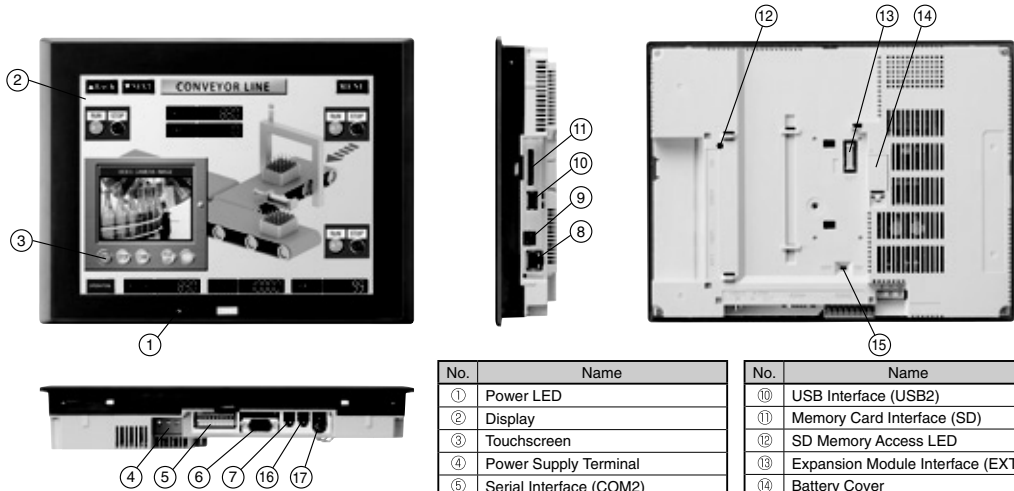


12.1  
inch

# HG4G Operator Interface

Compact housing with a versatile interface.  
High performance operator interface with multimedia functions.

- Bright 550 cd/m<sup>2</sup>
- TFT 65,536 Colors
- LED 60,000 Hours
- SVGA 800-600
- 48-level Brightness Adjustment
- Graphics
- Stroke Fonts
- Serial Interface
- Ethernet
- USB mini-B
- USB A
- 4 Expansion Modules
- Audio Output
- O/I Link
- Cyclic Script
- SD Card
- USB Flash Drive
- High Speed CPU
- High Speed Data
- User Memory 12MB
- Pict Bridge
- Front Panel Maintenance
- Audio Input
- Video Input
- Video Play
- Video Recording
- Voltage 24V DC
- Vertical OK
- Bezel Color Dark gray



No.	Name
①	Power LED
②	Display
③	Touchscreen
④	Power Supply Terminal
⑤	Serial Interface (COM2)
⑥	Serial Interface (COM1)
⑦	Audio Interface (AUDIO OUT)
⑧	Ethernet Interface (LAN)
⑨	USB Interface (USB1)

No.	Name
⑩	USB Interface (USB2)
⑪	Memory Card Interface (SD)
⑫	SD Memory Access LED
⑬	Expansion Module Interface (EXT)
⑭	Battery Cover
⑮	Terminal Resistor Switch
⑯	Audio Interface (AUDIO IN)
⑰	Video Interface (VIDEO IN)

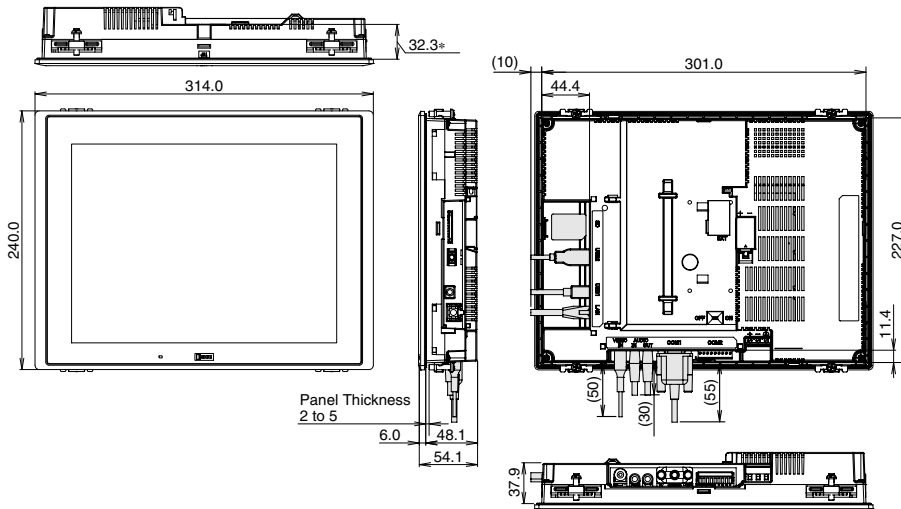
(Approval for HG4G operator interface only, excluding options or expansion modules.)

Note: Programming software with video recording function is available via free upgrade.  
For the latest information, visit our website at [www.idec.com](http://www.idec.com)

## HG4G Operator Interface

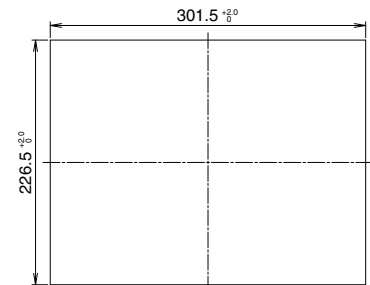
Display Screen	Operation Style	Communication/Memory Interface	Video/Audio Interface	Housing/Bezel Color	Part No.	Approvals
12.1-inch TFT color LCD 65,536 colors	Touch Switch (analog resistive)	COM1 COM2 LAN USB1 USB2 SD Memory Card	VIDEO IN AUDIO IN AUDIO OUT	Dark gray	<b>HG4G-CJT22MF-B</b>	Safety Standards: UL508 CSA C22.2 No.142
			AUDIO OUT	Dark gray	<b>HG4G-CJT22TF-B</b>	Ship Classification Standards: ABS, LR, NK, DNV

## Dimensions



\* Depth from the expansion module mounting surface.

## Panel Cut-out



All dimensions in mm.

Note 1: Dimensions in gray show the mounting dimensions of the cable.

Note 2: Dimensions in the figure may vary depending on the type of cable connected.

Note 3: Install the HG4G into a panel cut-out by tightening the four mounting clips (supplied with the HG4G) to a torque of 0.5 to 0.6 N·m.

Do not tighten with excessive force, otherwise the HG4G and screen may become distorted. Also waterproof characteristics may be lost.

# HG4G Operator Interface

## General Specifications

Rated Power Voltage	24V DC
Power Voltage Range	20.4 to 28.8V DC
Power Consumption	27W maximum 18W maximum when not using USB interface (USB2) or expansion module interface (EXT)
Allowable Momentary Power Interruption	10 ms maximum
Inrush Current	30A maximum
Dielectric Strength	1,000V AC, 10 mA, 1 minute between power and FG terminals
Insulation Resistance	10 MΩ minimum between power and FG terminals (500V DC megger)
Operating Temperature	0 to +50°C (no freezing)
Operating Humidity	10 to 90% RH (no condensation)
Storage Temperature	-20 to +60°C (no freezing)
Storage Humidity	10 to 90% RH (no condensation)
Pollution Degree	2
Vibration Resistance	5 to 8.4 Hz amplitude 3.5 mm, 8.4 to 150 Hz, acceleration 9.8 m/s <sup>2</sup> 10 cycles (100 minutes) on each of three mutually perpendicular axes
Shock Resistance	147 m/s <sup>2</sup> , 11 ms 5 shocks on each of three mutually perpendicular axes
Noise Immunity	Fast transient/burst test, Power terminals: ±2 kV, Communication line: ±1 kV (IEC/EN61131-2: 2007)
Electrostatic Discharge	ESD-3 (RH-1) Level 3 (Contact ±6 kV, air ±8 kV) (IEC/EN61131-2: 2007)
Corrosion Immunity	Free from corrosive gases
Mounting	Panel mounting
Degree of Protection	IP66 (IEC 60529) (front part when mounted) *
Dimensions	314.0W × 240.0H × 54.1D mm
Weight (approx.)	2.1 kg

- Do not use the HG4G in an environment subject to strong ultraviolet rays, otherwise the LCD quality will deteriorate.
- \* Protection degree of the front surface after mounting. Operation not guaranteed under certain environments.

## Display Specifications

Display	TFT Color LCD	
Color/Shade	65,536 colors	
Effective Display Area	246.0W × 184.5H mm	
Display Resolution	800W × 600H pixels	
View Angle	Right and left 80°, up 80°, down 60°	
Backlight	LED	
Backlight Life	60,000 hours minimum *1	
Brightness	550 cd/m <sup>2</sup> *2	
Brightness Adjustment	48 levels	
Backlight Replacement	Not possible	
Display Character Size	1/4 size	8 × 8 pixels (Western European language: ISO 8859-1, Central European language: ANSI 1250, Baltic: ANSI 1257, Cyrillic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)
	1/2 size	8 × 16 pixels (Western European language ISO 8859-1, Central European language: ANSI 1250, Baltic: ANSI 1257, Cyrillic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)
	Full size	16 × 32 pixels, 24 × 48 pixels, 32 × 64 pixels (Western European language: ISO 8859-1)
	Double size	16 × 16 pixels (Japanese JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)
	Double size	32 × 32 pixels (Japanese JIS first level characters, Mincho font)
	Scalable	Width 8 to 128 dots (1/2 size fixed) (ISO 8859-1 western language, 7-segment)
Quantity of Characters	1/4 size	100 characters × 75 lines
	1/2 size	100 characters × 37 lines
	Full size	50 characters × 37 lines
	Double size	25 characters × 18 lines (Mincho font)
Character Magnification	0.5, 1, 2, 3, 4, and 8 vertically and horizontally (except for scalable fonts)	
Character Attribute	Blink (1 or 0.5 sec period), reverse, bold, shadowed	
Graphics	Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	
Window Display	3 popup screens + 1 system screen	

\*1 The backlight life refers to the time until the brightness reduces by half after use at 25°C.

\*2 Brightness of the LCD only.

## Operation Specifications

Switching Element	Analog resistive membrane
Operating Force	3N maximum
Mechanical Life	1,000,000 operations
Acknowledgement Sound	Electronic buzzer or speaker output

## Function Specifications

Screen Types	Base screen, popup screen, system screen
No. of Screens	Base screen: 3,000 max. Popup screen: 3,015 max.
User Memory	12 MB (including expansion fonts)
Parts	Bit Button, Word Button, Goto Screen, Print Button, Key Button, Multi Button, Keypad, Selector Switch, Potentiometer, Numerical Input, Character Input, Pilot Lamp, Multi-State Lamp, Picture Display, Message Display, Message Switching Display, Alarm List Display, Alarm Log Display, Numerical Display, Bar Graph, Trend Chart, Pie Chart, Meter, Calendar, Bit Write Command, Word Write Command, Goto Screen Command, Print Command, Timer, Screen Script Command, Multi Command, Video Display
Calendar	Year, Month, Day, Hour, Min., Sec., Day of Week ±60 sec per month (at 25°C)
Power Failure Backup Data	Calendar, log data, keep internal relay, keep internal register
Battery	Recommended replacement span: every 4 years (at 25°C)

## Interface Specifications

Serial Interface (COM1)	Electrical Characteristics	EIA RS232C/485 (422) compliant
	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 187500 bps (Note)
	Synchronization	Asynchronous
	Communication Method	Half or full duplex
	Control System	Hardware control or none
Connector	D-sub 9-pin connector	
Serial Interface (COM2)	Electrical Characteristics	EIA RS232C/485 (422) compliant
	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 187500 bps (Note)
	Synchronization	Asynchronous
	Communication Method	Half or full duplex
	Control System	Hardware control or none
Connector	Detachable 9-pin terminal block	
Ethernet Interface (LAN)	Interface	IEEE802.3 (10/100BASE-T) compliant
	Connector	Modular connector (RJ-45)
Video Interface (VIDEO IN)	Interface	NTSC/PAL
	Connector	Pin jack
Audio Interface (AUDIO IN)	Interface	LINE IN (stereo)
	Connector	Mini jack connector (ø3.5 mm)
Audio Interface (AUDIO OUT)	Interface	LINE OUT (stereo)
	Connector	Mini jack connector (ø3.5 mm)
USB Interface (USB2)	Interface	USB 2.0 high speed (480 Mbps)
	Connector	USB Type A connector
USB Interface (USB1)	Interface	USB 2.0 high speed (480 Mbps)
	Connector	USB Type Mini-B connector
Memory Card Interface (SD)	Interface	SD memory card, SDHC memory card
	Connector	SD memory card socket
Expansion Module Interface (EXT)	Interface	MicroSmart I/O module interface
	Ouput current	5V 130 mA 24V 150 mA
	Max. no. of units	4 units

Note: 187,500 bps is available only with SIEMENS SIMATIC S7-300/400 series (MPI port direct connection).