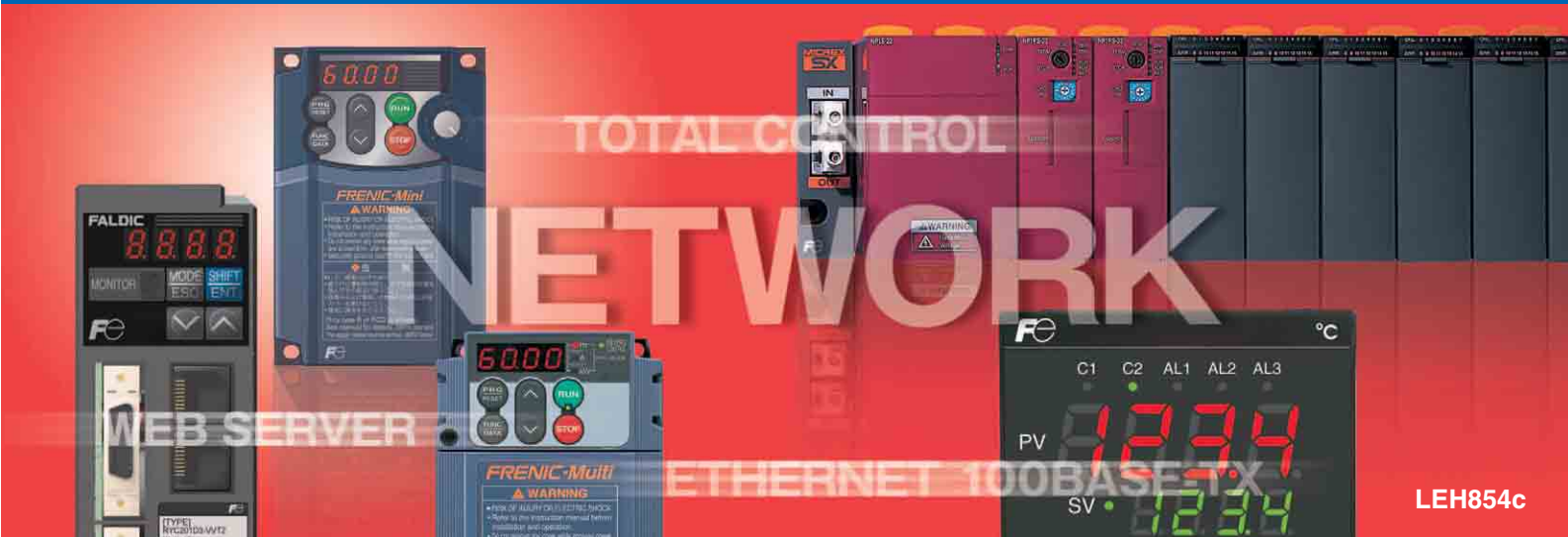
e-Front runners

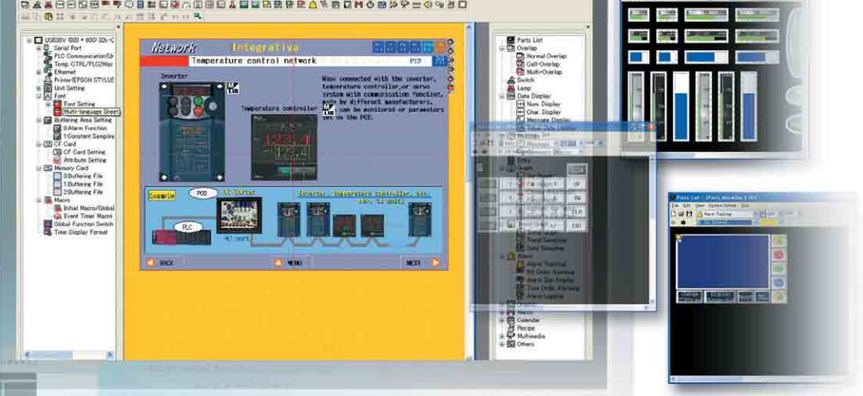
Fuji Programmable Operation Display

POD UG Series General Catalog



LEH854c

Meet our POD. The display that makes your machines more attractive, and your system configuration more simple



Conforms to 32,768 full-color for clearer and sharper image display.
Simplifies your system as a gateway of the temperature control network that connects the PLC, temperature controllers, and inverters.
The UG series are the displays that best fit users' needs by providing clearer and sharper images and allowing simplified system configuration.

POD Satisfies Varieties of Needs

Expression
Expressive

Impressive, real expression of photos and illustrations 32,768 full-color images as standard specification

Possible 32,768 full-color images for all sizes from 5.7 to 15.0 types. Improved image quality will enhance the machine and system values.

Information Management
Supportive

CF card usable for data from all sources covering the PC and PLC

Data of PC can be shared with PLC or vice versa by using the CF card. In addition, screen data and all other POD data can be saved into the CF card, and the CF card can be loaded into the POD.

Network
Integrative

By using the Ethernet as the standard, a network system with the POD acting as the core can be easily configured. Temperature control network permits direct access to an inverter or temperature controller while connecting to the PLC; thus, reducing the PLC load.

External Connection
Connective

Varieties of interfaces with external units are the standard

Higher functions and cost reduction of machine or equipment can be achieved by the video input and RGB I/O functions. In addition to screen data transmission, connection with printer and card reader/writer is possible by using the USB master/slave interface.

Maintenance Tool
Resources

Supporting on-site maintenance with the convenient maintenance tool

The on-site maintenance is strongly supported by the CF card for screen management and the PLC program data read/write using the ladder transfer function.

Editor
Creative

Easy creation of original screens meeting on-site needs using plentiful functions

Wizard function permits faster and sharper screen creation. The multilingual edit function easily creats not only English screen data but screen data usable worldwide.

CONTENTS

Free Choice by Size and Res olution

Resolution ▶

1024×768	800×600	640×480	640×480	320×240
XGA	SVGA	VGA	VGA	QVGA

Size ▲

	UG30 Series	UG30 Series	UG30 Series	Handy POD	UG30 Series	Simple POD	UG221 Series
15.0type	UG630H-XH ▶P.6						
12.1type		UG530H-VH UG530H-VS ▶P.6					
10.4type		UG430H-VH UG430H-VS ▶P.6	UG430H-TH UG430H-TS UG430H-SS ▶P.6·7				
8.4type		UG330H-VH UG330H-VS ▶P.7					
7.7type			UG330H-SS ▶P.7	UG320HD-SC4 UG320HD-SC4K UG320HD-SC43 UG320HD-SC4K3 ▶P.9			
5.7type					UG230H-TS UG230H-SS UG230H-LS ▶P.8	UG221H-SR UG221H-LR UG221H-LE ▶P.8	UG221H-TC UG221H-SC UG221H-LC ▶P.9

Separated type POD (monitor separated type)

Monitor separated type POD to UG30 series newly available

Commercially available monitors can be connected to the monitor separated type POD.

Big-sized monitor display

Realizes big-sized monitor by connecting to a big-sized PDP(plasma dispiay panel) or LCD monitor. Effective for Andon monitor at production lines, waiting list monitor at hospitals, and many more applications.

Touch panel interface

When connected with a touch panel function monitor, functions equivalent to POD with big-sized monitor can be obtained.

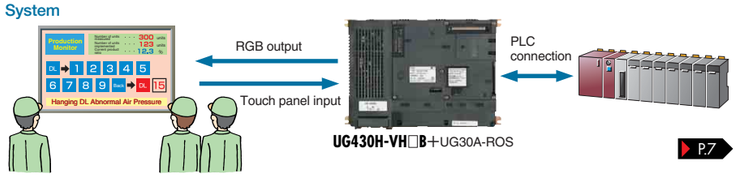
PLC 2-way function

Two PLCs from different manufacturers or series can be connected to the monitor separated type POD. The monitor separated type POD acts as the gateway among PLCs from different manufacturers.

Functions equivalent to UG30 series

Functions equivalent to UG30 with monitor can be realized based on UG430H-VH□. Since screen data created for 800x600 dots POD can be used, big-sized monitor can de achieved easily.

System



UG430H-VH□B+UG30A-ROS ▶P.7

Meeting a variety of needs with a wide range of products

POD UG30 Series

15.0type
XGA

UG630H-XH

P.26

15.0-inch TFT color LCD
Display color: 32,768 colors
Resolution: 1024 x 768 dots (XGA)

External interface
D-sub, Communication unit, MJ, USB port, CF card slot, Ethernet port

Main functions
Multi-language, JPEG display, Animation, Web Server, E-mail, Video, RGB I/O, Audio output, SRAM/RTC

12.1type
SVGA

UG530H-VH

P.28

12.1-inch TFT color LCD
Display color: 32,768 colors
Resolution: 800 x 600 dots (SVGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot, Ethernet port

Main functions
Multi-language, JPEG display, Animation, Web Server, E-mail, Video, RGB I/O, Audio output, SRAM/RTC

12.1type
SVGA

UG530H-VS

P.28

12.1-inch TFT color LCD
Display color: 32,768 colors
Resolution: 800 x 600 dots (SVGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot

Main functions
Multi-language, JPEG display, Animation, SRAM/RTC

10.4type
SVGA

UG430H-VH

P.28

10.4-inch TFT color LCD
Display color: 32,768 colors
Resolution: 800 x 600 dots (SVGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot, Ethernet port

Main functions
Multi-language, JPEG display, Animation, Web Server, E-mail, Video, RGB I/O, Audio output, SRAM/RTC

10.4type
SVGA

UG430H-VS

P.28

10.4-inch TFT color LCD
Display color: 32,768 colors
Resolution: 800 x 600 dots (SVGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot

Main functions
Multi-language, JPEG display, Animation, SRAM/RTC

10.4type
VGA

UG430H-TH

P.28

10.4-inch TFT color LCD
Display color: 32,768 colors
Resolution: 640 x 480 dots (VGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot, Ethernet port

Main functions
Multi-language, JPEG display, Animation, Web Server, E-mail, Video, RGB I/O, Audio output, SRAM/RTC

External interface icon:

D-sub ··· PLC communication port
MJ ··· PLC communication port
Communication unit ··· Communication unit
MJ ··· External connection port for screen data transfer
Printer port ··· Printer port
CF card slot ··· CF card slot
Ethernet port ··· Ethernet port
USB port ··· USB port

32,768 Full-color Display for Enhanced Clear and Sharp Image Display

10.4type VGA

UG430H-TS

P.28

10.4-inch TFT color LCD
Display color: 32,768 colors
Resolution: 640 x 480 dots (VGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot

Main functions
Multi-language, JPEG display, Animation, SRAM/RTC

10.4type VGA

UG430H-SS

P.28

10.4-inch TFT color LCD
Display color: 128 colors
Resolution: 640 x 480 dots (VGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot

Main functions
Multi-language, SRAM/RTC

SVGA

UG430H-VH□B

P.29

Display color: 32,768 colors
Resolution: 800 x 600 dots (SVGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot, Ethernet port

Main functions
Multi-language, JPEG display, Animation, Web Server, E-mail, RGB O, Audio output, SRAM/RTC

8.4type SVGA

UG330H-VH

P.28

8.4-inch TFT color LCD
Display color: 32,768 colors
Resolution: 800 x 600 dots (SVGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot, Ethernet port

Main functions
Multi-language, JPEG display, Animation, Web Server, E-mail, Video, RGB I/O, Audio output, SRAM/RTC

8.4type SVGA

UG330H-VS

P.28

8.4-inch TFT color LCD
Display color: 32,768 colors
Resolution: 800 x 600 dots (SVGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot

Main functions
Multi-language, JPEG display, Animation, SRAM/RTC

7.7type VGA

UG330H-SS

P.28

7.7-inch STN color LCD
Display color: 128 colors
Resolution: 640 x 480 dots (VGA)

External interface
D-sub, Communication unit, MJ, Printer port, CF card slot

Main functions
Multi-language, SRAM/RTC

Meeting a variety of needs with a wide range of products

POD UG30 Series

5.7type QVGA

UG230H-TS P.30

5.7-inch TFT color LCD
Display color: 32,768 colors
Resolution: 320 x 240 dots (QVGA)

External interface: MJ, MJ, USB port, Communication unit

Main functions: Multi-language, JPEG display, Web Server, E-mail, SRAM/RTC

5.7type QVGA

UG230H-SS P.30

5.7-inch STN color LCD
Display color: 32,768 colors
Resolution: 320 x 240 dots (QVGA)

External interface: MJ, MJ, USB port, Communication unit

Main functions: Multi-language, JPEG display, Web Server, E-mail, SRAM/RTC

5.7type QVGA

UG230H-LS P.30

5.7-inch white mode monochrome LCD
Display color: 2 colors (8 gradations)
Resolution: 320 x 240 dots (QVGA)

External interface: MJ, MJ, USB port, Communication unit

Main functions: Multi-language, Web Server, E-mail, SRAM/RTC

Simple POD

Super flat type with only 38mm depth

5.7type QVGA

UG221H-SR P.32

5.7-inch STN color LCD
Display color: 16 colors
Resolution: 320 x 240 dots (QVGA)

External interface: D-sub, MJ

Main functions: SRAM/RTC

5.7type QVGA

UG221H-LR P.32

5.7-inch white mode monochrome LCD
Display color: 2 colors (8 gradations)
Resolution: 320 x 240 dots (QVGA)

External interface: D-sub, MJ

Main functions: SRAM/RTC

5.7type QVGA

UG221H-LE P.32

5.7-inch white mode monochrome LCD
Display color: 2 colors (8 gradations)
Resolution: 320 x 240 dots (QVGA)

External interface: D-sub, MJ

External interface icon:

D-sub ··· PLC communication port
MJ ··· PLC communication port
Communication unit ··· Communication unit
MJ ··· External connection port for screen data transfer
Printer port ··· Printer port
CF card slot ··· CF card slot
Ethernet port ··· Ethernet port
USB port ··· USB port

POD UG221 Series

Compact and complete networking

5.7type
QVGA

UG221H-TC P.34

5.7-inch TFT color LCD
Display color: 16 colors
Resolution: 320 x 240 dots (QVGA)

External interface
D-sub, Communication unit, MJ, Printer port

5.7type
QVGA

UG221H-SC P.34

5.7-inch STN color LCD
Display color: 16 colors
Resolution: 320 x 240 dots (QVGA)

External interface
D-sub, Communication unit, MJ, Printer port

5.7type
QVGA

UG221H-LC P.34

5.7-inch blue mode monochrome LCD
Display color: 2 colors (8 gradations)
Resolution: 320 x 240 dots (QVGA)

External interface
D-sub, Communication unit, MJ, Printer port

Handy POD

Free choice of desktop or mobile with Handy POD

7.7type
VGA

UG320HD P.36

Comfortable 7.7 type with 128-color STN LCD

The 7.7-inch VGA (640 x 480 dots) with 128-color STN LCD enables a spacious screen layout that greatly enhances productivity.

A host of security, safety functions

Deadman's switch
The deadman's switch at the top of the display helps to prevent operating errors by requiring confirmation. (Two models available: 2-position and 3-position configurations) A deadman's switch lamp enhances safety.
Emergency stop switch
This standard-equipment, hardware-based switch lets you stop the system in case of emergency.
Key switch
The key-switch model increases security by allowing operation only by person with the key.

Analog touch panel

An analog resistance film touch panel simplifies on-screen arrangement of small parts, and also supports Memo Pad function.

Compact Flash (CF) card

The CF card interface is the standard equipment. Accumulation and storage of data that previously required a recorder can be done with the UG320HD only.

Convenient cable routing

The cable can be routed to the right or left, to hold it with either your right or left hand. This arrangement makes operation smooth and easy.

Other functions

•Degree of protection conforming to IP65 •Connectable with PLCs from different manufacturers (except for the use of the communication unit) •Fixed 4 switches with enabling direct output •Built-in clock function

Expression

Expressive

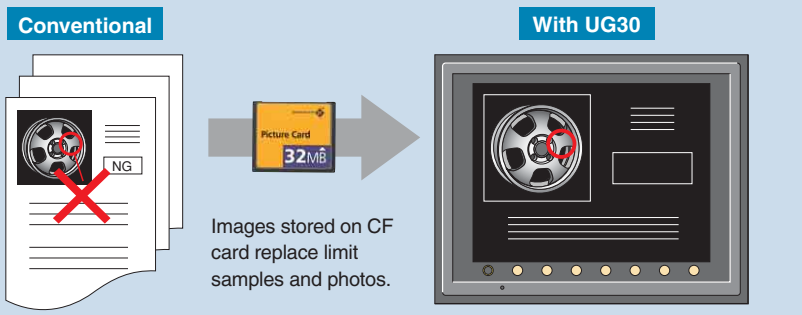
32,768 full-color display

UG630 UG530 UG430 UG330 UG230

The 32,768 full-color display gives clear and bright images equivalent to photos.

For example, the on-site operation manuals or recovery manuals have been used in paper because they contain clear and sharp photos. Now, these paper manuals can be maintained and used on the POD as electronic manuals.

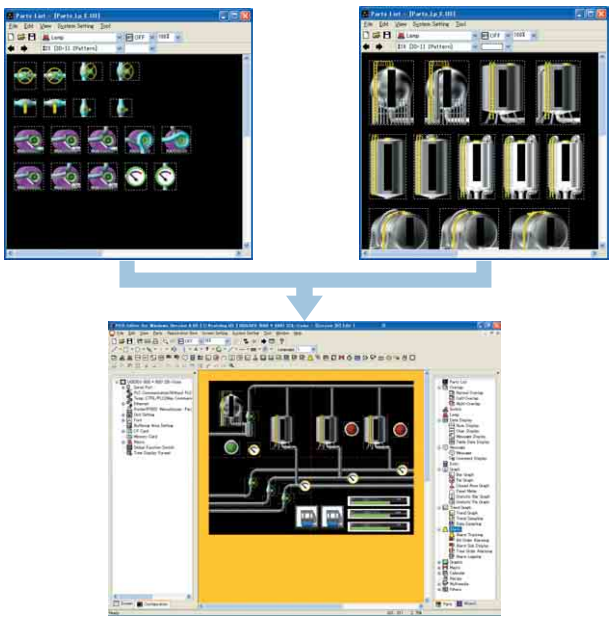
Brightly displays photos of actual samples and production equipment



3D parts

UG630 UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

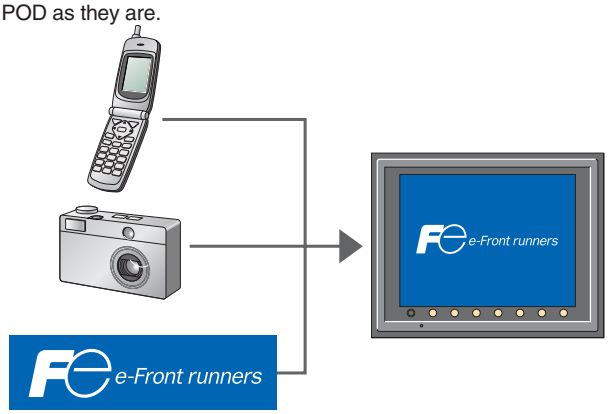
More than 1000 different 3D parts are prepared. The UG30 with 32,768 full-color allows more realistic image display.



JPEG display

UG630 UG530 UG430 UG330 UG230

In addition to mobile-phone and digital camera photo data, and BMP data like company logo, JPEG data can be displayed on the POD as they are.



Animation

UG630 UG530 UG430 UG330

Animation can be automatically completed simply by setting desired movements of pre-registered photo or picture (BMP file). This allows more realistic animation image display. Try it for yourself.

Multi-language function

UG630 UG530 UG430 UG330 UG230

Up to 8 languages can be displayed simultaneously or by switching.

Effective for local language expression when exporting the equipment or on-site operation with local staff.

* CF card is required for multi-language display.

Windows font function

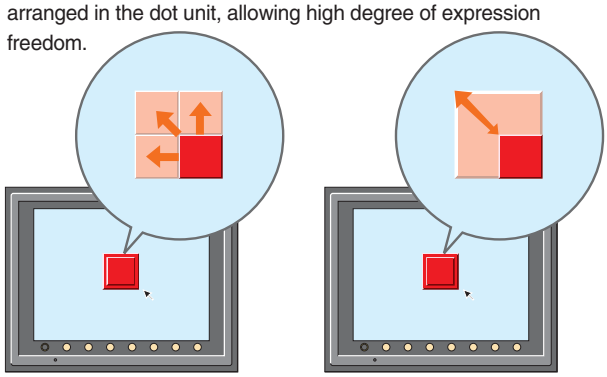
UG630 UG530 UG430 UG330 UG230

Windows fonts can be used for display. The expression can be improved as your desired font types and sizes can be chosen for each part and message. Multiple languages can also be displayed on a single screen.

Analog touch panel

UG630 UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

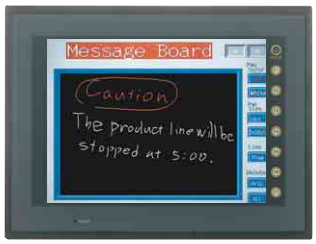
The analog touch panel is adopted as standard. Switches may be arranged freely in the dot unit, not in the cell unit like conventional matrix type. Furthermore, enlargement and reduction are also arranged in the dot unit, allowing high degree of expression freedom.



Possible to move in dot unit

Possible to enlarge and reduce in dot unit

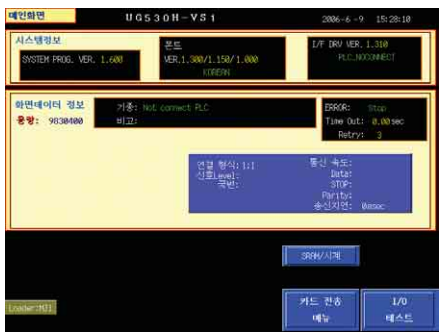
Analog touch panel allows handwriting on the POD (memo pad function), checking the touch switch status (ON/OFF), and checking the pressed coordinate with the internal memory (coordinate output function).



Chinese and Korean languages are supported for a local main screen.

UG630 UG530 UG430 UG330 UG230

Not only Japanese and English, but Chinese (simplified and traditional) and Korean are also supported in a local main screen. It is possible now to verify system information and screen data information of POD main body and run tests in these parts of the world.



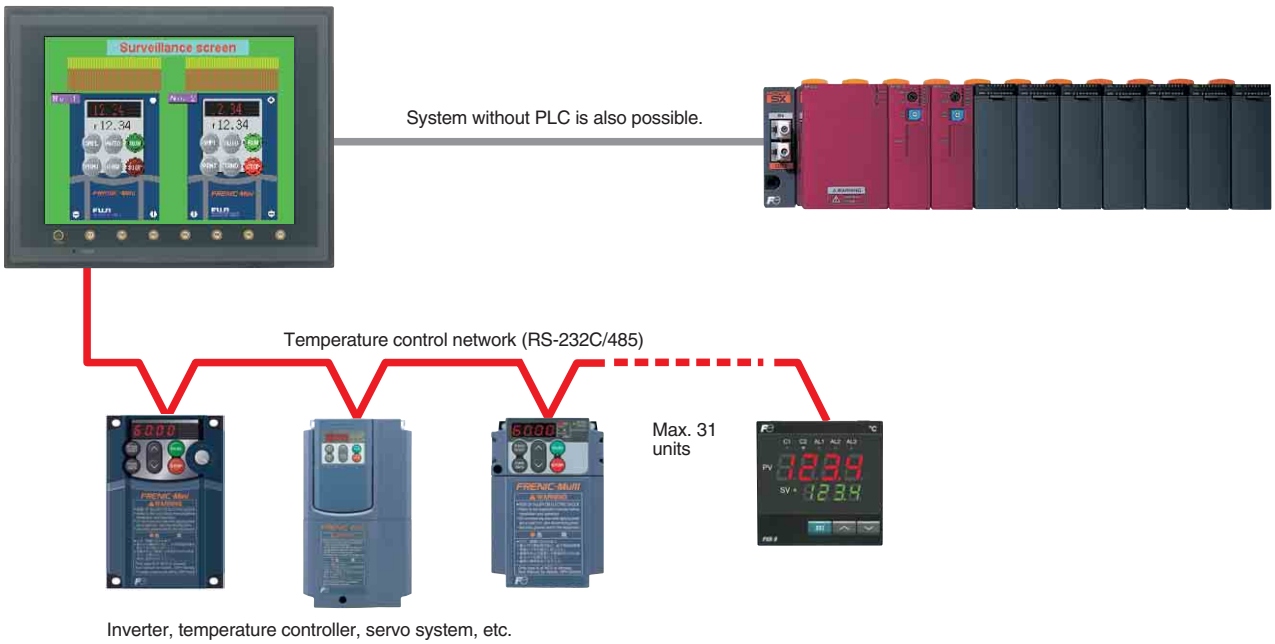
Network

Integrative

Temperature control network

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221

When connected with the inverter, temperature controller, or servo system with communication function, made by different manufacturers, data can be monitored or parameters set on the POD.



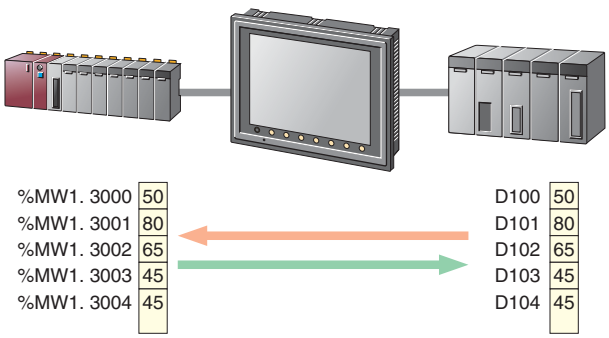
The devices, supporting ModbusRTU protocol, can be connected with the devices of different manufacturers and different models.

UG30 can communicate with inverter, temperature controller, and servo system via RS-232C/485 without any programs.
Up to 31 units can be connected when RS-485 is used.
Both serial connection and connection via communication unit are possible between PLC and POD.

PLC 2-Way

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221

Two PLCs of different manufacturers or different series can be connected to a POD. The POD acts as gateway between different PLCs.

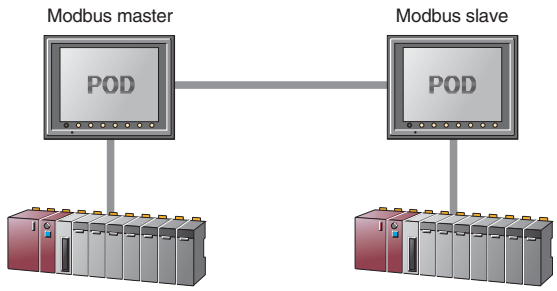


When a new facility has to be extended to an existing facility, the old facility can transfer data with the new facility's PLC via POD, without any program change of the old PLC.

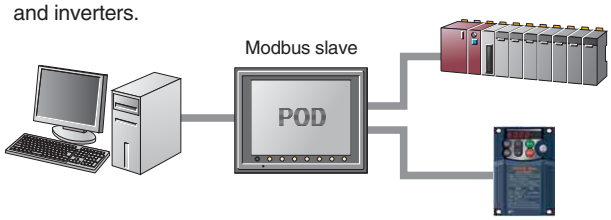
Modbus slave communications function

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

Allows data communications between PLCs of different makers via POD using the temperature control network (ModbusFree).



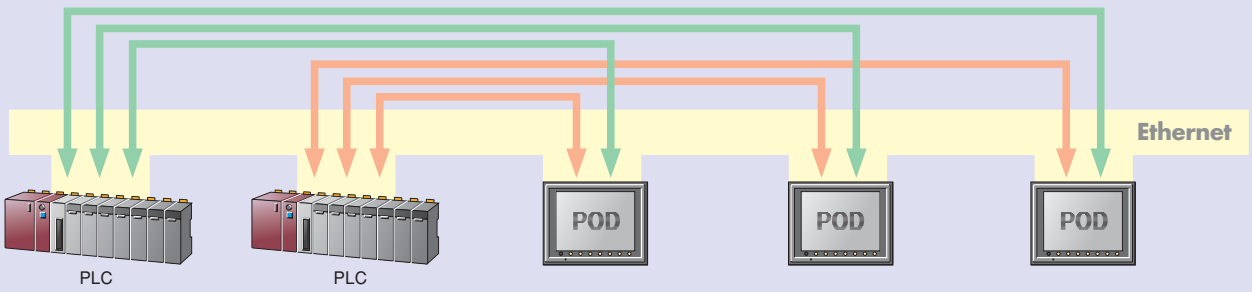
Modbus communications can be used from a personal computer to access the internal memory of POD and memories of PLCs and inverters.



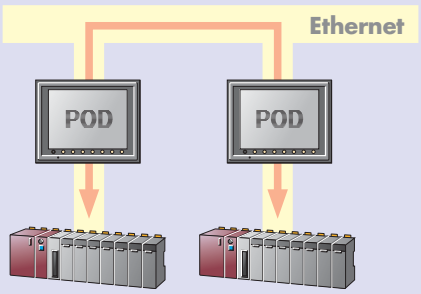
Ethernet

UG 630 UG 530 UG 430 UG 330 UG 230 UG 221

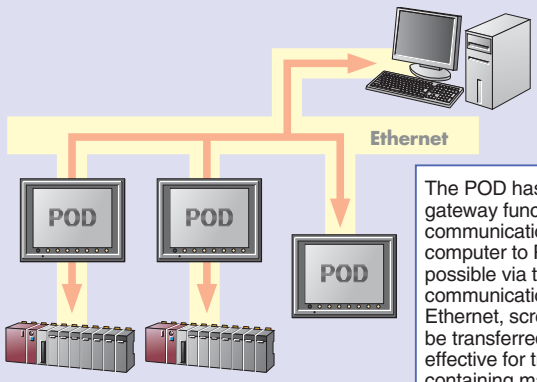
The model with Ethernet 100BASE-TX/10BASE-T equipped as standard is prepared. This standard model permits construction of the Ethernet network system. The Ethernet system can also be configured with models without Ethernet 100BASE-TX/10BASE-T once it is equipped with option.



PODs and PLCs connected on the Ethernet enable N-to-N connection without any program.



Data communications are also possible between PODs or between PLCs connected to the PODs.

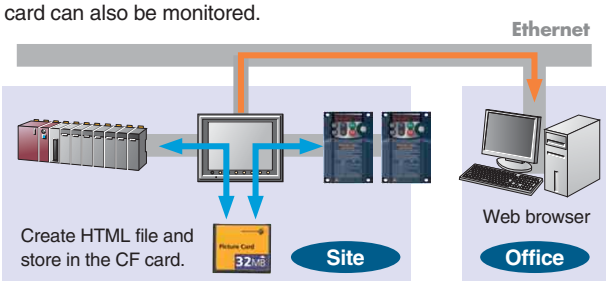


The POD has the communication gateway function. Thus, bi-directional communications from the personal computer to PLC and vise versa are possible via the POD. If communications are done via Ethernet, screen data of the POD can be transferred quickly. This is effective for transferring screen data containing many photos.

Web server function

UG 630 UG 530 UG 430 UG 330 UG 230

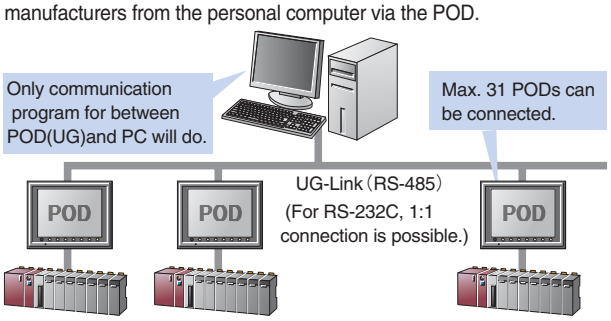
HTML files stored in the CF card can be displayed using a browser on a personal computer or set from the browser, making it possible to monitor or change settings of PLC and inverter data through the POD from a remote site. JPEG files stored in the CF card can also be monitored.



UG-Link

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

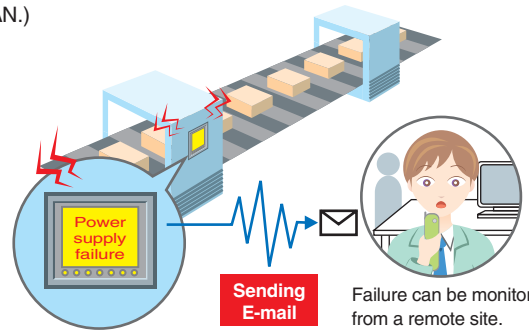
Even when the POD is connected to a PLC, the POD can be accessed from a personal computer. The communication rate is max. 115 kbps. Besides, using only a single communication program for between POD and the personal computer, you can access data of PLCs of different manufacturers from the personal computer via the POD.



E-mail distribution function

UG 630 UG 530 UG 430 UG 330 UG 230

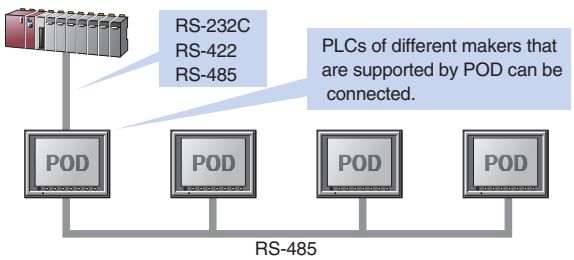
As E-mail can be distributed via the mail server upon system failure, prompt action can be taken or breakdown of an automatically operating system be recognized quickly. Maximum 8 addresses may be registered. (A mail server is required on the LAN.)



Multi-Link 2

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

This network enables high-speed communications with PLCs, using the standard serial port of the POD. Maximum 4 units of POD can be connected to one unit of PLC. While the communication rate between POD and PLC depends on the PLC, communication rate between PODs is 115kbps.



Information Management

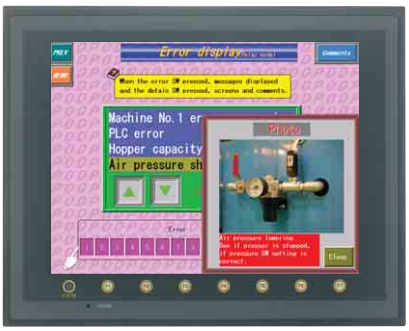
Supportive

Alarm/Message display function

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

An alarm or message can be displayed in response to bit.

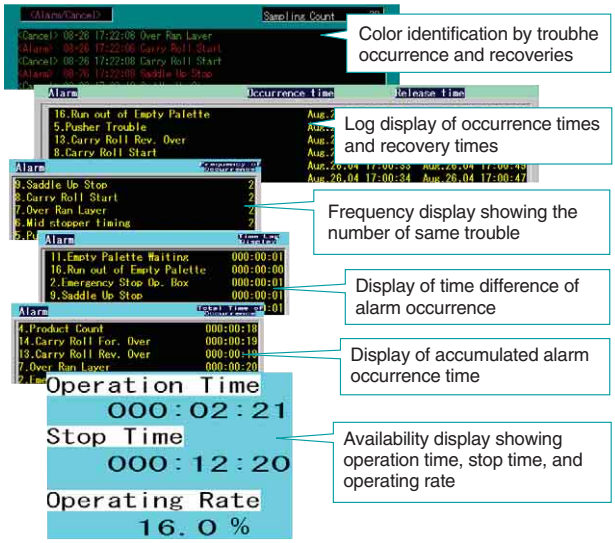
Upon trouble occurrence, this is effective for giving detail instructions to operators and indication of trouble location by photos, to enable prompt action.



Alarm log function

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

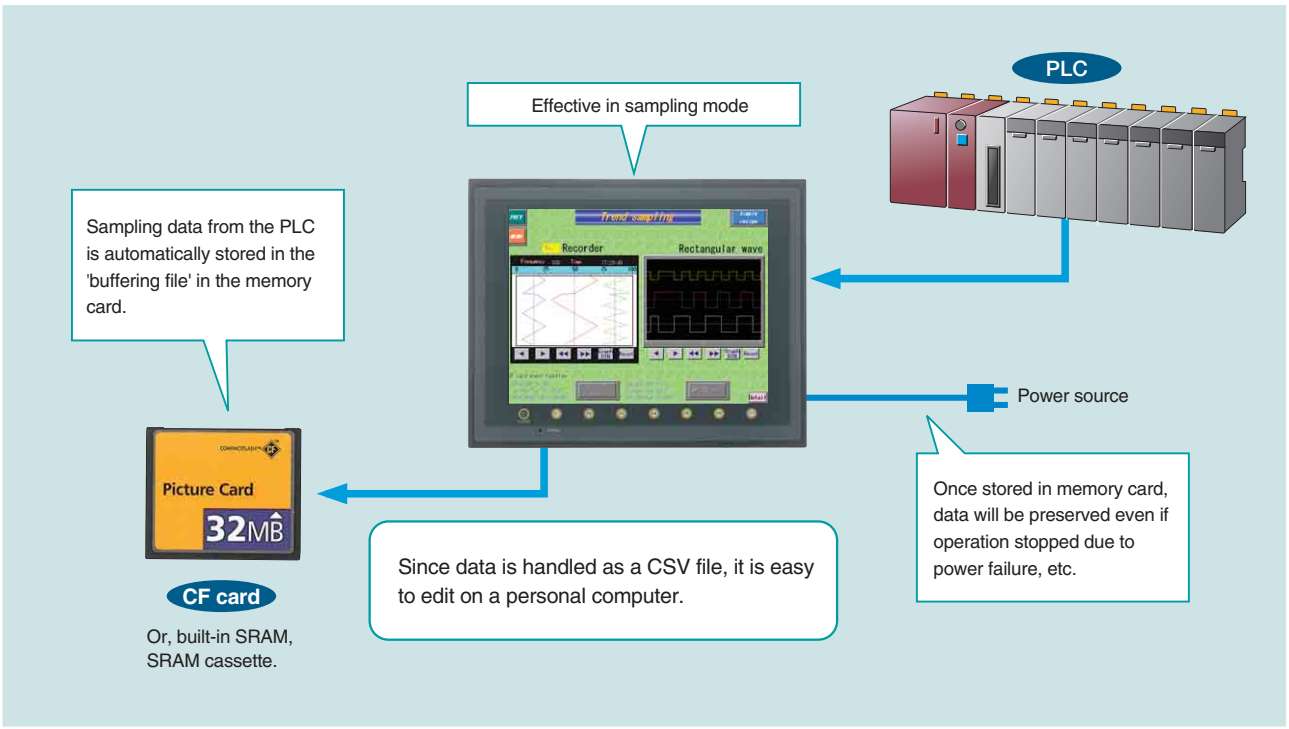
Contents of the trouble and time can be stored and managed to display as the log data. Data items may be sorted in order of occurrence times and priorities. Using the data, failure causes and equipment availabilities can be analyzed and displayed.



Data logging function

UG 630 UG 530 UG 430 UG 330 UG 230 HANDY

The error information and numeric data sampled from the system are logged to store in the CF card.

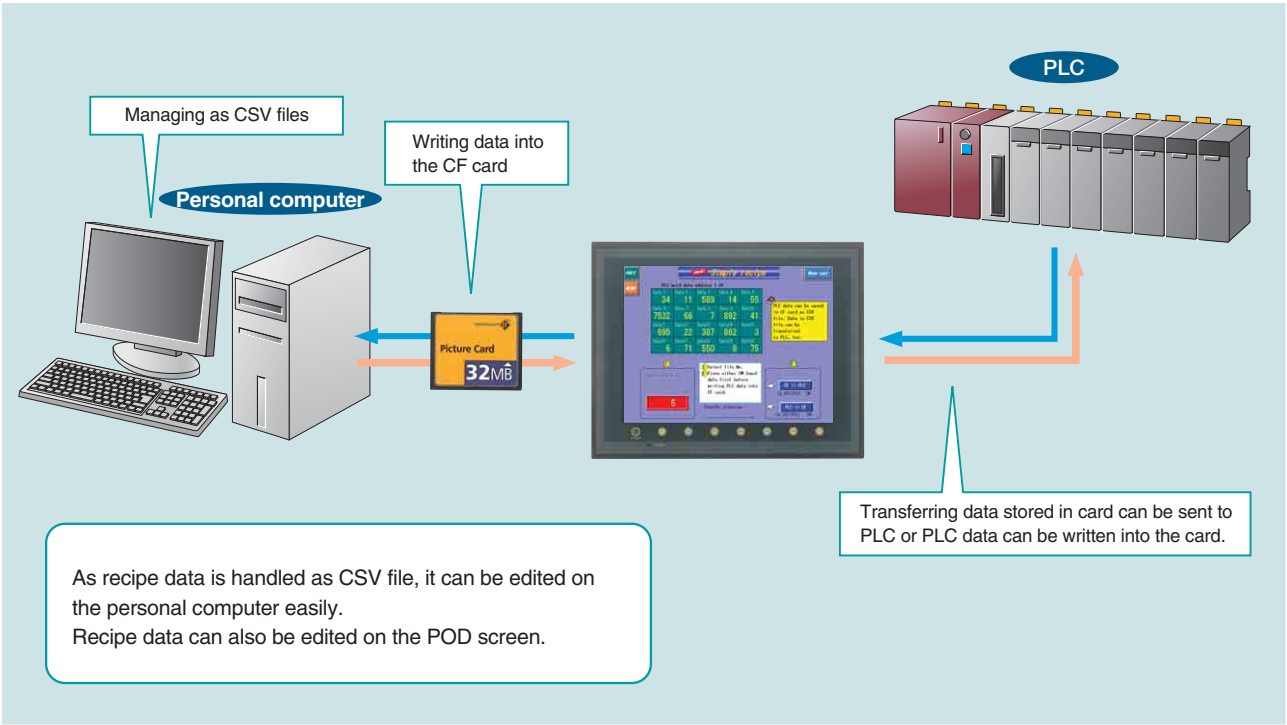


Applicable models

UG 630 ... UG630 Series | UG 530 ... UG530 Series | UG 430 ... UG430 Series | UG 330 ... UG330 Series | UG 230 ... UG230 Series | Simple POD ... Simple POD | UG 221 ... UG221 Series | HANDY ... Handy POD

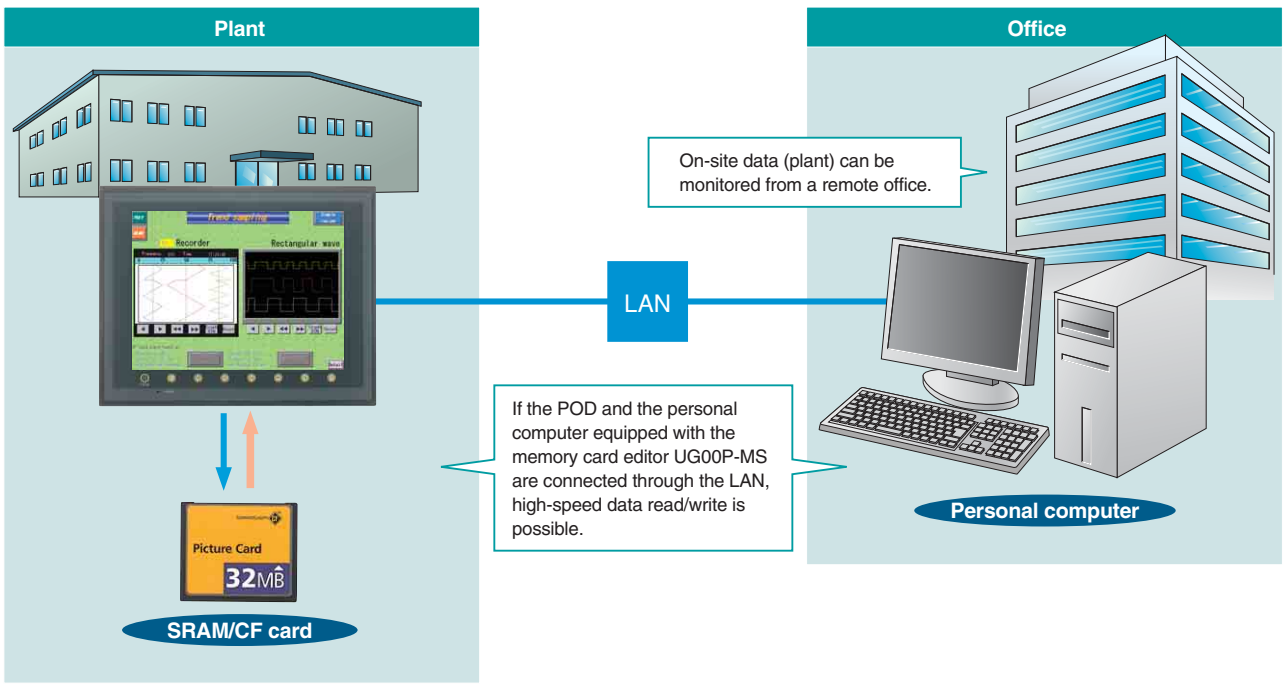
Recipe function

The setting data (recipe data) for the equipment created on the personal computer can be written to the PLC via the CF card. Multiple sets of recipe data can be stored in the CF card and selected on the POD.



Memory card editor (UG00P-MS)

The memory card editor is the software used to write the data stored in the CF card, built-in SRAM, or SRAM cassette in the personal computer, or convert them into a CSV file. When the POD is connected with a personal computer via Ethernet (except Simple POD and Handy POD), on-site data can be monitored from a remote office.



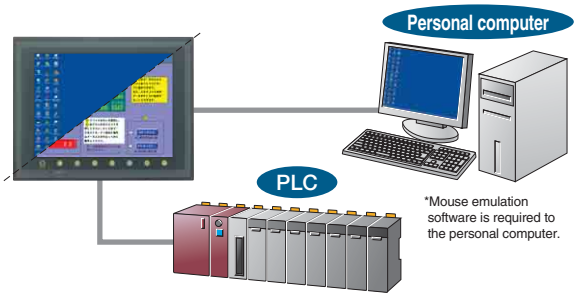
External Connection Unit

Connective

RGB input function

UG30A-RIS is required. (UG00A-RIS for UG630) UG630 UG530 UG430 UG330

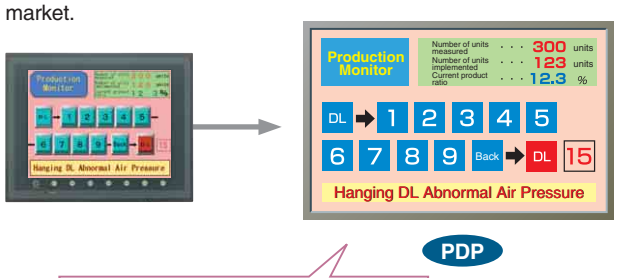
A single POD can display either its normal screen or a personal computer screen, with its switching operation. This contributes to space and cost savings of the system. The mouse function of the personal computer can also be realized on the POD screen using the analog touch panel function.*



RGB output function

UG30A-ROS is required. (UG00A-ROS for UG630) UG630 UG530 UG430 UG330

The POD screen can be displayed on a monitor available in the market.



Can be used as the electronic Andon in the plant production line.

Video input function

UG30A-VIS is required. (UG00A-VIS for UG630) UG630 UG530 UG430 UG330

Images of the connected digital video camera or CCD camera can be displayed on the UG30 as they are.

4-channel simultaneous display function

When 4 cameras are connected, their four images are simultaneously displayed.

Super impose function

The transparent operating screen can be displayed simultaneously on the video image.

Snap function

Not only a single snap, the strobe snap function enables display of 16-cell continuous static image capture. The snap images are handled as JPEG data.

Audio output function

UG30A-RIS, ROS, VIS or SUD is required. (UG00A-RIS, ROS, VIS or SUD for UG630) UG630 UG530 UG430 UG330

Sounds recorded in the WAV file format can be output from the speaker with amplifier.

Fault occurrence or on-site instructions can be announced through the speaker.

Compatible with printers

UG630 UG530 UG430 UG330 UG230 UG20

In addition to conventional MS-DOS printers, the UG30 series can be connected with Windows-based EPSON PM Series color ink-jet printers and compact printer CBM292/293 supplied by CBM.

Conforms to 1D and 2D bar code

UG630 UG530 UG430 UG330 UG230 Simple POD UG20 HANDY

The UG30 can reed out data by connecting 2D bar code scanner, in addition to 1D bar code scanning.(Only UG30 conforms to 2D bar code)

Conforms to USB interface as standard

UG630 UG230

USB master and slave interfaces are included as standard equipment. These increase on-site utility by allowing connection to a USB-equipped printers (such as EPSON PM Series) or commercially available CF card recorders. It also lets you transfer large-capacity screen data at a high speed.

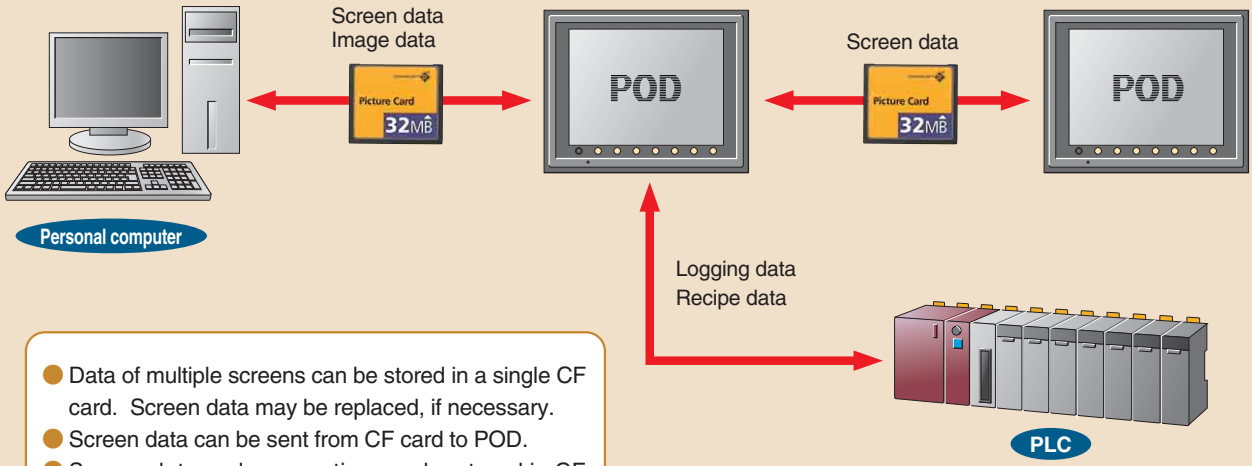
Maintenance Tool

Resources

Screen management by CF card

UG630 UG530 UG430 UG330 UG230 HANDY

Use of CF card facilitates screen data management.

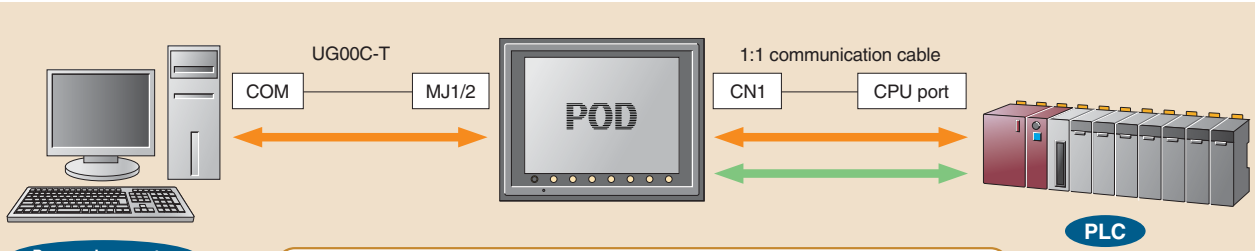


- Data of multiple screens can be stored in a single CF card. Screen data may be replaced, if necessary.
- Screen data can be sent from CF card to POD.
- Screen data under operation can be stored in CF. card.

Ladder transfer function

UG630 UG530 UG430 UG330 UG230 Simple POD UG221

By connecting the PLC programming tool to the POD, the PLC program can be read/written or monitored via the POD.



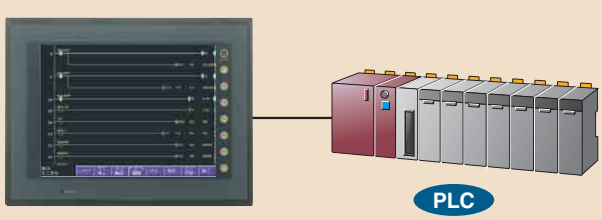
As the POD can be substituted for the conventional dual port interface or PLC's general-purpose communication module, this is effective for a PLC that has only one CPU programming port. (Makers of applicable models: Fuji, Mitsubishi, Omron, Yokogawa, Matsushita and SAMSUNG)

Ladder monitor function

UG630 UG530 UG430 UG330

Equipping with the extension memory cassette (UG30P-LM) for ladder monitor, the screen of the UG30 unit can be used to monitor ladder diagrams and I/O areas of the PLC. During monitoring a ladder diagram, you can call out the desired ladder by specifying a step number, and also make a search by specifying an address. When you click an error message, you can search and display the coil corresponding to the bit.

[Corresponding PLC models]
■Fuji : MICREX-SX (Standard loader)
■Fuji : FLEX-PC (Standard loader)
■Mitsubishi : MELSEC-Q (except for Q00J/00/01)



Creative

Editor (Screen Editor Software UG00S-CWV4)

Creative

POD EDITOR Ver.4

POD Editor Ver.4 for UG Series

Quite easy

Significant reduction of man-hours in screen drawing with easy-to-use editing environment.

Made easy by the View windows

Made easy by compound parts

Made easy by Macros

New Significant reduction of man-hours in drawing with compound parts

Compared with the previous versions, the new editor is able to significantly reduce man-hours in drawing by adopting compound parts. Simple, prompt drawing even when there are Complicated screens with can be drawn simply and quickly.

Comparison of editing alarm function by the older editor and POD EDITOR Ver. 4

Previous editor

Choose alarm mode → Layout alarm screen area → Choose and set function switch → Layout function switch → Completed

N times

POD EDITOR Ver.4

Layout compound alarm parts → Completed

Reduced man-hours

*The man-hours in drawing depends on the type of parts.

Get the whole picture at a glance with the new View layout.

1 Create screens

Drawing window

Drawing is performed in this window.

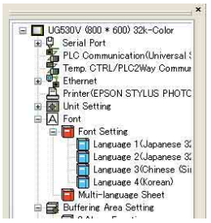
2 Call and edit windows and set up the system

Project View window

Display setting and system setting are integrated in the Project View window. Various settings can be changed and verified promptly only by the Project View window.

Screen

Configuration

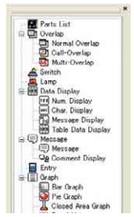


3 Select and arrange parts in the drawing window

Catalog View window

Parts layout is enabled by calling the list of parts and dragging and dropping selected parts on the drawing window.

Catalog View window

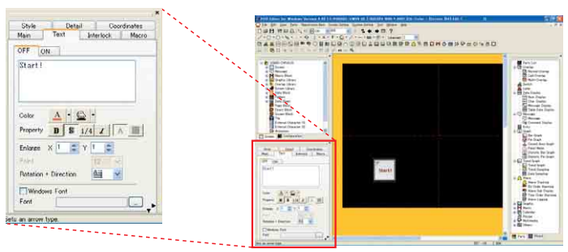


Parts list

4 Edit setting by the Item View window

Item View window

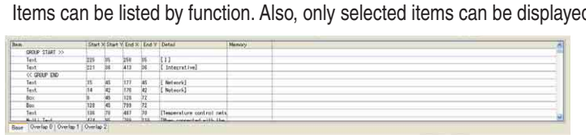
All the arranged parts are set in the Item View window.



5 List and display items arranged in the drawing window

Item list

Items can be listed by function. Also, only selected items can be displayed.



Editor (Screen Editor Software UG00S-CWV4)

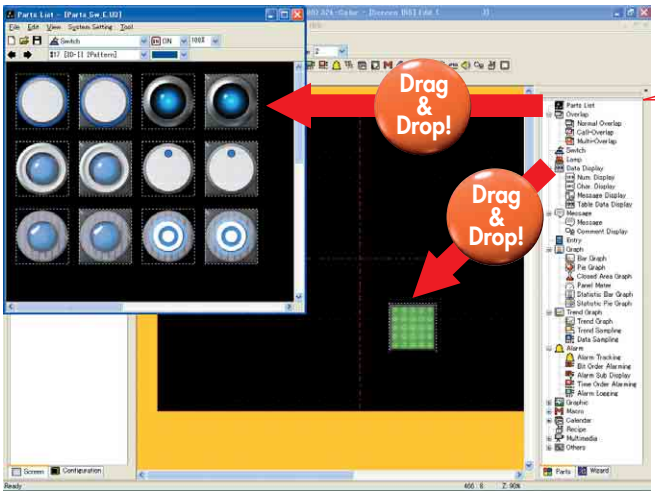
Creative

Catalog View window

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

Parts layout is enabled by calling the list of parts and dragging and dropping selected parts on the drawing window.

Select parts from the Catalog View window

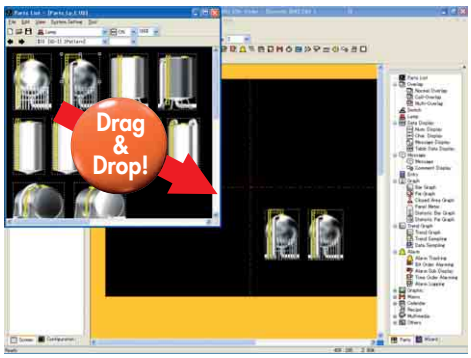


All kinds of parts are displayed on the Catalog View window.

Drag the parts or the parts list from the Catalog View window and drop them on the drawing window.

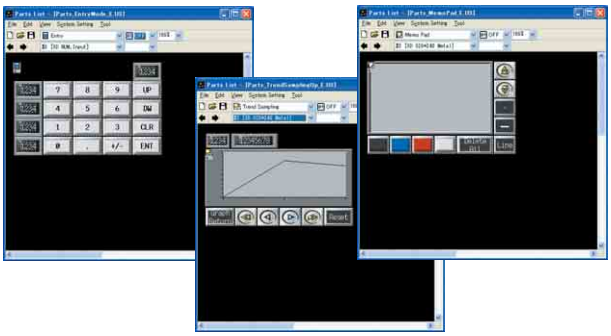
Drag and drop from parts list

All parts are thumbnailed on the parts list.

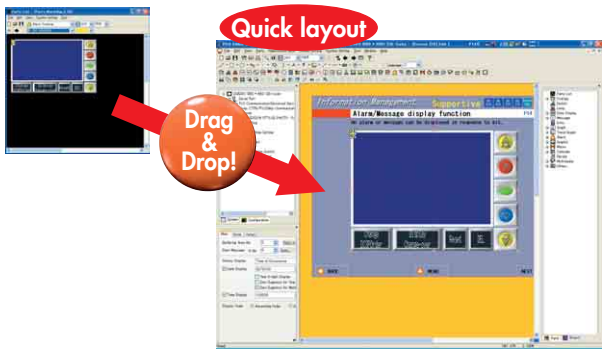


Select the parts from the parts list and layout them on the drawing window by drag and drop.

New Layout at once by using compound parts



Compound parts are adopted to combine multiple parts to one. Compound parts can be used as a template for alarm screens, notepads and trend charts.



For example, an alarm screen is arranged at once by selecting compound parts from the parts list, and dragging and dropping them. Man-hours in drawing can be significantly reduced by using this function.

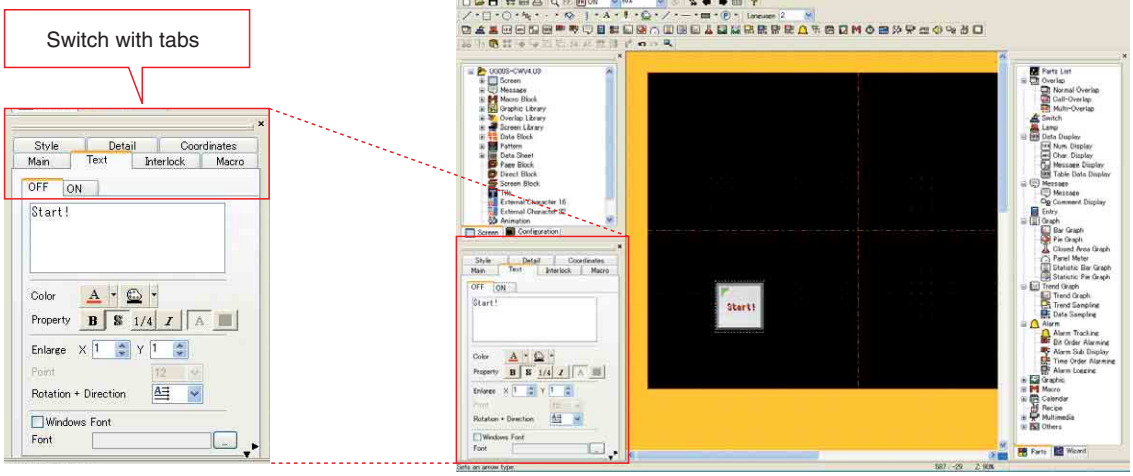
Applicable models

UG 630 ... UG630 Series　UG 530 ... UG530 Series　UG 430 ... UG430 Series　UG 330 ... UG330 Series　UG 230 ... UG230 Series　Simple POD ... Simple POD　UG 221 ... UG221 Series　HANDY ... Handy POD

Item View window

All the arranged parts can be set up on the Item View window.

Easy set-up on the Item View window



All the selected parts can be set up with only one Item View window.

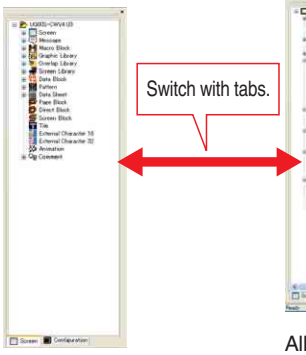
Arranged parts are set up on the Item view window.

Project View window

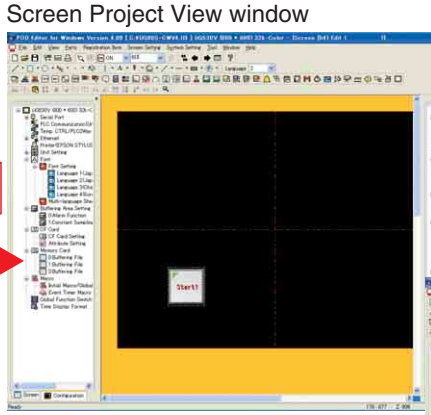
Display setting and system setting are integrated in the Project View window.
Various settings can be changed and verified only by the Project View window.

Change and verification on the Project View window

Configuration Project View window



Screen Project View window



All the screen configuration of the whole file can be verified on the Screen Project View window.
The Configuration Project View window allows you to verify all the system setting.

All the setting can be also changed on the Project View window.

Editor (Screen Editor Software UG00S-CWV4)

Creative

Easy macro function

UG630 UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

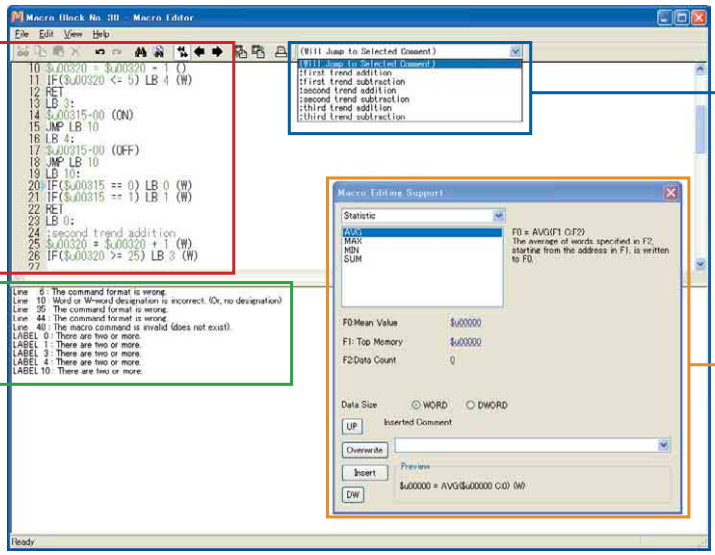
Macro function is made easier.

Support for text entry

Now macros can be directly entered with a keyboard. Macros are created and modified easily just like any text entry.

Comment list function

Comments can be added to describe the content of macros. The comments can be directly accessed using this function.



Automatic macro entry error check

When an erroneous macro is entered, this function immediately let you know what is incorrect and in what way it is incorrect.

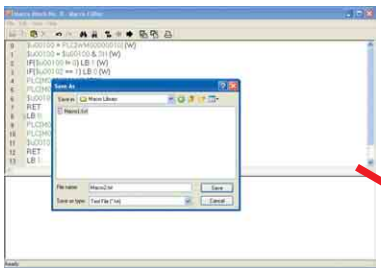
Support function for macro editing

This support function is added so that you can see the function of the macro at a glance as you do with Excel functions. Now you can create macros easily without consulting a manual.

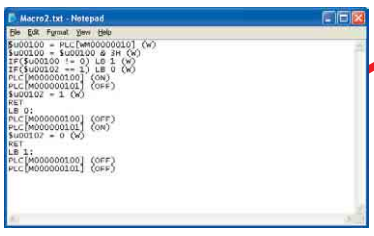
Macro library

UG630 UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

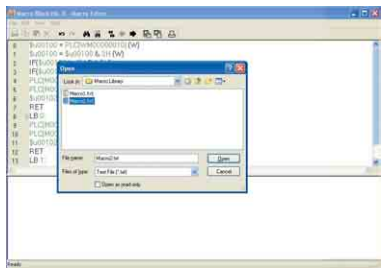
Exporting to a text file and importing from a text file is possible with this version. Various macros can be maintained in libraries.



Export macro to a library.



The content can be managed as a text file.

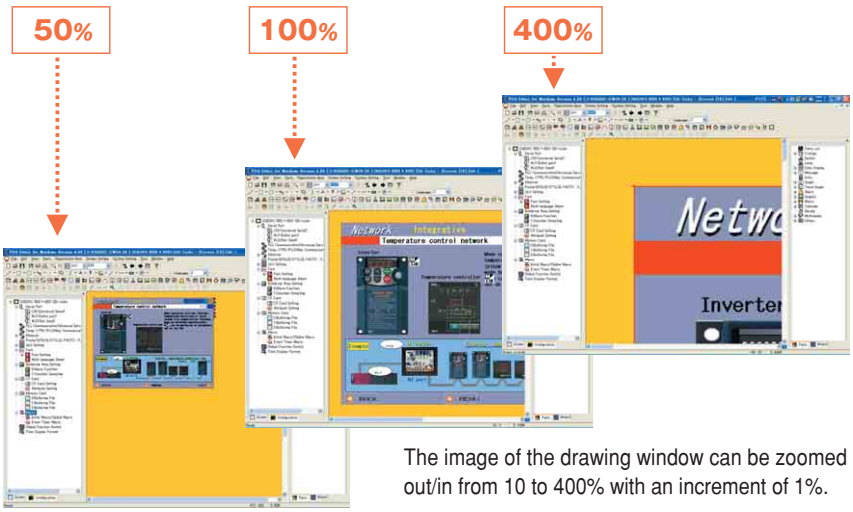


Import the macro from a library and use it.

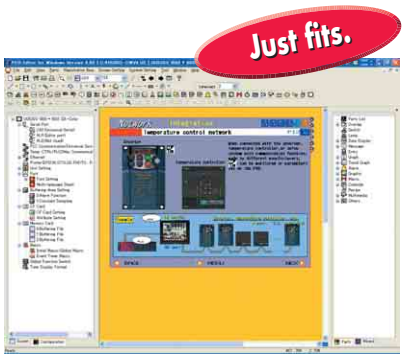
Applicable models

UG630 ... UG630 Series
UG530 ... UG530 Series
UG430 ... UG430 Series
UG330 ... UG330 Series
UG230 ... UG230 Series
Simple POD ... Simple POD
UG221 ... UG221 Series
HANDY ... Handy POD

Zooming out and zooming in of the drawing window



The image of the drawing window can be zoomed out/in from 10 to 400% with an increment of 1%.

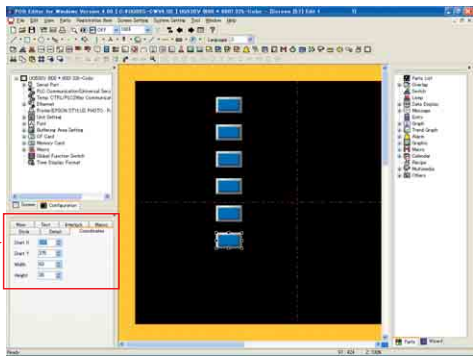


The image can be zoomed out/in to just fit in the window.

Arranging parts with the coordinate system

Parts can be arranged using the coordinate system on the Item View window. This function is useful when a fine tuning is required.

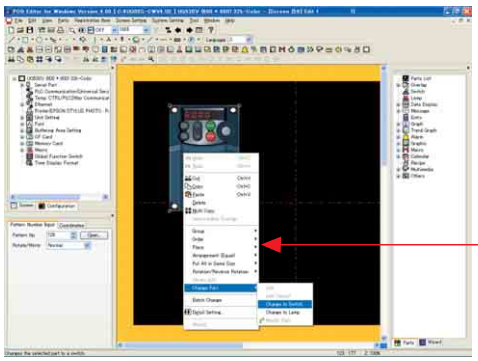
The position of a part can be specified by one dot.



Modifying parts

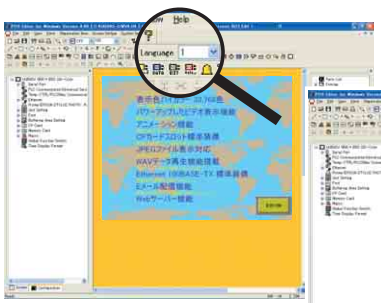
Selected items or areas can be turned into switches or lamps.

The item turns into a switch lamp at once with a right-click.

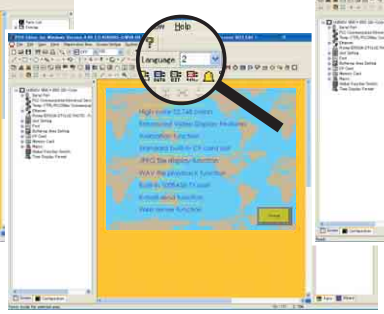


Switching languages smoothly with a multi-language function on the tool bar.

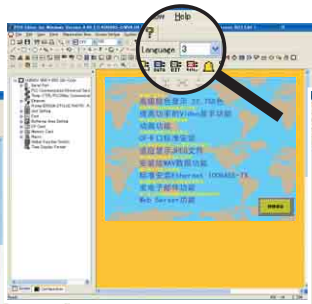
A multi-language bar is provided on the tool bar. This function is useful when screens are created in different languages to switch among these screens.



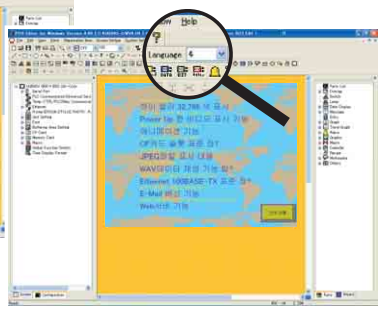
Japanese



English



Chinese



Korean

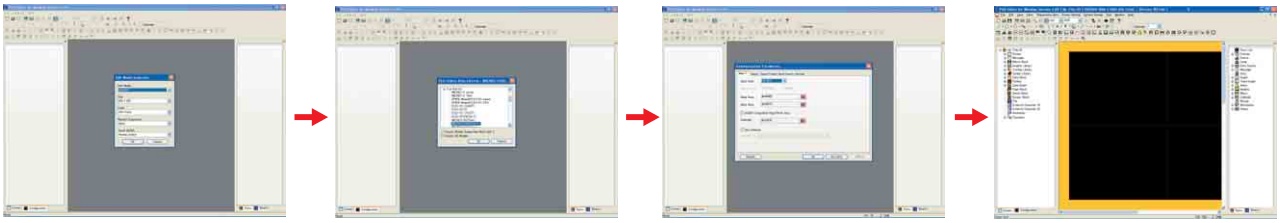
Editor (Screen Editor Software UG00S-CWV4)

Creative

System initialization

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

When the new screen is created, the minimum initial set-up is performed in the Wizard mode.
It makes sure that set-up is performed to get ready to create a new screen.

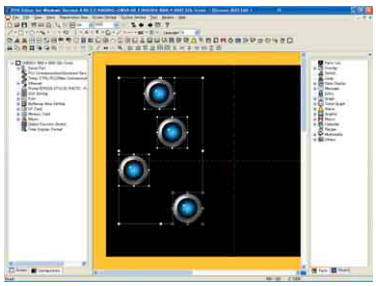


Arranging, aligning and resizing of parts

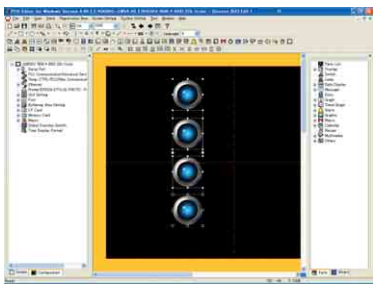
UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

Selected parts can be automatically arranged, aligned or resized.
You can turn the selected parts to the same size or align them.

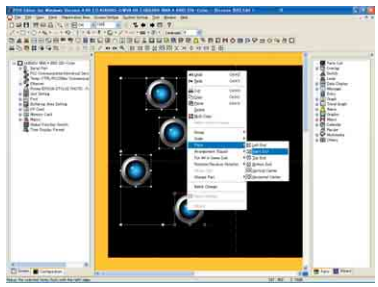
For example,



Select the parts you want to work on.



Set one part active. It becomes a standard part. Select the icon for the action.

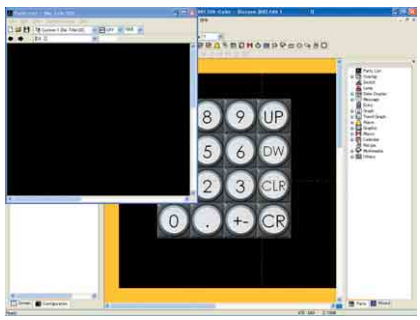


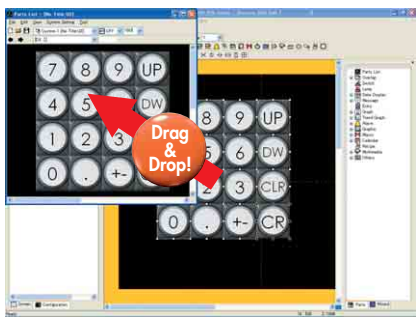
The same action can be performed with a right click too.

Parts library

UG 630 UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

You can add original parts to the parts list and store them in a library.
This is an easy process by dragging them from a drawing window and dropping them on a new screen of the parts list.



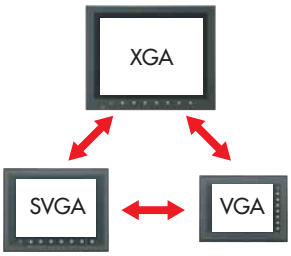


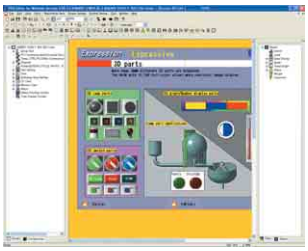
Applicable models

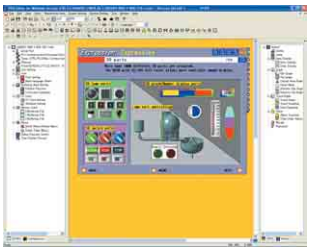
UG630 ... UG630 Series　UG530 ... UG530 Series　UG430 ... UG430 Series　UG330 ... UG330 Series　UG230 ... UG230 Series　Simple POD ... Simple POD　UG221 ... UG221 Series　HANDY ... Handy POD

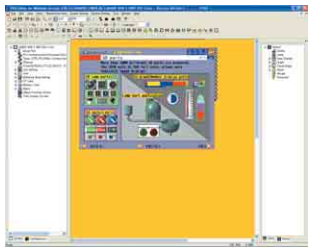
Screen resizing function

The new function is added to automatically resize the screen.
POD screen data of a different resolution can be reused with this function.




XGA


SVGA


VGA

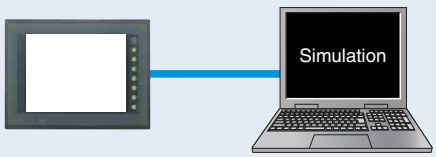
Effective reduction of man-hours in screen drawing

Each new screen does not have to be created for a different screen size (resolution).
*Manual fine tuning may be required.

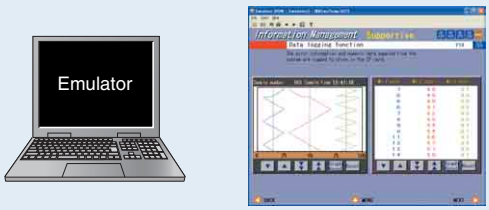
Emulator

Emulator function is incorporated in the POD Editor.
Only one PC is required for simulation.

Before POD main body was required.



From now on All you need is a PC.



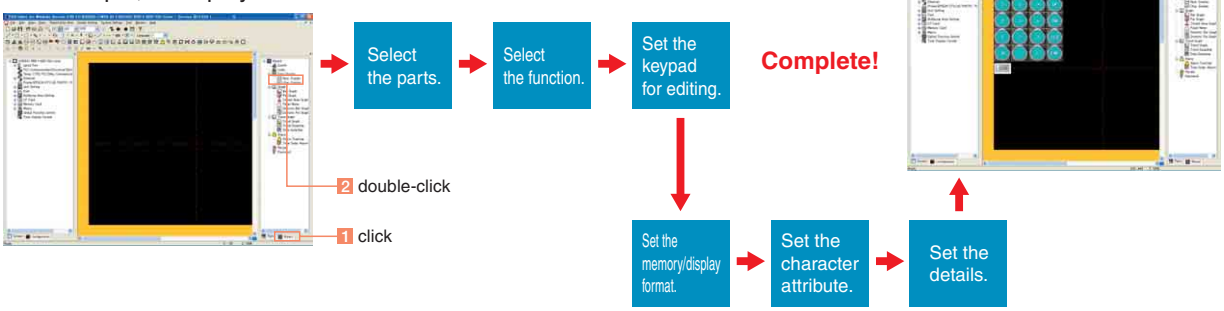
Effective reduction of man-hours in screen drawing

POD main body is not necessary for simulation.
You can create a new screen by tracking the movement of POD on PC.

Wizard function

A screen is created very quickly just by following instructions of the editor.

For example, to display numeric values:



Friendly for a screen drawing beginner

With the Wizard, creating complex parts and detailed setting is easily done as you wish.
The setting of already arranged parts can be modified easily with the Wizard too.

UG630 Series

●General specifications

Item		UG630	
	Model	AC power supply	DC power supply
Power supply	Rated voltage	100-240VAC	24VDC
	Permissible range of voltage	100-240VAC±10%	24VDC±10%
	Permissible momentary power failure	Within 20ms	Within 1ms
	Power consumption (Maximum rating)	90VA or less	40W or less
	Inrush current	For 100VAC: 15A, 10ms or less For 200VAC: 30A, 10ms or less	16A, 1ms or less
	Withstand voltage	AC external terminals to FG: 1500VAC, 1 minute	DC external terminals to FG: 500VAC, 1 minute
Insulation resistance		500VDC, 10MΩ or above	
Physical environment	Ambient temperature	0˚C to +40˚C	
	Storage ambient temperature	-10˚C to +50˚C	
	Ambient humidity	85% RH or less (Avoid condensation)	
	Solvent resistance	No cutting oil or organic solvent clung to the unit	
	Atmosphere	No corrosive gas or conductive dust	
	Operating altitude	Altitude 2000m or less	
Mechanical operating conditions	Vibration resistance	Vibration frequency: 10 to 150Hz, Acceleration: 9.8m/s² (1G) One-way deflection: 0.075mm, X, Y, Z: 3 directions for one hour	
	Shock resistance	Pulse shape: half sine wave Peak acceleration: 147m/s² (15G), X, Y, Z: each ±3 directions, six times each	
Electrical operating conditions	Noise immunity	Noise voltage: 1500Vp-p (pulse width 1μs, rise time: 1ns) Measured using a noise simulator	Noise voltage: 1000Vp-p (pulse width 1μs, rise time: 1ns) Measured using a noise simulator The DC power model shall also satisfy the EMC standard.
	Anti-static electricity discharge	Conforming to IEC61000-4-2, contact: 6kV, air: 8kV	
Mounting conditions	Grounding	Class-D grounding	
	Structure	Degree of protection: front panel: IP65 (using waterproof gasket) rear case: IP20 Form: in a single body Mounting method: panel flush mounting	Although the UG series has high environmental resistance characteristics equivalent to IP65F, it is expressed as IP65 herein in order to avoid confusion, as measures are required to meet the long-hour oil resistance, which is higher than the IP standard.
	Cooling system	Natural cooling	
	Material	Alminum	
Mass (kg)		UG630H-XH1: Approx. 5.2, UG630H-XH4: Approx. 5.0	

●Display specifications

Item / Model	UG630
Display device	TFT color LCD
Display size	15.0-inch
Display colors	32,768 colors
Resolution W x H (dots)	1024 x 768
Dot pitch W x H (mm)	0.297 x 0.297
Brightness (cd/m²)	350
Contrast ratio	450:1
Angle of vertical visibility	+50˚, -60˚
Angle of horizontal visibility	±75˚
Backlight	Cold cathode tube
Backlight life (average life of a tube)*1	60,000h (condition: 25˚C)
Auto OFF function	Always ON, arbitrary setting
Brightness adjustment	128 levels*2
Surface sheet	Material: Polycarbonate, 0.3mm thick
POWER lamp	Lights in the normal state. Blinks on detection of an inverter error (such as turning off of the backlight).

*1 At the time when the surface brightness is down to 50% of the initial value at normal temperature of 25˚C.
*2 Adjustment by a function switch or macrocommand.

●Touch panel specifications

Item	Specifications
Method	Analog resistance film type
Switch resolution	1024 (W) x 1024 (H)
Mechanical life	One million activations or more
Surface treatment	Hard-coated, anti-glare treatment 5%

●Function switch specifications

Item	Specifications
Number of switches	8
Method	Membrane switch
Mechanical life	One million activations or more

●Interface specifications

Item	Specifications
Serial interface for PLC connection (D-sub 25-pin, female)	RS-232C, RS-422/485 Start-stop (asynchronous) transmission Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115000bps
Serial Interface 1, 2 for screen data transfer/external connection (Modular jack, 8-pin)	RS-232C, RS-422/485 (2-wire connection) UG00P-MR, Bar code, UG00P-U2, Multi-link 2, Temperature control network/PLC 2-Way, UG-Link, etc.
USB master port (USB-A) for printer / CF card read and write interface	Type A, USB ver.1.1
USB slave port (USB-B) for screen date transfer	Type B, USB ver.1.1
Ethernet connection 100BASE-TX/10BASE-T	Compliance with IEEE802.3u (100BASE-TX)/ IEEE802.3 (10BASE-T) Baud rate: 100/10Mbps Cables: 100Ω unshielded twist-pair, category 5, maximum length = 100m

●Clock and backup memory specifications

Item	Specifications
Battery specification	Coin-type lithium primary cell
Backup memory	SRAM 64KB
Backup time period	5 years (at ambient temperature 25˚C)
Battery voltage drop detection	Provided (internal memory $s167 allocated)
Calendar accuracy	±90 sec per month (at ambient temperature 25˚C)

●Editor environment

Item		Specifications	
Editing method		Exclusive screen editor software	
Editing tool	Type of screen editor software	UG00S-CWV3 (Ver. 3.2.27.0 and later)	UG00S-CWV4 (Ver. 4.0.1.0 and later)
	CPU	Pentium II 450MHz or above recommended	Pentium III 800MHz or above (Pentium IV 2.0GHz or above recommended)
	OS	Windows98/Me/NT Ver.4.0/2000/XP*1*2	
	Hard disk capacity	Free space of approx. 460 MB or more	Free space of approx. 700 MB or more
	Display	Resolution 800 x 600 or more recommended	Resolution 1024 x 768 or more recommended
	CD-ROM drive	24x speed or more recommended	

*1 When installing the software in Windows NT Ver.4.0/2000/XP, do it under the authority of Administrator.
*2 The applicable OS varies with the software version. For details, refer to the section of installation in User's Manual.

●Display function specifications

Item		Specifications				
Display language *		Japanese	English/Western Europe	Chinese (traditional)	Chinese (simplified)	Korean
Characters	1/4-size, 1-byte	ANK code	Latin1	ASCII code	ASCII code	ASCII code
	2-byte 16-dot	JIS #1, 2 levels	–	Chinese (traditional)	Chinese (simplified)	Hangul (without Kanji)
	2-byte 32-dot	JIS #1 level	–	–	–	–
Character size		1/4-size: 8 x 8 dots 1-byte: 8 x 16 dots 2-byte: 16 x 16 dots or 32 x 32 dots Enlarge: W: 1 to 8 times, H: 1 to 8 times				
Number of displayable characters		1/4-size	127 characters x 96 lines			
		1-byte	127 characters x 48 lines			
		2-byte	64 characters x 48 lines			
Character properties		Display properties: Normal, reverse, blink, bold, shadow Colors: 32,768 colors + blink 16 colors				
Graphics		Lines: Line, continuous line, box, parallelogram, polygon Circles: Circle, arc, sector, ellipse, elliptical arc Others: Tile patterns				
Graphic properties		Line types: 6 (thin, thick, dot, chain, broken, two-dot chain) Tile patterns: 16 (incl. user-definable 8 patterns) Display properties: Normal, reverse, blink Colors: 32,768 colors + blink 16 colors Color selection: Foreground, background, boundary (line)				

* In addition, the following fonts are available.
Gothic, English/Western Europe (Gothic), English/Western Europe (Times), Central Europe, Cyrillic, Greek, Turkish

●Function performance specifications

Item		Specifications
Screens		Max. 1024
Screen memory		Flash memory: Appox. 4,992 KB (varies depending on the font)
Switches		1024 per screen
Switch actions		Set, reset, momentary, alternate, illuminated Simultaneous keying possible with a function switch and a switch on the display
Lamps		Reverse, blink, exchange of graphics: 1024 per screen
Graphs		Pie, bar, panel meter and closed area graph: No limitation within 256 KB per screen *1 Statistics and trend graphs: Max. 256 per layer *2
Data setting	Numerical data display	No limitation within 256 KB per screen *1
	Character display	No limitation within 256 KB per screen *1
	Message display	Resolution: max. 127 characters (1-byte) No limitation within 256 KB per screen *1
Sampling		Sampling display of buffer data (Regular time sample, bit synchronize, bit sample, relay sample, alarm function)
Graphic library		Max. 2560
Multi-overlaps		Max. 1024
Data blocks		Max. 1024
Messages		Max. 32768 lines
Patterns		Max. 1024
Macro blocks		Max. 1024
Page blocks		Max. 1024
Direct blocks		Max. 1024
Screen blocks		Max. 1024
Data sheets		Max. 1024
Screen library		Max. 1024
Temperature control network/PLC 2-Way table		Max. 32
Time display		Provided
Hard copy		Provided
Buzzer		Provided, 2 sounds (short beep, long beep)
Auto OFF function		Always ON, arbitrary setting
Self-diagnostic function		Switch self-test function Communication parameter setting check function Communication check function

*1 The number of setting memory is limited to 1024 per screen.
*2 Four layers per screen (base + 3 overlaps)

UG630 Series

●General specifications

Item \ Model		UG330		UG430		UG530	
		DC power supply		AC power supply	DC power supply	AC power supply	DC power supply
Power supply	Rated voltage	24VDC		100-240VAC	24VDC	100-240VAC	24VDC
	Permissible range of voltage	24VDC±10%		100-240VAC±10%	24VDC±10%	100-240VAC±10%	24VDC±10%
	Permissible momentary power failure	Within 1ms		Within 20ms	Within 1ms	Within 20ms	Within 1ms
	Power consumption (Maximum rating)	UG330H-S 15W or less	UG330H-V 22W or less	60VA or less	30W or less	60VA or less	30W or less
	Inrush current	25A, 0.7ms		For 100VAC: 16A, 6ms For 200VAC: 32A, 7ms	30A, 1ms	For 100VAC: 16A, 6ms For 200VAC: 32A, 7ms	30A, 1ms
	Withstand voltage	DC external terminals to FG: 500VAC, 1 minute		AC external terminals to FG: 1500VAC, 1 minute	DC external terminals to FG: 500VAC, 1 minute	AC external terminals to FG: 1500VAC, 1 minute	DC external terminals to FG: 500VAC, 1 minute
Insulation resistance		500VDC, 10MΩ or above					
Physical environment	Ambient temperature	0˚C to +50˚C					
	Storage ambient temperature	-10˚C to +60˚C					
	Ambient humidity	85% RH or less (Avoid condensation)					
	Solvent resistance	No cutting oil or organic solvent clung to the unit					
	Atmosphere	No corrosive gas or conductive dust					
	Operating altitude	Altitude 2000m or less					
Mechanical operating conditions	Vibration resistance	Vibration frequency: 10 to 150Hz, Acceleration: 9.8m/s² One-way deflection: 0.075mm, X, Y, Z: 3 directions for one hour					
	Shock resistance	Pulse shape: half sine wave Peak acceleration: 147m/s², X, Y, Z: each ±3 directions, six times each					
Electrical operating conditions	Noise immunity	1500Vp-p (pulse width 1μs, rise time: 1ns)					
	Anti-static electricity discharge	Conforming to IEC61000-4-2, contact: 6kV, air: 8kV					
Mounting conditions	Grounding	Grounding resistance: less than 100Ω					
	Structure	Degree of protection: front panel: IP65 (using waterproof gasket) rear case: IP20 Form: in a single body Mounting method: panel flush mounting Although the UG series has high environmental resistance characteristics equivalent to IP65F, it is expressed as IP65 herein in order to avoid confusion, as measures are required to meet the long-hour oil resistance, which is higher than the IP standard.					
	Cooling system	Natural cooling					
	Mass (kg)	Approx. 1.5		Approx. 2.4		Approx. 2.7	
Case color		Black (Munsell N2.0)					
Case material		PC/ABS resin					

●Display specifications

Item \ Model	UG330H-SS	UG330H-VH,VS	UG430H-SS	UG430H-TH,TS	UG430H-VH,VS	UG530H-VH,VS
Display device	STN color LCD	TFT color LCD				
Display size	7.7-inch	8.4-inch	10.4-inch			12.1-inch
Display colors	128 colors +16-color blinks	32,768 colors +16-color blinks	128 colors +16-color blinks	32,768 colors +16-color blinks		
Resolution W x H (dots)	640 x 480	800 x 600	640 x 480		800 x 600	
Dot pitch W x H (mm)	0.246 x 0.246	0.213 x 0.213	0.33 x 0.33		0.264 x 0.264	0.3075 x 0.3075
Brightness (cd/m²)	200	350	220	350	280	350
Contrast ratio	25:1	250:1	350:1	300:1	300:1	350:1
Angle of vertical visibility	+40˚, -30˚	+35˚, -55˚	+30˚, -20˚	+45˚, -55˚	+35˚, -45˚	+40˚, -45˚
Angle of horizontal visibility	±50˚	±50˚	±45˚	±70˚	±50˚	±55˚
Backlight	Cold cathode fluorescent lamp					
Average backlight life *1	Approx. 40,000h	Approx. 50,000h				
Backlight auto OFF function	Always ON, arbitrary setting					
Contrast adjustment	Provided *2	Not provided				
Brightness adjustment	Not provided	128 levels *2				
Surface sheet	Material: Polycarbonate, 0.3mm thick					
POWER lamp	ON when the power is supplied					

*1 At the time when the surface brightness is down to 50% of the initial value at normal temperature of 25˚C.
*2 Adjustment by a function switch or macrocommand.

●Touch panel specifications

Item	Specifications
Method	Analog resistance film type
Switch resolution	1024 (W) x 1024 (H)
Mechanical life	One million activations or more
Surface treatment	Hard-coated, anti-glare treatment 5%

●Function switch specifications

Item	Specifications
Number of switches	8
Method	Digital resistance film type
Mechanical life	One million activations or more

●General specifications (Separated type POD *)

Item		Type	UG430H-VH1B	UG430H-VH4B
			AC power supply	DC power supply
Power supply	Rated voltage		100-240VAC	24VDC
	Permissible range of voltage		100-240VAC±10%	24VDC±10%
	Permissible momentary power failure		Within 20ms	Within 1ms
	Power consumption (Maximum rating)		40VA or less	12W or less
	Inrush current		For 100VAC: 16A, 6ms For 200VAC: 32A, 7ms	30A, 1ms
	Withstand voltage		AC external terminals to FG: 1500VAC, 1 minute	DC external terminals to FG: 500VAC, 1 minute
Insulation resistance			500VDC, 10MΩ or above	
Physical environment	Ambient temperature		0˚C to +50˚C	
	Storage ambient temperature		-10˚C to +60˚C	
	Ambient humidity		85% RH or less (Avoid condensation)	
	Solvent resistance		No cutting oil or organic solvent clung to the unit	
	Atmosphere		No corrosive gas or conductive dust	
Mechanical operating conditions	Vibration resistance		Vibration frequency: 10 to 150Hz, Acceleration: 9.8m/s² Single amplitude: 0.075mm, X, Y, Z: 3 directions for one hour	
	Shock resistance		Pulse shape: half sine wave Peak acceleration: 147m/s², X, Y, Z: 3 directions six times each	
Electrical operating conditions	Noise immunity		1500Vp-p (pulse width 1μs, rise time: 1ns)	
	Anti-static electricity discharge		Conforming to IEC61000-4-2, contact: 6kV, air: 8kV	
Mounting conditions	Grounding		Grounding resistance: less than 100Ω	
	Structure		Degree of protection: rear case: IP20 Form: in a single body Mounting method: Panel flush mounting	
	Cooling system		Natural cooling	
	Mass (kg)		Unit: approx. 1.6	
	Dimensions W x H x D (mm)		Main unit only: 315 x 214.6 x 51.7 When option unit UG30A-ROS is installed: 315 x 214.6 x 72.7	
Case color			Black (Munsell N2.0)	
Case material			PC/PS resin	

* The UG430H-VH□B does not have a monitor.
To display its screen, the optional UG30A-ROS and a commecially available display monitor unit are necessary.

●Interface specifications

Item	Specifications
Serial interface for PLC connection (D-sub 25-pin, female)	RS-232C, RS-422/485 Start-stop (asynchronous) transmission Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200bps
Serial Interface 1, 2 for screen data transfer/external connection (Modular jack, 8-pin)	RS-232C, RS-422/485 (2-wire connection) UG00P-MR, Bar code, UG00P-U2, Multi-link 2, Temperature control network/PLC 2-Way, UG-Link, etc.
Printer interface	Compliance with Centronics, half-pitch 20-pin PR201, ESC/P-J84, ESC/P super function, ESC/P24-J84 CBM292/293 printer * Bar code printer MR400 EPSON printer: PM series
CF card interface	Compliance with CompactFlash™
Ethernet connection 100BASE-TX/10BASE-T (Standard with high-peformance type only)	Compliance with IEEE802.3u/IEEE802.3 Baud rate: 100/10Mbps Cables: 100Ω unshielded twist-pair, category 5, maximum length = 100m

* The CBM292/293 printer cannot print the screen hard copy.

●Clock and backup memory specifications

Item	Specifications
Battery specification	Coin-type lithium primary cell
Backup memory	SRAM 64KB
Backup time period	5 years (at ambient temperature 25˚C)
Battery voltage drop detection	Provided (internal memory allocated)
Calendar accuracy	±90 sec per month (at ambient temperature 25˚C)

●Editor environment

Item		Specifications	
Editing method		Exclusive screen editor software	
Editing tool	Type of screen editor software	UG00S-CWV3 (Ver. 3.2.27.0 and later)	UG00S-CWV4 (Ver. 4.0.1.0 and later)
	CPU	Pentium II 450MHz or above recommended	Pentium III 800MHz or above (Pentium IV 2.0GHz or above recommended)
	OS	Windows98/Me/NT Ver.4.0/2000/XP*1*2	
	Hard disk capacity	Free space of approx. 460 MB or more	Free space of approx. 700 MB or more
	Display	Resolution 800 x 600 or more recommended	Resolution 1024 x 768 or more recommended
	CD-ROM drive	24x speed or more recommended	

*1 When installing the software in Windows NT Ver.4.0/2000/XP, do it under the authority of Administrator.
*2 The applicable OS varies with the software version. For details, refer to the section of installation in User's Manual.

●Display function specifications

Item		Specifications				
Display language *		Japanese	English/Western Europe	Chinese (traditional)	Chinese (simplified)	Korean
Characters	1/4-size, 1-byte	ANK code	Latin1	ASCII code	ASCII code	ASCII code
	2-byte 16-dot	JIS #1, 2 levels	–	Chinese (traditional)	Chinese (simplified)	Hangul (without Kanji)
	2-byte 32-dot	JIS #1 level	–	–	–	–
Character size		1/4-size: 8 x 8 dots 1-byte: 8 x 16 dots 2-byte: 16 x 16 dots or 32 x 32 dots Enlarge: W: 1 to 8 times, H: 1 to 8 times				
Number of displayable characters		Resolution	640 x 480		800 x 600	
		1/4-size	80 characters x 60 lines		100 characters x 75 lines	
		1-byte	80 characters x 30 lines		100 characters x 37 lines	
		2-byte	40 characters x 30 lines		50 characters x 37 lines	
Character properties		Display properties: Normal, reverse, blink, bold, shadow Colors: 32,768 colors + blink 16 colors (UG330H-SS, UG430H-SS: 128 colors + blink 16 colors)				
Graphics		Lines: Line, continuous line, box, parallelogram, polygon Circles: Circle, arc, sector, ellipse, elliptical arc Others: Tile patterns				
Graphic properties		Line types: 6 (thin, thick, dot, chain, broken, two-dot chain) Tile patterns: 16 (incl. user-definable 8 patterns) Display properties: Normal, reverse, blink Colors: 32,768 colors + blink 16 colors (UG330H-SS, UG430H-SS: 128 colors + blink 16 colors) Color selection: Foreground, background, boundary (line)				

* In addition, the following fonts are available. Gothic, English/Western Europe (Gothic), English/Western Europe (Times), Central Europe, Cyrillic, Greek, Turkish

●Function performance specifications

Item		Specifications
Screens		Max. 1024
Screen memory		Flash memory: Appox. 4,992 KB (varies depending on the font)
Switches		768 per screen
Switch actions		Set, reset, momentary, alternate, illuminated Simultaneous keying possible with a function switch and a switch on the display
Lamps		Reverse, blink, exchange of graphics: 768 per screen
Graphs		Pie, bar, panel meter and closed area graph: No limitation within 256 KB per screen *1 Statistics and trend graphs: Max. 256 per layer *2
Data setting	Numerical data display	No limitation within 256 KB per screen *1
	Character display	No limitation within 256 KB per screen *1
	Message display	Resolution: 640 x 480: max. 80 characters (1-byte) 800 x 600: max. 100 characters (1-byte) No limitation within 256 KB per screen *1
Sampling		Sampling display of buffer data (Regular time sample, bit synchronize, bit sample, relay sample, alarm function)
Graphic library		Max. 2560
Multi-overlaps		Max. 1024
Data blocks		Max. 1024
Messages		Max. 32768 lines
Patterns		Max. 1024
Macro blocks		Max. 1024
Page blocks		Max. 1024
Direct blocks		Max. 1024
Screen blocks		Max. 1024
Data sheets		Max. 1024
Screen library		Max. 1024
Animation (Frames)		Max. 1024
Temperature control network/PLC 2-Way table		Max. 32
Time display		Time display function: provided
Hard copy		Screen hard copy function: provided
Buzzer		Buzzer: provided, 2 sounds (short beep, long beep)
Auto OFF function		Always ON, arbitrary setting
Self-diagnostic function		Switch self-test function Communication parameter setting check function Communication check function

*1 The number of setting memory is limited to 1024 per screen.
*2 Four layers per screen (base + 3 overlaps)

UG230 Series

●General specifications

Item		Model: UG230
Power supply	Rated voltage	24VDC
	Permissible range of voltage	24VDC±10%
	Permissible momentary power failure	Within 1ms
	Power consumption (Maximum rating)	16W or less
	Inrush current	20A or less (with a rise time 0.1ms)
	Withstand voltage	DC external terminals to FG: 500VAC, 1 minute
Insulation resistance		500VDC, 10MΩ or above
Physical environment	Ambient temperature	0˚C to +50˚C *
	Storage ambient temperature	-10˚C to +60˚C
	Ambient humidity	85% RH or less (Avoid condensation)
	Solvent resistance	No cutting oil or organic solvent clung to the unit
	Atmosphere	No corrosive gas or conductive dust
	Operating altitude	Altitude 2000m or less
Mechanical operating conditions	Vibration resistance	Vibration frequency: 10 to 150Hz, Acceleration: 9.8m/s² One-way deflection: 0.075mm, X, Y, Z: 3 directions for one hour
	Shock resistance	Pulse shape: half sine wave Peak acceleration: 147m/s², X, Y, Z: 3 directions, six times each
Electrical operating conditions	Noise immunity	1000Vp-p (pulse width 1μs, rise time: 1ns)
	Anti-static electricity discharge	Conforming to IEC61000-4-2, contact: 6kV, air: 8kV
Mounting conditions	Grounding	Grounding resistance: less than 100Ω
	Structure	Degree of protection: front panel: IP65 (using waterproof gasket) rear case: IP20 Form: in a single body Mounting method: panel flush mounting Although the UG series has high environmental resistance characteristics equivalent to IP65F, it is expressed as IP65 herein in order to avoid confusion, as measures are required to meet the long-hour oil resistance, which is higher than the IP standard.
	Cooling system	Natural cooling
	Mass	Unit only: approx. 680g, with UG230A-DCL installed: approx. 820g
Case color		Black (Munsell N2.0)
Case material		PC/PS resin

* As for UG230H-SS and UG230H-LS, the display quality might deteriorate and the contrast be weaken when operated for a long period of time at ambient temperature 40 to 50˚C.

●Display specifications

Item	Model: UG230H-LS	UG230H-SS	UG230H-TS
Display device	Monochrome LCD	STN color LCD	TFT color LCD
Display size	5.7-inch		
Colors	Monochrome, 8 gradations + blinks	32,768 colors +16-color blinks	
Resolution W x H (dots)	320 x 240		
Dot pitch W x H (mm)	0.36 x 0.36		
Brightness (cd/m²)	220	160	350
Contrast ratio	5:1	30:1	60:1
Angle of vertical visibility	+20˚, -40˚	+20˚, -35˚	+65˚, -40˚
Angle of horizontal visibility	±45˚	±50˚	±65˚
Backlight	Cold cathode fluorescent lamp		
Average backlight life *1	Approx. 58,000h	Approx. 54,000h	Approx. 50,000h
Backlight auto OFF function	Always ON, arbitrary setting		
Contrast adjustment	Provided *2		Not provided
Brightness adjustment	Not provided		128 levels *2
Surface sheet	Material: Polycarbonate, 0.3mm thick		
POWER lamp	ON (green) when the power is supplied. ON (orange) when the voltage of the battery connected has become low.		

*1 At the time when the surface brightness is down to 50% of the initial value at normal temperature of 25˚C.
*2 Adjustment by a function switch or macrocommand.

●Touch panel specifications

Item	Specifications
Method	Analog resistance film type, matrix resistance film type
Switch resolution	Analog: 1024 (W) x 1024 (H) Matrix: 20 (W) x 12 (H)
Mechanical life	One million activations or more
Surface treatment	Hard-coated, anti-glare treatment 5%

●Function switch specifications

Item	Specifications
Number of switches	6
Method	Digital resistance film
Mechanical life	One million activations or more

●Interface specifications

Item	Specifications
Serial interface for screen data transfer/external connection (Modular jack, 8-pin: MJ1)	RS-232C, RS-422/485 (2-wire connection) UG00P-MR, Bar code, UG00P-U2, Multi-link 2, Temperature control network/PLC 2-Way, UG-link, etc.
Serial interface for PLC connection (Modular jack, 8-pin: MJ2)	RS-232C, RS-422/485 Asynchronous transmission Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud Rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200bps
Printer/CF card reader connection USB master port (USB-A)	Type A, USB Ver. 1.1
Screen data transfer USB slave port (USB-B)	Type B, USB Ver. 1.1

●Clock and backup memory specifications

Item	Specifications
Battery specification	Coin-type lithium primary cell
Backup memory	SRAM 128 KB
Backup time period	5 years (at ambient temperature 25˚C)
Battery voltage drop detection	Provided (internal memory allocated)
Calendar accuracy	±90 sec per month (at ambient temperature 25˚C)

●Editor environment

Item		Specifications	
Editing method		Exclusive screen editor software	
Editing tool	Type of screen editor software	UG00S-CWV3 (Ver. 3.2.27.0 and later)	UG00S-CWV4 (Ver. 4.0.1.0 and later)
	CPU	Pentium II 450MHz or above recommended	Pentium III 800MHz or above (Pentium IV 2.0GHz or above recommended)
	OS	Windows98/Me/NT Ver.4.0/2000/XP*1*2	
	Hard disk capacity	Free space of approx. 460 MB or more	Free space of approx. 700 MB or more
	Display	Resolution 800 x 600 or more recommended	Resolution 1024 x 768 or more recommended
	CD-ROM drive	24x speed or more recommended	

*1 When installing the software in Windows NT Ver.4.0/2000/XP, do it under the authority of Administrator.
*2 The applicable OS varies with the software version.
For details, refer to the section of installation in User's Manual.

●Display function specifications

Item		Specifications				
Display language *		Japanese	English/Western Europe	Chinese (traditional)	Chinese (simplified)	Korean
Characters	1/4-size, 1-byte	ANK code	Latin1	ASCII code	ASCII code	ASCII code
	2-byte 16-dot	JIS #1, 2 levels	–	Chinese (traditional)	Chinese (simplified)	Hangul (without Kanji)
	2-byte 32-dot	JIS #1 level	–	–	–	–
Character size		1/4-size: 8 x 8 dots 1-byte: 8 x 16 dots 2-byte: 16 x 16 dots or 32 x 32 dots Enlarge: W: 1 to 8 times, H: 1 to 8 times				
Number of displayable characters		Resolution	320 x 240			
		1/4-size	40 characters x 30 lines			
		1-byte	40 characters x 15 lines			
		2-byte	20 characters x 15 lines			
Characters properties		Display properties: Normal, reverse, blink, bold, shadow Colors: 32,768 colors + blink 16 colors / monochrome 8 gradations + blink				
Graphics		Lines: Line, continuous line, box, parallelogram, polygon Circles: Circle, arc, sector, ellipse, elliptical arc Others: Tile patterns				
Graphic properties		Line types: 6 (thin, thick, dot, chain, broken, two-dot chain) Tile patterns: 16 (incl. user-definable 8 patterns) Display properties: Normal, reverse, blink Colors: 32,768 colors + blink 16 colors / monochrome 8 gradations + blink Color selection: Foreground, background, boundary (line)				

* In addition, the following fonts are available. Gothic, English/Western Europe (Gothic), English/Western Europe (Times), Central Europe, Cyrillic, Greek, Turkish

●Function performance specifications

Item		Specifications
Screens		Max. 1024
Screen memory		Flash memory: Appox. 1,472 KB (varies depending on the font)
Switches		192 per screen
Switch actions		Set, reset, momentary, alternate, illuminated Simultaneous keying possible with a function switch and a switch on the display (For the matrix type, simultaneous keying possible with two switches on the display)
Lamps		Reverse, blink, exchange of graphics, 192 per screen
Graphs		Pie, bar, panel meter and closed area graph: No limitation within 256 KB per screen *1 Statistics and trend graphs: Max. 256 per layer *2
Data setting	Numerical data display	No limitation within 256 KB per screen *1
	Character display	No limitation within 256 KB per screen *1
	Message display	Resolution: Max. 40 1-byte characters No limitation within 256 KB per screen *1
Sampling		Sampling display of buffer data (Regular time sample, bit synchronize, bit sample, relay sample, alarm function)
Graphic library		Max. 2560
Multi-overlaps		Max. 1024
Data blocks		Max. 1024
Messages		Max. 32768 lines
Patterns		Max. 1024
Macro blocks		Max. 1024
Page blocks		Max. 1024
Direct blocks		Max. 1024
Screen blocks		Max. 1024
Data sheets		Max. 1024
Screen library		Max. 1024
Temperature control network/PLC 2-Way table		Max. 32
Time display		Time display function: provided
Hard copy		Screen hard copy function: provided
Buzzer		Buzzer: provided, 2 sounds (short beep, long beep)
Auto OFF function		Always ON, arbitrary setting
Self-diagnostic function		Switch self-test function Communication parameter setting check function Communication check function

*1 The number of setting memory is limited to 256 per screen.
*2 Four layers per screen (base + 3 overlaps)

Simple POD

●General specifications

Item \ Model		Simple POD
Power supply	Rated voltage	24VDC
	Permissible range of voltage	24VDC±10% *1
	Permissible momentary power failure	Within 1ms
	Power consumption (Maximum rating)	10W or less
	Inrush current	10A, 1ms
Physical environment	Ambient temperature	0˚C to +50˚C *2
	Storage ambient temperature	-10˚C to +60˚C
	Ambient humidity	85% RH or less (Avoid condensation)
	Solvent resistance	No cutting oil or organic solvent clung to the unit
	Atmosphere	No corrosive gas or conductive dust
	Operating altitude	Altitude 2000m or less
Mechanical operating conditions	Vibration resistance	Vibration frequency: 10 to 150Hz, Acceleration: 9.8m/s^2 One-way deflection: 0.075mm, X, Y, Z: 3 directions for one hour
	Shock resistance	Pulse shape: half sine wave Peak acceleration: 147m/s^2, X, Y, Z: 3 directions, six times each
Electrical operating conditions	Noise immunity	1000Vp-p (pulse width 1μs, rise time: 1ns)
	Anti-static electricity discharge	Conforming to IEC61000-4-2, contact: 6kV, air: 8kV
Mounting conditions	Grounding	Grounding resistance: less than 100Ω
	Structure	Degree of protection: front panel: IP65 (using waterproof gasket) rear case: IP20 Form: in a single body Mounting method: panel flush mounting Although the UG series has high environmental resistance characteristics equivalent to IP65F, it is expressed as IP65 herein in order to avoid confusion, as measures are required to meet the long-hour oil resistance, which is higher than the IP standard.
	Cooling system	Natural cooling
	Mass	Unit only: approx. 800g
Case color		Black (Munsell N2.0)
Case material		PC/PS resin

*1 The Simple POD has no electrical insulation between the 0V terminal for 24V class the input power supply and the 0V for the internal voltage (SG) including the communication circuit (non-insulated power system adopted). Take this into account in system design.
*2 The POD display quality might deteriorate and the contrast be weaken when operated for a long period of time at ambient temperature 40 to 50˚C.

●Display specifications

Item \ Model	UG221H-LE, LR	UG221H-SR
Display device	Monochrome LCD	STN color LCD
Display size	5.7-inch	
Colors	Monochrome 8 gradations + blinks	16 colors + blinks
Resolution W x H (dots)	320 x 240	
Dot pitch W x H (mm)	0.36 x 0.36	
Brightness (cd/m^2)	220	160
Contrast ratio	10:1	55:1
Angle of vertical visibility	-40˚, +20˚	
Angle of horizontal visibility	±45˚	
Backlight	Cold cathode fluorescent lamp	
Average backlight life *1	Approx. 50,000h	Approx. 54,000h
Backlight auto OFF function	Always ON, arbitrary setting	
Contrast adjustment	Provided *2	
Brightness adjustment	4 levels *3	
Surface sheet	Material: PET (188μm)	
POWER lamp	ON when the power is supplied	

*1 At the time when the surface brightness is down to 50% of the initial value at normal temperature of 25˚C.
*2 Adjustment by a function switch or macrocommand.
*3 Adjustment by macrocommand.

●Touch panel specifications

Item	Specifications
Method	Analog resistance film type
Switch resolution	1024 (W) x 1024 (H)
Mechanical life	One million activations or more
Surface treatment	Hard-coated, anti-glare treatment 5%

●Function switch specifications

Item	Specifications
Number of switches	6
Method	Digital resistance film
Mechanical life	One million activations or more

●Interface specifications

Item	Specifications
Serial interface for PLC connection (D-sub 25-pin, female)	RS-232C, RS-422/485 Asynchronous transmission Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600bps
Serial interface 1 for screen data transfer/external connection (Modular jack, 8-pin)	RS-232C, RS-422/485 (2-wire connection) UG00P-MR, Bar code, UG00P-U2, Multi-link 2, Temperature control network/PLC 2-Way, UG-Link, etc.

●Clock and backup memory specifications

Item	Specifications
Battery specification	Coin-type lithium primary cell
Backup memory	SRAM 128 KB
Backup time period	5 years (at ambient temperature 25˚C)
Battery voltage drop detection	Provided (internal memory allocated)
Calendar accuracy	±90 sec per month (at ambient temperature 25˚C)

●Editor environment

Item		Specifications	
Editing method		Exclusive screen editor software	
Editing tool	Type of screen editor software	UG00S-CWV3 (Ver. 3.2.27.0 and later)	UG00S-CWV4 (Ver. 4.0.1.0 and later)
	CPU	Pentium II 450MHz or above recommended	Pentium III 800MHz or above (Pentium IV 2.0GHz or above recommended)
	OS	Windows98/Me/NT Ver.4.0/2000/XP*1*2	
	Hard disk capacity	Free space of approx. 460 MB or more	Free space of approx. 700 MB or more
	Display	Resolution 800 x 600 or more recommended	Resolution 1024 x 768 or more recommended
	CD-ROM drive	24x speed or more recommended	

*1 When installing the software in Windows NT Ver.4.0/2000/XP, do it under the authority of Administrator.
*2 The applicable OS varies with the software version.
For details, refer to the section of installation in User's Manual.

●Display function specifications

Item		Specifications				
Display language *		Japanese	English/Western Europe	Chinese (traditional)	Chinese (simplified)	Korean
Characters	1/4-size, 1-byte	ANK code	Latin1	ASCII code	ASCII code	ASCII code
	2-byte 16-dot	JIS #1, 2 levels	–	Chinese (traditional)	Chinese (simplified)	Hangul (without Kanji)
	2-byte 32-dot	JIS #1 level	–	–	–	–
Character size		1/4-size: 8 x 8 dots 1-byte: 8 x 16 dots 2-byte: 16 x 16 dots or 32 x 32 dots Enlarge: W: 1 to 8 times, H: 1 to 8 times				
Number of displayable characters		1/4-size	40 characters x 30 lines			
		1-byte	40 characters x 15 lines			
		2-byte	20 characters x 15 lines			
Characters properties		Display properties: Normal, reverse, blink, bold, shadow Colors: UG221H-SR: 16 colors + blink, UG221H-L□: Monochrome 8-gradation + blink				
Graphics		Lines: Line, continuous line, box, parallelogram, polygon Circles: Circle, arc, sector, ellipse, elliptical arc Others: Tile patterns				
Graphic properties		Line types: 6 (thin, thick, dot, chain, broken, two-dot chain) Tile patterns: 16 (incl. user-definable 8 patterns) Display properties: Normal, reverse, blink Colors: UG221H-SR: 16 colors + blink UG221H-Lx: Monochrome 8-grade + blink Color selection: Foreground, background, boundary (line)				

* In addition, the following fonts are available. Gothic, English/Western Europe (Gothic), English/Western Europe (Times), Central Europe, Cyrillic, Greek,Turkish

●Function performance specifications

Item		Specifications
Screens		Max. 1024
Screen memory		Flash memory: Appox. 760 KB (varies depending on the font)
Switches		192 per screen
Switch actions		Set, reset, momentary, alternate, illuminated (Simultaneous keying possible with a function switch and a switch on the display)
Lamps		Reverse, blink, exchange of graphics, 192 per screen
Graphs		Pie, bar, panel meter and closed area graph: No limitation within 128 KB per screen *1 Statistics and trend graphs: Max. 256 per layer *2
Data setting	Numerical data display	No limitation within 128 KB per screen *1
	Character display	No limitation within 128 KB per screen *1
	Message display	Resolution: Max. 40 characters (1-byte) No limitation within 128 KB per screen *1
Sampling		Sampling display of buffer data (Regular time sample, bit synchronize, bit sample, relay sample, alarm function)
Graphic library		Max. 2560
Multi-overlaps		Max. 1024
Data blocks		Max. 1024
Messages		Max. 6144 lines
Patterns		Max. 1024
Macro blocks		Max. 1024
Page blocks		Max. 1024
Direct blocks		Max. 1024
Screen blocks		Max. 1024
Screen library		Max. 1024
Temperature control network/PLC 2-Way table		Max. 32
Time display		Time display function: provided
Buzzer		Buzzer: provided, 2 sounds (short beep, long beep)
Auto OFF function		Always ON, arbitrary setting
Self-diagnostic function		Switch self-test function Communication parameter setting check function Communication check function

*1 The number of setting memory is limited to 256 per screen.
*2 Four layers per screen (base + 3 overlaps)

UG221 Series

●General specifications

Item		Model: UG221
Power supply	Rated voltage	24VDC
	Permissible range of voltage	24VDC±10%
	Permissible momentary power failure	Within 10ms
	Power consumption (Maximum rating)	10W or less
	Inrush current	10A, 1ms
	Withstand voltage	DC external terminals to FG : 500VAC for 1min
Insulation resistance		500VDC, 10MΩ or more
Physical environment	Ambient temperature	0˚C to +50˚C
	Storage ambient temperature	-10˚C to +60˚C
	Ambient humidity	85% RH or less (Avoid condensation)
	Solvent resistance	No cutting oil or no organic solvent to clung to the unit
	Atmosphere	No corrosive gas or conductive dust
	Operating altitude	Altitude 2000m or less
Mechanical operating conditions	Vibration resistance	Vibration frequency: 10 to 150Hz, Acceleration: 9.8m/s², 3 directions of X, Y and Z for one hour
	Shock resistance	Pulse shape: half sine wave, Peak acceleration: 147m/s², 3 directions of X, Y and Z, six times each
Electrical operating conditions	Noise immunity	1500Vp-p (noise width: 1μs)
	Anti-static electricity discharge	Conforming to IEC61000-4-2, contact: 6kV , Air: 8kV
Mounting conditions	Grounding	Grounding resistance: less than 100Ω
	Structure	Degree of protection: front panel: IP65 (when using gasket); rear panel: IP20 Form: in a single body Mounting method: panel flush mounting Although the UG series has high environmental resistance characteristics equivalent to IP65F, it is expressed as IP65 herein in order to avoid confusion, as measures are required to meet the long-hour oil resistance, which is higher than the IP standard.
	Cooling system	Natural cooling
	Mass	Approx. 0.8kg
Case color		Black (Munsell N2.0)
Case material		PC/PS resin

*1 Including 4mm, the size of boss for communication unit.

●Display specifications

Item	Model: UG221H-LC	UG221H-SC	UG221H-TC
Display device	Monochrome LCD	STN color LCD	TFT color LCD
Display size	5.7-inch		
Color	Monochrome 8 gradations + blinks	16 colors + blinks	
Resolution W x H (dots)	320 x 240		
Dot pitch W x H (mm)	0.36 x 0.36		
Effective display area W x H (mm)	115.2 x 86.4		
Backlight	Cold cathode fluorescent lamp		
Contrast adjustment	Provided *1	By function switches	Not provided
Backlight average life *2	Approx. 50,000h		
POWER lamp	ON when the power is supplied.		

*1 Adjustable with function switches.
*2 At the time when the surface brightness is down to 50% of the initial value at normal temperature of 25˚C.

●Touch panel specifications

Item	Specifications
Method	Analog resistance film type, matrix resistance film type
Switch resolution	Analog: 1024 (W) x 1024 (H) Matrix: 20 (W) x 12 (H)
Mechanical life	One million activations or more
Surface treatment	Hard-coated, anti-glare treatment 5%

●Function switch specifications

Item	Specifications
Number of switches	6
Type of switch	Pressure sensitive switches
Mechanical life	One million activations or more

●Interface specifications

Item	Specifications
Serial interface for PLC connection (D-sub 25-pin, female)	RS-232C, RS-422/485 Asynchronous transmission Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600bps
Serial interface 1, 2 for screen data transfer/external connection (Modular jack, 8-pin)	RS-232C, RS-422/485 (2-wire connection) UG00P-MR, Bar code, UG00P-U2, Multi-link 2, UG-Link, Temperature control network, Mobdus slave communication, serial printer
Printer interface	Compliance with Centronics, half-pitch 36-pin, (for PC-98x1) NEC : PR201 EPSON : ESC/P-J84, ESC/P super function, ESC-P24-J84, CBM292/293 printer (The screen hard copy cannot be printed out.)

●Editor environment

Item		Specifications	
Editing method		Exclusive screen editor software	
Editing tool	Type of screen editor software	UG00S-CWV3 (Ver. 3.2.27.0 and later)	UG00S-CWV4 (Ver. 4.0.1.0 and later)
	CPU	Pentium II 450MHz or above recommended	Pentium III 800MHz or above (Pentium IV 2.0GHz or above recommended)
	OS	Windows98/Me/NT Ver.4.0/2000/XP*1*2	
	Hard disk capacity	Free space of approx. 460 MB or more	Free space of approx. 700 MB or more
	Display	Resolution 800 x 600 or more recommended	Resolution 1024 x 768 or more recommended
	CD-ROM drive	24x speed or more recommended	

*1 When installing the software in Windows NT Ver.4.0/2000/XP, do it under the authority of Administrator.
*2 The applicable OS varies with the software version.
For details, refer to the section of installation in User's Manual.

●Display function specifications

Item		Specifications				
Display language *		Japanese	English/Western Europe	Chinese (traditional)	Chinese (simplified)	Korean
Characters	1/4-size, 1-byte	ANK code	Latin1	ASCII code	ASCII code	ASCII code
	2-byte (16-dot)	JIS #1, 2 levels	–	Chinese (traditional)	Chinese (simplified)	Hangul (without Kanji)
	2-byte (32-dot)	JIS #1 level	–	–	–	–
Character size		1/4-size: 8 x 8 dots 1-byte: 8 x 16 dots 2-byte: 16 x 16 dots or 32 x 32 dots Enlarge: W: 1 to 8 times, H: 1 to 8 times				
Number of displayable characters		Resolution	320 x 240			
		1/4-size	40 characters x 30 lines			
		1-byte	40 characters x 15 lines			
		2-byte	20 characters x 15 lines			
Character properties		Display property: normal, reverse, blinking, bold, shadow Color: 16 colors + blinking/monochrome 8-gradation + blinking				
Graphics		Lines: Line, continuous line, box, parallelogram, polygon Circles: Circle, arc, sector, ellipse, elliptical arc Others: Tile patterns				
Graphic properties		Line types: 6 (thin, thick, dot, chain, broken, two-dot chain) Tile patterns: 16 (incl. user-definable 8 patterns) Display properties: Normal, reverse, blinking Display color: 16 colors + blinking/monochrome 8-gradation + blinking Color selection: Foreground, background, boundary (line)				

* Refer to the User's Manual <Function> (FEH376) for (Gothic) fonts.

●Function performance specifications

Item		Specifications
Screens		Max. 1024
Screen memory		FP-ROM (flash memory): Appox. 760 KB (varies depending on the font)
Switches		192 per screen
Switch actions		Set, reset, momentary, alternate Simultaneous keying possible with a function switch and a switch on the display (For the matrix type, simultaneous keying possible with two switches on the display)
Lamps		Reverse, blink, exchange of graphics: 192 per screen
Graphs		Pie, bar, panel meter and closed area graph: No limitation: within 128 KB per screen *2 Statistics and trend graphs: Max. 256 per layer *1
Data setting	Numerical data display	No limitation within 128 KB per screen *2
	Character display	No limitation within 128 KB per screen *2
	Message display	Resolution: 320 x 240: Max. 40 characters (1-byte) 640 x 480: Max. 80 characters (1-byte) 800 x 600: Max. 100 characters (1-byte) No limitation within 128 KB per screen *2
Sampling		Sampling display of buffer data (Regular time sample, bit synchronize, bit sample, relay sample, alarm function)
Graphic library		Max. 2560
Multi-overlaps		Max. 1024
Data blocks		Max. 1024
Messages		Max. 6144 lines
Patterns		Max. 1024
Macro blocks		Max. 1024
Page blocks		Max. 1024
Direct blocks		Max. 1024
Screen blocks		Max. 1024
Temperature control network table		Max. 32
Time display		Provided
Hard copy		Screen hard copy function: Provided
Buzzer		provided, 2 types (short beep and long beep)
Auto OFF function		Always ON, arbitrary setting
Self-diagnostic function		Switch self-test function Communication parameter setting check function Communication check function

*1 Four layers per screen (base + 3 overlaps)
*2 For the memory setting limit, refer to the User's Manual <Function> (FEH376).

Handy POD

●General specifications

Item		Model: UG320HD
Power supply	Rated voltage	24VDC
	Permissible range of voltage	24VDC±10%
	Permissible momentary power failure	Within 10ms (24VDC)
	Power consumption	20W or less
	Inrush current	13A, 2ms
	Withstand voltage	DC external terminals to FG: 500VAC, 1min.
Insulation resistance		500VDC, 10MΩ or above
Physical environment	Ambient temperature	0˚C to +50˚C
	Storage ambient temperature	-10˚C to +60˚C
	Ambient humidity	85% RH or less (Avoid condensation)
	Solvent resistance	No cutting oil or no organic solvent clung to the unit
	Atmosphere	No corrosive gas or conductive dust
	Operating altitude	Altitude 2000m or less
Mechanical operating conditions	Vibration resistance	Vibration frequency: 10 to 150Hz, Acceleration: 9.8m/s², 3 directions of X, Y and Z: one hour each
	Shock resistance	Pulse shape: Half sine wave, Peak acceleration: 147m/s², 3 directions of X, Y and Z, six times each
Electrical operating conditions	Noise immunity	1000Vp-p, noise width 1μs
	Anti-static electricity discharge	Compliance with IEC61000-4-2, contact 6kV, air 8kV
Mounting conditions	Grounding	Grounding resistance: less than 100Ω
	Structure	Degree of protection: IP65 where the I/F cover is mounted (UG320HD-SC4x3 excluded) Form: in a single body Mounting method: Portable, wall mounting, desktop Although the UG series has high environmental resistance characteristics equivalent to IP65F, it is expressed as IP65 herein in order to avoid confusion, as measures are required to meet the long-hour oil resistance, which is higher than the IP standard.
	Cooling system	Natural cooling
	Mass	Approx. 1.2kg
	Dimensions W x H x D (mm)	259 x 232 x 47 (excluding emergency stop switch)
Case color		Black (Munsell N2.0)
Case material		PC/ABS resin

●Display specifications

Item	Model: UG320HD
Display device	STN color LCD
Display size	7.7-inch
Display colors	128 colors + blinking 16 colors
Resolution W x H (dots)	640 x 480
Dot pitch W x H (mm)	0.246 x 0.246
Backlight	Cold cathode fluorescent lamp
Backlight life *	Approx. 40,000h
Backlight auto OFF function	Always ON, arbitrary setting
Contrast adjustment	Adjustable by function switches
POWER lamp	ON when the power is supplied.
ENB lamp	ON when screen operation is possible
Surface sheet	Material: PET (188μm)

* At the time when the surface brightness is down to 50% of the initial value at normal temperature of 25˚C.

●Touch panel specifications

Item	Specifications
Method	Analog resistance film type
Switch resolution	1024 (W) x 1024 (H)
Mechanical life	One million activations or more
Surface treatment	Hard-coated, anti-glare treatment 5%

●Emergency switch specifications

Item	Specifications
Number of switches	1
Method	Push-lock type (2NC contact, common)
Mechanical life	Min. 100,000 cycles
Rating	Rated operational voltage: 24V, at resistive load: 1.0A

●Function switch specifications

Item	Specifications
Number of switches	12 (4 for direct external output)
Method	Membrane switch
Mechanical life	Min. 1,000,000 cycles

●Deadman switch specifications

Item	Specifications
Number of switches	1
Method	Momentary switch (1NO contact)
Mechanical life	Min. 1,000,000 cycles

●3-position switch specifications (Option)

Item	Specifications
Number of switches	1
Method	1NO contact (double-break, slow action)
Mechanical life	Min. 1,000,000 cycles (for 1P→2P→1P action) Min. 100,000 cycles (for 1P→2P→3P action)
Operating pressure (reference value)	Required force to directly operate circuit action: Min. 30N

●Key switch specifications (Option)

Item	Specifications
Number of switches	1
Number of contacts	1NO contact
Mechanical life	Min. 250,000 cycles
Electrical life	Min. 100,000 cycles (Switching frequency: 1200 cycles/hour)
Rating	Rated operational voltage: 24V, at resistive load: 1.0A

●Interface Specifications

Item	Specifications
Multistage terminal board (TB1) • PLC connection • Power supply • External output	RS-232C, RS-422/485 Start-stop (asynchronous) transmission Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200bps
Modular jack, 8-pin (MJ1) • Screen data transfer • UG-Link • Bar code * An I/F cover and wall mounting bracket not applicable	RS-232C Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 2400, 9600, 19200, 38400, 57600, 115200bps

●Editor environment

Item		Specifications	
Editing method		Exclusive screen editor software	
Editing tool	Type of screen editor software	UG00S-CWV3 (Ver. 3.2.27.0 and later)	UG00S-CWV4 (Ver. 4.0.1.0 and later)
	CPU	Pentium II 450MHz or above recommended	Pentium III 800MHz or above (Pentium IV 2.0GHz or above recommended)
	OS	Windows98/Me/NT Ver.4.0/2000/XP*1*2	
	Hard disk capacity	Free space of approx. 460 MB or more	Free space of approx. 700 MB or more
	Display	Resolution 800 x 600 or more recommended	Resolution 1024 x 768 or more recommended
	CD-ROM drive	24x speed or more recommended	

*1 When installing the software in Windows NT Ver.4.0/2000/XP, do it under the authority of Administrator.
*2 The applicable OS varies with the software version. For details, refer to the section of installation in User's Manual.

●Display specifications

Item		Specifications				
Display language *		Japanese	English/Western Europe	Chinese (traditional)	Chinese (Simplified)	Korean
Characters	1/4-size, 1-byte	ANK code	ASCII code	ASCII code	ASCII code	ASCII code
	2-byte (16-dot)	JIS #1, 2 levels	ASCII code	Chinese (traditional)	Chinese (simplified)	Hangul (without Kanji)
	2-byte (32-dot)	JIS #1 level	ASCII code	–	–	–
Character size		1/4-size: 8 x 8 dots 1-byte: 8 x 16 dots 2-byte: 16 x 16 dots or 32 x 32 dots Enlarge: W: 1 to 8 times, H: 1 to 8 times				
Number of displayable characters		Resolution	640 x 480			
		1/4-size	80 characters x 60 lines			
		1-byte	80 characters x 30 lines			
		2-byte	40 characters x 30 lines			
Character property		Display property: normal, reverse, blinking, bold, shadow Color: 128 colors + blinking 16 colors				
Graphics		Lines: line, continuous line, box, parallelogram, polygon Circles: circle, arc, sector, ellipse, elliptical arc Others: tile patterns				
Graphics properties		Line types: 6 (thin, thick, dot, chain, broken, two-dot chain) Tile patterns: 16 (incl. user-definable 8 patterns) Display property: normal, reverse, blinking Display color: 128 colors + blinking 16 colors Color selection: foreground, background, boundaries (line)				

* Refer to the User's Manual <Function> (FEH375) for (Gothic) fonts.

●Function performance specifications

Item		Specifications
Screens		Max. 1024
Screen memory		FP-ROM (flash memory), Approx. 2,760 KB (varies depending on the font)
Switches		768 per screen
Switch actions		Set, reset, momentary, alternate, illuminated Simultaneous keying possible with a function switch and a switch on the display
Lamps		Reverse, blinking, exchange of graphics: 768 per screen
Graphs		Pie, bar, panel meter and closed area graph: No limitation within 128 KB per screen *2 Statistics and trend graphs: Max. 256 per layer *1
Data setting	Numerical data display	No limitation within 128 KB per screen *2
	Character display	No limitation within 128 KB per screen *2
	Message display	Resolution: 640 x 480: Max. 80 characters (1-byte) No limitation within 128 KB per screen *2
Sampling		Sampling display of buffer data (regular time sample, bit synchronize, bit sample, relay sample, alarm function)
Graphic libraries		Max. 2560
Multi-overlaps		Max. 1024
Data blocks		Max. 1024
Messages		Max. 6144 lines
Patterns		Max. 1024
Macro blocks		Max. 1024
Page blocks		Max. 1024
Direct blocks		Max. 1024
Screen blocks		Max. 1024
Calendar		Time display function: provided
Buzzer		provided, 2 sounds (short beep, long beep)
Backlight auto OFF function		Always ON, arbitrary setting
Self-diagnostic function		Switch self-test function Communication parameter setting check function Communication check function

*1 Four layers per screen (base + 3 overlaps)
*2 For the memory setting limit, refer to the User s Manual <Operation> (FEH375).

Communication Unit

●OPCN-1 communication unit (UG03I-J)

Item	Specification
Transmission method	Half-duplex, synchronous system
Transmission rate/ Transmission distance (switchable) *1	125kbps/1000m, 250kbps/800m 500kbps/480m, 1Mbps/240m
No. of connected stations *2	1 to 31 (max.)
Connection method	M3.5 screw terminal block
Applicable cable	Twisted-pair cable with shielding
Transmission content	GET/PUT service, I/O service
Station No.	01 to 7F (Rotary switch)

Notes: PLCs and interface units for connection with the OPCN-1 communication unit are as follows:
- OPCN-1 interface master module (NP1L-JP1) for Fuji MICREX-SX SPH
- OPCN-1 interface master module (NJ-JPCN-1) for Fuji FLEX-PC NJ series
- JPCN-1 interface master module (AJ71J92-S3, A1SJ71J92-S3) for Mitsubishi MELSEC A series
- J-NET module (LWE580, LQE040) for Hitachi HIDIC-S10α series, S10min
- JPCN unit (C200HW-JRM21) for Omron SYSMAC C200H series

*1 The transmission distance indicates an example when Furukawa-made cable (KPEV-SB 1.25mm²) is used. Note that the length may change depending on the cable characteristics.
*2 The number of PODs that can be connected varies depending on such factors as application and PLC. When connecting three or more PODs (including message communication devices) to a single PLC, use I/O communication to connect the PODs to the PLC.

●SX bus communication unit (UG03I-S, UG230I-S)

Item	Specification
Transmission line	Dedicated cable *1 (total length 25m)
No. of connected stations	No. of PODs connected via SX bus in same configuration: 8
Transmission rate	25Mbps
PLC connecting range	CPUs in same configuration

*1 For connection, use the following SX bus extension cable.

Type	Cable length (unit: mm)
NP1C-P3	300
NP1C-P6	600
NP1C-P8	800
NP1C-02	2,000
NP1C-05	5,000
NP1C-10	10,000
NP1C-25	25,000

For UG03I-S, mount the ferrite core that is supplied with the SX bus cable.

●Ethernet (FL-net) communication unit (UG03I-E2)

Item	Specification		
	AUI		
	10BASE5	10BASE2	10BASE-T
Transmission rate	10Mbps		
Transmission method	Base band		
Transmission protocol (FL-net)	FA-link protocol		
Max. network length or max. node distance	2500m (5 segments)	925m (5 segments)	500m (HUB: 4 stages)
Max. segment length	500m	185m	100m between node and HUB
Max. number of nodes per system	254 stations (not via rooter)		
Max. number of nodes	100 units/segment	30 units/segment	2 units/segment
Min. node distance	2.5m	0.5m	None
Connecting cable	Ethernet Coaxial cable (50Ω)	RG58A/U, RG58C/U Coaxial cable (50Ω)	UTP (Twisted-pair cable without shielding) 22-26AWG

Note: With UG03I-E2, Ethernet and FL-net communication is possible.

●DeviceNet communication unit (UG03I-D)

Item	Specification				
Vendor ID	319				
Product code	7521 (HEX)				
Connector type	Screw connector				
Input/Output specifications	Conforms to the DeviceNet protocol				
Max. number of connected stations	63				
Transmission rate	125k/250k/500kbps (changeable with the dip switch)				
Transmission distance	Transmission rate	Max. network length		Branch line length	Total branch line length
		THICK cable	THIN cable		
	125kbps	500m	100m	6m	156m
	250kbps	250m	100m	6m	78m
	500kbps	100m	100m	6m	39m
Communication function	I/O messages: Polling				

●T-link communication unit (UG03I-T,UG230I-T)

Item	Specification
Transmission method	Half-duplex serial transmission 1:N (polling/selecting)
Transmission rate	500kbps
Transmission distance *1	1km
No. of connected stations *2	1 to 32 (max.)
Connection method	M3.5 screw terminal
Applicable cable	Twisted-pair cable with shielding
Number of words occupied	2, 4, 8, 16, 64 words (by setting)
Station No.	00 to 98 (hardware switch)

*1 For cable types, see User Manual <T-Link Communications> (FEH356).
*2 The number of PODs that can be connected varies depending on such factors as application and PLC. When connecting four or more PODs (including message communication devices) to a single PLC, use I/O communication to connect the PODs to the PLC

●PROFIBUS-DP communication unit (UG03I-P)

Item	Specification						
No. of connected stations	Slave stations: 125 (max.)						
Station No. setting range	1 to 125 (set by the editor)						
Type of transmission line	Bus structure (multi-drop)						
Transmission line *1	Bus transmission line: twisted-pair cable with shielding (Total length depends on transmission rate.)						
Transmission method	Half-duplex, serial transmission conforming to EIA RS-485						
Communication setting	Data length: 8 bits Parity: Even Stop bit: 1						
Transmission rate (bps)	9600	19200	93750	187500	500000	1.5M	12M
Transmission distance (m)	1200	1200	1200	1000	400	200	100
Coding scheme	NRZ (Non Return to Zero) system						
Occupied input/output points	Input/output: 1 to 48 words (32/64/96 bytes are selected from the editor)						

Note: When connecting with the PROFIBUS-DP communication unit, use Siemens SIMATIC S7 series PLC.
*1 For cable types, see User Manual <PROFIBUS Communications> (FEH368).

●CC-Link communication unit (UG03I-C)

Item	Specification
Transmission rate/ Max. transmission distance *1	156kbps/1200m, 625kbps/600m, 2.5Mpbs/200m, 5Mbps/150m, 10Mbps/100m
Maximum No. of connected stations *2	26 (intelligent device stations)
No. of occupied stations	1 or 4 (changeable with the DIP switch)
Transmission method	Polling system
Synchronization	Frame synchronization system
Coding scheme	NRZI (Non Return to Zero Inverted) system
Type of transmission line	Bus (RS-485)
Transmission format	Conforms to HDLC
Error control system	CRC
Connecting cable *3	Twisted-pair cable with shielding

Notes: PLCs and interface units for connection with CC-Link communication unit are as follows:
- CC-Link interface master-local unit (AJ61BT11, A1SJ61BT11) for Mitsubishi MELSEC A series.
- CC-Link interface master-local unit (AJ61QBT11, A1SJ61QT11) for MELSEC QnA

*1 Irrespective of transmission rate setting, 2m or longer cable length is necessary between the POD and adjacent stations.
*2 The number of PODs that can be connected varies depending on such factors as application and PLC. When connecting four or more PODs (including message communication devices) to a single PLC, use I/O communication to connect the PODs to the PLC.
*3 For cable types, see User Manual <CC-Link Communications> (FEH355).

Option and Extension Units

●Video input unit (UG00A-VIS, UG30A-VIS)

Video display specifications

Item	Specification	
Type	UG00A-VIS	UG30A-VIS
Model	UG630	UG530 UG430 UG330
Display colors	16,777,216 colors	32,768 colors
Input channel	4 channels	
Video signal system	NTSC system, PAL system	
Video input	1.0Vp-p, 75Ω unbalanced	
Display size	640 x 480, 640 x 240, 320 x 240, 160 x 120	
Color adjustment	Contrast (32 gradations) Brightness (32 gradations) Color gain (32 gradations)	

Audio specifications

Item	Specification	
Type	UG00A-VIS	UG30A-VIS
Model	UG630	UG530 UG430 UG330
Audio file (WAV file) format	PCM system Sampling rate: 16/8 kHz, quantization bit: 16/8 bits Stereo/monaural	PCM system Sampling rate: 8 kHz, quantization bit: 8 bits Monaural
Audio output voltage	2.8Vp-p	1.0Vp-p
Audio output connector	3.5mm dia. stereo mini-jack	
Connected amplifier	Input impedance: 10kΩ or more	

●RGB input unit (UG00A-RIS, UG30A-RIS)

Input signal specifications

Item	Specification	
Type	UG00A-RIS	UG30A-RIS
Model	UG630	UG530 UG430 UG330
Input method	Analog RGB	
Input channel	1 channel	
Output signal	Analog, 0.5 - 1.0Vp-p positive	Analog, 0.7 - 0.8Vp-p positive
Synronous signal	TTL level (positive/negative)	
Display colors	65,536 colors	32,768 colors

Audio specifications

Item	Specification	
Type	UG00A-VIS	UG30A-VIS
Model	UG630	UG530 UG430 UG330
Audio file (WAV file) format	PCM system Sampling rate: 16/8 kHz, quantization bit: 16/8 bits Stereo/monaural	PCM system Sampling rate: 8 kHz, quantization bit: 8 bits Monaural
Audio output voltage	2.8Vp-p	1.0Vp-p
Audio output connector	3.5mm dia. stereo mini-jack	
Connected amplifier	Input impedance: 10kΩ or more	

●RGB output unit (UG00A-ROS, UG30A-ROS)

Output signal specifications

Item	Specification		
Type	UG00A-ROS	UG30A-ROS	
Model	UG630	UG530 UG430H-V UG330H-V	UG430H-T
Input method	Analog RGB		
Input channel	1 channel		
Output signal	0.78Vp-p/75Ω	0.7Vp-p/75Ω	
Synronous signal	HSYNC, VSYNC: TTL level		
Display dots	1024 x 768	800 x 600	640 x 480
Display colors	32,768 colors		
Horizontal sync frequency	48.4kHz	38.0kHz	30.4kHz
Vertical sync frequency	60kHz		58kHz
Interlace	None		

Audio specifications

Item	Specification	
Type	UG00A-VIS	UG30A-VIS
Model	UG630	UG530 UG430 UG330
Audio file (WAV file) format	PCM system Sampling rate: 16/8 kHz, quantization bit: 16/8 bits Stereo/monaural	PCM system Sampling rate: 8 kHz, quantization bit: 8 bits Monaural
Audio output voltage	2.8Vp-p	1.0Vp-p
Audio output connector	3.5mm dia. stereo mini-jack	
Connected amplifier	Input impedance: 10kΩ or more	

●Audio output unit (UG00A-SUD, UG30A-SUD)

Audio specifications

Item	Specification	
Type	UG00A-VIS	UG30A-VIS
Model	UG630	UG530 UG430 UG330
Audio file (WAV file) format	PCM system Sampling rate: 16/8 kHz, quantization bit: 16/8 bits Stereo/monaural	PCM system Sampling rate: 8 kHz, quantization bit: 8 bits Monaural
Audio output voltage	2.8Vp-p	1.0Vp-p
Audio output connector	3.5mm dia. stereo mini-jack	
Connected amplifier	Input impedance: 10kΩ or more	

●Extension unit for UG230 (UG230A-DCL)

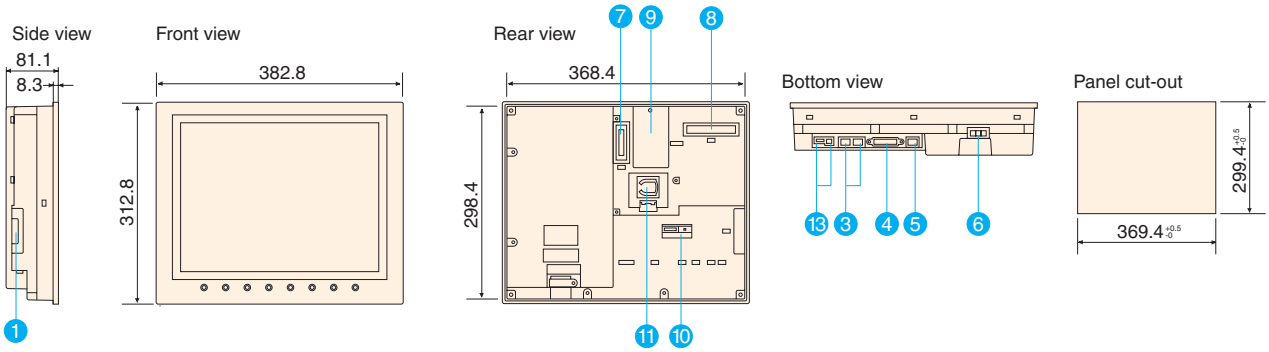
Specifications

Item	Specification
Application	Ethernet 100BASE-TX/10BASE-T, CF card interface, PLC communication port (D-sub 25-pin)
Power source	5VDC (supplied from POD)
Ambient temperature	0 to 50˚C
Storage temperature	-10 to 60˚C
Relative humidity	85% RH or less (Avoid condensation)
Atmosphere	Free from corrosive gas or conductive dust
Outside dimensions (W x H x D)	102.7 x 128.8 x 21.5mm

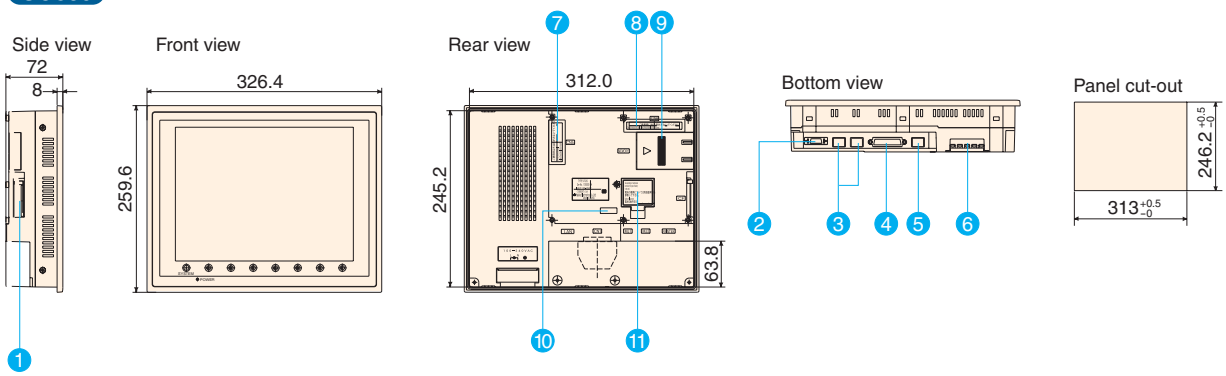
UG30 Series

■Outline drawing (Unit: mm)

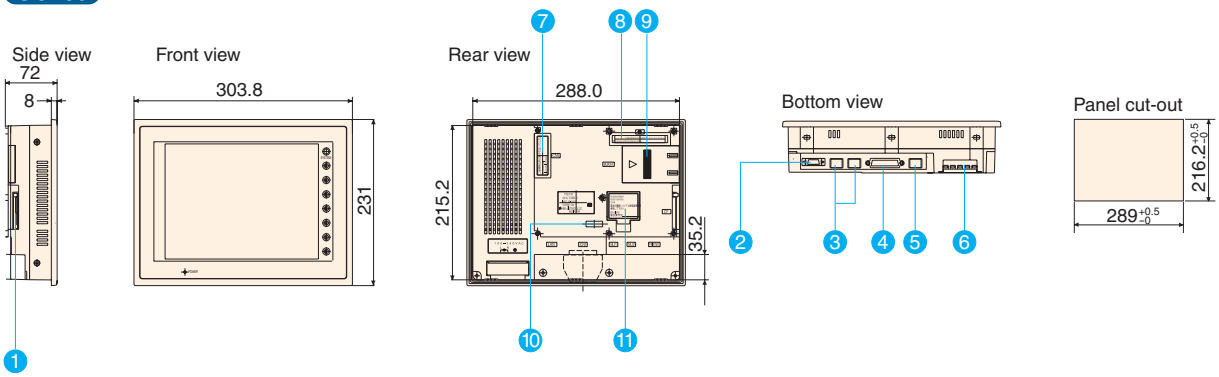
UG630



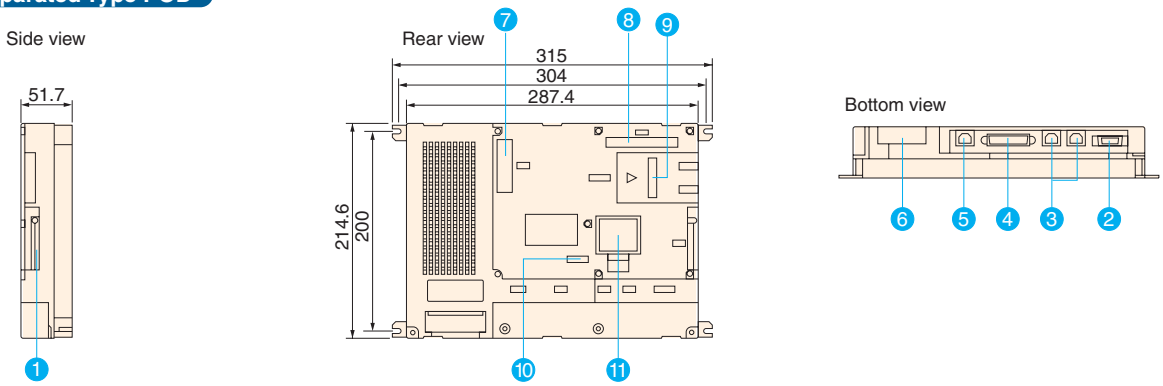
UG530



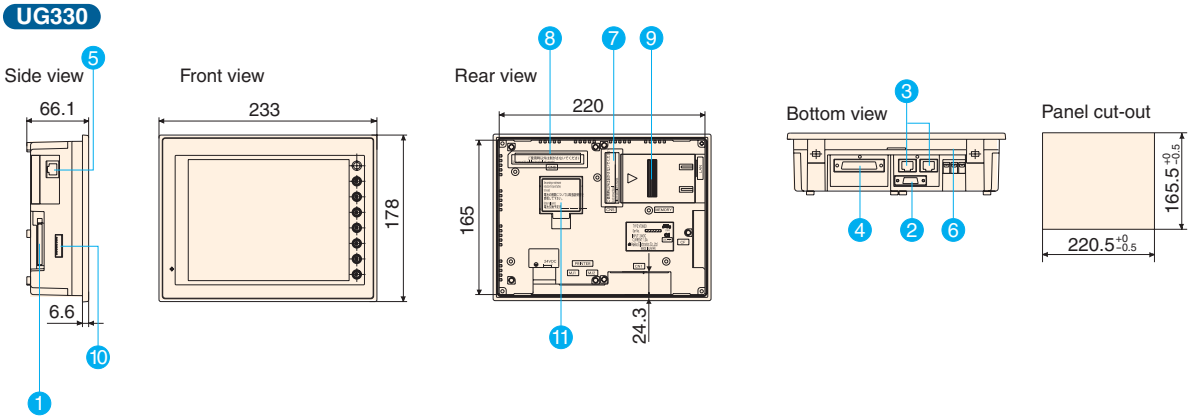
UG430



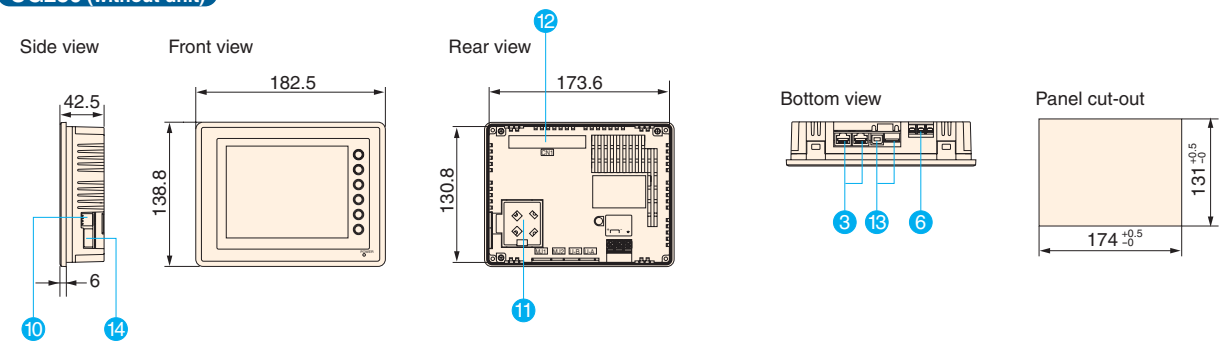
Separated Type POD



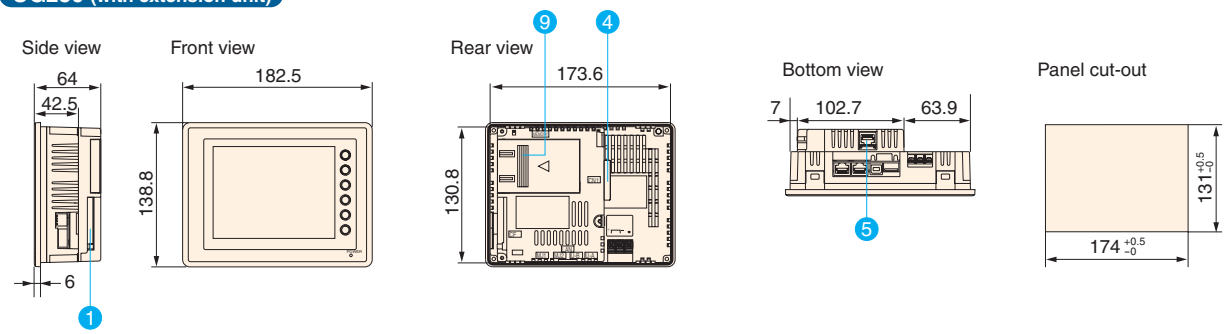
UG330



UG230 (without unit)



UG230 (with extension unit)



Name of each part

❶ CF card slot (CF)
Slot to which a CF card is inserted.

❷ Printer port (PRINTER)
Port to which Centronics printer is connected.

❸ Modular port (MJ1/MJ2)
Port to which screen data transfer, temperature controller or bar code reader is connected.
MJ2 of the UG230 is connected to a PLC or controller. Simple POD has only MJ1.

❹ PLC communication port (CN1)
Port to which the PLC or controller is connected.

❺ Ethernet port (LAN)
Port for connecting the Ethernet 100BASE-TX/10BASE-T.

❻ Power supply terminal
Terminal for power supply.

❼ Communication unit port (CN5)
Port for installing SX bus, T-link or other communication unit.

❽ Option unit port (CN6, CN7)
Port for installing the video input, RGB I/O or other optional unit.

❾ Extension memory port (MEMORY)
Port for installing the memory cassette, SRAM cassette or the like.

❿ DIP switch
Switches used for various setting the POD.

⓫ Battery holder
Holder for connecting the battery.

⓬ Extension unit port (CN1)
Port for installing the extension unit and communication unit exclusive for the UG230.

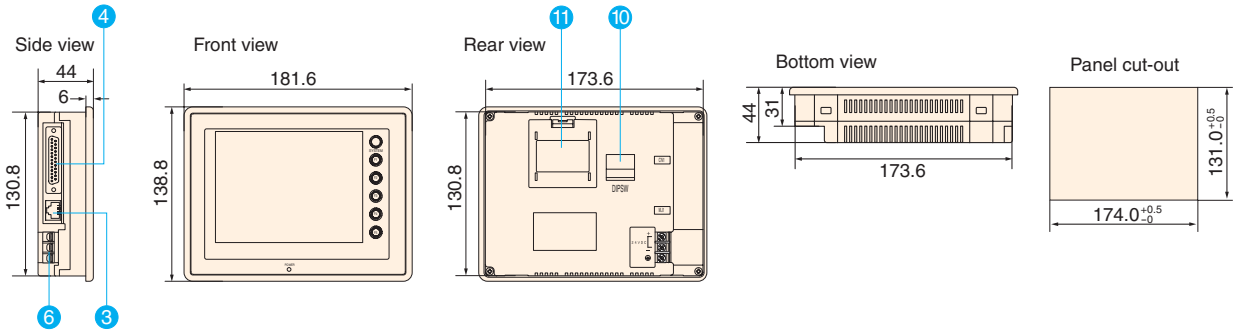
⓭ USB port (U-A/U-B)
U-A for connecting the USB printer or CF card reader, and U-B for screen data transfer.

⓮ Slide switch
Used for switching RS-232C and RS-422 for MJ2.

Outline Dimensions

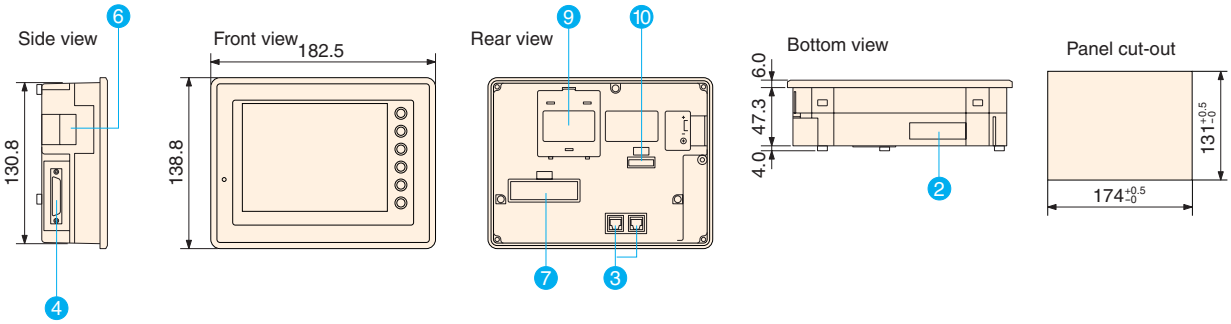
Simple POD

■Outline drawing (Unit: mm)



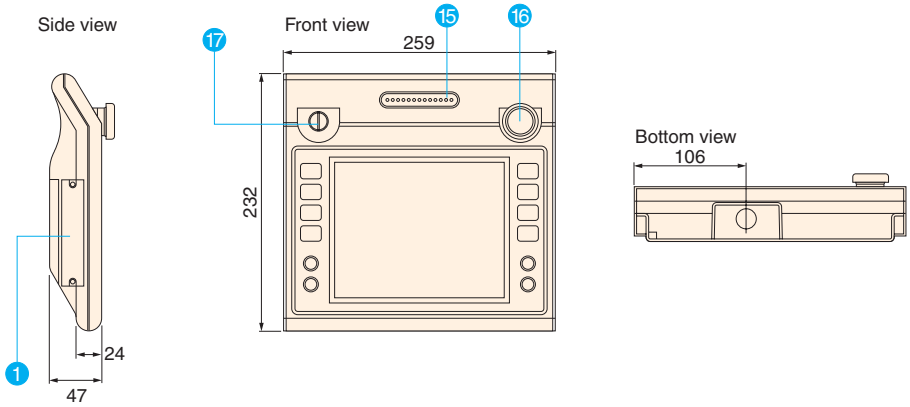
UG221 Series

■Outline drawing (Unit: mm)



Handy POD

■Outline drawing (Unit: mm)



Name of each part

❶ CF card slot (CF)
Slot to which a CF card is inserted.

❷ Printer port (PRINTER)
Port to which Centronics printer is connected.

❸ Modular port (MJ1/MJ2)
Port to which screen data transfer, temperature controller or bar code reader is connected.
MJ2 of the UG230 is connected to a PLC or controller. Simple POD has only MJ1.

❹ PLC communication port (CN1)
Port to which the PLC or controller is connected.

❺ Ethernet port (LAN)
Port for connecting the Ethernet 10BASE-T.

❻ Power supply terminal
Terminal for power supply.

❼ Communication unit port (CN5)
Port for installing SX bus, T-link or other communication unit.

❽ Option unit port (CN6)
Port for installing the video input, RGB I/O or other optional unit.

❾ Extension memory port (MEMORY)
Port for installing the memory cassette, SRAM cassette or the like.

❿ DIP switch
Switches used for various setting the POD.

⓫ Battery holder
Holder for connecting the battery.

⓬ Extension unit port (CN1)
Port for installing the extension unit and communication unit exclusive for the UG230.

⓭ USB port (U-A/U-B)
U-A for connecting the USB printer or CF card reader, and U-B for screen data transfer.

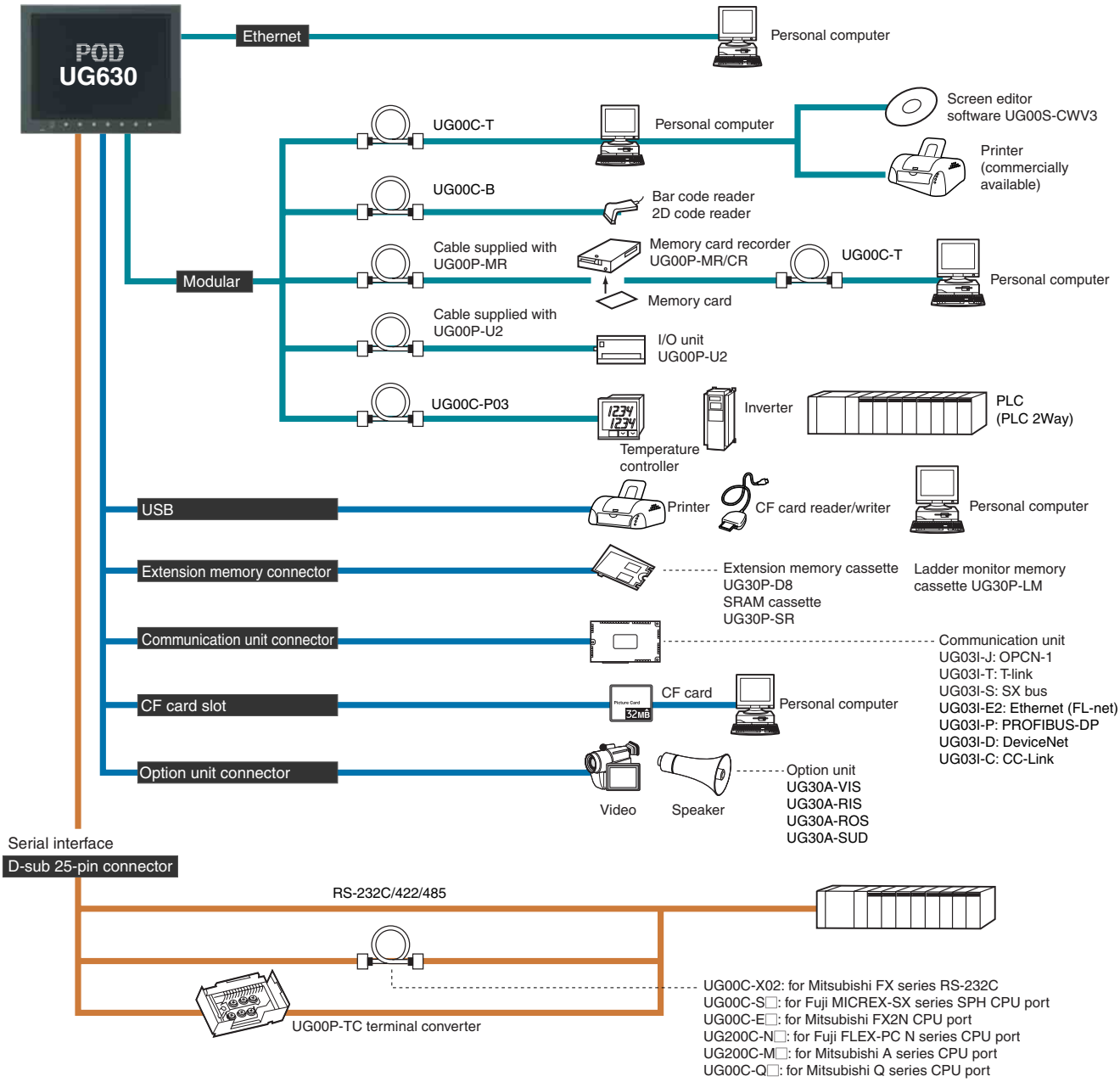
⓮ Slide switch
Used for switching RS-232C and RS-422 for MJ2.

⓯ Deadman's switch

⓰ Emergency stop switch

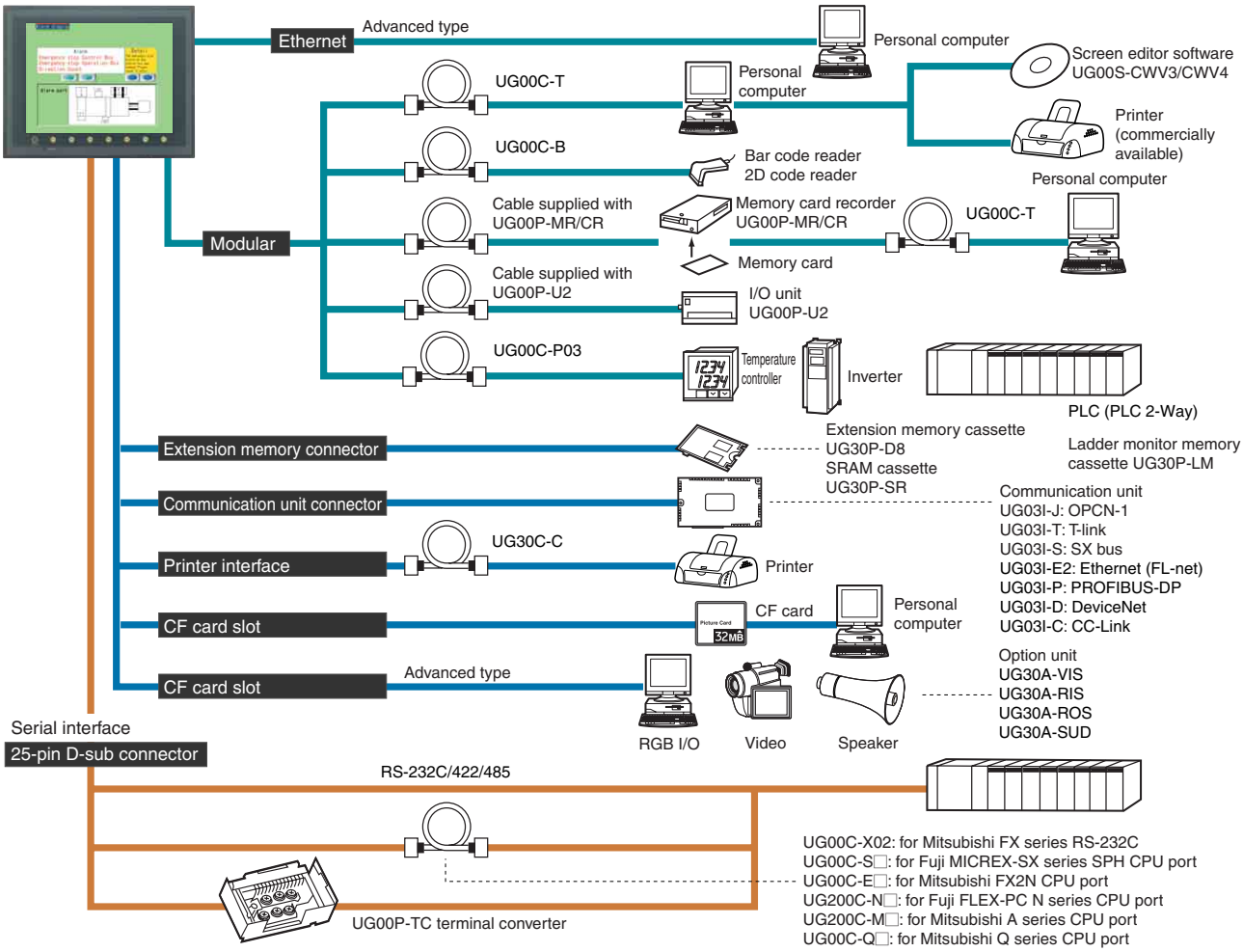
⓱ Key switch

UG630 Series

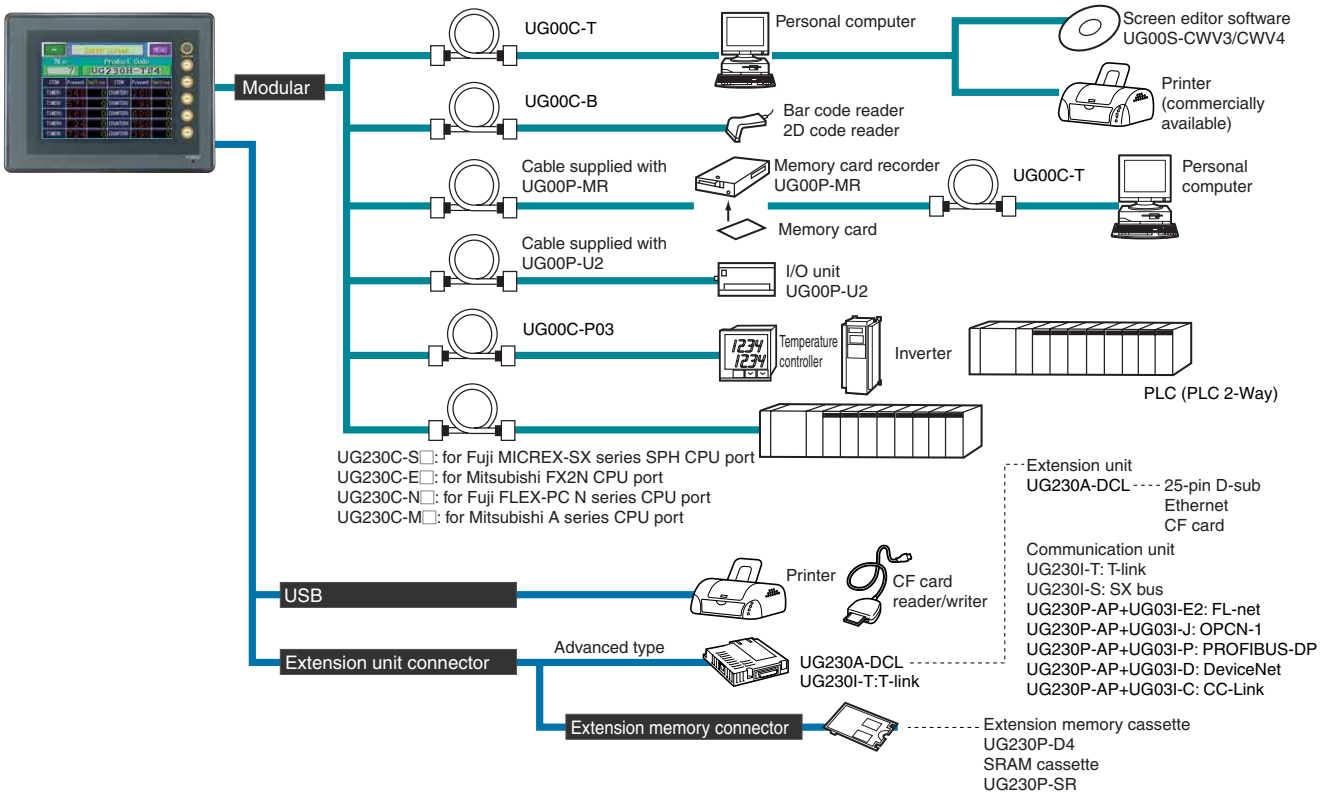


System Configuration

UG30 Series



UG230 Series



Simple POD

Modular

UG00C-T — Personal computer — Screen editor software UG00S-CWV3/CWV4; Printer (commercially available)

UG00C-B — Bar code reader

Cable supplied with UG00P-MR — Memory card writer UG00P-MR — Memory card; UG00C-T — Personal computer

Cable supplied with UG00P-U2 — I/O unit UG00P-U2

UG00C-P03 — Temperature controller — Inverter — PLC (PLC 2-Way)

Serial interface

25-pin D-sub connector

RS-232C/422

UG00C-X02: for Mitsubishi FX series RS-232C
UG00C-S□: for Fuji MICREX-SX series SPH CPU port
UG00C-E□: for Mitsubishi FX2N CPU port
UG200C-N□: for Fuji FLEX-PC N series CPU port
UG200C-M□: for Mitsubishi A series CPU port
UG00C-Q□: for Mitsubishi Q series CPU port

UG221 Series

Modular

UG00C-T — Personal computer — Screen editor software UG00S-CWV3/CWV4; Printer (commercially available)

UG00C-B — Bar code reader

Cable supplied with UG00P-MR — Memory card writer UG00P-MR — Memory card; UG00C-T — Personal computer

Cable supplied with UG00P-U2 — I/O unit UG00P-U2

UG00C-P03 — Temperature controller — Inverter — PLC (PLC 2-Way)

Extension memory connector — Extension memory cassette UG221P-D4; SRAM cassette UG221P-SR

Communication unit connector — Communication unit UG03I-J: OPCN-1; UG03I-T: T-link; UG03I-S: SX bus; UG03I-E2: Ethernet (FL-net); UG03I-P: PROFIBUS-DP; UG03I-D: DeviceNet; UG03I-C: CC-Link

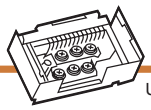
Printer interface — UG00C-C — Printer

Serial interface

25-pin D-sub connector

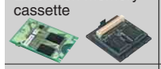
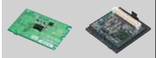
RS-232C/422

UG00C-X02: for Mitsubishi FX series RS-232C
UG00C-S□: for Fuji MICREX-SX series SPH CPU port
UG00C-E□: for Mitsubishi FX2N CPU port
UG200C-N□: for Fuji FLEX-PC N series CPU port
UG200C-M□: for Mitsubishi A series CPU port
UG00C-Q□: for Mitsubishi Q series CPU port



UG00P-TC terminal converter

Peripheral Option List

Option			UG630H-XH	UG530H-VH	UG530H-VS	UG430H-VH	UG430H-VS	UG430H-TH	UG430H-TS	UG430H-SS
		POD model								
Screen data transfer cable 	UG00C-T	Used for connection between POD and personal computer or between personal computer and UG00P-MR/CR for data transfer.	○	○	○	○	○	○	○	○
Printer cable 	UG30C-C UG00C-C	Used to connect a printer to the POD	—	UG30C-C	UG30C-C	UG30C-C	UG30C-C	UG30C-C	UG30C-C	UG30C-C
Bar code reader connecting cable 	UG00C-B	Used to connect a bar code reader to the POD.	○	○	○	○	○	○	○	○
Multi-link 2 master cable 	UG00C-H03	Used to connect the POD master and slave in multi-link 2.	○	○	○	○	○	○	○	○
Temperature controller connecting cable 	UG00C-P03	Used for connection between POD and temperature controller or inverter, or with PLC in PLC 2-Way.	○	○	○	○	○	○	○	○
MJ D-sub converter cable 	UG30C-M	Used to connect PLC in the PLC 2-Way.	○	○	○	○	○	○	○	○
MJ2 D-sub converter cable 	UG30C-J	Exclusive for UG230 and used to connect MJ2 to PLC.	—	—	—	—	—	—	—	—
Extension memory cassette 	UG30P-D8 UG230P-D4 UG221P-D4	Used to increase the screen data memory capacity.	UG30P-D8	UG30P-D8	UG30P-D8	UG30P-D8	UG30P-D8	UG30P-D8	UG30P-D8	UG30P-D8
SRAM cassette 	UG30P-SR UG230P-SR UG221P-SR	Cassette memory for backing up sampling data and POD internal memory. Calendar setting is also possible.	UG30P-SR	UG30P-SR	UG30P-SR	UG30P-SR	UG30P-SR	UG30P-SR	UG30P-SR	UG30P-SR
Ladder monitor memory cassette 	UG30P-LM	Add-on memory for the ladder monitor function	UG30P-LM	UG30P-LM	UG30P-LM	UG30P-LM	UG30P-LM	UG30P-LM	UG30P-LM	UG30P-LM
Memory card/CF card recorder 	UG00P-MR UG00P-CR	Used to back up screen data or as memory for the memory manager and data logging functions.	UG00P-MR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR
Terminal converter 	UG00P-TC	Used for connecting the POD and PLC via RS-422/485.	○	○	○	○	○	○	○	○
Dual-port interface 	UG00P-DI	Used to increase the Mitsubishi A/QnA/FX programming connector into 2 ports.	○	○	○	○	○	○	○	○
I/O unit 	UG00P-U2	Used as an external I/O of the POD. I/O = 16/16	○	○	○	○	○	○	○	○
Communication interface unit* 	UG03I-T UG03I-S UG03I-J UG03I-E2 UG03I-P UG03I-C UG03I-D UG230I-T UG230I-S	UG03I-T (T-link) UG03I-S (SX bus) UG03I-J (OPCN-1) UG03I-E2 (Ethernet /FL-net) UG03I-P (PROFIBUS-DP) UG03I-C (CC-Link) UG03I-D (DeviceNet) UG230I-T (T-linkfor UG230) UG230I-S (SX bus for UG230)	○	○	○	○	○	○	○	○
Option unit 	UG30A-VIS UG30A-RIS UG30A-ROS UG30A-SUD UG00A-VIS UG00A-RIS UG00A-ROS UG00A-SUD	UG30A-VIS (video input + audio output) UG30A-RIS (RGB input + audio output) UG30A-ROS (RGB output + audio output) UG30A-SUD (audio output)	○	○	—	○	—	○	—	—
Extension unit 	UG230A-DCL	Conforms to 25-pin D-sub/ CF card/Ethernet.	—	—	—	—	—	—	—	—

*The communication unit adaptor UG230P-AP is necessary for mounting UG03I-□ to UG230.

UG330H-VH	UG330H-VS	UG330H-SS	UG230H-TS	UG230H-SS	UG230H-LS	UG221H-SR	UG221H-LR	UG221H-LE	UG221H-TC	UG221H-SC	UG221H-LC	UG320HD
○	○	○	○	○	○	○	○	○	○	○	○	○
UG30C-C	UG30C-C	UG30C-C	—	—	—	—	—	—	UG00C-C	UG00C-C	UG00C-C	—
○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○
—	—	—	○	○	○	—	—	—	—	—	—	—
UG30P-D8	UG30P-D8	UG30P-D8	UG230P-D4	UG230P-D4	UG230P-D4	—	—	—	UG221P-D4	UG221P-D4	UG221P-D4	—
UG30P-SR	UG30P-SR	UG30P-SR	UG230P-SR	UG230P-SR	UG230P-SR	—	—	—	UG221P-SR	UG221P-SR	UG221P-SR	—
UG30P-LM	UG30P-LM	UG30P-LM	—	—	—	—	—	—	—	—	—	—
UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR
○	○	○	○	○	○	—	—	—	○	○	○	—
○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	—
○	○	○	○	○	○	—	—	—	○	○	○	—
○	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	○	○	○	—	—	—	—	—	—	—

Connection Unit List

●Applicable PLCs (As of August in 2006)

Maker	PLC series	1:1	1:n (Multi-drop)	Multi-link 2	n:1 (Multi-link)	Ethernet	Network option	PLC 2-Way
Fuji Electric FA	MICREX-F series	○	○	○	○		T-link	○
	SPB (N mode) & FLEX-PC series	○	○	○			OPCN-1 (FLEX-PC)	○ *2
	SPB (N mode) & FLEX-PC CPU	○		○				
	FLEX-PC COM (T)	○	○	○	○			
	FLEX-PC (T)	○		○				
	FLEX-PC CPU (T)	○		○				
	MICREX-SX SPH/SPB series	○		○		○ (SPH)	T-link (SPH) / OPCN-1 (SPH) / SX bus (SPH)	○
	MICREX-SX SPH/SPB CPU	○		○				
Mitsubishi Electric	A series link	○	○	○	○		CC-Link / OPCN-1	○
	A series CPU	○		○				
	QnA series link	○	○	○		○	CC-Link	○ *2
	QnA series CPU	○		○	○Used with UG00P-DI			
	QnH (Q) series link	○	○	○		○	CC-Link	○ *2
	QnH (A) series CPU	○		○				
	QnH (Q) series CPU	○		○				○
	QnH (Q) series link (Multi CPU)	○	○	○	○	○		
	QnH (Q) series CPU (Multi CPU)	○		○				
	Q00J/00/01CPU	○		○		○	CC-Link	
	FX series CPU	○		○				
	FX2N series CPU	○		○				
	FX1S series CPU	○		○				
	FX series link (A protocol)	○	○	○	○			○ *3
	FX-3UC series CPU	○		○				
	A link + Net10	○	○ *1		○			
OMRON	SYSMAC C	○	○	○			OPCN-1	○ *2
	SYSMAC CV	○	○	○				○ *2
	SYSMAC CS1/CJ1	○	○	○		○		○ *2
	SYSMAC CS1/CJ1 DNA	○	○ *1			○		
Sharp MS	JW series	○	○	○	○	○	FL-Net	○
	JW100/70H COM port	○	○	○				○
	JW20 COM port	○	○	○				○
	JW300 series	○	○	○				
	JW311/312/321/322 series (Ethernet)					○		
	JW331/332/341/342/352/362 series (Ethernet)					○		
Hitachi	HIDIC-H	○	○	○	○	○		
	HIDIC-EHV	○				○		
	HIDIC-S10/2 α/mini	○		○		○	OPCN-1	○
	HIDIC-S10/4 α	○		○				○
	HIDIC-S10/ABS	○		○				
	HIDIC-S10V	○				○		
Matsushita Electric	MEWNET	○	○	○	○	○		○
Works	FP series					○		
Yokogawa Electric	FA500	○	○	○	○			
	FA-M3	○	○	○	○	○		○
	FA-M3R	○	○	○	○	○	FL-Net	○
YASKAWA Electric	MEMOBUS	○	○	○				
	CP9200SH/MP900	○	○	○				
	MP2300(MODBUS TCP/IP)					○		
Toyoda Machine Works	TOYOPUC	○	○	○	○	○		○
Koyo Electronics	SU/SG	○	○	○				
Industries	SR-T	○	○	○				
	SR-T (K protocol)	○		○				
	SU/SG (K-Sequence)	○		○				
	SU/SG (ModbusRTU)	○		○				
Rockwell Automation	PLC-5	○	○	○		○		
(Allen-Bradley)	SLC500	○	○	○		○		○
	NET-ENI (SL500)					○		
	Micro Logix 1000	○	○	○				
	Control Logix / Compact Logix	○		○		○ *6		
GE FUNUC Automation	90 series	○	○	○				
	90 series (SNP-X)	○		○				
Toshiba	T series	○	○	○	○	○		
	EX series	○	○	○				
Toshiba Machine	TC200	○	○	○	○			

●Applicable PLCs (As of August in 2006)

Maker	PLC series	1:1	1:n (Multi-drop)	Multi-link 2	n:1 (Multi-link)	Ethernet	Network option	PLC 2-Way
SIEMENS	S5	○		○				
	S5 PG port	○		○				
	S7	○		○			PROFIBUS-DP	
	S7-200 PPI	○	○		○			
	S7-300/400 MPI	○	○ *4		○ *5	○		
	S7-300MPI (UG 00P-MP)	○	○ *4		○ *5			
	S7-300MPI (HMI ADP)	○		○				
	S7-300MPI (PC ADP)	○		○				
	S7-300MPI (Helmholz SSW7 ADP)	○		○				
	TI500/505	○		○				
Shinko Electric	SELMART	○	○	○	○			
SAMSUNG	SPC series	○	○	○	○			
	N_plus	○	○	○	○			
	SECNET	○	○	○	○			○
Keyence	KZ series link	○	○	○				
	KZ-A500 CPU	○		○				
	KZ/KV series CPU	○	○	○				
	KZ24/300 CPU	○		○				
	KV10/24 CPU	○		○				○
	KV-700	○		○		○		○
	KV-1000	○		○		○		○
LS	MASTER-K10/60/200	○		○		○		
	MASTER-K500/1000	○	○	○	○	○		
	MASTER-KxxxS	○		○				
	MASTER-KxxxS CNET	○	○	○				
	GLOFA CNET	○	○	○				
	GLOFA GM series CPU	○		○		○		
	GLOFA GMR series (Ethernet)					○		
	XGT/XGK series	○		○		○		
FANUC	Power Mate	○		○				
Fatec Automation	FACON FB series	○	○	○				
Izumi (IDEC)	MICRO3	○	○	○				
	MICRO Smart	○	○	○				
Modicon	Modbus RTU	○	○	○				
Yamatake	MX series	○		○				
	DMC50	○	○	○				
Taian Electric	TP02	○	○	○				
SAIA	PCD	○		○		○		
MOELLER	PS4	○		○				
Telemecanique	TSX Micro	○		○				
Automationdirect	Direct LOGIC	○	○	○		○		
	Direct LOGIC (K-Sequence)	○	○	○				
	Direct LOGIC (ModbusRTU)	○	○	○				
VIGOR	M series	○		○				
DELTA	DVP series	○		○				
Toyo Denki Seizo	μGPCsx series	○		○			OPCN-1/SX bus	
	μGPCsx CPU	○		○				
Baldor	Mint	○						
Modbus RTU (Free Format)	–	○	○					
Modbus TCP/IP	–					○		
FESTO	FEC	○		○				
Honeywell	Universal Modbus RTU	○	○	○				
	Universal Modbus TCP/IP(Ethernet)					○		
EATON Cutler-Hummer	ELC	○		○				
UNITRONICS	M90/M91/Vision series (ASCII)	○		○				

✻The panel meter type that can connect with our POD UG Series is WA5**7-□(□: 01 to 12 and 18).

*1 When the PLC connected to the controller network is connected to UG30 series, the UG30 can communicate with the PLC on the network.

*2 Only RS-232C can be used. *3 FX□N-422-BD cannot be connected. *4 Maximum 4 PLCs can be connected. *5 Maximum 3 UG30 can be connected.

◎ 1:1 denotes connection between one POD and one PLC.
◎ 1:n means that multiple PLCs can be connected to a single POD.
◎ Multi-Link 2 means that up to 4 PODs can be connected to a single PLC.
◎ n:1 means that multiple PODs can be connected to a single PLC.
◎ For the Ethernet communications, while the LAN port is the standard equipment for an advanced type POD, the communication interface unit (UG03I-E2) is required for the standard type POD.
◎ The communication interface unit (UG03I-□) is required when using a network option.
◎ For the PLC connection to the MJ port, RS-232C or RS-485 (2-wire type) must be used when using the PLC 2-Way.

Connection Unit List

●Applicable Inverters, Temperature Controllers, etc. (As of August in 2006)

Maker	Unit name	Category
Fuji Electric FA	F-MPC04P(LOADER)	Power monitoring unit
	F-MPC series/FePSU	
	FVR-E11S	Inverter
	FVR-C11S	
	FRENIC5000G11S/P11S	
	FRENIC5000VG7S	
	FRENIC-Mini (MODBUS RTU)	
	FRENIC-Eco (MODBUS RTU)	
	FRENIC-Multi (MODBUS RTU)	
	FVR-E11S (MODBUS RTU)	
	FVR-C11S (MODBUS RTU)	
	FRENIC5000G11S/P11S (MODBUS RTU)	
	FRENIC5000VG7S (MODBUS RTU)	
	HFR-C9K	IH inverter
	HFR-C11K	
	PPMC (MODBUS RTU)	AC power monitor
	Faldic-α series	Servo system
	Faldic-W series	
Fuji Electric Technica	WA5000✻	Panel meter
Fuji Electric Systems	PYX (MODBUS RTU)	Temperature controller
	PYH	
	PXR (MODBUS RTU)	
	PXG (MODBUS RTU)	
	PXH (MODBUS RTU)	
	PH series	Recorder
	PHR (MODBUS RTU)	
Yokogawa M&C	UT100	Temperature controller
	UT750	
	UT550	
	UT520	
	UT350	
	UT320	
	UP350	
	UP550	
	UP750	
	UM330	
	UM350	
	UT2400/2800	
Yamatake	SDC10	Temperature controller
	SDC20	
	SDC21	
	SDC30/31	
	SDC35/36	
	SDC40A	
	SDC40G	
	DMC10	
	DMC50	
	AHC2001	
	AHC2001+DCP31/32	
	DCP31/32	
OMRON	E5CK	Temperature controller
	E5ZE	
	E5ZD	
	E53K	
	E5EK-T	
	E5AK	
	E5AK-T	
	E5CK-T	
	E5AN/E5EN/E5CN/E5GN	
	E5ZN	
	E5AR/E5ER	
	V600/620	
	3G3MV (MODBUS RTU)	
RKC Instrument	SR-Mini (MODBUS RTU)	Temperature controller
	CB100/CB400/CB500/CB700/CB900 (MODBUS RTU)	
	SR-Mini (Standard Protocol)	
	REX-F400/F700/F900 (Standard Protocol)	
	REX-F9000 (Standard Protocol)	
	SRV (MODBUS RTU)	
	REX-B800 (Standard Protocol)	

✻The panel meter type that can connect with our POD UG Series is WA5**7-□(□: 01 to 12 and 18).

Maker	Unit name	Category
Mitsubishi Electric	FR-✻500	Inverter
	FR-V500	
	MR-J2S-✻A	Servo system
	MR-J2S-✻CL	
	MR-J2S-✻CP	
	MR-J3-✻A	
Chino	DZ1000 (MODBUS RTU)	Temperature controller
	DZ2000 (MODBUS RTU)	
	KP1000	
	LT400 Series (MODBUS RTU)	
	DP1000	
	DB1000	
Nikki Denso	SQB-6432B	Servo system
Ohkura Electric	EC5500S	Digital indicator/controller
	EC5800	
	EC5600S	
	EC5900A	
Shinko Technos	C Series	Temperature controller
	FC Series	
	GC Series	
	DCL-33A	
	JCx-300 Series	
Sanmei Electronics	Cuty Axis	Servo system
Toshiba	VF-S7	Inverter
	VF-S9	
	VF-S11	
	VF-A7	
SanRex	DC AUTO (HKD type)	Rectifier
A & D	AD4402 (MODBUS RTU)	Weight indicator
	AD4404 (MODBUS RTU)	
IAI	Super SEL controller	Controller
	X-SEL controller	
	TX-C1	
	ROBO CYLINDER (RCP2/ERC)	Electric cylinder
	ROBO CYLINDER (RCS)	
Koatsu Gas Kogyo	R-BLT	Card reader/writer
LG	iS5	Inverter
	iG5	
EUROTHERM	2400 series (MODBUS RTU)	Controller
UNIPULSE	F340A	Digital indicator
	F371	
	F600	
	F800	
Hitachi	SJ300 series	Inverter
	L300P series	
YASKAWA Electric	VS mini V7 series	Inverter
YASKAWA CONTROLS	E-POSI series	Positioning controller
M-System	R1M series (MODBUS RTU)	Recorder for personal
	R5 series (MODBUS RTU)	computer
SAMSUNG	MOSCON-E7	Inverter
SUNX	LP-200/LP-F10	Laser marker
	LP-300	
	LP-400	
	LP-V10	
	LP-W052	
Sanyo Electric	PB1 series	Servo system
Gammaflux	TTC2100	Temperature control system
Toho Electronics	TTM-000	Temperature controller
Sanken Electric	SAMCO-e	Inverter
	SAMCO-vm05	
Honeywell	Universal Modbus RTU	Temperature controller
	DC1000	
Shimaden	Shimaden standard protocol	Temperature controller
YAMAHA MOTOR	RCX142	Robot controller
	SRCD/SRCX	
	PRC	
Siemens	MICROMASTER 400	Inverter
	USS Protocol	General-purpose protocol
DELTA DAU DATA SYSTEMS	PMAC	Temperature controller
KOGANEI	ABSRCD/ABSRCX	Controller
	ABPRC	
SICK	DME3000	Laser distance measuring device
Danfoss	VLT series	Inverter
Modbus Free		

Product Warranty

Dear Customers of Fuji Electric Controller,

The warranty of this product is as follows unless the special instructions state otherwise in the quote, contract, catalog, or specifications at the time of 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 from, or Fuji Electric for further information.
Please conduct prompt incoming inspection of the product upon purchase or delivery. Also, please give enough consideration to management and maintenance of the product prior to accepting the product.

1. Period and coverage of the warranty

1-1 Period

(1) The period of the warranty is effective until the earliest of either a year from the date of purchase or, eighteen (18) months from the date of manufacture printed on the plate.
(2) The above period may not be applicable in case the particular environment, conditions or frequency of use affects the lifetime of the product.
(3) The warranty for the parts repaired by Fuji Electric service department is effective for six months from the date of repair.

1-2 Coverage

(1) If malfunction occurs in the period of warranty due to Fuji Electric, the malfunctioning parts are exchanged or repaired for free 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 instructed in a catalog, instruction book or usersÅf manual.
  2) The malfunction is caused by the factors that do not originate in the purchased or delivered product.
  3) The malfunction is caused by other devices or software design that does not originate in Fuji Electric products.
  4) The malfunction occurs due to an alteration or repair that is not performed by Fuji Electric.
  5) The malfunction occurs because the expendable parts listed in an instruction book or catalog were not maintained nor exchanged 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 an unintended purpose.
  8) The malfunction occurs due to a disaster or natural disaster that Fuji Electric is not responsible for.
(2) The warranty is only applicable to the single purchased delivered product.
(3) The warranty covers only the area stated in above (1). Any damage induced by the malfunction of the purchased or delivered product, including the damage or loss to a device or machine and passive damages, is not covered by the warranty.

1-3 Malfunction diagnosis

Malfunction is to be diagnosed temporarily by the purchaser. This diagnosis can be conducted by Fuji Electric or its delegated service provider with due charge upon the request from the purchaser. The charge is to be paid by the purchaser at the rate stipulated in the rate schedule of Fuji Electric.

2. Liability for opportunity loss

Regardless of the time period of the occurrence, Fuji Electric is not liable for the damage caused by the factors Fuji Electric is not responsible for, opportunity loss of the purchaser caused by malfunction of Fuji Electric product, passive damages, damage caused due to special situations regardless of whether it was foreseeable or not, and secondary damage, accident compensation, damage to products that were not manufactured by Fuji Electric, and compensation towards other operations.

3. Period for repair and provision of spare parts after the production is discontinued (maintenance period)

The discontinued models (products) can be repaired for seven years from the date of discontinuation. Also, most spare parts used for repair are provided for seven years from the date of discontinuation. However, some electric parts may not be obtained due to their short life cycle. In this case, repair or provision of the parts may be difficult in the above period. Please contact Fuji Electric or its service providers for further information.

4. Delivered term

Standard products that do not entail application setting or adjustment are regarded as received by the purchaser upon delivery. Fuji Electric 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 Fuji Electric or its service providers for further information.

6. Scope of application

Above contents shall be assumed to apply to transactions and use of the country where you purchased the products. Consult the local supplier or Fuji for the detail separately.

UG 30 series

Item	Type (product code)	Specification			CE	UL	NK	Remarks
Main unit UG630 series 15.0 type	UG630H-XH1	TFT color LCD XGA	Ethernet port mounted as standard, Option unit installation is possible.	AC100-200V				
	UG630H-XH4			DC24V	◎	◎	◎	
Main unit UG530 series 12.1 type	UG530H-VS1	TFT color LCD SVGA		100-200VAC				
	UG530H-VH1		Ethernet port mounted as standard, Option unit installation is possible.					
	UG530H-VS4			24VDC	◎	◎		*1
	UG530H-VH4		Ethernet port mounted as standard, Option unit installation is possible.		◎	◎		*1
Main unit UG430 series 10.4 type	UG430H-TS1	TFT color LCD VGA		100-200VAC				
	UG430H-TH1		Ethernet port mounted as standard, Option unit installation is possible.					
	UG430H-TS4			24VDC	◎	◎		*1
	UG430H-TH4		Ethernet port mounted as standard, Option unit installation is possible.		◎	◎		*1
	UG430H-VS1	TFT color LCD SVGA		100-200VAC				
	UG430H-VH1		Ethernet port mounted as standard, Option unit installation is possible.					
	UG430H-VS4			24VDC	◎	◎		*1
	UG430H-VH4		Ethernet port mounted as standard, Option unit installation is possible.		◎	◎		*1
	UG430H-SS1	TFT color LCD VGA 128-color type		100-200VAC				
	UG430H-SS4			24VDC	◎	◎		*1
	UG430H-VH1B	Separated type SVGA	Ethernet port mounted as standard, Option unit installation is possible.	100-200VAC				
	UG430H-VH4B			24VDC	◎	◎		
Main unit UG330 series TFT 8.4 type, STN 7.7 type	UG330H-VS4	TFT color LCD SVGA		24VDC	◎	◎		*1
	UG330H-VH4		Ethernet port mounted as standard, Option unit installation is possible.		◎	◎		*1
	UG330H-SS4	STN color LCD VGA			◎	◎		*1
Main unit UG230 series 5.7 type	UG230H-LS4	Monochrome LCD QVGA	Analog touch panel	24VDC	◎	◎		
	UG230H-SS4	STN color LCD QVGA			◎	◎		
	UG230H-TS4	TFT color LCD QVGA			◎	◎		
	UG230H-LS4D	Monochrome LCD QVGA	Matrix touch panel	24VDC	◎	◎		
	UG230H-SS4D	STN color LCD QVGA			◎	◎		
	UG230H-TS4D	TFT color LCD QVGA			◎	◎		

*1 Conforms to CE marking by mounting the communication unit conforming to CE marking. When both the communication unit and the memory card reader are combined, conformity to CE marking needs to be checked by the user.

* Matrix touch panel type
For the UG30 series, the matrix touch panel types are also available. For more information, please contact Fuji Electric FA.

● Matrix touch panel applicable models
UG530H-V□□D
UG430H-T□□D
UG430H-SS□D

Simple POD

Item	Type (product code)	Specification			CE	UL	Remarks
Main unit Simple POD 5.7 type	UG221H-LE4	Monochrome LCD QVGA		24VDC	◎	◎	
	UG221H-LR4		SRAM, built-in clock		◎	◎	
	UG221H-SR4	STN color LCD QVGA			◎	◎	

* Communication unit UG03I-□ cannot be connected.

UG221 Series

Item	Type (product code)	Specification			CE	UL	Remarks
Main unit UG221 series 5.7 type	UG221H-LC4	Monochrome LCD QVGA	Analog touch panel	24VDC	◎	◎	
	UG221H-SC4	STN color LCD QVGA			◎	◎	
	UG221H-TC4	TFT color LCD QVGA			◎	◎	
	UG221H-LC4D	Monochrome LCD QVGA	Matrix touch panel	24VDC	◎	◎	
	UG221H-SC4D	STN color LCD QVGA			◎	◎	
	UG221H-TC4D	TFT color LCD QVGA			◎	◎	

Handy POD

Item	Type (product code)	Specification			CE	UL	Remarks
Main unit Handy POD 7.7 type	UG320HD-SC4	STN color LCD VGA		24VDC	◎	◎	
	UG320HD-SC4K		Key switch		◎	◎	
	UG320HD-SC43		3-position deadman's switch		◎	◎	
	UG320HD-SC4K3		Key switch, 3-position deadman's switch		◎	◎	

Peripheral Option Unit

Item	Type (product code)	Specification		CE	UL	Remarks
Screen editor software	UG00S-CWV3	Editor CD-ROM Version for Windows (Japanese/English)				
	UG00S-CWV4	Editor CD-ROM Version for Windows V4 (Japanese/English, V4.0.5.0 or later)				
Communication unit	UG03I-J	OPCN-1		◎	◎	
	UG03I-T	T-link		◎	◎	
	UG230I-T	T-link (for UG230)		◎	◎	
	UG03I-S	SX bus		◎	◎	
	UG230I-S	SX bus (for UG230, UG03I-S+UG230P-AP)		◎	◎	
	UG03I-E2	Ethernet (OPCN-2 (FL-net2))		◎	◎	
	UG03I-P	PROFIBUS-DP		◎	◎	
	UG03I-D	DeviceNet		◎	◎	
	UG03I-C	CC-Link			◎	
	UG230P-AP	Communication unit adaptor for UG230 (with the CF card slot and the memory cassette connector)		◎	◎	*2
Option unit	UG00A-VIS	Video input 4CH+ audio output 1CH (for UG630)				
	UG00A-RIS	Analog RGB input+ audio output (for UG630)				
	UG00A-ROS	Analog RGB output+ audio output (for UG630)				
	UG00A-SUD	Audio output 1CH (for UG630)				
	UG30A-VIS	Video input + audio output		◎	◎	
	UG30A-RIS	Analog RGB input + audio output			◎	
	UG30A-ROS	Analog RGB output + audio output			◎	
	UG30A-SUD	Audio output			◎	
Extension unit	UG230A-DCL	Ethernet, CF card, D-bus 25-pin		◎	◎	*2
Cable	UG00C-T	For screen data transfer	3m			
	UG30C-C	For printer connection to UG30	2.5m			
	UG00C-C	For printer connection to UG221	2.5m			
	UG00C-B	For bar code reader connection to POD	2m			
	UG00C-H03	For high-speed multi-link (Multi-Link 2) connection (between master and slave)	3m			
	UG00C-P03	For temperature control network, PLC 2-Way	3m			
	UG30C-M	For modular jack-D-sub25 conversion	0.3m			
	UG30C-J	For modular jack-D-sub25 conversion (RS-232C/485: 4-wire type)	0.3m			
	UG00C-X02	For Mitsubishi FX series connection via RS-232C	2m			
	UG00C-S02	For direct connection to MICREX-SX SPH CPU port	2m			
	UG00C-S03		3m			
	UG00C-S05		5m			
	UG200C-N02	For direct connection to SPB & FLEX-PC N series CPU port	2m			
	UG200C-N03		3m			
	UG200C-N05		5m			
	UG200C-M02	For direct connection to Mitsubishi CPU port	2m			
	UG200C-M03		3m			
	UG200C-M05		5m			
	UG00C-E02	For direct connection to Mitsubishi FX2N CPU port	2m			
	UG00C-E03		3m			
	UG00C-E05		5m			
	UG00C-Q02	For direct connection to Mitsubishi Q series CPU port	2m			
	UG00C-Q03		3m			
	UG00C-Q05		5m			
	UG230C-S02	For MICREX-SX SPH CPU port (for UG230)	2m			
	UG230C-S03		3m			
	UG230C-S05		5m			
	UG230C-N02	For SPB & FLEX-PC N series CPU port (for UG230)	2m			
	UG230C-N03		3m			
	UG230C-N05		5m			
	UG230C-M02	For direct connection to Mitsubishi CPU port (for UG230)	2m			
	UG230C-M03		3m			
	UG230C-M05		5m			
	UG230C-E02	For direct connection to Mitsubishi FX2N CPU port (for UG230)	2m			
	UG230C-E03		3m			
	UG230C-E05		5m			

*2 The device, when connected with the POD, conforms to the CE marking and has obtained UL standards.
* The UG230P-AP is always used in combination with the communication unit UG03I-□ and not usable as a single unit.

Item	Type (product code)	Specification		CE	UL	Remarks
Cable	UG30C-MA03	For ladder transfer to Mitsubishi A series CPU port	3m			
	UG30C-MA05		5m			
	UG00C-HD03	Cable for connecting Handy POD	3m			
	UG00C-HD05		5m			
	UG00C-HD15		15m			
	UG00C-HD20		20m			
	UG200C-G	For connection between Mitsubishi CPU port and UG00P-DI				
Extension memory cassette	UG30P-D8	Flash memory (for UG530/430/330)	8MB	◎	◎	*2
	UG230P-D4	Flash memory (for UG230)	4MB			
	UG221P-D4	Flash memory (for UG221)	4MB			
Ladder monitor memory cassette	UG30P-LM	Ladder monitor memory cassette			◎	
SRAM cassette	UG30P-SR	SRAM cassette (for UG530/430/330)	512KB	◎	◎	*2
	UG230P-SR	SRAM cassette (for UG230)	512KB			
	UG221P-SR	SRAM cassette (for UG221)	512KB			
Communication terminal block	UG00P-TC	Communication terminal block for RS-485			◎	*2
I/O unit	UG00P-U2	Panel mounting I/O unit				
Memory card editing software	UG00P-MS	Memory card data editing software CD-ROM version (Japanese/English)				
Recorder	UG00P-MR	Memory card recorder for screen data transfer or external storage		◎		
	UG00P-CR	Compact Flash card recorder for screen data transfer and external storage		◎		
Dual-port interface	UG00P-DI	Mitsubishi A, Q, FX series CPU port interface				
MPI adapter	UG00P-MP	MPI adapter for PLC connection by SIEMENS				
Protection sheet	UG630P-PS	Screen protection sheet (for UG630)				
	UG530P-PS	Screen protection sheet (for UG530)				
	UG430P-PS	Screen protection sheet (for UG430)				
	UG330P-PS	Screen protection sheet (for UG330)				
	UG220P-PS	Screen protection sheet (for UG230/UG221)				
	UG630P-PT	Diffused reflection protective sheet (for UG630)				
	UG530P-PT	Diffused reflection protective sheet (for UG530)				
	UG430P-PT	Diffused reflection protective sheet (for UG430)				
	UG330P-PT	Diffused reflection protective sheet (for UG330)				
	UG220P-PT	Diffused reflection protective sheet (for UG230/UG221)				
Maintenance parts	UG630P-BX	Replacement backlight LCD (for UG630)				
	UG530P-BFB	Replacement backlight (for UG530, TFT color)				
	UG420P-BVA	Replacement backlight (for UG430, TFT color (SVGA))				
	UG430P-BFB	Replacement backlight (for UG430, TFT color (VGA 32K/128 color))				
	UG330P-BV	Replacement backlight (for UG330, TFT color)				
	UG320P-BC	Replacement backlight (for UG330, STN color)				
	UG30P-BT	Battery (for UG530/430/330/230/Simple POD)				
	UG00P-HDRS	Battery (for Handy POD)				
Memory card	UG00K-S25K	SRAM card	256KB			
	UG00K-S51K		512KB			
	UG00K-S01M		1MB			
	UG00K-S02M		2MB			
	UG00K-S04M		4MB			
	UG00K-F04M	Flash memory card	4MB			
Stand	UG00P-HDST	Stand for Handy POD				
Mounting bracket	UG00P-HDFS	Wall mounting set for Handy POD (both POD and wall sides)				
	UG00P-HDF1	Wall mounting set for Handy POD (wall side only)				

⚠ Safety Considerations

- For safe operation, before using the product read the instruction manual or user manual that comes with the product carefully or consult the Fuji sales representative from which you purchased 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.
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- Customers are requested to prepare safety measures when they apply the products introduced in this catalog to such systems or facilities that will affect human lives or cause severe damage to property if the products become faulty.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.

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