Pro-face®

Bright & Easy-to-read Display
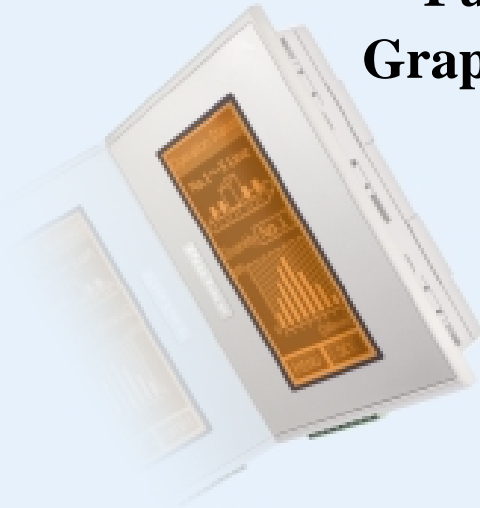
Easy Connection

Easy Installation

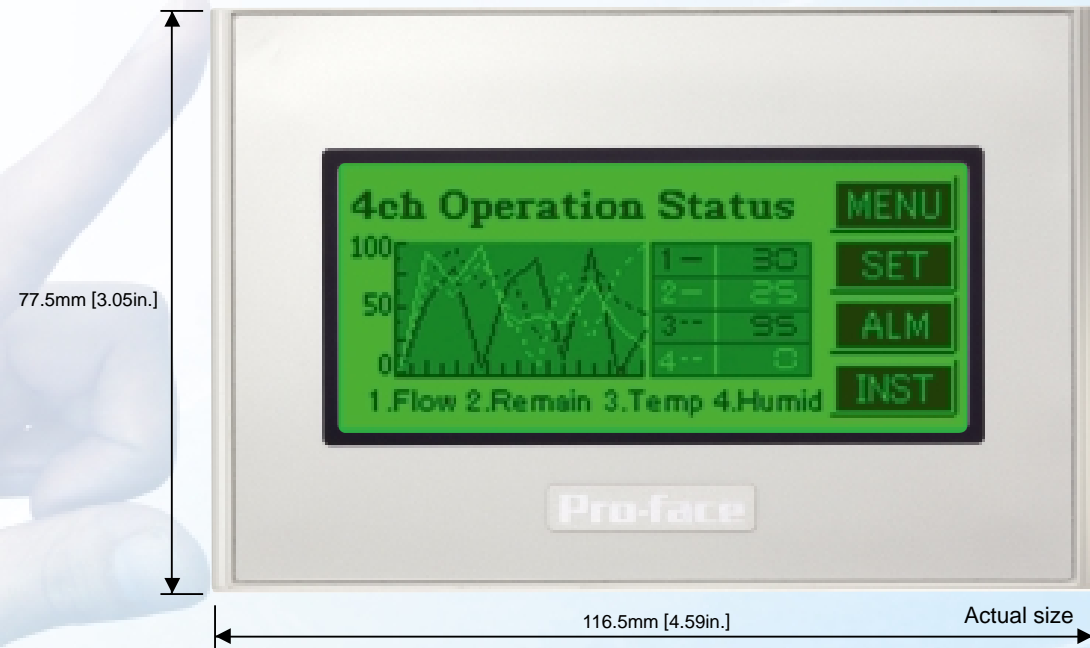## Full Featured Compact
Graphic Operator Interface

GP4100 SERIES

Compact HMI with easy-to-read display.
Compact HMI for easy operation.

Compact graphic operator interface with features selected from all Pro-face HMI products.

77.5mm [3.05in.]

4ch Operation Status

MENU
SET
ALM
INST

100
50
0

1— 30
2— 25
3-- 95
4-- 0

1.Flow 2.Remain 3.Temp 4.Humid

Pro-face

116.5mm [4.59in.]

Actual size

3.4inch STN Monochrome LCD

- 200 x 80 pixel resolution
- 16 levels of grayscale
- USB I/F x 2 (Type-A/mini-B)

Select the best model for your application!

Select from two backlight color patterns!

| Green | Orange | Red |
| White | Pink | Red |

or

Select from three types of serial connections!

RS-232C
or
RS-422/485
or
RS-485(isolated)

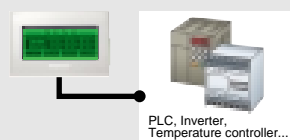**Select vertical or horizonal installation!**

Reliable for international use!

CE

To be certified by NEMA,C-Tick mark, and KCC.
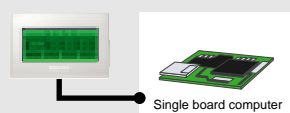*Date of certification will differ according to the standard. Contact your Pro-face sales representative for details.

Connect directly to a variety of devices!

As of November 2009

Connect to controllers!

PLC, Inverter, Temperature controller...

Connect to single board computers!

Single board computer

PLC

Maker Name	Driver Name	1 : n	Path Through	n : m
Mitsubishi Electric Corporation	A Series CPU Direct	●	●	
	A Series Computer Link	●		●
	FX Series CPU Direct	●	●	
	FX Series Computer Link	●		
	Q Series CPU Direct	●	●	
	Q/QnA Serial Communication	●		●
	QnA Series CPU Direct	●	●	
	QUTE Series CPU Direct	●		
OMRON Corporation	C/CV Series HOST Link	●		●
	CS/CJ Series HOST Link	●	●	●
Panasonic Electric Works, Ltd.	FP Series Computer Link SIO	●	●	
Siemens AG	SIMATIC S7 3964 (R)/RK512	●		
	SIMATIC S7 MPI Direct *1	●	●	●
	SIMATIC S5 3964 (R)	●		
	SIMATIC S5 CPU Direct	●		
Rockwell Automation, Inc.	DF1	●	●	
	DH-485	●		

PLC

Maker Name	Driver Name	1 : n	Path Through	n : m
KEYENCE Corporation	KV-700/1000/3000/5000 CPU Direct	●	●	
	Visual KV Series CPU Direct	●		
	Visual KZ Series CPU Direct	●		
Schneider Electric Industries	MODBUS SIO Master	●		
	Uni-Telway	●		
	MODBUS Slave	●		
TOSHIBA MACHINE CO., LTD.	TC Series (TC mini/TC200)	●		

Temperature and Process Controllers/Inverter/Servo

Maker Name	Driver Name	1 : n	Path Through	n : m
OMRON Corporation	Temp. Controller CompoWay/F	●		
Mitsubishi Electric Corporation	FREQROL Inverter	●		

Other Devices

Maker Name	Driver Name	1 : n	Path Through	n : m
Digital Electronics Corporation	Memory Link *2	●		
	General SIO *3	●		
Modbus-IDA	General MODBUS RTU SIO master	●		

*1 GP4107X only. *2 Communicates using built-in memory and can be used with any PC or microcomputer board. *3 Program driver that processes send and receive commands using D-script.
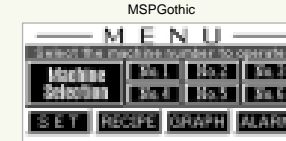
More drivers under development

Visit the Otasuke Pro! support website for the newest drivers and more detailed information! → **http://www.pro-face.com/otasuke/**

Easy-to-read display in a compact size!

● Texts!
Small characters are displayed clearly with 200 x 80 pixel resolution allowing for flexible screen editing regardless of character size.

Magnified view
Clear
No distortion of characters

11pt Clear 綺麗 清晰 예쁘다
10pt Clear 綺麗 清晰 예쁘다
9pt 綺麗 清晰 예쁘다
8pt Clear 綺麗 清晰 예쁘다
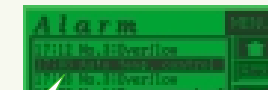
MSPGothic

MENU

Many switches can be placed on a small screen.
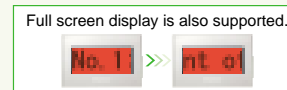
<Multi-language support>
Provides flexibility in multi-lingual environments by offering a choice of display languages familiar to operators.

Clear	綺麗	清晰	예쁘다
English	Japanese	Simplified Chinese	Korean

<Alarm history display>
Messages can also be displayed using image fonts allowing for easy-to-read error identification.

Alarm

Alarm history can be displayed in scrolling text, eliminating display area limitations.
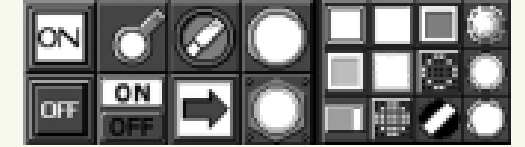
Full screen display is also supported.

No.1: Overcurrent of the heater

● Numeric characters!
Numbers are clearly displayed with bitmap and image fonts.

1234 — Bitmap font (Neon)
1234 — Image font
1234 — Standard font (seven-segment)

● Switches and lamps!
Recognizable and easy-to-operate screens can be created using clear 16-grayscale parts.

16-grayscale parts

Plain monochrome parts
More parts downloadable from our support website.
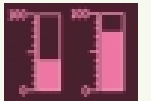**http://www.pro-face.com/otasuke/**

● Graphs!
A wide variety of graphs are available for screen design, providing visual representation of operational status.
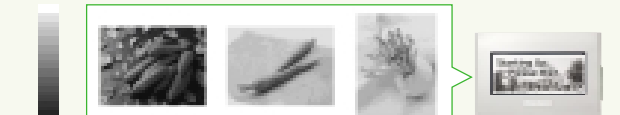
Line graph | Semi-circular graph | Bar graph

● Images!
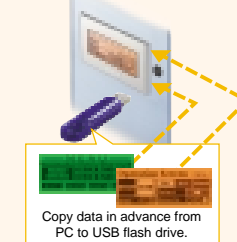JPEG and BMP images can be displayed clearly with 16 levels of grayscales.

16 gray scales

Display photos and illustrations clearly!

Features of large-sized models in small package!

USB Type-A (for connecting USB flash drives and code readers)
USB mini-B (for screen data transfer and Pass-through features)

● Easy transfer of screen data without a PC! (USB Type-A)
Easy screen editing using a USB flash drive without bringing a PC to the site.

<Connectable to a USB code reader>
USB connection allows data scanning with easy setup.
*Use a self-powered USB hub when using a USB code reader.

<Connect to devices using USB to SIO conversion>
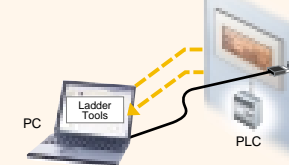Support for expanded SIO scripts allows simultaneous connection to a temperature controller and PLC.

<Ladder data can be transferred by USB flash drives>
Ladder data can be transferred from a display unit to TCmini/TC200, PLCs manufactured by Toshiba Machine, Co., Ltd.

Copy data in advance from PC to USB flash drive.

● Easy editing of 3rd party PLC ladder programs! (USB mini-B)
The Pass-through feature allows you to easily edit PLC ladder programs and change the configuration via a HMI, without switching cables on site.

A USB extension cable can be installed to the front of a cabinet for maintenance without opening the panel.

PC | Ladder Tools | PLC

● GP-Pro EX, Pro-face's screen editing software for all Pro-face products!
GP-Pro EX allows efficient, hassle-free screen creation and debugging, providing significant reduction of development time.
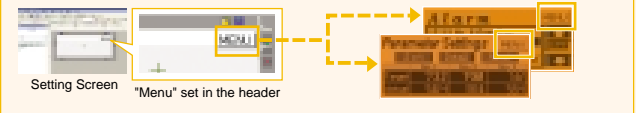
<Simulation>
Monitor operation of screen data on a PC screen even without a HMI.

No connection required

<Headers and footers>
Screen titles, menu switches, and other items can be shared between all screens.

Setting Screen | "Menu" set in the header

● Easy installation with the common software among all Pro-face products!
GP-Pro EX Ver. 2.6

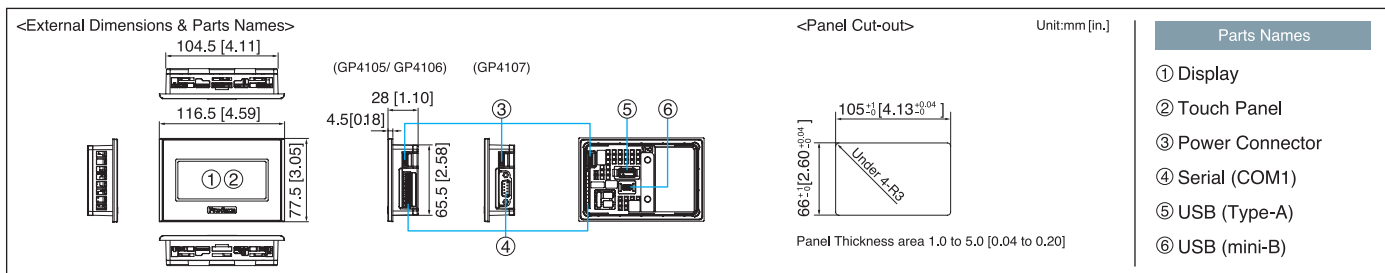### ● Screen Editor GP-Pro EX, compatible with all Pro-face products!

The GP4100 series offers more useful features. Visit the official Pro-face website for more information. **http://www.proface.com/**

■ Specification *For details on the specifications, visit the official Pro-face website or refer to the manuals.

Function Specifications	GP4105G1D	GP4105W1D	GP4106G1D	GP4106W1D	GP4107G1D	GP4107W1D
Display Type	3.4" STN Monochrome LCD					
Display Colors	Monochrome 16 Levels of grayscale					
Resolution	W200 x H80 pixels					
LED Backlight (Not replaceable)	Green/Orange/ Red	White/Pink/ Red	Green/Orange/ Red	White/Pink/ Red	Green/Orange/ Red	White/Pink/ Red
Effective Display Area	W80 x H32 mm					
Language Fonts *1	Japanese, ASCII, Chinese (Simplified), Chinese (Traditional), Korean, Cyrillic, Thai					
Character Sizes	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 pixel fonts Stroke font: 6 to 80 pixel fonts Image font: 8 to 72 pixel 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 16 pixels	25 char. x 5 rows					
Text — 16 X 16 pixels	12 char. x 5 rows					
Text — 32 X 32 pixels	6 char. x 2 rows					
Application memory	FLASH EPROM 2.2 MB *3					
Clock Accuracy	Uses the clock of an external device					
Touch Panel Type	Resistive Film (analog)					
Interface — Serial (COM1)	RS-232C, Asynchronous Transmission, Data Length: 7 or 8 bit, Parity: none, Odd or Even, Stop Bit: 1 or 2 bit, Data Transmission Speed: 2,400 bps to 115.2 kbps, Connector: 2-piece terminal block 9 pin		RS-422/485, Asynchronous Transmission, Data Length: 7 or 8 bit, Parity: none, Odd or Even, Stop Bit: 1 or 2 bit, Data Transmission Speed: 2,400 bps to 115.2 kbps, Connector: 2-piece terminal block 9 pin		RS-485 (isolated), Asynchronous Transmission, Data Length: 7 or 8 bit, Parity: none, Odd or Even, Stop Bit: 1 or 2 bit, Data Transmission Speed: 2,400 bps to 115.2 kbps, 187.5 kbps (MPI), Connector: D-Sub9 (socket)	
Interface — USB (Type-A)	Conforms to USB2.0 (Type-A) x 1, Power Supply Voltage: DC 5 V ±5 %, Communication Distance: 5 m or less					
Interface — USB (mini-B)	Conforms to USB2.0 (mini-B) x 1, Communication Distance: 5 m or less					

General Specifications	GP4105G1D	GP4105W1D	GP4106G1D	GP4106W1D	GP4107G1D	GP4107W1D
International Safety Standards	UL LISTED, cUL LISTED, CE, PC, C, 〔mark〕					
Conforming Standards	UL508, CSA-C22.2 No.142, EN61000-6-2, EN61000-6-4, EN61131-2, GOST-R, C-Tick mark, KCC					
Input Voltage	DC24V					
Power Consumption	2.7W or less *4		3.0W or less *4		3.4W or less *4	
Surrounding Air Temperature	0 to 50 C *5					
Grounding	Functional grounding: Grounding resistance of 100Ω, 2mm2 or thicker wire, or your country's applicable standard.(Same for FG and SG terminals)					
Structure	IP65f, NEMA #250 TYPE 4X/13 (on the front panel when properly installed in an enclosure) *6					
External Dimensions	W116.5 x H77.5 x D28 mm [W4.59 x H3.05 x D1.1 in.]					
Weight	0.2 kg [0.4 lb] ot less (display unit only)					
Cooling Method	Natural air circulation					

*1 Please refer to the GP-Pro EX Reference Manual for details on font types and character codes.
*2 Other font sizes can be set up with the screen editor software.
*3 Capacity available for user application.
*4 Does not include power supply for USB devices.
*5 When using 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.
*6 The front face of the GP unit, installed in a solid panel, has been tested using, conditions equivalent to the standards shown in the specification. Even though, the GP unit's level of resistance is equivalent to these standards, oils that should have, no effect on the GP can possibly harm the unit.

<External Dimensions & Parts Names>

104.5 [4.11] (GP4105/ GP4106) (GP4107)
116.5 [4.59] 28 [1.10] 4.5 [0.18] 77.5 [3.05] 65.5 [2.58]
① ② ③ ④ ⑤ ⑥

<Panel Cut-out>
Unit:mm [in.]
105 +1 [4.13 +0.04]
66 +1 [2.60 +0.04] Under 4.R3
Panel Thickness area 1.0 to 5.0 [0.04 to 0.20]

Parts Names
① Display
② Touch Panel
③ Power Connector
④ Serial (COM1)
⑤ USB (Type-A)
⑥ USB (mini-B)

■ Units

Product Name	Model No.	Backlight Colors	Display Type	Serial (COM1)	USB	Input Voltage
GP-4105G	GP4105G1D	Green/Orange/Red	3.4" STN Monochrome LCD	RS-232C	Type-A x1 mini-B x1	DC24V
GP-4105W	GP4105W1D	White/Pink/Red				
GP-4106G	GP4106G1D	Green/Orange/Red		RS-422/485		
GP-4106W	GP4106W1D	White/Pink/Red				
GP-4107G	GP4107G1D	Green/Orange/Red		RS-485 (isolated)		
GP-4107W	GP4107W1D	White/Pink/Red				

■ Accessories

Product Name	Model No.	Description
GP-Pro EX	EX-ED-V26	Screen editor software (Ver.2.6 or later required to use GP4100 series)
USB Transfer Cable (Type-A/mini-B) (1.8m)	ZC9USCBMB1	Cable for transferring screen data from a PC (Type-A) to the GP (USB mini-B)
Mitsubishi PLC Q-Series CPU I/F Cable (3m)	ZC9CBQ31	Connects the GP directly to the CPU programming port on the Mitsubishi Electric PLC Q series
Mitsubishi PLC FX-Series CPU I/F Cable (5m)	ZC9CBFX51	Connect the GP directly to the CPU programming port on the Mitsubishi Electric Mitsubishi PLC FX series
Mitsubishi PLC FX-Series CPU I/F Cable (1m)	ZC9CBFX11	
Mitsubishi PLC A-Series Cable (5m)	ZC9CBA51	Connects the GP directly to the CPU programming port on the Mitsubishi Electric PLC A/QnA series
Panasonic Electonic Works PLC FP Series CPU Cable (2m)	ZC9CBFP21	Connects the GP directly to the CPU port on the Panasonic Electric Works PLC FP series
USB Panel-mount Extension Cable (USB mini-B 1m)	ZC9USEXMB1	Extension cable attaching to the USB (mini-B) port on the front side of the operation panel
USB Panel-mount Extension Cable (USB Type-A 1m)	CA5-USBEXT-01	Extension cable attaching to the USB (Type-A) port on the front side of the operation panel
USB-Serial (RS-232C) Conversion Cable (50cm)	CA6-USB232-01	Cable for converting a GP unit's USB interface (Type-A) into a serial interface (RS-232C)
Screen Protection Sheet	ZC9DS31	Disposable, dirt-resistant sheet for the GP unit's screen (5 sheets/set)
USB Clamp Type-A (1port)	ZC9USCL1	USB (Type-A) Cable clamp for 1 port products to prevent disconnection (5 clamps/set)
USB Clamp mini-B (1port)	ZC9USCLMB1	USB (mini-B) Cable clamp for 1 port products to prevent disconnection (5 clamps/set)

■ Maintenance Items *Please purchase when the product is damage or lost.

Product Name	Model No.	Description
Installation Fastener	ZC9AF31	Used to install the GP into a solid panel (2 pieces/set)
Installation Gasket	ZC9WG31	Provides dust and moisture resistance when GP is installed into a solid panel (1 piece)
COM I/F Connector	ZC9CMC1	Connector for Serial I/F (1 piece)

⚠ **Caution: Before operating any of these products, be sure to read all related manuals thoroughly.**

● For printing purposes, the colors in this catalog may differ from those of the actual unit.
● LCD screens may exhibit minute grid-points (light and dark) on the Display Panel surface. Also,"Contouring" - where some parts of the screen are brighter than others, producing a wavelike pattern - may occasionally occur. Both are normal for an LCD display and are not defects.
● Actual user screens may differ from the screens shown here.
● All product names used in this catalog are the registered trademarks or trademarks of their respective companies.
● All information contained in this catalog is subject to change without notice.