Autonics

Graphic Panel
GP-S057

INSTRUCTION MANUAL

CE C K

Thank you for choosing our Autonics product.
Please read the following safety considerations before use.

◼ Safety Consideration

※Please observe all safety considerations for safe and proper product operation to avoid hazards.
※⚠ symbol represents caution due to special circumstances in which hazards may occur.

⚠ **Warning** Failure to follow these instructions may result in serious injury or death.

⚠ **Caution** Failure to follow these instructions may result in personal injury or product damage.

⚠ Warning

1. **Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)**
Failure to follow this instruction may result in fire, personal injury, or economic loss.
2. **Use the unit within the rated specifications.**
Failure to follow this instruction may result in shortening the life cycle of the product or fire.
3. **Do not connect, repair, or inspect the unit while connected to a power source.**
Failure to follow this instruction may result in fire.
4. **Check 'Power Wiring' and 'Serial Interface' before wiring.**
Failure to follow this instruction may result in fire.
5. **In preparation for product damage, communication error, or malfunction, install external limit switch, emergency stop switch, or other protection circuit.**
Failure to follow this instruction may result in fire, personal injury, or economic loss.
6. **Since Lithium battery is embedded in the product, do not disassemble or burn the unit.**
Failure to follow this instruction may result in fire.
7. **Do not disassemble or modify the unit.**
Failure to follow this instruction may result in fire.
8. **Please contact to us for battery replacement.**

⚠ Caution

1. **Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.**
Failure to follow this instruction may result in fire or explosion.
2. **Use dry cloth to clean the unit, and do not use water or organic solvent.**
Failure to follow this instruction may result in electric shock or fire.
3. **When connecting the power input, use AWG 23 cable or over and tighten the terminal screw with a tightening torque of 0.5 to 0.8N.m.**
Failure to follow this instruction may result in fire or malfunction due to contact failure.
4. **Keep metal chip, dust, and wire residue from flowing into the unit.**
Failure to follow this instruction may result in fire or product damage.
5. **Do not push over 2 point at the same time.**
Failure to follow this instruction may result in malfunction.

◼ Ordering Information

Model	Monitor size	Display unit	Color	Power supply	Interface
GP-S057-S1D0	5.7inch	STN LCD	MONO (blue, white)	24VDC	Each port of RS232C, RS422C
GP-S057-S1D1					Two port RS232C

※**The above specifications are subject to change and some models may be discontinued without notice.**
※**Be sure to follow cautions written in the instruction manual, user manual and the technical descriptions (catalog, homepage).**

◼ Specifications

●General specifications

Model	GP-S057-S1D0	GP-S057-S1D1
Power supply	24VDC⎓	
Allowable voltage range	90 to 110% of power supply	
Power consumption	Max. 3.6W	
Serial interface	Each port of RS232C, RS422 (asynchronous method)	Two ports of RS232C (asynchronous method)
Real-time controller	RTC embedded	
Battery life cycle	3 years at 25℃	
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	
Dielectric strength	500VAC at 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℃, 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: 4pcs, waterproof rubber ring, battery (included)	
Approval	CE K	
Weight※1	Approx. 565g (approx. 386g)	

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

●Performance specifications

Model	GP-S057-S1D0(1)
Display performance	
LCD type	5.7inch STN Blue Negative
Resolution	320×240 dot
Display area	119×91mm
Color	MONO (blue, white)
LCD view angle	Within each 30°of top/bottom/right/left
Backlight	White LED
Brightness	Adjustable by software
Graphic drawing performance	
Language※1	Support for Korean, English, Japanese, Chinese, Russian, Vietnamese, Portuguese
Text	• Up to 1590 characters (6×8 font) displayable • 6×8, 8×8 ASCII character, High quality view of numbers • 8×16 ASCII characters, 16×16 regional characters (1 to 8 times bigger for width, 0.5 to 5 times bigger for height)
Graphic drawing memory	512kB
Number of user screen	500 page
Touch switch	Width 15×Height 4=60

※1: Supported language can be added.

◼ 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.
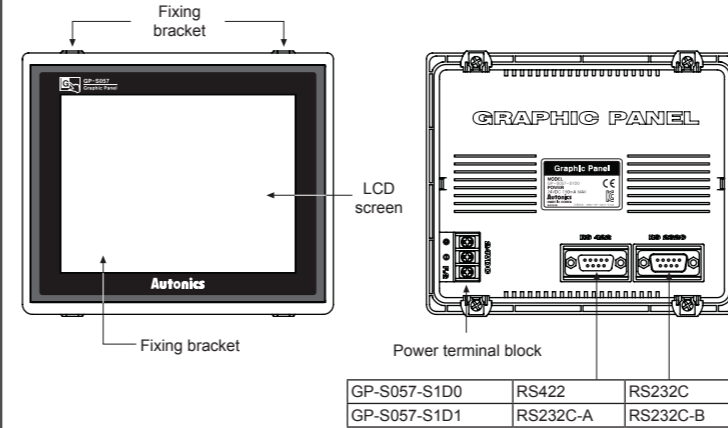●Ground resistance should be less than 100Ω and ground it separately.

+ − F.G

24VDC
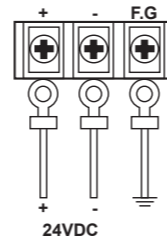
◼ Serial Interface

●All devices connectable into GP-S057 including PC, PLC, serial printer, barcode reader and dedicated connectors can be connected into both RS232C and RS422 ports.
●Device must be set for the port in system setting for GP-S057. For details, refer to 'GP Editor user manual'.
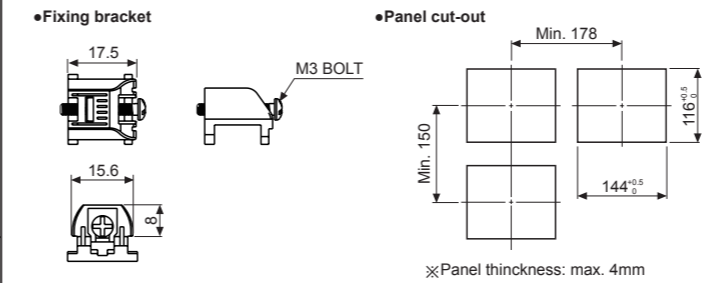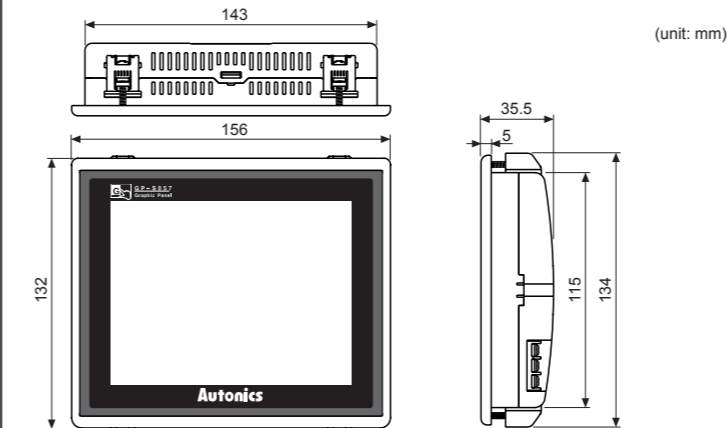●For the method of wiring external devices of PLC, refer to 'GP, LP user manual for communication'.

Port	Pin		Port	Pin	
RS232C RS232C-A RS232C-B	1	Non-used	**RS422**	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
D-Sub 9-pin Male			D-Sub 9-pin Female		

◼ Unit Description

Fixing bracket

LCD screen

GRAPHIC PANEL

Fixing bracket

Power terminal block

| GP-S057-S1D0 | RS422 | RS232C |
| GP-S057-S1D1 | RS232C-A | RS232C-B |

◼ Dimensions

(unit: mm)

143
156
132
35.5
5
115
134

●Fixing bracket

17.5
15.6
8
M3 BOLT

●Panel cut-out

Min. 178
Min. 150
116⁺⁰·⁵
144⁺⁰·⁵

※Panel thinckness: max. 4mm

◼ Installation

1. Set a waterproof rubber ring after placing the joining part of the ring under the GP-S057.
2. Adhere closely between each edge of the GP-S057 and the rings.
3. Set GP-S057 in panel.
4. Set the fix bracket to 4 bracket slots and fix them with the screw of the brackets.

Upper side
Lower side
Mounting slot for bracket
Waterproof rubber ring

●Mounting bracket

M3 Screw driver Approx. 0.3N·m
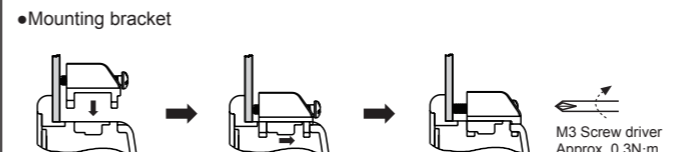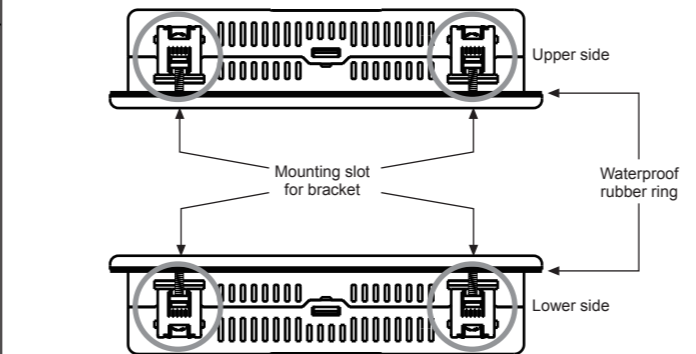
◼ Software

Visit our homepage (www.autonics.com) to download GP Editor or firmware.

●GP Editor
GP Editor is for editing shape, arrangement, default of tag data which is displayed on GP-S057 screen. For GP Editor software, computer specification is as below.
Operating system: Windows XP/7/8/10

Item	Minimum specification	Recommended specification
CPU	Pentium 4 or above	Pentium Dual Core
Memory	256MB	512MB
Hard disk	1GB (available space)	2GB (available space)
Resolution	1024×768	1024×768

●Firmware
Please refer to 'GP-S044/S057 user manual' and 'GP Editor user manual'.

◼ 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, homepage).
Visit our homepage (www.autonics.com) to download manuals.

●GP Editor user manual
It describes how to write screen data, and is about related usage of GP-S057 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-S057 and system control.

◼ Cable (sold setarately)

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 GP-S057 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.
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.
8. 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

◼ Major Products

◼ Photoelectric Sensors ◼ Temperature Controllers
◼ Fiber Optic Sensors ◼ Temperature/Humidity Transducers
◼ Door Sensors ◼ SSRs/Power Controllers
◼ Door Side Sensors ◼ Counters
◼ Area Sensors ◼ Timers
◼ Proximity Sensors ◼ Panel Meters
◼ Pressure Sensors ◼ Tachometer/Pulse (Rate)Meters
◼ Rotary Encoders ◼ Display Units
◼ Connector/Sockets ◼ Sensor Controllers
◼ Switching Mode Power Supplies
◼ Control Switches/Lamps/Buzzers
◼ I/O Terminal Blocks & Cables
◼ Stepper Motors/Drivers/Motion Controllers
◼ Graphic/Logic Panels
◼ Field Network Devices
◼ Laser Marking System (Fiber, Co₂, Nd: yag)
◼ Laser Welding/Cutting System

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