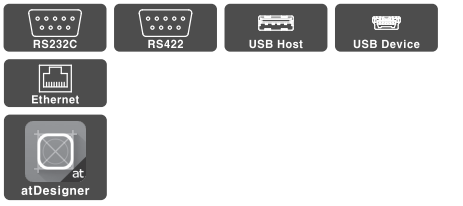
Advanced Type 7 inch Color LCD Graphic Panel

▣ Features

- Horizontal/Vertical installation according to environment
- Various communication interface: RS232C, RS422, Ethernet
- Simultaneous monitoring of multiple addresses and channels
- Monitoring device of the connected controllers even without user screen data
- Multilingual table function: switching language of user screen by touching a button.
- Large capacity of memory:
  - widen range of UB, UW internal device
  - 64MB user screen memory
- Using user screen drawing program 'atDesigner'
  - More variety functions, objects and library image
  - Intuitive user interface
- Equipped with 7 inch TFT LCD of 16,777,216 colors for realizing True color
- Possible to be touched by not only hand but also glove, pen tip or etc. with resistive type touch screen

Please read "Safety Considerations" in the instruction manual before using.



▣ Manual

For the detail information and instructions, please refer to user manual and user manual for communication, and be sure to follow cautions written in the technical descriptions (catalog, website).
Visit our website (www.autonics.com) to download manuals.

- **atDesigner user manual**
  It describes how to design user screen and contains information about GP-A070 HMI function and how to use it.
- **GP/LP user manual for communication**
  It describes how to connect with external devices such as PLC.
- **GP-A Series user manual**
  It describes general information about installation and system of GP-A070.

▣ Ordering Information

Model	Item	Series	Screen size	Display unit	Color	Power supply	Interface
GP-A070-T9D6	Graphic panel	A Series	7 inch	TFT Color LCD	16,777,216 color	24VDC⎓	RS232C, RS422, USB HOST, USB DEVICE, Ethernet
GP-A070-T9D7							RS232C: 2, USB HOST, USB DEVICE, Ethernet

▣ Specifications

◎ General specifications

Model		GP-A070-T9D6	GP-A070-T9D7
Power supply		24VDC⎓	
Allowable voltage range		90 to 110% of power supply	
Power consumption		Max. 7.2W	
Serial interface		Each of RS232C, RS422	Two ports of RS232C
USB interface		Each of USB HOST, USB Device (USB2.0)	
Ethernet interface		IEEE802.3(U), 10/100Base-T	
Real-time controller		RTC embedded	
Battery life cycle		3 years at 25°C	
Insulated resistance		Over 100MΩ (at 500VDC megger)	
Ground		3rd grounding (max. 100Ω)	
Noise immunity		±0.5kV the square wave noise (pulse width: 1μs) by the noise simulator	
Withstanding voltage		500VAC 50/60Hz for 1 minute	
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 minute) in each X, Y, Z direction for 1 hour	
	Malfunction	0.5mm amplitude at frequency of 10 to 55Hz (for 1 minute) in each X, Y, Z direction for 10 minutes	
Shock	Mechanical	300m/s² (approx. 30G) in each X, Y, Z direction for 3 times	
	Malfunction	100m/s² (approx. 10G) in each X, Y, Z direction for 3 times	
Environment	Ambient temperature	0 to 50°C, storage: -20 to 60°C	
	Ambient humidity	35 to 85%RH, storage: 35 to 85%RH	
Protection structure		IP65 (front panel, IEC standard)	
Accessory		Fixing bracket: 4, battery (included)	
Approval		CE KC	
Weight※1		Approx. 706g (approx. 520g)	

※1: The weight includes packaging. The weight in parenthesis is for unit only.
※Environment resistance is rated at no freezing or condensation.

◎ Performance specifications

● Display performance

LCD type	TFT Color LCD
Resolution	800×480 dot
Display area	152.4×94.44mm
Color	16,777,216 color
LCD view angle	Within 50°/60°/65°/65°of each top/bottom/left/right
Backlight	White LED
Luminance	Max. 300cd/m^2
Luminance adjustment	Adjustable by software

● Graphic drawing performance

Language※1	Korean, English
Text	Bitmap ASCII and vector font
Memory for user screen	64MB
Number of user screen	100 pages
Touch switch	Analog touch (resistive type)

● Interface type

GP-A070-T9D6	RS232C, RS422, USB Host, USB Device, Ethernet
GP-A070-T9D7	RS232C: 2, USB Host, USB Device, Ethernet

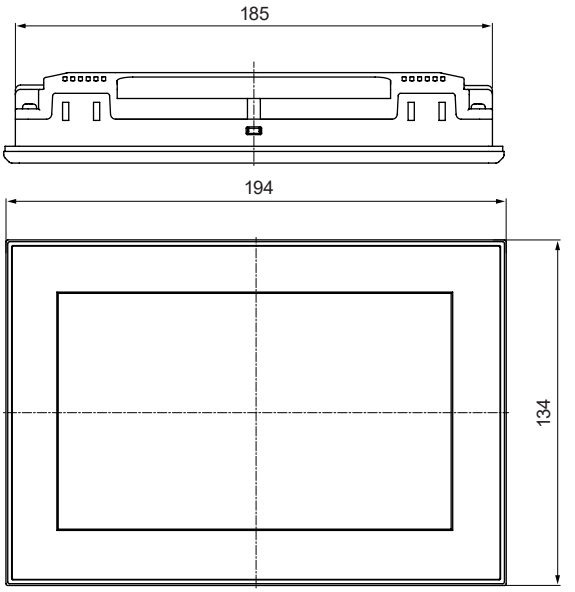
※1: Supported language can be added.

▣ Function

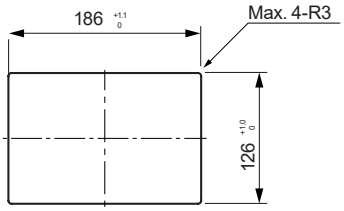
Function		Description
Figure		Line/Multi line/Rectangle/Round rectangle/Polygon/Circle/Fan/Chord/Arc/ Rectangle scale/Circle scale/Semicircle scale/Image/Text
Object	Lamp	Displaying the value of the designated device in bit/word/multi lamp
	Switch	Switching the status of the designated device or object with bit/word/change screen/special/multi switch
	Numeric input/display	Displaying the value of the designated device/Inputting the value to the designated device in number (DEC, HEX, OCT, BIN, REAL)
	Text input/display	Displaying the value of the designated device/Inputting the value to the designated device in text (ASCII/Unicode)
	Call window	Calling a window screen according to the conditions on the value of the designated device
	Message	Displaying a message according to the conditions on the value of the designated device
	Graph	Displaying the value of the designated device in bar/pie/panel meter/statistic/RealTime trend/Logging trend/ RealTime distribution/Logging distribution graph
	Clock	Displaying time or date of the time
	Recipe Editor	Editing recipe (project)
	Logging table	Displaying the logging data (project) in a table
	System logging table	Displaying the system logging data (project) in a table
	Alarm explorer	Displaying the alarm group of alarm history (project) in a table
	Alarm list	Displaying the data of alarm history (project) in a table.
	Data list viewer/editor	Displaying/Editing the value of consecutive word device in a table
	Option list	Displaying the data of the designated device/Inputting data to the designated device in a combo box
	Move coord.	Displaying the object/Moving coordinate of the object according to the value of the designated device
Project	Link device	Reading/Writing the data between GP and controller (PLC) as long as setting according to the status of bit/ cycle condition
	Flow alarm	Displaying alarm in the flowing text at the set position, when meeting the alarming condition
	Alarm history	Saving data of alarming time, device, and information, when the value of the designated alarm-observing device meets the set condition
	Scheduler	Executing a function (bit on/off/reversal, work value changing, script) according to the set condition (device/ cycle)
	Recipe	Reading the value of the multiple devices/Writing the value to the multiple devices at once
	Logging	Saving the value of the designated device, when meeting the condition (device/cycle)
	System Logging	Saving system operation information of GP in a log file
	Script	Writing Lua script by user

▣ Dimension

(unit: mm)

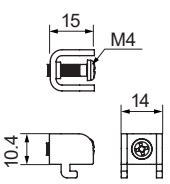


● **Panel cut out**

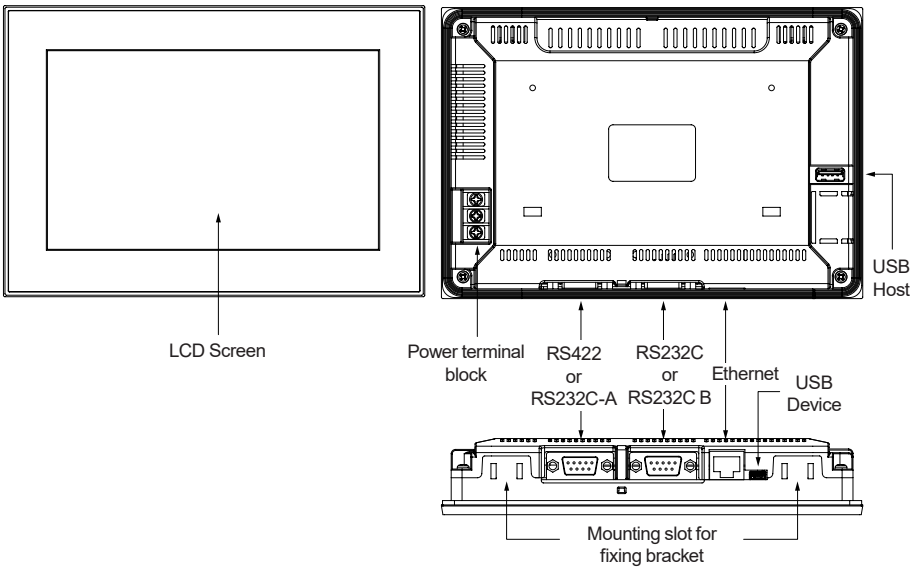


※Panel thickness : max. 4mm

● **Fixing bracket**



▣ Unit Description



●Serial port (RS232C/RS422)

All devices connectable to the product including PC, PLC, serial printer, barcode reader, and dedicated connectors can be connected in to both RS232C and RS422 ports.

Port	Pin		Port	Pin	
RS232C **RS232C-A** **RS232C-B** 5 4 3 2 1 / 9 8 7 6 D-Sub 9-pin Male	1	Non-Used	**RS422** 1 2 3 4 5 / 6 7 8 9 D-Sub 9-pin Female	1	TXD+
	2	RXD		2	RXD+
	3	TXD		3	Non-Used
	4	DTR		4	Non-Used
	5	SG		5	SG
	6	DSR		6	TXD-
	7	Non-Used		7	RXD-
	8	Non-Used		8	Non-Used
	9	Non-Used		9	Non-Used

●Ethernet port

For connecting LAN cable and hub, use direct cable, and for connecting PC directly, use cross cable.

●USB

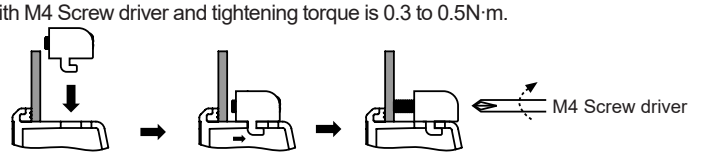
Type	USB Host	USB Device
Function	· Transferring/Copying data between storage and GP-A070 · Firmware upgrade · Bar-code reader · Printer	· Uploading/Downloading a atDesigner project file · Used as external storage by connecting to PC

USB HOST can cover up to 32GB of external storage.
It supports only external storage of FAT16 and FAT32 file system.

※For detailed information about each interface, please refer to 'GP-A Series user manual' and 'GP/LP Communication manual'.

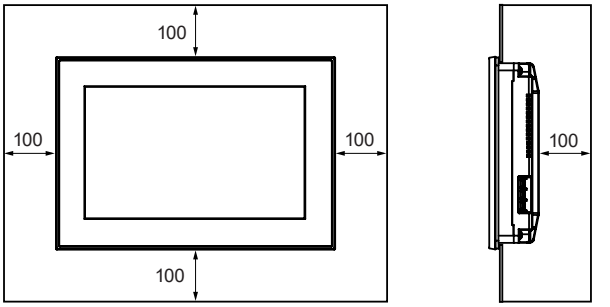
▣ Installation

1. Set GP-A070 in panel.
2. Set fixing brackets in 4 slots (2 slots is in upper side, 2 slots is in lower side).
3. Tighten fixing bracket with M4 Screw driver and tightening torque is 0.3 to 0.5N·m.



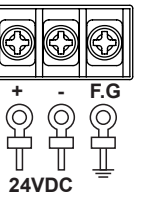
※When installing GP-A070 on panel, make 100mm of space from upper, lower, right, left side of the product on the panel and back side of panel. It is for preventing effect of electromagnetic waves and heat from other controllers.

(unit: mm)



▣ Power Wiring

- For power supply, use the wire of which cross section is at least 0.75mm² and use the wire of which cross section is at least 1.25mm² for grounding.
- Use round terminal with at least 3mm of internal diameter and less than 6mm of external diameter.
- Do not apply power before power line connection.
- Check power polarity.
- Tighten the terminal screw with 0.5 to 0.8N·m torque.
- Ground resistance should be less than 100Ω and ground it separately.



▣ Cable (sold separately)

Communication cables connectable into external devices such as PLC are sold separately.
Please refer to 'GP/LP user manual for communication' for communication cable.

▣ Battery Replacement

Please contact our service center to replace battery.
It may cause an explosion or a fire when using improper battery.

▣ Cautions during Use

1. Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
2. 24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
3. Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
4. Operate the product after supplying power to the product, input/output equipment, and load. If operate product before supplying power, it may result in output error or malfunction.
5. Keep away from high voltage lines or power lines to prevent inductive noise.
   Do not use near the equipment which generates strong magnetic force or high frequency noise.
6. Make a required space around the unit for radiation of heat, and do not block ventilation openings.
7. Do not push the touch panel with a hard and sharp object or push the panel with excessive force.
   It may result in fire or malfunction.
8. When skin is smeared with liquid crystal from the broken LCD, rinse with running water for over 15 minutes.
   If it gets into the eyes, rinse eyes with running water for over 15 minutes and contact a doctor.
9. This unit may be used in the following environments.
   ①Indoors (in the environment condition rated in 'Specifications')
   ②Altitude max. 2,000m
   ③Pollution degree 2
   ④Installation category II