e-Front runners

Fuji Programmable Operation Display

POD UG Series General Catalog

LEH854a

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

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

Expressive

Possible 32,768 full-color images for all sizes from 5.7 to 12.1 types. Improved image quality will enhance the machine and system values.

Information Management

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

Supportive

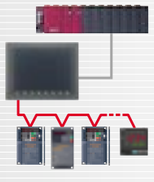
Data of PC can be shared with PLC or vice versa by using the CF card. In addition, screen data and all other POD data can be saved into the CF card, and the CF card can be loaded into the POD.

Network

Conforms to all types of networks, from open network to Ethernet.

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

Varieties of interfaces with external units are the standard

Connective

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

Supporting on-site maintenance with the convenient maintenance tool

Resources

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

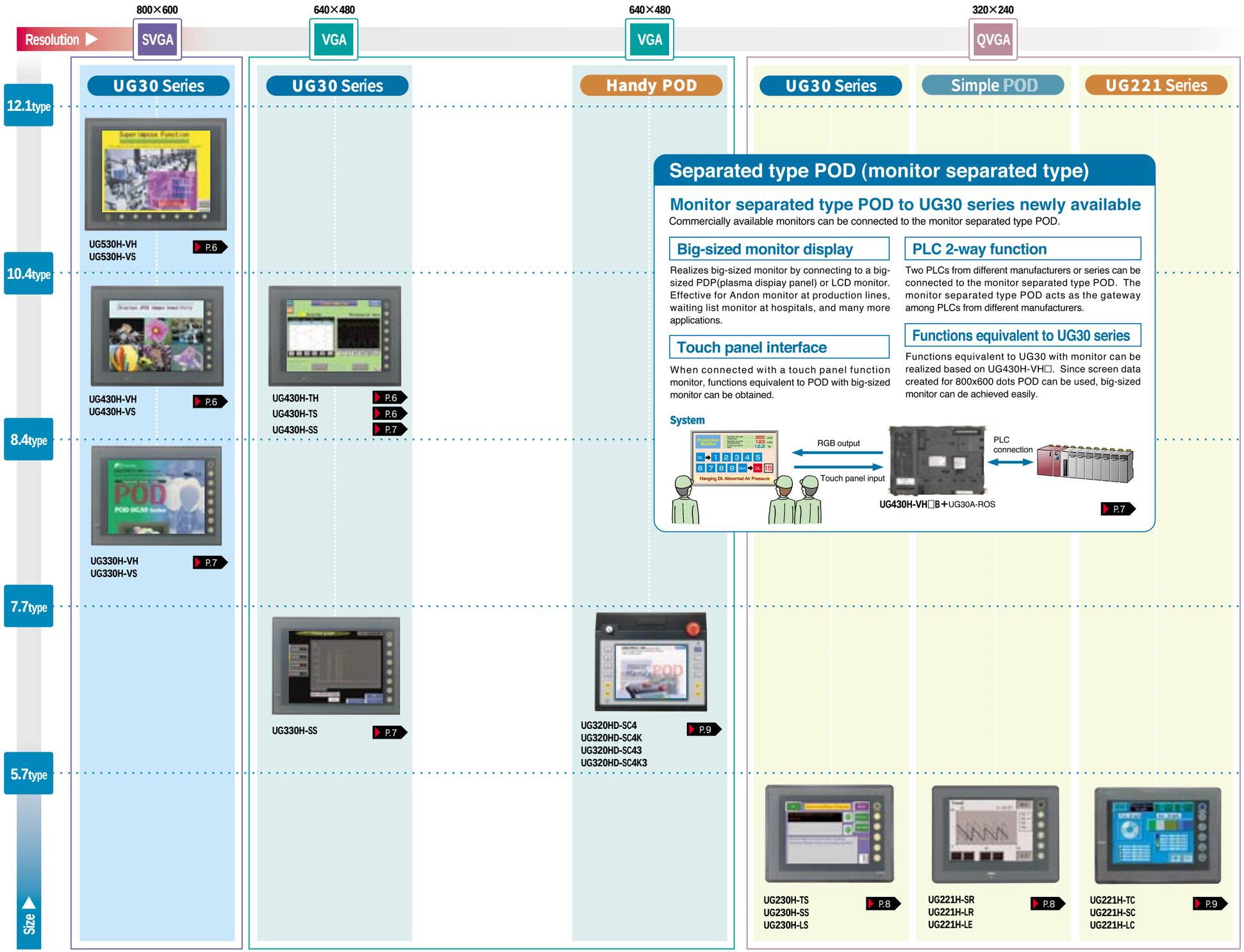
Easy creation of original screens meeting on-site needs using plentiful functions

Creative

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



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

12.1type SVGA

UG530H-VH

P.22

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.22

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.22

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.22

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.22

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

10.4type VGA

UG430H-TS

P.22

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

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-SS

P.22

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.23

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.22

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.22

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.22

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.24

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.24

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.24

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.26

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.26

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.26

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.28

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.28

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.28

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.30

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

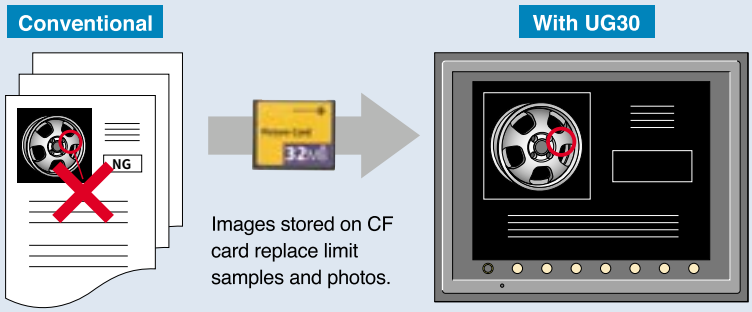
32,768 full-color display

UG 530 UG 430 UG 330 UG 230

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

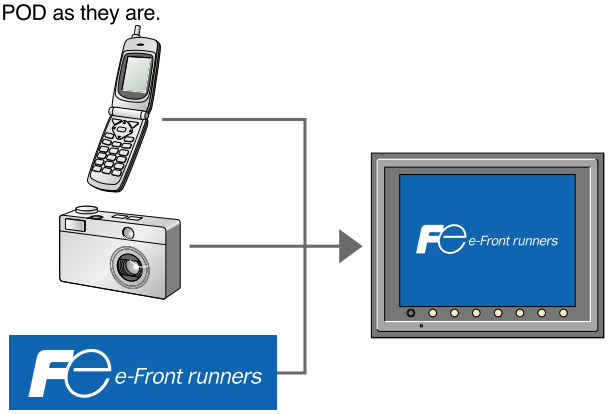
UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

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

JPEG display

UG 530 UG 430 UG 330 UG 230

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

UG 530 UG 430 UG 330

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.

Applicable models

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

Multi-language function

UG 530 UG 430 UG 330 UG 230

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

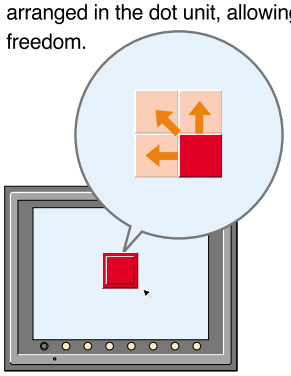
UG 530 UG 430 UG 330 UG 230

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.

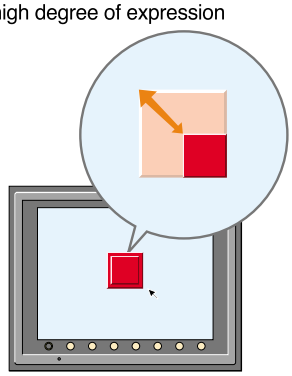
Analog touch panel

UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 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).

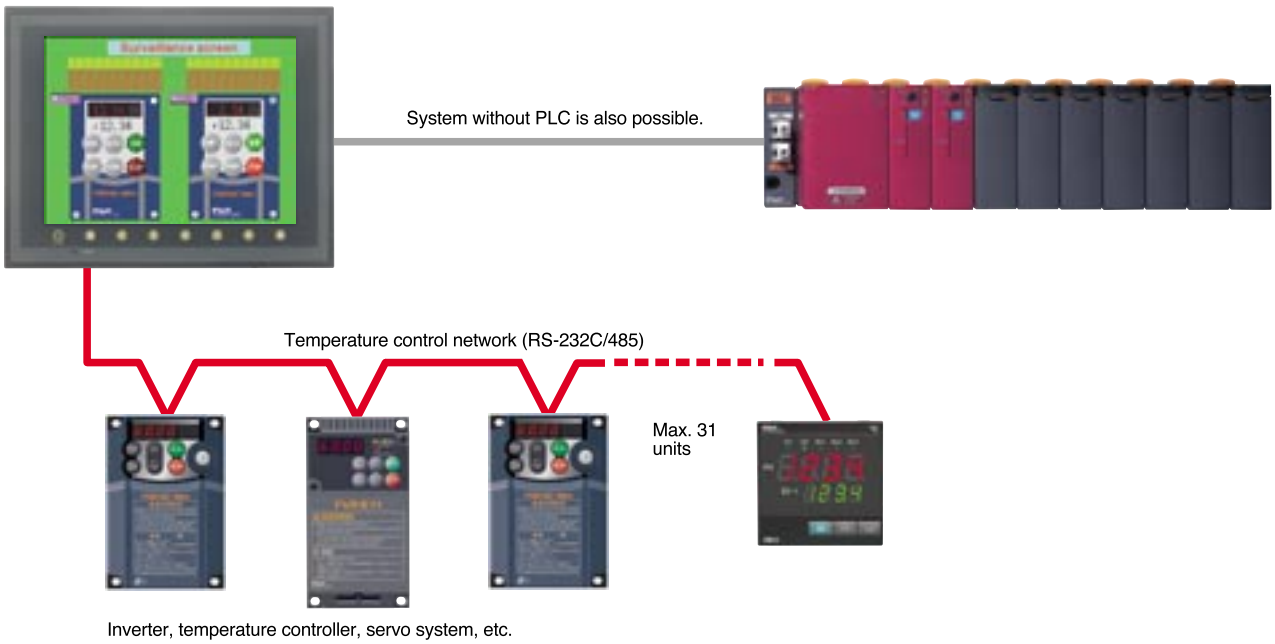
Network

Integrative

Temperature control network

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.



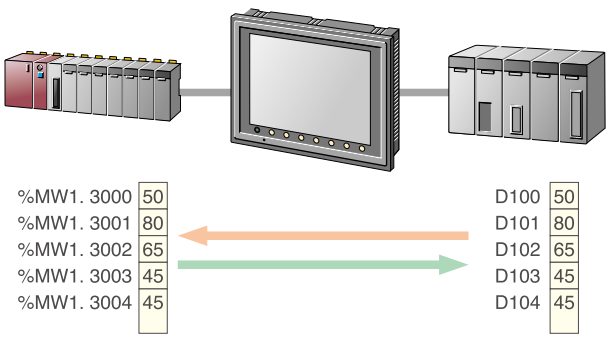
The devices, supporting ModbusRTU protocol, can be connected with the devices of different manufacturers and different models.

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 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.

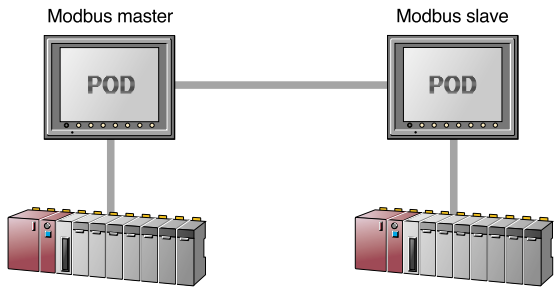


When a new facility has to be extended to an existing facility, the old facility can transfer data with the new facility's PLC via POD, without any program change of the old PLC.

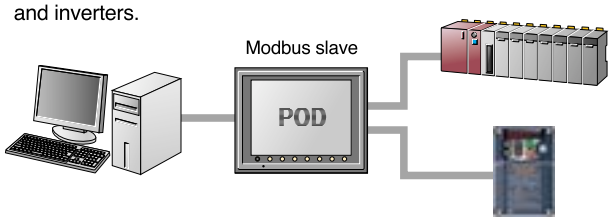
Modbus slave communications function

UG 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).



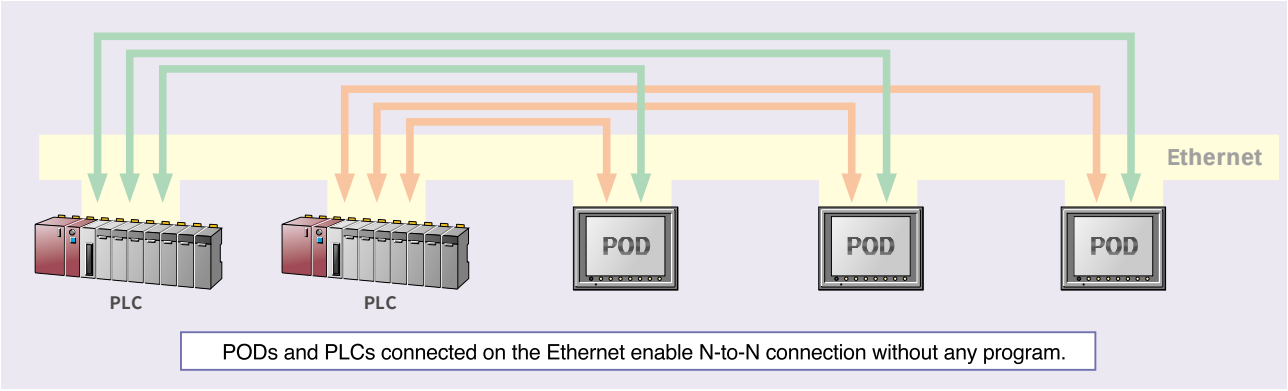
Modbus communications can be used from a personal computer to access the internal memory of POD and memories of PLCs and inverters.



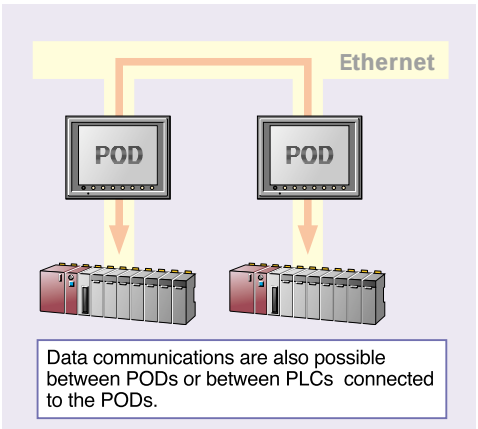
Ethernet

UG 530 UG 430 UG 330 UG 230 UG 221

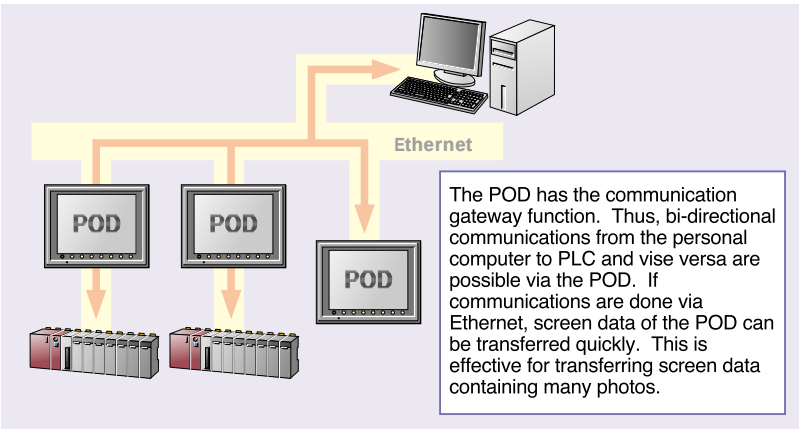
The model with Ethernet 10BASE-T equipped as standard is prepared. This standard model permits construction of the Ethernet network system. The Ethernet system can also be configured with models without Ethernet 10BASE-T once it is equipped with option.



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.

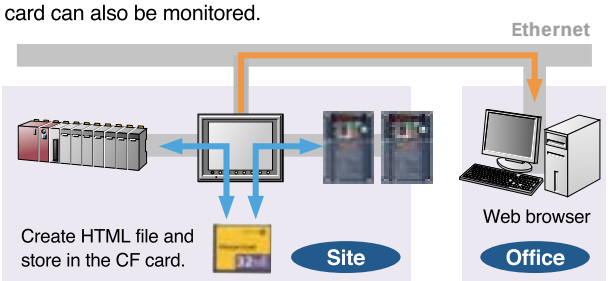


The POD has the communication gateway function. Thus, bi-directional communications from the personal computer to PLC and vise versa are possible via the POD. If communications are done via Ethernet, screen data of the POD can be transferred quickly. This is effective for transferring screen data containing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

Web server function

UG 530 UG 430 UG 330 UG 230

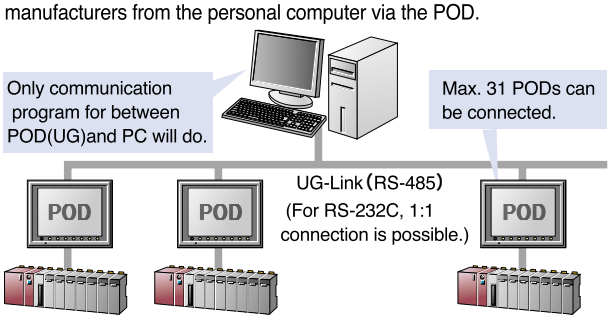
HTML files stored in the CF card can be displayed using a browser on a personal computer or set from the browser, making it possible to monitor or change settings of PLC and inverter data through the POD from a remote site. JPEG files stored in the CF card can also be monitored.



UG-Link

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

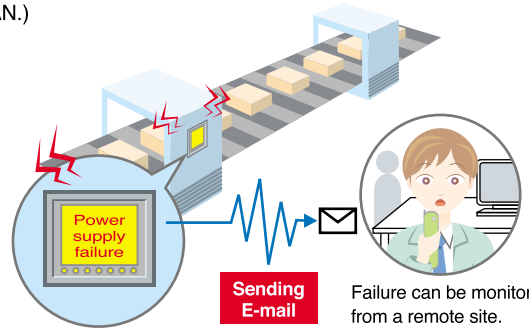
Even when the POD is connected to a PLC, the POD can be accessed from a personal computer. The communication rate is max. 115 kbps. Besides, using only a single communication program for between POD and the personal computer, you can access data of PLCs of different manufacturers from the personal computer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



E-mail distribution function

UG 530 UG 430 UG 330 UG 230

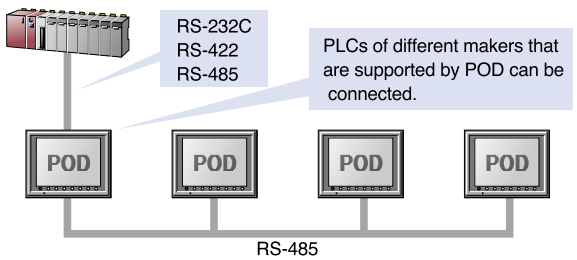
As E-mail can be distributed via the mail server upon system failure, prompt action can be taken or breakdown of an automatically operating system be recognized quickly. Maximum 8 addresses may be registered. (A mail server is required on the LAN.)



Multi-Link 2

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

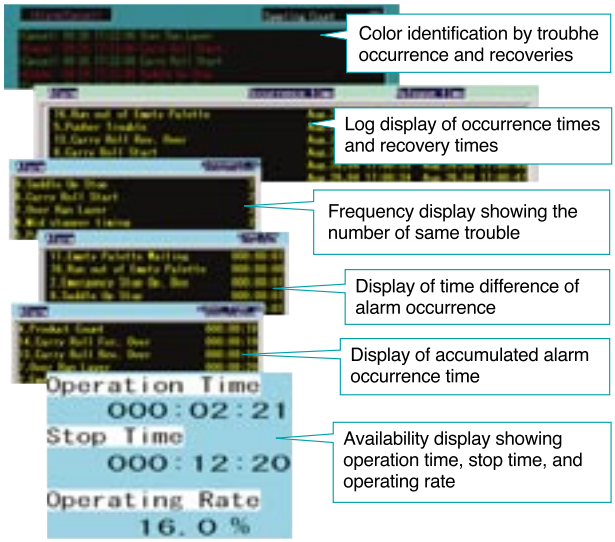
An alarm or message can be displayed in response to bit.

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

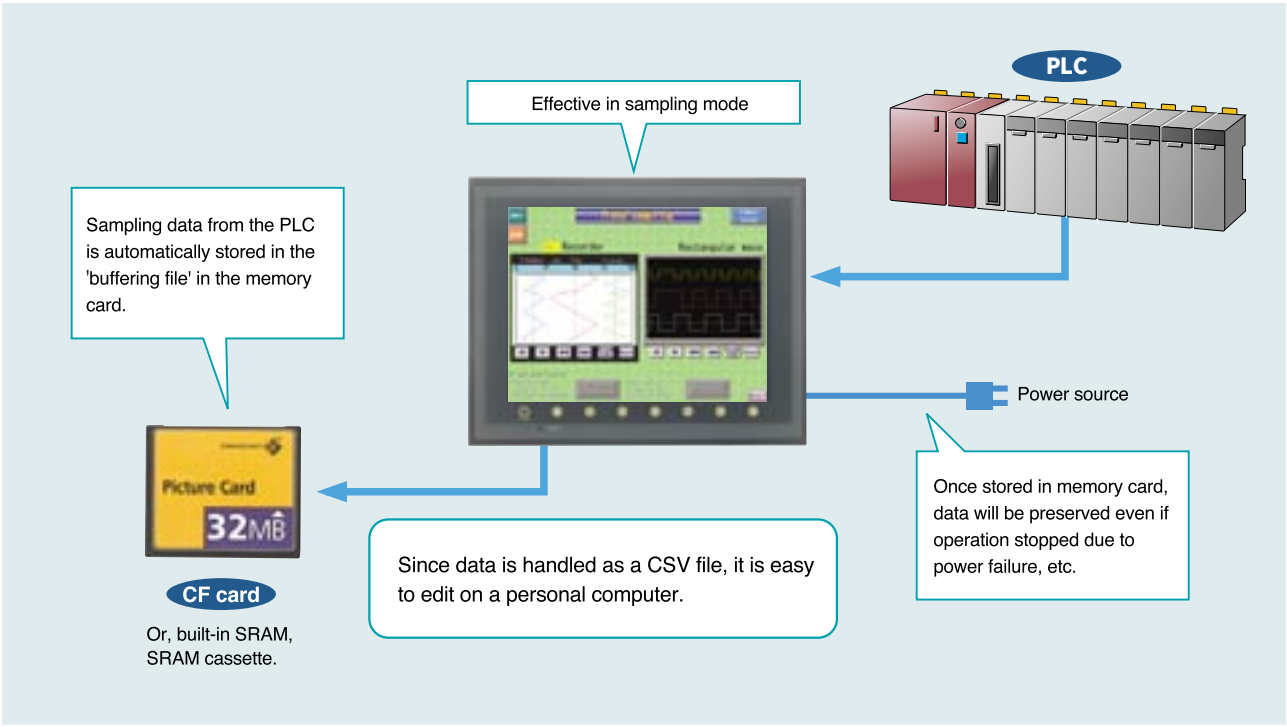
Contents of the trouble and time can be stored and managed to display as the log data. Data items may be sorted in order of occurrence times and priorities. Using the data, failure causes and equipment availabilities can be analyzed and displayed.



Data logging function

UG 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.



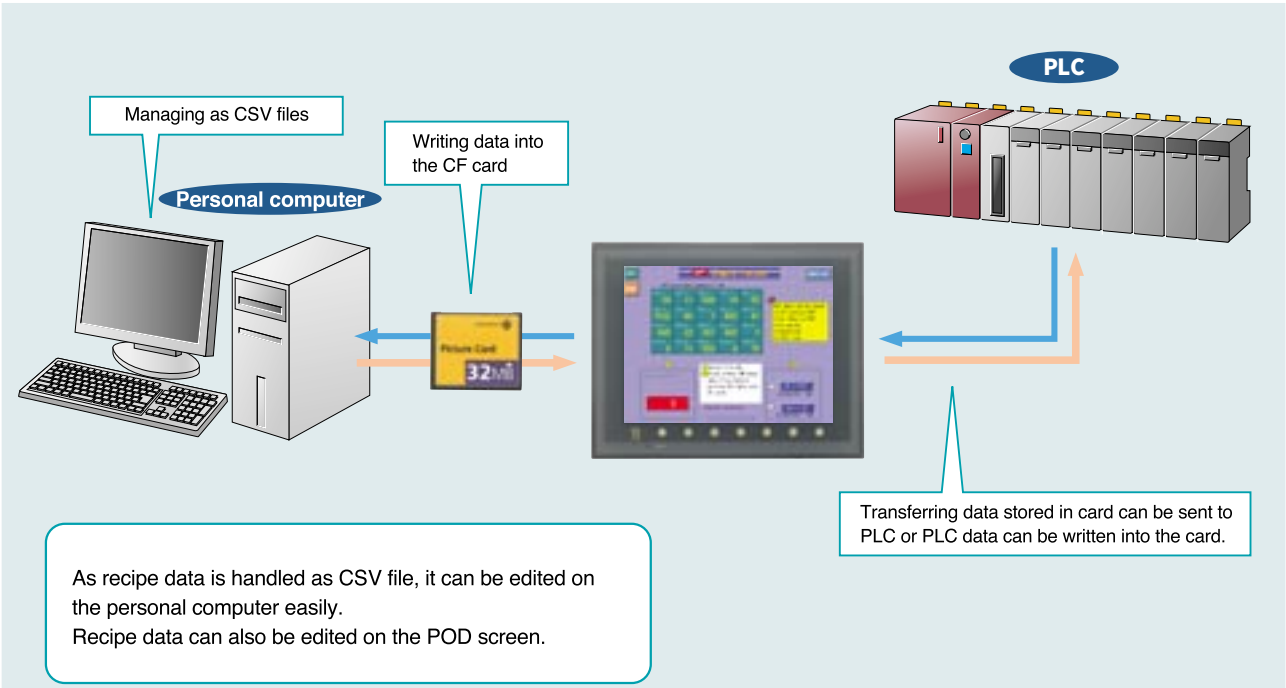
Applicable models

UG 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

UG 530 UG 430 UG 330 UG 230 HANDY

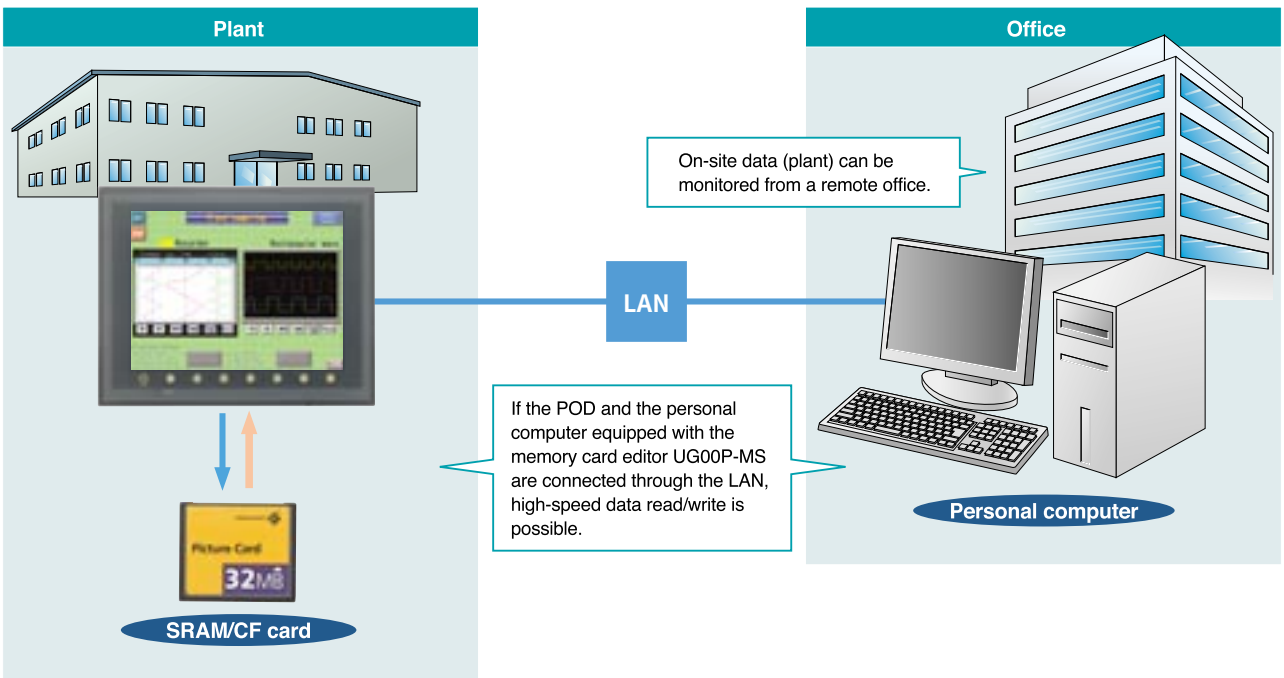
The setting data (recipe data) for the equipment created on the personal computer can be written to the PLC via the CF card. Multiple sets of recipe data can be stored in the CF card and selected on the POD.



Memory card editor (UG00P-MS)

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

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.

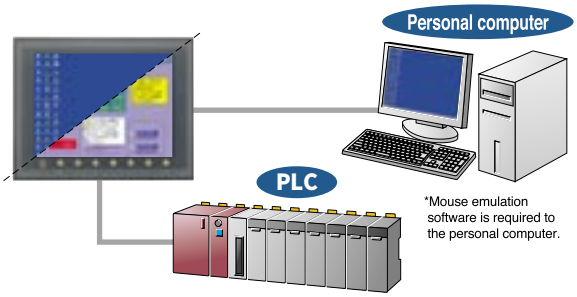


External Connection Unit

Connective

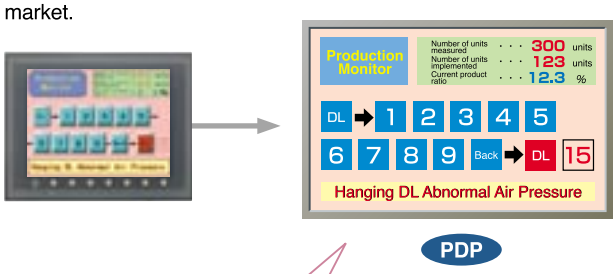
RGB input function (UG30A-RIS is required.) UG530 UG430 UG330

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.) 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.) 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.) 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.

Conforms to 1D and 2D bar code 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 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.

Compatible with printers UG530 UG430 UG330 UG230 UG20

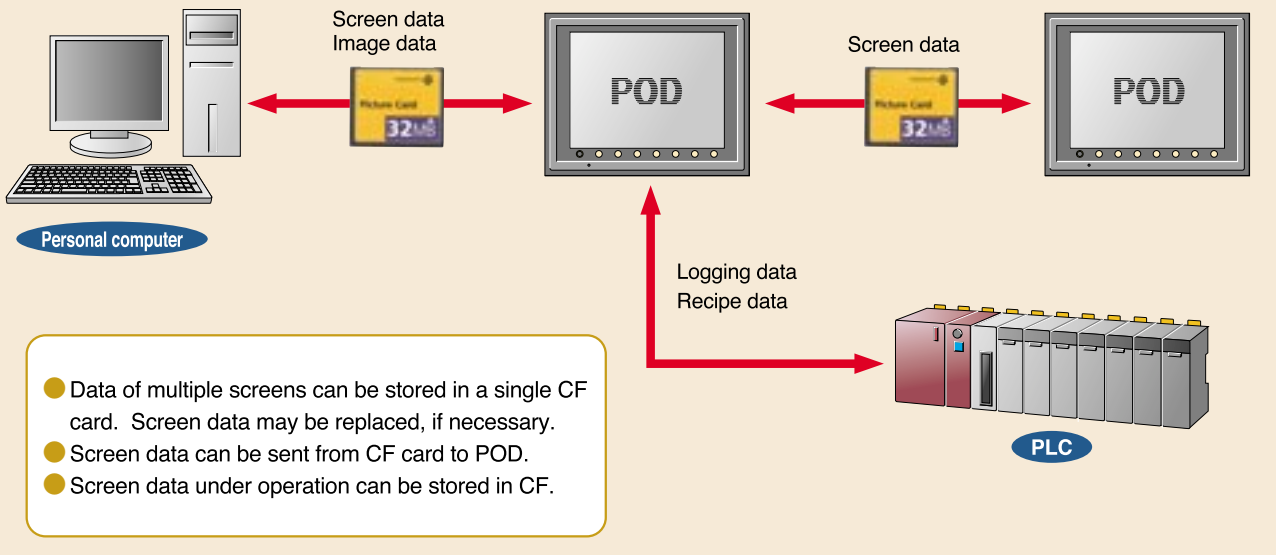
In addition to conventional MS-DOS printers, the UG30 series can be connected with Windows-based EPSON PM Series color ink-jet printers and compact printer CBM292/293 supplied by CBM.

Maintenance Tool

Resources

Screen management by CF card

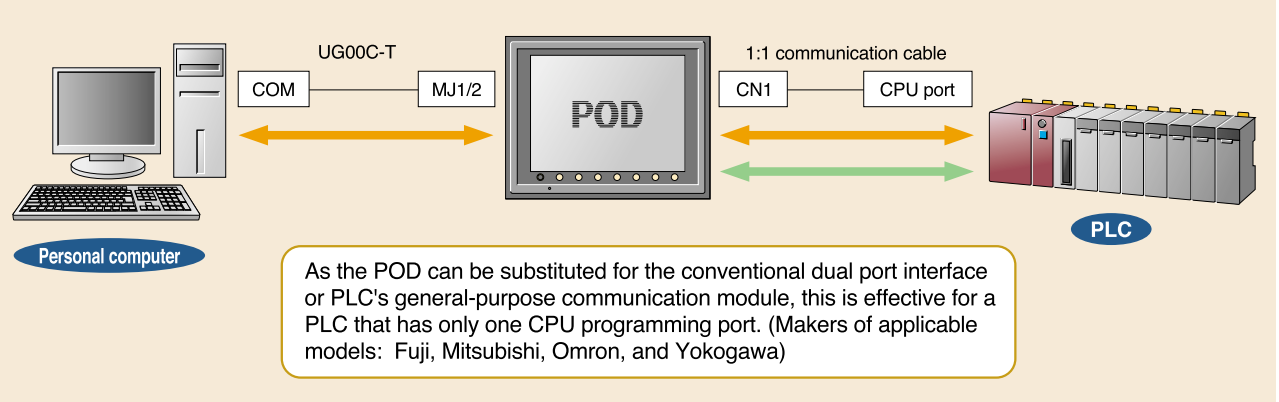
Use of CF card facilitates screen data management.



- 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.

Ladder transfer function

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, and Yokogawa)

Mitsubishi Q series ladder monitor function

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 Mitsubishi MELSEC-Q Series 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 (except for Q00J/00/01).

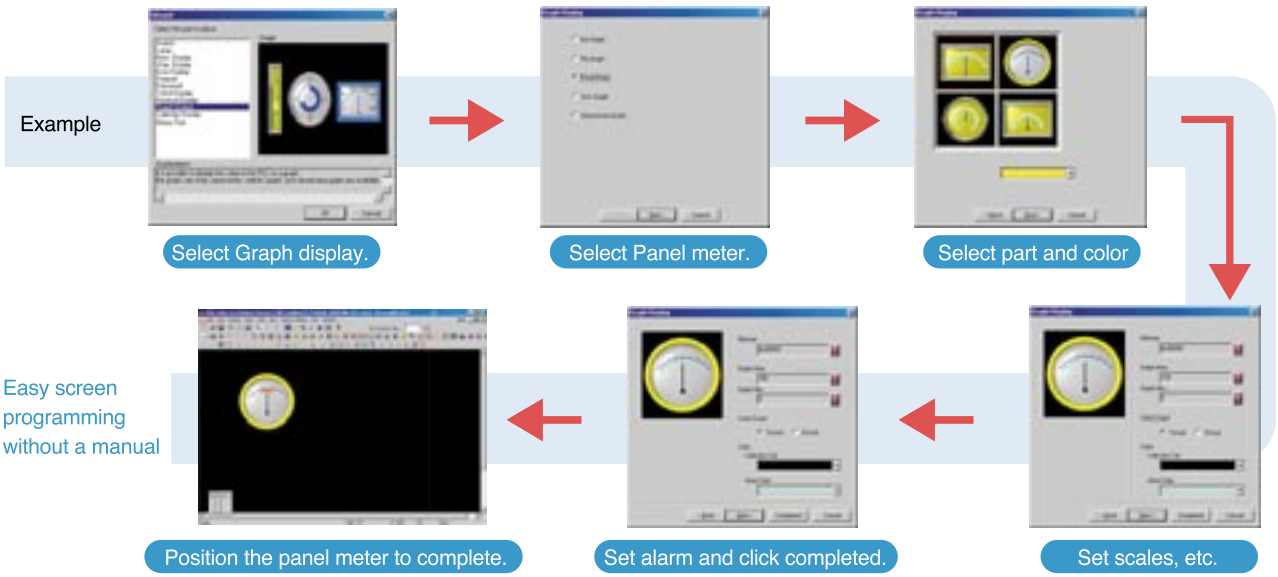
Editor (Screen Editor Software UG00S-CWV3)

Creative

Wizard function

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

Screen images can be created easily by following instructions on the display.



Multi-language edit function

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

This function allows data input in multiple languages without changing your computer's OS. Edit the screen by seeing the corresponding words on the multi-language input sheet to speed up your operation. By selecting the display environment of the required language, you can input data accurately while checking the screen layout.

Language menu switching between Japanese/English

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

The editor's view language on the menu bar can be switched between Japanese and English display. This is useful when an overseas-based staff creates the screen images.

Applicable models

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

Custom parts

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

You can create and register your original parts.

Item customize function

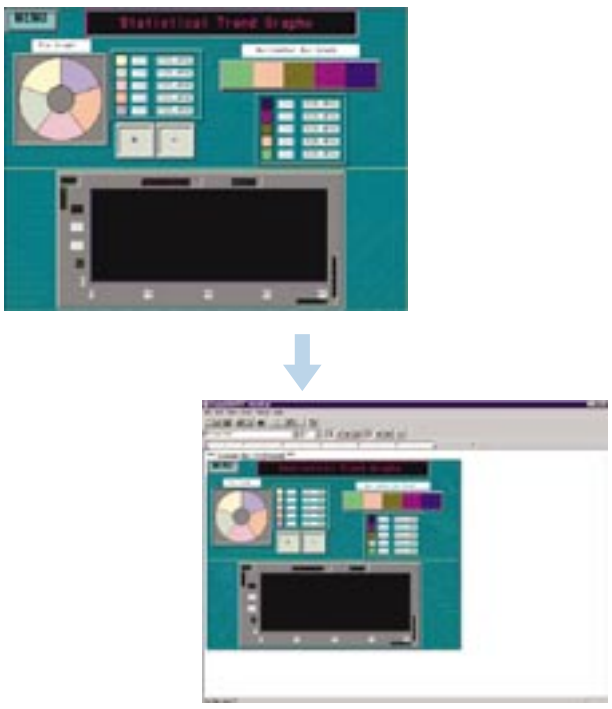
UG 530 UG 430 UG 330 UG 230

BMP data can be input and worked as a switch. A variety of needs can be met and an original design operation panel realized by arranging user unique switches.(32,768 color type only)

Screen image document creation

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

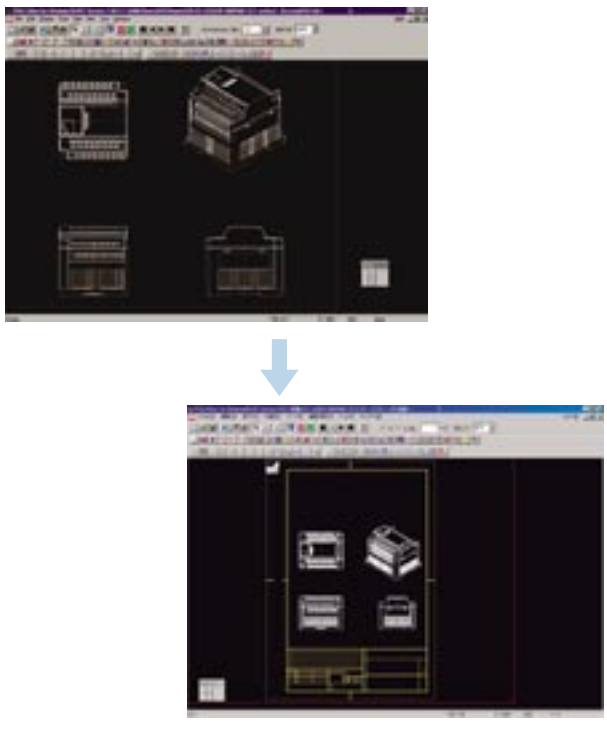
Screen images created by the editor can be pasted on the MS-Word or Ichitaro or the similar word-processor. This enables fine documents within short time. In addition, rich text (RTF file) format can be output directly.



DXF file conversion

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

DXF files created with CAD can be converted to arrange them on the screen. Using CAD data, the time required for screen development can be saved.



Editor (Screen Editor Software UG00S-CWV3)

Creative

Screen list display function

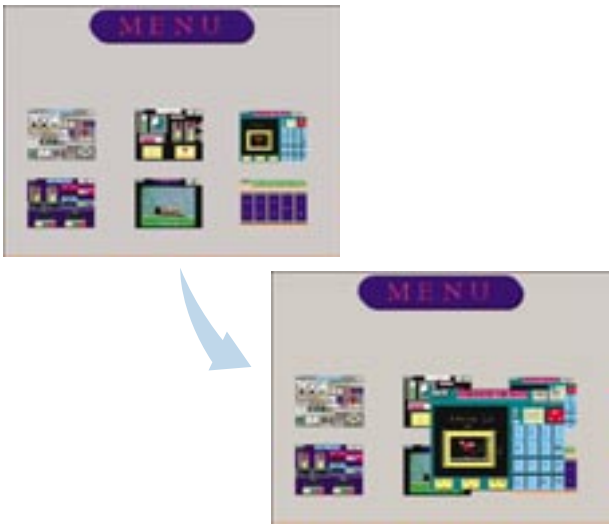
UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

Created screens can be displayed as a list. Copy or deletion of screens can be done on the list. Desired images and/or items can be copied between two different screens.

Registration of screen images as patterns

UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

Screen images can be registered as patterns. You can arrange them on the screen changeover switches to make an easy-to-understand menu screen.



Memory batch change function

UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

The set memory addresses can be changed as a batch. You can arbitrary set the range to change. Addresses can be changed only within selected items, for example, by the screen or by the library.

Macro function

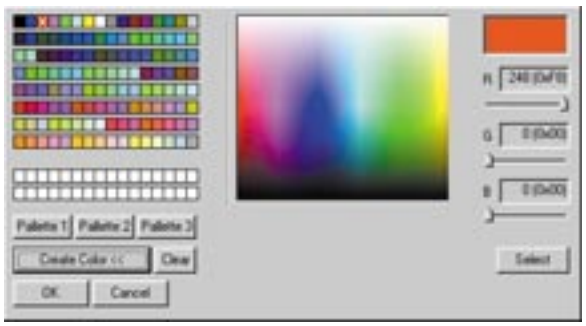
UG530 UG430 UG330 UG230 Simple POD UG221 HANDY

UG30 series have the macro function that makes it possible to complete POD screen control within the POD. Screen control program, which has been entrusted to PLC until now, is no longer necessary, reducing the load of PLC to a large extent.

Addition and registration of original colors

UG530 UG430 UG330 UG230

Original colors can be registered easily in addition to default palette colors. RGB numbers can also be specified (32,768 color type only).



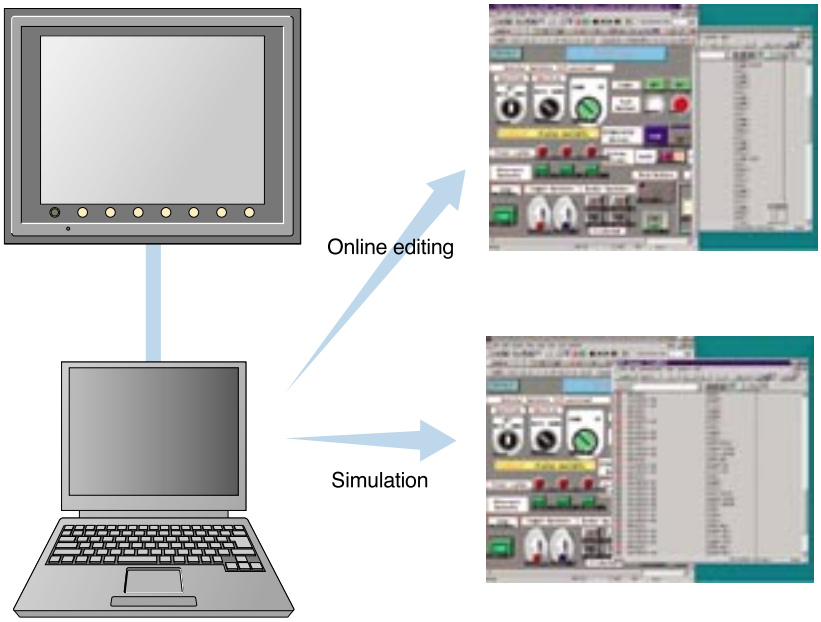
Applicable models

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

Simulation function

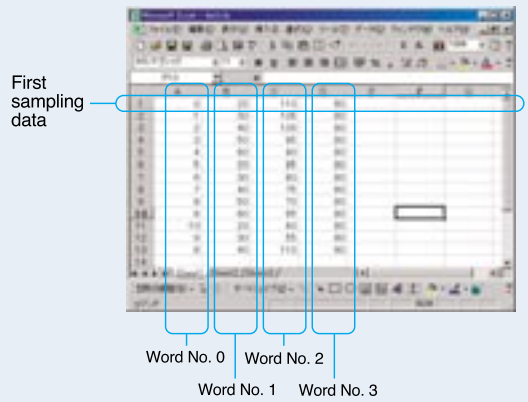
UG 530 UG 430 UG 330 UG 230 Simple POD UG 221 HANDY

The editor has the simulation function that enables you to check operations on the screen only by connecting the POD to a personal computer, without connecting to a PLC. You can online develop screens while simulating their operations, i.e., screen development and debugging can be made at a time, which effectively reduces the time required for machine design.



The bit memory allocated to switches or lamps can be turned on and off, and monitored. It is also possible to set maximum and minimum limits for numeric display and freely change numeric value between these limits.

You can make a dummy data with CSV file for spreadsheet program and simulate it for sampling mode test. With the memory card editor UG00P-MS, you can read the sampling data stored in a memory card as a CSV file.



Free upgrade

A user who has already purchased the editor can update to the newest version from our website free of charge. Consistently advancing new POD functions can thus be obtained promptly. For details, visit our website (http://www.fujielectric.co.jp/fcs/).

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

UG30 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/PS 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 (AC power supply)	UG430H-VH4B (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 10BASE-T (Standard with high-peformance type only)	Compliance with IEEE802.3 Baud rate: 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. 3.0.0.0 and later) CPU: Pentium II 450MHz or above recommended OS: Windows98/Me/NT Ver.4.0/2000/XP Hard disk capacity: Free space of approx. 460 MB or more (For minimum installation: approx. 105 MB) Memory capacity: 64 MB or more (128 MB or more recommended) Display: Resolution 800 x 600 or more recommended

●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. For more information, refer to the User's Manual <Function> (FEH376) and the User's Manual <Function Supplementary Manual> (FEH376-1).
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-CW (Ver. 3.2.0.0 and later) CPU: Pentium II 450MHz or above recommended OS: Windows98/Me/NT Ver.4.0/2000/XP Hard disk capacity: Free space of approx. 460 MB or more (For minimum installation: approx. 105 MB) Memory capacity: 64 MB or more (128 MB or more recommended) Display: Resolution 800 x 600 or more recommended

●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. For more information, refer to the User's Manual <Operation> (FEH375) and the User's Manual <Function Supplementary Manual> (FEH376-1).
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		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/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. 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	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/m²)	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. 3.2.1.0 and later) CPU: Pentium II 450MHz or above recommended OS: Windows98/Me/NT Ver.4.0/2000/XP Hard disk capacity: Free space of approx. 460 MB or more (For minimum installation: approx. 105 MB) Memory capacity: 64 MB or more (128 MB or above recommended) Display: Resolution 800 x 600 or more recommended

●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. For more information, refer to the User's Manual <Operation> (FEH375) and the User's Manual <Function Supplementary Manual> (FEH376-1).
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/s^2, 3 directions of X, Y and Z for one hour
	Shock resistance	Pulse shape: half sine wave, Peak acceleration: 147m/s^2, 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.)

●Drawing environment

Item	Specifications
Editing method	Exclusive screen editor software
Editing tool	Type of screen editor software: UG00S-CWV3 (Ver. 3.2.1.0 and later) CPU: Pentium II 450MHz or above recommended OS: Windows98/Me/NT Ver.4.0/2000/XP Hard disk capacity: Free space of approx. 460MB or more (for minimum installation : approx. 105 MB) Memory capacity: 64 MB or more (128 MB or more recommended) Display: Resolution 800 x 600 or more recommended

●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. 3.2.1.0 and later) CPU: Pentium II 450MHz or above recommended OS: Windows98/Me/NT Ver.4.0/2000/XP Hard disk capacity: Free space of approx. 460 MB or more (For minimum installation: approx. 105 MB) Memory capacity: 64 MB or more (128 MB or more recommended) Display: Resolution 800 x 600 or more recommended

●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 1.25mm^2) 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)

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.

●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 (UG30A-VIS)

Video display specifications

Item	Specification
Display color	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	Description
Audio file (WAV file) format	PCM system Sampling rate: 8kHz, quantization bit: 8 bits Monaural
Audio output voltage	1.0Vp-p
Audio output connector	3.5mm dia. stereo mini-jack
Connected amplifier	Input impedance: 10kΩ or more

●RGB input unit (UG30A-RIS)

Input signal specifications

Item	Specification			
Display dots	640 x 480 dots	640 x 400 dots	720 x 350 dots	800 x 600 dots
Display colors	32,768 colors or less			
Horizontal sync frequency	31.5kHz	24.9kHz	31.5kHz	37.5kHz
Vertical sync frequency	60Hz	56Hz	70Hz	60Hz
Input amplitude	0.7Vp-p	0.8Vp-p	0.7Vp-p	
Typical signal	Windows screen VGA size	PC9801	BIOS screen	Windows screen SVGA size
Applicable model	UG330H-VH UG430H-TH UG430H-VH UG530H-VH			UG330H-VH UG430H-VH UG530H-VH

Input signals other than the above are not recommended, as they are out of the specifications of the LCD panel used.

Audio specifications

Item	Description
Audio file (WAV) format	PCM system Sampling rate: 8kHz, quantization bit: 8 bits Monaural
Audio output voltage	1.0Vp-p
Audio output connector	3.5mm dia. stereo mini-jack
Connected amplifier	Input impedance: 10kΩ or more

●RGB output unit (UG30A-ROS)

Output signal specifications

Item	Specification	
Model	UG330H-VH UG430H-VH UG530H-VH	UG430H-TH
Display device	SVGA	VGA
Display dots	800 x 600 dots	640 x 480 dots
Display colors	32,768 colors or less	
Horizontal sync frequency	38.0kHz	30.4kHz
Vertical sync frequency	60Hz	58Hz
Signal level	RGB: 0.7Vp-p/75Ω, HSYNC, VSYNC: TTL level	
Interlace	None	

Audio specifications

Item	Description
Audio file (WAV file) format	PCM system Sampling rate: 8kHz, quantization bit: 8 bits Monaural
Audio output voltage	1.0Vp-p
Audio output connector	3.5mm dia. stereo mini-jack
Connected amplifier	Input impedance: 10kΩ or more

●Audio output unit (UG30A-SUD)

Audio specifications

Item	Description
Audio file (WAV file) format	PCM system Sampling rate: 8kHz, quantization bit: 8 bits Monaural
Audio output voltage	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)

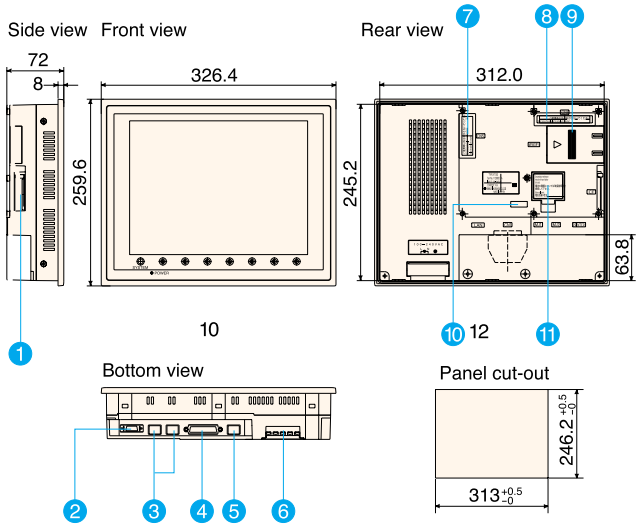
Specifications

Item	Description
Application	Ethernet 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

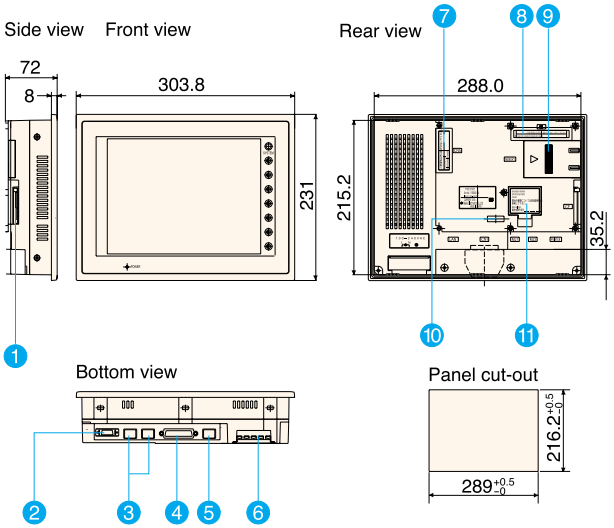
UG30 Series

■Outline drawing (Unit: mm)

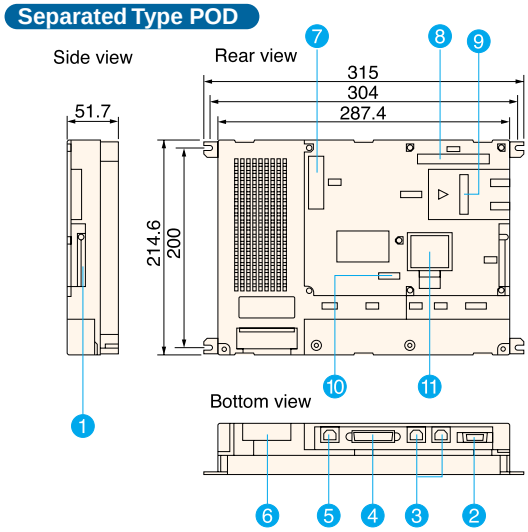
UG530



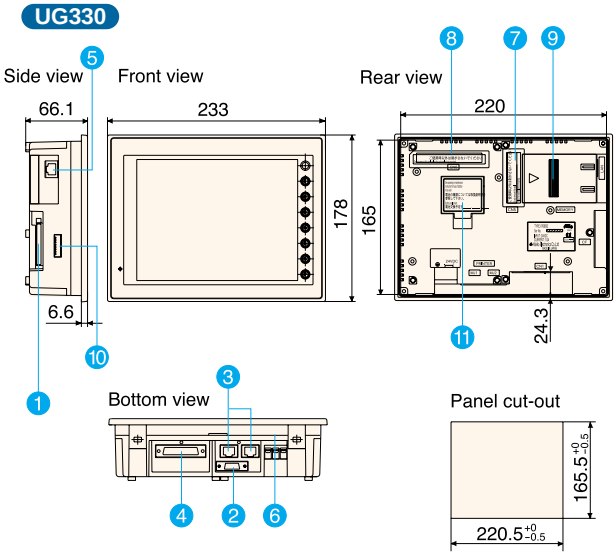
UG430



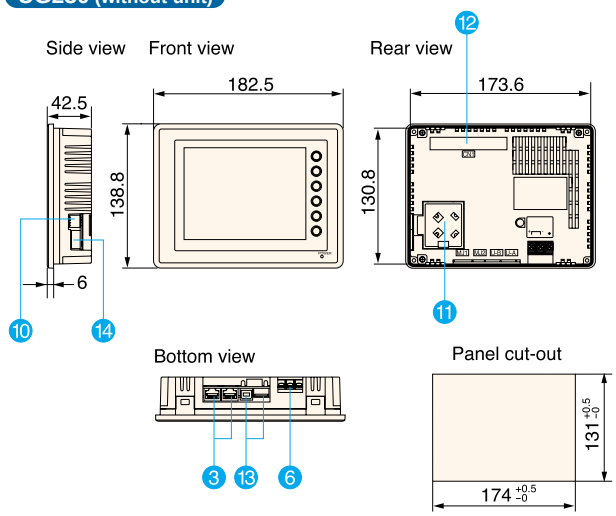
Separated Type POD



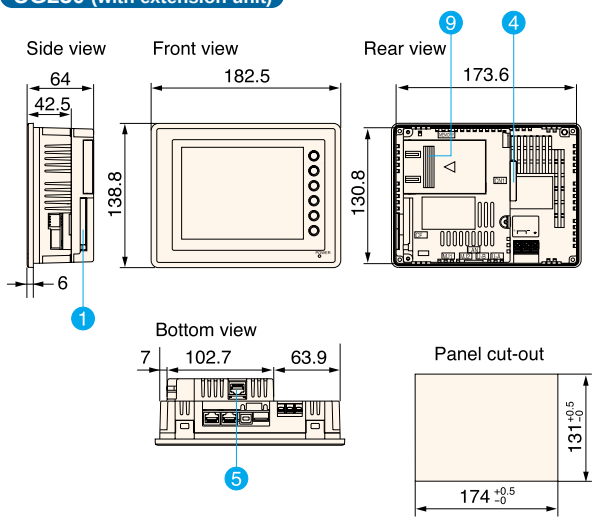
UG330



UG230 (without unit)

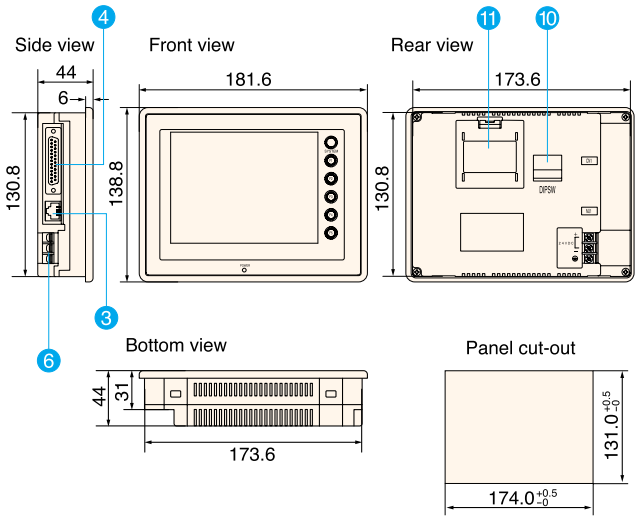


UG230 (with extension unit)



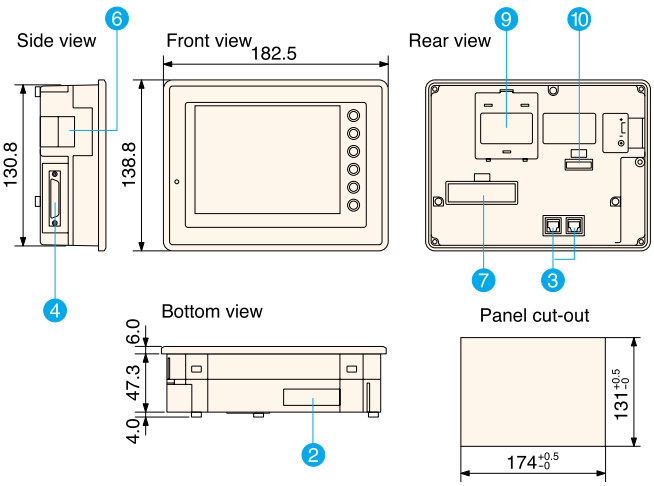
Simple POD

■Outline drawing (Unit: mm)



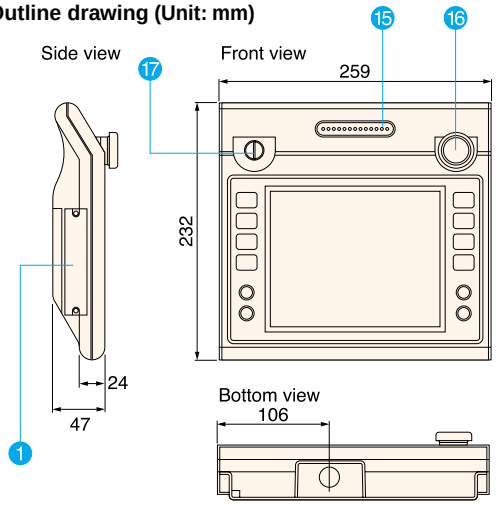
UG221 Series

■Outline drawing (Unit: mm)



Handy POD

■Outline drawing (Unit: mm)



Name of each part

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

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

❸Modular 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.

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

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

❻Power supply terminal
Terminal for power supply.

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

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

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

❿DIP switch
Switches used for various setting the POD.

⓫Battery holder
Holder for connecting the battery.

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

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

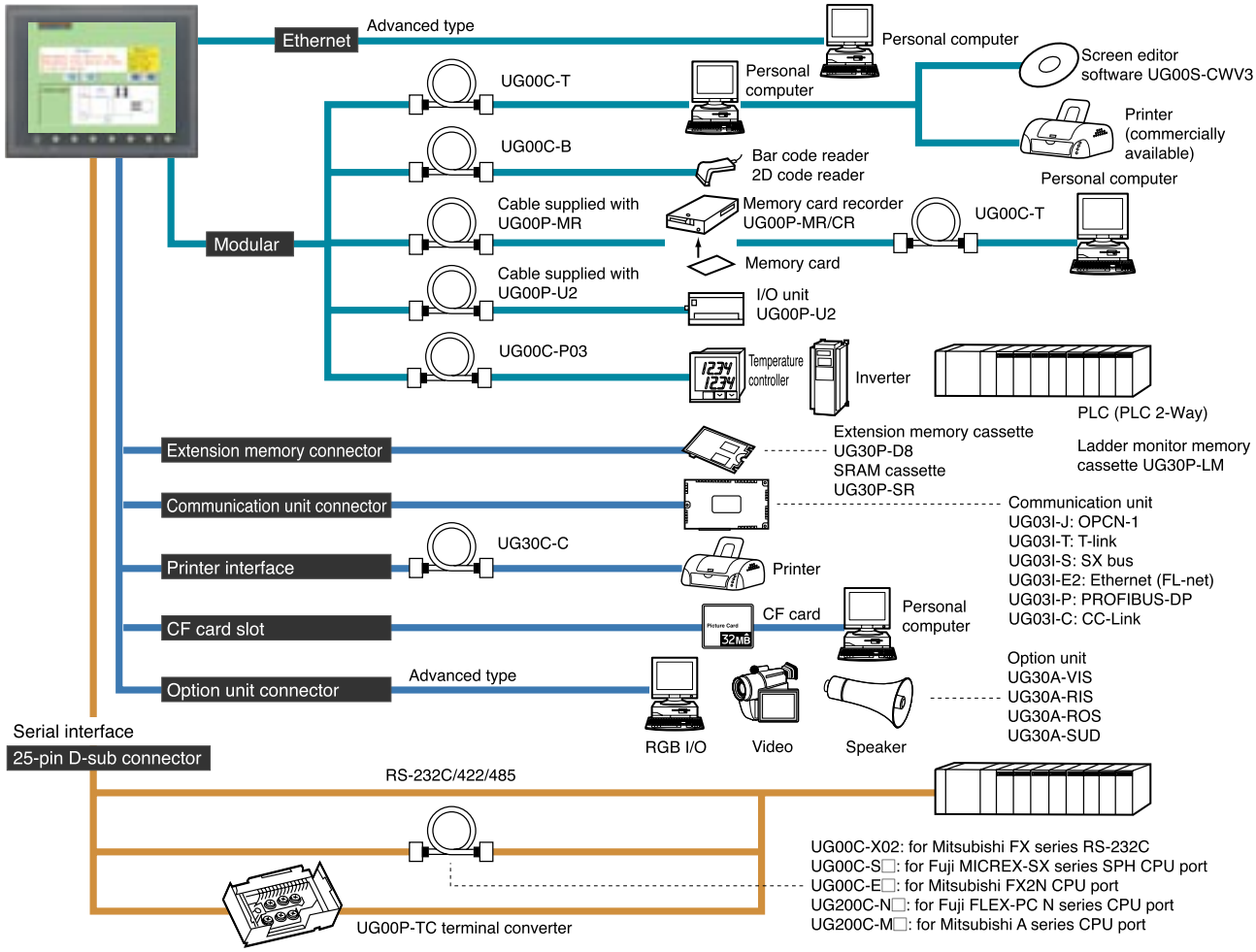
⓮Slide switch
Used for switching RS-232C and RS-422 for MJ2.

⓯Deadman's switch

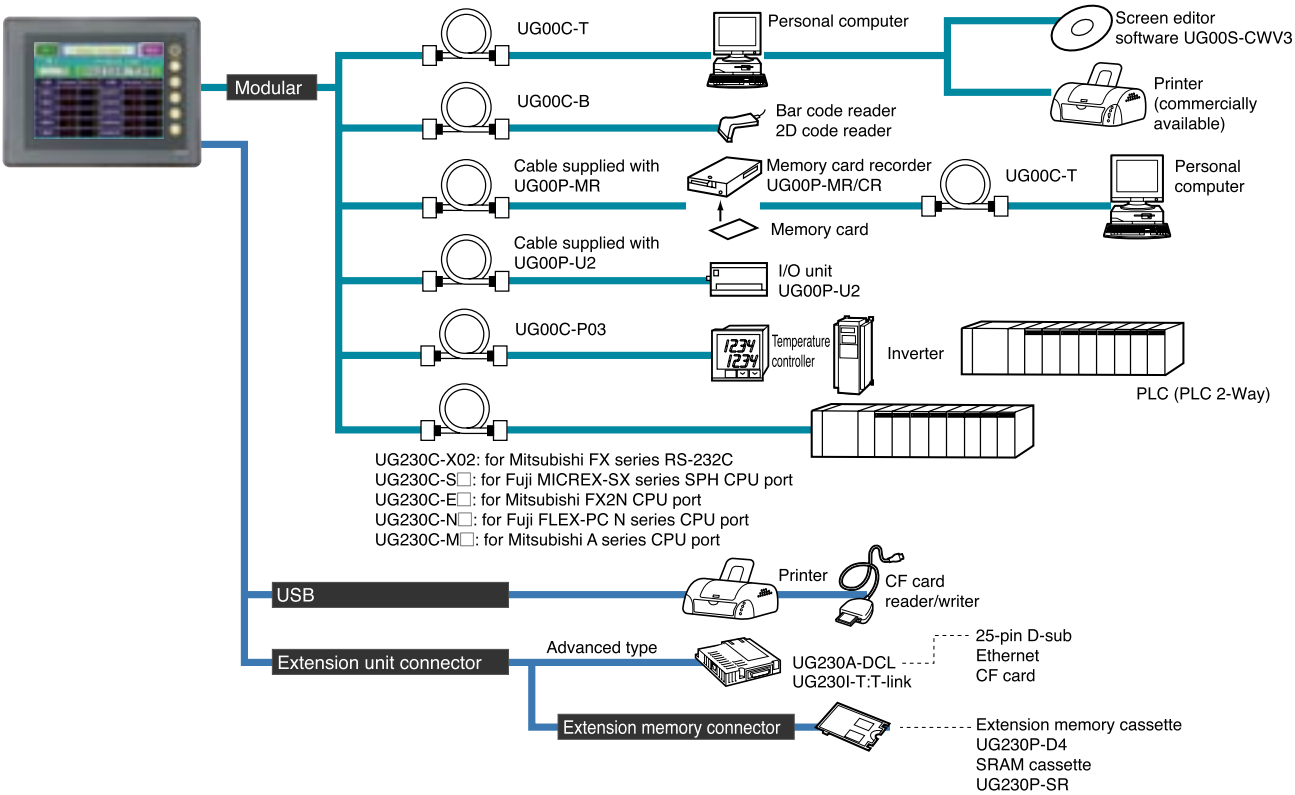
⓰Emergency stop switch

⓱Key switch

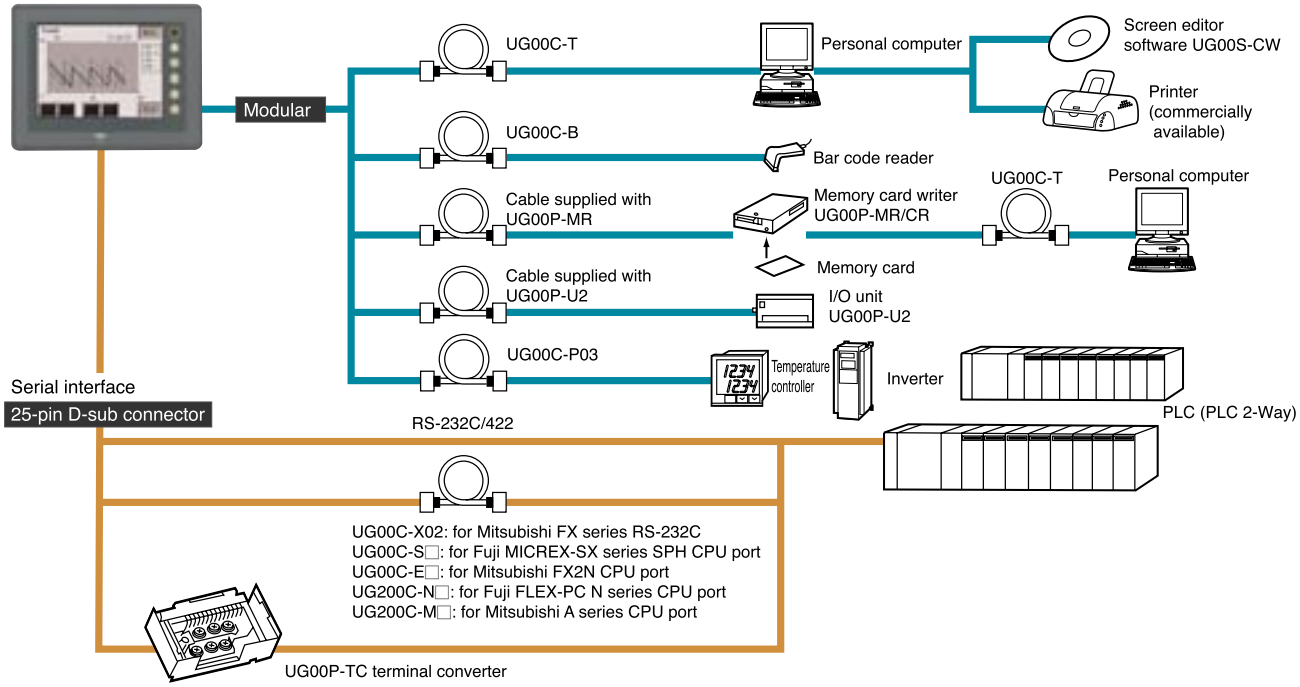
UG30 Series



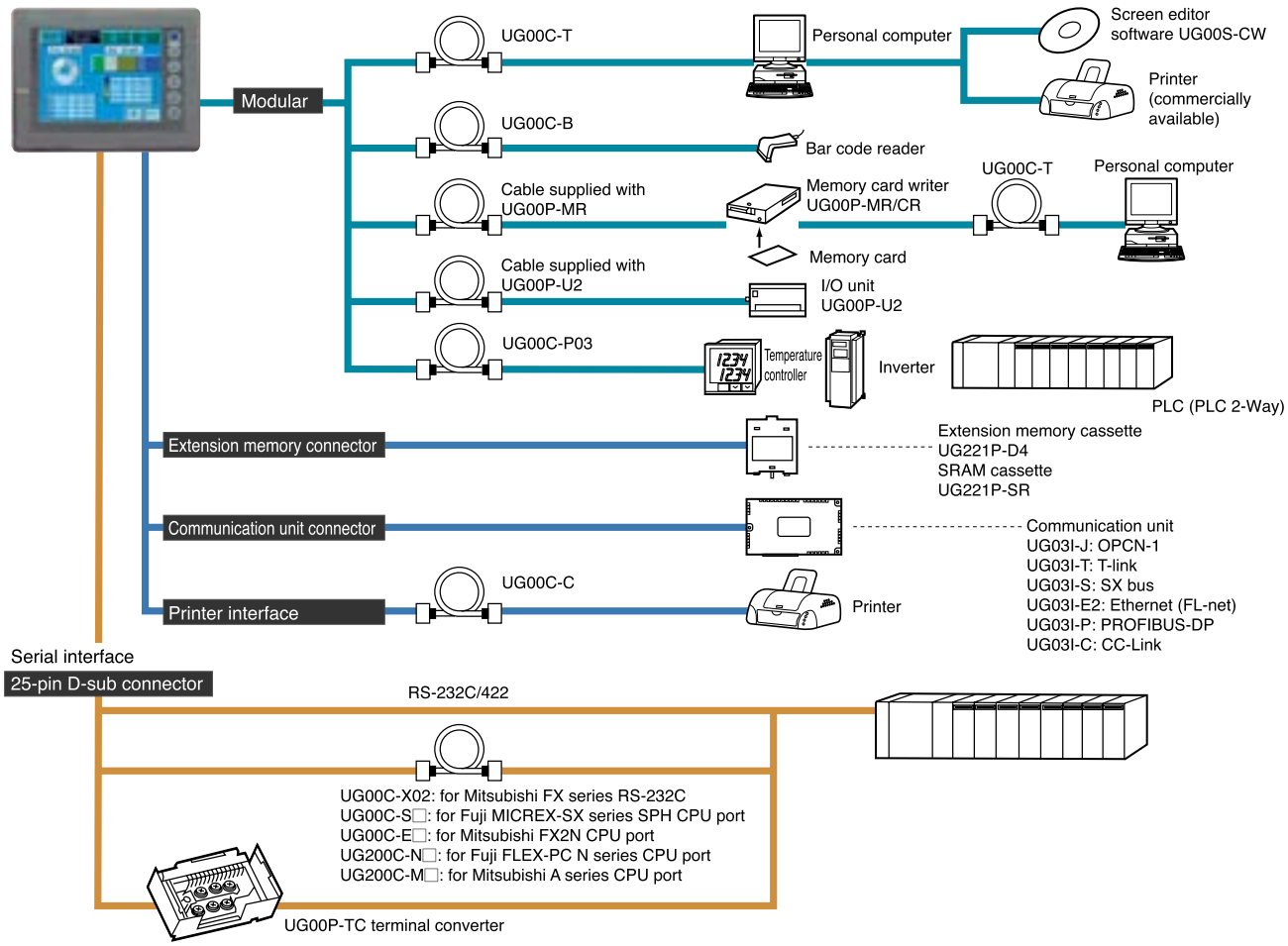
UG230 Series



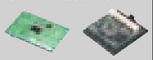
Simple POD



UG221 Series



Peripheral Option List

Option			UG530H-VH	UG530H-VS	UG430H-VH	UG430H-VS	UG430H-TH	UG430H-TS	UG430H-SS
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
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
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
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-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 UG230I-T	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) UG230I-T (T-link:for UG230)	○	○	○	○	○	○	○
Option unit 	UG30A-VIS UG30A-RIS UG30A-ROS UG30A-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.	—	—	—	—	—	—	—

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-CR	UG00P-MR UG00P-CR	UG00P-MR UG00P-CR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR	UG00P-MR UG00P-CR
○	○	○	○	○	○	—	—	—	○	○	○	—
○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	—
○	○	○	UG230I-T	UG230I-T	UG230I-T	—	—	—	○	○	○	—
○	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	○	○	○	—	—	—	—	—	—	—

Connection Unit List

●Applicable PLCs (As of March in 2005)

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)	○(IEC mode)
	MICREX-SX SPH series (N mode/F mode)							○
	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 (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-S10/2 α/mini	○		○		○	OPCN-1	○
	HIDIC-S10/4 α	○		○				○
	HIDIC-S10/ABS	○		○				
	HIDIC-S10V	○				○		
Matsushita Electric Works	MEWNET	○	○	○	○	○		○
	FP series					○		
Yokogawa Electric	FA500	○	○	○	○			
	FA-M3	○	○	○	○	○		○
	FA-M3R	○	○	○	○	○	FL-Net	○
YASKAWA Electric	MEMOBUS	○	○	○				
	CP9200SH/MP900	○	○	○				
Toyoda Machine Works	TOYOPUC	○	○	○	○	○		○
Koyo Electronics Industries	SU/SG	○	○	○				
	SR-T	○	○	○				
	SR-T (K protocol)	○		○				
	SU/SG (K-Sequence)	○		○				
Rockwell Automation (Allen-Bradley)	PLC-5	○	○	○				
	SLC500	○	○	○				
	Micro Logix 1000	○	○	○				
	Control Logix / Compact Logix	○		○				
GE FUNUC Automation	90 series	○	○	○				
	90 series (SNP-X)	○		○				
Toshiba	T series	○	○	○	○			
	EX series	○	○	○				
Toshiba Machine	TC200	○	○	○	○			
SIEMENS	S5	○		○				
	S5 PG port	○		○				
	S7	○		○			PROFIBUS-DP	
	S7-200 PPI	○	○		○			
	S7-300/400 MPI	○	○ *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	○		○		○		○
LG	MASTER-K10/60/200	○		○		○		
	MASTER-K500/1000	○	○	○	○	○		
	MASTER-KxxxS	○		○				
	MASTER-KxxxS CNET	○	○	○				
	GLOFA CNET	○	○	○				
	GLOFA GM series CPU	○		○		○		
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 LOGIG	○	○	○		○		
	Direct LOGIG (K-Sequence)	○	○	○				
VIGOR	M series	○		○				
DELTA	DVP series	○		○				
Toyo Denki Seizo	μGPCsx series	○		○			OPCN-1/SX bus	
	μGPCsx CPU	○		○				
Baldor	Mint	○						
Modbus TCP/IP	–					○		
Modbus RTU Free	–	○	○					
FESTO	FEC	○		○				

●Applicable Inverters, Temperature Controllers, etc. (As of March in 2005)

Maker	Unit name	Category
Fuji Electric FA	F-MPC04P	Power monitoring unit
	FVR-E11S	Inverter
	FVR-C11S	
	FRENIC5000G11S/P11S	
	FRENIC5000VG7S	
	FRENIC-Mini (MODBUS RTU)	
	FRENIC-Eco (MODBUS RTU)	
	FVR-E11S (MODBUS RTU)	
	FVR-C11S (MODBUS RTU)	
	FRENIC5000G11S/P11S (MODBUS RTU)	
	FRENIC5000VG7S (MODBUS RTU)	
	HFR-C9K	IH inverter
	Faldic-α series	Servo system
	Faldic-W series	
Fuji Electric Technica	WA5000＊	Panel meter
Fuji Electric Instruments	PYX (MODBUS RTU)	Temperature controller
	PYH	
	PXR (MODBUS RTU)	
	PH series	Recorder
	PPMC (MODBUS RTU)	AC power monitor
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	
	SDC40A	
	DMC10	
	SDC40G	
	DMC50	
	DCP31/32	
	AHC2001	Module type controller
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)	

＊The panel meter type that can connect with our POD UG Series is WA5**7-□(□: 01 to 12.18).

Maker	Unit name	Category
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)	
Mitsubishi Electric	FR-＊500	Inverter
	FR-V500	
	MR-J2S-＊A	Servo system
	MR-J2S-＊CL	
Chino	DZ1000 (MODBUS RTU)	Temperature controller
	DZ2000 (MODBUS RTU)	
	KP1000	
	LT400 Series (MODBUS RTU)	
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-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	
	ROBO CYLINDER (RCP2/ERC,RCS)	Electric cylinder
Koatsu Gas Kogyo	R-BLT	Card reader/writer
LG	iS5	Inverter
	iG5	
EUROTHERM	2400 series (MODBUS RTU)	Controller
UNIPULSE	F340A	Digital indicator
	F371	
	F600	
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 computer
	R5 series (MODBUS RTU)	
SAMSUNG	MOSCON-E7	Inverter
SUNX	LP-200/LP-F10	Laser marker
	LP-300	
	LP-400	
Sanyo Electric	PB1 series	Servo system
Gammaflux	TTC2100	Temperature control system
Toho Electronics	TTM-000	Temperature controller
Sanken Electric	SAMCO-e	Inverter
	SAMCO-vm05	
Modbus Free		

*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.

UG 30 series

Item	Type (product code)	Specification			CE	UL	Remarks
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		100-200VAC			
	UG430H-SS4	128-color type		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 *2 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.
*2 The communication unit is under development. The UG03I-□ cannot be connected.

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

	Type (product code)	Specification		CE	UL	Remarks
Item	UG00S-CWV3	Editor CD-ROM Version for Windows (Japanese/English)				
Screen editor software	UG03I-J	OPCN-1		◎	◎	
Communication unit	UG03I-T	T-link		◎	◎	
	UG230I-T	T-link (for UG230)		◎	◎	
	UG03I-S	SX bus		◎	◎	
	UG03I-E2	Ethernet (OPCN-2 (FL-net2))		◎	◎	
	UG03I-P	PROFIBUS-DP		◎	◎	
	UG03I-C	CC-Link			◎	
Option unit	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, 25-pin D-bus				
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			
	UG00C-E02	For direct connection to Mitsubishi FX2N CPU port	2m			
	UG00C-E03		3m			
	UG00C-E05		5m			
	UG00C-Q03	For direct connection to Mitsubishi Q series CPU port	3m			
	UG00C-Q05		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			
	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			
	UG00C-HD03	Cable for connecting Handy POD	3m			
	UG00C-HD05		5m			
	UG00C-HD15		15m			
	UG00C-HD20		20m			
	UG200C-G	For connection of Mitsubishi CPU port UG00P-DI				
Extension memory cassette	UG30P-D8	Flash memory (for UG530/430/330)	8MB	◎		
	UG230P-D4	Flash memory (for UG230)	4MB			
	UG221P-D4	Flash memory (for UG221)	4MB			
Ladder monitor memory cassette	UG30P-LM	For Mitsubishi Q series			◎	
SRAM cassette	UG30P-SR	SRAM cassette (for UG530/430/330)	512KB	◎		
	UG221P-SR	SRAM cassette (for UG221)	512KB			
Communication terminal block	UG00P-TC	Communication terminal block for RS-485			◎	
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				
Protection sheet	UG530P-PS	Screen protection sheet (for UG530)				
	UG430P-PS	Screen protection sheet (for UG430)				
	UG330P-PS	Screen protection sheet (for UG330)				
	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-PS	Screen protection sheet (for UG230/UG221)				
	UG220P-PT	Diffused reflection protective sheet (for UG230/UG221)				
Maintenance parts	UG520P-BFA	Replacement backlight (for UG530, TFT color)				
	UG420P-BVA	Replacement backlight (for UG430, TFT color (SVGA))				
	UG420P-BFA	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-F25K	Flash memory card	256KB			
	UG00K-F51K		512KB			
	UG00K-F01M		1MB			
	UG00K-F02M		2MB			
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.
- Customers, who want to use the products introduced in this catalog for special systems or devices such as for atomic-energy control, aerospace use, medical use, passenger vehicle, and traffic control, are requested to consult the Fuji sales division.
- 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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