

HG2J Operator Interface

7-inch wide

Beautiful and brilliant display with new function.

The space-saving design contributes to the downsizing of equipment.

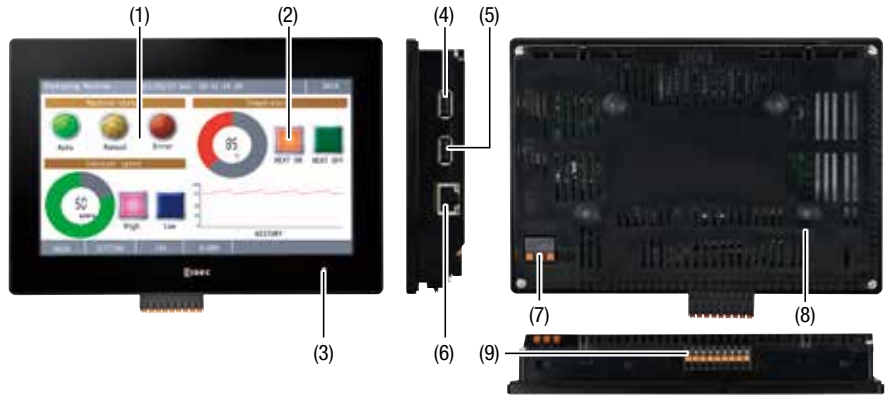
Bright 500 cd/m ²	TFT 65,536 colors	LED 50,000 hours	48-level Brightness Adjustment	Real Parts
Outlined font	WVGA 800 x 480	Serial Interface	Ethernet	USB A 2 ports
USB Memory	User Memory 24MB	Front Panel Maintenance	Operating voltage 12 to 24V DC	Operating temperature -20 to +60°C



Bezel color
Black



(for main unit only)



No.	Name
(1)	Display
(2)	Touchscreen
(3)	POWER LED
(4)	USB Interface (USB1)
(5)	USB Interface (USB2)

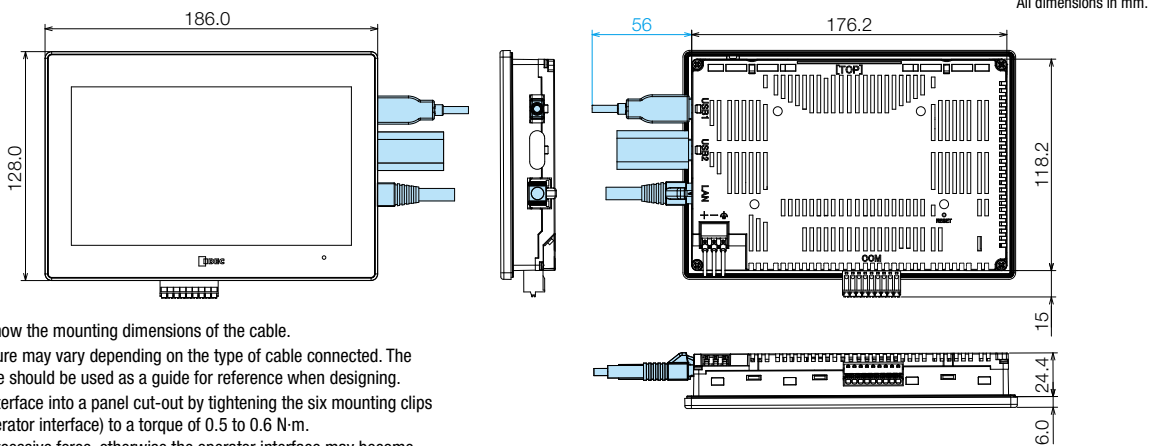
No.	Name
(6)	Ethernet Interface (LAN)
(7)	Power supply terminal
(8)	RESET Switch
(9)	Serial Interface (COM)

HG2J

Package Quantity: 1

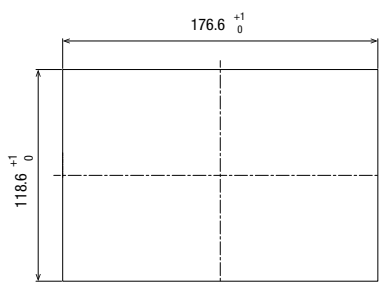
Display Screen	Operation Style	Communication Interface	Bezel color	Part No.	Approvals
7-inch wide TFT color LCD 65,536 colors	PCAP touchscreen (Projected capacitive)	COM LAN USB1 USB2	Black	HG2J-7UT22TF-B	UL61010-1 UL61010-2-201 UL121201 CSA C22.2 No.61010-1 CSA C22.2 No.61010-2-201 CSA C22.2 No.213

Dimensions



- Dimensions in blue show the mounting dimensions of the cable.
- Dimensions in the figure may vary depending on the type of cable connected. The information listed here should be used as a guide for reference when designing.
- Install the operator interface into a panel cut-out by tightening the six mounting clips (supplied with the operator interface) to a torque of 0.5 to 0.6 N·m. Do not tighten with excessive force, otherwise the operator interface may become distorted. Also, waterproof characteristics may be lost.

Panel Cut-out



- Panel Thickness: 1.0 to 5.0mm

All dimensions in mm.

General Specifications

Rated Power Voltage	12 to 24V DC
Power Voltage Range	10.2 to 28.8V DC
Power Consumption	13W maximum
	5W maximum when not using USB1 or USB2
	3W maximum when Backlight OFF
Allowable Momentary Power Interruption	10ms max. (power supply voltage 20.4 to 28.8V DC) 1ms max. (power supply voltage 10.2 to 20.4V DC)
Inrush Current	30A maximum
Dielectric Strength	500V AC, 10 mA, 1 minute between power and FG terminals
Operating Temperature	-20 to +60°C (no freezing)
Operating Humidity	10 to 90%RH (no condensation)
Storage Temperature	-20 to +70°C (no freezing)
Storage Humidity	10 to 90%RH (no condensation)
Pollution Degree	2
Vibration Resistance	5 to 8.4 Hz single amplitude 3.5 mm, 8.4 to 150 Hz acceleration, 9.8M/s ² on each of three mutually perpendicular axes (IEC61131-2)
Shock Resistance	147m/s ² , 11ms, 5 shocks on each of three mutually perpendicular axes (IEC61131-2)
Noise Immunity	Fast transient/burst test
	Power terminals: 2 kV Communication line: 1kV (IEC/EN61131-2)
Electrostatic Discharge	Contact: 6 kV Air: 8kV (IEC/EN61131-2)
Corrosion Immunity	Free from corrosive gases
Mounting	Panel mount (panel thickness: 1.0 to 5.0 mm)
Degree of Protection	When panel thickness is less than 1 to 5mm: IP66F (IEC60529)
	When panel thickness is less than 1.6 to 5mm: IP66F, IP67F (IEC60529) TYPE 4X, TYPE 13
Dimensions	186 (W) x 128 (H) mm x 30.4 (D) mm
Weight (approx.)	500g

- Do not use the HG2J in an environment subject to strong ultraviolet rays, otherwise the LCD quality will deteriorate.

Display Specifications

Display	TFT color LCD (TN type)	
Color / Shade	65,536 colors (16-bit color)	
Effective Display Area	154.08 (W) x 85.92 (H) mm	
Display Resolution	800 (W) x 480 (H) pixels	
DPI	0.1926 (W) x 0.179 (H) mm	
View angle	Left/right/top: 80°, bottom 60°	
Backlight	White LED	
Backlight Life	50,000 hours minimum (* 1)	
Brightness	500 cd/m ² (Typ.) (*2)	
Brightness Adjustment	48 levels	
Backlight Replacement	Not replaceable by user (must be replaced by IDEC)	
Font	Shift_JIS (Japanese)	ANSI1250 (Central European language)
	ISO8859-1 (European)	European language)
	GB2312 (Simplified Chinese)	ANSI1251 (Baltic)
	BIG5 (Traditional Chinese)	ANSI1251 (Cyrillic)
	KSC5601 (Korean)	ASCII (7-seg)
Character Size	8 to 512	
Character Attribute	Blink (1 or 0.5 sec period), reverse	
Graphics	Straight line, polyline, rectangle, circle, arc, circle/ellipse, equilateral polygons (3, 4, 5, 6, 8) picture	
Window Display	3 popup screens + 1 system screen	

*1) The backlight life is not guaranteed and refers to the time until the brightness reduces by half after use at 25°C.
The actual life depends on operating environments and conditions.

*2) Brightness of the LCD alone at an ambient temperature of 25°C.

Operation Specifications

Switching Element	PCAP (Projected capacitance) method
Multiple Operations	Up to 2 points
Acknowledgement Sound	Electronic buzzer or audio 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	Approx. 24MB
Parts	Bit Button, Word Button, Goto Screen, Print Button, Key Button, Multi Button, Keypad, Numerical Input, Character Input, Pilot Lamp, Multi-State Lamp, Picture Display, Message Display, Message Switching Display, Alarm List Display, Alarm Log Display, Data 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±90 sec per month (at 25°C)
Power Failure Backup Data	Calendar, log data, keep relay, internal register
Backup Time	20 days (Typ.) (*3)

*3) If the power is cut off for more than 20 days, the error message "Backup data lost" will be displayed at the next start-up and the clock data will be initialized to "00:00:00 January 1, 2000".

Interface Specifications

Serial Interface (COM) (*4)	RS232C	Electrical Characteristics	EIA RS232C compliant
		Transmission Speed	1,200 / 2,400 / 4,800 / 9,600 / 19,200 / 38,400 / 57,600 / 115,200 / 187,500bps (*5)
		Synchronization	Asynchronous
		Communication Method	Half or full duplex
		Control System	Hardware control or none
	RS422/485	Electrical Characteristics	EIA RS422/485 compliant
		Transmission Speed	1,200 / 2,400 / 4,800 / 9,600 / 19,200 / 38,400 / 57,600 / 115,200 / 187,500bps (*5)
		Synchronization	Asynchronous
		Communication Method	Half or full duplex
		Control System	None
Connector		Detachable 9-pin terminal block	
Ethernet Interface (LAN)	Interface	IEEE802.3u (10BASE-T/100BASE-TX) compliant	
	Connector	Modular connector (RJ-45)	
USB Interface (USB1) (*6)	Interface	USB2.0 High speed (480Mbps)	
	Connector	USB Type A connector	
USB Interface (USB2) (*6)	Interface	USB2.0 High speed (480Mbps)	
	Connector	USB Type A connector	

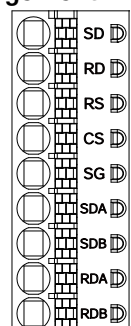
*4) RS232C and RS422/485 can be used simultaneously.

*5) 187,500 bps is available only with , SIEMENS SIMATIC S7-300/400 series (MPI port direct connection).

*6) USB output current varies depending on the mounting direction and operating temperature.

Serial Interface Connector Terminal Arrangement

Name	I/O	Function	Communication
SD	OUT	Send data	RS232C
RD	IN	Receive data	
RS	OUT	Request to send	
CS	IN	Clear to send	
SG	-	Signal ground	RS232C, RS422/485
SDA	OUT	Send data "+ "	RS422/485
SDB	OUT	Send data "- "	
RDA	IN	Send data "+ "	
RDB	IN	Send data "- "	



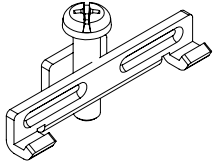
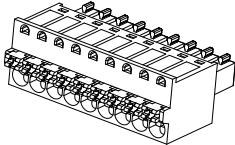
Optional (sold separately)

Name / Shape		Part No.	Package Quantity	Description	
System Integration Software		SW1A-W1C	1	Automation Organizer (Includes application software WindO/I-NV4)	
Protective Sheet		HG9Z-2D7PN05	5	For 7-inch wide, used to protect the LCD 5 pcs/pack	
(Dimensions: 182.4 x 124.4 mm, sheet thickness: 0.153 mm)					
USB relay port		CW1X-USB20-1M	1	Bezel color	Cable length: 1m USB2.0 TypeA
		CW4X-USB20-1M		Bezel color: Metallic	
RJ45 relay port		CW1X-RJ45	1	Bezel color	Number of Contacts: 8pin
		CW1X-RJ45		Bezel color: Metallic	
Rubber cap (*1)		CW9Z-D1X1	1	Material : TPE Color: Black Degree of Protection: IP65/67	
Plastic cover (*1)		CW9Z-D1X2	1	Material :<Lens> Polycarbonate resin <Main body>: Polyamide resin <Gasket>: NBR Color : Translucent Degree of Protection: IP65/67	

*1) This accessory is for CW series relay ports (CW1X/CW4X) only. This product cannot be used for other models.
For details on how to use the product, refer to the instruction manual from the QR code on the right.



Maintenance parts (sold separately)

Name	Part No.	Package Quantity	Description
Mounting Clip 	HG9Z-4K2PN04	4	Four clips are supplied.
Serial Interface 20-pin MIL connector (Detachable 9-pin terminal block, Push-in terminal) 	HG9Z-XT09P	1	One plug (terminal block type) is supplied.

Compatible PLCs

Manufacturer	Series
IDEC	MICROSmart FC6A
	SmartAXIS FT1A Pro/Lite
	MICROSmart FC6A (Ethernet)
	SmartAXIS FT1A Pro/Lite (Ethernet)
Mitsubishi	MELSEC-A (link unit)
	MELSEC-QnA (link unit)
	MELSEC-Q (link unit)
	MELSEC-Q (Ethernet)
	MELSEC-FX
OMRON	SYSMAC-C
	SYSMAC-CS
	SYSMAC-CJ1
	SYSMAC-CJ2
	SYSMAC-CP1
	SYSMAC (Ethernet)
Allen-Bradley	PLC-5 (Half Duplex)
	SLC-500 (Half Duplex)
	MicroLogix (Full Duplex)
	ControlLogix (Full Duplex)
	CompactLogix (Full Duplex)
	FlexLogix (Full Duplex)
	ControlLogix (Ethernet/IP, Ethernet/IP (Logix Native Tag))
	CompactLogix (Ethernet/IP, Ethernet/IP (Logix Native Tag))
	PLC-5 (Ethernet/IP)
	SLC 500 (Ethernet/IP)
	MicroLogix (Ethernet/IP)

Manufacturer	Series
SIEMENS	S7-200
	S7-300 (connect to CPU unit)
	S7-300 (link unit)
	S7-400
	S7-1200 (Ethernet)
Keyence	KV-700 / 1000 / 3000 / 5000
	KV Nano
	KZ
	KV
	KV (Ethernet)
Shibaura Machinery	TC200
	TCmini
Modicon	Modbus RTU Master (*1)
	Modbus RTU Slave (*2)
	Modbus ASCII Master (*1)
	Modbus TCP Client (*1)
	Modbus TCP Slave (*2)

- The compatible PLC information is for reference only (except for IDEC PLCs), and IDEC does not guarantee the operation of any other manufacturers' PLC. When using other manufacturers' PLCs, read their specifications and instruction manual carefully. The PLC must be operated correctly under the user's responsibility.
- The company names and product names are registered trademarks or brand names.
- 1) HG2J is connected as a master.
- *2) HG2J is connected as a slave.

An updated listing of compatible PLCs can be found from the following website.
https://us.idec.com/idec-us/en/USD/c/Operator_Interfaces