


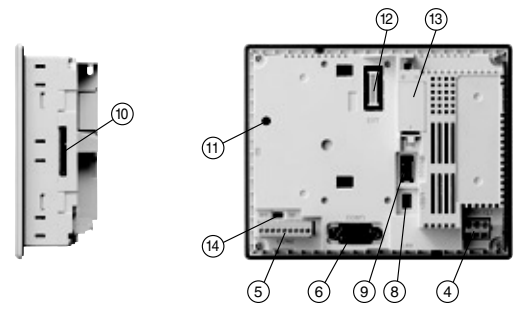
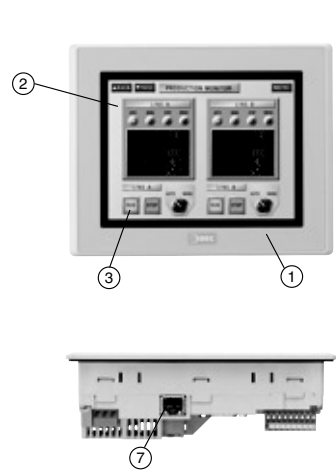


5.7
inch

HG2G Operator Interface (High Performance)



**Excellent visibility by super-bright LED backlight.
800 cd/m² (5.7-inch)**

- Bright **800** cd/m²
 - TFT **65,536** Colors
 - LED **50,000** Hours
 - SVGA **640x480**
 - 48-level Brightness Adjustment
 - Graphics
 - Stroke Fonts
 - Serial Interface
 - Ethernet
 - USB mini-B
 - USB A
 - 2 Expansion Modules
 - O/I Link
 - Cyclic Script
 - SD Card
 - USB Flash Drive
 - High Speed CPU
 - High Speed Data
 - User Memory 12MB
 - Pict Bridge
 - Front Panel Maintenance
 - Voltage 24V DC
 - Vertical OK
- Bezel Color:  Light Gray  Dark gray  Silver



No.	Name
①	Power LED
②	Display
③	Touchscreen
④	Power Supply Terminal
⑤	Serial Interface (COM2)
⑥	Serial Interface (COM1)
⑦	Ethernet Interface (LAN)

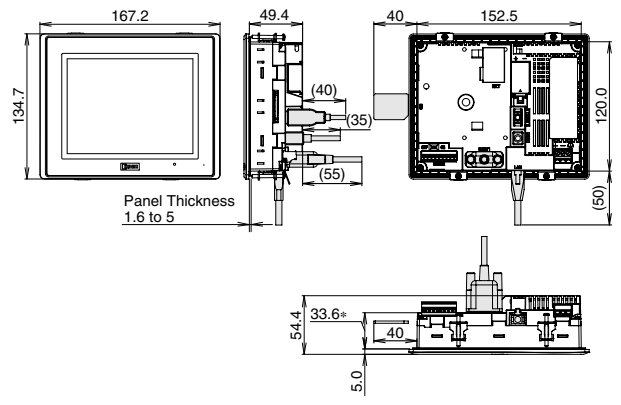
No.	Name
⑧	USB Interface (USB1)
⑨	USB Interface (USB2)
⑩	Memory Card Interface (SD)
⑪	SD Memory Access LED
⑫	Expansion Module Interface (EXT)
⑬	Battery Cover
⑭	Terminal Resistor Switch

  (Approval for HG2G operator interface only, excluding options or expansion modules.)

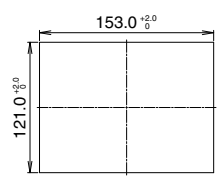
HG2G Operator Interface

Display Screen	Operation Style	Communication/Memory Interface	Housing/Bezel Color	Part No.	Approvals
5.7-inch TFT color LCD 65,536 colors	Touch Switch (analog resistive)	COM1 COM2 LAN USB 1 USB 2 SD Memory Card	Light gray	HG2G-5FT22TF-W	Safety Standards: UL508 CSA C22.2 No.142
			Dark gray	HG2G-5FT22TF-B	
			Silver	HG2G-5FT22TF-S	Ship Classification Standards: ABS, LR, NK, DNV

Dimensions



Panel Cut-out



All dimensions in mm.

* Depth from the expansion module mounting surface.

- Note 1: Dimensions in gray show the mounting dimensions of the cable.
- Note 2: Dimensions in the figure vary depending on the type of cable connected.
- Note 3: Install the HG2G into a panel cut-out by tightening the four mounting clips (supplied) to a torque of 0.2 to 0.3 N-m. Do not tighten with excessive force, otherwise the HG2G and screen may be distorted. Also waterproof characteristics may be lost.

HG2G Operator Interface (High Performance)

General Specifications

Rated Power Voltage	24V DC
Power Voltage Range	20.4 to 28.8V DC
Power Consumption	19W maximum 10W 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 ² 10 cycles (100 minutes) on each of three mutually perpendicular axes
Shock Resistance	147 m/s ² , 11 ms 5 shocks on each of three mutually perpendicular axes
Noise Immunity	Fast transient/burst test, Power terminals: ±1 kV, Communication line: ±0.5 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	167.2W × 134.7H × 54.4D mm
Weight (approx.)	0.65 kg

- Do not use the HG2G 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 Color	TFT Color LCD	
Color/Shade	65,536 colors	
Effective Display Area	115.2W × 86.4H mm	
Display Resolution	640W × 480H pixels	
View Angle	Right and left 80°, up 80°, down 80°	
Backlight	LED	
Backlight Life	50,000 hours *1	
Brightness	800 cd/m ² *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, 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, 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)
	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	80 characters × 60 lines
	1/2 size	80 characters × 30 lines
	Full size	40 characters × 30 lines
	Double size	20 characters × 15 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

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
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
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
	Output 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).

Flush Silhouette

Switches & Pilot Lights

Display Lights

LED Illumination Units

Display Units

Safety Products

Terminal Blocks

Comm. Terminals

AS-Interface

Relays & Timers

Sockets

Circuit Protectors

Power Supplies

PLCs & SmartRelay

Operator Interfaces

Sensors

Control Stations

Explosion Protection

References

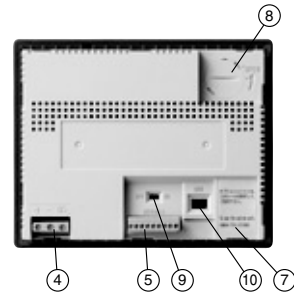
5.7
inch

HG2G Operator Interface (Basic/Color)

Enhanced visibility and user-friendly features.
Stylish design with 3 different housing colors.
Super bright 400 cd/m² LCD.

Bright 400 cd/m ²	TFT 256 Colors	LED 50,000 Hours
QVGA 320×240	32-level Brightness Adjustment	Serial Interface
Ethernet	USB mini-B	O/I Link
User Memory 2MB	Voltage 12/24V DC	
Bezel Color		

Light Gray Dark gray Silver



No.	Name
①	Power LED
②	Display
③	Touchscreen
④	Power Supply Terminal
⑤	Serial Interface 1

No.	Name
⑥	Ethernet Interface (LAN)
⑦	O/I Link Interface
⑧	Battery Cover
⑨	Terminal Resistor Switch
⑩	USB Interface

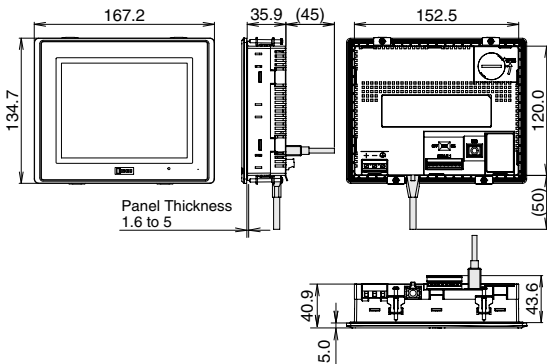


(Approval for HG2G operator interface only, excluding options or expansion modules.)

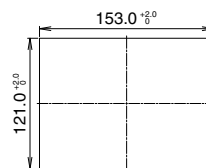
HG2G Operator Interface

Operating Voltage	Display Screen	Operation Style	Communication Interface	Ethernet Interface	Power Failure Backup Data	Housing/ Bezel Color	Part No.	Approvals
12/24V DC	5.7-inch TFT color LCD 256 colors	Touch Switch (analog resistive)	RS232C/485 (422) USB	With	With	Light gray	HG2G-5ST22TF-W	UL508 CSA C22.2 No.142
						Dark gray	HG2G-5ST22TF-B	
						Silver	HG2G-5ST22TF-S	
			RS232C/485 (422) USB	Without	Without	Light gray	HG2G-5ST22VF-W	
						Dark gray	HG2G-5ST22VF-B	
						Silver	HG2G-5ST22VF-S	

Dimensions



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 vary depending on the type of cable connected.

Note 3: Install the HG2G into a panel cut-out by tightening the four mounting clips (supplied) to a torque of 0.2 to 0.3 N-m.

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

HG2G Operator Interface (Basic/Color)

General Specifications

Model	HG2G-5S (Color)
Rated Power Voltage	12V DC/24 V DC
Power Voltage Range	10.2 to 28.8V DC
Power Consumption	8W maximum
Allowable Momentary Power Interruption	10 ms maximum
Inrush Current	40A maximum
Dielectric Strength	500V AC, 10 mA, 1 minute between power and FG terminals
Insulation Resistance	50 M Ω 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 ² 10 cycles (100 minutes) on each of three mutually perpendicular axes
Shock Resistance	147 m/s ² , 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/EN61000-4-4)
Electrostatic Discharge	ESD-3 (RH-1) Level 3 (Contact ± 6 kV, air ± 8 kV) (IEC/EN61000-4-2)
Corrosion Immunity	Free from corrosive gases
Mounting	Panel mounting
Degree of Protection	IP66 (IEC 60529) (front part when mounted) *
Dimensions	167.2 W \times 134.7 H \times 40.9 D mm
Weight (approx.)	0.5 kg

- Do not use the HG2G 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

Model	HG2G-5S (Color)	
Display	TFT Color LCD	
Color/Shade	256 colors	
Effective Display Area	115.2W \times 86.4H mm	
Display Resolution	320W \times 240H pixels	
View Angle	Right and left 70°, up 70°, down 60°	
Contrast Adjustment	Adjustable from the front of the panel	
Backlight	LED	
Backlight Life	50,000 hours minimum ¹ *1	
Backlight Control	Automatic Off	
Brightness	400 cd/m ² *2	
Brightness Adjustment	32 levels	
Backlight Replacement	Not possible	
Display Character Size	1/4 size	8 \times 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 \times 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 \times 32 pixels, 24 \times 48 pixels, 32 \times 64 pixels (Western European language: ISO 8859-1)
	Double size	32 \times 32 pixels (Japanese JIS first level characters, Mincho font)
Quantity of Characters	1/4 size	40 characters \times 30 lines
	1/2 size	40 characters \times 15 lines
	Full size	20 characters \times 15 lines
	Double size	10 characters \times 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	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	0.2 to 0.8N
Mechanical Life	1,000,000 operations
Acknowledgement Sound	Electronic buzzer

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	2 MB (including expansion fonts)
Parts	Bit Button, Word Button, Goto Screen, 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, 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 *	Recommended replacement span: every 4 years (at 25°C)

* Not available for HG2G-5ST22VF.

Interface Specifications

Serial Interface (COM1)	Electrical Characteristics	EIA RS232C compliant
	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
	Synchronization	Asynchronous
	Communication Method	Half or full duplex
	Control System	Hardware control or none
	Connector	D-sub 9-pin connector
Serial Interface (COM2) (Note 1)	Electrical Characteristics	EIA RS485 compliant
	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 187500 bps (Note 2)
	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	Connector (RJ-45)
USB Interface	Interface	USB 2.0
	Connector	USB Type Mini-B connector (Note)
O/I Link Interface	Electrical Characteristics	EIA RS485 compliant
	Transmission Speed	19200, 38400, 57600, 115200 bps
	Synchronization	Asynchronous
	Communication Method	Half duplex
	Connector	3-pin terminal block

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

Flush Silhouette

Switches & Pilot Lights

Display Lights

LED Illumination Units

Display Units

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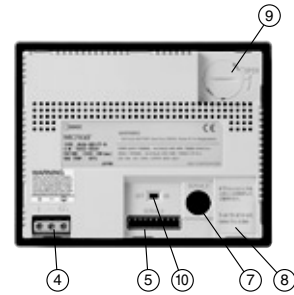
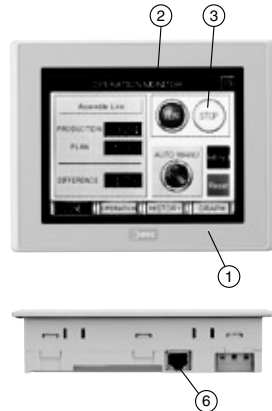
References

5.7
inch

HG2G Operator Interface (Basic/Monochrome)



Enhanced visibility and user-friendly features.
Stylish design with 3 different housing colors.
Super bright 400 cd/m² LCD.

Bright 500 cd/m ²	Mono-chrome 15 levels	CCFL 75,000 Hours
QVGA 320×240	Serial Interface	Ethernet
O/I Link	User Memory 2MB	Voltage 24V DC
Voltage 12V DC		
Bezel Color		



No.	Name
①	Power LED
②	Display
③	Touchscreen
④	Power Supply Terminal
⑤	Serial Interface 1

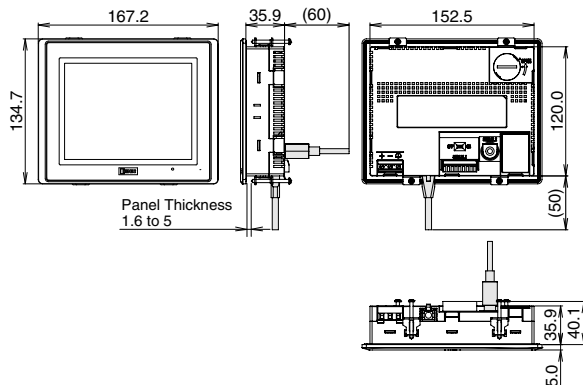
No.	Name
⑥	Ethernet Interface (LAN)
⑦	Serial Interface 2
⑧	O/I Link Interface
⑨	Battery Cover
⑩	Terminal Resistor Switch

  (Approval for HG2G operator interface only, excluding options or expansion modules.)

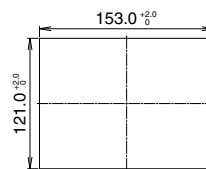
HG2G Operator Interface

Operating Voltage	Display Screen	Operation Style	Communication Interface	Ethernet Interface	Power Failure Backup Data	Housing/ Bezel Color	Part No.	Approvals
24V DC	5.7-inch STN monochrome LCD 15 shades	Touch Switch (analog resistive)	RS232C/485 (422)	With	With	Light gray	HG2G-SB22TF-W	UL508 UL1604 CSA C22.2 No.142 CSA C22.2 No.213
						Dark gray	HG2G-SB22TF-B	
						Silver	HG2G-SB22TF-S	
				Without		Light gray	HG2G-SB22VF-W	
						Dark gray	HG2G-SB22VF-B	
						Silver	HG2G-SB22VF-S	
12V DC	5.7-inch STN monochrome LCD 15 shades	Touch Switch (analog resistive)	RS232C/485 (422)	With		Light gray	HG2G-SB21TF-W	
						Dark gray	HG2G-SB21TF-B	
						Silver	HG2G-SB21TF-S	
				Without		Light gray	HG2G-SB21VF-W	
						Dark gray	HG2G-SB21VF-B	
						Silver	HG2G-SB21VF-S	

Dimensions



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 vary depending on the type of cable connected.

Note 3: Install the HG2G into a panel cut-out by tightening the four mounting clips (supplied) to a torque of 0.2 to 0.3 N·m.

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

HG2G Operator Interface (Basic/Monochrome)

General Specifications

Model	HG2G-S (monochrome)	
	24V DC	12V DC
Rated Power Voltage	24V DC	12V DC
Power Voltage Range	20.4 to 28.8V DC	10.2 to 18.0V DC
Power Consumption	10W maximum	
Allowable Momentary Power Interruption	10 ms maximum	
Inrush Current	20A maximum	40A maximum
Dielectric Strength	1,000V AC, 10 mA, 1 minute between power and FG terminals	
Insulation Resistance	50 MΩ minimum between power and FG terminals (500 V 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 ² 10 cycles (100 minutes) on each of three mutually perpendicular axes	
Shock Resistance	147 m/s ² , 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/EN61000-4-4)	
Electrostatic Discharge	ESD-3 (RH-1) Level 3 (Contact ±6 kV, air ±8 kV) (IEC/EN61000-4-2)	
Corrosion Immunity	Free from corrosive gases	
Mounting	Panel mounting	
Degree of Protection	IP65 (IEC 60529) (front part when mounted) *1, Type 13 *2	
Dimensions	167.2W × 134.7H × 40.9D mm	
Weight (approx.)	0.5 kg	

- Do not use the HG2G in an environment subject to strong ultraviolet rays, otherwise the LCD quality will deteriorate.
- *1 Protection degree of the front surface after mounting. Operation not guaranteed under certain environments.
- *2 Operation not guaranteed when used with certain types of oils.

Display Specifications

Model		HG2G-S (monochrome)
Display		STN monochrome LCD
Color/Shade		15 shades
Effective Display Area		115.2W × 86.4H mm
Display Resolution		320W × 240H pixels
View Angle		Right and left 45°, up 25°, down 45°
Contrast Adjustment		Adjustable from the front of the panel
Backlight		CCFL
Backlight Life		75,000 hours minimum *1
Backlight Control		Automatic off
Brightness		500 cd/m ² *2
Brightness Adjustment		32 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)
		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)
Double size	32 × 32 pixels (Japanese JIS first level characters, Mincho font)	
Quantity of Characters	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	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	0.2 to 0.8N
Mechanical Life	1,000,000 operations
Acknowledgement Sound	Electronic buzzer

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	2 MB (including expansion fonts)
Parts	Bit Button, Word Button, Goto Screen, 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, Timer, Screen Script Command, Multi Command
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 compliant
	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
	Synchronization	Asynchronous
	Communication Method	Half or full duplex
	Control System	Hardware control or none
	Connector	D-sub 9-pin connector
Serial Interface (COM2) (Note 1)	Electrical Characteristics	EIA RS485 compliant
	Transmission Speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 187500 bps (Note 2)
	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	Connector (RJ-45)
USB Interface	Interface	USB 2.0
	Connector	USB Type Mini-B connector (Note 3)
O/I Link Interface	Electrical Characteristics	EIA RS485 compliant
	Transmission Speed	19200, 38400, 57600, 115200 bps
	Synchronization	Asynchronous
	Communication Method	Half duplex
	Connector	3-pin terminal block

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

- Flush Silhouette
- Switches & Pilot Lights
- Display Lights
- LED Illumination Units
- Display Units
- Safety Products
- Terminal Blocks
- Comm. Terminals
- AS-Interface
- Relays & Timers
- Sockets
- Circuit Protectors
- Power Supplies
- PLCs & SmartRelay
- Operator Interfaces
- Sensors
- Control Stations
- Explosion Protection
- References

HG4G/3G/2G Operator Interface

Options

Name	Part No.	Package Quantity	Description	Applicable Model				
				HG4G	HG3G	HG2G-5F	HG2G-5S	HG2G-S
Application Software	SW1A-W1C	1	Automation Organizer	√	√	√	√	√
USB Maintenance Cable (2m)	HG9Z-XCM22		Dsub 9-pin socket *1	—	—	—	—	√
	HG9Z-XCM42	1	USB Cable USB-miniB	√	√	√	√	—
PLC Connection Cable For IDEC MicroSmart (5m)	HG9Z-XC295	1	Mini DIN 8-pin (Dsub 9-pin)	√	√	√	—	—
PLC Connection Cable For Mitsubishi FX series (5m)	HG9Z-XC305	1	Mini DIN 8-pin (Dsub 9-pin)	√	√	√	—	—
PLC Connection Cable For Mitsubishi Q series (5m)	HG9Z-XC315	1	Mini DIN 6-pin (Dsub 9-pin)	√	√	√	—	—
PLC Connection Cable For IDEC MicroSmart (5m)	HG9Z-XC275	1	Mini DIN 8-pin (loose wire)	√	√	√	√	√
PLC Connection Cable For IDEC MicroSmart (2.4m)	FC2A-KP1C	1	Mini DIN 8-pin (loose wire)	√	√	√	√	√
USB panel-mount extension cable (1m)	HG9Z-XCE11	1	For USB-A port	√	√	√	—	—
	HG9Z-XCE21	1	For USB-mini B port	√	√	√	√	—
Connector Conversion Cable (16 cm)	HG9Z-XCT11	1	To convert from D-sub 25-pin to 9-pin (used when replacing from HG3F/4F to HG3G/4G)	√	√	√	—	—
Memory Card	HG9Z-XMS2	1	SD Memory Card (2GB)	√	√	√	—	—
Protective Cover	HG9Z-2E2PN03	3	For 5.7 inch (3 pcs/pack) (used to cover the front side of the operator interface)	—	—	√	√	√
	HG9Z-2D5PN05	5	For 5.7 inch (5 pcs/pack)	—	—	√	√	√
Protective Sheet *2	HG9Z-3D8PN02	2	For 8.4-inch (2 pcs/pack)	—	√	—	—	—
	HG9Z-3DA2PN02	2	For 10.4-inch (2 pcs/pack)	—	√	—	—	—
	HG9Z-4DCPN02	2	For 12.1 inch (2 pcs/pack)	√	—	—	—	—
Expansion Module Clamp *3	HG9Z-XJ3PN05	5	For installing the expansion modules on the back of the HG2G-5F/3G/4G (short). For total width 17.6 to 41.1 mm.	√	√	√	—	—
	HG9Z-XJ4PN05	5	For installing the expansion modules on the back of the HG2G-5F/3G/4G (long). For total width 47.0 to 68.8 mm.	√	√	√	—	—
	HG9Z-XJ5PN05	5	For installing the expansion modules on the back of the HG2G-5F/3G/4G (XL). For total width 70.1 to 93.9 mm.	√	√	√	—	—
L-shaped Terminal Block Connector for I/O Module *4	HG9Z-PMT10LPN02	2	For MicroSmart I/O Module (10-pole) (2 pcs/pack)	√	√	√	—	—
	HG9Z-PMT11LPN02	2	For MicroSmart I/O Module (11-pole) (2 pcs/pack)	√	√	√	—	—
O/I Link Unit	HG9Z-2G1	1	Communication unit for O/I link	—	—	—	√	√
Panel Mount Adaptor	HG9Z-2A1	1	Adaptor for mounting HG2G to the panel cut-out of HG2F.	—	—	√	√	√
	HG9Z-2A2	1	Adaptor for mounting HG2G to 156 x 123.5 mm panel cut-out.	—	—	√	√	√
User's Manual	HG9Y-B1119	1	English	√	√	√	√	√

*1 Computer link cable (FC2A-KC4C) for IDEC's PLC can also be used.

*2 The protective sheet is UV resistant, however, resistance against direct sunlight in outdoor usage is not guaranteed. Used to protect the display screen.

*3 Use the expansion module clamp when using expansion modules.

Order the module clamp by referring to the width of the module shown in the dimensions of each module.

Note: When connecting more than 3 expansion modules to the HG3G/4G, note the limits shown below:

<Limits>

Current flow rate at 5V: 130 mA max. Total width: 92.3 mm max.

Current flow rate at 24V: 150 mA max.

*4 See Cat No. P1373 or instruction manual for details on MicroSmart expansion modules.

Maintenance Parts

Name	Part No.	Package Quantity	Description	Applicable Model				
				HG4G	HG3G	HG2G-5F	HG2G-5S	HG2G-S
Mounting Clip	SLD-K02PN10	10	Four clips are supplied.	—	—	√	√	√
	HG9Z-4K2PN04	4	Four clips are supplied.	√	√	—	—	—
Host Communication Plug	HG9Z-XT09V	1	One plug (terminal block type) is supplied.	—	—	√	√	—
	HG9Z-XT09	1	One plug (terminal block type) is supplied.	√	√	—	—	√
Replacement Battery	HG9Z-XR1	1	Lithium battery CR2032 (one battery is supplied)	√	√	√	√	√
USB Cable Lock Pin	HG9Z-XU1PN05	5	Used to lock USB cable (for USB2).	√	√	√	—	—

Expansion Modules

Input Modules

Input	Part No.	Connector	Dimensions (L × W × H mm)	Consumption Current (mA)	
				5V	24V
8 points/AC Input	FC4A-N08A11	Removable Terminal Block	90.0 × 23.5 × 70.0	25	0
8 points/DC Input	FC4A-N08B1		90.0 × 23.5 × 70.0	25	0
16 points/DC Input	FC4A-N16B1		90.0 × 23.5 × 70.0	40	0
16 points/DC Input	FC4A-N16B3	MIL Connector	90.0 × 17.6 × 70.0	35	0
32 points/DC Input	FC4A-N32B3		90.0 × 29.7 × 70.0	65	0

Output Modules

Output	Part No.	Connector	Dimensions (L × W × H mm)	Consumption Current (mA)	
				5V	24V
8 points/Relay Output	FC4A-R081	Removable Terminal Block	90.0 × 23.5 × 70.0	30	40
16 points/Relay Output	FC4A-R161		90.0 × 23.5 × 70.0	45	75
8 points/Transistor Sink Output	FC4A-T08K1		90.0 × 23.5 × 70.0	10	20
8 points/Transistor Source Output	FC4A-T08S1		90.0 × 23.5 × 70.0	10	20
16 points/Transistor Sink Output	FC4A-T16K3	MIL Connector	90.0 × 17.6 × 70.0	10	40
16 points/Transistor Source Output	FC4A-T16S3		90.0 × 17.6 × 70.0	10	40
32 points/Transistor Sink Output	FC4A-T32K3		90.0 × 29.7 × 70.0	20	70
32 points/Transistor Source Output	FC4A-T32S3		90.0 × 29.7 × 70.0	20	70

Combination I/O Modules

Input/Output	Part No.	Connector	Dimensions (L × W × H mm)	Consumption Current (mA)	
				5V	24V
4 points/DC Input 4 points/Relay Output	FC4A-M08BR1	Removable Terminal Block	90.0 × 23.5 × 70.0	25	20
16 points/DC Input 8 points/Relay Output	FC4A-M24BR2	Non-removable Terminal Block	90.0 × 39.1 × 70.0	65	45

- Use the expansion module clamp when using expansion modules.
Order the module clamp by referring to the width of the module shown in the dimensions of each module.
Note: When connecting more than 3 expansion modules to the HG3G/4G, note the limits shown below:
<Limits>
Current flow rate at 5V: 130 mA max. Total width: 92.3 mm max.
Current flow rate at 24V: 150 mA max.
- See Cat No. P1373 or instruction manual for details on MicroSmart expansion modules.

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