Display colors	65,536 colors(without blinks) 32,768 colors(with blinks)				16 grayscale (with blinks)	
Display memory	FROM (4.5MB)					
Backup memory	SRAM (512KB)	SRAM (128KB)	SRAM (512KB)	SRAM (128KB)	SRAM (512KB)	SRAM (128KB)
Ethernet	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *5	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *5	100BASE-TX /10BASE-T Built-in	Option (CU-03-3) *5
Communication I/F	Equipped					
CF card I/F	Equipped *2					
USB I/F	Type A and B(Ver1.1)					
Options: Communication unit	CU-00~08					
Options: I/O unit	V-I/O					
Serial interface: D-Sub 9-pin CN1 *2	RS-232C, RS-422/485, Asynchronous Data length: 7 bits, 8 bits, Parity: even, odd, none Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200bps					
Serial interface: Modular 8-pin MJ1/MJ2	RS-232C • RS-422/485(2-wire) *3, Asynchronous Data length: 7 bits, 8 bits Parity: even, odd, none Stop bit: 1 bit, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500bps *3					
Compatibility: CE Marking *3	EN61000-6-2, EN61000-6-4					
Compatibility: UL/cUL *3	UL508, UL1604(Class1,Division2)					
Compatibility: RoHS directive	Complied					

*2 Available only when equipped with DU-10 (option)
*3 Available only when connected with SIEMENS MPI (MJ2 only). Not compatible with D-Sub 9-pin (option)
*4 MJ2 is connectable with RS-422 (4-wire)
*5 Under development

Legend of icons

12.1 inches Display size (inches) | TFT Display device | SVGA Display resolution | 64K color Display colors | 12.5M FROM FROM capacity | 512K SRAM SRAM (byte) | 3ch serial Serial port | Ether Ethernet 100BASE-TX/10BASE-T | COM I/F Communication unit I/F | CF CF card I/F | A•B USB USB I/F | AC power Power Supply | Analog Matrix Analog switch / Matrix switch | Video option Video input | RGB option RGB input/output | Sound option Sound output | Option Option

Display Features

Improved visibility for operator interface panels

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

High-resolution Display

The image shown below is not an actual display image.

65,536 colors*1
(32,768 colors with blinks)

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

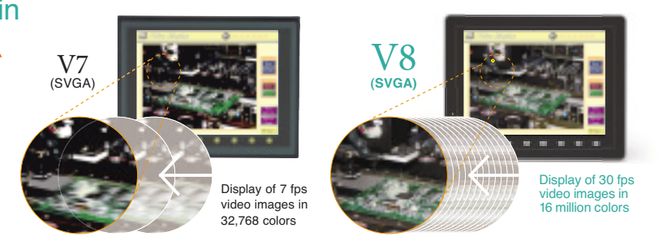
*1 Except V806iMD/V806MD

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

Display of 30 fps video images in 16 million colors*2

First in Industry

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



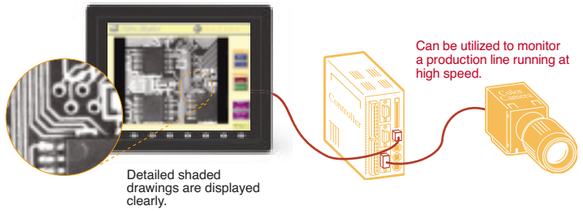
Monochrome display with 256 gradations*2

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

Locating the cause of trouble by monitoring with video

Motion picture facilitates locating the cause of trouble when it occurs.

Available in autumn 2008



*2 For V808iS, 260,000-color displays and 64-gradation monochrome displays are possible.

Clear and smooth letters

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

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

Language		Japanese	English/ European	Traditional Chinese	Simplified Chinese	Korean	Central European	Cyrillic	Greek	Turkish	Unicode(UTF-8)
Bitmap font	Non-gothic	● Japanese/Japanese32	●	●	●	●	●	●	●	●	●
	Gothic	● Gothic/Gothic (IBM extension)	● Gothic (Mincho)	×	×	×	×	×	×	×	×
Stroke font		●	●	●	●	●	●	●	●	●	

Operation Features

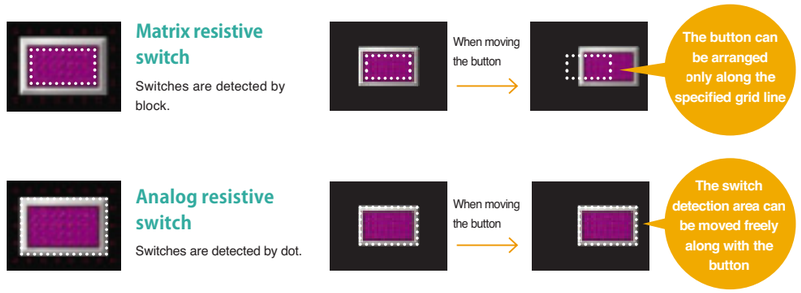
"User-oriented operationality" by high-speed and smooth display

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

Free switch layout with analog resistive switches

Analog resistive switch

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

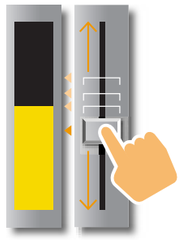


*The area outside the dotted lines is not detected.

Slider switch

Available in summer 2008

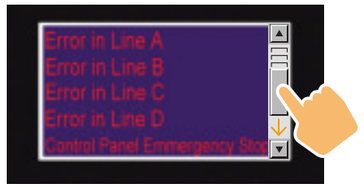
Slider switches enable data entry without inputting data using the numeral key pad. Values can be modified easily and quickly, even for a fine adjustment.



Scroll bar

Available in summer 2008

The desired item can be selected by the scroll bar in the same manner as with the Windows® operation system. This function is most suitable for alarm display.



Memo pad function

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

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

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

Speedy drawing

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

High-speed communication

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

Quick response

Switch response speed has been shortened by efficient data processing and task assignment.

Communication Features

Multi-communication using the gateway function

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

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

8-way communication

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

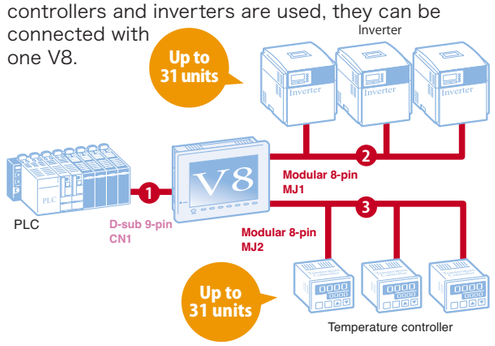
- Simultaneous communication and data transfer with eight kinds of devices
- Simultaneous monitoring and operation of multiple PLCs and peripherals
- Linkage between a V8 and various devices on the LAN network using the gateway function

Network Examples

Example 1 Serial connection (three ports)

Making a network linked with various automation devices

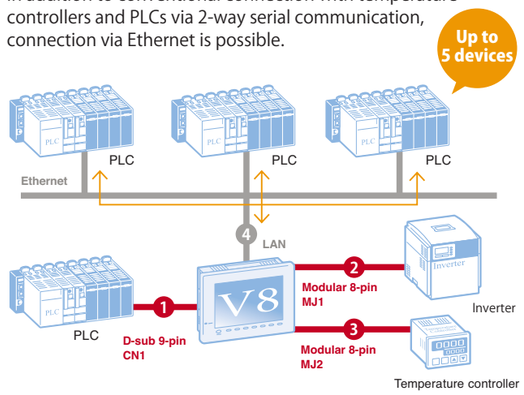
PLCs and peripherals of up to three kinds of units can be connected by serial connection. Even though two or more types of temperature controllers and inverters are used, they can be connected with one V8.



Example 2 Serial connection and Ethernet

Integrated management of up to eight kinds of devices

In addition to conventional connection with temperature controllers and PLCs via 2-way serial communication, connection via Ethernet is possible.

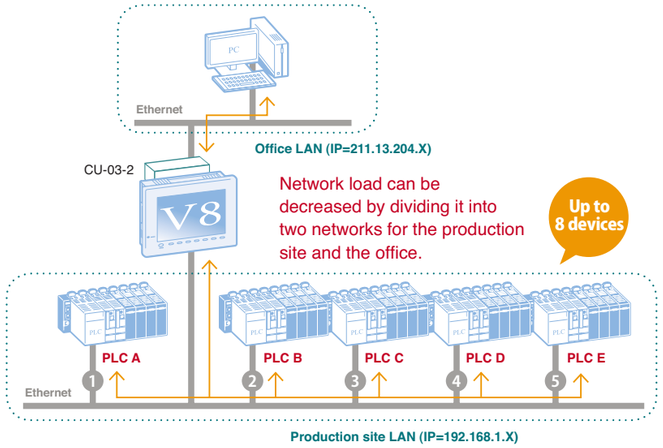


Example 3 Ethernet First in Industry

Used as a gateway for different types of networks

V8 can connect with eight kinds of PLCs via Ethernet. In addition, it can be used as a gateway with another network by adding an Ethernet port using the optional unit (CU-03-2).

For example, data can be transferred between a production site and the office freely by using a V8. V8 works as the gateway of multiple networks of the production site and the office without increasing data load on the networks.



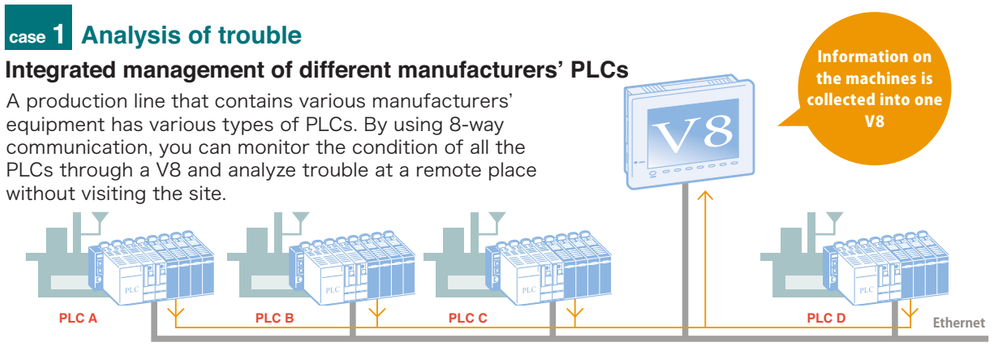
A variety of ingenious uses

8-way communication offers various functions and boosts your convenience

case 1 Analysis of trouble

Integrated management of different manufacturers' PLCs

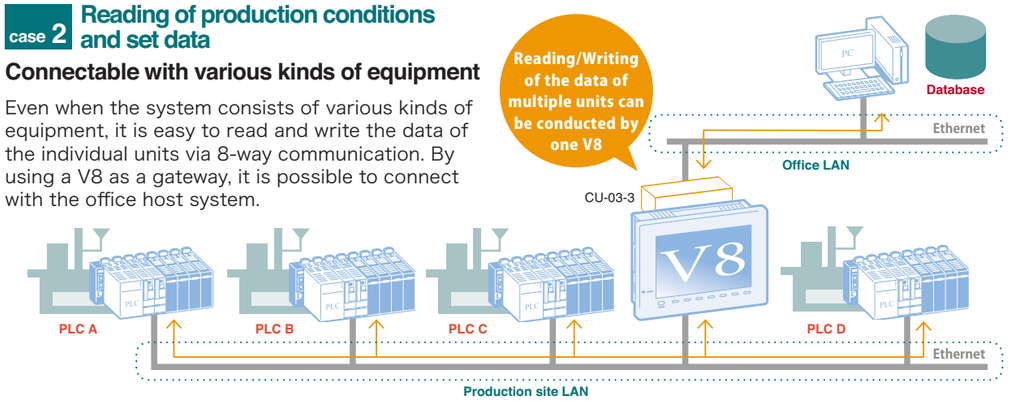
A production line that contains various manufacturers' equipment has various types of PLCs. By using 8-way communication, you can monitor the condition of all the PLCs through a V8 and analyze trouble at a remote place without visiting the site.



case 2 Reading of production conditions and set data

Connectable with various kinds of equipment

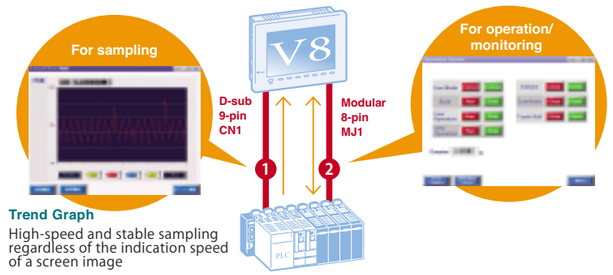
Even when the system consists of various kinds of equipment, it is easy to read and write the data of the individual units via 8-way communication. By using a V8 as a gateway, it is possible to connect with the office host system.



case 3 Real-time indication of information

High-speed data sampling

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



Expandability (USB master/slave)

High compatibility with peripherals makes for more user-friendliness

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

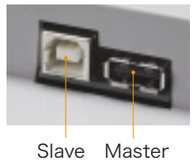
High-speed transfer of large-volume data and easy connection to printers

Slave (USB-B)

PLC Ladder Program Transfer

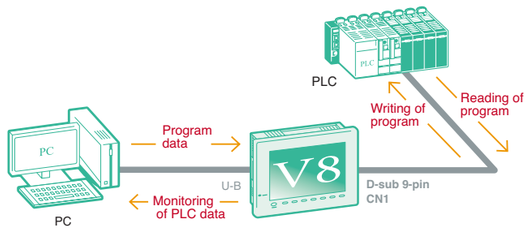
Available in summer 2008

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



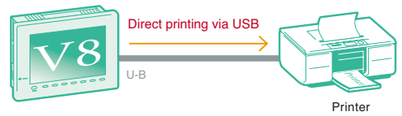
High-speed Transfer of Screen Data

Large-volume screen program edited by "V-SFT" configuration software can be downloaded and uploaded at high speed.



Compatible with PictBridge Printers

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

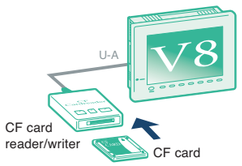


Compatible with PC peripherals including a USB keyboard and a USB mouse

Master (USB-A)

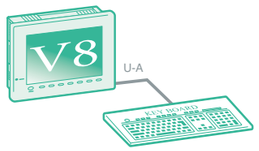
Card Reader/Writer

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



Compatible with USB Keyboard

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



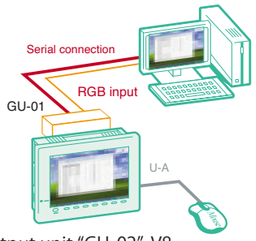
USB Interfaces Fitted on the Front

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

Compatible with USB Mouse

PC operation

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



Output on Large Displays

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

Expandability (CF Card)

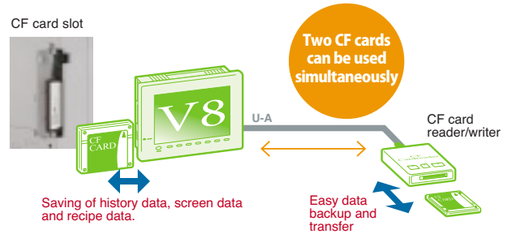
For superior information management

Two-drive system for versatile uses of CF cards

CF card interface and USB reader/writer

Equipped with Two Drives

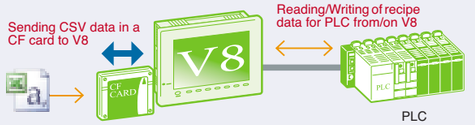
In addition to the built-in CF card interface, MONITOUCH is equipped with a USB interface for a CF card reader/writer, which can be used simultaneously. Since CF card data can be copied to another card while V8 is being used, the V8 performance will not be inhibited. These functions expand the versatility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



Built-in Drive for Constant Use

case 1 Recipe Data

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



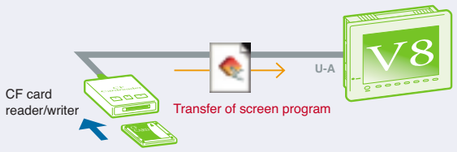
case 2 Sampling

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

USB Drive for Easy Data Delivery

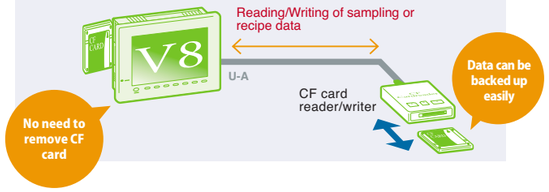
case 3 Screen Data Transfer

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



case 4 Data Delivery

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



PC-friendliness

Compatible with FAT32

Available in summer 2008

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

Impressive Screen

Screen program capacity can be increased by means of a CF card

A CF card can be used as an extension unit for editing the screen. You can design an impressive screen freely without having to worry about data capacity.

Easy Configuration 1

Highly functional switches

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

Various switches that meet the individual needs

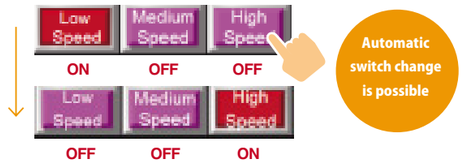
Multi-output

In order to meet diversified needs, switches with various functions are installed.

Multi-output memory
Output up to 16 positions

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

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



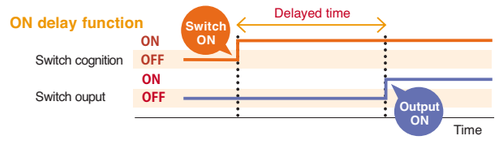
Indication depends on the value

Available in summer 2008

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

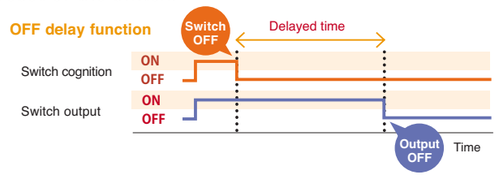
Setting the switch timing freely
ON delay

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



Setting the switch timing freely
OFF delay

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

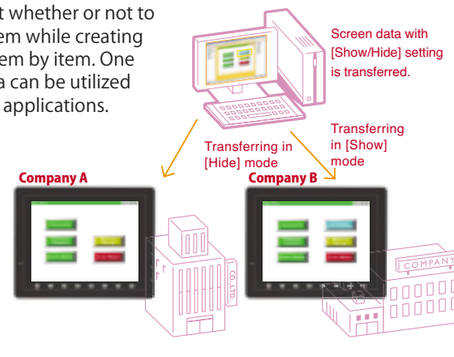


Indication according to individual production sites needs

Conditional Visibility

Static conditional visibility

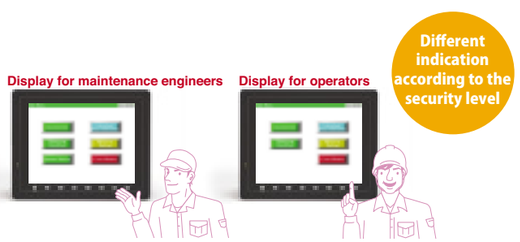
You can set whether or not to show an item while creating a screen, item by item. One screen data can be utilized for differnt applications.



Conditional visibility according to the security level

Available in summer 2008

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



* The above screens are subject to change as development progresses.

Dyanamic conditional visibility

Whether items are indicated or not is automatically determined according to the memory condition.

Easy Configuration 2

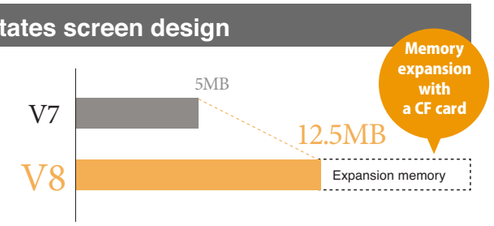
Convenient functions to meet users' demands

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

High-capacity memory facilitates screen design

12.5MB*1 Flash ROM

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

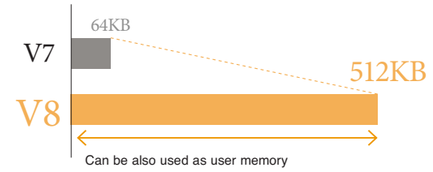


*1 SRAM capacity differs depending on the models. See Performance Specifications (P26, P27) for details
*2 Comparison with V7

For saving large-volume event history data

512KB*1 SRAM as Standard

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



*1 SRAM capacity differs depending on the models. See Performance Specifications (P26, P27) for details

Referring to operation history to analyze causes of error

Operation Log

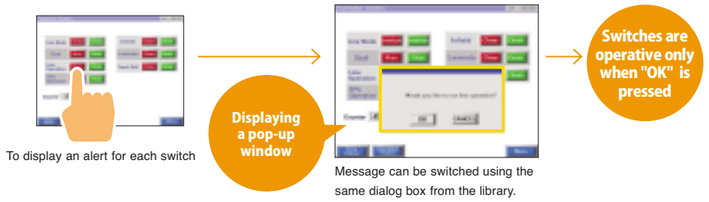
Available in summer 2008

The operation history for switches and values entered on MONITOUCH can be recorded in chronological order. After entering the registered password, you can refer to all the details of operation history, such as who the operator was, which operations were performed, and how the operations were conducted.

Easy-to-make pop-up message

Pop-up Window

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



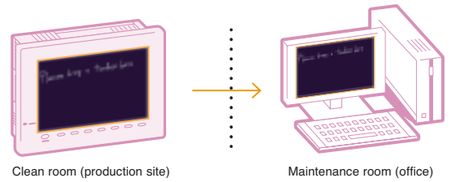
For easy communication between production sites and the office

Memo Pad Function

Available in summer 2008

V8 can be used as a memo pad for communication between production sites and the office as easily as the telephone or e-mail. Display data, which is entered by means of the keyboard or handwriting, can be transferred to PCs in the office or other V8 via Ethernet.

For communication between a production site and the office



Configuration Software [V-SFT]

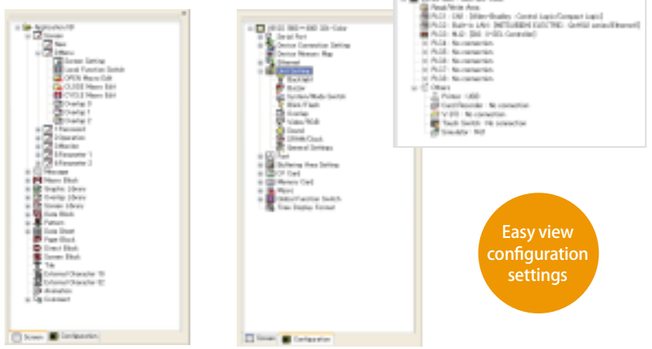
New V-SFT for easy screen configuration

Multiple windows provides immediate access to all application data.

Overall View of All the Devices

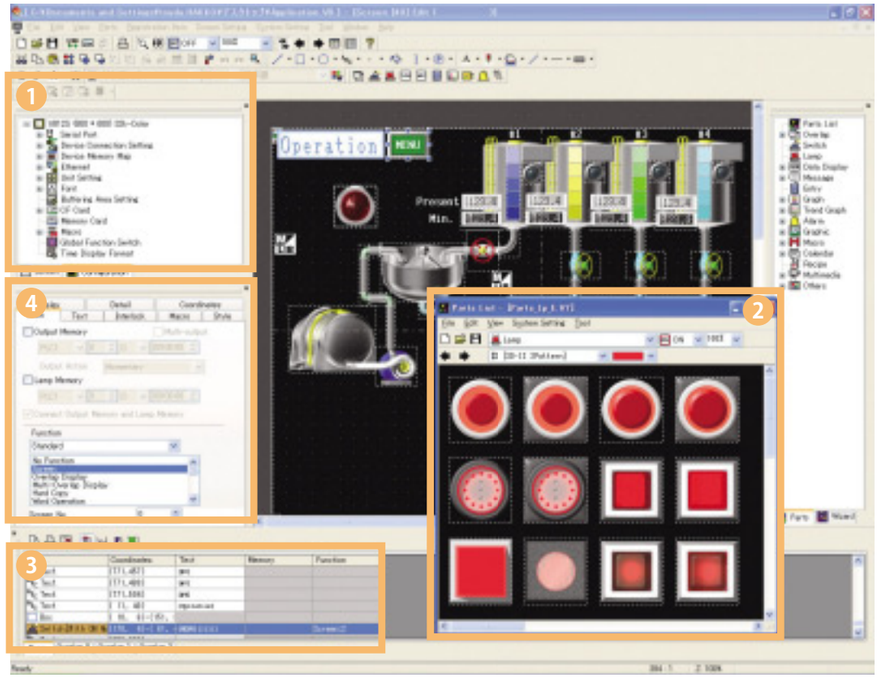
Project View (1)

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



Easy view configuration settings

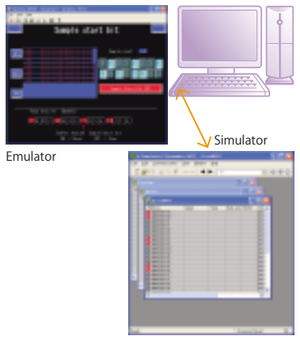
[Screen] and [Configuration] windows are easily switched by clicking tabs.



Quick Debugging on Your PC

Emulator for Easy Debugging

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



MONITOUCH V-SFT Ver. 5

■ V-SFT Requirements

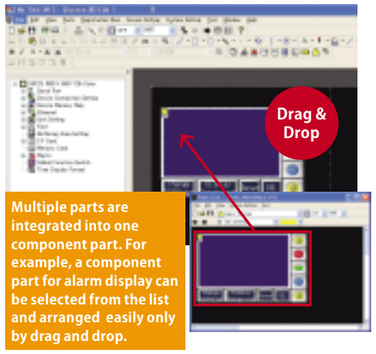
PC	PC/AT compatible machine with Windows
OS	Windows 98/ Me/ NT Version 4.0/ 2000/ XP/ XP 64 edition/ Vista 32bit*
CPU	Pentium III 800 MHz or higher (Pentium IV 2.0 GHz or higher is recommended.)
Memory	512 MB or more
Hard disk	For installation: 850 MB or more available space
CD-ROM Disk drive	24 times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

* When installing in Windows NT Ver.4/ 2000/ XP/ XP 64 edition/ Vista 32bit, administrator authority is required.

Quick Arrangement with Component Parts

Parts View (2)

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



Multiple parts are integrated into one component part. For example, a component part for alarm display can be selected from the list and arranged easily only by drag and drop.

Easy and Speedy Display Configuration

Auto Size Change

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

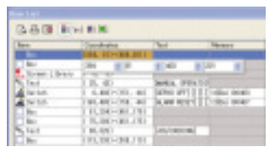
VGA (640×480 pixels) → Switched to V812iS SVGA (800×600 pixels)

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

Convenient Item View (3)

Direct editing

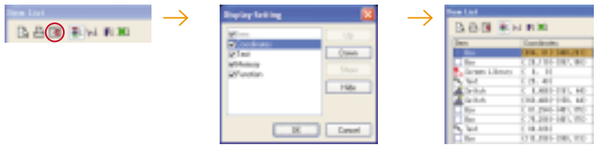
Memory condition, coordinates, switch names can be entered in the item view.
Memory address, position, and text can be directly entered in the item list.



Easy editing by selecting items

Coordinate items view

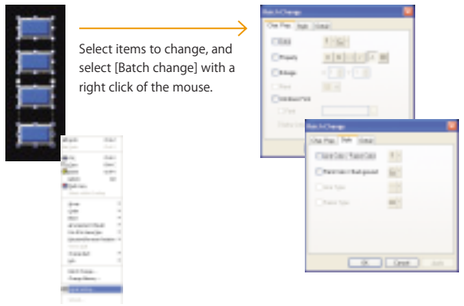
Utilize [Display setting] in the item list to minimize or maximize item properties in the windows. This system facilitates efficient management of information.



Enhanced Batch Change Functions

Additional items for batch change

More items can be changed simultaneously by batch change.



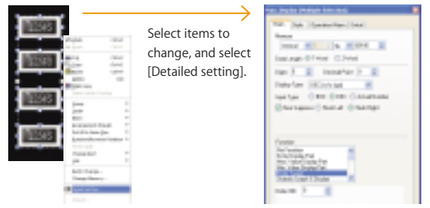
Select items to change, and select [Batch change] with a right click of the mouse.

Batch change with the item view (4)

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

<Available items>

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



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

Component Parts

"Component Parts" facilitate screen configuration.

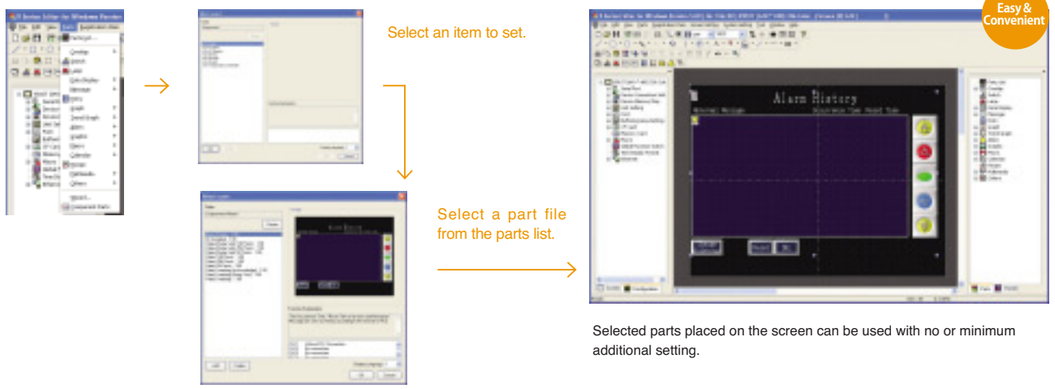
Convenient tool assists you in creating functional screens instantly.

Quick screen configuration using integrated "Component Parts"

Component Parts

First in Industry

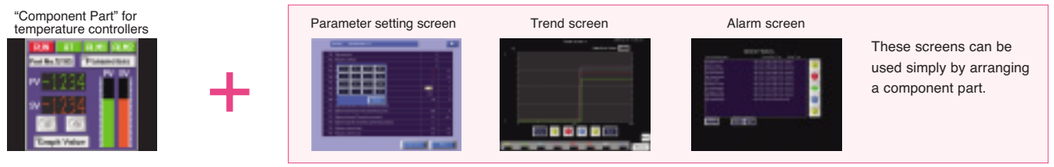
In "Component Parts," various functions and macros have been arranged according to purpose. You can create a functional screen instantly by simply selecting a "Component Parts" from the parts list and arranging it on the screen.



Selected parts placed on the screen can be used with no or minimum additional setting.

Point 1 Easy Screen Configuration

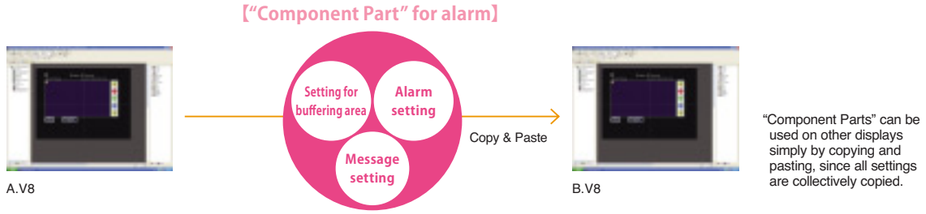
You can create multifunctional screens using integrated "Component Parts." When arranging on a screen that contains other messages or setting windows, a "Component Part" can be used regardless of overlapping of settings or windows.



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

Point 2 Easy Utilization of Resource

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

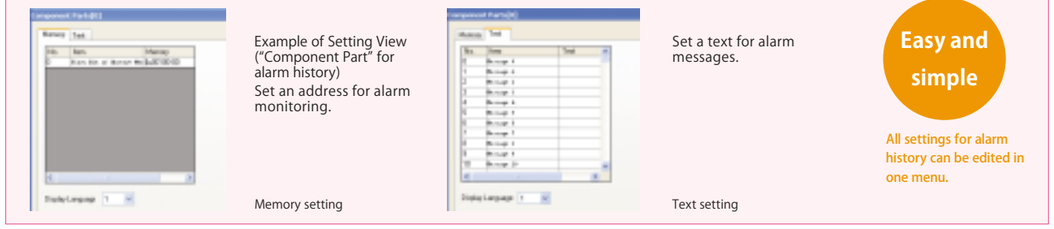


"Component Parts" can be used on other displays simply by copying and pasting, since all settings are collectively copied.

Point 3 Simple Setting View

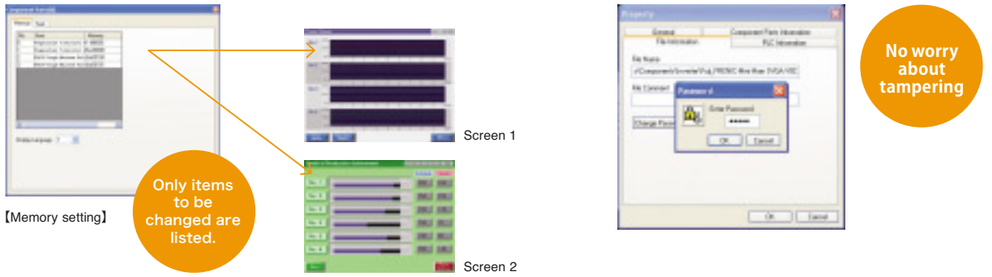
After arranging "Component Parts," they can be easily used simply by setting addresses and text.

Example of Setting View ("Component Part" for alarm history)



Point 4 Batch Change of Addresses/Text

When the same address or text is used for multiple screens, all the settings can be changed simultaneously on the setting view simply by registering it in the address/text table of a "Component Part."



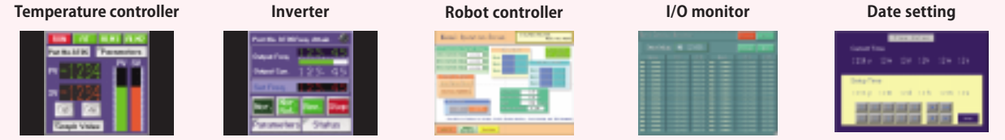
Point 5 Authorization by Passwords

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

Point 6 Various "Component Parts"

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

Examples of "Component Parts"



Expandability via MES*/ Ethernet

Supporting the construction of advanced MES

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

Reinforcing your production management through connection to the database

MES* interface function

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

No Programming Required

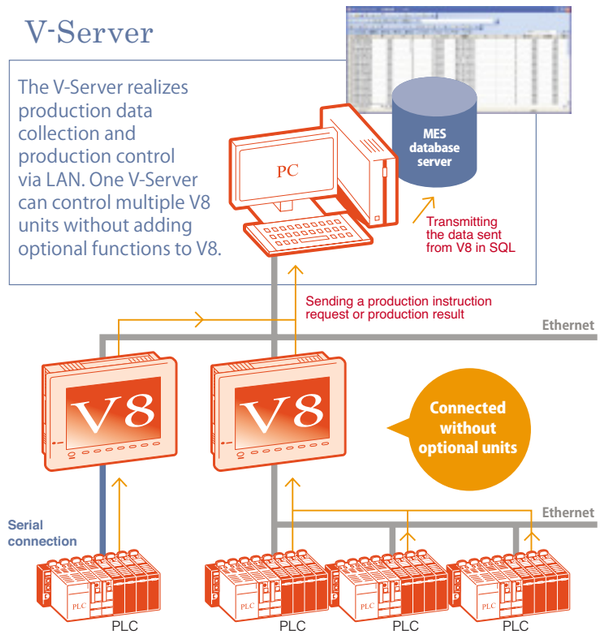
Data can be saved in the database server by simple setting on V-SFT — no programming is required.

Preventing data loss

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

Decreasing system load

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



* [MES]: The "Manufacturing Execution System" is for optimizing product quality, product quantity, delivery date, cost, etc. in the management/ control of production sites.

Extended functions using Ethernet

FTP Server Function

The upstream PCs can read/write the data from/on V8. The data is transmitted in universal communication protocol and no additional application software is necessary.

Remote Desktop Function

Under Dvelop-ment

The screen of the server PC can be displayed on V8 via Ethernet. Operation manuals saved in the PC can be checked on V8, which is a feature that decrease operation errors.

Replay of Web Camera Images (Motion JPEG)

Available in autumn 2008

Images captured by a web camera can be displayed on V8. This function helps to monitor the entire production line.

Document Display

With V-SFT ver.5, you can easily display various kinds of documents such as pdf files on V8.

Application software for low-cost connection of the office to the production site TELLUS and V-Server

Enhancing production performance with remote operation and data collection functions

With V-Server, you can monitor and control machines that are operated at a remote production site, even overseas, from your office via the Internet/Ethernet at low cost. By combining the network function and the server function of Ethernet and the Internet, it is possible to conduct alarm message transmission, remote monitoring, and collection and analysis of errors. Your production efficiency can be improved by preventing trouble and decreasing the downtime of your machines.

Main features

- Collecting and saving PLC data
- Collecting and saving sampling data of V8
- Controlling and transferring recipe data
- Monitoring alarm condition and sending alarm mail
- Controlling data with PC application software by means of DDE function
- Transferring V8 screen program via Ethernet

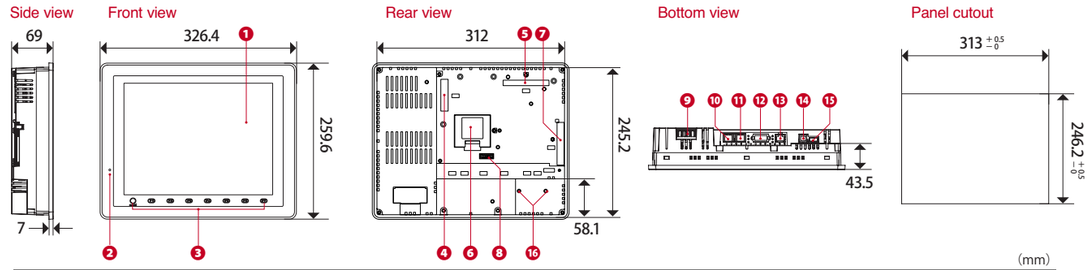
For further information, please refer to our TELLUS and V-Server catalog.

Dimensions and Part Names

Provided with plentiful kinds of interfaces

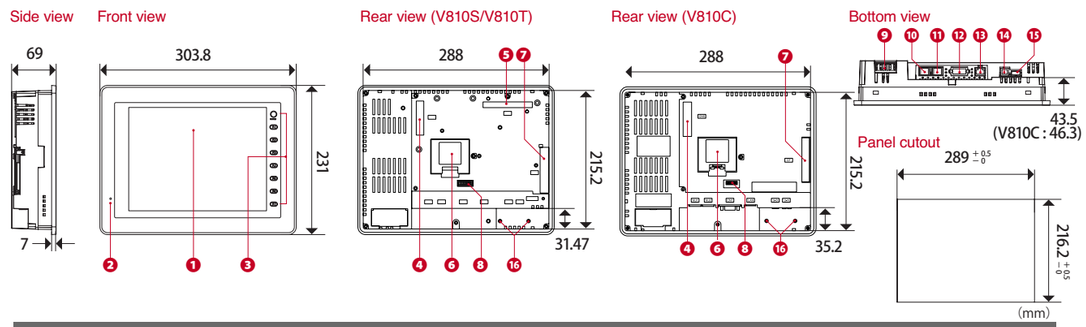
(mm)

V812iS / V812S

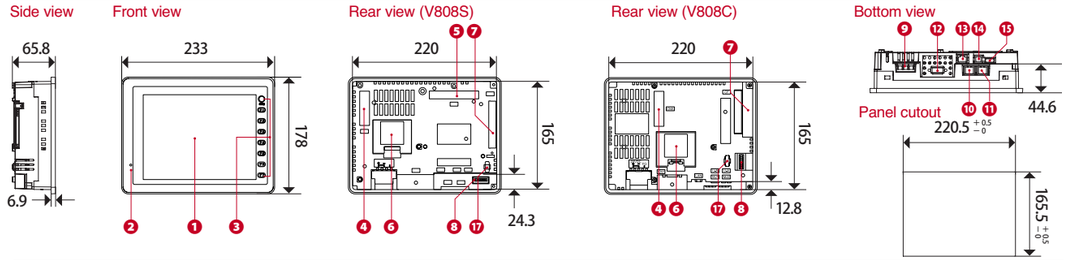


(mm)

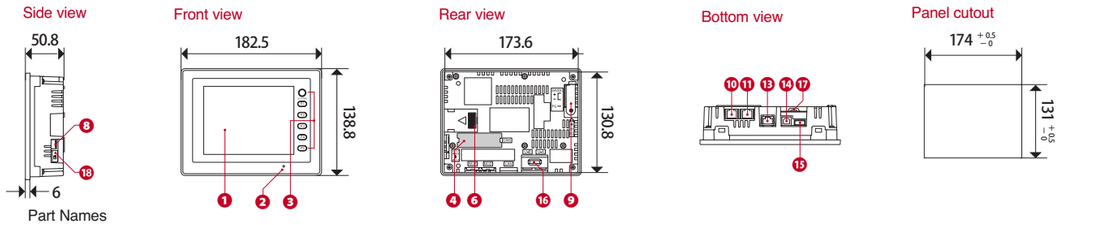
V810iS / V810S / V810iT / V810T / V810iC / V810C



V808iS / V808S / V808iC / V808C



V806iT / V806T / V806iC / V806C / V806iM / V806M



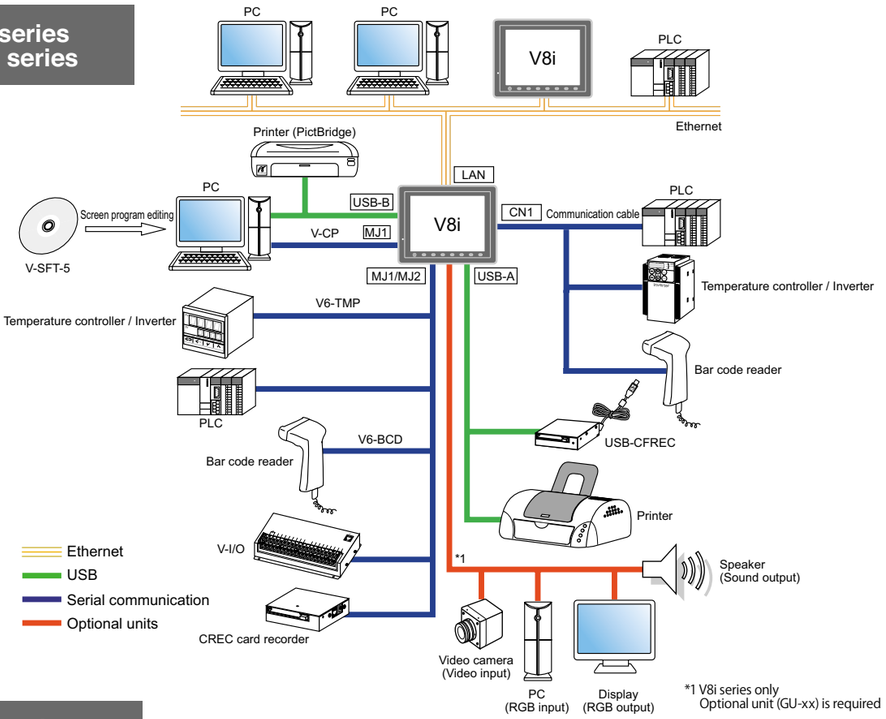
Part Names

❶ Display	❻ Battery holder	⓫ Modular 8-pin for serial port (MJ2)	⓰ Screw hole for fixing USB cable lock
❷ Power lamp	❼ CF card slot (CF)	⓬ D-Sub 9-pin for serial port (CN1)	⓱ Inlet port for fixing USB cable
❸ Function switch	❽ DIP switch	⓭ 100BASE-TX/10BASE-T port (LAN)	⓲ Slide switch
❹ Connector for communication unit (CN5)	❾ Power supply	⓮ USB-B (slave)	
❺ Connector for optional unit (CN7)	❿ Modular 8-pin for serial port (MJ1)	⓯ USB-A (master)	

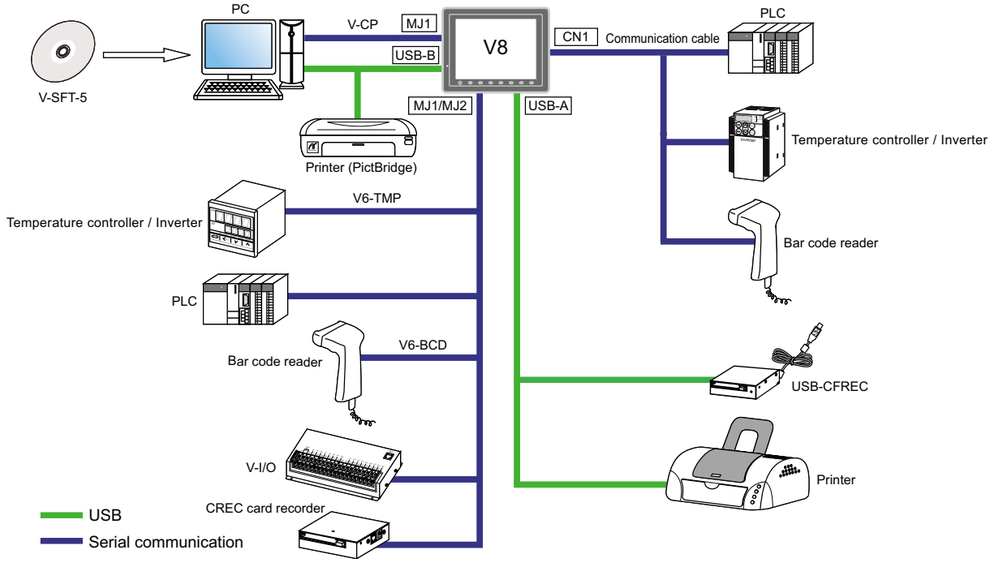
System Configuration

Flexible system configuration meets diversified requirements

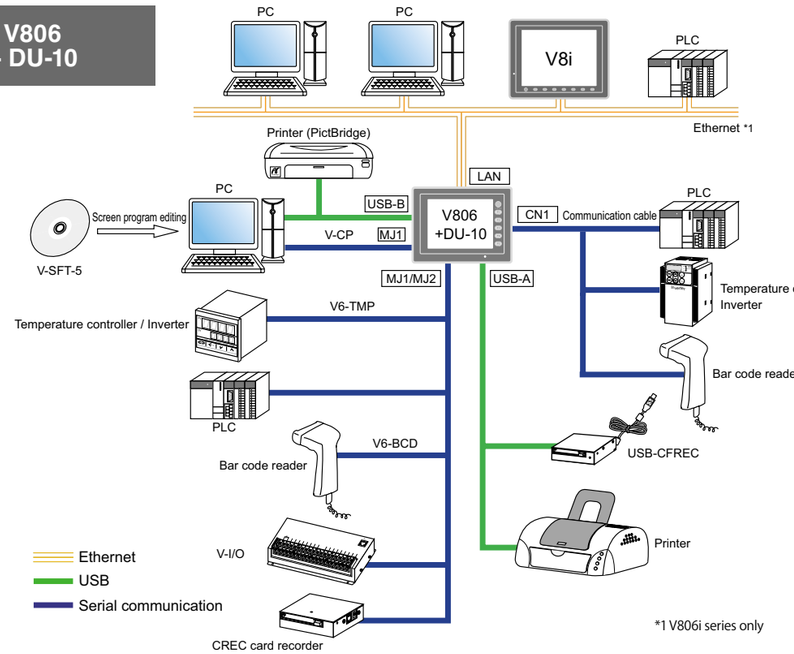
V8i series V8iC series



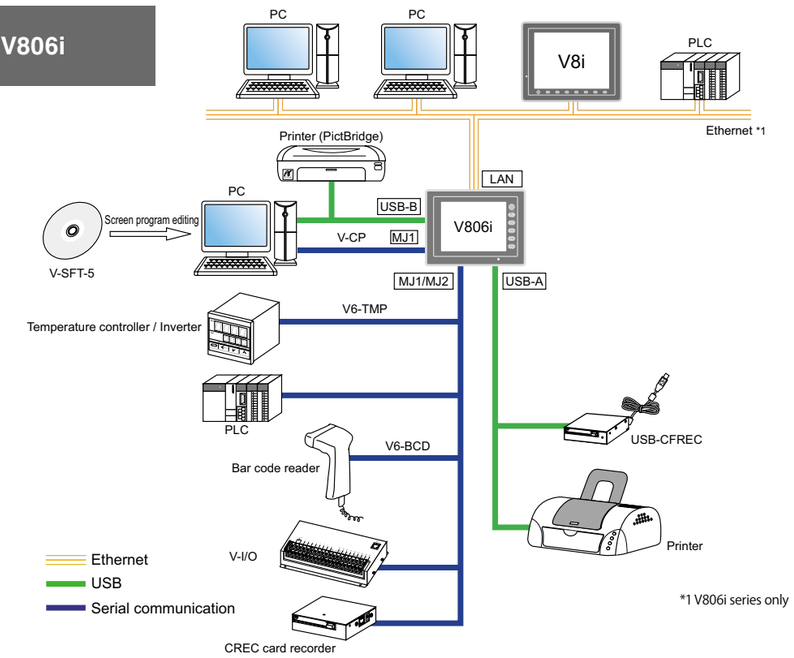
V8 series V8C series



V806 + DU-10



V806i



Specifications

High-end specifications open up new possibilities.

General Specifications

Item	Model	V812		V810			
		V812xS	V812xSD	V810xS/V810xT	V810xC	V810xSD/V810xTD	V810xCD
Power supply	Rated voltage	100-240V AC	24V DC	100-240V AC		24V DC	
	Permissible range of voltage	100-240V AC±10%	24V DC±10%	100-240V AC±10%		24V DC±10%	
	Permissible momentary power failure	Within 20ms	Within 1ms	Within 20ms		Within 1ms	
	Demand (maximum rating)	70VA or less	30W or less	70VA or less	60VA or less	25W or less	20W or less
	Inrush current	20A,10ms(100V AC) 40A,10ms(200V AC)	20A,2ms	20A,10ms(100V AC) 40A,10ms(200V AC)	16A,6ms(100V AC) 32A,7ms(200V AC)	20A,2ms (24V DC)	20A,1ms (24V DC)
Insulation resistance		500V DC,10MΩ or more					
Physical environment	Ambient temperature	0°C ～ +50°C *1					
	Storage temperature	-10°C ～ +60°C					
	Ambient humidity	85%RH or less(without dew condensation, Max. wet bulb temperature: 39°C or lower) *1					
	Resistance to solvent	No attachment of cutting oil or organic solvent					
	Atmosphere	Not exposed to corrosive gas or conductive dust					
	Operation altitude	2,000 meter or lower					
	Contamination level *2	Level 2					
Mechanical operating conditions	Resistance to oscillation	Vibration frequency: 10~150Hz, acceleration: 9.8m/s2(1.0G) pulsating width: 0.075mm, X,Y,Z: 3 directions 1 hour each way					
	Resistance to shock	Pulse shape: half-sine, peak acceleration: 147m/s^2(15G), X,Y,Z: 3 directions, six times each way					
Electric operating conditions	Noise proof	1500Vp-p (pulse width 1μs, pulse rise time : 1ns)					
	Static discharge	Complies with IEC61000-4-2, contact: 6kV, air: 8kV					
Installation conditions	Grounding	Grounding resistance : Less than 100Ω , FG/SG separation					
	Structure	Protect structure: Front panel: Compatible with IP65 (when water-proof gasket is used.) Rear cover: Compatible with IP20 Form: Single unit Installation method: Panel mounting					
	Cooling system	Natural air cooling					
	Weight	Approx.2.9kg		Approx.2.5kg			
	Dimensions W*H*D(mm)	326.4×259.6×69.0		303.8×231.0×69.0			
	Panel cutout (mm)	313.0×246.2 (+0.5/-0)		289.0×216.2 (+0.5/-0)			
Case color		Gray					
Material		PC/ABS					

* 1 Keep wet bulb temperature under 39℃ to avoid an accident.
* 2 Contamination level is an index that shows the incidence rate of conductive substance. At Level 2, only nonconductive substance is produced, but a temporary conductive state may occur due to dew concentration.

Performance Specifications

Item	Model	V812iS	V812S	V810iS	V810S	V810iT	V810T	V810iC	V810C
Display specifications	Screen memory	12.5MB							4.5MB
	Display device	TFT color LCD							
	Resolution W:H(dots)	800×600				640×480			
	Display size	12.1 inches		10.4 inches					
	Colors	65,536 colors (without blinks) / 32,768 colors (with blinks)							
	Backlight	CCFL							
	Backlight life *4	About 50,000 hours							
	Backlight Auto OFF	Lit in normal (Set by the user)							
	Power lamp	Lit in normal condition, blinks in alarm condition such as blowout of backlight bulbs							
	Contrast adjustment	Fixed							
	Brilliance control	3 levels (Adjusted into 128 grades by macro command)							
Number of characters	1/2-byte	100 columns × 75 lines				80 columns × 60 lines			
	1-byte	100 columns × 37 lines				80 columns × 30 lines			
	2-byte	50 columns × 37 lines				40 columns × 30 lines			
Enlargement of characters		X: 1 ～ 8 times Y: 1 ～ 8 times							
Touch switch	Switch resolution	Analog: 1,024×1,024 Matrix: 50×30		Analog: 1,024×1,024		Analog: 1,024×1,024 Matrix: 40×24			
	Mechanical life	1 million times or more							
	Surface treatment	Hard coating, Non glare finish 5%							
Function switch	Number of function switches	8 switches							
External interface	D-Sub 9-pin (CN1)	RS-232C, RS-422/485, Asynchronous type, Data length : 7,8 bits, Parity : even, odd, none, Stop bit : 1,2 bits, Baud rate : 4800, 9600, 19200, 38400, 57600, 76800, 115200,187500*5 bps							
	Modular 8-pin (MJ1/ MJ2)	RS-232C, RS-422/485 (two-wire system), Asynchronous type, Data length : 7,8 bits, Parity : even, odd, none, Stop bit : 1,2 bits, Baud rate : 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps							
	CF card interface	Compatible with CompactFlash™							
	Ethernet	Complies with IEEE802.3 Baud rate: 100Mbps, 10Mbps Cable: 100Ω Unsealed twist pair, Category 5, Max length: 100m							
	USB	Type A, Type B (Ver1.1)							
Clock & Back up memory	Battery	Coin-type lithium primary battery							
	Back up memory (SRAM)	512KB							128KB
	Back up period	5 years (Ambient temperature 25°C)							
	Calendar accuracy	Gap±90 sec. per month (Ambient temperature 25°C)							

* 4 When the panel surface luminance drops to 50% of the initial value at normal temperature (25°C)
* 5 Available only when connected with SIEMENS MPI.

General Specifications

Item	Model	V808		V806
		V808xSD	V808xCD	
Power supply	Rated voltage	24V DC		
	Permissible range of voltage	24V DC±10%		
	Permissible momentary power failure	Within 1ms		
	Demand (maximum rating)	23W or less	20W or less	17W or less
	Inrush current	20A,2ms(24V DC)	20A,1ms(24V DC)	16A or more
Insulation resistance		500V DC,10MΩ or more		
Physical environment	Ambient temperature	0°C ～ +50°C		
	Storage temperature	-10°C ～ +60°C		
	Ambient humidity	85%RH or less(without dew condensation, Max. wet bulb temperature: 39°C or lower)*1		
	Resistance to solvent	No attachment of cutting oil or organic solvent		
	Atmosphere	Not exposed to corrosive gas or conductive dust		
	Operation altitude	2,000 meter or lower		
	Contamination level *2	Level 2		
Mechanical operating conditions	Resistance to oscillation	Vibration frequency: 10~150Hz, acceleration: 9.8m/s2(1.0G) pulsating width: 0.075mm, X,Y,Z: 3 directions 1 hour each way		
	Resistance to shock	Pulse shape: half-sine, peak acceleration: 147m/s^2(15G), X,Y,Z: 3 directions, six times each way		
Electric operating conditions	Noise proof	1500Vp-p (pulse width 1μs, pulse rise time : 1ns)		
	Static discharge	Complies with IEC61000-4-2, contact: 6kV, air: 8kV		
Installation conditions	Grounding	Grounding resistance : Less than 100Ω , FG/SG separation		
	Structure	Protect structure: Front panel: Compatible with IP65 (when water-proof gasket is used.) Rear cover: Compatible with IP20 Form: Single unit Installation method: Panel mounting		
	Cooling system	Natural air cooling		
	Weight	Approx.1.5kg		Approx.740g
	Dimensions W*H*D(mm)	233.0x178.0x65.8		182.5×138.8×50.8
	Panel cutout (mm)	220.5x165.5 (+0.5/-0)		174×131 (+0.5/-0)
Case color		Gray		
Material		PC/ABS		

* 1 Keep wet bulb temperature under 39℃ to avoid an accident.
* 2 Contamination level is an index that shows the incidence rate of conductive substance. At Level 2, only nonconductive substance is produced, but a temporary conductive state may occur due to dew concentration.

Performance Specifications

Item	Model	V808iS	V808S	V808iC	V808C	V806iT	V806T	V806iC	V806C	V806iM	V806M
Display specifications	Screen memory	12.5MB		4.5MB							
	Display device	TFT color LCD						STN color LCD		STN monochrome LCD	
	Resolution W:H(dots)	800×600		640×480		320×240					
	Display size	8.4 inches				5.7 inches					
	Colors	65,536 colors (without blinks) / 32,768 colors (with blinks)								16 grayscale (with blinks)	
	Backlight	CCFL									
	Backlight life *4	About 50,000 hours						About 75,000 hours		About 58,000 hours	
	Backlight Auto OFF	Lit in normal (Set by the user)									
	Power lamp	Lit in normal condition, blinks in alarm condition such as blowout of backlight bulbs									
	Contrast adjustment	Fixed						Adjustable (Function switch or macro switch)			
	Brilliance control	3 levels (Adjusted into 128 grades by macro command)						Fixed			
Number of characters	1/2-byte	100 columns × 75 lines		80 columns × 60 lines		40 columns × 30 lines					
	1-byte	100 columns × 37 lines		80 columns × 30 lines		40 columns × 15 lines					
	2-byte	50 columns × 37 lines		40 columns × 30 lines		20 columns × 15 lines					
Enlargement of characters		X: 1 ～ 8 times Y: 1 ～ 8 times									
Touch switch	Switch resolution	Analog: 1,024×1,024									
	Mechanical life	1 million times or more									
	Surface treatment	Hard coating, Non glare finish 5%									
Function switch	Number of function switches	8 switches				6 switches					
External interface	D-Sub 9-pin (CN1) *6	RS-232C, RS-422/485, Asynchronous type, Data length : 7,8 bits, Parity : even, odd, none, Stop bit : 1,2 bits, Baud rate : 4800, 9600, 19200, 38400, 57600, 76800, 115200,187500*5 bps				RS-232C, RS-422/485 (two-wire system), Asynchronous type, Data length : 7,8 bits, Parity : even, odd, none, Stop bit : 1,2 bits, Baud rate : 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps					
	Modular 8-pin (MJ1/ MJ2)	RS-232C, RS-422/485 (two-wire system), Asynchronous type, Data length : 7,8 bits, Parity : even, odd, none, Stop bit : 1,2 bits, Baud rate : 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps				RS-232C, RS-422/485, Asynchronous type, Data length : 7,8 bits, Parity : even, odd, none, Stop bit : 1,2 bits, Baud rate : 4800, 9600, 19200, 38400, 57600, 76800, 115200,187500*5 bps					
	CF card interface	Compatible with CompactFlash™				Optional unit DU-10					
	Ethernet	Complies with IEEE802.3 Baud rate: 100Mbps, 10Mbps Cable: 100Ω Unsealed twist pair, Category 5, Max length: 100m									
	USB	Type A, Type B (Ver1.1)									
Clock & Back up memory	Battery	Coin-type lithium primary battery									
	Back up memory(SRAM)	512KB		128KB		512KB	128KB	512KB	128KB	512KB	128KB
	Back up period	5 years (Ambient temperature 25°C)									
	Calendar accuracy	Gap±90 sec. per month (Ambient temperature 25°C)									

* 4 When the panel surface luminance drops to 50% of the initial value at normal temperature (25°C)
* 5 Available only when connected with SIEMENS MPI.
* 6 For V806 series, available only when equipped with DU-10 (option).

Option Units

Optional units that expand V8's performance

Various units for greater expandability and usability

Expansion/ Communication Units

Expansion units

GU-00(Video input + sound output unit)
Displays images from a video camera on V8 and outputs sound files through external speakers.

GU-01(RGB input + sound output unit)
Displays PC images on V8 and outputs sound files through external speakers.

GU-02(RGB output + sound output unit)
Displays images of V8 on PC display and outputs sound files through external speakers.

GU-03(Sound output unit)
Outputs sound files through external speakers.

GU-10(Video input(2ch) + RGB input)
Displays images from video cameras and PC images on V8 simultaneously.

GU-11(RGB input(2ch))
Displays RGB images such as PC images through two channels on V8 simultaneously.

DU-10(V806)
Compatible with a D-Sub9pin/CF card

Communication units

XX	Compatible network	XX	Compatible network
00	OPCN-1 *1	04	PROFIBUS-DP
01	T-Link	06	SX bus
02	CC-Link *1	07	DeviceNet *1
03-3	Ethernet *1	08	FL-net *1

Connected to various networks. Multiple V8 panels can be connected to one PLC. Other devices can be linked to the network, improving system's cost-effectiveness.

*1 Under development

Optional units

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

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

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

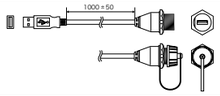
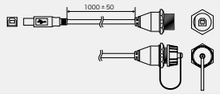
V-MDD (ACPU/QnACPU/FXCPU dual port interface)
Used to double the port of the connector for programmer units. Useful when connecting to ACPU/QnACPU/FXCPU(MITSUBISHI) directly.

Application Software

Configuration software

V-SFT-5(Ver.5)
For Windows98/Me/NT Version4.0/2000/ XP/XP 64 Edition/Vista 32bit

Cables

Type	Configuration	Connected to
V-CP	RS-232C Modular 8-pin — D-Sub 9-pin, Length: 3 m	PC
V6-BCD	RS-232C Modular 8-pin, Length: 3 m	Bar code reader
V6-MLT	RS-422 Modular 8-pin, Length: 3 m	MONITOUCH V8/V7/V6 series
V6-TMP	RS-232C/485 Modular 8-pin, Length: 3, 5 or 10 m	Temperature controller and inverter etc.
UA-FR		USB-CFREC Card reader/ writer
UB-FR		PC PictBridge Printer

V7-BT (Battery)
Lithium battery for V8 series

V8xx-GS/V8xx-GSN10
Protection sheet for panels: 5 sheets per set.
N10 is a non-glare type sheet.
See P29 for details.

V8xxx-FL
Backlight for V8
See P29 for details.

Panel Adapter
Used when fitting V8 into V4/GD-80/GD-65/GD-64 panel cutout.

Option List

Optional units that expand V8's performance

Expansion / Communication units

Type	Model: V8 Series																	
	V812iS	V812S	V810iS	V810S	V810iT	V810T	V810iC	V810C	V808iS	V808S	V808iC	V808C	V806iT	V806T	V806iC	V806C	V806iM	V806M
Expansion units																		
GU-00	○		○		○				○									
GU-01	○		○		○				○									
GU-02	○		○		○				○									
GU-03	○		○		○				○									
GU-10	○		○		○				○									
GU-11	○		○		○				○									
DU-10													○	○	○	○	○	○
Communication units																		
CU-00	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CU-01	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CU-02	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CU-03-3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CU-04	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CU-06	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CU-07	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Others

Type	Model: V8 Series																	
	V812iS	V812S	V810iS	V810S	V810iT	V810T	V810iC	V810C	V808iS	V808S	V808iC	V808C	V806iT	V806T	V806iC	V806C	V806iM	V806M
V-SFT-5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
TC-D9	○	○	○	○	○	○	○	○	○	○	○	○	○ *1	○ *1	○ *1	○ *1	○ *1	○ *1
CREC/CREC01	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
USB-CFREC	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
V-MDD	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
V7-BT	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Protection sheet																		
V812-GS	○	○																
V812-GSN10	○	○																
V810-GS			○	○	○	○	○	○										
V810-GSN10			○	○	○	○	○	○										
V808-GS									○	○	○	○						
V808-GSN10									○	○	○	○						
V806-GS													○	○	○	○	○	○
V806-GSN10													○	○	○	○	○	○
Backlight																		
V812-FL	○	○																
V810-FL			○	○	○	○	○	○										
V808S-FL									○	○								
V808C-FL											○	○						
Panel adapter																		
PAD-V610			○	○	○	○	○	○										
PAD-V610-01			○	○	○	○	○	○										
PAD-V608									○	○	○	○						
PAD-V608-01									○	○	○	○						
PAD-V606													○	○	○	○	○	○

*1 DU-10

Cables

Type	Model: V8 Series																	
	V812iS	V812S	V810iS	V810S	V810iT	V810T	V810iC	V810C	V808iS	V808S	V808iC	V808C	V806iT	V806T	V806iC	V806C	V806iM	V806M
V-CP	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
V6-BCD	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
V6-MLT	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
V6-TMP-3M/V6-TMP-5M/ V6-TMP-10M	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
UA-FR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
UB-FR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Customer Service

Global service network

Please contact our customer service department for information and advice.

TEL

Tel +81-76-274-2144

FAX

Fax +81-76-274-5208

E-mail

sales@hakko-elec.co.jp

Website

http://www.monitouch.com

Includes FAQs for troubleshooting, instruction manuals, sample screens, and information for upgrading of configuration software.

http://www.monitouchv8.com

MONITOUCH V8 series

Visit our website for MONITOUCH V8 Series.

Global Sales Network

Our distributors are ready to support your worldwide business.

http://www.hakko-elec.co.jp/en/distributors/index.html

Product Warranty

To the purchasers of Hakko Electronics products:

The warranty of this product is as follows, unless there are special instructions that state otherwise in the quote, contract, catalog, or specifications at the time of the quote or order.
The purpose or area of use may be limited, and a routine checkup may be required depending on the product. Please contact the distributor from which you purchased the product, or Hakko Electronics for further information.
Please conduct inspection of the product promptly upon purchase or delivery. Also, please give sufficient consideration to management and maintenance of the product prior to accepting it.

1. Period and Coverage of the Warranty

1-1 Period

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

1-2 Coverage

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

1-3 Malfunction Diagnosis

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

2. Liability for Opportunity Loss

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

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.

Driver List (PLCs)

		Supported
Allen-Bradley	Control Logix/Compact Logix	○
	Control Logix(Ethernet)	○
	SLC500	○
	Micro Logix	○
	Micro Logix (Ethernet)	○
Automationdirect	Direct LOGIC(K-Sequence)	○
	Direct LOGIC(Modbus RTU)	○
Baumuller	BMx-x-PLC	○
EATON Cutler-Hammer	ELC	○
FATEK AUTOMATION	FACON FB series	○
Fuji Electric	MICREX-F series	○
	MICREX-F series V4 Compatible	○
	MICREX-F Tlink	○
	MICREX-F Tlink V4 Compatible	○
	SPB(N mode)&FLEX-PC serie	○
	SPB(N mode)&FLEX-PC CPU	○
	MICREX-SX(Tlink)	○
	MICREX-SX(OPCN-1)	○
	MICREX-SX(SX bus)	○
	MICREX-SX SPH/SPB series	○
	MICREX-SX SPH/SPB CPU	○
	MICREX-SX(Ethernet)	○
Hitachi Industrial Equipment System	HIDIC-H	○
	HIDIC-H (Ethernet)	○
	HIDIC-EHV	○
	HIDIC-EHV(Ethernet)	○
HITACHI	HIDIC-S10/2α,S10mini	○
	HIDIC-S10/2α,S10mini(Ethernet)	○
	HIDIC-S10V	○
	HIDIC-S10V(Ethernet)	○
IDEC	MICRO SMART	○
JTEKT	TOYOPUC	○
	TOYOPUC(Ethernet)	○
KEYENCE	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)	○
Koyo	SU/SG(K-Sequence)	○
	SU/SG(Modbus RTU)	○
LS	MASTER-KxxxS	○
	MASTER-KxxxS CNET	○
	XGT/XGK series CPU	○
	XGT/XGK series	○
Matsushita Electric Works	MEWNET	○
	FP series (Ethernet TCP/IP)	○
	FP series (Ethernet UDP/IP)	○
Mitsubishi Electric	A series link	○
	A series CPU	○
	QnA series link	○
	QnA series CPU	○
	QnA series (Ethernet)	○
	QnH(Q) series link	○
	QnH(Q) series CPU	○
	Q00J/00/01 CPU	○
	QnH(Q) series (Ethernet)	○
	QnH(Q) series link (Multi CPU)	○
	QnH(Q) series (Multi CPU) (Ethernet)	○
	QnH(Q) series CPU(Multi CPU)	○
	FX2N series CPU	○
	FX series link (A-prt)	○
	FX-3UC series CPU	○
OEMax	N7X/NX Plus series (70P/700P/750P/CCU+)	○
	N7/NX series (70/700/750/CCU)	○
OMRON	SYSMAC C	○
	SYSMAC CS1/CJ1	○
	SYSMAC CS1/CJ1(Ethernet)	○
	SYSMAC CS1/CJ1(Ethernet Auto)	○
SAIA	PCD	○
	PCD S-BUS(Ethernet)	○
SAMSUNG	N Plus	○
	SECNET	○
Siemens	S7-300/400MPI	○
	S7 PROFIBUS-DP	○
	S7-200 PPI	○
	S7-300/400(Ethernet)	○
SHARP	JW series	○
	JW 100/70H COM port	○
	JW20 COM port	○
SHINKO ELECTRIC	SELMART	○
TECO	TP-03	○
UNITRONICS	M90/91/Vision Series (ASCII)	○
Yaskawa Electric	MEMOBUS	○
	CP9200SH/MP900	○
	MP2300(MODBUS TCP/IP)	○
	CP/MP EXPANSION MEMOBUS (UDP/IP)	○
Yokogawa Electric	FA-M3	○
	FA-M3R	○
	FA-M3/FA-M3R(Ethernet UDP/IP)	○
	FA-M3/FA-M3R(Ethernet TCP/IP)	○
	MODBUS RTU(Free Format)	○
	MODBUS TCP/IP(Ethernet)	○
	Universal Serial	○
	Barcode	○
	V-Link	○
	ModbusRTU Slave	○
	ModbusTCP/IP Slave	○
	Without PLC Connection	○

Drivers that are not provied in this list will be developed upon request.

Driver List (Thermo controllers, inverters, etc.)

		Supported
DELTA TAU DATA SYSTEMS	PMAC	○
	PMAC (Ethernet)	○
Fuji Electric	PYX(MODBUS RTU)	○
	PXR(MODBUS RTU)	○
	PXG(MODBUS RTU)	○
	PXH(MODBUS RTU)	○
	F-MPC04P(Loader)	○
	F-MPC series /FePSU	○
	FVR-E11S(MODBUS RTU)	○
	FVR-C11S(MODBUS RTU)	○
	FRENIC5000G11S/P11S(MODBUS RTU)	○
	FRENIC5000VG7S(MODBUS RTU)	○
	FRENIC-Mini(MODBUS RTU)	○
	FRENIC-Eco(MODBUS RTU)	○
	FRENIC-Multi(MODBUS RTU)	○
	FRENIC-MEGA(MODBUS RTU)	○
	HFR-C9K	○
	HFR-C11K	○
	PPMC(MODBUS RTU)	○
	FALDIC-α series	○
	PHR(MODBUS RTU)	○
	WA5000	○
	PUM(MODBUS RTU)	○
	ALPHA5	○
	APR-N series (MODBUS RTU)	○
	WE1MA series (MODBUS RTU)	○
IAI	X-SEL	○
	PCON/ACON/SCON(MODBUS RTU)	○
Mitsubishi Electric	FR-V500	○
	FR-*500	○
OMRON	E5AR/E5ER	○
	E5AN/E5EN/E5CN/E5GN	○
	V600/620	○
RKC Instruments	SR-Mini(MODBUS RTU)	○
	CB100/CB400/CB500/CB700/CB900(MODBUS RTU)	○
	SR-Mini(Standard Protocol)	○
	SRV(MODBUS RTU)	○
	MA900/MA901(MODBUS RTU)	○
	SRZ(MODBUS RTU)	○
SanRex	DC AUTO (HKD type)	○
SHINKO TECHNOS	DCL-33A	○
	FC Series	○
SUNX	LP-400	○
TOHO ELECTRONICS	TTM-00BT	○
	TTM-200(MODBUS RTU)	○
TOSHIBA	VF-A7	○
Yamatake	SDC35/36	○
	DMC10	○
	DMC50(COM)	○
Yokogawa M&C	UT100	○
	UT750	○
	UT550	○
	UT520	○
	UT450	○
	UT350	○
	UT320	○
	UT2400/2800	○

NEW

V815

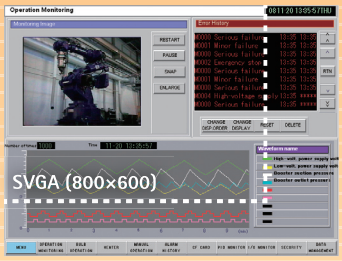
TFT

15-inch model, XGA, 65,536 colors

Compatible with 8-way communication
Serial 3ch (RS-232C/485) (standard features)
USB 2ch (master/slave) (standard features)
LAN (standard features)

e-Front runners

High-definition XGA (1,024×768) in 65,536 colors



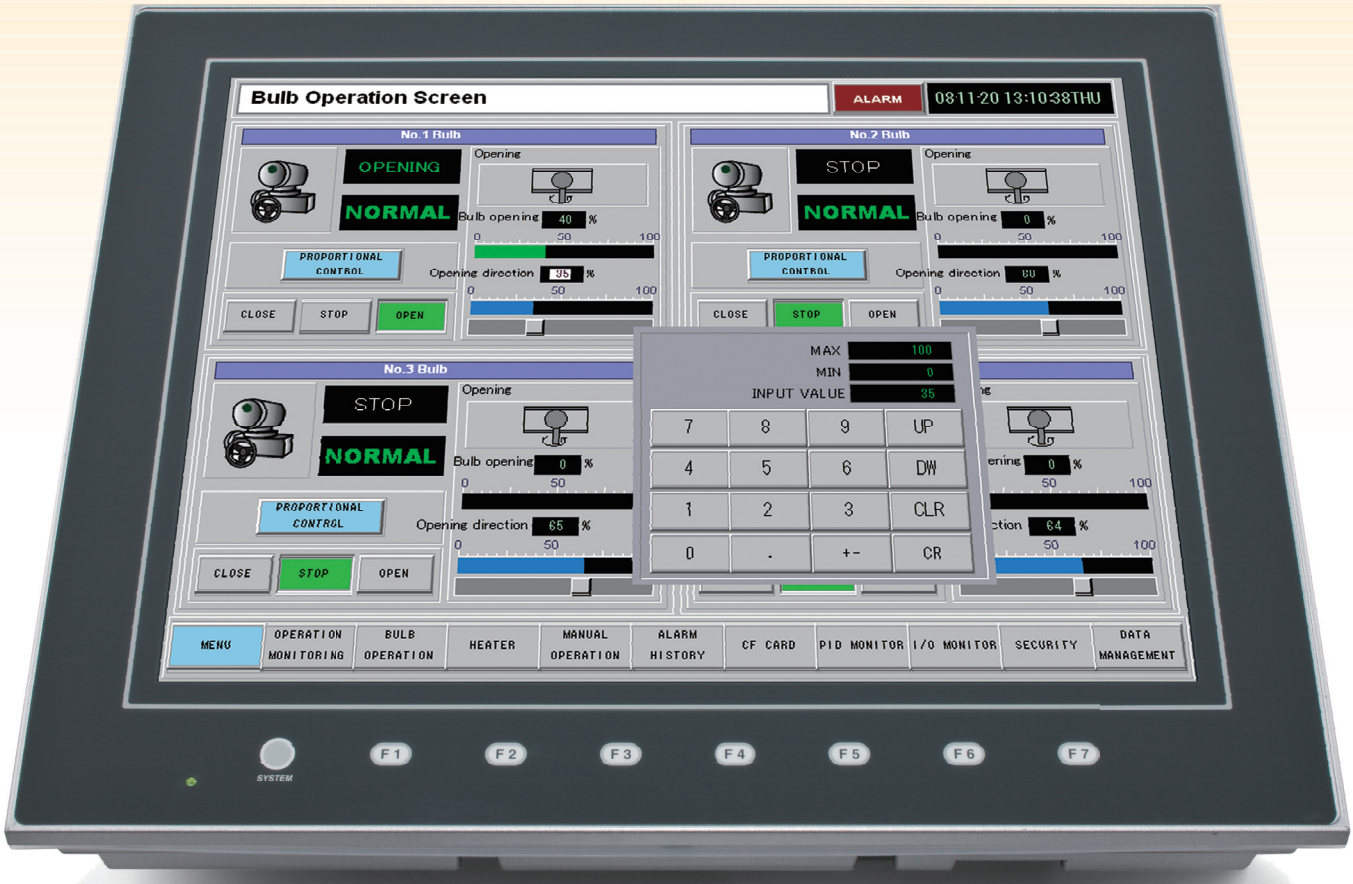
XGA (1024×768)

The XGA (1,024×768) screen, which can display various kinds of information in bright colors, is ideal for centralized control of production sites. The high level of visibility of the large 15-inch high-definition screen ensures smooth, accurate and safe operation.

See all of your plant production data at a single glance on our large display

Largest flagship model in the series

New 15-inch model!

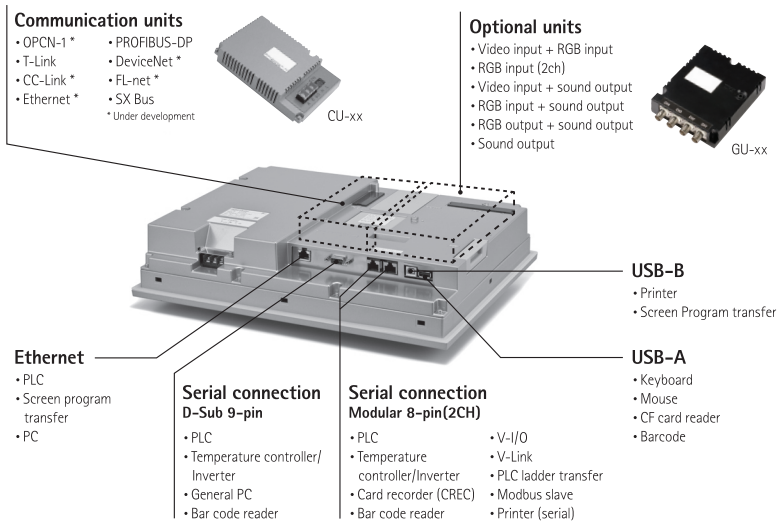


V815 Specifications

Item		Specifications
Display memory (FROM)		12.5MB
Display device		TFT color LCD
Effective display size		15 inches
Display colors		65,536 colors (without blinks) / 32,768 colors (with blinks)
Resolution (L×H)		1,024×768 dots
Backlight		CCFL
Backlight life		60,000 hours (25°C)
Backlight auto OFF		Lit in normal / Set by the user
Brilliance control		3 levels (Adjusted into 128 grades by macro command)
Contrast adjustment		Fixed
Power lamp		Lit in normal condition, blinks in alarm condition such as blowout of backlight bulbs
Touch switch	Type	Analog resistive
	Mechanical life	1 million times or more
	Surface treatment	Hard coating, Non glare finish 5%
Function switch	Number of switches	8 switches
External interface	D-Sub 9-pin (CN1)	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, 15200, 187500bps*
	Modular 8-pin (MJ1/ MJ2)	RS-232C, RS-422/485 (two-wire system), Asynchronous type, Data length: 7, 8 bits, Parity: even, odd, none, Stop bit: 1, 2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps
	CF card interface	Compatible with CompactFlash™
	Ethernet	Complies with IEEE802.3, Baud rate: 100Mbps, 10Mbps, Cable: 100Ω unsealed twist pair, Category 5, Max length: 100m
	USB	Type A, Type B (Ver1.1)
	Battery	Coin-type lithium primary battery
Clock & Backup memory	Backup memory	SRAM 512KB
	Backup period	5 years (Ambient temperature 25°C)
	Battery failure detection	Monitored in the internal memory
	Calendar accuracy	Gap within 90 sec. per month (Ambient temperature 25°C)

* When connected with SIEMENS MPI

Interface

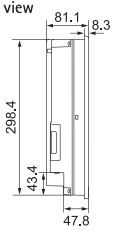


Models

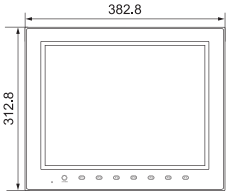
Item	Model	Specifications	Remarks
V815 Series 15-inch model	V815iX	TFT color, 1,024×768 dots, Ethernet, AC power	-
	V815iXD	TFT color, 1,024×768 dots, Ethernet, DC power	CE/UL/cUL compatible

External Dimensions (mm)

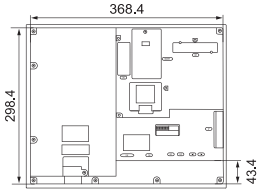
Side view



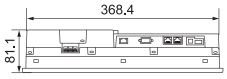
Front view



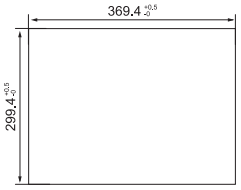
Rear view



Bottom view



Panel cutout



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