

# HG2G 5.7 Operator Interface





**IDEC CORPORATION** 

# Enhanced visibility and user-Stylish design with 3 different



# Super Bright 350 cd/m<sup>2</sup>\*

High contrast, Wide viewing angle

256 colors, Color LCD

Contrast comparison: 1.7 times brighter than competitive models
Viewing angle: From top 65°, from bottom 70°, from right/left 55°



# Super Bright 500 cd/m<sup>2</sup>\*

**High-quality monochrome** 

15 brightness levels Monochrome LCD

Contrast comparison: 5 times brighter than competitive models
Viewing angle: From top 25°, from bottom 45°, from left/right 45°.



\*Luminance according to LCD manufacturer's specifications



Downloaded from Elcodis.com electronic components distributor

















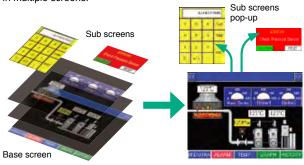
# friendly features. housing colors.

# HG2G Operator Interface

# Easily design and edit screens

# By overlapping the screens, common graphic images can be shared.

Five base screens can be overlapped onto one base screen and up to three pop-up sub screens can placed on top. Effective design is possible by creating a layout screen and sharing graphics used in multiple screens.

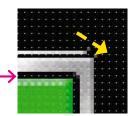


# Flexible screen design

#### Button positioning and size can be adjusted.

The position and size of a touch button can be changed as required.

The touch button can be moved and re-sized in 1-pixel increments.



# Display foreign languages

# Multiple languages can be displayed by using the language change function.

Switch to any of 16 different languages by simple operation. Text can be edited by the text manager of WindO/I-NV2. Text can also be edited using Excel and can be imported using CSV and TEXT files. European, Japanese, Chinese, Taiwanese, Korean, Central European, Baltic, Cyrillic, and Windows fonts can be installed.

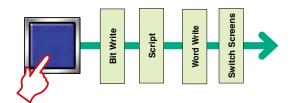


nload via O/I Link

# Execute several operations using only one button

# Multi-button functionality allows operation of several functions at the same time.

Up to 32 functions can be set in one button so there is no need to overlap buttons. Bit write, word write, and script commands can be set in one button, reducing design time.



# Complicated operations are strain on the host machine

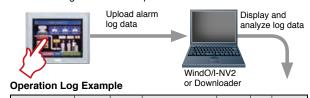
# Complicated operation can be processed inside the HG2G using script functions.

Various operations can be processed inside the HG2G, reducing the strain on the host machine. Conditional statements and functions can be selected and entered from the function list using the script function, allowing beginners to enter functions easily. Syntax check function is also available.

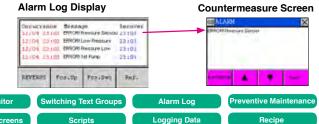
# Solve system errors quickly

# Operation log functions and alarm log functions record operational details.

The Operation Log records information for every operation. This function enables you to check who, when, what, and where an operation was performed. The alarm log function displays an alarm when a system error occurs and stores the log data. These functions help analyze causes and solve problems such as system errors. The log data can be exported as a CSV file.



Time	User Name	Screen No.	Event Name	Part Name	Device	Changed to
2009/01/23 01:34:07	_	Base 1	Change Operation Modes	-	_	Run Mode
2009/01/23 01:34:08	_	Base 1	Change Users	_	_	test1
2009/01/23 01:34:08	test1	Base 1	Switch Base Screens	-	_	Base 1
2009/01/23 01:34:13	test1	Base 1	Press Buttons	BitSwitch1	_	_
2009/01/23 01:34:13	test1	Base 1	Write Data to any Devices	-	LM 0	1



**Features** 

# Adaptable to various communication systems for flexible system architecture.

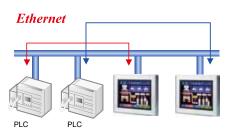
#### **Ethernet Connection**

HG2G maintenance is possible using a PC located in a remote location. Communicates with PLCs via host communication.

Screen display data can be changed and data can be analyzed from remote locations

using a PC. Configuration Software WindO/I-NV2

Connected to a PLC that can be used via Ethernet. Flexible system architecture. Both 1:1 communication and N:N communication are possible.



(Ethernet Communication Drivers) IDEC: Web Server Unit (FC3/FC4/FC5 series). MELSEC-Q/QnA (Ethernet) Mitsubishi: Ethernet/IP A-B: Modicon: Modbus/TCP Koyo: DirectLogic

When connecting several PLCs, the PLCs must use the same ethernet protocols

# Serial Connection

Ethernet

Host Device

Connects to a variety of devices such as PLCs, computer boards, and barcode readers.

#### PLC Link Communication





#### **DM Link Communication**



Data can be read from and written to PLC devices, such as relays and registers. Various communication device drivers are available.





PC, PLC, and computer boards can access the DM link memory in the HG2G to read and write data. 1:1 and 1:N communication systems are possible. Because a proprietary communication protocol is used for the HG2G, the host requires a special program for DM link communication.



Host device such

1:N Communication



as PC, PLC, and computer board

computer board.

RS232C RS485 (422)

\*Only one HG2G can be connected using RS232C

#### O/I Link Communication



#### **User Communication/Sub Host Communication**







Up to 16 HG2G units can be connected with the O/I link User Communication at a communication speed of 115.2 kbps.



O/I link unit is not required for the HG2G slave. Operator interfaces other than HG2G cannot be connected.

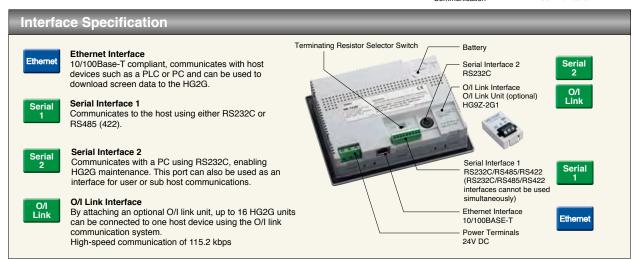
Connect to serial communication devices such as barcode readers.



#### **Sub Host Communication**

A communication method for reading and writing data from and to devices such as PLC relays and registers. Using Sub Host Communication with PLC Link Communication makes it possible to communicate with two PLCs without making a communication program in the PLC.





# User-friendly features enable easy graphical screen editing.

# **Application Software**



Automation Organizer is a complete package software to create system configuration and edit and debug programs for PLCs and operator interfaces. Automation Organizer consists of system configuration software "WindCFG," PLC programming software "WindLDR," and OI touchscreen programming software "WindO/I-NV2."

# Automation Organizer WindO/I-NV2

# **OI Touchscreen Programming Software**

# Flexible workspace allows for dynamic screen design

# Project Window

Structure of projects: such as screen, project, alarm log, and text managers are easy to recognize and settings are easy to edit.

#### Screen List

Created screens can be seen as images, making it easy to open screens that need editing.



#### Tag Editor

Device addresses of the connected PLC and HG series are displayed. A tag name can be set to each address and the name can be changed by the user.

#### Part List

Button and lamp parts can be displayed. Layout is possible by using drag and drop methodology.

## **Object List**

Device, operating condition, and type of command can be read from this list. A property can also be changed by selecting the item.

# **Easy Setting of Parts Operating Conditions**



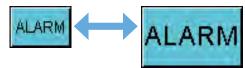
The operating conditions of buttons and lamps, bit/word write, and screen switching can be set in the property settings for each part. Lamps can be easily set to turn on, turn off, or flash.

# Select from 5000 images in the image library



Various graphic images can be selected from WindO/I-NV2 configuration software and Symbol Factory, a graphic library containing 5000 images.

#### **Automatic Adjustment of Text Size**



The text size is automatically adjusted according to the size of the object such as a button nameplate. The text size fits in the object even when the language is switched from English to a different language.

## Confirm Images on the WindO/I-NV2 Screen

Easy to confirm the screen image before and after switching screens and texts on the WindO/I-NV2 screen. Powerful screen editing.

Preview (when off)



Preview (when on)



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#### **Download Service**

Latest versions of WindO/I-NV2, host interface drivers, and user's manual can be downloaded from the IDEC website. Update your HG2G system software by downloading the latest functions using WindO/I-NV2.

http://www.idec.com/download

# HG2G Operator Interface

# **Brightest LCD in its class.**

# Can be used with various interfaces including Ethernet.

- Super-bright LCD.

  Can be seen clearly even in
- Can be seen clearly—even in bright locations.
- · Ethernet communication is available.
- Easy system configuration with various communication systems, such as PLC link communication.
- · Easy-to-use design tool WindO/I-NV2
- Slim body style—only 35.9mm deep behind the panel (housing)
- Components can be laid out easily on the analog touch panel.
- Light gray, dark gray, and silver housing colors are available.
- Multi-lingual fonts can be displayed by switching text groups.
- Operation log function is provided.





# **Types**

Display Screen	Operation Type	Maintenance Interface	Host Interface	Ethernet Interface	Housing/Bezel Color	Type No.	Remarks
					Light gray	HG2G-SB22TF-W	
				With	Dark gray	HG2G-SB22TF-B	
5.7-inch STN			RS232C/485 (422) Detachable 9-pin terminal block		Silver	HG2G-SB22TF-S	
monochrome LCD 15 shades	- Analog switch	RS232C		Without Da	Light gray	HG2G-SB22VF-W	
					Dark gray	HG2G-SB22VF-B	
					Silver	HG2G-SB22VF-S	CE
					Light gray	HG2G-SS22TF-W	l CE
				With	With	Dark gray	HG2G-SS22TF-B
5.7-inch STN						Silver	HG2G-SS22TF-S
color LCD 256 colors					Light gray	HG2G-SS22VF-W	
				Without	Dark gray	HG2G-SS22VF-B	
					Silver	HG2G-SS22VF-S	

#### Options

Name	Ordering Type No.	Package Quantity	Description
Protective Sheet	HG9Z-2D2	5	For HG2G
PLC Connection Cable For IDEC MicroSmart (5m)	HG9Z-XC275	1	Mini DIN 8-pin
PLC Connection Cable For IDEC MicroSmart (2.4m)	FC2A-KP1C	1	Mini DIN 8-pin
O/I Link Unit	HG9Z-2G1	1	Communication unit for O/I link
Maintenance Cable	HG9Z-XCM22	1	Dsub 9-pin (socket) (2m long) Computer link cable 4C (FC2A-KC4C) for IDEC's MicroSmart and OpenNet Controller is also compatible.
Application Software "Automation Organizer" (CD) (English/Japanese/Chinese)	SW1A-W1C	1	Complete package includes Wind CFG system configuration software, WindLDR PLC programming software, and WindO/I-NV2 OI Touchscreen programming software. PDF files of English/Japanese/Chinese manuals are stored on the CD.
Manual "WindO/I-NV2"	HG9Y-B1119	1	English

# Replacement Parts

Name	Type No.	Ordering Type No.	Package Quantity	Description
Mounting Clip	SLD-K02	SLD-K02PN10	10	Four clips are supplied with HG2G.
Replacement Battery	HG9Z-XR1	HG9Z-XR1	1	Lithium battery CR2032 (one battery is supplied with HG2G)
Host communication plug	HG9Z-XT09	HG9Z-XT09	1	One plug is supplied with HG2G.

# **General Specifications**

Rated Power Voltage	24V DC
Power Voltage Range	20.4 to 28.8V DC
Power Consumption	10W maximum
Allowable Momentary Power Interruption	10 ms maximum
Inrush Current	20A maximum
Dielectric Strength	1000V AC, 10 mA, 1 minute between power and FG terminals
Insulation Resistance	$50\ M\Omega$ 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 (IEC 60664-1)
Vibration Resistance	5 to 9 Hz amplitude 3.5 mm, 9 to 150 Hz, acceleration 9.8 m/s <sup>2</sup> 10 cycles (100 minutes) on each of three mutually per- pendicular axes) (IEC60068-2-6)
Shock Resistance	147 m/s², 11 ms 5 shocks on each of three mutually perpendicular axes (IEC60062-2-27)
Noise Immunity	Fast transient/burst test, Common mode: Level 3, Power terminals: ±2 kV, Communication line: ±1 kV (IEC 61000-4-4)
Electrostatic Discharge	ESD-3 (RH-1), Level 3 (contact ±6 kV, air ±8 kV) (IEC 61000-4-2)
Corrosion Immunity	Free from corrosive gases
Mounting	Panel mounting
Degree of Protection	IP65 (operator)
Dimensions	167.2W × 134.7H × 40.9D mm
Weight (approx.)	500g

Do not use the HG2G in an environment subject to strong ultraviolet rays, otherwise the LCD quality will deteriorate.

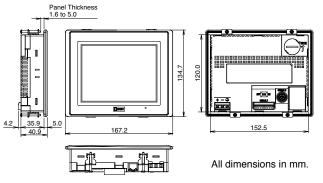
# **General Specifications**

Switching Element	Analog resistive membrane
Operating Force	0.2 to 0.8N
Mechanical Life	1,000,000 operations
Acknowledge Sound	Electronic buzzer

# **Function Specifications**

	-
Screen Types	Base screen, sub screen, system screen
No. of Screens	Base screen: 3000 max. Sub screen: 3015 max.
User Memory	2 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, Screen Script Command, Multi Command, Timer
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 Life	4 years (at 25°C)

# **Dimensions**



# **Display Specifications**

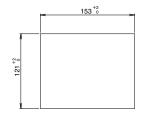
Display Color  Effective Display Area  Monochrome STN  Color/Shade  Effective Display Area  Monochrome 15 shades  Effective Display Area  Display Resolution  320W × 240H pixels  Contrast Adjustment  Possible in steps  Backlight  Cold-cathode tube  Backlight Life  75,000 hours nominal (Note)  Backlight Replacement  Inpossible (by IDEC only)  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  1/2 size  Full size  Full size  Double size  1/4 size  1/4 size  1/4 size  1/4 size  1/4 size  1/5 size  1/6 × 16 pixels (Western European language: ANSI 1250, Baltic: ANSI 1257, Cyrillic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)  1/6 × 32 pixels, 24 × 48 pixels, 32 × 64 pixels (Western European language: ISO 8859-1)  Full size  Full size  1/4 size  1/4 size  1/4 size  1/5 size  1/6 × 16 pixels (Japanese) JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)  32 × 32 pixels (Japanese JIS first and second level characters x 30 lines  1/2 size  1/4 size  1/4 size  1/5 size  1/6 × 16 pixels (Japanese JIS first level characters, Mincho font)  1/7 size  1/8 size  1/9 characters × 15 lines  Character Magnification  0.5, 1, 2, 3, 4, and 8 vertically and horizontally  Character Attribute  Blink (1 or 0.5 sec period), reverse, bold, shadowed  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					
Color/Shade Monochrome 15 shades 256 colors  Effective Display Area 115.2W × 86.4H mm  Display Resolution 320W × 240H pixels  Contrast Adjustment Possible in steps  Backlight Life 75,000 hours nominal (Note)  Backlight Life 75,000 hours nominal (Note)  Backlight Control Automatic OFF  Backlight Replacement Impossible (by IDEC only)  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 1/2 size 1/2 size 1/2 size 1/2 size 1/4			Monochrome	Color	
Effective Display Area 115.2W x 86.4H mm  Display Resolution 320W x 240H pixels  Contrast Adjustment Possible in steps  Backlight Cold-cathode tube  Backlight Control Automatic OFF  Backlight Replacement Impossible (by IDEC only)  8 x 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)  8 x 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)  1/2 size  Full size  1/4 size  1/5 x 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)  1/2 size  1/4 size  1/4 x 2 pixels, 24 x 48 pixels, 32 x 64 pixels (Western European language: ISO 8859-1)  Full size  1/4 x 2 pixels, 24 x 48 pixels, 32 x 64 pixels (Western European language: ISO 8859-1)  1/4 x 32 pixels (Japanese JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)  32 x 32 pixels (Japanese JIS first level characters, Mincho font)  40 characters x 30 lines  1/2 size  40 characters x 15 lines  Double size  Double size  10 characters x 7 lines  Character Magnification  0.5, 1, 2, 3, 4, and 8 vertically and horizontally  Character Attribute  Blink (1 or 0.5 sec period), reverse, bold, shadowed  Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image			Monochrome STN	Color STN	
Display Resolution  320W × 240H pixels  Contrast Adjustment  Possible in steps  Backlight  Cold-cathode tube  75,000 hours nominal (Note)  Backlight Replacement  Impossible (by IDEC only)  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  1/2 size  1/2 size  1/2 size  Full size  1/4 size  1/4 size  1/2 size  1/3 size  1/4 size	Color/Shade		Monochrome 15 shades	256 colors	
Contrast Adjustment Possible in steps  Backlight Cold-cathode tube  T5,000 hours nominal (Note)  Backlight Control Automatic OFF  Backlight Replacement Impossible (by IDEC only)  1/4 size  1/4 size  1/4 size  1/2 size  1/2 size  Full size  Double size  Quantity of Characters  Contral European language: ANSI 1250, Baltic: ANSI 1257, Cyrillic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)  16 × 32 pixels (Western European language: SO 8859-1, Central European language: ANSI 1250, Baltic: ANSI 1257, Cyrillic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)  16 × 32 pixels, 24 × 48 pixels, 32 × 64 pixels (Western European language: ISO 8859-1)  Full size  16 × 16 pixels (Japanese JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)  32 × 32 pixels (Japanese JIS first level characters, Mincho font)  40 characters × 15 lines  Double size  10 characters × 7 lines  Character Magnification  Character Attribute  Blink (1 or 0.5 sec period), reverse, bold, shadowed  Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Effective Display Area		115.2W × 86.4H mm		
Backlight Life 75,000 hours nominal (Note)  Backlight Control Automatic OFF  Backlight Replacement Impossible (by IDEC only)  8 x 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 1/2 size 1/2 size 2/2 size 1/4 characters 1/4 size	Display Reso	olution	320W × 240H pixels		
Backlight Life 75,000 hours nominal (Note)  Backlight Control Automatic OFF  Backlight Replacement Impossible (by IDEC only)  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 × 6 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 16 × 16 pixels (Japanese katakana and symbols: JIS 8-bit code)  16 × 32 pixels, 24 × 48 pixels, 32 × 64 pixels (Western European language: ISO 8859-1)  Full size 16 × 16 pixels (Japanese JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)  20 valuantity of 1/2 size 40 characters × 30 lines  1/2 size 40 characters × 30 lines  1/2 size 20 characters × 15 lines  Character Magnification 0.5, 1, 2, 3, 4, and 8 vertically and horizontally  Character Attribute Blink (1 or 0.5 sec period), reverse, bold, shadowed  Graphics Type Stright line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Contrast Adj	ustment	Possible in steps		
Backlight Control Automatic OFF  Backlight Replacement Impossible (by IDEC only)  8 × 8 pixels (Western European language: ISO 8859-1, Central European language: ANSI 1250, Baltic: ANSI 1257, Cyrllic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)  8 × 16 pixels (Western European language ISO 8859-1, Central European language: ANSI 1250, Baltic: ANSI 1257, Cyrllic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)  1/2 size  Full size  Full size  16 × 16 pixels (Western European language: SO 8859-1)  (Western European language: ISO 8859-1)  16 × 16 pixels (Japanese katakana and symbols: JIS 8-bit code)  16 × 32 pixels, 24 × 48 pixels, 32 × 64 pixels  (Western European language: ISO 8859-1)  16 × 16 pixels (Japanese JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)  22 × 32 pixels  (Japanese JIS first level characters, Mincho font)  1/4 size  40 characters × 30 lines  1/2 size  40 characters × 15 lines  Double size  10 characters × 7 lines  Character Magnification  0.5, 1, 2, 3, 4, and 8 vertically and horizontally  Character Attribute  Blink (1 or 0.5 sec period), reverse, bold, shadowed  Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Backlight		Cold-cathode tube		
Backlight Replacement Impossible (by IDEC only)  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)  8 × 16 pixels (Western European language: SO 8859-1, Central European language: ANSI 1250, Baltic: ANSI 1257, Cyrillic: ANSI1251, Japanese katakana and symbols: JIS 8-bit code)  1/2 size  1/2 size  Full size  1/2 size  1/4 size  1/5 pixels (Japanese JIS first and second level characters, simplified Chinese, Korean)  32 × 32 pixels (Japanese JIS first and second level characters, simplified Chinese, Korean)  1/4 size  40 characters × 30 lines  1/2 size  1/2 size  1/2 size  1/4 size  1/4 size  1/5 pixels (Japanese JIS first and second level characters, simplified Chinese, Korean)  1/4 size  40 characters × 15 lines  1/2 size  10 characters × 15 lines  10 character × 7 lines  Character Magnification  Character Attribute  Blink (1 or 0.5 sec period), reverse, bold, shadowed  Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Backlight Life	9	75,000 hours nominal (Note)		
1/4 size  1/5 size  1/6 size  1/7 size  1/7 size  1/7 size  1/7 size  1/8 si	Backlight Co	ntrol	Automatic OFF		
1/4 size	Backlight Re	placement	Impossible (by IDEC only)		
Display Character Size  1/2 size  1/2 size  Full size  Double size  1/4 size  Ouantity of Characters  Character  Characte		1/4 size	Central European language: A Cyrillic: ANSI1251, Japanese	ANSI 1250, Baltic: ANSI 1257,	
16 x 32 pixels, 24 x 48 pixels, 32 x 64 pixels	Character	1/2 size	Central European language: ANSI 1250, Baltic: ANSI 1257, Cyrillic: ANSI1251, Japanese katakana and symbols: JIS		
Full size 16 × 16 pixels (Japanese JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)  32 × 32 pixels (Japanese JIS first and second level characters, simplified Chinese, traditional Chinese, Korean)  32 × 32 pixels (Japanese JIS first level characters, Mincho font)  1/4 size 40 characters × 30 lines  1/2 size 40 characters × 15 lines  Full size 20 characters × 15 lines  Double size 10 characters × 7 lines  Character Magnification 0.5, 1, 2, 3, 4, and 8 vertically and horizontally  Character Attribute Blink (1 or 0.5 sec period), reverse, bold, shadowed  Graphics Type Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Size				
ters, simplified Chinese, traditional Chinese, Korean)  32 × 32 pixels (Japanese JIS first level characters, Mincho font)  40 characters × 30 lines  1/4 size					
Double size   (Japanese JIS first level characters, Mincho font)		Full size			
Ouantity of Characters      1/2 size		Double size			
Characters Full size 20 characters × 15 lines Double size 10 characters × 7 lines  Character Magnification 0.5, 1, 2, 3, 4, and 8 vertically and horizontally  Character Attribute Blink (1 or 0.5 sec period), reverse, bold, shadowed  Graphics Type Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image		1/4 size	40 characters × 30 lines		
Double size 10 characters × 75 lines  Character Magnification 0.5, 1, 2, 3, 4, and 8 vertically and horizontally  Character Attribute Blink (1 or 0.5 sec period), reverse, bold, shadowed  Graphics Type Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Quantity of	1/2 size	40 characters × 15 lines		
Character Magnification 0.5, 1, 2, 3, 4, and 8 vertically and horizontally Character Attribute Blink (1 or 0.5 sec period), reverse, bold, shadowed  Graphics Type Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Characters	Full size	20 characters × 15 lines		
Character Attribute Blink (1 or 0.5 sec period), reverse, bold, shadowed  Graphics Type Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image		Double size	10 characters x 7 lines		
Graphics Type Straight line, polyline, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Character Ma	agnification	0.5, 1, 2, 3, 4, and 8 vertically and horizontally		
equilateral polygons (3, 4, 5, 6, 8), paint, bitmap image	Character At	tribute	Blink (1 or 0.5 sec period), reverse, bold, shadowed		
Window Display 3 popup screens + 1 system screen	Graphics Typ	ре			
	Window Disp	lay	3 popup screens + 1 system screen		

Note: The backlight life refers to the time until the surface brightness reduces by half after using continuously at room temperatures.

# **Interface Specifications**

	Electrical Characteristics	EIA RS232C compliant	
232C	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps	
	Synchronization	Asynchronous	
RS	Communication Method	Half or full duplex	
	Control System	Hardware control or none	
	Connector	Detachable 9-pin terminal block	
	Electrical Characteristics	EIA RS485 (422) compliant	
3422	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 187500 bps	
Ä	Synchronization	Asynchronous	
RS485	Communication Method	Half or full duplex	
	Control System	Hardware control or none	
	Connector	Detachable 9-pin terminal block	
Electrical Characteristics		EIA RS232C compliant	
Transmission Speed		9600, 19200, 38400, 57600, 115200 bps	
Synchronization		Asynchronous	
Communication Method		Half duplex, proprietary protocol	
Connector		Mini DIN 8-pin connector	
Ele	ctrical Characteristics	EIA RS485 compliant	
Tra	nsmission Speed	19200, 38400, 57600, 115200 bps	
Syr	chronization	Asynchronous	
Cor	mmunication Method	Half duplex, proprietary protocol	
Cor	nnector	3-pin terminal block	
Inte	rface	IEEE802.3 (10/100BASE-T) compliant	
Cor	nnector	Modular connector (RJ-45)	
	Tra Syr Cor Cor Ele Tra Syr Cor Cor	Transmission Speed Synchronization Communication Method Control System Connector Electrical Characteristics Transmission Speed Synchronization Communication Method Control System Connector Electrical Characteristics Transmission Speed Synchronization Connector Synchronization Communication Method Control System Connector Connector Communication Speed Synchronization Communication Method	

# **Panel Cut-out**



 Install the HG2G into a panel cutout by tightening the four mounting clips to a torque of 0.12 to 0.15 N·m (recommended tightening torque: 0.14 N·m).

Note: Do not tighten with excessive force, otherwise the HG2G and screen will be distorted. Also waterproof characteristics may be lost.

# Compatible PLCs

Manufacturer	Series	Applicable CPU Unit	CPU Connec- tion	Link Unit	Ether- net
	OpenNet	FC3A-CP2	√		√
	Controller	FC4A-C10R2	√		√
IDEC	MicroSmart	FC4A-C16R2/C24R2, FC4A-D20K3/D20S3, FC4A-D20RK1/D20RS1, FC4A-D40K3/D40S3	√	√	√
	MicroSmart Pentra	FC5A-C10R2/C16R2, FC5A-C24R2, FC5A-C10R2C/C16R2C, FC5A-C24R2C	V	V	√
		FC5A-D16RK1/D16RS1 FC5A-D32K3/D32S3	√	√	√
		A1N, A2N, A3N, A1SH		√	
	MELSEC-A	A2CCPUC24 A0J2, A0J2H, A2A, A3A, A2U, A3U, A4U, A2US, A2USH-S1	√	√	
	MELSEC-QnA	Q4ACPU, Q4ARCPU, Q3ACPU, Q2ACPU, Q2ACPU-S1		√	√
Mitaubiahi		Q2ASHCPU, Q2ASHCPU-S1, Q2ASCPU, Q2ASCPU-S1	,	√	√
Mitsubishi		Q00CPU, Q01CPU	√,	<b>,</b>	√ /
	MELSEC-Q	Q02CPU, Q02HCPU Q06HCPU, Q12PHCPU,	- √	√ ,	√ ,
	WILLOLD Q	Q25HCPU		√	√
		Q00JCPU			√
	MELSEC-FX	FX0, FX0N, FX1, FX2, FX2C, FX-0S, FX-1S	√		
	WILLOLOTA	FX2N, FX2NC, FX1N, FX1NC	√	- √	
		FX3UC, FX3U	√	√	
	SYSMAC-C	C500, C500F, C1000H, C1000HF, C2000, C2000H, C200HS, C200HE, C200HG, C200HX, C120, C120F		√	
OMRON		C20H, C28H, C40H, C60H, CQM1H, C200HS-CPU21/23/31/33, C200HE-CPU42, C200HG-CPU43/63, C200HX-CPU44/64	√	,	
		CPM1, CPM1A	,	_ √	
	0.401410.004	CPM2A	√ /	<b>√</b>	
	SYSMAC-CS1	CS1G, CS1H	٧	√	
	SYSMAC-CJ SYSMAC-CP	CJ1M, CJ1H, CJ1G CP1H	٧	√	
	PLC-5	Any PLC-5 models connect- able to 1770-KF2 Any PLC-5	<b>√</b>	√	
		PLC-5, PLC-5E			√
	SLC-500	SLC5/03, SLC5/04	√		√,
Allen- Bradley	MicroLogix	SLC5/05 MicroLogix1000 MicroLogix1100 MicroLogix1200 MicroLogix1500	√		√ √
	ControlLogix	ControlLogix5550 ControlLogix5555			
	CompactLogix	1768CompactLogix	√ •/		
	FlexLogix	1769CompactLogix 1794-L33, 1794-L34	v V		
	S7-200	CPU212, CPU214, CPU215, CPU216, CPU221, CPU222, CPU224, CPU226 CPU224XP, CPU226XM	√		
SIEMENS	S7-300	CPU313, CPU314, CPU315, CPU315-2DP, CPU316, CPU318 CPU313C-2PtP	√	√	
	S7-400	CPU412, CPU414, CPU416, CPU416F-2, CPU417	· ·	√	

Manufacturer	Series	CPU Unit	CPU Connec- tion	Link Unit	Ether- net
	KV-700, KV-1000	KV-700, KV-1000	√	√	
Keyence	KZ	KZ-10, 16, 20, 40, 80	√		
	KV	KV-10, 16, 24, 40	v		
		JW-10	√		
	New Satellite JW	JW-21CU, JW-31CUH/H1, JW-50CU/CUH		√	
Sharp		JW-22CU, JW-32CUH/H1, JW-33CUH/H1/H2/H3, JW-70CU/CUH,	√	√	
	C10mini	JW-100CU/CUH			
Hitachi	S10mini	S10mini	√	√	
·***	S10V	LQP510	√		
JTEKT	TOYOPUC-PC2J	PC2J			
(TOYODA)	TOYOPUC-PC3J	PC3J, PC3JD, PC3JG	√		
Toshiba	TC200	TC3-13B1	√		
	TCmini	TC03-01, TC03-02	,		
		CPU311, CPU313, CPU323	√		
GE Fanuc Automation	Series 90-30	CPU331, CPU341, CPU350, CPU351, CPU352, CPU360, CPU363, CPU364, CPU374	√	√	
	VersaMax	Nano Micro (14, 23, 28 points)	√		
Schneider	Twido	TWDLCAA16DRF TWDLCAA24DRF		√	
Modicon	Momentum	171CCC96020			√
		FP0, FP10, FP10SH, FP1,	,		<u> </u>
Panasonic	FP series Machine	FP2, FP2SH, FPΣ	√		
Yaskawa		MP920, MP930, MP2300	√	√	
	Controller DirectLOGIC05	DL05			
	DirectLOGIC06	DL06 D2-240, D2-250, D2-250-1,			√
Koyo	DirectLOGIC205	D2-260			
Royo	KOSTAC SZ	SZ-4	√		
		SU-6H	√		
	KOSTAC SU	SU-5E, SU-6B	√	√	√
		SU-5M, SU-6M		- √	√
	Power Mate	Power Mate-MODEL D			
FANUC	Series	16i, 160i, 18i, 180i 30i, 31i, 32i	√		
		FA-M3 (F3SP20, F3SP28, F3SP30, F3FP36, F3BP20, F3BP30)		√	
Yokogawa	FACTORY ACE	FA-M3 (F3SP05, F3SP21, F3SP25, F3SP35, F3SP38, F3SP53, F3SP58)	√	√	
	FREX-PC	NB1, NB2, NB3, NJ-CPU-E4, NJ-CPU-A8, NJ-CPU-B16, NS	√	√	
Fuji	MICREX-F	F30, F50, F50H, F55, F60, F70, F70S, F80H, F81, F120H, F120S, F140S, F150S, F250		√	
	PROSEC	T1-16, T1-28, T1-40, T1-40S, PU234E	√	√	
Toshiba	PROSEC T Series	PU224, PU215N, PU235N, PU245N, PU315, PU325, PU325H, PU326H	√		
Tostilba	V Series	PU672T, PU662T, PU612E L1PU11H, L1PU12H, S2PU82, S2PU72, S2PU32, S2PU22, S3PU65, S3PU55, S3PU45, S3PU21	√		
LS		K10S1, K120S	√		
Industrial	MASTER-K	K80S, K200S	√	√	
		,	-	•	

Ethernet link unit may be necessary for some PLCs.

The updated information of the compatible PLCs can be found at the following website.

http://www.idec.com/download

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Read the safety precautions described in the user's manual to make sure of correct operation of the HG2G.

Specifications and other descriptions in this catalog are subject to change without notice.



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