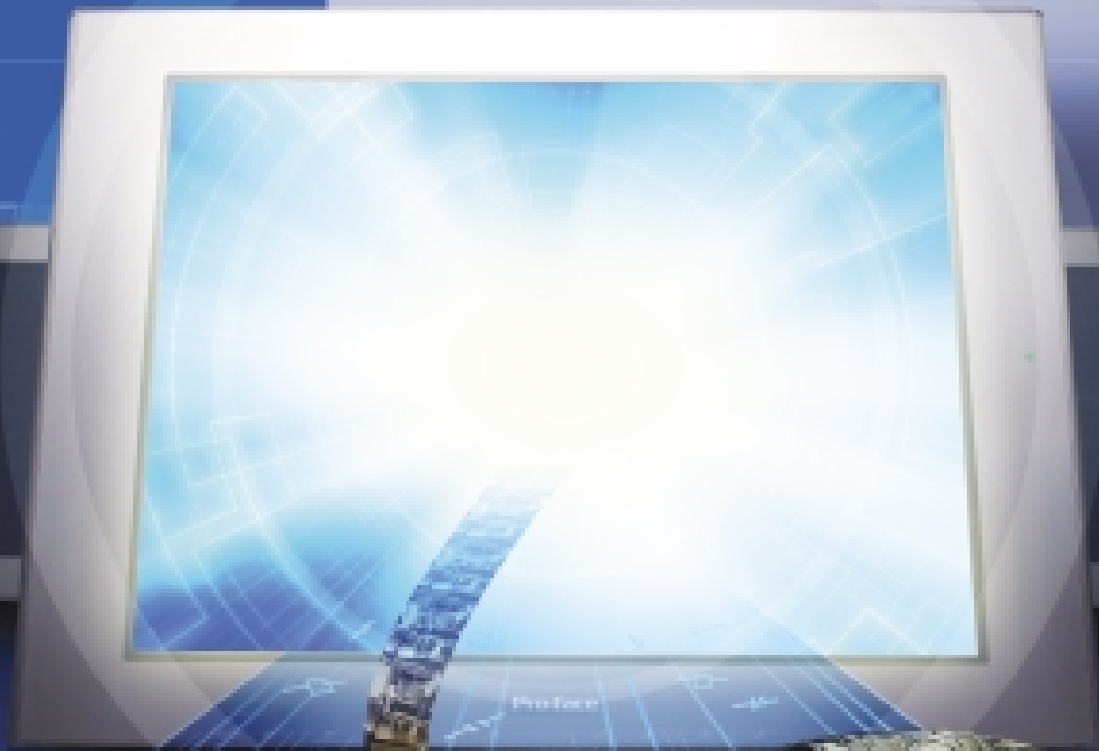


## Introducing New Generation of the Manufacturing Command Center, the GP3000 Series

It's the next step in the evolution of the GP3000 Series. We now offer the industry's broadest model selection and software with enhanced features.



A New Concept in Graphic Operator Interfaces

# GP3000 SERIES



ISO9001  
JQA-1367

# Introducing new models incorporating HMI<sup>4</sup>

Introducing a full product line of **50** models across three classes



**Interactive M Class:**  
With visual representation features such as video recording and playback.

5 models



**Intelligent C Class:**  
Enable to expand I/O function directly as well as operation and display of Host Controller.

30 models



**S Class:**  
Equipped with monitor interfaces. Additional functions enhance performance for a more pleasant field environment.

15 models



		15-inch XGA		12.1-inch SVGA		10.4-inch VGA				7.5-inch VGA		5.7-inch QVGA			
		SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, VM Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, VM Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, VM Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	SIO 2ch, Ethernet, Expansion Unit, USB (Host), CF Card, AUX Sound Out	
CLASS	M	AGP3750-T1-AF	AGP3750-T1-D24	AGP3650-T1-AF	AGP3650-T1-D24	AGP3550-T1-AF	AGP3550-T1-D24	AGP3450-T1-D24							
	C	AGP3600-T1-AF-D81K	AGP3600-T1-D24-D81K	AGP3500-T1-AF-D81K	AGP3500-T1-D24-D81K	AGP3500-S1-AF-D81K	AGP3500-S1-D24-D81K	AGP3400-T1-D24-D81K	AGP3400-S1-D24-D81K	AGP3300-T1-D24-D81K	AGP3300-S1-D24-D81K	AGP3300-L1-D24-D81K			
		AGP3600-T1-AF-D81C	AGP3600-T1-D24-D81C	AGP3500-T1-AF-D81C	AGP3500-T1-D24-D81C	AGP3500-S1-AF-D81C	AGP3500-S1-D24-D81C	AGP3500-L1-D24-D81C	AGP3400-T1-D24-D81C	AGP3400-S1-D24-D81C	AGP3300-T1-D24-D81C	AGP3300-S1-D24-D81C	AGP3300-L1-D24-D81C		
	S	AGP3600-T1-AF-FN1M	AGP3600-T1-D24-FN1M	AGP3500-T1-AF-FN1M	AGP3500-T1-D24-FN1M				AGP3400-T1-D24-FN1M	AGP3300-T1-D24-FN1M					
AGP3600-T1-AF		AGP3600-T1-D24	AGP3500-T1-AF	AGP3500-T1-D24	AGP3500-S1-AF	AGP3500-S1-D24	AGP3500-L1-D24	AGP3400-T1-D24	AGP3400-S1-D24	AGP3300-T1-D24	AGP3300-S1-D24	AGP3300-L1-D24	AGP3301-L1-D24	AGP3302-B1-D24	

\*Not supported by AGP-3302B

## External Interfaces in brief

**SIO 2ch Serial Interface**  
COM1: RS-232C/RS-422/RS-485 serial interface. D-SUB 9-pin male connector. Communication method can be switched via software.  
COM2: RS-422/RS-485 serial interface. D-SUB 9-pin female connector.

**USB (Host) Interface**  
USB 1.1-compatible interface. Uses Type-A connectors. Can be connected to USB printers, USB Barcode Readers and others.

**Expansion Unit Interface**  
This interface accepts an Expansion Unit with built-in communications functions.

**VM Unit Interface**  
The VM Unit can be connected through this interface. Four cameras can be connected to one unit.

**Video In Interface**  
This interface connects to a video camera. NTSC/PAL/SECAM compatible. RCA Connector is used.

**DIO Interface**  
Connects to external devices such as switches and lamps.

**CF Card Interface**  
This interface accepts CF cards for filing recipes or data backup.

**CF Card Interface**  
This interface accepts CF cards for filing recipes or data backup.

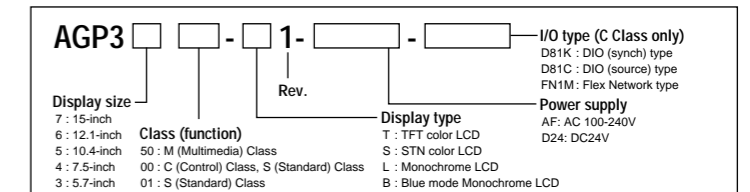
**Ethernet Interface (LAN)**  
Ethernet communications (10 BASE-T/100 BASE-TX) interface. IEEE 802.3u-compliant. Accepts RJ-45 modular jack connector (8 pin).

**AUX/Sound Output Interface**  
This interface accommodates external reset, alarm output, buzzer output, and sound output.

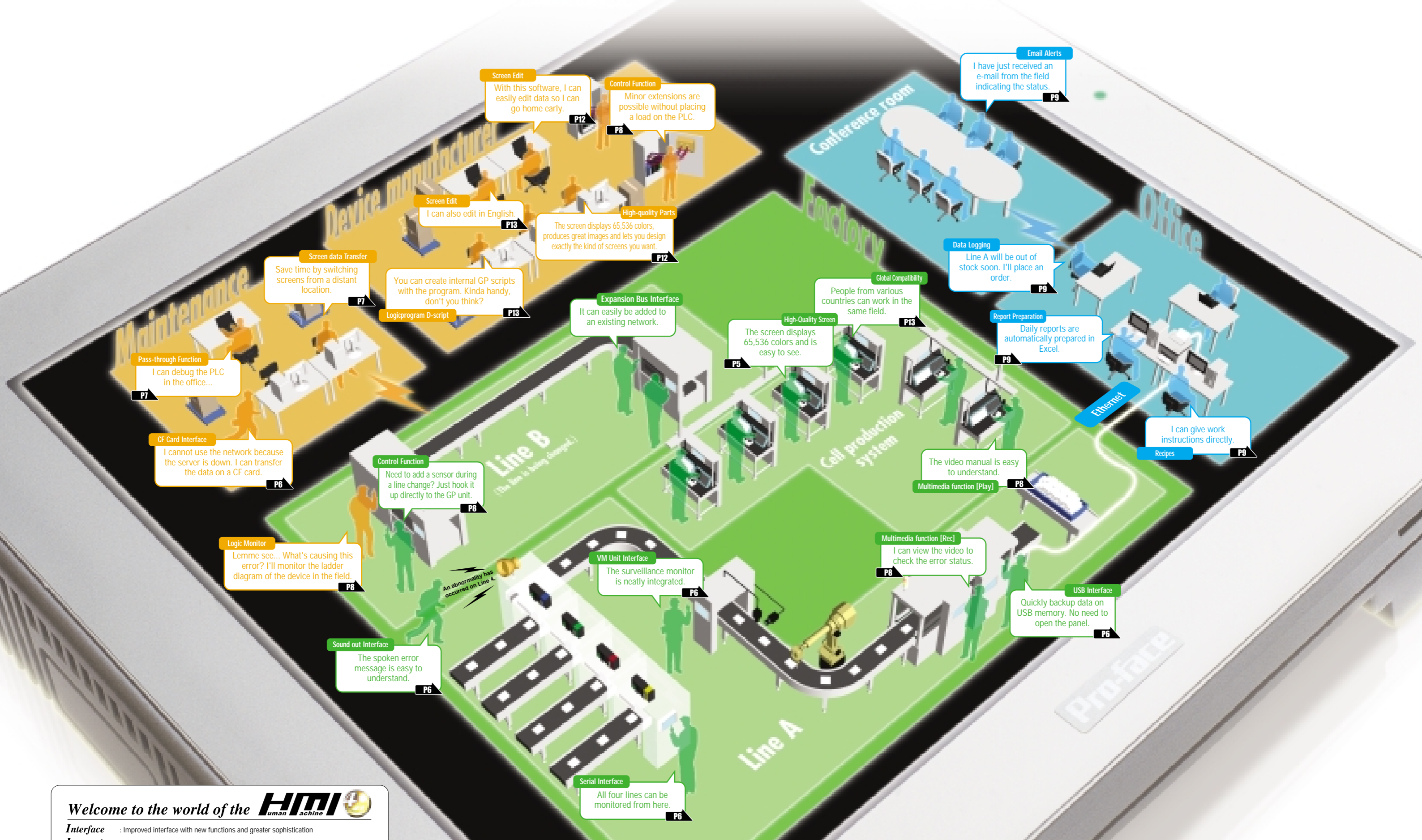
**Sound Input Interface**  
This interface connects to a microphone through a minijack connector.

**FLEX NETWORK Interface**  
Connects to the compact FLEX NETWORK system.

## Model Number Nomenclature



# An Advanced Factory Automation System Incorporating **HMI** uman achine



Welcome to the world of the **HMI** uman achine

- Interface** : Improved interface with new functions and greater sophistication
- Interactive** : Enhanced communication through video recording and playback
- Intelligence** : Enhanced devices with control functions for added value and long-term compatibility
- Information** : Information functions that eliminate barriers between the field and office

The above system reveals the essence of the Manufacturing Command Center – a monitor capable of surveying everything.

# Advanced specifications provide comfort for users and creators.

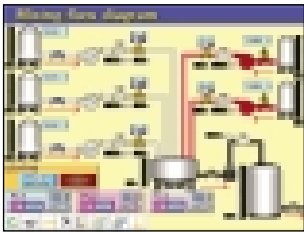
## 1

Images are appealing and the high-quality screen offers excellent visibility.

### ○ The GP3000 Series (TFT type) displays 65,536 colors standard.

The subtle colors of JPEG and BMP files are clearly displayed at high resolution. This is a standard feature and requires no additional equipment.

TFT color LCD: 65,536 colors



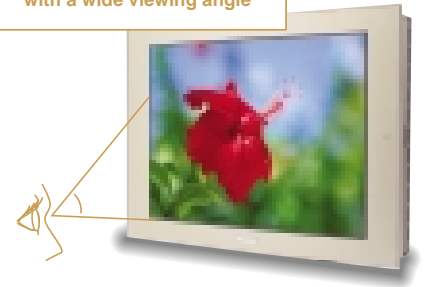
STN color LCD: 4,096 colors



Monochrome LCD: 16 Shades of gray



A clear, easy-to-view display with a wide viewing angle

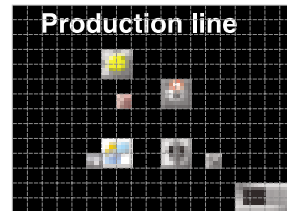


## 2

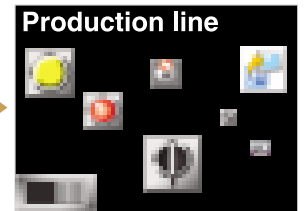
Clear display, with free object placement.

### ○ All GP3000 Series models feature an analog touch panel.

The analog panel improves visibility. Because the screen has no grid, parts can be placed wherever desired.



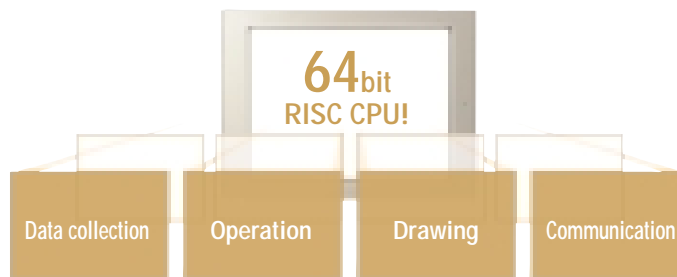
Conventional model



Analog touch panel

## 3

Quick responsiveness for stress-free screen processing.



### ○ High-speed data sampling

Results of 100-ms(max) data sampling can be displayed in a detailed trend graph.

### ○ The GP3000 Series uses a 64-bit RISC CPU for the fastest processing speed in the industry.

Smoothly processes large amounts of screen data. Up-to-date specifications ensure a long service life.

### ○ Featuring a proprietary image processor

Large models with high pixel counts feature a proprietary image processor. Smoother reproduction of animation and image drawing speed.

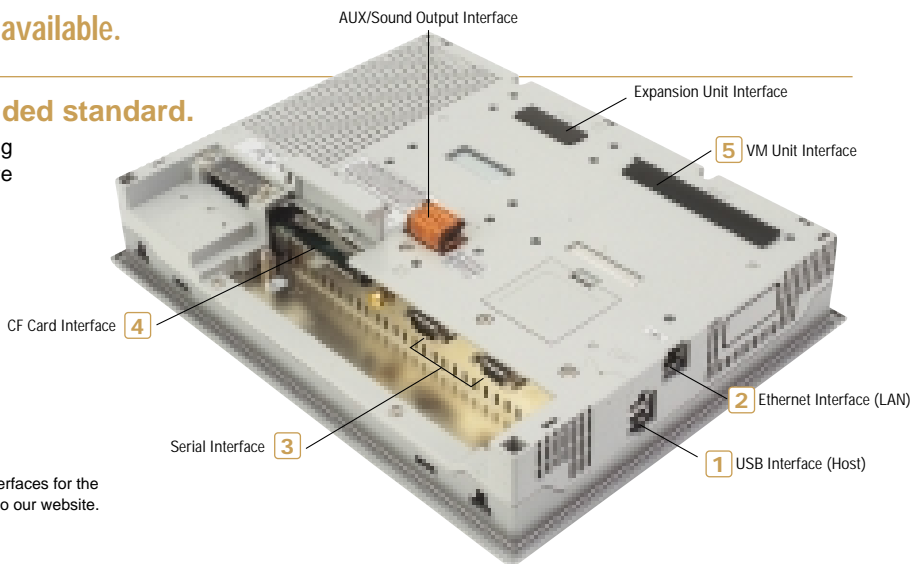
### ○ High-speed communications with more powerful interfaces

The 100BASE-TX Ethernet interface provides faster data transfer.

# 4 More versatile interfaces are available.

## ○ A variety of interfaces are provided standard.

These interfaces simplify connection to existing systems as well as system additions and future expansion.



Note: Available interfaces vary by model. The photo shows the interfaces for the AGP-3650T (AC). For a list of the compliant models, please refer to our website.

### 1 Various devices can easily be connected via USB.

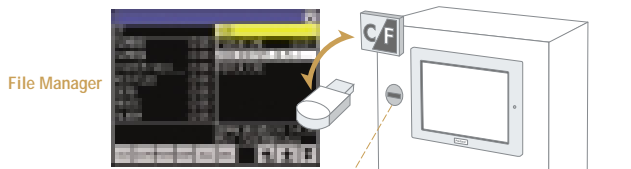
#### ○ USB interface x 2-ch standard (host).\*

\*1-ch for 7.5-inch and 5.7-inch types



#### ○ File Management

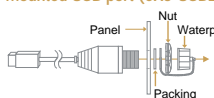
By using File Manager, data transfer between a USB flash drive and CF card inserted in GP are possible.



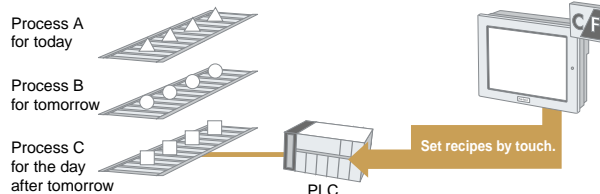
**Applications**  
Numerous applications are available, including the following:

- Transfer screen data.
- Collect log data.
- Change recipes.
- Manage movie files.

Attach a USB cable to the readily accessible panel-mounted USB port (CA5-USBEXT-01).



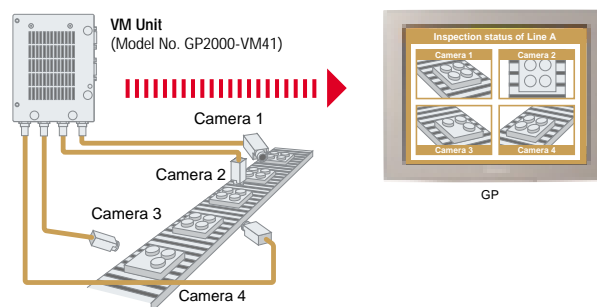
### ○ The CSV data transfer function makes it easy to change the PLC's settings.



### 5 VM Unit Connection

With a VM unit(option), visual monitoring of work details and conditions on the production site is available in real time. Up to four cameras can be connected, and all the 4 images are displayable on one GP screen.

Note: Not all the models can connect the VM unit. For a list of the compliant models, please refer to our website.



### 2 Ethernet interface for easy communication with the host PC.

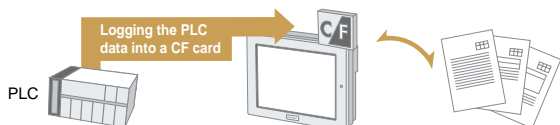
Enhanced Ethernet interfaces included as standard.

### 3 Two serial ports provided as standard.

COM 1\*: RS-232C/RS-422/RS-485 COM 2: RS-422/RS-485  
\*AGP-3302B only as for RS-232C.

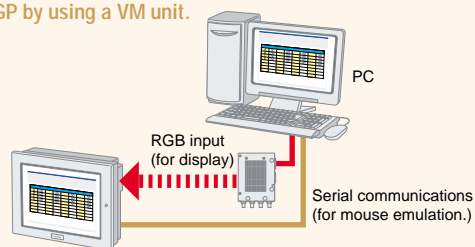
### 4 CF cards enhance the convenience of the GP3000 Series.

#### ○ The logging function increases the efficiency of documentation.



Note: SRAM data can be output with the sampling print function. CSV data on a CF card can be output with a CSV display.  
Note: SRAM data can be output with the sampling print function. With the CSV monitor, you can output CSV data from a CF card.

#### GP can control a PC by displaying the PC screen on GP by using a VM unit.



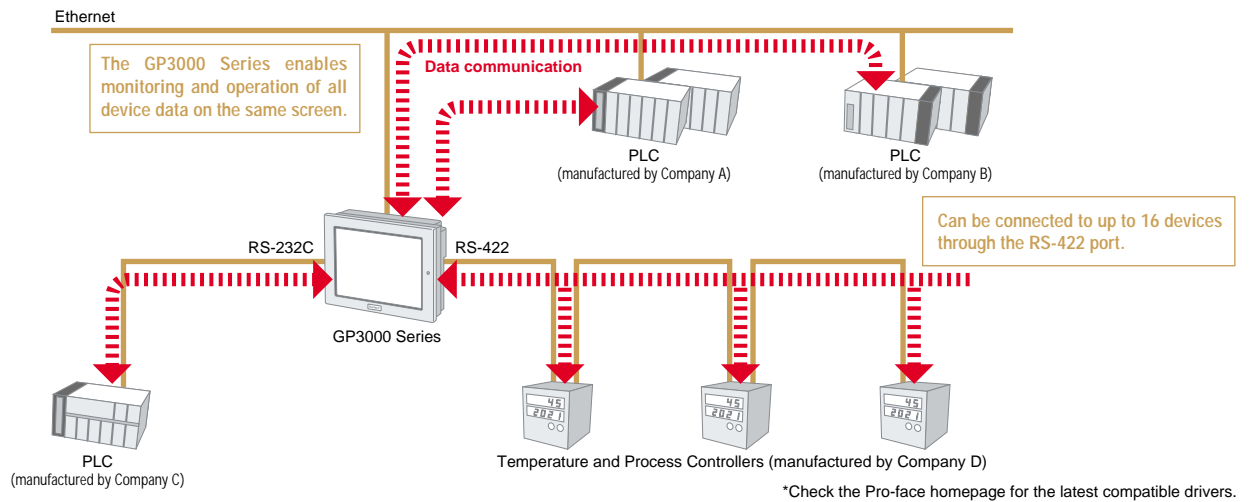
Note: Downloading Touch Panel Driver is necessary. Please refer to our website for more information.

# This class is pursuing convenience such as maintenance and management.

## 5 Communicate with up to four types of devices\*

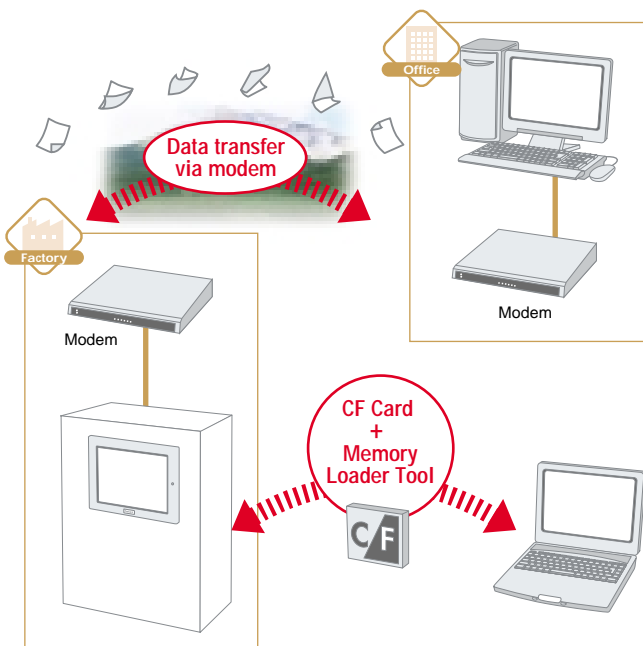
Communicate with four devices simultaneously and manage all information with one machine. Pro-face is the leader in the number of communications drivers supported.

\*5.7 inch models enable simultaneous communication with up to two types.



## 6 Screen Data Transfer

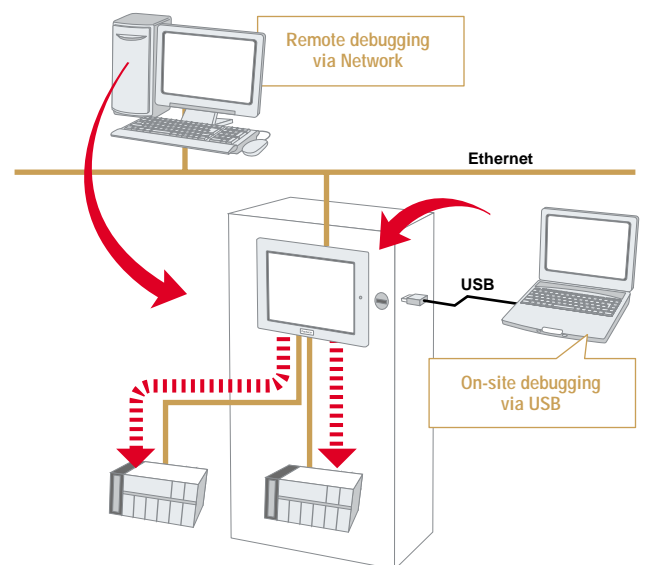
Besides CF card, Screen data transfer via modem is now available.



Note: To open a project file directly from backup data on CF card, the dedicated Memory Loader Tool is necessary to be saved together on CF card.

## 7 Pass-through Function

You can easily perform debugging of the PLC via Ethernet, even from a PC located in a remote office.



### Supported PLC models

- Mitsubishi Electric Q Series with CPU direct connection
- Mitsubishi Electric QnA Series with CPU direct connection
- Mitsubishi Electric QUTE Series with CPU direct connection

Note: For the operating environment, please refer to our website.

# Use audio and video in the field or at the office.

This class features multimedia functionality for more user-friendly operation with sound and video.

## ○ Movie File Playback

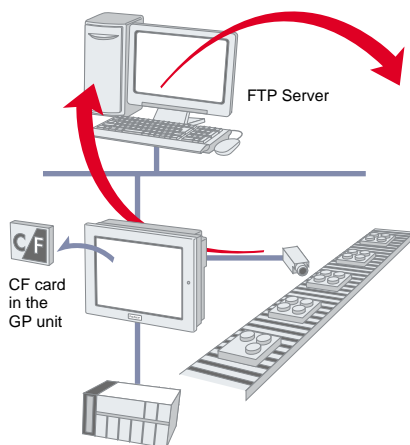
You can use the display of the GP3000 to play back movie files. Simply select the desired files from a CF card or FTP server. You can play selected movies repeatedly.

It's easy to add movies to on-site instruction screens for better comprehension.



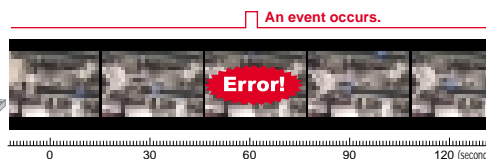
And you can now create movie files with commercially available video software.

Note: Any movie files you create must be converted with converter tool to use on GP or office PC. It is necessary to movie converter tool. (Movie Converter License/ Model No. EX-MOVCON-LICENSE)



## ○ Event Recorder

You can record video and audio from a video camera connected to the GP3000. This file CF card inserted into the GP or on an FTP server connected via Ethernet.



When a predefined event is triggered, video before and after the event (max.120 sec) is automatically recorded and stored as a log.

Fast & Accurate Troubleshooting

# Accommodates simple sub-control and future expansion.

This class features flexible system expansion and control functionality which assists PLC.

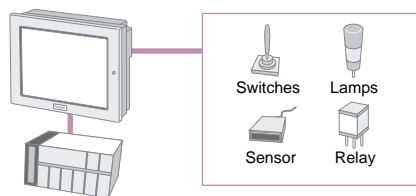
## ○ Control Functions

You can easily add a variety of control devices. To the DIO types, you can directly connect various components such as buttons and lamps. And the FLEX NETWORK type allows space-saving connections with less wiring.

### DIO type for direct connection to components

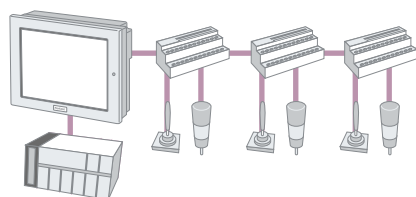
DIO (sink) type:  
6 inputs/2 outputs  
DIO (source) type:  
6 inputs/2 outputs

A wide range of components can be used for ON/OFF control.



### FLEX NETWORK type featuring I/O expansion.

Maximum number of expansible I/Os:  
512 bit I/Os  
(256 inputs and 256 outputs)  
128 integral I/Os  
(64 inputs and 64 outputs)



## ○ Logic Monitoring Function

You can check logic programs in GP on GP screen at site.



Logic display

Displays an entire logic program so you can check the operating status and the layout of instructions.

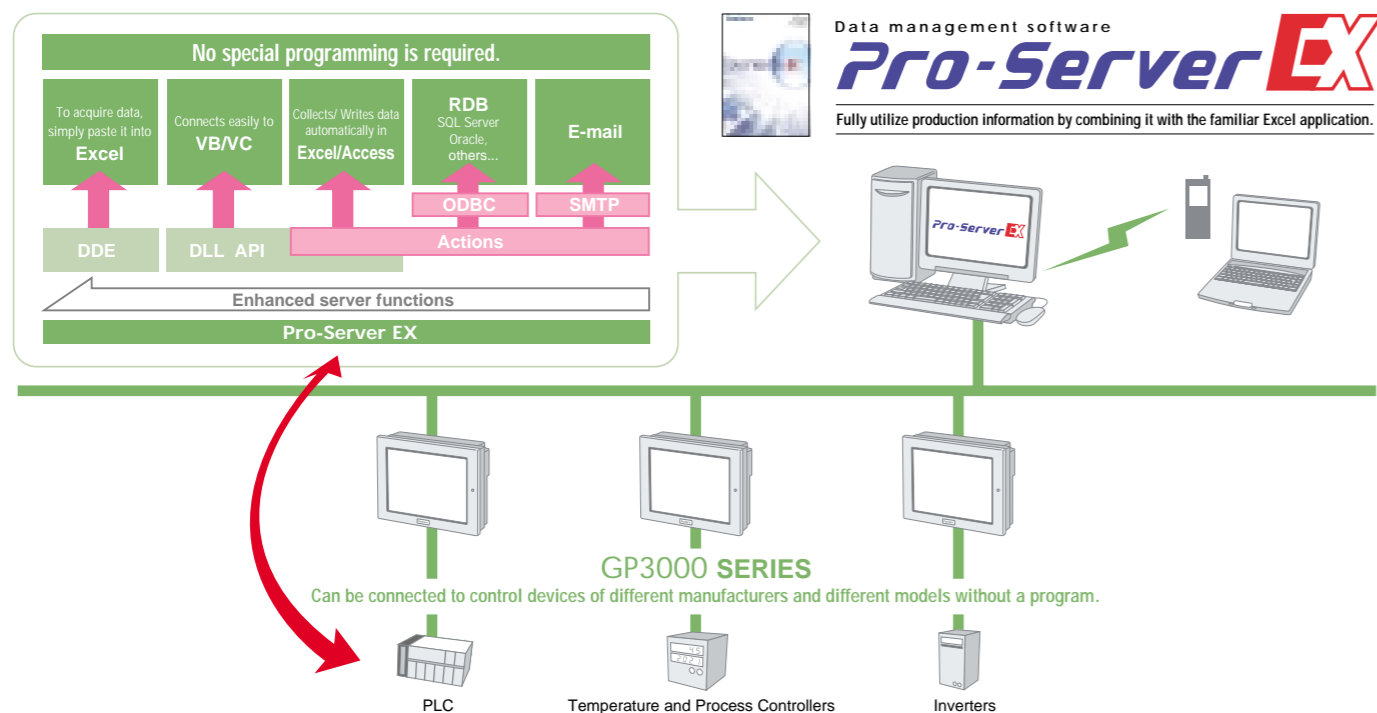


Address display

The addresses used in a logic program are listed so you can verify the names and current values of variables.

Migrating logic programs from GLC2000 Series to GP3000 Series may cause some differences in functionality. For details on restrictions and functional differences, see "Otasuke Pro!" (<http://www.pro-face.com/otasuke/>).

# Simple, low-cost software for constructing a network between the office and the field.



Data management software  
**Pro-Server EX**  
Fully utilize production information by combining it with the familiar Excel application.

## 1 Reliable automated transmission of work instructions

### ○ Recipes

Transfer data directly from your office to equipment on site. Numerous data formats can be accommodated.  
**Storage formats** <CSV, Excel, Access, Oracle, SQL Server>

## 2 Collect production data in real time.

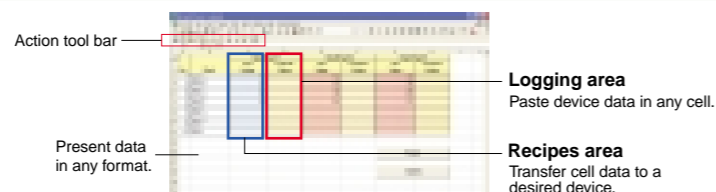
### ○ Data Logging

Collect device data in real time and save it in your desired format.  
**Storage formats** <CSV, Excel, Access, Oracle, SQL Server>

In addition,

Recipes and logs can be included on one sheet.

The display of production orders and results on a single screen allows you to monitor progress at a glance.



## 3 Share information by creating reports in Excel.

### ○ Report Preparation

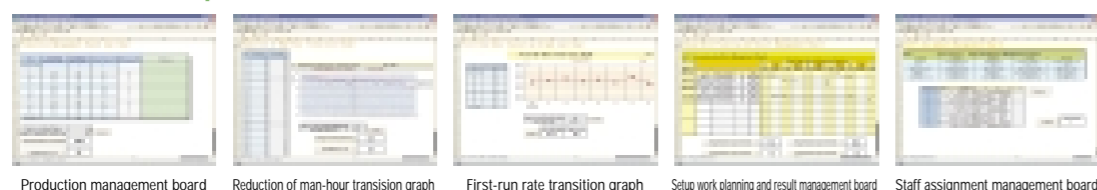
Compile data from devices into structured reports using templates and Excel's edit functions.

## 4 Receive e-mail alerts of abnormalities in the field.

### ○ E-mail Alerts

Arrange to receive an e-mail alert whenever a certain event occurs.

### 29 standard templates

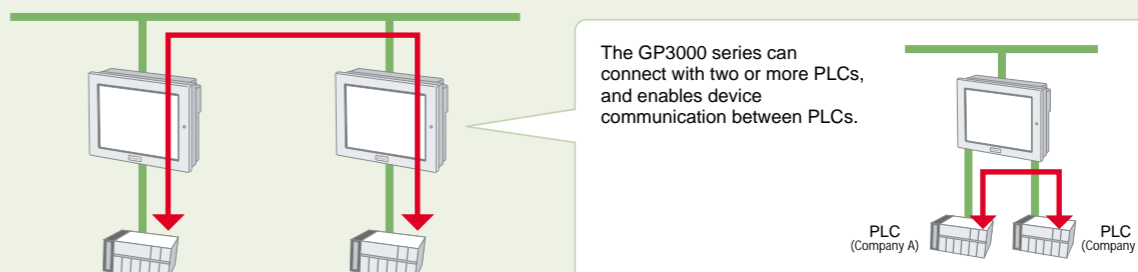


- Daily report, monthly report
- Work progress control
- Work plan
- Performance control
- Andon signal panel etc.

## Convenient functions for enriching information and communication

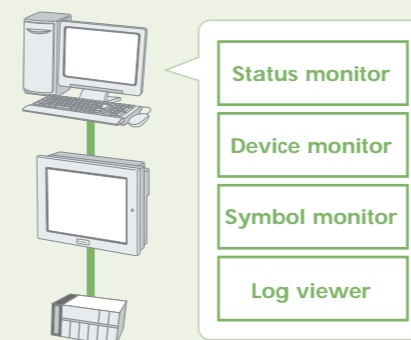
### Device to Device Communication

Even with no PC connected, you can share data with other equipment connected to the GP. All types of equipment and data can be accommodated.



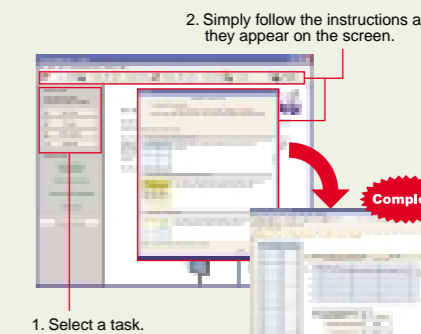
### Monitor Device Status

Monitor status and information of equipment connected to the GP on the (connected) PC screen. No programming is required.



### Wizard Function

Use the wizard to prepare reports. To create a network project, simply follow the messages and specify the items needed.



### Pro-Server EX Operating Environment

PC	PC/AT compatible with Windows® operating system (Not compatible with NEC PC9800 Series.)
OS	Windows® 2000 (Service Pack 3 or later), Windows® XP Home Edition / Professional Note: Administrator privileges are required to install this software.
CPU	Intel® Pentium® III 500MHz or more (Pentium® III 800MHz or more is recommended)
Resolution	800 x 600 (SVGA) or more, 256 colors minimum, 96 dpi font only
Memory	128 MB or more (256 MB or more is recommended)
Hard Disk Space (required for installation)	1 GB or more (2 GB or more is recommended)
Software Menu Languages	English, Japanese
Language FEP	FEP supported by the above OS
Other software	Microsoft® Excel 2000 or later (when ACTION function is set) Microsoft® Access 2000 or later (when ACTION function is set) Microsoft® Internet Explorer Ver. 5.0 or later (when ACTION function is set) .NET Framework Ver.1.1 (Service Pack1)
Printer	Any model supported by the above OS
Network adapter	10BASE-T, 100BASE-TX
Network protocol	TCP/IP (Specified in Windows Control Panel)

Support models GP3000 Series \*Not Supported by AGP-3301S/ AGP-3301L/ AGP-3302B.



# GP-Pro EX simplifies the engineer's goal - combining design with functionality. Now you can easily create ideal user interfaces.

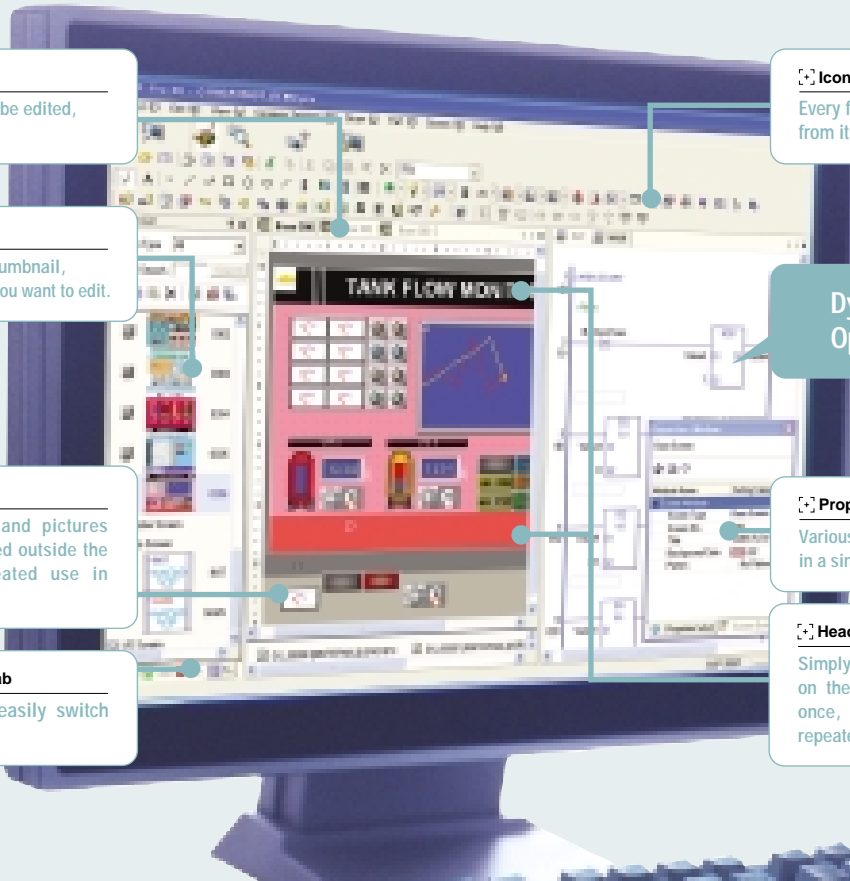


Screen Editor

## GP-Pro EX

- Use all drawing resources with ease.
- All features are integrated into parts. (tag program is now an integrated part)
- The user environment is intuitive.

We're working to reduce the number of steps in every operation.



**Tab function**  
To switch to the screen to be edited, simply switch tabs.

**Thumbnail display**  
Simply by selecting the thumbnail, you can call up the screen you want to edit.

**Temporary area**  
Frequently used parts and pictures can be temporarily placed outside the drawing area for repeated use in other screens.

**Workspace switching tab**  
Simply click a tab to easily switch workspaces.

**Icons**  
Every function can be easily understood from its associated icon.

**Dynamic Link Between Operation and Control**

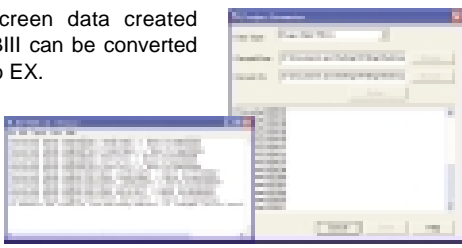
**Property window**  
Various setting parameters can be edited in a single window.

**Headers & Footers**  
Simply register frequently used screens on the top and bottom of the screen once, and call up to any screen for repeated use.

### Easily incorporates existing data resources to reduce the number of drawing steps.

#### File Converter

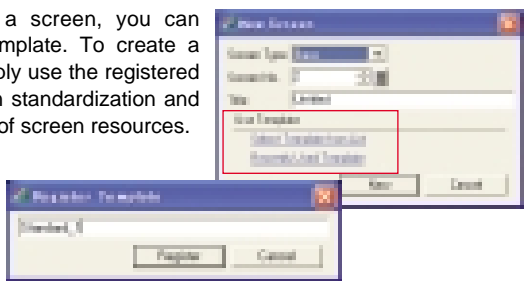
Your existing screen data created with GP-PRO/PBIII can be converted for use in GP-Pro EX.



Note: Please refer to [otasuke Pro!]. (<http://www.pro-face.com/otasuke/>)  
Prior to conversion, be sure to read Notes and differences for data conversion.

#### Template Registration

Once you create a screen, you can register it as a template. To create a similar screen, simply use the registered template for screen standardization and effective utilization of screen resources.

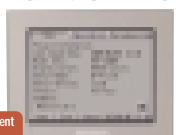


**On-line Update**  
With the online updating service, you can always maintain the latest version.



#### Display project information on the main unit offline.

You can view drawing information on the display such as download data, download person, and edit software version. This feature makes maintenance even more convenient.

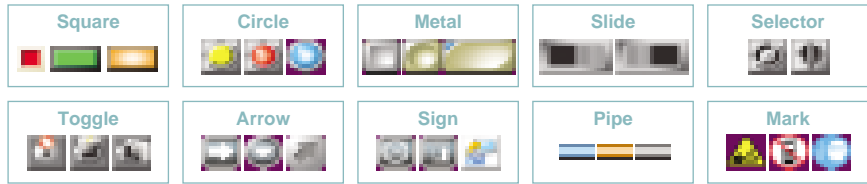


For more convenient maintenance

## Parts

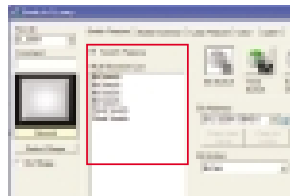
### High-quality Parts

A wide variety of attractive and easy-to-understand parts are prepared. Pictorial symbols can be used to create operator screens that overcome language barriers.



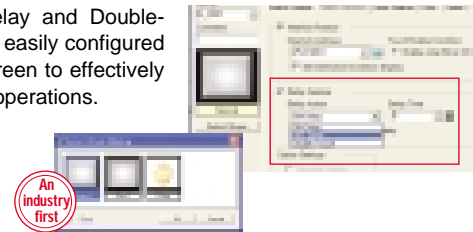
### Multifunction Switches

Multiple functions can easily be assigned to a single switch without changing the existing functions.



### ON Delay / OFF Delay / Double Touch Switches

ON-Delay, OFF-Delay and Double-Touch Input can be easily configured in switch setting screen to effectively prevent erroneous operations.



## Fonts

### Stroke Fonts

Beautiful stroke fonts provide greater layout flexibility. They can be bolded, outlined and smoothly enlarged / reduced in single-dot increments.



Windows-based image fonts are also supported. This allows you to create displays with a wide range of characters.

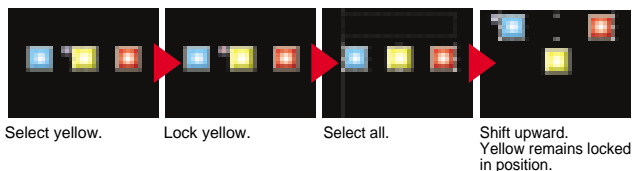


Note: For supported languages, please refer to "Operating Environment for GP-Pro EX" on Page 13.

## Editing Function

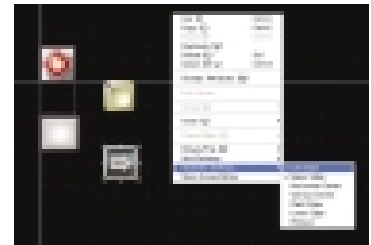
### Fixing Pin Function

Placed parts or other objects can be fixed to the background to ensure smoother operation.



### Guideline Display

Positioning of objects can be visually done. By automatically detecting the position of the already placed object, this function helps you to align a newly added or moved object with it.



### Pasting Images

Image files (BMP and JPEG) can be freely pasted as well as enlarged/reduced.

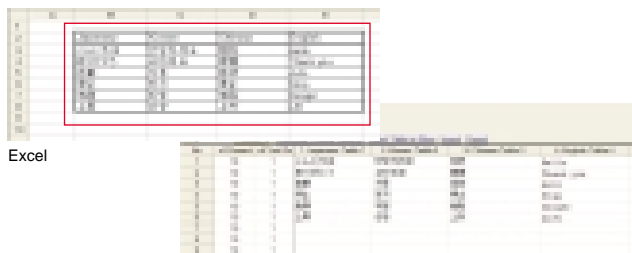


Directly call up JPG files saved on a CF card.

## Global Compatibility

### Text Tables

Easily switch between various languages on the same screen. Simply use copy & paste functions to place data into the text table after translation in CSV or Excel. The number of lines in the text table has been increased to 10,000.



### Language-switching function in drawing environment

The software menu language can be toggled between English and Japanese easily to accommodate operator preference.

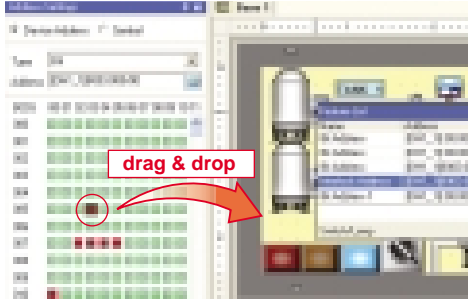
### Unicode®


In a font corresponding to Unicode, the language of other countries input is possible regardless of a language of the OS. You can also directly capture characters from Web dictionary services.

Another Function

○ Address Mapping

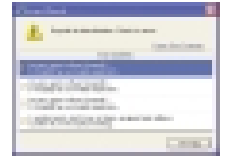
With drag & drop mouse operation only, address setup can be easily & visually done, ensuring higher efficiency.



Simply clicking on the part ID displays the screen where the relevant part is used. 

○ Error Checking

GP-Pro EX detects errors in a project before the screen data is transferred. When an error is detected, a detailed message is displayed including why, where, etc.



○ Auto-document

This feature supports smoother document preparation. Simply by selecting necessary items, you can easily create a document.



○ Preview

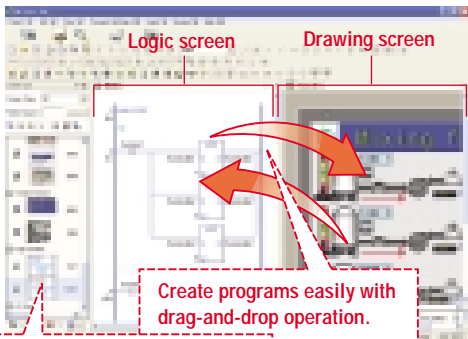
This feature allows you to easily verify the actual display screen in preview mode by allowing the input of dummy data for each part. Screen images can be captured in preview mode to use them for screen specifications.

Logic Program · D-script

○ Logic Program

With the upgraded GP-Pro EX, you can develop logic programs as well as screen creation. You can also use existing logic programs created with the GP-PRO/PBIII C-Package.

- Symbols for drawing/editing images and variables for creating logic programs are unified.
- Symbol variables for drawing images and creating logic programs are not required to be imported nor exported.
- Block structured subroutines reduce steps for development and management of logic programs.



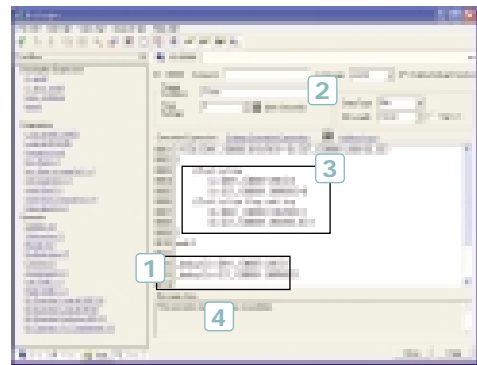
Block-structured subroutines ensure smooth editing. See Pages 26 for Instruction Notation List

Now added instructions for greater ease of use.

Not Supported by AGP-3301S/ AGP-3301L/ AGP-3302B.

○ D-script

D-script is a simplified language which can be programmed on your own. This function enables calculation inside GP and drastically reduces workload of external communication device such as PLC.



1 Debug Function

Using the Debug Function, addresses can be verified on the display terminal. Debug function can be set to be hidden or displayed by using the main unit offline.

2 Triggers Various triggers allow for smooth navigation of operations.

3 Communication between multiple devices

Specify the different devices connected.

4 Message Area Clear, easy-to-understand messages are displayed.

Operating Environment for GP-Pro EX

PC	PC Models on which Windows® runs normally.
OS	Windows® 2000 (Service Pack 3 or later), Windows® XP (Home Edition/ Professional Edition) *Administrator permission is necessary when you install this product.
CPU	Pentium® III 800MHz or more (Pentium® 4 1.3GHz or above is recommended.)
Resolution	SVGA 800x600 or above is recommended. A display of 256 or more colors is required.
Memory	512MB or more (1GB or more is recommended.)
Hard Disk Space	400MB or more *Enough free space to install GP-Pro EX
Language	Software Menu English, Japanese (German, Italian, French, Spanish, Chinese, Taiwanese, Korean)* Please contact your Pro-face sales representative in detail.
	Languages that the GP can Display European languages, Japanese, Korean, Simplified and Traditional Chinese, Thai, Cyrillic Alphabet. *To input languages other than English and Japanese for the 'Languages that the GP can Display', you need to add each language's FEP and fonts.
Each Language's FEP	Windows® 2000 (Service Pack 3 or later), Windows® XP (Home Edition/Professional Edition) supported FEP
Others	.NET Framework Ver.1.1 (Service Pack1) *.NET Framework Ver.1.1 (Service Pack1) automatically installs on a PC without it.
	Internet Explorer Ver.6.0 or later
	Adobe® Reader® Ver. 6.0.3 or later
	Mouse, CD-ROM Drive (necessary only at the time of installation) and printer which support the above OS Internet connection is required for the online update feature and the online user registration.

NOTE: This operating environment is valid as of May, 2006. Please consult with sales staff prior to purchasing. When using a screen from PC, USB port or Ethernet for downloading screen is necessary.

Operating Environment for Transfer Tool

PC	PC Models on which Windows® runs normally.
OS	Windows® 98 (Second Edition or later), Windows® Millennium Edition, Windows® 2000 Professional (Service Pack 3 or later), Windows® XP (Home Edition/ Professional Edition) *Administrator permission is necessary when you install this product.
CPU	Pentium® II 266MHz or above is recommended.
Memory	128MB or more (512MB or more is recommended.)
Hard Disk Space	60MB or more *Enough free space to install GP-Pro EX
Others	Mouse, CD-ROM Drive (necessary only at the time of installation) and printer which support the above OS

NOTE: This operating environment is valid as of May, 2006. Please consult with sales staff prior to purchasing. When using a screen from PC, USB port or Ethernet for downloading screen is necessary.

Operating Environment for Movie Converter

PC	PC Models on which Windows® runs normally.
OS	Windows® 2000 (Service Pack 4), Windows® XP (Home Edition/ Professional Edition) (Service Pack2 or later)
CPU	Pentium® II 1GHz or above is recommended.
Memory	256MB or more (512MB or more is recommended.)
Hard Disk Space	60MB or more *Enough free space to install Movie Converter
Others	Mouse, CD-ROM Drive (necessary only at the time of installation) Windows® Media Player 9.0, Directx x9.0c

NOTE: This operating environment is valid as of May, 2006. A codec must be installed on the PC running Movie Converter. (If movie files can be played normally on the PC, the codec has already been installed.) A default codec is installed with video/ audio players such as Windows® Media Player.

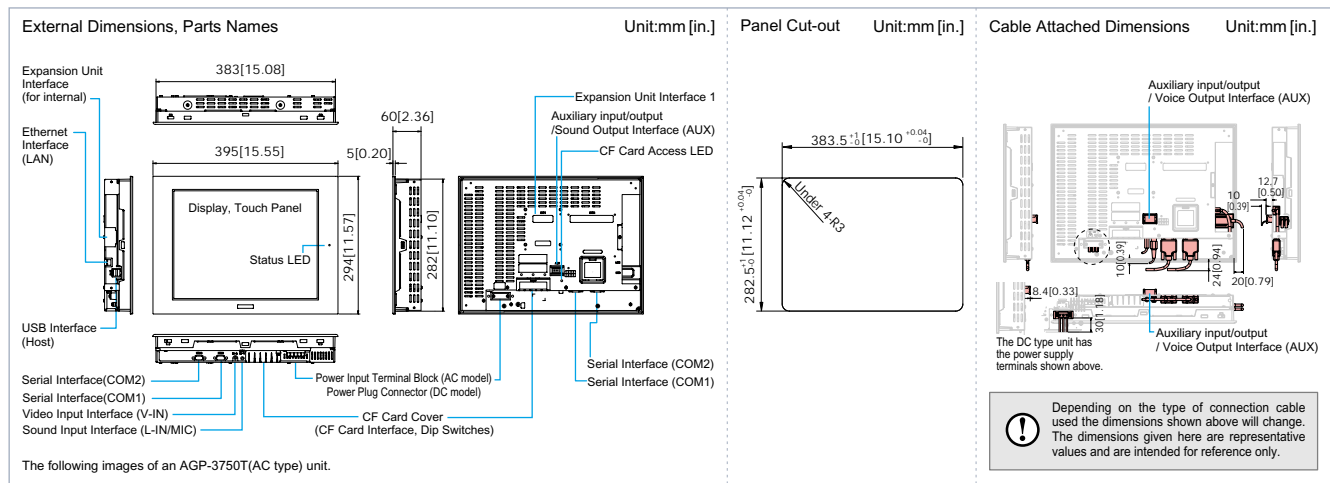
# 15-inch Specifications

FUNCTIONAL SPECIFICATION		AGP3750-T1-AF	AGP3750-T1-D24
M Class			
International Safety Standards			
Display Type		TFT Color LCD	
Display Colors		65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1	
Backlight		CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)	
Display Resolution		1024 x 768 pixels	
Effective Display Area		306.2mm[12.06in.] x 230.1mm[9.06in.]	
Brightness Control		8 levels of adjustment available via touch panel	
Contrast Adjustment		—	
Language Fonts		Japanese: 6962 (JIS Standards 1&2)(including 607 non-kanji characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)	
Text Composition		Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)	
Text		Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2	
Memory		Application: 8MB FEPROM *3 Data Backup: 320KB SRAM *4	
Touch Panel		Type: Resistive Film (analog) Resolution: 1024 x 1024	
Control Memory		Variable Area: 64 KB SRAM (uses lithium battery) *4 Program Area: 132 KB FLASH EPROM	
Interface		Serial Interface (COM1): Asynchronous Transmission: RS-232C/422/485 *5 Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male Serial Interface (COM2): Asynchronous Transmission: RS-422/485 Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *6), Connector: D-Sub 9pin female Ethernet Interface: IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45) Expansion Unit Interface: Expansion Unit Interface (external/internal) USB Interface: USB 1.1 Host I/F, USB TYPE-A connector x 2 CF Card Interface: CF Card Slot (TYPE-II) x 1 Video Input Interface: NTSC: 59.9Hz, PAL: 50Hz, SECAM: 50Hz, Connector: RCA 75 Ω Sound Input Interface: MIC input/LINE input (Change with S/W), Connector: MINI-JACK Φ3.5 Sound Output Interface: Speaker Output 70mW (Rated Load: 8Ω, Frequency: 1kHz) Connector: Two piece type terminal block AUX Input/Output Interface: [AUX Output] Alarm Output, RUN Output, Buzzer Output, Rated Voltage: DC24V, Rated Current: 50mA, [AUX Input] Remote Reset Input, Input Voltage: DC24V, Input Current: 6mA, Operating Voltage: (When ON) DC9V or more, (When OFF) DC2.5V or less	

GENERAL SPECIFICATION	AGP3750-T1-AF	AGP3750-T1-D24
Rated Voltage	AC100V to AC240V	DC24V
Rated Voltage Range	AC85V to AC265V	DC19.2V to DC28.8V
Allowable Voltage Drop	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less
Power Consumption	AC100V 1.1A or less AC240V 0.7A or less	50W or less
Voltage Endurance	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)	
Operating Temperature	0 °C to +50 °C *7	
Storage Temperature	-20 °C to +60 °C	
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)	
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)	
Pollution Degree	Pollution Degree 2	
Corrosive Gasses	Free of corrosive gasses	
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)	
Vibration Resistance	IEC61131-2(JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s <sup>2</sup> X,Y,Z directions for 10 times (100min.)	
Noise Immunity (via noise simulator)	Noise Voltage: 1500Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000Vp-p Pulse Duration: 1 μs Arise Time: 1ns
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)	
Grounding	100 Ω or less, or your country's applicable standard *8	
Ratings (For front panel of installed unit)	Equivalent to IP65f NEMA #250 TYPE 4X/13 *9	
External Dimensions	W395mm[15.55in.] x H294mm[11.57in.] x D60mm[2.36in.]	
Weight	5.6kg (12.3lb) or less	
Cooling Method	Natural air circulation	

\*1 Changing the Colors setting to "65,536 colors" will disable the blinking feature on all screens in your project. If you wish to use the blinking feature, select "16,384 colors".  
 \*2 Font Sizes can be set up by software.  
 \*3 User area.  
 \*4 A Lithium battery's lifetime is:  
 10 years when the battery's ambient temperature is 40 °C or less.  
 4.1 years when the battery's ambient temperature is 50 °C or less.  
 1.5 years when the battery's ambient temperature is 60 °C or less.  
 When used for back up: Approximately 60 days, with a fully charged battery. Approximately 6 days, with a half-charged battery.

\*5 RS-232C and RS-422/485 are software switchable.  
 \*6 SIEMENS SIMATIC S7-200/300/400 series (MPI port only). Please contact your Pro-face sales representative for supported models and other details.  
 \*7 Operating temperature refers to temperature inside mounting enclosure.  
 \*8 Grounding requirements differ from country to country. Be sure to confirm your work environment requirements prior to installation. For more information, please contact your local Pro-face office.  
 \*9 The degree of protection provided by these products is equivalent to IP65f, however their performance cannot be guaranteed for every environment. Be sure to confirm your work environment requirements prior to installation.



# 12.1-inch Specifications



FUNCTIONAL SPECIFICATION	AGP3650-T1-AF	AGP3600-T1-AF-D81K	AGP3600-T1-D24-D81K	AGP3600-T1-AF-D81C	AGP3600-T1-D24-D81C
	M Class	C Class			
	DIO(Sink)		DIO(Source)		
International Safety Standards	UL, CE		UL, CE		
Display Type	TFT Color LCD				
Display Colors	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1				
Backlight	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)				
Display Resolution	800 x 600 pixels				
Effective Display Area	248.0mm[9.76in.] x 186.5mm[7.34in.]				
Brightness Control	8 levels of adjustment available via touch panel				
Contrast Adjustment	—				
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kANJI characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)				
Text Composition	Character Sizes	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)			
	Font Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2			
Text	8 x 8 dots	100 Char. x 75 rows			
	8 x 16dots	100 Char. x 37 rows			
	16 x 16 dots	50 Char. x 37 rows			
	32 x 32 dots	25 Char. x 18 rows			
Memory	Application	8MB FEPRAM *3			
	Data Backup	320KB SRAM *4			
Touch Panel	Type	Resistive Film (analog)			
	Resolution	1024 x 1024			
Control Memory	Variable Area	64 KB SRAM (uses lithium battery) *4			
	Program Area	132 KB FLASH EPROM			
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 *5, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male			
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485 Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *6), Connector: D-Sub 9pin female			
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)			
	Expansion Unit Interface	Expansion Unit Interface (external/internal)			
	USB Interface	USB1.1, USB TYPE-A connector x 2			
	VM Unit Interface	VM Unit Interface x 1			
	CF Card Interface	CF Card Slot (TYPE-II) x 1			
	Video Input Interface	NTSC: 59.9Hz, PAL: 50Hz, SECAM: 50Hz Connector: RCA 75 Ω			
	Sound Input Interface	MIC input/LINE input (Change with SW), Connector: MINI-JACK Φ3.5			
	Sound Output Interface	Speaker Output 70mW (Rated Load: 8Ω, Frequency: 1kHz), Connector: Two piece type terminal block			
AUX Input/Output Interface	[AUX Output] Alarm Output, RUN Output, Buzzer Output, Rated Voltage: DC24V, Rated Current: 50mA, [AUX Input] Remote Reset Input, Input Voltage: DC24V, Input Current: 6mA, Operating Voltage: (When ON) DC9V or more, (When OFF) DC2.5V or less				
DIO Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Sink type 2 outputs				
FLEX NETWORK Interface	—				

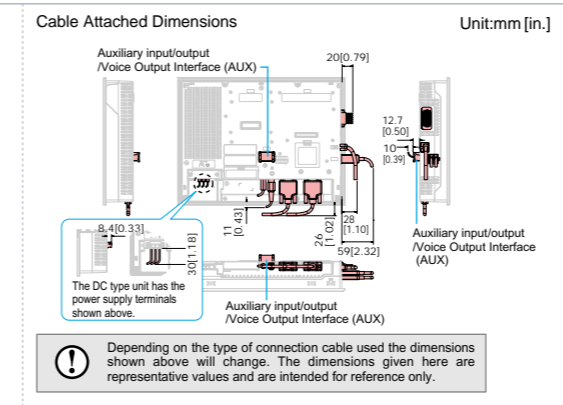
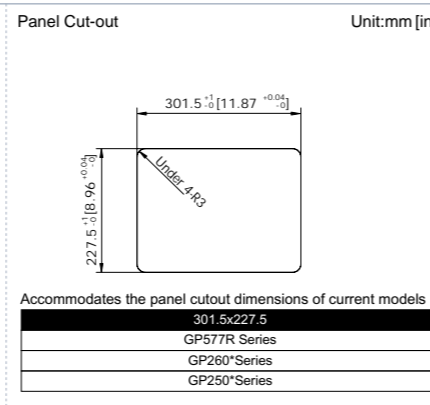
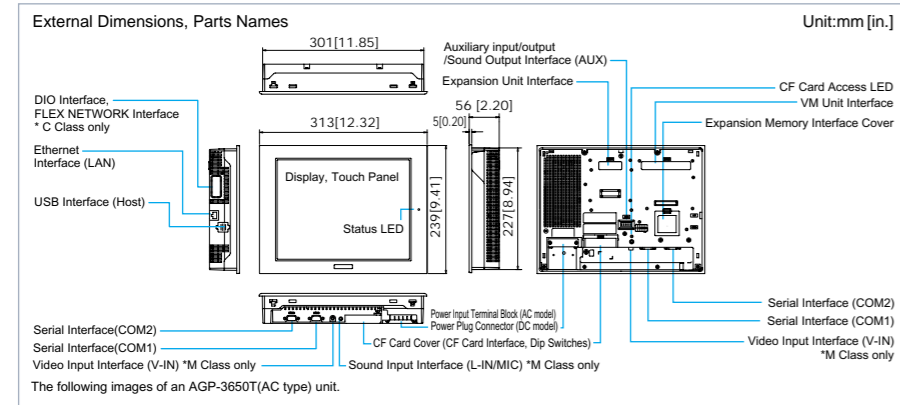
FUNCTIONAL SPECIFICATION	AGP3600-T1-AF-FN1M	AGP3600-T1-D24-FN1M	AGP3600-T1-AF	AGP3600-T1-D24
	C Class		S Class	
	FLEX NETWORK			
International Safety Standards	UL, CE		UL, CE	
Display Type	TFT Color LCD			
Display Colors	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1			
Backlight	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)			
Display Resolution	800 x 600 pixels			
Effective Display Area	248.0mm[9.76in.] x 186.5mm[7.34in.]			
Brightness Control	8 levels of adjustment available via touch panel			
Contrast Adjustment	—			
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kANJI characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)			
Text Composition	Character Sizes	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)		
	Font Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2		
Text	8 x 8 dots	100 Char. x 75 rows		
	8 x 16dots	100 Char. x 37 rows		
	16 x 16 dots	50 Char. x 37 rows		
	32 x 32 dots	25 Char. x 18 rows		
Memory	Application	8MB FEPRAM *3		
	Data Backup	320KB SRAM *4		
Touch Panel	Type	Resistive Film (analog)		
	Resolution	1024 x 1024		
Control Memory	Variable Area	64 KB SRAM (uses lithium battery) *4		
	Program Area	132 KB FLASH EPROM		
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 *5, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male		
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485 Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *6), Connector: D-Sub 9pin female		
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)		
	Expansion Unit Interface	Expansion Unit Interface (external/internal)		
	USB Interface	USB1.1, USB TYPE-A connector x 2		
	VM Unit Interface	VM Unit Interface x 1		
	CF Card Interface	CF Card Slot (TYPE-II) x 1		
	Video Input Interface	—		
	Sound Input Interface	—		
	Sound Output Interface	Speaker Output 70mW (Rated Load: 8Ω, Frequency: 1kHz), Connector: Two piece type terminal block		
AUX Input/Output Interface	[AUX Output] Alarm Output, RUN Output, Buzzer Output, Rated Voltage: DC24V, Rated Current: 50mA, [AUX Input] Remote Reset Input, Input Voltage: DC24V, Input Current: 6mA, Operating Voltage: (When ON) DC9V or more, (When OFF) DC2.5V or less			
DIO Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Sink type 2 outputs			
FLEX NETWORK Interface	63 stations max., Bit variable input: 256 points, Bit variable output: 256 points, Integer variable input: 64 points, Integer variable output: 64 *7			

GENERAL SPECIFICATION	AGP3650-T1-AF	AGP3600-T1-AF-D81K	AGP3600-T1-D24-D81K	AGP3600-T1-AF-D81C	AGP3600-T1-D24-D81C
Rated Voltage	AC100V to AC240V	DC24V	DC24V	AC100V to AC240V	DC24V
Rated Voltage Range	AC85V to AC265V	DC19.2V to DC28.8V	DC19.2V to DC28.8V	AC85V to AC265V	DC19.2V to DC28.8V
Allowable Voltage Drop	Shorter than 1 cycle (Instantaneous power failure time: 1s or less)	10ms or less	10ms or less	Shorter than 1 cycle (Instantaneous power failure time: 1s or less)	10ms or less
Power Consumption	AC100V 0.9A or less AC240V 0.45A or less	50W or less	50W or less	AC100V 0.9A or less AC240V 0.45A or less	50W or less
Voltage Endurance	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)				
Operating Temperature	0 °C to +50 °C *8				
Storage Temperature	-20 °C to +60 °C				
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)				
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)				
Pollution Degree	Pollution Degree 2				
Corrosive Gasses	Free of corrosive gasses				
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)				
Vibration Resistance	IEC61131-2 (JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s <sup>2</sup> X,Y,Z directions for 10 times (100min.)				
Noise Immunity (via noise simulator)	Noise Voltage: 1500Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000Vp-p Pulse Duration: 1 μs Arise Time: 1ns
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)				
Grounding	100Ω or less, or your country's applicable standard *9				
Ratings (For front panel of installed unit)	Equivalent to IP65f NEMA #250 TYPE 4X/13 *10				
External Dimensions	W313mm[12.31in.] x H239mm[9.41in.] x D56mm[2.20in.]				
Weight	3.0kg (6.6lb) or less	3.2kg (7.0lb) or less	3.2kg (7.0lb) or less	3.0kg (6.6lb) or less	3.0kg (6.6lb) or less
Cooling Method	Natural air circulation				

GENERAL SPECIFICATION	AGP3600-T1-AF-FN1M	AGP3600-T1-D24-FN1M	AGP3600-T1-AF	AGP3600-T1-D24
Rated Voltage	AC100V to AC240V	DC24V	AC100V to AC240V	DC24V
Rated Voltage Range	AC85V to AC265V	DC19.2V to DC28.8V	AC85V to AC265V	DC19.2V to DC28.8V
Allowable Voltage Drop	Shorter than 1 cycle (Instantaneous power failure time: 1s or less)	10ms or less	Shorter than 1 cycle (Instantaneous power failure time: 1s or less)	10ms or less
Power Consumption	AC100V 0.9A or less AC240V 0.45A or less	50W or less	AC100V 0.9A or less AC240V 0.45A or less	50W or less
Voltage Endurance	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)			
Operating Temperature	0 °C to +50 °C *8			
Storage Temperature	-20 °C to +60 °C			
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)			
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)			
Pollution Degree	Pollution Degree 2			
Corrosive Gasses	Free of corrosive gasses			
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)			
Vibration Resistance	IEC61131-2 (JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s <sup>2</sup> X,Y,Z directions for 10 times (100min.)			
Noise Immunity (via noise simulator)	Noise Voltage: 1500Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500Vp-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000Vp-p Pulse Duration: 1 μs Arise Time: 1ns
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)			
Grounding	100Ω or less, or your country's applicable standard *9			
Ratings (For front panel of installed unit)	Equivalent to IP65f NEMA #250 TYPE 4X/13 *10			
External Dimensions	W313mm[12.31in.] x H239mm[9.41in.] x D56mm[2.20in.]			
Weight	3.2kg (7.0lb) or less	3.0kg (6.6lb) or less	3.0kg (6.6lb) or less	3.0kg (6.6lb) or less
Cooling Method	Natural air circulation			

\*1 Changing the Colors setting to "65,536 colors" will disable the blinking feature on all screens in your project. If you wish to use the blinking feature, select "16,384 colors".  
 \*2 Font Sizes can be set up by software.  
 \*3 User area.  
 \*4 A Lithium battery's lifetime is:  
 10 years when the battery's ambient temperature is 40 °C or less.  
 4.1 years when the battery's ambient temperature is 50 °C or less.  
 1.5 years when the battery's ambient temperature is 60 °C or less.  
 When used for back up: Approximately 60 days, with a fully charged battery. Approximately 6 days, with a half-charged battery.

\*5 RS-232C and RS-422/485 are software switchable.  
 \*6 SIEMENS SIMATIC S7-200/300/400 series (MPI port only).  
 \*7 Depending on type of units used.  
 \*8 Operating temperature refers to temperature inside mounting enclosure.  
 \*9 Grounding requirements differ from country to country. Be sure to confirm your work environment requirements prior to installation. For more information, please contact your local Pro-face office.  
 \*10 The degree of protection provided by these products is equivalent to IP65f, however their performance cannot be guaranteed for every environment. Be sure to confirm your work environment requirements prior to installation.



# 10.4-inch Specifications



FUNCTIONAL SPECIFICATION	AGP3550-T1-AF		AGP3500-T1-AF-D81K		AGP3500-T1-D24-D81K		AGP3500-S1-AF-D81K		AGP3500-S1-D24-D81K		AGP3500-L1-D24-D81C		AGP3500-T1-AF-D81C		AGP3500-T1-D24-D81C	
	M Class	C Class				DIO(Source)				DIO(Sink)						
International Safety Standards	UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC	
Display Type	TFT Color LCD				STN Color LCD				Monochrome LCD				TFT Color LCD			
Display Colors	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1				4,096 Colors				Black and White (16 Shades)				65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1			
Backlight	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)															
Display Resolution	640 x 480 pixels				640 x 480 pixels				640 x 480 pixels				640 x 480 pixels			
Effective Display Area	211.2mm[8.31in.] x 158.4mm[6.24in.]				215.2mm[8.43in.] x 162.3mm[6.39in.]				216.0mm[8.50in.] x 160.8mm[6.33in.]				211.2mm[8.31in.] x 158.4mm[6.24in.]			
Brightness Control	8 levels of adjustment available via touch panel															
Contrast Adjustment	8 levels of adjustment available via touch panel															
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kANJI characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)															
Text Composition	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)															
Text	Character Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2														
	Font Sizes	80 Char. x 60 rows														
	8 x 8 dots	80 Char. x 30 rows														
	8 x 16dots	40 Char. x 30 rows														
Memory	Application	8MB FEPROM *3														
	Data Backup	320KB SRAM *4														
Touch Panel	Type	Resistive Film (analog)														
	Resolution	1024 x 1024														
Control Memory	Variable Area	64 KB SRAM (uses lithium battery) *4														
	Program Area	132 KB FLASH EPROM														
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 *5, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male														
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485 Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *6), Connector: D-Sub 9pin female														
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)														
	Expansion Unit Interface	Expansion Unit Interface (external/internal)														
	USB Interface	USB1.1, USB TYPE-A connector x 2														
	VM Unit Interface	VM Unit Interface x 1 *7														
	CF Card Interface	CF Card Slot (TYPE-II) x 1														
	Video Input Interface	NTSC: 50/60Hz PAL: 50Hz, SECAM: 50Hz Connector: RCA 75Ω														
	Sound Input Interface	MIC input/LINE input (Change with SW), Connector: MINI-JACK9.35														
	Sound Output Interface	Speaker Output 70mW(Rated Load: 8Ω, Frequency: 1KHz), Connector: Two piece type terminal block														
	AUX Input/Output Interface	[AUX Output] Alarm Output, RUN Output, Buzzer Output, Rated Voltage: DC24V, Rated Current: 50mA, [AUX Input] Remote Reset Input, Input Voltage: DC24V, Input Current: 6mA, Operating Voltage: (When ON) DC9V or more, (When OFF) DC2.5V or less														
	DIO Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Sink type 2 outputs														
FLEX NETWORK Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Source type 2 outputs															

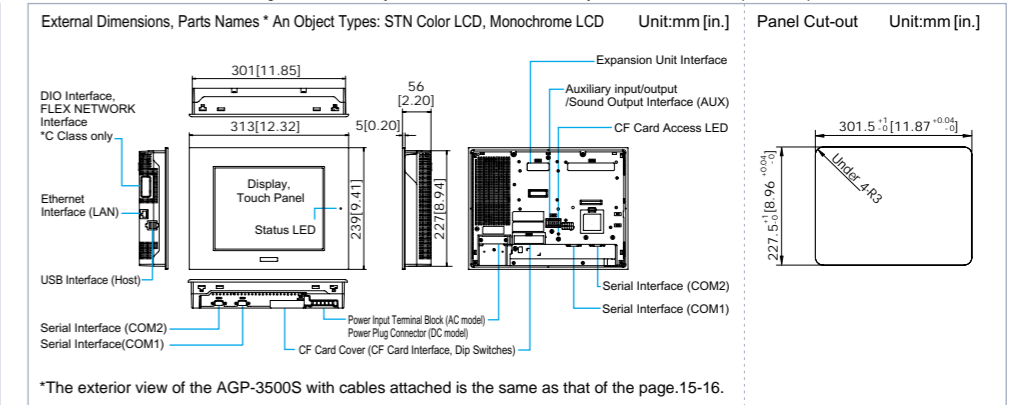
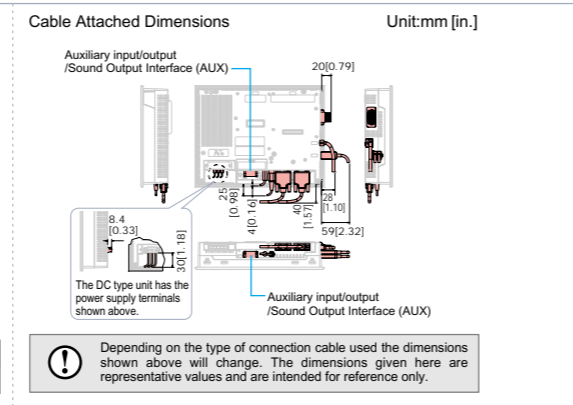
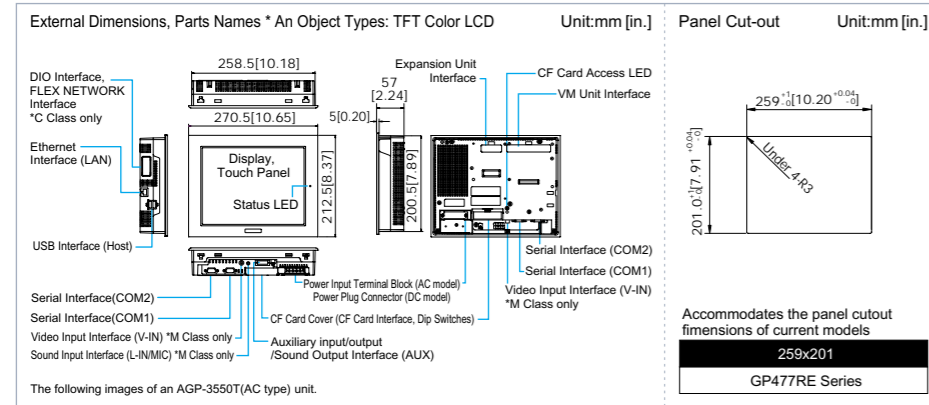
FUNCTIONAL SPECIFICATION	AGP3500-S1-AF-D81C		AGP3500-S1-D24-D81C		AGP3500-T1-AF-FN1M		AGP3500-T1-D24-FN1M		AGP3500-T1-AF		AGP3500-T1-D24		AGP3500-S1-AF		AGP3500-S1-D24		AGP3500-L1-D24	
	C Class				S Class				DIO(Source)				DIO(Sink)					
International Safety Standards	UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC		UL, CE, FCC	
Display Type	STN Color LCD				TFT Color LCD				STN Color LCD				Monochrome LCD					
Display Colors	4,096 Colors				65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1				4,096 Colors				Black and White (16 Shades)					
Backlight	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)																	
Display Resolution	640 x 480 pixels				640 x 480 pixels				640 x 480 pixels				640 x 480 pixels					
Effective Display Area	215.2mm[8.43in.] x 162.3mm[6.39in.]				211.2mm[8.31in.] x 158.4mm[6.24in.]				215.2mm[8.43in.] x 162.3mm[6.39in.]				216.0mm[8.50in.] x 160.8mm[6.33in.]					
Brightness Control	8 levels of adjustment available via touch panel																	
Contrast Adjustment	8 levels of adjustment available via touch panel																	
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kANJI characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)																	
Text Composition	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)																	
Text	Character Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2																
	Font Sizes	80 Char. x 60 rows																
	8 x 8 dots	80 Char. x 30 rows																
	8 x 16dots	40 Char. x 30 rows																
Memory	Application	8MB FEPROM *3																
	Data Backup	320KB SRAM *4																
Touch Panel	Type	Resistive Film (analog)																
	Resolution	1024 x 1024																
Control Memory	Variable Area	64 KB SRAM (uses lithium battery) *4																
	Program Area	132 KB FLASH EPROM																
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 *5, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male																
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485 Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *6), Connector: D-Sub 9pin female																
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)																
	Expansion Unit Interface	Expansion Unit Interface (external/internal)																
	USB Interface	USB1.1, USB TYPE-A connector x 2																
	VM Unit Interface	VM Unit Interface x 1 *7																
	CF Card Interface	CF Card Slot (TYPE-II) x 1																
	Video Input Interface	NTSC: 50/60Hz PAL: 50Hz, SECAM: 50Hz Connector: RCA 75Ω																
	Sound Input Interface	MIC input/LINE input (Change with SW), Connector: MINI-JACK9.35																
	Sound Output Interface	Speaker Output 70mW(Rated Load: 8Ω, Frequency: 1KHz), Connector: Two piece type terminal block																
	AUX Input/Output Interface	[AUX Output] Alarm Output, RUN Output, Buzzer Output, Rated Voltage: DC24V, Rated Current: 50mA, [AUX Input] Remote Reset Input, Input Voltage: DC24V, Input Current: 6mA, Operating Voltage: (When ON) DC9V or more, (When OFF) DC2.5V or less																
	DIO Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Sink type 2 outputs																
FLEX NETWORK Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Source type 2 outputs																	

GENERAL SPECIFICATION	AGP3550-T1-AF	AGP3500-T1-AF-D81K	AGP3500-T1-D24-D81K	AGP3500-S1-AF-D81K	AGP3500-S1-D24-D81K	AGP3500-L1-D24-D81C	AGP3500-T1-AF-D81C	AGP3500-T1-D24-D81C
Rated Voltage	AC100V to AC240V	DC24V	AC100V to AC240V	DC24V	DC24V	AC100V to AC240V	DC24V	DC24V
Rated Voltage Range	AC85V to AC265V	DC19.2V to DC28.8V	AC85V to AC265V	DC19.2V to DC28.8V	DC19.2V to DC28.8V	AC85V to AC265V	DC19.2V to DC28.8V	DC19.2V to DC28.8V
Allowable Voltage Drop	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less	10ms or less	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less	10ms or less
Power Consumption	AC100V 0.9A or less AC240V 0.45A or less	50W or less	AC100V 0.9A or less AC240V 0.45A or less	50W or less	50W or less	AC100V 0.9A or less AC240V 0.45A or less	50W or less	50W or less
Voltage Endurance	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)							
Operating Temperature	0 °C to +50 °C *9							
Storage Temperature	-20 °C to +80 °C							
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)							
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)							
Pollution Degree	Pollution Degree 2							
Corrosive Gasses	Free of corrosive gasses							
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)							
Vibration Resistance	IEC61131-2(JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s² X,Y,Z directions for 10 times (100min.)							
Noise Immunity (via noise simulator)	Noise Voltage: 1500V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)							
Grounding	100 Ω or less, or your country's applicable standard *10							
Ratings (For front panel of installed unit)	Equivalent to IP65/ NEMA #250 TYPE 4X/13 *11							
External Dimensions	W270.5mm[10.65in.] x H212.5mm[8.37in.] x D57mm[2.24in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W270.5mm[10.65in.] x H212.5mm[8.37in.] x D57mm[2.24in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W270.5mm[10.65in.] x H212.5mm[8.37in.] x D57mm[2.24in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]
Weight	2.5kg (5.5lb) or less	2.7kg (5.9lb) or less	3.2kg (7.0lb) or less	2.7kg (5.9lb) or less	2.7kg (5.9lb) or less	2.5kg (5.5lb) or less	2.7kg (5.9lb) or less	3.0kg (6.6lb) or less
Cooling Method	Natural air circulation							

GENERAL SPECIFICATION	AGP3500-S1-AF-D81C	AGP3500-S1-D24-D81C	AGP3500-T1-AF-FN1M	AGP3500-T1-D24-FN1M	AGP3500-T1-AF	AGP3500-T1-D24	AGP3500-S1-AF	AGP3500-S1-D24	AGP3500-L1-D24
Rated Voltage	AC100V to AC240V	DC24V	AC100V to AC240V	DC24V	AC100V to AC240V	DC24V	AC100V to AC240V	DC24V	DC24V
Rated Voltage Range	AC85V to AC265V	DC19.2V to DC28.8V	AC85V to AC265V	DC19.2V to DC28.8V	AC85V to AC265V	DC19.2V to DC28.8V	AC85V to AC265V	DC19.2V to DC28.8V	DC19.2V to DC28.8V
Allowable Voltage Drop	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less	Shorter than 1cycle (Instantaneous power failure time: 1s or less)	10ms or less	10ms or less
Power Consumption	AC100V 0.9A or less AC240V 0.45A or less	50W or less	AC100V 0.9A or less AC240V 0.45A or less	50W or less	AC100V 0.9A or less AC240V 0.45A or less	50W or less	AC100V 0.9A or less AC240V 0.45A or less	50W or less	50W or less
Voltage Endurance	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1500V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)	AC1000V 20mA for 1 minute (between charging and FG terminals)
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)								
Operating Temperature	0 °C to +50 °C *9								
Storage Temperature	-20 °C to +60 °C								
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)								
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)								
Pollution Degree	Pollution Degree 2								
Corrosive Gasses	Free of corrosive gasses								
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)								
Vibration Resistance	IEC61131-2(JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s² X,Y,Z directions for 10 times (100min.)								
Noise Immunity (via noise simulator)	Noise Voltage: 1500V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1500V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns	Noise Voltage: 1000V/p-p Pulse Duration: 1 μs Arise Time: 1ns
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)								
Grounding	100 Ω or less, or your country's applicable standard *10								
Ratings (For front panel of installed unit)	Equivalent to IP65/ NEMA #250 TYPE 4X/13 *11								
External Dimensions	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W270.5mm[10.65in.] x H212.5mm[8.37in.] x D57mm[2.24in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W270.5mm[10.65in.] x H212.5mm[8.37in.] x D57mm[2.24in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W270.5mm[10.65in.] x H212.5mm[8.37in.] x D57mm[2.24in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]	W313mm[12.32in.] x H239mm[9.41in.] x D56mm[2.20in.]
Weight	3.2kg (7.0lb) or less	2.7kg (5.9lb) or less	2.5kg (5.5lb) or less	2.7kg (5.9lb) or less	2.5kg (5.5lb) or less	2.7kg (5.9lb) or less	3.0kg (6.6lb) or less	3.0kg (6.6lb) or less	3.0kg (6.6lb) or less
Cooling Method	Natural air circulation								

\*1 Changing the Colors setting to "65,536 colors" will disable the blinking feature on all screens in your project. If you wish to use the blinking feature, select "16,384 colors".  
 \*2 Font Sizes can be set up by software.  
 \*3 User area.  
 \*4 A Lithium battery's lifetime is:  
 10 years when the battery's ambient temperature is 40 °C or less.  
 4.1 years when the battery's ambient temperature is 50 °C or less.  
 1.5 years when the battery's ambient temperature is 60 °C or less.  
 When used for back up: Approximately 60 days, with a fully charged battery, approximately 6 days, with a half-charged battery.

\*5 RS-232C and RS-422/485 are software switchable.  
 \*6 SIEMENS SIMATIC S7-200/300/400 series (MPI port only).  
 \*7 Please contact your Pro-face sales representative for supported models and other details.  
 \*8 The Expansion Unit Interface and VM Unit Interface cannot be used simultaneously.  
 \*9 Depending on type of units used.  
 \*10 When using STN Color LCD models in an environment where the temperature becomes or exceeds 40 °C for an extended period of time, the screen contrast level may decrease from its original level of brightness. Operating temperature refers to temperature inside mounting enclosure.  
 \*11 Grounding requirements differ from country to country. Be sure to confirm your work environment requirements prior to installation. For more information, please contact your local Pro-face office.  
 \*12 The degree of protection provided by these products is equivalent to IP65/ however their performance cannot be guaranteed for every environment. Be sure to confirm your work environment requirements prior to installation.



# 7.5-inch Specifications

FUNCTIONAL SPECIFICATION	AGP3450-T1-D24	AGP3400-T1-D24-D81K	AGP3400-S1-D24-D81K	AGP3400-T1-D24-D81C
	M Class	C Class		DIO(Source)
International Safety Standards	UL, CE, FCC, RoHS			
Display Type	TFT Color LCD		STN Color LCD	TFT Color LCD
Display Colors	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1		4,096 Colors	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1
Backlight	CCFL (Service life: 54,000 hrs. at 25 °C and 24 hr. Operation)			
Display Resolution	640 x 480 pixels			
Effective Display Area	153.7mm[6.05in.] x 115.8mm[4.56in.]			
Brightness Control	8 levels of adjustment available via touch panel			
Contrast Adjustment	8 levels of adjustment available via touch panel			
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kanji characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)			
Text Composition	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)			
Text	Character Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2		
	Font Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2		
	8 x 8 dots	80 Char. x 60 rows		
	8 x 16dots	80 Char. x 30 rows		
Memory	Application	8MB FEPRAM *3		
	Data Backup	320KB SRAM *4		
Touch Panel	Type	Resistive Film (analog)		
	Resolution	1024 x 1024		
Control Memory	Variable Area	64 KB SRAM (uses lithium battery) *4		
	Program Area	132 KB FLASH EPROM		
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 *5, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male		
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *6), Connector: D-Sub 9pin female		
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)		
	Expansion Unit Interface	Expansion Unit Interface (external/internal)		
	USB Interface	USB1.1 Host I/F, USB TYPE-A connector x 1		
	CF Card Interface	CF Card Slot (TYPE-II) x 1		
	Video Input Interface	NTSC: 59.9Hz, PAL: 50Hz, SECAM: 50Hz, Connector: RCA 75Ω		
	Sound Input Interface	MIC input/LINE input (Change with S/W), Connector: MINI-JACK φ3.5		
	Sound Output Interface	Speaker Output 70mW(Rated Load: 8Ω, Frequency: 1KHz), Connector: Two piece type terminal block		
	AUX Input/Output Interface	[AUX Output] Alarm Output, RUN Output, Buzzer Output, Rated Voltage : DC24V, Rated Current: 50mA, [AUX Input] Remote Reset Input, Input Voltage: DC24V, Input Current: 6mA, Operating Voltage: (When ON) DC9V or more, (When OFF) DC2.5V or less		
DIO Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Sink type 2 outputs			
FLEX NETWORK Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Source type 2 outputs			

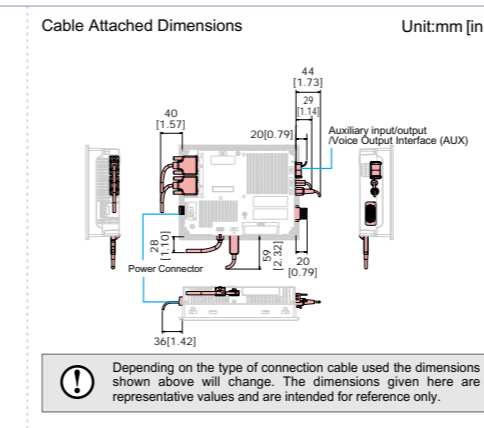
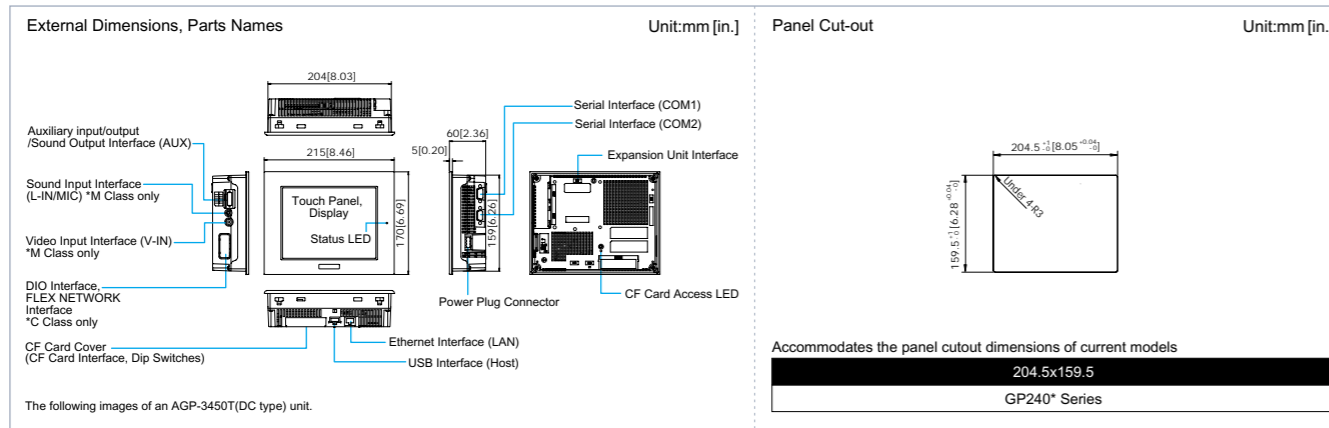
FUNCTIONAL SPECIFICATION	AGP3400-S1-D24-D81C	AGP3400-T1-D24-FN1M	AGP3400-T1-D24	AGP3400-S1-D24
	DIO(Source)	FLEX NETWORK	S Class	
International Safety Standards	UL, CE, FCC, RoHS			
Display Type	STN Color LCD		TFT Color LCD	STN Color LCD
Display Colors	4,096 Colors		65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1	4,096 Colors
Backlight	CCFL (Service life: 54,000 hrs. at 25 °C and 24 hr. Operation)			
Display Resolution	640 x 480 pixels			
Effective Display Area	153.7mm[6.05in.] x 115.8mm[4.56in.]			
Brightness Control	8 levels of adjustment available via touch panel			
Contrast Adjustment	8 levels of adjustment available via touch panel			
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kanji characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)			
Text Composition	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)			
Text	Character Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2		
	Font Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2		
	8 x 8 dots	80 Char. x 60 rows		
	8 x 16dots	80 Char. x 30 rows		
Memory	Application	8MB FEPRAM *3		
	Data Backup	320KB SRAM *4		
Touch Panel	Type	Resistive Film (analog)		
	Resolution	1024 x 1024		
Control Memory	Variable Area	64 KB SRAM (uses lithium battery) *4		
	Program Area	132 KB FLASH EPROM		
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 *5, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male		
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *6), Connector: D-Sub 9pin female		
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)		
	Expansion Unit Interface	Expansion Unit Interface (external/internal)		
	USB Interface	USB1.1 Host I/F, USB TYPE-A connector x 1		
	CF Card Interface	CF Card Slot (TYPE-II) x 1		
	Video Input Interface	NTSC: 59.9Hz, PAL: 50Hz, SECAM: 50Hz, Connector: RCA 75Ω		
	Sound Input Interface	MIC input/LINE input (Change with S/W), Connector: MINI-JACK φ3.5		
	Sound Output Interface	Speaker Output 70mW(Rated Load: 8Ω, Frequency: 1KHz), Connector: Two piece type terminal block		
	AUX Input/Output Interface	[AUX Output] Alarm Output, RUN Output, Buzzer Output, Rated Voltage : DC24V, Rated Current: 50mA, [AUX Input] Remote Reset Input, Input Voltage: DC24V, Input Current: 6mA, Operating Voltage: (When ON) DC9V or more, (When OFF) DC2.5V or less		
DIO Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Sink type 2 outputs			
FLEX NETWORK Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Source type 2 outputs			

GENERAL SPECIFICATION	AGP3450-T1-D24	AGP3400-T1-D24-D81K	AGP3400-S1-D24-D81K	AGP3400-T1-D24-D81C
Rated Voltage	DC24V			
Rated Voltage Range	DC19.2V to DC28.8V			
Allowable Voltage Drop	10ms or less			
Power Consumption	28W or less			
Voltage Endurance	AC1000V 20mA for 1 minute (between charging and FG terminals)			
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)			
Operating Temperature	0 °C to +50 °C *8			
Storage Temperature	-20 °C to +60 °C			
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)			
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)			
Pollution Degree	Pollution Degree 2			
Corrosive Gasses	Free of corrosive gasses			
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)			
Vibration Resistance	IEC61131-2(JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s <sup>2</sup> X,Y,Z directions for 10 times (100min.)			
Noise Immunity (via noise simulator)	Noise Voltage: 1000Vp-p Pulse Duration: 1μs Arise Time : 1ns			
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)			
Grounding	100Ω or less, or your country's applicable standard *9			
Ratings (For front panel of installed unit)	Equivalent to IP65f NEMA #250 TYPE 4X/13 *10			
External Dimensions	W215mm[8.46in.] x H170mm[6.69in.] x D60mm[2.36in.]			
Weight	1.8kg (4.0lb) or less		2.0kg (4.4lb) or less	
Cooling Method	Natural air circulation			

GENERAL SPECIFICATION	AGP3400-S1-D24-D81C	AGP3400-T1-D24-FN1M	AGP3400-T1-D24	AGP3400-S1-D24
Rated Voltage	DC24V			
Rated Voltage Range	DC19.2V to DC28.8V			
Allowable Voltage Drop	10ms or less			
Power Consumption	28W or less			
Voltage Endurance	AC1000V 20mA for 1 minute (between charging and FG terminals)			
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)			
Operating Temperature	0 °C to +50 °C *8			
Storage Temperature	-20 °C to +60 °C			
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)			
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)			
Pollution Degree	Pollution Degree 2			
Corrosive Gasses	Free of corrosive gasses			
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)			
Vibration Resistance	IEC61131-2(JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s <sup>2</sup> X,Y,Z directions for 10 times (100min.)			
Noise Immunity (via noise simulator)	Noise Voltage: 1000Vp-p Pulse Duration: 1μs Arise Time : 1ns			
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)			
Grounding	100Ω or less, or your country's applicable standard *9			
Ratings (For front panel of installed unit)	Equivalent to IP65f NEMA #250 TYPE 4X/13 *10			
External Dimensions	W215mm[8.46in.] x H170mm[6.69in.] x D60mm[2.36in.]		W215mm[8.46in.] x H170mm[6.69in.] x D60mm[2.36in.]	
Weight	2.0kg (4.4lb) or less		1.8kg (4.0lb) or less	
Cooling Method	Natural air circulation			

\*1 Changing the Colors setting to "65,536 colors" will disable the blinking feature on all screens in your project. If you wish to use the blinking feature, select "16,384 colors".  
 \*2 Font Sizes can be set up by software.  
 \*3 User area.  
 \*4 A Lithium battery's lifetime is:  
 10 years when the battery's ambient temperature is 40 °C or less.  
 4.1 years when the battery's ambient temperature is 50 °C or less.  
 1.5 years when the battery's ambient temperature is 60 °C or less.  
 When used for back up: Approximately 60 days, with a fully charged battery. Approximately 6 days, with a half-charged battery.

\*5 RS-232C and RS-422/485 are software switchable.  
 \*6 SIEMENS SIMATIC S7-200/300/400 series (MPI port only). Please contact your Pro-face sales representative for supported models and other details.  
 \*7 Depending on type of units used.  
 \*8 When using STN Color LCD models in an environment where the temperature becomes or exceeds 40 °C for an extended period of time, the screen contrast level may decrease from its original level of brightness. Operating temperature refers to temperature inside mounting enclosure.  
 \*9 Grounding requirements differ from country to country. Be sure to confirm your work environment requirements prior to installation. For more information, please contact your local Pro-face office.  
 \*10 The degree of protection provided by these products is equivalent to IP65f, however their performance cannot be guaranteed for every environment. Be sure to confirm your work environment requirements prior to installation.



# 5.7-inch Specifications

FUNCTIONAL SPECIFICATION	C Class								FUNCTIONAL SPECIFICATION
	DIO(Sink)				DIO(Source)				
International Safety Standards	UL, CE, FCC, RoHS								International Safety Standards
Display Type	TFT Color LCD	STN Color LCD	Monochrome LCD	TFT Color LCD	STN Color LCD	Monochrome LCD	TFT Color LCD	Monochrome LCD	Display Type
Display Colors	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1	4,096 Colors	Black and White (16 Shades)	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1	4,096 Colors	Black and White (16 Shades)	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1	Black and White (16 Shades)	Display Colors
Backlight	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 75,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 58,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 75,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 58,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 58,000 hrs. at 25 °C and 24 hr. Operation)	Backlight
Display Resolution	320 x 240 pixels								Display Resolution
Effective Display Area	115.2mm[4.54in.] x 86.4mm[3.40in.]								Effective Display Area
Brightness Control	8 levels of adjustment available via touch panel								Brightness Control
Contrast Adjustment	8 levels of adjustment available via touch panel								Contrast Adjustment
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kanji characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)								Language Fonts
Text Composition	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)								Text Composition
Text	Character Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2							Text
	Font Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2							
	8 x 8 dots	40 Char. x 30 rows							
	8 x 16dots	40 Char. x 15 rows							
Memory	16 x 16 dots	20 Char. x 15 rows							Memory
	32 x 32 dots	10 Char. x 7 rows							
	Application	6MB FEPRM *3							
	Data Backup	320KB SRAM *4							
Touch Panel	Type	Resistive Film (analog)							Touch Panel
	Resolution	1024 x 1024							
Control Memory *5	Variable Area	64 KB SRAM (uses lithium battery) *4							Control Memory *5
	Program Area	132 KB FLASH EPROM							
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 *6, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male							Interface
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *7), Connector: D-Sub 9pin female							
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)							
	Expansion Unit Interface	Expansion Unit Interface (external/internal)							
	USB Interface	USB1.1 Host I/F, USB TYPE-A connector x 1							
	CF Card Interface	CF Card Slot (TYPE-II) x 1							
	DIO Interface	Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Sink type 2 outputs		Inputs Method: Sink/ Source type 6 inputs, Outputs Method: Source type 2 outputs				—	
	FLEX NETWORK Interface	—							
	63 stations max., Bit variable input: 256 points, Bit variable output: 256 points, Integer variable input: 64 points, Integer variable output: 64 *8								

FUNCTIONAL SPECIFICATION	S Class						FUNCTIONAL SPECIFICATION
	DIO(Sink)		DIO(Source)		FLEX NETWORK		
International Safety Standards	UL, CE, FCC, RoHS						International Safety Standards
Display Type	TFT Color LCD	STN Color LCD	Monochrome LCD	STN Color LCD	Monochrome LCD	Blue-mode Monochrome LCD	Display Type
Display Colors	65,536 Colors (no blink) / 16,384 Colors (3-speed blink) *1	4,096 Colors	Black and White (16 Shades)	4,096 Colors	Black and White (16 Shades)	Blue and White (16 Shades)	Display Colors
Backlight	CCFL (Service life: 50,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 75,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 58,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 75,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 58,000 hrs. at 25 °C and 24 hr. Operation)	CCFL (Service life: 58,000 hrs. at 25 °C and 24 hr. Operation)	Backlight
Display Resolution	320 x 240 pixels						Display Resolution
Effective Display Area	115.2mm[4.54in.] x 86.4mm[3.40in.]						Effective Display Area
Brightness Control	8 levels of adjustment available via touch panel						Brightness Control
Contrast Adjustment	8 levels of adjustment available via touch panel						Contrast Adjustment
Language Fonts	Japanese: 6962 (JIS Standards 1&2)(including 607 non-kanji characters), ANK: 158 (Korean fonts, Simplified and traditional Chinese fonts are downloadable.)						Language Fonts
Text Composition	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 dot fonts, Stroke font: 6 to 127 dot fonts (Full-size character: 12 to 254 dot fonts)						Text Composition
Text	Character Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2					Text
	Font Sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times *2					
	8 x 8 dots	40 Char. x 30 rows					
	8 x 16dots	40 Char. x 15 rows					
Memory	16 x 16 dots	20 Char. x 15 rows					Memory
	32 x 32 dots	10 Char. x 7 rows					
	Application	6MB FEPRM *3					
	Data Backup	320KB SRAM *4		128KB SRAM *4			
Touch Panel	Type	Resistive Film (analog)					Touch Panel
	Resolution	1024 x 1024					
Control Memory *5	Variable Area	64 KB SRAM (uses lithium battery) *4					Control Memory *5
	Program Area	132 KB FLASH EPROM					
Interface	Serial Interface (COM1)	Asynchronous Transmission: RS-232C/422/485 (AGP-3302B only as for RS-232C *6), Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps, Connector: D-Sub 9pin male					Interface
	Serial Interface (COM2)	Asynchronous Transmission: RS-422/485, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: none, Odd or Even, Data transmission speed: 2400bps to 115.2kbps (MPI: 187.5kbps *7), Connector: D-Sub 9pin female					
	Ethernet Interface	IEEE802.3u, 10BASE-T/100BASE-TX, modular jack connector (RJ-45)					
	Expansion Unit Interface	Expansion Unit Interface (external/internal)			Expansion Unit Interface (external only)		
	USB Interface	USB1.1 Host I/F, USB TYPE-A connector x 1					
	CF Card Interface	CF Card Slot (TYPE-II) x 1					
	DIO Interface	—					
	FLEX NETWORK Interface	—					

GENERAL SPECIFICATION	AGP3300-T1-D24-D81K	AGP3300-S1-D24-D81K	AGP3300-L1-D24-D81K	AGP3300-T1-D24-D81C	AGP3300-S1-D24-D81C	AGP3300-L1-D24-D81C	AGP3300-T1-D24-FN1M	AGP3300-L1-D24-FN1M
Rated Voltage	DC24V							
Rated Voltage Range	DC19.2V to DC28.8V							
Allowable Voltage Drop	5ms or less							
Power Consumption	26W or less							
Voltage Endurance	AC1000V 20mA for 1 minute (between charging and FG terminals)							
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)							
Operating Temperature	0 °C to +50 °C *9							
Storage Temperature	-20 °C to +60 °C							
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)							
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)							
Pollution Degree	Pollution Degree 2							
Corrosive Gasses	Free of corrosive gasses							
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)							
Vibration Resistance	IEC61131-2 (JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s <sup>2</sup> X,Y,Z directions for 10 times (100min.)							
Noise Immunity (via noise simulator)	Noise Voltage: 1000Vp-p Pulse Duration: 1 μs Arise Time: 1ns							
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)							
Grounding	100Ω or less, or your country's applicable standard *10							
Ratings (For front panel of installed unit)	Equivalent to IP65f NEMA #250 TYPE 4X/13 *11							
External Dimensions	W167.5mm[6.59in.] x H135mm[5.31in.] x D59.5mm[2.34in.]							
Weight	1.2kg (2.6lb) or less							
Cooling Method	Natural air circulation							

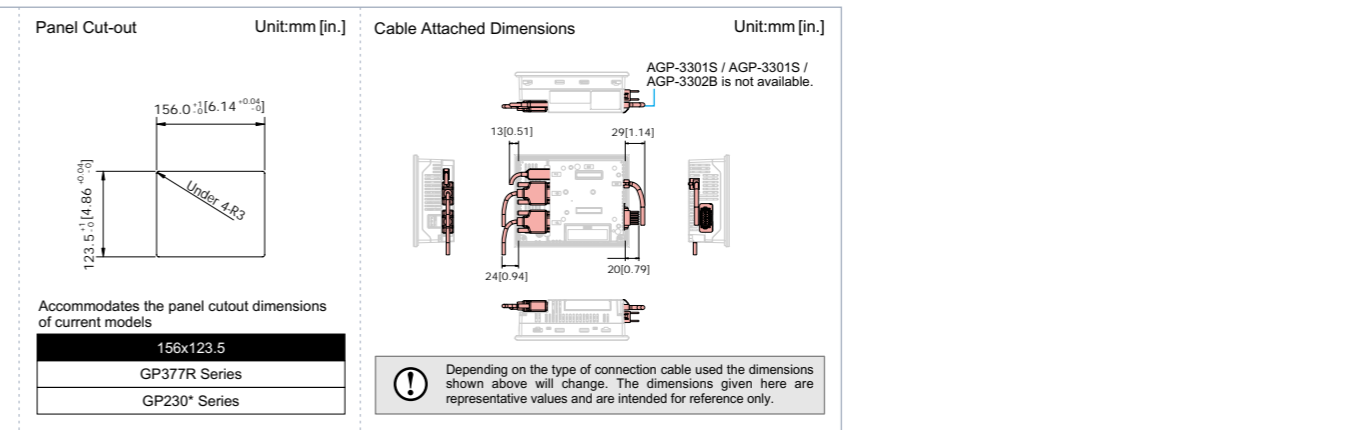
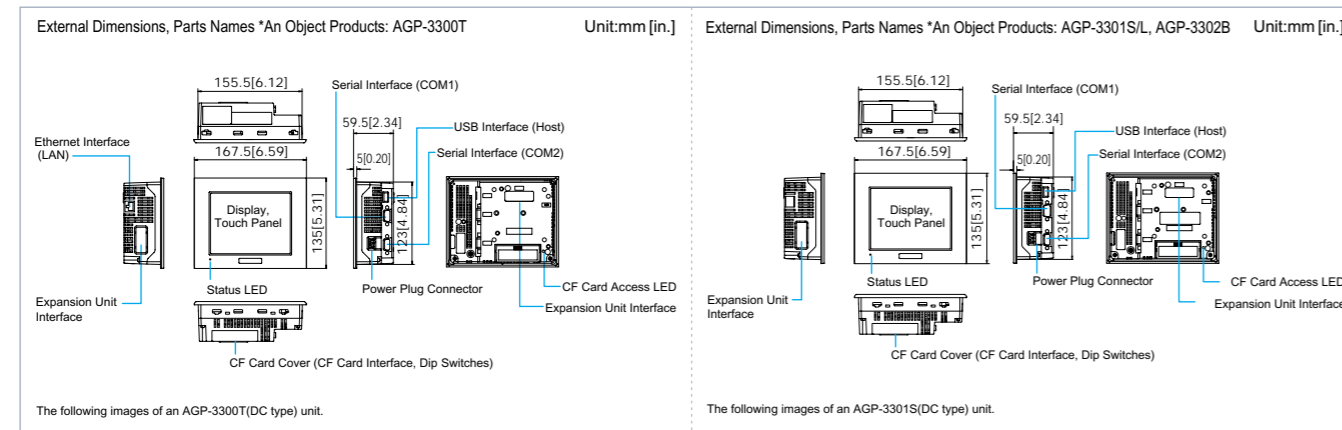
GENERAL SPECIFICATION	AGP3300-T1-D24	AGP3300-S1-D24	AGP3300-L1-D24	AGP3301-S1-D24	AGP3301-L1-D24	AGP3302-B1-D24
Rated Voltage	DC24V					
Rated Voltage Range	DC19.2V to DC28.8V					
Allowable Voltage Drop	5ms or less			10ms or less		
Power Consumption	26W or less			18W or less		
Voltage Endurance	AC1000V 20mA for 1 minute (between charging and FG terminals)					
Insulation Resistance	10MΩ or higher at DC500V (between charging and FG terminals)					
Operating Temperature	0 °C to +50 °C *9					
Storage Temperature	-20 °C to +60 °C					
Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)					
Storage Humidity	10%RH to 90%RH (Non-condensing, wet bulb temperature: 39 °C or less)					
Pollution Degree	Pollution Degree 2					
Corrosive Gasses	Free of corrosive gasses					
Atmospheric Endurance (GP Operation Altitude)	800hPa to 1114hPa (2000 meters or lower)					
Vibration Resistance	IEC61131-2 (JIS B 3502) compliant 5Hz to 9Hz Single amplitude 3.5mm 9Hz to 150Hz Fixed acceleration 9.8m/s <sup>2</sup> X,Y,Z directions for 10 times (100min.)					
Noise Immunity (via noise simulator)	Noise Voltage: 1000Vp-p Pulse Duration: 1 μs Arise Time: 1ns					
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)					
Grounding	100Ω or less, or your country's applicable standard *10					
Ratings (For front panel of installed unit)	Equivalent to IP65f NEMA #250 TYPE 4X/13 *11					
External Dimensions	W167.5mm[6.59in.] x H135mm[5.31in.] x D59.5mm[2.34in.]					
Weight	1.0kg (2.2lb) or less					
Cooling Method	Natural air circulation					

\*1 Changing the Colors setting to "65,536 colors" will disable the blinking feature on all screens in your project. If you wish to use the blinking feature, select "16,384 colors".  
 \*2 Font Sizes can be set up by software.  
 \*3 User area.

\*4 A Lithium battery's lifetime is:  
 10 years when the battery's ambient temperature is 40 °C or less.  
 4.1 years when the battery's ambient temperature is 50 °C or less.  
 1.5 years when the battery's ambient temperature is 60 °C or less.  
 When used for back up: Approximately 60 days, with a fully charged battery. Approximately 6 days, with a half-charged battery.  
 \*5 Logic Programming is not available with AGP-3301S/AGP-3301L/AGP-3302B.

\*6 RS-232C and RS-422/485 are software switchable.  
 \*7 SIEMENS SIMATIC S7-200/300/400 series (MPI port only).  
 \*8 Depending on type of units used.

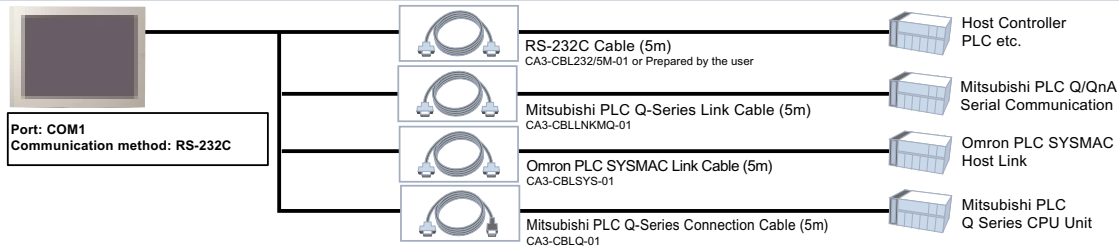
\*9 When using AGP-3300S/AGP-3300L/AGP-3301S/AGP-3301L/AGP-3302B in an environment where the temperature becomes or exceeds 40 °C for an extended period of time, the screen contrast level may decrease from its original level of brightness. Operating temperature refers to temperature inside mounting enclosure.  
 \*10 Grounding requirements differ from country to country. Be sure to confirm your work environment requirements prior to installation. For more information, please contact your local Pro-face office.  
 \*11 The degree of protection provided by these products is equivalent to IP65f, however their performance cannot be guaranteed for every environment. Be sure to confirm your work environment requirements prior to installation.



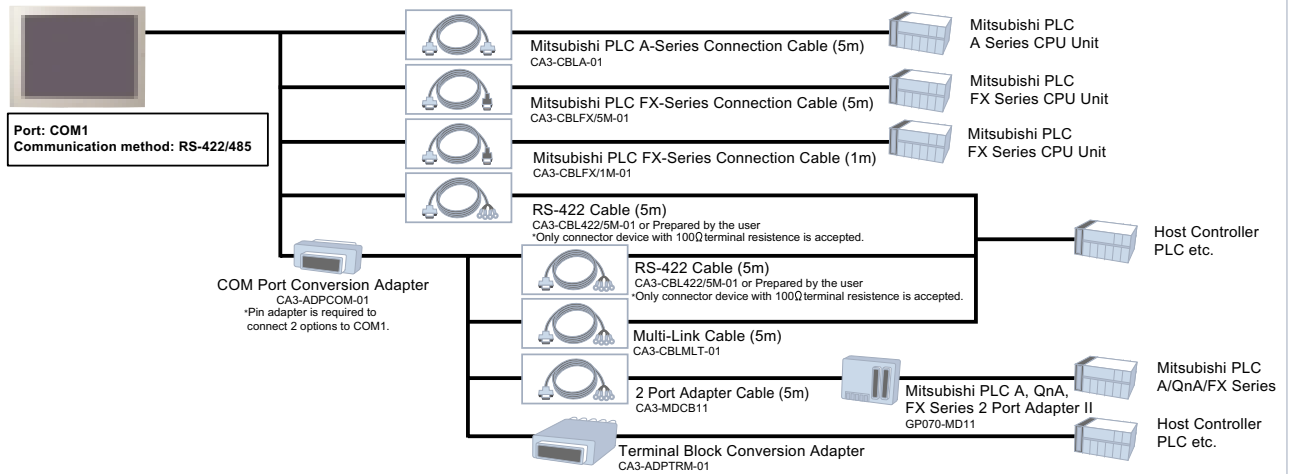


# System Structure

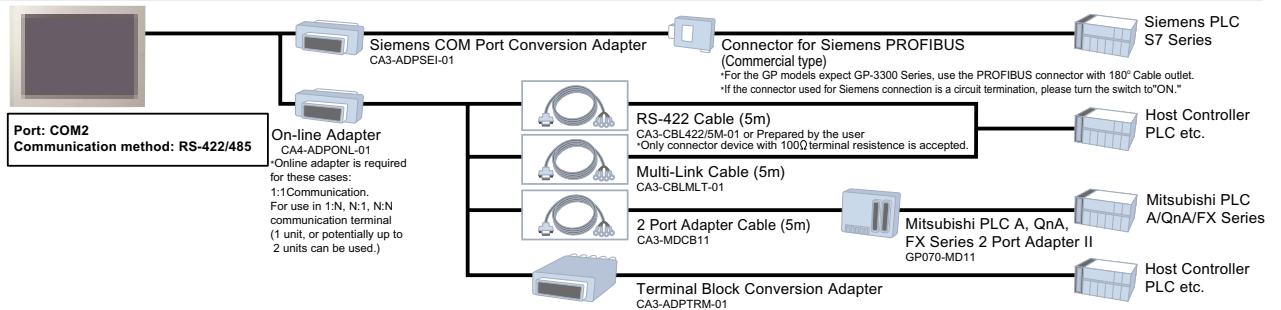
## Serial Communication COM1:RS-232C < All GP3000 Series models. >



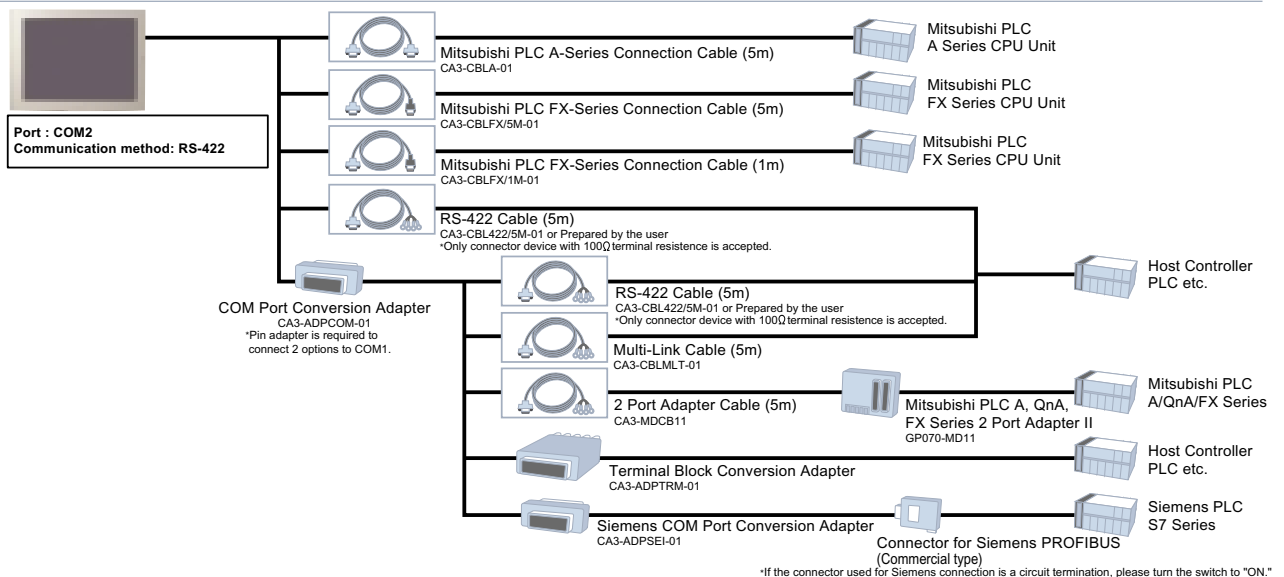
## Serial Communication COM1:RS-422/485 < All GP3000 Series models. >



## Serial Communication COM2:RS-422/485 < All GP3000 Series models except AGP-3302B. >

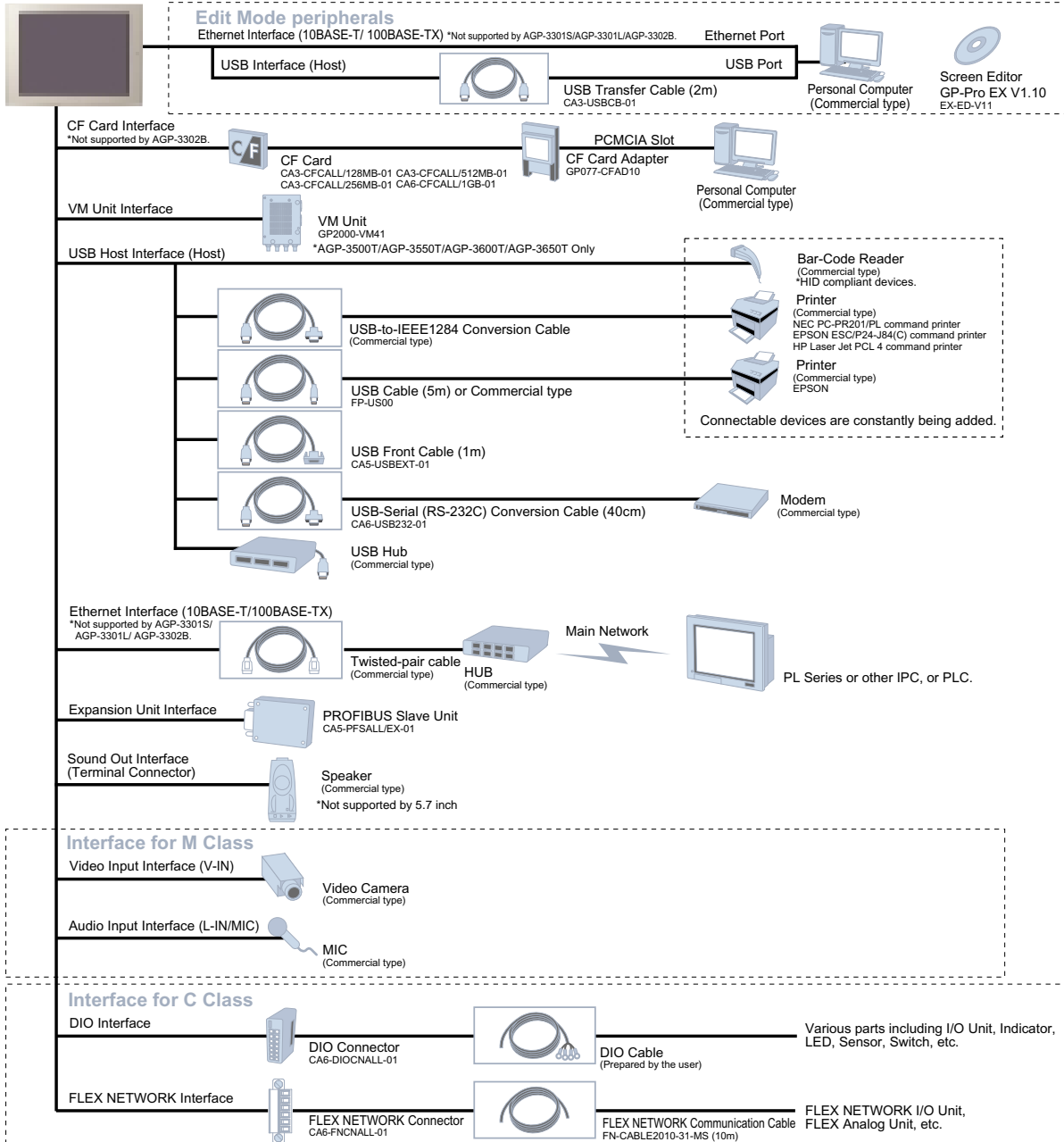


## Serial Communication COM2:RS-422 < AGP-3302B >



Refer to the manual for a system configuration diagram when using an Isolation Unit.

## Interface < All GP3000 Series models. >



### Interface Input/ Output Specifications

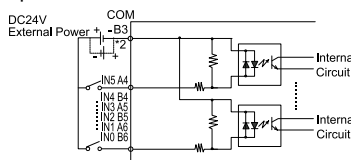
	DIO Input Specifications
Rated Voltage	DC24V
Maximum Allowable Voltage	DC28.8V
Input Method	Source/Sink Input
Rated Current	5.7mA (DC24V)
Input Resistance	4.2kΩ
Operation Range	DC15V or more
ON Voltage	DC5V or less
OFF Voltage	1.5ms or less
Input Delay Time	ON to OFF: 1.5ms or less
Common Lines	1
Common Design	8 points/1 common line
External Connection	12-pin connector (used with Output section)
Input Points	6
Input Signal Display	No LED indicators
Status Display	None
Isolation Method	Photo coupler Isolation
External Power Supply	For Signal: DC 24V

	DIO Output Specifications (Sink type)	DIO Output Specifications (Source type)
Rated Voltage	DC24V	DC24V
Rated Voltage Range	DC20.4V to DC28.8V	DC20.4V to DC28.8V
Output Method	Sink Output	Source Output
Maximum Load Voltage	0.2A /point, 0.4A/ common	0.2A /point, 0.4A/ common
Output Voltage Drop	1.5V or less	1.5V or less
Output Delay Time	OFF to ON: 1ms or less	OFF to ON: 1ms or less
ON to OFF	1ms or less	1ms or less
Voltage Leakage (when OFF)	0.1mA or less	0.1mA or less
Clamp Voltage	39V±1V	39V±1V
Type of Output	Transistor Output	Transistor Output
Common Lines	1	1
Common Design	2 points/1 common line	2 points/1 common line
External Connection	12-pin connector (also used for Input)	12-pin connector (also used for Input)
Output Protection Type	Output is unprotected	Output is unprotected
Internal Fuse	1.5A, 125V DIP fuse (not replaceable)	1.5A, 125V DIP fuse (not replaceable)
Surge Control Circuit	Zener diode	Zener diode
Output Points	2	2
Output Signal Display	No LED indicators	No LED indicators
Status Display Element	None	None
Isolation Method	Photo coupler Isolation	Photo coupler Isolation
External Power Supply	DC24V	DC24V

	FLEX NETWORK Data Transfer Settings
Communication Type	1:N
Connection Method	Multi Drop
Transfer Distance	At 6Mbps 200m per CH, at 12Mbps 100m per CH
Transfer Method	During cyclic period, distributed transmission, Half-duplex
Transfer Speed	6Mbps, 12Mbps
Transfer I/F	Differential method, Pluses transfer resistance
Error Check	Format check, bit check, CRC-12 check
No. of Stations	63 stations max., *1 Bit variable input: 256 points, Integer variable output: 256 points, Integer variable output: 64 points (Depending on type of units used.)

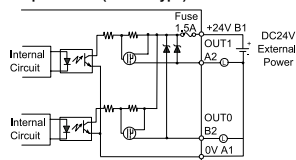
\*1 Depending on type of units used.

### Input Circuit

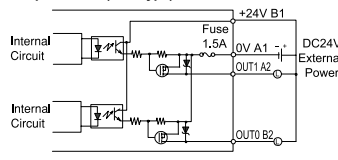


\*2 Dotted line shows connection to sink output type.

### Output Circuit (Source type)



### Output Circuit (Sink type)



Output terminal doesn't have a protection function, GP may be damaged by short of output wiring or miswiring. Please connect a suitable fuse if necessary.

# Option Line-up



	Product Name	Model No.	Description	
Software	GP-Pro EX V1.10	EX-ED-V11	New easy-to-use screen editor software	
	GP-Pro EX Editor license	EX-ED-LICENSE-V11	User license for GP-Pro EX <sup>*1</sup>	
	Pro-Server EX V1.0 Developer	EX-SDV-V10	Software that connects the GP unit with a computer via Ethernet and collects and transmits data. <sup>*2</sup>	
	Pro-Server EX V1.0 Developer license	EX-SED-LICENSE	Pro-Server EX Development Environment license <sup>*3</sup>	
Software	Pro-Server EX V1.0 Runtime license	EX-SRT-LICENSE	Pro-Server EX Runtime license <sup>*4</sup>	
	Movie Converter License	EX-MOVCON-LICENSE	A license of file converter tool which is necessary for displaying general video data onto GP to PC. <sup>*5</sup>	
	USB Transfer Cable (2m)	CA3-USBCB-01	Downloads project data created with the Screen Editor via the GP unit's serial interface.	
Cable	USB Cable (5m)	FP-US00	Connects a USB printer. (TYPE-B)	
	USB Front Cable (1m)	CA5-USBEXT-01	The cable for extending a USB Host Interface of GP.	
	RS-232C Cable (5m)	CA3-CBL232/5M-01	COM1 Connects Mitsubishi PLC A-Series (or other host controller) to the GP. (RS-232C)	
	RS-422 Cable (5m)	CA3-CBL422-01	COM2 Connects a host controller to the GP. (RS-422)	
	RS-422 Cable (5m)	CA3-CBL422/5M-01	COM1 Connects a host controller to the GP. (RS-422) <Only connector device with 100Ω terminal resistance is accepted.> <sup>*6,7</sup>	
	Mitsubishi PLC A-Series Connection Cable (5m)	CA3-CBLA-01	COM1 Connects Mitsubishi PLC A-Series and QnA-Series programming console I/F to GP. (Simultaneous use of programming console is not possible.)	
	Mitsubishi PLC Q-Series Connection Cable (5m)	CA3-CBLQ-01	COM1 Connects Mitsubishi PLC Q-Series programming console I/F to GP. (Simultaneous use of programming console is not possible.)	
	Mitsubishi PLC Q-Series Link Cable (5m)	CA3-CBLNMQ-01	COM1 Connects Mitsubishi PLC Q-Series (or other host controller) to the GP. (Simultaneous use of programming console I/F to AGP. (RS-232C))	
	Mitsubishi PLC FX-Series Connection Cable (5m)	CA3-CBLFX/5M-01	COM1 Connects Mitsubishi PLC FX-Series programming console I/F to GP. (Simultaneous use of programming console is not possible.)	
	Mitsubishi PLC FX-Series Connection Cable (1m)	CA3-CBLFX/1M-01	COM1 Connects Mitsubishi PLC FX-Series programming console I/F to GP. (Simultaneous use of programming console is not possible.)	
	Omron PLC SYSMAC Link Cable (5m)	CA5-CBLSYS-01	COM1 Connects Omron PLC SYSMAC Series unit (or other host controller) to the GP. (RS-232C)	
	Multi-Link Cable (5m)	CA3-CBLMLT-01	COM2 CF Card Items (AGP-3302B is not available) connects a host controller to the GP for multi-link (n:1) communication. <sup>*6,7</sup>	
	2 Port Adapter Cable (5m)	CA3-MDCB11	COM2 Connects Mitsubishi PLC to the GP using 2 port adapter II (RS-422) <sup>*6,7</sup>	
	9-pin-to-25-pin RS-a232C Conversion Cable (20cm)	CA3-CBLCBT232-01	COM1 Connects a standard RS-232C cable (GP Connector:D-sub 25-pin) to the GP.	
	9-pin-to-25-pin RS-422 Conversion Cable (20cm)	CA3-CBLCBT422-01	COM2 Connects a standard RS-422 cable (GP Connector:D-sub 25-pin) to the GP. <sup>*6,7</sup>	
	USB-Serial (RS-232C) Conversion Cable (40cm)	CA6-USB232-01	The conversion cable for using a GP's USB I/F as the Serial (RS-232C) I/F. Connects a Modem only for the RS-232C communication method.	
	Adapter	COM Port Conversion Adapter	CA3-ADPCOM-01	COM1 Connects optional RS-422 communication items to GP unit's COM1 port.
		On-line Adapter	CA4-ADPONL-01	COM2 Terminal adapter for performing RS-422/RS-485 communication at COM2 port. <sup>*7</sup>
		Terminal Block Conversion Adapter	CA3-ADPTRM-01	COM2 Connects output from a serial interface with an RS-422 terminal block. <sup>*6,7</sup>
		Siemens COM Port Conversion Adapter	CA3-ADPSEI-01	COM2 Connects Siemens PLCs to the GP. (for RS-485 communication) <sup>*8</sup>
Mitsubishi PLC A, QnA, FX Series 2 Port Adapter II		GP070-MD11	Allows simultaneous use of an GP Series unit and a Mitsubishi PLC A, QnA, FX Series peripheral device. <sup>*6,7</sup>	
RS-232C Isolation Unit		CA3-ISO232-01	COM1 A unit for connecting a host controller to GP with providing isolation. (RS-232C and RS-422 are switchable).	
RS-485 Isolation Unit		CA3-ISO485-01	COM2 A unit for connecting a host controller to GP with providing isolation. (RS-422 and RS-485 are switchable).	
CF Card Adapter		GP077-CFAD10	Used for read/write of CF Card data via a PC's PCMCIA slot.	
CF Card		CA3-CFCALL/128MB-01	128MB	Inserted into the GP unit's CF Card slot. AGP-3302B is not available.
		CA3-CFCALL/256MB-01	256MB	
	CA3-CFCALL/512MB-01	512MB		
	CA6-CFCALL/1GB-01	1GB		
PROFIBUS Slave Unit	CA5-PFSALL/EX-01	Expansion Unit for connecting GP to PROFIBUS network or communicating with a PROFIBUS-DP master.		
VM UNIT (for VM-BS)	GP2000-VM41	VM UNIT is a unit for capture of the video image. (This unit supports only TFT color LCD model of 10.4 inch/ 12.1inch.)		
Panel Cutout Adapter for GP-3500 series (TFT)	CA4-ATM10-01	Panel cutout adapter for mounting 10.4 inch (TFT) in cutout of GP-2500/ GP-2600.		
Panel Cutout Adapter for GP-3300 Series	CA4-ATM5-01	Panel cutout adapter for mounting 5.7 inch in cutout of GP-37W2B.		
FLEX NETWORK <sup>9</sup>	FLEX NETWORK 16-Point Input Sink Source Type I/O Unit	FN-X16TS41	16-point sink-source shared I/O Unit. DC24V input signal can be connected.	
	FLEX NETWORK 32-Point Input Sink Source Type I/O Unit	FN-X32TS41	32-point sink-source shared I/O Unit. DC24V input signal can be connected.	
	FLEX NETWORK 16-Point Output Sink Type I/O Unit	FN-Y16SK41	16-point output sink I/O Unit.	
	FLEX NETWORK 16-Point Output Source Type I/O Unit	FN-Y16SC41	16-point output source I/O Unit.	
	FLEX NETWORK 8-Point Input Sink Source /8-Point Transistor Output Sink Type I/O Unit	FN-XY08TS41	8-point input sink-source and 8-point transistor output sink mixed I/O unit. Both DC24V input signals and DC24V output (load current: 200mA max.) devices can be connected.	
	FLEX NETWORK 16-Point Input Sink Source /16-Point Transistor Output Sink Type I/O Unit	FN-XY16SK41	16-point input sink-source and 16-point transistor output sink mixed I/O unit. Both DC24V input signals and DC24V output (load current: 200mA max./1.6A/common) devices can be connected.	
	FLEX NETWORK 16-Point Input Sink Source /16-Point Transistor Output Source Type I/O Unit	FN-XY16SC41	16-point input sink-source and 16-point transistor output source mixed I/O unit. Both DC24V input signals and DC24V output (load current: 200mA max./1.6A/common) devices can be connected.	
	FLEX NETWORK 32-Point Input Sink Source /32-Point Transistor Output Sink Type I/O Unit	FN-XY32SKS41	32-point input sink-source and 32-point transistor output sink mixed I/O unit. Both DC24V input signals and DC24V output (load current: 200mA max./1.6A/common) devices can be connected.	
	FLEX NETWORK 8-Point Relay Output/11 Common Type I/O Unit	FN-Y08RL41	8-point relay output (1 common) I/O Unit. Up to AC240V (1A) load current can be connected.	
	FLEX NETWORK 2-Channel Analog/Digital Conversion Input Unit	FN-AD02AH41	Converts 2-channel analog signals to digital signals at 12-bit resolution.	
	FLEX NETWORK 2-Channel Digital/Analog Conversion Output Unit	FN-DA02AH41	Converts 2-channel 12-bit digital signal to analog signal and sends output.	
	FLEX NETWORK 4-Channel Analog/Digital Conversion Input Unit	FN-AD04AH11	Converts 4-channel analog signals to digital signals at 12-bit resolution.	
	FLEX NETWORK 4-Channel Digital/Analog Conversion Output Unit	FN-DA04AH11	Converts 4-channel 12-bit digital signal to analog signal and sends output.	
	FLEX NETWORK Single-Axis Positioning Unit	FN-PC10SK41	Both of this unit and GP can store positioning data. Motor driver connection cable (FN-PC10CB01) is required.	
	Teaching Loader for Single-Axis Positioning Unit	FN-PC10LD41	Programmer for Single-Axis Positioning Unit. Allows entry, editing and operation checking of high-precision positioning data. (5m cable included)	
	FLEX NETWORK High Speed Counter Unit	FN-HC10SK41	High performance High-Speed counter that can easily change counter input types. Can create both a wide range of data and cam output.	
	Motor Driver Connection Cable (1m)	FN-PC10CB01	Connects the FLEX NETWORK single-axis positioning unit and the servo and stepping drivers.	
FLEX NETWORK Communication Cable (10m)	FN-CABLE2010-31-MS	Connect GP units with FLEX NETWORK units.		
FLEX NETWORK Communication Cable (50m)	FN-CABLE2050-31-MS			
FLEX NETWORK Communication Cable (200m)	FN-CABLE2200-31-MS			
Installation Gasket	CA3-WPG15-01	15 inch	Provides dust and moisture resistance when GP is installed into a solid panel.	
	CA3-WPG12-01	12.1 inch/ 10.4 inch (STN/Mono type)		
	CA5-WPG10-01	10.4 inch (TFT type)		
	CA5-WPG8-01	7.5 inch		
	CA3-WPG6-01	5.7 inch		
	AUX Connector	CA5-AUXCNALL-01	15 inch/ 12.1 inch/ 10.4 inch/ 7.5 inch	AUX connector for GP3000 series required in case an external output is used.
	Connector Cover	CA3-BUSCVR-01	Protects the GP unit's rear face connector. (Large size and small size each 1)	
	USB Cable Clamp (1 port)	CA5-USBATM-01	5.7 inch	USB Cable clamp for 1 port products to prevent disconnection. (Set of 5 cable clamps)
	USB Cable Clamp (2 port)	CA5-USBATL-01	15 inch/ 12.1 inch/ 10.4 inch/ 7.5 inch	USB Cable clamp for 2 port products to prevent disconnection. (Set of 5 cable clamps) <sup>*11</sup>
	DC Power Supply Connector for Medium-sized Units	CA5-DCCNM-01	7.5 inch/ 5.7 inch	Connector for attaching power supply to medium-sized units. (Set of 5 connectors)
DC Power Supply Connector for Large-sized Units	CA5-DCCNL-01	15 inch/ 12.1 inch/ 10.4 inch <sup>*12</sup>	Connector for attaching power supply to large-sized units. (Set of 5 connectors)	
Installation Fastener	CA3-ATFALL-01	Used to install the GP into a solid panel. (1 set for 4 fasteners)		
DIO Connector	CA6-DIOCNALL-01	Connector attached to the DIO interface. Connects an external I/O device. (Set of 5 connectors) <sup>*9</sup>		
FLEX NETWORK Connector	CA6-FNCNALL-01	Connector attached to the FLEX NETWORK interface. Connects the FLEX NETWORK communication cable. (Set of 5 connectors) <sup>*9</sup>		
Single-Axis Teaching Loader Cable (5m)	FN-LD10CBL	Connects the FLEX NETWORK single-axis positioning unit and the single-axis teaching loader. (Set of 5 cables) <sup>*9</sup>		
Protection Sheet	CA3-DFS15-01	15 inch	Disposable, dirt-resistant sheet for the GP unit's screen. (5 sheets/set) (Hard type)	
	CA3-DFS12-01	12.1 inch/ 10.4 inch (STN type)		
	CA5-DFS10-01	10.4 inch (TFT type)		
	PS400-DF00	7.5 inch		
	CA3-DFS6-01	5.7 inch		
	CA3-BLU15-01	15 inch		This backlight is used for replacement.
CA3-BLU12-01	12.1 inch			
CA5-BLU10T-01	10.4 inch (TFT type)			
PS501S-BU00	10.4 inch (STN type)			

<sup>\*1</sup> Purchase when installing GP-Pro EX on more than one computer. One license is necessary for every computer.

<sup>\*2</sup> Setup Editor and Runtime included.

<sup>\*3</sup> Purchase when installing Setup Editor and Runtime on more than one computer.

<sup>\*4</sup> Purchase when installing only Runtime on more than one computer. One license is necessary for every computer.

<sup>\*5</sup> Because the video conversion tool is included with GP-Pro EX V1.10 you only need to purchase the license.

<sup>\*6</sup> When connecting to COM1, COM conversion adapter (CA3-ADPCOM-01) is required.

<sup>\*7</sup> Online adapter is required for these cases: 1:1 communication, For use in 1:N, N:1, N:N communication terminal (1 unit, or potentially up to 2 units can be used).

<sup>\*8</sup> For termination set switch to "ON".

<sup>\*9</sup> C (Control) Class FLEX NETWORK Board Type only.

<sup>\*10</sup> GP bundles maintenance items. You only need to purchase new items in case of breakage or loss.

<sup>\*11</sup> 7.5 inch must use the 2 port USB Cable Clamp (CA5-USBATL-01).

<sup>\*12</sup> DC type only.

# Instruction Notation List



Category	Instruction Name	Instruction Notation	Ladder Symbol	Category	Instruction Name	Instruction Notation	Ladder Symbol	Category	Instruction Name	Instruction Notation	Ladder Symbol	Category	Instruction Name	Instruction Notation	Ladder Symbol			
Basic Instruction	Bit Basic	Normally Open	NO		Arithmetic Operation	Division	DIV		Function Instruction	Trigonometric Function	Cosine	COS		Compare Instruction	Date Compare	Date Compare Equal	NEQ	
		Normally Closed	NC			Modulation	MOD				Tangent	TAN				Date Compare Greater Than	NGT	
		Out	OUT			Increment	INC				Arc Sine	ASIN				Date Compare Greater Than Or Equal To	NGE	
		Negative Out	OUTN			Decrement	DEC				Arc Cosine	ACOS				Date Compare Less Than	NLT	
		Set	SET			Time Addition	JADD				Arc Tangent	ATAN				Date Compare Less Than Or Equal To	NLE	
		Reset	RST			Time Subtraction	JSUB				Cotangent	COT				Date Compare Not Equal	NNE	
	Pulse Basic	Positive Transition	PT		Logical Operation	Logical AND	AND		The other Function	Exponential	EXP		Data Convert	BCD Convert	BCD			
		Negative Transition	NT			Logical OR	OR			Logarithm	LN			BIN Convert	BIN			
		Program Control	Jump	JMP			Logical XOR	XOR			Log Base 10	LG10			Encode	ENCO		
			Jump to Subroutine	JSR			Logical NOT	NOT			Equal	EQ			Decode	DECO		
			Return	RET			Move (Copy)	MOV			Greater Than	GT			Convert to Radian	RAD		
			Repeat number of times (For)	FOR			Block Move (Block Copy)	BLMV			Greater Than Or Equal To	GE			Degree Convert	DEG		
	Repeat number of times (NEXT)		NEXT		Fill Move	FLMV		Less Than	LT		Scale	SCL						
	Inverse		INV		Exchange	XCH		Less Than Or Equal To	LE		Convert Integer to Float	I2F						
	Exit	EXIT		Shift	Shift Left	SHL		Arithmetic Compare	Not Equal	NE		Convert Integer to Real	I2R					
	Power Bar Control	PBC			Shift Right	SHR			Time Compare Equal	JEQ		Convert Float to Integer	F2I					
	Power Bar Reset	PBR			Arithmetic Shift Left	SAL			Time Compare Greater Than	JGT		Convert Float to Real	F2R					
	Logic Wait Instruction	LWA			Arithmetic Shift Right	SAR			Time Compare Less Than	JLT		Convert Real to Integer	R2I					
Timer Instruction	On Delay Timer	TON			Rotate Left	ROL			Time Compare Greater Than Or Equal To	JGE		Convert Real to Float	R2F					
	Off Delay Timer	TOF			Rotate Right	ROR			Time Compare Less Than Or Equal To	JLE		Convert Seconds	H2S					
	Pulse Timer	TP		Rotate Left with Carry Over	RCL		Time Compare Not Equal	JNE		Convert Seconds to Time	S2H							
	Accumulate On Delay Timer	TONA		Rotate Right with Carry Over	RCR		Function Instruction	Calculate Function	Sum	SUM								
	Accumulate Off Delay Timer	TOFA		Rotation	Trigonometric Function	Sine			SIN									
	Counter Instruction	Up Counter	CTU						Sum	SUM								
Down Counter		CTD				Average			AVE									
Up/Down Counter		CTUD				Square Root			SQRT									
R/W Instruction		Time Read/Write	JRD						Bit Conut	BCNT								
		Date Read/Write	JSET				PID	PID										
		Time Set	JSET		Operation Instruction	Arithmetic Operation	Add	ADD										
	Date Read	NRD		Subtract			SUB											
	Date Set	NSET		Multiplication			MUL											
	Operation Instruction	Arithmetic Operation	Add	ADD														
Subtract		SUB																
Multiplication		MUL																
Division		DIV																
Modulation		MOD																
Increment		INC																

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