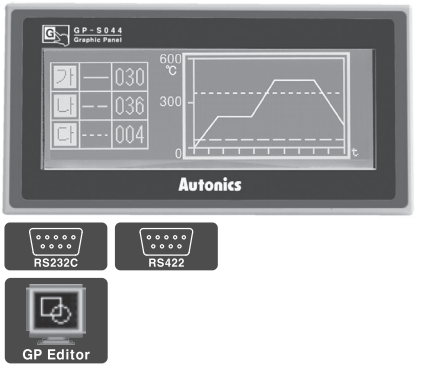
Basic Type 4.4 inch Mono LCD Graphic Panel

▣ Features



- Displays max. 400 characters
- Enables to save max. 500 pages of user screen
- Easy software upgrade available on website
  (1) GP firmware file
  (2) GP Editor (drawing program)
  (3) Additional protocol
- Different devices monitoring function
  : Allows to monitor and control the variables of additionally connected controllers (such as PLC) with external communication port
- Supports multilingual
  : Supports Korean, Japanese, English, Chinese, Russian, Vietnamese and Portuguese.
  Additional languages will be available by firmware.
- Supports multi-font
  : It provides various bitmap and user-selected fonts.
- Various multi-communication port
  : Both RS232C 2 port and RS232C/RS422 compound port are provided.
- Device monitoring function
  : It enables to monitor GP devices and connected controller devices by GP without graphic design data.
- Printer and barcode reader connection
  : It enables to print alarm history connecting a printer and read barcode connecting a barcode reader.
- Compact design
- Various display function
  : It displays data by various tags.

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

※GP-S044 Series is a replacement of GP-2480 Series, discontinued product.

▣ 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.

- **GP Editor user manual**
  It describes how to write screen data, and is about related usage of GP-S044 HMI function.
- **GP/LP user manual for communication**
  It describes connection for external devices such as PLC.
- **GP-S044/S057 user manual**
  It describes general information on the installation and usage of GP-S044 and system contents.

▣ Ordering Information

Model	Item	Series	Monitor size	Display unit	Color	Power supply	Interface
GP-S044-S1D0	Graphic panel	S series	4.4 inch	STN LCD	MONO (blue, white)	24VDC⎓	Each port of RS232C, RS422
GP-S044-S1D1							Two ports of RS232C

■ Specifications

Model		GP-S044-S1D0	GP-S044-S1D1
Power supply		24VDC⎓	
Allowable voltage range		90 to 110% of power supply	
Power consumption		Max. 3.6W	
Display performance	LCD type	4.4 inch STN Blue Negative	
	Resolution	240×80 dots	
	Display area	112.8×37.6mm	
	Color	MONO (blue, white)	
	LCD view angle	Top/Bottom/Left/Right within 30° in each direction	
	Backlight	White LED	
	Brightness	Adjustable by software	
Graphic drawing performance	Language※1	English, Korean, Japanese, Chinese, Russian, Vietnamese, Portuguese	
	Text	• High resolution display up to 400 letters (6×8 font) • 6×8, 8×8 ASCII characters, high definition numbers • 8×16 ASCII characters, 16×16 character by each country (1-8 times bigger for width, 0.5-5 times bigger for height)	
	Graphic drawing memory	512KB	
	Number of user screen	500 pages	
	Touch switch	Width 15×Height 4 = 60	
Serial interface		Each port of RS232C, RS422 (asynchronous method)	Two ports of RS232C (asynchronous method)
Real-time controller		RTC embedded	
Battery life cycle		Approx. 3 years at 25℃	
Insulation 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	
Dielectric strength		500VAC (50/60Hz) for 1 min	
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hour	
	Malfunction	0.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 min	
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℃, storage: -20℃ to 60℃	
	Ambient humidity	35 to 85% RH, storage: 35 to 85% RH	
Protection structure		IP65 (front panel, IEC standard)	
Accessory		Fixing bracket: 4, waterproof rubber ring, battery (included)	
Approval		CE KC	
Weight※2		Approx. 413g (approx. 284g)	

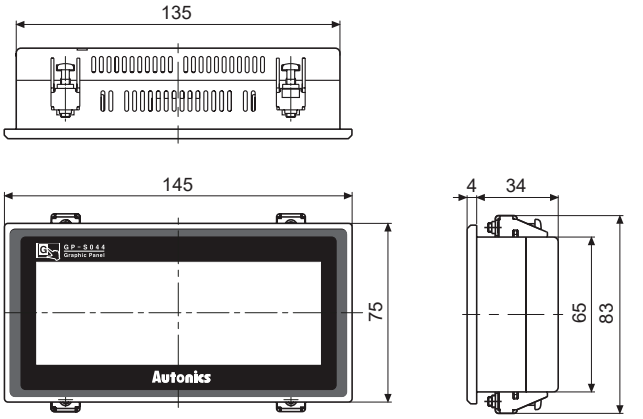
※1: Supported language can be added. ※2: The weight includes packaging. The weight in parenthesis is for unit only.
※Environment resistance is rated at no freezing or condensation.

■ Function

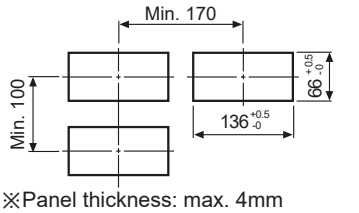
Figure display		Line, rectangle, circle, text, bitmap
Tags	Numeral display	Displays the designated device as numerical value. (decimal, hexadecimal, octal, binary, real number)
	ASCII display	Displays the designated device value as ASCII character.
	Time display	Displays current time or date.
	Alarm history	Registers alarm history.
	Alarm list	Displays generated (not recovered) alarm.
	Comment display	Displays the designated comment as device status or value.
	Lamp	Displays lamp as device status.
	Part display	Displays the designated parts as device status and value.
	Line graph	Displays several device values with a graph of broken line.
	Trend graph	Displays change of device value for time with a graph of broken line.
	Bar graph	Displays a device value with a bar graph.
	Statistic graph	Displays a ratio of several device values with pie graph.
	Panel meter	Displays a device value as panel meter.
	Touch key	Screen is switched, word/bit device values are set when it touched.
	Numeral input	Configures user input value in device.
	ASCII input	Configures user input ASCII code value in device.
System information function		Monitors/Controls GP operation from PLC.
Recipe function		Reads/Writes several PLC device collectively.
Security function		Only acceptable user can observe/operate important data.
Barcode read function		Connects barcode reader, read barcode.
Floating alarm function		Warning message is floated when alarm is generated.
Time operation		Specific bit device is ON/OFF for designated day and time.
Overlap window		Available to form dynamically overlapping another base screen on the base one.
Observe status function		Changes PLC device status/value of PLC when trigger is generated.

▣ Dimensions

(unit: mm)

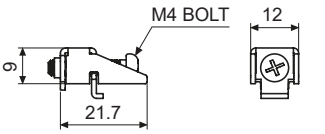


● **Panel cut-out**

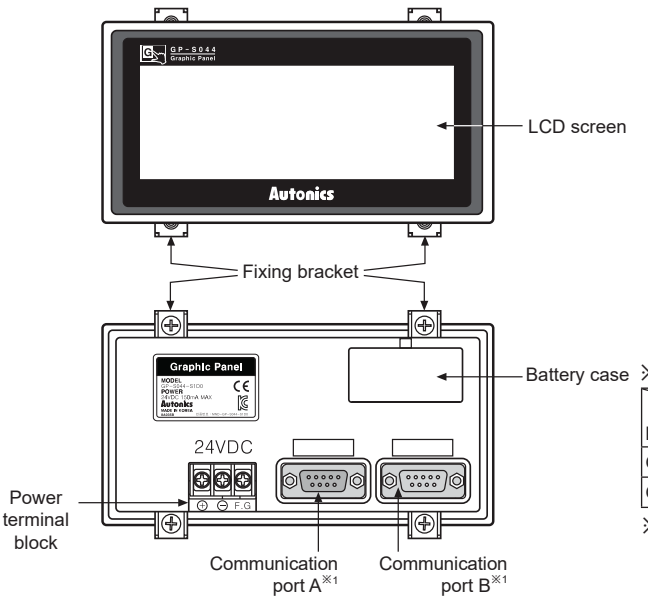


※Panel thickness: max. 4mm

● **Fixing bracket**



▣ Unit Description



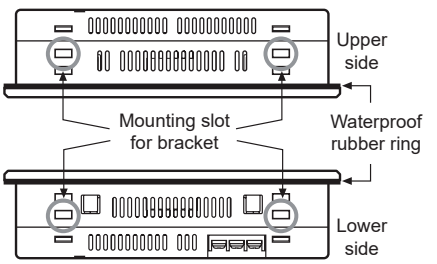
※1: Communication port

Model \ Communication port	Port A	Port B
GP-S044-S1D0	RS422	RS232C
GP-S044-S1D1	RS232C-A	RS232C-B

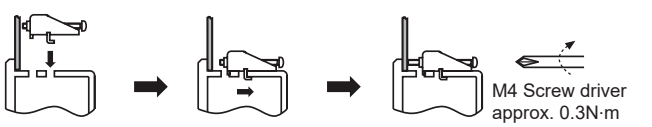
※For more information, refer to '▣ Serial Interface' of GP/LP Common Features.

▣ Installation

1. Set a waterproof rubber ring after placing the joining part of the ring under the GP-S044.
2. Adhere closely between each edge of the GP-S044 and the rings.
3. Set GP-S044 in panel.
4. Set the fixing bracket to 4 bracket slots and fix them with the screw of the bracket.



● **Fixing bracket**

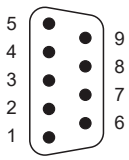
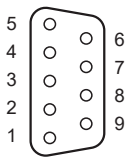


▣ Cable (sold separately)

Serial connection cables which connect GP/LP with PLC or other external devices are sold separately.
Refer to "GP/LP Communication Cables".

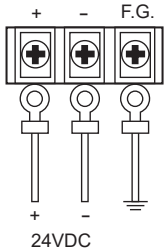
▣ Serial Interface

- All devices are connectable with GP-S044 including PC, PLC, serial printer, barcode reader and dedicated connectors can be connected with both RS232C and RS422 ports.
- Use the dedicated communication cable for the each connected device. (Refer to the "GP/LP Communication Cables")
- For the method of wiring external devices like PLC, refer to "GP/LP communication manual".

Port	NO.	Pin
RS232C  D-Sub 9-pin Male	1	Not used
	2	RXD
	3	TXD
	4	DTR
	5	SG
	6	DSR
	7	Not used
	8	Not used
	9	Not used
RS422  D-Sub 9-pin Female	1	TXD+
	2	RXD+
	3	Not used
	4	Not used
	5	SG
	6	TXD-
	7	RXD-
	8	Not used
	9	Not used

▣ 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.



▣ Battery Replacement

Please contact out distributor to replace battery.
It may cause an explosion or a fire when improper battery is used.

▣ 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