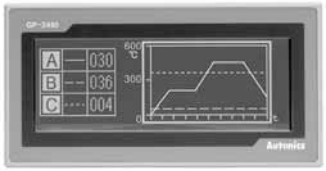
(O) Graphic Panel

GP-2480

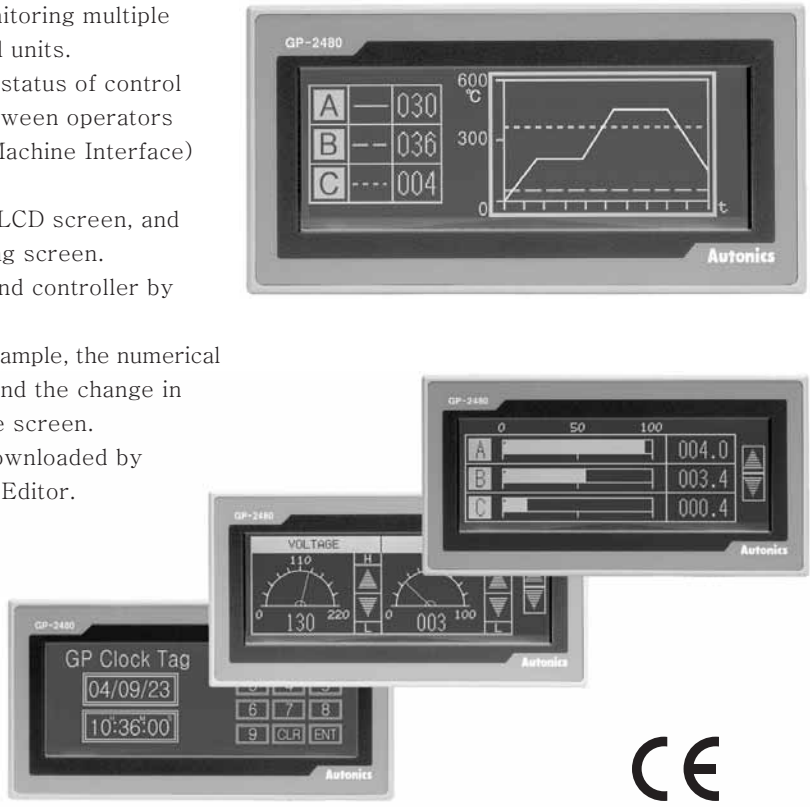


GP-2480 Series

38mm Graphic Panel with Touch Screen, Slim design, and better Reliability

▣GP(Graphic Panel) 2480

GP-2480 is a graphic interface device monitoring multiple control operations of PLC and other control units.
It indicates processing values or operation status of control devices and enables the communication between operators and user so that it replaces HMI(Human-Machine Interface) and MMI(Man-Machine Interface).
It displays control parameters and data on LCD screen, and they are easily set and managed by touching screen.
It offers better data transfer between GP and controller by the serial communication method.
The variables are displayed with tags; for example, the numerical value of temperature is shown with a tag, and the change in temperature for time can be graphed on the screen.
The data on GP-2480 can be edited and downloaded by user's preference using the software, GP Editor.



▣Features

- ●Slim 38mm of space saving device(W145×H74×D38mm)
- ●High resolution(240×80 dot), display max.400 characters
- ●6×6, 8×8, ASCⅡ, high quality view of numbers
- ●8×16 ASCⅡ, 16×16 of regional characters
  (1, 2, 3, 4, 5, 6, 7, 8 times bigger for width/0.5, 1, 2, 3, 4, 5 times bigger for height)
- ●Able to save max. 500 pages of user screen
- ●Communication between heterogeneous controllers
- ●Able to monitor 2 controllers simultaneously and relay the communication
- ●Multi monitoring function : Connect same controllers to PLC2 connection port(Software) English, Korean
  (Additional language support can be available by firmware)
- ●Support multi font(Various bitmap fonts, user-defined fonts)

Default font		8×16 pixel
Available characters	6×8 pixel	40 characters×10 lines=400 characters
	8×8 pixel	30 characters×10 lines=300 characters
	8×16 pixel	30 characters×5 lines=150 characters
	16×16 pixel	15 characters×5 lines=75 characters
	32×32 pixel	7 characters×2 lines=14 characters
Font size	Width	1~8 times
	Height	0.5, 1~5 times

- ●Device monitoring function : It is able to monitor the activities of connectable controller devices without designed data.
- ●Touch interface : It is able to operate GP using touch switch on front screen

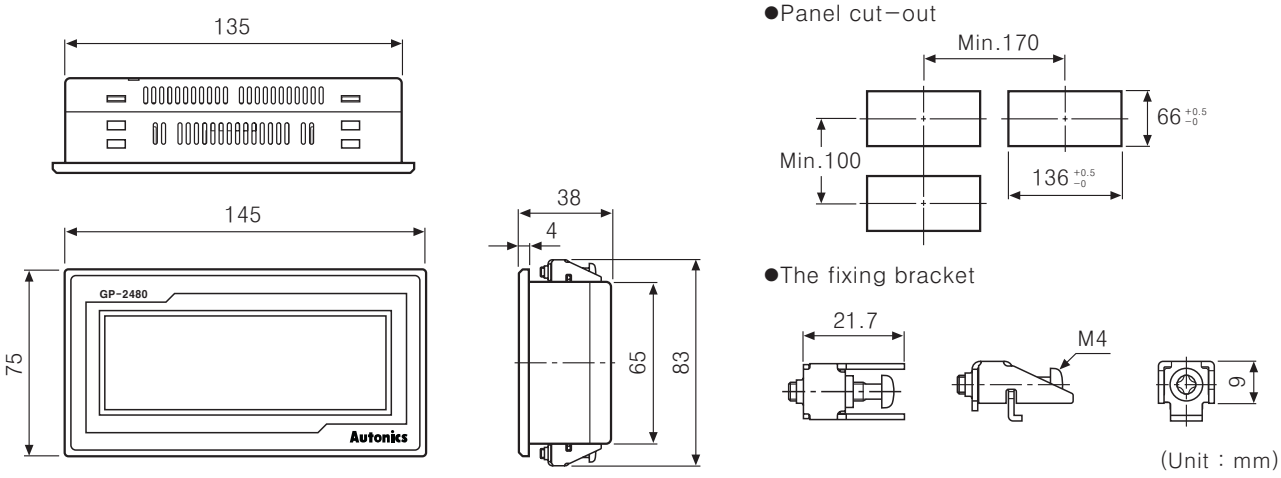
▣Specifications

Model				GP-2480-SBD0	GP-2480-SBD1
LCD type				STN Blue Negative	
Resolution				240×80 dots	
Display area				112.8mm×37.6mm	
Color				Single color(Blue, White)	
LCD visible angle				30° of Up/Down/Left/Right direction	
Backlight				White LED	
Battery life cycle				3 years at 25℃	
Brightness				Adjust as software	
Serial communication				Each of RS232C, RS422	2 ports of RS232C
Applicable device				PLC(Refer to "Communication manual"), Printer, Barcode reader	
Graphic drawing software				GP Editor	
Text font size				• 6x8, 8x8 ASCII character, High quality number • 8X16 ASCII character, 16X16 regional character (Width 1,2,...,8 times, Height 0.5,1,2,..,5 times)	
User Screen	Graphic drawing memory			512KB	
	Figure display			Line, Rectangle, Circle, Text, Bitmap	
	Tags	Numeral display		Display the designated device as numerical value. (Decimal, hexadecimal, octal, binary, real number)	
		ASCII display		Display the designated device value as ASCII character.	
		Time display		Display current time or date.	
		Alarm history		Register alarm history.	
		Alarm list		Display generated (not backed up) alarm.	
		Comment display		Display the designated comment as device status or value.	
		Lamp		Display lamp as device status.	
		Part display		Display the designated parts as device status and value.	
		Line graph		Display several device values with a graph of broken line.	
		Trend graph		Display change of device value for time with a graph of broken line.	
		Bar graph		Display a device value with a bar graph.	
		Statistic graph		Display a ratio of several device values with pie graph.	
		Panel meter		Display a device value as panel meter.	
		Touch key		Screen is switched, word/bit device values are set when it touched.	
		Numeral input		Configure user input value in device.	
		ASCII input		Configure user input ASCII code value in device.	
	System information function			Monitor/control GP operation from PLC.	
	Recipe function			Read/Write several PLC device collectively.	
	Security function			Only acceptable user can observe/operate important data.	
	Barcode read function			Connect 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			Change PLC device status/value of PLC when trigger is generated.	
System Screen	Monitoring			Monitor connected PLC device and change the status.	
	Preference	Language selection		Designate system language and character set.	
		Channel connection		Configure connection device of serial port connected to CH1, CH2, editor, printer, barcode reader and serial setup.	
		Current time		Configure current date and time.	
		Delete user data		Delete user data.	
		Configuration/access key		Designate the configuration/access key position of system menu.	
		Buzzer		ON/OFF buzzer	
		Switching of user screen		Configure time for initial screen when power it on.	
		Backlight		Configure Backlight OFF time if there is no operation.	
		Battery		Display the percentage of battery remaining.	
		Contrast		Adjust LCD contrast.	
	Configuration of function	Data transmission		Display during communication (Download/upload) between GP and editor.	
		Time switch		Configure time switch	
		Print out		Print alarm history with serial printer.	

▣Specifications

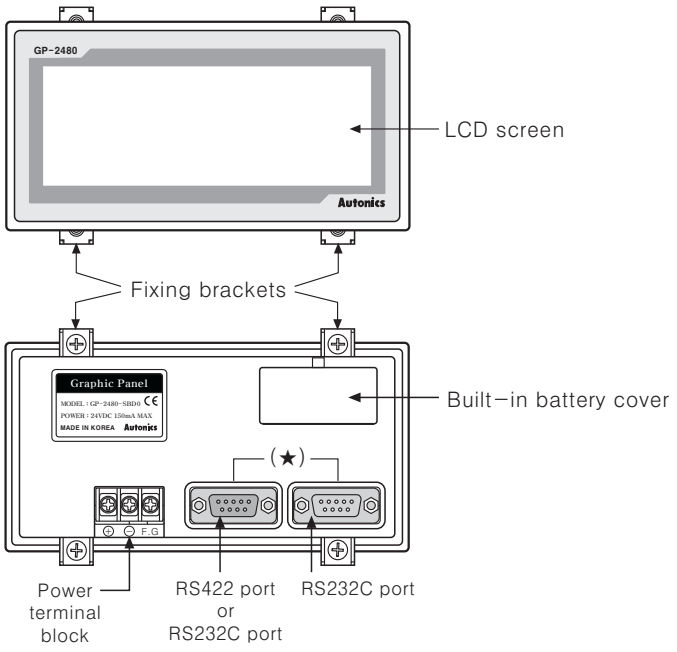
System Screen	Data check	Basic screen	Display title and number of base screen user made.
		Window screen	Display title and number of window screen user made.
		Comment	Display comment list downloaded in main body.
		Check using memory	Display status of using graphic drawing memory.
		Check model and version	Display model and firmware version of GP.
Ambient temperature			0℃ ~ 50℃(at non-freezing status)
Storage temperature			-20℃ ~ 60℃(at non-freezing status)
Ambient humidity			35% ~ 85% RH (at non-dew status)
Insulation resistance			Min. 100MΩ (at 500VDC mega)
Ground			3rd grounding (Max. 100Ω)
Dielectric strength			500VAC(50/60Hz) for a minute
Noise strength			The square wave noise (Pulse width 1㎲) by the noise simulator with ±1000V R/S phase and repetition frequency 60Hz
Vibration		Mechanical	0.75mm amplitude at frequency of 10~55Hz (for a minute) in each of X, Y, Z directions for an hour
		Malfunction	0.5mm amplitude at frequency of 10~55Hz (for a minute) in each of X, Y, Z directions for 10 minutes
Protection structure			IP65(IEC standard)
Accessory			Fixing bracket : 4 pcs, Rubber waterproof ring, Battery (Built-in)
Unit weight			Approx. 300g

▣Dimensions



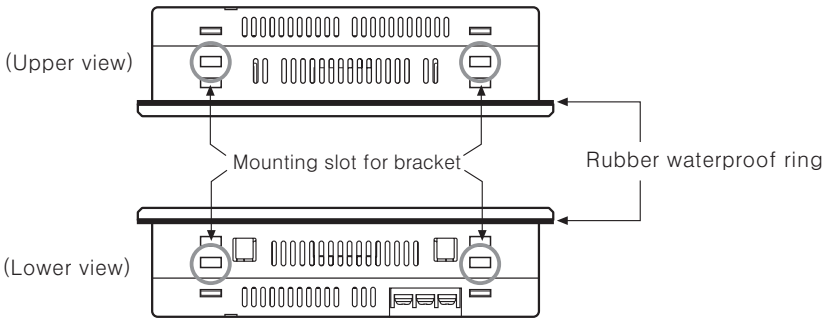
(Unit : mm)

▣Part description

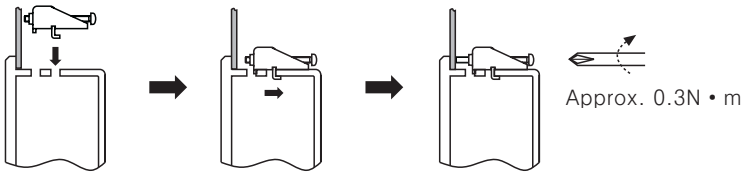


▣Installation

1. Set a rubber waterproof ring in GP.
2. Set GP in panel.
3. Set brackets in 4 bracket slots and fix them.

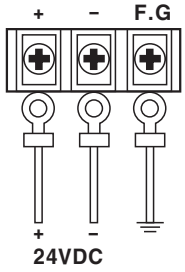


●Mounting bracket



▣Connection wiring

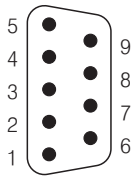
●Please use at least 0.75㎟ power wire, at least 1.25㎟ ground wire.
●Please use crimp-on type ring terminal with min.3mm of inside diameter and max. 6mm of external diameter.
●Please make sure the power is OFF before connect the power wire.
●Please check power polarity.
●Please tighten screws of each terminal with 0.5~0.8 N • m torque.
●Ground resistance should be max.100Ω, it is required to ground separately.



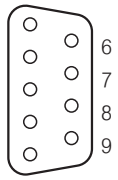
▣Serial interface

●Connectable devices including PC, PLC, Serial printer, barcode reader and various controllers can be connected to RS232C, RS422.
●Set the device connected into the port in system configuration. Refer to "GP user manual" for the details and "Communication manual" for connection of PLC.

Port	PIN		Port	PIN	
RS232C-A, RS232C-B	1	Non-used	**RS422-A**	1	TXD+
	2	RXD		2	RXD+
	3	TXD		3	RTS-
	4	DTR		4	CTS+
	5	SG		5	SG
	6	DSR		6	TXD-
	7	Non-used		7	RXD-
	8	Non-used		8	RTS+
	9	Non-used		9	CTS-



D-Sub 9Pin Male



D-Sub 9Pin Female

▣Software(GP Editor)

Please visit our website(www.autonics.com) and download software and manual.

< Computer specification for using software >

Item	Minimum specification	Recommended specification
System	Pentium Ⅱ	Min. Pentium Ⅲ
Memory	64MB	Min. 128MB
Hard disk	Over 50MB of available space	Over 100MB of available space
Resolution	800×600	Min. 800×600
Operating system	Windows 98/NT/2000/Me/XP	

▣Manual

●GP user manual
Refer to "GP user manual" for more information about design screen data using GP Editor and instructions of GP.

●Communication manual
Refer to "Communication manual" for more information about serial connection of external device, such as PLC.

▣Battery replacement

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

▣Connectable device with GP

Series	Connectable device	Connection type
LG Master-K	MK-10S1	Loader
	MK-80S	Loader
	MK-120S	Loader
	MK-200S	Loader
LG Glofa	GM4	Loader
	GM6	Loader
LG CNET	MK-80S	Cnet
	MK-120S	Cnet
	MK-200S	Cnet
SAMSUNG FARA	N70	Loader
	N70Plus	Loader
MITSUBISH FX	FX1S	Loader
	FX1N	Loader
	FX2N	Loader
	FX2NC	Loader
NAIS FP	FP0-C10	Loader
	FP0-C14	Loader
	FP0-C16	Loader
	FP0-C32	Loader
	FPG-C24R2	Loader
	FPG-C32T	Loader
	FPG-C32T2	Loader
OMRON SYSMAC C	CPM1A	Loader
OMRON temperature controller	E5AN	Modbus
	E5AR	Modbus
	E5CN	Modbus
	E5EN	Modbus
	E5ER	Modbus
DELTA temperature controller	DTB Series	Modbus
AUTONICS	MT Series	Private communication
	MP Series	Private communication
	THD Series	Modbus
	TZ/TZN Series	Private communication
UNIVERSAL	UNIVERSAL	Modbus(Slave)

※The above list is available in GP Editor 2.50.
※The connectable device will be upgraded according to GP Editor version and additional Patch. Check the latest version on our website(www.autonics.com).
※The available version of GP firmware is different according to GP Editor version. The GP system can be down if non-compatible version is used.
※Refer to the website(www.autonics.com) and manual to select communication cable between GP and controllers (Sold separately).

▣Application

◎Complicated environment of operation and control

It graphicalizes mechanical control components such as button, switch and lamps so that saves cost and space and improves the preservation of devices.

Control part　　GP-2480

◎Setting and change of production process

It memorizes the set conditions (Recipe) of process in GP, and it sets or changes commands to PLC without PC. It enhances reliability of production line with fast corresponding alarm of error and preserving the history.

PLC　　GP-2480

◎Controllers with complicated setting

It sets complicated or non-displaying controller (Thermometer/hygrometer, temperature controller etc).

1) Temperature/Humidity without display device

Display temperature, humidity

2) Temperature controller

#1.....#32　　Easy to set and adjust parameter.

◎Data control

It prints alarm history of controller using printer. It reads the data from barcode reader and save it in PLC.

1) PLC/Printer

PLC　　GP-2480　　Printer

2) Barcode reader/PLC

GP-2480　　PLC

◎Communication between heterogeneous controllers

PLC　　GP-2480　　Thermometer/ hygrometer

▣Precaution for using

1. Do not press touch panel with hard and sharp object.
2. Please store the device in the recommended temperature range, or LCD panel can be damaged.
3. Please check pin number shown in "Communication manual" when connect communication port.
4. Do not block the ventilating opening of this product.
5. Do not use or store it in a place with direct ray of light or dust.
6. Do not use or store it in a place with shock or vibration.
7. The ground wire of GP should be grounded separately. The ground resistance should be max.100Ω, please use the wire of min.2㎟ dimension.
8. Please check the pin number and connect to GP communication port.
9. Please tighten bolt on terminal block with specified tightening torque.
10. When liquid crystal from the broken LCD is smeared on your skin, wash it for 15 minutes. If it is gotten in your eye, wash it for 15 minutes and contact a medical specialist for more information.
11. Do not inflow dust or wire dregs into the unit.
12. For cleaning, do not use water or an oil-based detergent, use dry towels.
13. It should be done away regarded as an industrial waste.