



Actual Size

4.6" Monochrome STN LCD Touchscreen - HG1F

- Features**
- Super bright monochrome LCD screen: 500 cd/m²
 - High resolution: 300 x 100 pixels.
 - High performance CPU for fast response
 - Analog resistive touch panel
 - Screen orientation: Landscape or Portrait
 - Slim frame design
 - Large memory capacity of 1MB
 - O/I link communication
 - 1:N PLC communication (IDEC/Modbus PLC)
 - Supports major brand PLC manufacturers: IDEC, Allen Bradley, Omron, Mitsubishi, Automation Direct (Koyo), GE, Siemens, and many more
 - Multilingual capabilities: English, simplified & traditional Chinese, Korean, central European languages, etc.
 - Approvals: UL, c-UL, Hazardous Locations Class 1 Div. 2, Nema Type 13, IP65, CE
 - Programming Software: WindO/I-NV2 Ver 3.12 or higher



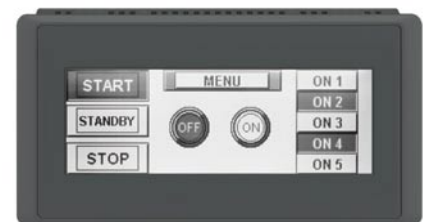
Specifications

General Specifications

Rated Power Voltage	24V DC
Power Voltage Range	20.4 to 28.8V DC
Power Consumption	10W maximum
Power Inrush Current	20A maximum
Allowable Momentary Power Interruption	10ms minimum
Dielectric Strength	1,000V AC, 10mA, 1 minute between power & FG terminals
Insulation Resistance	50MΩ minimum between power & FG terminals (500V DC megger)
Backup Battery	CR2032 lithium battery, Life approx. 4 years (25°C)
Operating Temperature	0 to 50°C
Operating Humidity	10 to 90% RH (no condensation)
Storage Temperature	-20 to +60°C
Storage Humidity	10 to 90% RH (no condensation)
Pollution Degree	2 (IEC 60664-1)
Corrosion Immunity	Atmosphere free from corrosive gases
Vibration Resistance (damage limits)	10 to 20Hz amplitude 0.625mm, 20 to 55Hz acceleration 9.8m/s ² , 2 hours per axis on each of three mutually perpendicular axes
Shock Resistance (damage limits)	147m/s ² , 11ms, 5 shocks on each of three mutually perpendicular axes
Noise Immunity	Fast transient/burst test, Common mode: Level 3, Power terminals: ±2 kV, Communication line: ±1kV, (IEC 61000-4-4)
Electrostatic Discharge	ESD-3 (RH-1), Level 3, (contact ±6kV, air ±8kV), (IEC 61000-4-2)
Mounting	Panel mounting
Degree of Protection	IP65, Nema Type 13 (operator)
Dimensions	147W x 76H x 39.3D mm
Weight (approx.)	280g



Portrait Orientation



Landscape Orientation

35.3mm



Side View

Specifications con't on following page

Specifications Con't

Display Specifications	
LCD	Monochrome STN
Effective Display Area	111.4W x 38.4H mm
Display Resolution	300W x 100H pixels
LCD Life	50,000 hours minimum
Contrast Adjustment	Possible in steps using the front touch screen
Backlight	Cold-cathode tube
Backlight Life	50,000 hours nominal (Note)
Backlight Control	Automatic OFF
Backlight Replacement	Possible

Note: The backlight life refers to the time when the surface brightness is reduced by half after using continuously at room temperature.

Function Specifications	
Screen Types	Base screen, popup screen, system screen
No. of Screens	Base screen: 3,000 max., popup screen: 3,000 max.
User Memory	1MB (including expansion fonts)
Parts	Bit Button, Word Button, Goto Screen Button, Print Button, Key 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, Timer
Calendar	Year, Month, Day, Hour, Min., Sec., Day of Week ±30 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)

HG1F to PLC Communication Cable Part Numbers

IDECC PLC Model	Comm. Type	Link Unit Used	Cable Part Number*
Microsmart (FC5A & FC4A)	RS-232	FC4A-PC1 or FC4A-HPC1	HG9Z-XC183**
		Built-in Port (8 pin Mini-Din)	FC4A-KC1CA
	RS-485	FC4A-PC3 or FC4A-HPC3	HG9Z-1C131A
FC4A-PC2 or FC4A-HPC2		HG9Z-1C121A	
OpenNet Controller or Micro3C	RS-232	Built-in Port (8 pin Mini-Din)	HG9Z-XC183
	RS-485	Built-in Port (Screw terminal type)	HG9Z-1C131A
Micro3	RS-485	Built-in Port (8 pin Mini-Din)	HG9Z-1C121A

* More cable part numbers available at www.idec.com/usa/hg1f

** Cable FC4A-KC1CA can also be used

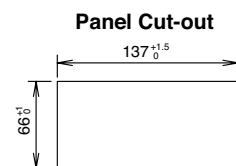
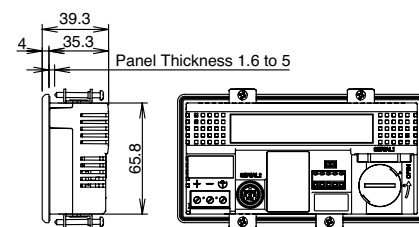
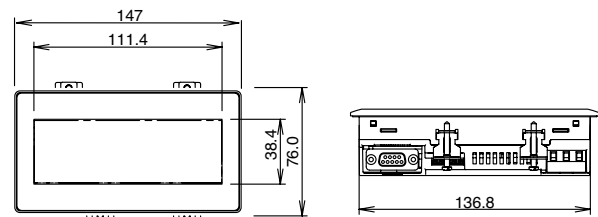
Part Numbers

	Display Screens	Part Numbers	Bezel Color	Communication Type
Operator Interfaces	4.6" STN Monochrome LCD	HG1F-SB22BF-W	Light Gray	RS-232
		HG1F-SB22BF-B	Black	
		HG1F-SB22BF-S	Silver*	
		HG1F-SB22YF-W	Light Gray	RS-485 / RS-422
		HG1F-SB22YF-B	Black	
HG1F-SB22YF-S	Silver*			

*Silver bezel is not UL Listed or in-stock item.

	Description	Part Numbers
Software	WindO/I-NV2 - Programming software for all Touchscreens. PLC Drivers are included with the software.	HG9Y-ZSS2W
Cable	Programming cable for HG1F Series (PC to HG1F)	HG9Z-XCM1A or FC2A-KC4C
Accessories	Protective Sheet (5 piece minimum)	HG9Z-1D
	Replacement Backlight (1 pc.)	HG9Z-1FB
	Mounting Clips (10 piece minimum)	SLD-K02
	Replacement Battery (1 pc.)	HG9Z-XR1
	O/I Link Unit	HG9Z-2G1

Dimensions



The above figure illustrates the RS485/422 version.



Available Functions

PLCs

Operator Interfaces

Automation Software

Power Supplies

Sensors

Communication & Networking

Category	Item	HG1F	HG2F		HG3F	HG4F
			Standard	CC Switch Option		
Communication	PLC link communication	√	√	√	√	√
	DM link communication	√	√	√	√	√
	OI link communication	√	√	√	√	√
	Ethernet	—	—	—	√	√
	No host	√	√	√	√	√
User Memory		1 MB	2 MB	2 MB	8 MB*	8 MB*
Interface	RS232C/RS485 (422)	√	√	√	√	√
	Ethernet	—	—	—	√	√
	CF card slot	—	√	√	√	√
	Parallel	—	—	—	√	√
Display Color	256 colors	—	√	√	√	√
	Monochrome	√	√	√	—	—
Brightness	(cd/m ²)	500	250	250	450	400
Resolution	(pixels)	300 x 100	320 x 240	320 x 160**	640 x 480	800 x 600
Touch Switch		—	16 x 12	16 x 8	32 x 24	40 x 30
CC Switch		—	—	4 x 1 row (bottom)	—	—
Expansion Unit	Digital I/O unit	—	√	√	√	√
Features	System program download	√	√	√	√	√
	Font download	√	√	√	√	√
	Download via Ethernet	—	—	—	√	√
	Download via OI link	√	√	√	√	√
	Project transfer via CF card	—	√	√	√	√
	Printer output	√	√	√	√	√
	Backlight replacement	√	√	√	√	√
	Environment resistance	√	√	√	√	√
	Simulation	√	√	√	√	√
	Pass through	√	√	√	√	√
Functions	Device monitor	√	√	√	√	√
	Web server function	—	—	—	√	√
	Overlapped screens	√	√	√	√	√
	Sub-screen superimpose	√	√	√	√	√
	Text group switching	√	√	√	√	√
	Script	√	√	√	√	√
	Part operating condition setting	√	√	√	√	√
	Alarm log	√	√	√	√	√
	Logging	√	√	√	√	√
	Recipe	√	√	√	√	√
Password setting	√	√	√	√	√	
Parts	Bit button	√	√	√	√	√
	Word button	√	√	√	√	√
	Goto screen button	√	√	√	√	√
	Print button	√	√	√	√	√
	Key button	√	√	√	√	√
	Keypad	√	√	√	√	√
	Selector switch	√	√	√	√	√
	Potentiometer	√	√	√	√	√
	Numerical input	√	√	√	√	√
	Character input	√	√	√	√	√
	Pilot lamp	√	√	√	√	√
	Picture display	√	√	√	√	√
	Message display	√	√	√	√	√
	Message switching display	√	√	√	√	√
	Alarm list display	√	√	√	√	√
	Alarm log display	√	√	√	√	√
	Numerical display	√	√	√	√	√
	Bar graph	√	√	√	√	√
	Trend chart	√	√	√	√	√
	Pie chart	√	√	√	√	√
Meter	√	√	√	√	√	
Calendar	√	√	√	√	√	
WindO/I-NV2 Functions	Bit write command	√	√	√	√	√
	Word write command	√	√	√	√	√
	Goto screen command	√	√	√	√	√
	Timer	√	√	√	√	√
	Print command	√	√	√	√	√
	Screen print command	√	√	√	√	√
	Debugging	√	√	√	√	√
	Log data upload tool	√	√	√	√	√
	Graphic library tool	√	√	√	√	√
	Screen import	√	√	√	√	√
	Text browser	√	√	√	√	√
	Device browser	√	√	√	√	√
	Script browser	√	√	√	√	√
	Picture browser	√	√	√	√	√
	Basic/advanced mode	√	√	√	√	√
Preview	√	√	√	√	√	
Windows font	√	√	√	√	√	
Library function	√	√	√	√	√	
Global replace	√	√	√	√	√	
Work space	√	√	√	√	√	

*2MB used for OS
 **four tactile push regions (40 x 70 pixels)

Part Numbers

OI Touchscreen

	Part Numbers	Bezel Color	Description
12.1"	HG4F-JT22TFW	Light Gray	Color TFT LCD Touchscreen
	HG4F-JT22TFB	Black*	Color TFT LCD Touchscreen
	HG4F-JT22TFW-DH485-500	Light Gray	Color TFT LCD Touchscreen with DF1 / DH485 converter/cable package for SLC 500 (w/RJ45 connector)
10.4"	HG3F-FT22TFW	Light Gray	Color TFT LCD Touchscreen
	HG3F-FT22TFB	Black*	Color TFT LCD Touchscreen
	HG3F-FT22TFW-DH485-500	Light Gray	Color TFT LCD Touchscreen with DF1/DH485 converter/cable package for SLC 500 (w/RJ45 connector)
5.7"*	HG2F-SS22VCF	Light Gray	Color STN LCD Touchscreen
	HG2F-SB22VCF	Light Gray	Monochrome STN LCD Touchscreen
	HG2F-SS22VCF-DH485-500	Light Gray	Color STN LCD Display with DF1 / DH485 converter/ cable package for SLC500 (w/RJ45 connector)
	HG2F-SB22VCF-DH485-500	Light Gray	Monochrome STN LCD Display with DF1 / DH485 converter / cable package for SLC500 (w/RJ45 connector)
5.7" with CC Click	HG2F-SS52VCF	Light Gray	Color STN LCD Touchscreen w/ CC Click Tactile Touchbutton Technology
	HG2F-SB52VCF	Light Gray	Monochrome STN LCD Touchscreen w/ CC Click Tactile Touchbutton Technology
4.6"	HG1F-SB22BF-W	Light Gray	Monochrome STN LCD Touchscreen, RS-232 comm.
	HG1F-SB22BF-B	Black	Monochrome STN LCD Touchscreen, RS-232 comm.
	HG1F-SB22YF-W	Light Gray	Monochrome STN LCD Touchscreen, RS-485/RS-422 comm.
	HG1F-SB22YF-B	Black	Monochrome STN LCD Touchscreen, RS-485/RS-422 comm.



*Black bezel models available upon request.

Accessories

Accessories

Accessory	Description	Part Number
Programming Tools	WindQ/I-NV2 Programming software for all IDEC Touchscreen Series	HG9Y-ZSS2W
	Cable connecting PC to Touchscreen via RS-232 Serial Port	HG9Z-XCM1A
Converters	USB to RS-232 Converter for PCs without Serial Ports	FC4A-USB
	AB SLC500 (w/RJ45 connector) DF1 / DH485 Communication Package for HG2F/3F/4F	HG9Z-GWDF1DH485-3
	AB SLC500 (w/RJ45 connector) DF1 / DH485 Communication Package for 4.6" HG1F	HG9Z-GWDF1DH485-4
Protective Sheet	For 12.1" HG4F (minimum order quantity is 2 pcs.)	HG9Z-4DAP
	For 10.4" HG3F (minimum order quantity is 2 pcs.)	HG9Z-3DAP
	For 5.7" HG2F (minimum order quantity is 5 pcs.)	HG9Z-2D2
	For 4.6" HG1F (minimum order quantity is 5 pcs.)	HG9Z-1D
Mounting Clips	For 10.4" HG3F & 12.1" HG4F (minimum order quantity is 10 pcs.)	HG9Z-4K1
	For 5.7" HG2F (minimum order quantity is 4 pcs.)	HG9Z-2K1
	For 4.6" HG1F (minimum order quantity is 10 pcs.)	SLD-K02
Replacement Backlight	For 12.1" HG4F	HG9Z-4FB
	For 10.4" HG3F	HG9Z-3FB2
	For 5.7" HG2F	HG9Z-2B1
	For 4.6" HG1F	HG9Z-1FB
OI Link Unit	For all OI touchscreens	HG9Z-2G1
32 Point Digital I/O	For 10.4" HG3F & 12.1" HG4F (16 Inputs & 16 Outputs)	HG9Z-3P102
	For 5.7" HG2F (16 Inputs & 16 Outputs)	HG9Z-2P101
Compact Flash Card	128MB CF Card for 5.7" HG2F, 10.4" HG3F, 12.1" HG4F	HG9Z-MF128
Replacement Battery	Lithium Battery for 4.6" HG1F	HG9Z-XR1

PLCs

Operator Interfaces

Automation Software

Power Supplies

Sensors

Communication & Networking

Available Functions

Category	Item	HG2F		HG3F	HG4F	
		Touch Switch Type	CC Switch Type			
Communication	PLC link communication	✓	✓	✓	✓	
	DM link communication	✓	✓	✓	✓	
	O/I link communication	✓	✓	✓	✓	
	Ethernet	—	—	✓	✓	
	No host	✓	✓	✓	✓	
User Memory		2 MB	2 MB	8 MB*	8 MB*	
Interface	RS232C/RS485 (422)	✓	✓	✓	✓	
	Ethernet	—	—	✓	✓	
	CF card slot	✓	✓	✓	✓	
	Parallel	—	—	✓	✓	
Display Color	256 colors	✓	✓	✓	✓	
	Monochrome	✓	✓	—	—	
Brightness	(cd/m ²)	250	250	350	350	
Resolution	(pixels)	320 × 240	320 × 160**	640 × 480	800 × 600	
Touch Switch		16 × 12	16 × 8	32 × 24	40 × 30	
CC Switch		—	4 × 1 row (bottom)	—	—	
Expansion Unit	Digital I/O unit	✓	✓	✓	✓	
Features	System program download	✓	✓	✓	✓	
	Font download	✓	✓	✓	✓	
	Download via Ethernet	—	—	✓	✓	
	Download via O/I link	✓	✓	✓	✓	
	Project transfer via CF card	✓	✓	✓	✓	
	Printer output	✓	✓	✓	✓	
	Backlight replacement	✓	✓	✓	✓	
	Environment resistance	✓	✓	✓	✓	
Functions	Simulation	✓	✓	✓	✓	
	Pass through	✓	✓	✓	✓	
	Device monitor	✓	✓	✓	✓	
	Web server function	—	—	✓	✓	
	Overlapped screens	✓	✓	✓	✓	
	Sub-screen superimpose	✓	✓	✓	✓	
	Text group switching	✓	✓	✓	✓	
	Script	✓	✓	✓	✓	
	Part operating condition setting	✓	✓	✓	✓	
	Alarm log	✓	✓	✓	✓	
	Logging	✓	✓	✓	✓	
	Recipe	✓	✓	✓	✓	
	Password setting	✓	✓	✓	✓	
	Parts	Bit button	✓	✓	✓	✓
Word button		✓	✓	✓	✓	
Goto screen button		✓	✓	✓	✓	
Print button		✓	✓	✓	✓	
Key button		✓	✓	✓	✓	
Keypad		✓	✓	✓	✓	
Selector switch		✓	✓	✓	✓	
Potentiometer		✓	✓	✓	✓	
Numerical input		✓	✓	✓	✓	
Character input		✓	✓	✓	✓	
Pilot 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		✓	✓	✓	✓	
Print command		✓	✓	✓	✓	
Screen print command		✓	✓	✓	✓	
WindO/I-NV2 Functions		Debugging	✓	✓	✓	✓
		Log data upload tool	✓	✓	✓	✓
		Graphic library tool	✓	✓	✓	✓
		Screen import	✓	✓	✓	✓
	Text browser	✓	✓	✓	✓	
	Device browser	✓	✓	✓	✓	
	Script browser	✓	✓	✓	✓	
	Picture browser	✓	✓	✓	✓	
	Basic/advanced mode	✓	✓	✓	✓	
	Preview	✓	✓	✓	✓	
	Windows font	✓	✓	✓	✓	
	Library function	✓	✓	✓	✓	
	Global replace	✓	✓	✓	✓	
	Work space	✓	✓	✓	✓	

Available Functions

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Operator Interfaces



1. *2MB used for OS
2. **four tactile push regions (40 x 70 pixels)

Part Numbers

Part Numbers: IDEC SmartTouch

	Part Numbers	Bezel Color	Description
12.1"	HG4F-JT22TFW	Light Gray	Color TFT LCD Touchscreen
	HG4F-JT22TFB	Black*	Color TFT LCD Touchscreen
	HG4F-JT22TFW-DH485-500	Light Gray	Color TFT LCD Touchscreen with DF1 / DH485 converter/cable package for SLC 500 (w/RJ45 connector)
10.4"	HG3F-FT22TFW	Light Gray	Color TFT LCD Touchscreen
	HG3F-FT22TFB	Black*	Color TFT LCD Touchscreen
	HG3F-FT22TFW-DH485-500	Light Gray	Color TFT LCD Touchscreen with DF1/DH485 converter/cable package for SLC 500 (w/RJ45 connector)
5.7"	HG2F-SS22VCF	Light Gray	Color STN LCD Touchscreen
	HG2F-SB22VCF	Light Gray	Monochrome STN LCD Touchscreen
	HG2F-SS22VCF-DH485-500	Light Gray	Color STN LCD Display with DF1 / DH485 converter/ cable package for SLC500 (w/ RJ45 connector)
	HG2F-SB22VCF-DH485-500	Light Gray	Monochrome STN Color Display with DF1 / DH485 converter / cable package for SLC500 (w/RJ45 connector)
5.7" with CC Click	HG2F-SS52VCF	Light Gray	Color STN LCD Touchscreen w/ CC Click Tactile Touchbutton Technology
	HG2F-SB52VCF	Light Gray	Monochrome STN LCD Touchscreen w/ CC Click Tactile Touchbutton Technology



* Black Bezel Models available upon request. Please consult IDEC.

Accessories

Part Numbers: Accessories

Accessory	Description	Part Number
Programming Tools	WindO/I-NV2 Programming software for all IDEC Touchscreen Series	HG9Y-ZSS2W
	Cable connecting PC to Touchscreen via RS-232 Serial Port	HG9Z-XCM1A
Converters	USB to RS-232 Converter for PCs without Serial Ports	FC4A-USB
	AB SLC500 (w/RJ45 connector) DF1 / DH485 Communication Package	HG9Z-GWDF1DH485-2
Protective Sheet	For 12.1" HG4F (2 pcs. / pack)	HG9Z-4DAPN02
	For 10.4" HG3F (2 pcs. / pack)	HG9Z-3DAPN02
	For 5.7" HG2F (5 pcs. / pack)	HG9Z-2D2
Mounting Clips	For 10.4" HG3F & 12.1" HG4F (10 pcs. / pack)	HG9Z-4K1PN10
	For 5.7" HG2F (4 pcs. / pack)	HG9Z-2K1PN04
Replacement Backlight	For 12.1" HG4F	HG9Z-4FB
	For 10.4" HG3F	HG9Z-3FB
	For 5.7" HG2F	HG9Z-2B1
O/I Link Unit	For 12.1" HG4F / 10.4" HG3F / 5.7" HG2F	HG9Z-2G1
32 Point Digital I/O	For 10.4" HG3F & 12.1" HG4F (16 Inputs & 16 Outputs)	HG9Z-3P102
	For 5.7" HG2F (16 Inputs & 16 Outputs)	HG9Z-2P101
Compact Flash Card	32MB CF Card for 5.7" HG2F, 10.4" HG3F, 12.1" HG4F	HG9Z-MF32