

HMI

GC-A

GC-7

EA7

Visual Scope

HMI Lineup

PLC

HMI

SENSOR

ENCODER


































COUNTER

INFORMATION

HMI Lineup

Programmable
Touch Panel

HMI Software

		GC-A			GC-7		
							
Model Number		GC-A14	GC-A14-R	GC-73LM-R	GC-73LCL-R	GC-76LC	
Type	Panel Computer						
	Programmable Touch Panel	●	●	●	●	●	
Case	Open Frame Type						
	Bezel Type	●	●	●	●	●	
Display	Device Size	15.0-inch 					
		12.1-inch 					
		10.4-inch 					10.4-inch 
		8.4-inch 					
		7.0-inch 					
		5.7-inch 					
	Display Device	TFT color LCD 					
		STN Black-and-white 					
	Resolution	1024×768 					
		800×600 					
		800×480 					
		600×480 					
		320×240 					
	Backlight	LED	●	●		●	●
		CCFL			●		
	Operation	Touch Panel	●	●	●	●	●
		Multi-Touch	—	—	—	—	—
	Interfaces	Serial Port		RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485
USB Port		Type A	USB1.1	USB1.1	USB1.1	USB1.1	
		Type B	USB2.0	USB2.0	USB1.1	USB1.1	
Ethernet		●	—	—	—		
SD Card Slot		●	—	—	—		
CF Card Slot		—	—	—	●		
Sound Output		▲*1	—	—	—		
VGA Output		—	—	—	—		
Expansion Option		—	—	—	—		

*1 To be supported

HMI Lineup

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- INFORMATION

- HMI Lineup
- Programmable Touch Panel
- HMI Software

EA7							
EA7-S6M-RS	EA7-T6CL-RS	EA7-S6M-S	EA7-T6CL-S	EA7-T8C-S	EA7-T10C-SG	EA7-T12C-S	EA7-T15C-S
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
							15.0-inch
						12.1-inch	
					10.4-inch		
				8.4-inch			
5.7-inch	5.7-inch	5.7-inch	5.7-inch				
	65,536 colors		65,536 colors	65,536 colors	65,536 colors	65,536 colors	65,536 colors
15 gray gradations		15 gray gradations					
							XGA 1024×768
						SVGA 800×600	
				VGA 640×480	VGA 640×480		
QVGA 320×240	QVGA 320×240	QVGA 320×240	QVGA 320×240				
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
—	—	—	—	—	—	—	—
RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485	RS-232C RS-422/485
USB1.1	USB1.1	USB1.1	USB1.1	USB1.1	USB1.1	USB1.1	USB1.1
USB1.1	USB1.1	USB1.1	USB1.1	USB1.1	USB1.1	USB1.1	USB1.1
—	—	●	●	●	●	●	●
—	—	—	—	—	—	—	—
—	—	●	●	●	●	●	●
—	—	●	●	●	●	●	●
—	—	—	—	—	—	—	—
—	—	●	●	●	●	●	●

The specifications and prices described in this catalog were valid when the catalog was issued. For the latest information, contact our sales persons or see our website.

PLC

HMI

SENSOR

ENCODER

COUNTER

INFORMATION

GC-A

Features

Programmable Touch Panel

- TFT models from 7-inch WVGA
- Screen transfer: Ethernet / USB
- PLC connection: Ethernet / Serial
- Supports SD card
- Macro features
- Supports remote operation



Features

Remote operation on a smartphone/tablet

It transfers GC-A screens on a mobile devices to enable the operation of applications remotely. This remarkably improves safety and efficiency at workshop because the remote access enables updates and/or troubleshoots of lines at everywhere.

Email server feature

Serves emails indicating troubles at workshop to the office or any places. So maintenance capability will be drastically enhanced because you can grasp the trouble situation immediately.

Nimble data management with SD card (to be supported)

Easily moves screen data and enables analyzing the data records on the panel with a PC at the office in order to prepare business reports, so that you utilize the accumulated operation records much more easily.

Advanced programming

Received data can be processed with various programmable conditions and data transaction features. Since touch panel processes data to display and to analyze, it reduces PLC's processing load and saves communication overhead as well.

Displays with WVGA LCD

Displays clear vivid images with high resolution WVGA LCD device. Implemented 7 inch wide screen that is installed in a same size of 5.7 inch model housing is suitable for compact and integrated management machines.

Low power consumption for cost saving

LED backlight saves rated power consumption to around 6 watts. Also 7 level brightness control feature helps extra power saving.

Saves maintenance costs

Removing a cooling fan and adopted excellent quality parts eliminate required replacement parts and reduce the running costs. So the ecological capability brings outstanding cost merits throughout long-term running.

Various interfaces for external devices

For PLCs, provides Dsub 15pin RS-232C/422/485 port, Dsub 9pin RS-232C port and RJ45Ethernet port for 10Base-T/100Base-TX communication. And for project (screen) transfer, it has a built-in USB2.0 Type B port. Further, offers a reasonable model without Ethernet communication port in the product lineup.

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Software Outline

① Menu Bar

Prepared useful features such as Windows interfaces.

② Window

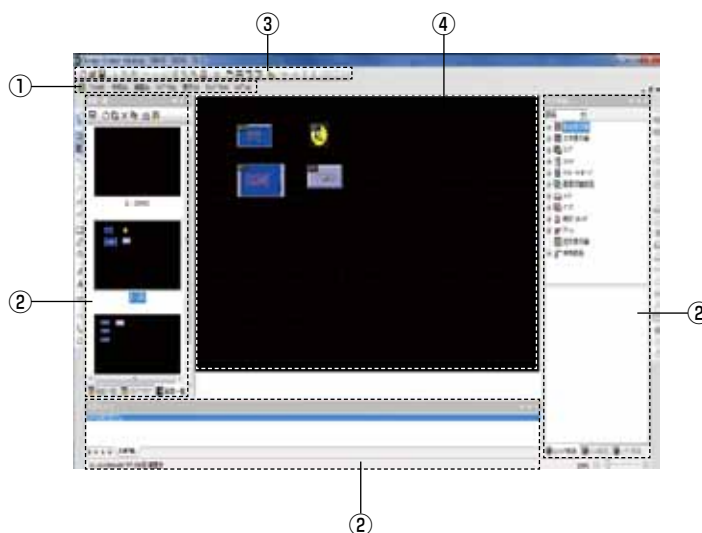
Windows that are used to operate standard features can be located anywhere to customize it.

③ Toolbar

Toolbars at the end of window can be moved to be used as toolbox.

④ Configuration Window

Place various parts to prepare screen for specific purpose.

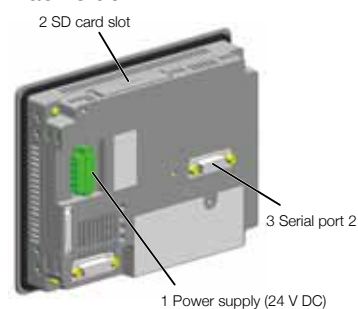


GC-A

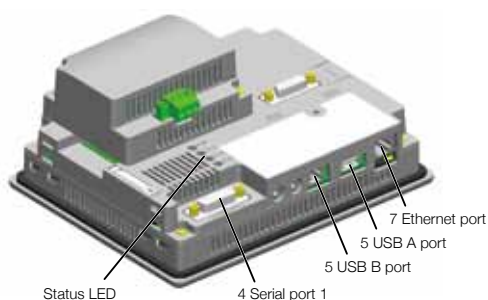
Specifications

Each Part Names and Descriptions

Back side



Back side bottom



- | | | |
|---|------------------------|--|
| 1 | Power supply (24 V DC) | Drives with useful power supply |
| 2 | SD card slot | Used for uploading/downloading screen data and saving measured data. |
| 3 | Serial port 2 | Makes connection with the PLC possible. |
| 4 | Serial port 1 | Makes connection with the PLC possible. |
| 5 | USB B port | Screen data can be uploaded/downloaded. |
| 6 | USB A port | Measured data can be saved in a USB memory that is convenient to carry around. |
| 7 | Ethernet port | Makes connection with the PLC possible. |

Option

Name	Model Number
Plug for AC Power Supply	EA-AC-CON
AC Power Supply Module	EA-AC
D-sub Terminal Block Conversion Adaptor (For RS-422/485)	EA-COMCON-3
D-sub Angle Conversion Adaptor	EA-ADPTR-4
Compact Flash 512MB	EA-CF-CARD

Connection Cable

Model Number	Connected Device
EA-2CBL	SJ, DL05/06/205, SZ, PZCPU Modular 6-pin
EA-2CBL-1	DL06/205-1/260, SZ-4M, PZ3High-density D-sub 15-pin
EA-4CBL-1	D4-CPU programmer port D-sub 15-pin
EA-4CBL-2	D4-CPU general-purpose port D-sub 25-pin
EA-MITSU-CBL-1	Mini DIN for Mitsubishi FX PLC
EA-MITSU-CBL-2	Mitsubishi computer link D-sub 9-pin
EA-OMRON-CBL-1	D-sub 9-pin for Omron

Maintenance Product

Name	Model Number
Plug for Main Body Power Supply	EA-DC-CON
Mounting bracket	EA-BRK-3
Battery	D2-BAT-1(CR2354)

GC-A

Specifications

Main Body Specifications

Model Number	GC-A14	GC-A14-R	
Display	Device Size	7-inch	
	Display Device	TFT color LCD	
	Display Color/Gradation	262,144 color	
	Number of Dots	800 x 480 (WVGA)	
	Brightness Control	Set from the configuration screen of the main body display. (Setting components can be arranged from the drawing software.)	
	Backlight*1	LED	
	Replacement of Backlight	—	
	Automatic Turn-off Function	Possible	
Touch Panel	Analog resistive type, resolution: 1,024 W x 1,024 H		
Interfaces	Serial Port (RS-232C, RS-422/485*2) For PLC Connection	D-sub 15-pin (Female) x 1 Transmission speed (bps): 1,200/2,400/4,800/9,600/19,200/38,400/57,600 bps	
	Serial Port (RS-232C) For PLC Connection	D-sub 9-pin (Male) x 1*7 Transmission speed (bps): 1,200/2,400/4,800/9,600/19,200/38,400/57,600 bps	
	Ethernet*3	Ethernet 10BASE-T/100BASE-TX (RJ-45, Category 5) x 1	—
	USB (A) Port*4*5	USB 1.1 x 1	
	USB (B) Port For screen data transfer	USB 2.0 x 1	
	CF Card Slot (3.3 V)	—	
	SD Card Slot (3.3 V)	1 slot supports SDHC	—
	Line Output	To be supported	—
General Specifications	Supply Voltage	24 V DC (100/200 V AC power supply module is available as an option: EA-AC*6)	
	Allowable Power Range	20.4 to 28.8 V DC, allowable ripple, within 100 mVp-p, allowable instantaneous power failure time, within 5 ms	
	Power Consumption (24 V DC, at main body standalone operation)	Approx. 6 W	
	Use Ambient Temperature	0 to 50°C	
	Storage Ambient Temperature	-20 to 60°C	
	Use / Storage Ambient Humidity	10 to 85% RH (No condensation)	
	Noise Resistance	1000 V AC p-p, pulse width 1 .s, rise time 1 ns, between DC power supply input terminal and FG terminal (Cased on noise simulator)	
	Withstand Voltage	1000 V AC, 1 min, between DC power supply input terminal and FG terminal	
	Insulation Resistance	10 MΩ or higher (500 V DC), between DC power supply input terminal and FG terminal	
	Vibration Resistance	Comply with IEC61131-2, 5 to 9 Hz: 3.5 mm, 9 to 150 Hz: 9.8 m/s ² (10 times each for the X, Y, and Z direction)	
	Impact Resistance	Maximum 147 m/s ² , 11 ms (2 times each for the X, Y, and Z direction)	
	Electrostatic Discharge Resistance	Compliant with IEC61000-4-2, contact: 4 kV, air: 8 kV	
	Surrounding Atmosphere in Place of Use	No corrosive gases	
	Grounding	D-class grounding	
	Protective Structure	Equivalent to IP65(Only front, when gasket is used.)	
	Dimensions (mm)	204.4 W x 156 H x 48.5 D	
Weight (g)	604		
Panel Cutout Dimensions (mm)	189.5 W x 144.5 H		
Cooling System	Natural air-cooling		
Compliant Standards	UL508, CE EN61131-2		
Drawing Software	Software	GC-A ScreenCreatorAdvance	
	Required system configuration	<ul style="list-style-type: none"> · Intel® Atom™ Processor are recommended. · Windows®XP / Windows®7 / 8 (32/64-bit) · Equipped with 512 MB (1 GB or more is recommended.) · HD disc for free space of 50 MB or more · Resolution for XGA 1,024 x 768 or higher is recommended · CD-ROM drive / USB port 	
Accessories	Power plug Quick Start Guide Mounting brackets		

*1 25 degrees C, 24 hour continuous lighting

*2 Any one of RS-232C/422/485 can be used.

*3 Combined use by PLC connection and screen data transfer and the network

*4 Neighbor port may not be available according to width of plug shape

*5 Some of commercial products may not work with this

*6 Option EA-AC specification

*7 Disabled while using Ethernet

GC-A

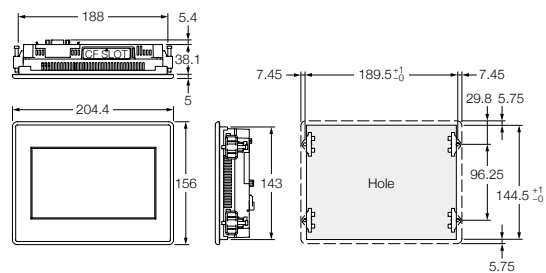
Specifications / Dimensions

List of Connected Devices

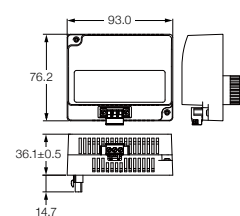
Device	Manufacturer	PLC Series	CPU Direct Connection	Serial Module/Port	Ethernet Module/Port
PLC	Koyo	KOSTAC S Series	○	○	○
		Direct Logic Series	○	○	○
	Mitsubishi	MELSEC-AnN Series	—	○	—
		MELSEC-AnS Series	—	○	—
		MELSEC-QnA Series	—	○	—
		MELSEC-Q Series	—	○	—
		MELSEC-FX Series	—	○	—
	Omron	SYSMAC C Series	—	○	—
		SYSMAC CQM1 Series	—	○	—
		SYSMAC CPM1 Series	—	○	—
JTEKT	TOYOPUC Series	—	○	○(PC3 PC10G)	
Panasonic	MEWNET Series	—	○	—	
Toshiba Machine	TCmini Series	—	○	—	
HostComputer		MemoryLink	—	○	—

Dimensions

GC-A14/GC-A14-R



EA-AC



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GC-7

Features

Programmable Touch Panel (GC Type)

Inherited the GC-5□ display.

- 10.4-inch TFT color Model number: GC-76LC
- 5.7-inch STN color Model number: GC-73LCL-R
- 5.7-inch STN monochrome Model number: GC-73LM-R



Features

- Shifted from the GC50 series.

The applications of the GC-50 series (GC-53LC3, GC-53LM3, and sGC-56LC2) are partially inherited.

The applications can be replaced within restrictions.

- ScreenCreator5 is usable.

The ScreenCreator5 drawing software has been upgraded. You can draw in the same way as with the GC-50 series.

Restrictions from the GC50 Series

1. Drawing software

Prepare ScreenCreator5 Ver3.0 or later.

You can download the drawing software from Koyo Electronics' website free of charge.

2. Panel cutout dimensions

The panel cutout dimensions are not changed.

The display can be installed in the existing holes for attaching the control panel as is.

3. Dimensions

The 5.7-inch type is 7.1 mm thicker in depth.

The 0.4-inch type is 3.0 mm wider in width.

Since the location and size of mounting brackets and external connection connectors are different, make sure that there are no interfering parts inside and outside the board.

4. Power Supply

The 5.7-inch type is connected to the main body, not by terminal block but by connector (bundled item). The 10.4-inch type has been changed to 24 V DC specification.

If you use the GC7 at 100 V/200 V AC, use the optional EA-AC or prepare a commercial AC/DC power supply. (If the EA-AC is used, the depth of the product becomes the main body + 36.1 mm.)

5. Confirmation of PLC models

PLCs that can be used are largely limited. Also, the shapes of connection connectors are different. (M:N communications also cannot be used.)

6. Confirmation of peripheral devices

The GC70 series has only one serial port.

Also note that there are no parallel ports or RAS output / reset input.

7. Touch panel operation

Since an analog-type touch panel is used, there are the following restrictions.

- You cannot press two, three, or four points at the same time.
- The resolution of the touch panel is different.

Since the GC50 series has a different resolution (16 x 12 or 32 x 24) from the GC70 series (1,024 x 1,024), the operational feeling may be different.

8. When K-BASIC is used

There are restrictions on usable instruction words.

9. When option products are used

The digital I/O cannot be used.

The backup data in a CF card is not compatible. If the data is backed up by a CF card for the GC50 series, restore the screen data to ScreenCreator5 once. Each setting data needs to be reset for the GC70 series.

10. How to download screen data

Screen data can be transferred via USB.

11. Other

There may be restrictions in addition to the items mentioned above.

Viewing angle of the screen, appearance of reduced / enlarged characters, appearance of the black-and-white type (difference between blue type LCD and black-and-white mode), etc.

* When you change models, it is recommended that you check the operations using actual equipment once.

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Programmable
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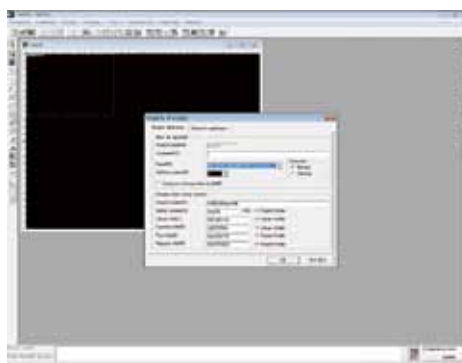
EA7

How to Transfer Software

- 1 Read the screen data project using ScreenCreator5 (Ver3.0 or later).
- 2 Change the target panel to the new model (GC-73LM-R / GC-73LCL-R / GC-76LC) using ScreenCreator5 (Ver3.0 or later).
- 3 Recompile the screen data using ScreenCreator5 (Ver3.0 or later).
- 4 Download the compilation data to the new model using ScreenCreator5 (Ver3.0 or later).

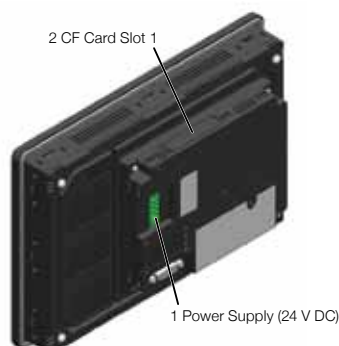
* In a new model, it is not necessary to change to the download mode at hardware side like previous models.

If the computer and the display are connected via a USB cable and the data is downloaded from a computer, the display automatically changes to the download mode and automatically restarts after the completion of the download.

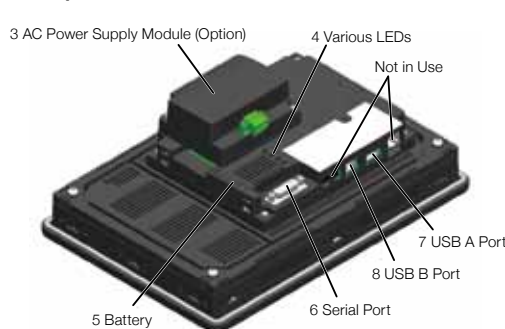


Each Part Names and Descriptions

Standard



Expansion (Option is installed)



- 1 Power supply (24 V DC)
- 2 CF card slot
- 3 AC power supply module (Option)
- 4 Various LEDs
- 5 Battery
- 6 Serial port
- 7 USB A port
- 8 USB B port

Can be used for the power supply in the same conditions as GC-53L□3.

The screen data can be uploaded/downloaded from a CF card.

Can be used with a power supply under the same conditions as the GC-56LC2.

You can check the power supply / status / transmission and reception.

Retain clock data / SRAM.

For connection to a PLC

The screen data can be uploaded/downloaded from a USB memory.

The screen data can be uploaded/downloaded from drawing software.

Options

Name	Model Number	
AC Power Supply Module	EA-AC	
Compact Flash	EA-CF-CARD	
D-sub Terminal Block Conversion Adaptor (For RS-422/485)	EA-COMCON-3	
D-sub Angle Conversion Adaptor	EA-ADPTR-4	
Protection Sheet	For 5.7-inch type	EA-6-COV2
	For 10.4-inch type	EA-10-COV2
Surface Cover	For 5.7-inch type	GC-S3SH-32
	For 10.4-inch type	EA-10-COV3-SG

Connection Cables

EA-2CBL	SJ, DL05/06/205, SZ, PZCPU Modular 6-pin
EA-2CBL-1	DL06/250-1/260,SZ-4M,PZ3 High-density D-sub 15-pin
EA-4CBL-1	D4-CPU programmer port D-sub 15-pin
EA-4CBL-2	D4-CPU general-purpose port D-sub 25-pin
EA-MITSU-CBL-2	Mitsubishi computer link D-sub 9P
EA-OMRON-CBL-1	D-sub 9-pin for Omron

Cable length: 3 m

Expendable Supplies

Name	Model Number	
Gasket	For 5.7-inch Type	—
	For 10.4-inch Type	EA-10-GSK-SG
Mounting Brackets	For 5.7-inch Type	EA-MG-BZ
	For 10.4-inch Type	EA-BRK-2G
Battery	D2-BAT-1	
Plug for Main Body Power Supply	EA-DC-CON	
Plug for AC Power Supply	EA-AC-CON	

GC-7

Specifications

Main Body Specifications

Model Number		GC-73LM-R	GC-73LCL-R	GC-76LC
Display	Device Size	5.7-inch		10.4-inch
	Display Device	STN monochrome LCD		TFT color LCD
	Display Color	Black-and-white mode (15 gradations)		65,536 color
	Number of Dots	320 x 240 (QVGA)		640 x 480 (VGA)
	Brightness Control*1	Set from the system screen of the main body display. (Setting components can be arranged from the drawing software.)		
	Backlight	Cold-cathode tube Average life: Continuous lighting for 50,000 hours or longer / 25°C	LED	
	Replacement of Backlight	Impossible		Possible
	Touch Panel	Analog resistive type, Resolution: 1,024 W x 1,024 H		
External Interface	For PLC Connection	Serial	Start-stop synchronization, RS-232C, RS-422/485 (2/4-wire system), D-sub 15-pin (Female) x 1 Data length: 7/8 bit, parity: None/Odd/Even, stop bit: 1/2 bit Transmission speed (bps): 1,200/2,400/4,800/9,600/19,200/38,400/57,600/115,200	
	Screen Data Transfer		USB (B) 1.1 x 1	
	CF Card Slot 1		No	Compact Flash (Limited to 3.3 V) TYPE I/II x 1*2
	USB		USB (A) 1.1 x 1	
General Specifications	Supply Voltage	24 V DC		
	Allowable Power Range	20.4 to 28.8 V DC, allowable ripple, within 100 mVp-p, allowable instantaneous power failure time, within 5 ms		
	Power Consumption	Approx.9 W (24 V DC, at main body standalone operation)	Approx.10 W (24 V DC, at main body standalone operation)	Approx.17 W (24 V DC, at main body standalone operation)
	Use Ambient Temperature	0 to 50°C		
	Storage Ambient Temperature	-20 to 60°C		
	Use / Storage Ambient Humidity	10 to 85% RH (No condensation)		
	Noise Resistance	1000 V AC p-p, pulse width 1 μs, rise time 1 ns, between DC power supply input terminal and FG terminal (Cased on noise simulator)		
	Withstand Voltage	1000 V AC, 1 min, between DC power supply input terminal and FG terminal		
	Insulation Resistance	10 MΩ or higher (500 V DC), between DC power supply input terminal and FG terminal		
	Vibration Resistance	Compliant with JIS C 0911, vibration acceleration: constant acceleration 19.6 m/s ² , frequency range: 5 to 55 Hz to 5 Hz, vibration time: vertical direction (Y direction) 4H, horizontal and front-back direction (X and Z direction) 2H, sweep cycle: 5 → 55 → 5, 1 octave / min (10%)		
	Impact Resistance	Compliant with JIS C 0912, maximum acceleration 98 m/s ² (10 G), duration of action: 11 ms, number of impacts: 10 times each in perpendicular direction		
	Electrostatic Discharge Resistance	Atmospheric discharge: 8 kV, application places: bezel, touch panel, contact discharge: 4 kV, application places: left/right and front/back of the panel		
	Surrounding Atmosphere in Place of Use	No corrosive gases		
	Grounding	D-class grounding		
	Protective Structure	IP65 (Only front, when gasket is used.)		
	Dimensions (mm)	197 W x 152 H x 54.1 D		299.0 W x 209.0 H x 70.0 D
	Weight (g)	660	630	1480
	Panel Cutout Dimensions (mm)	179.0 W x 140.0 H		85 W x 191 H
	Cooling System	Natural air-cooling		
	Compliant Standards	UL508 (Scheduled to acquire), EMC directive (CE marking: Self-declared), CE EN61131-2, EMI CISPR11 Class A, unnecessary radiation measurement, field intensity measurement, magnetic field strength measurement (EN55011) EMS susceptibility immunity measurement Class A EN61000-4-2 Electrostatic discharge immunity test, EN61000-4-3 Radiation magnetic field immunity test, EN61000-4-4 First transient burst immunity test, EN61000-4-5 Surge immunity test, EN61000-4-6 Conductivity immunity test		
Accessories	QSG (Quick Start Guide) manual Mounting brackets (4 units) Power plug		QSG (Quick Start Guide) manual Mounting brackets (6 units) Power plug (Bundled with mounting brackets)	

*1 Since this display uses a cold-cathode tube for the backlight, the brightness widely fluctuates according to the conditions shown below. Consider the described brightness as a target.

Ambient temperature, installation angle of the product, elapsed time since power-on, duration of use of the product, and number of product power supply ON/OFF cycles

*2 Only the specific card can be used.

* Regarding the EA-AC specifications, see P.345.

GC-7
Specifications







List of Connected Devices

Manufacturer	Series	ScreenCreator5	ScreenCreator5 Properties of Project
Koyo	KOSTAC-S	Koyo (KOSTAC S)	
		Koyo (CCM3)	
	DL Series	Koyo (DL Series)	
		Koyo (DL Series MODBUS)	
Mitsubishi	MELSEC-AnN	Mitsubishi (AnN/AnS) (LINK)	
	MELSEC-AnS	Mitsubishi (AnN/AnS) (LINK) (High speed communication)	
	MELSEC-AnA	Mitsubishi (AnA/AnU) (LINK)	
	MELSEC-AnU	Mitsubishi (AnA/AnU) (LINK) (High speed communication)	
	MELSEC-QnA	Mitsubishi (QnA) (LINK)	
		Mitsubishi (QnA) (LINK) (High speed communication)	
MELSEC-Q	Mitsubishi (QnA) (LINK)		
		Mitsubishi (QnA) (LINK) (High speed communication)	
Omron	SYSMAC C	Omron (C)	
	SYSMAC CQM1	Omron (C)	
	SYSMAC CS1	Omron (CS1)	
Sharp	New Satellite JW	Sharp (CPU direct connection)	
		Sharp (LINK)	
JTEKT	TOYOPUC	JTEKT (PC2)	
		JTEKT (PC3)	
Yaskawa	Inverter	Yaskawa (Inverter)	
Yokogawa	FACTORY ACE	Yokogawa (CPU_No.*)	
		Yokogawa (CPU_No.*) (High speed communication)	
	FA-M3	Yokogawa (CPU No. variable)	
		Yokogawa (CPU No. variable) (High speed communication)	
	Temperature Controller	Yokogawa (CPU No. variable)	
		Yokogawa (CPU No. variable) (High speed communication)	
Keyence	KZ Series	Omron (C)	
		Mitsubishi (AnA,AnU) (LINK)	
		Mitsubishi (AnA,AnU) (LINK) (High speed communication)	
		Mitsubishi (AnN/AnS) (LINK)	
		Mitsubishi (AnN/AnS) (LINK) (High speed communication)	
Toyo Denki	Digital Controller	Toyo Denki (μ -GPCH)	

Supported PLCs as of May 2012

Largely restricted compared with the GC50 series.

If devices other than those above are connected, it is impossible to shift to the GC70 series.

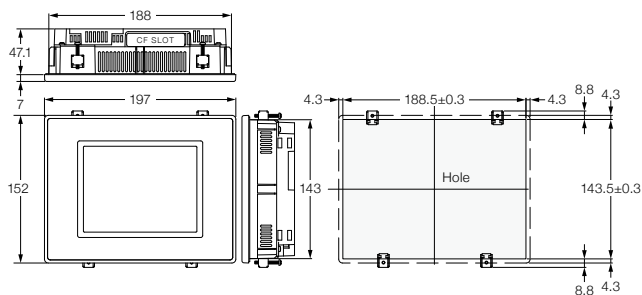
-  PLC
-  HMI
-  SENSOR
-  ENCODER
-  COUNTER
-  INFORMATION

GC7

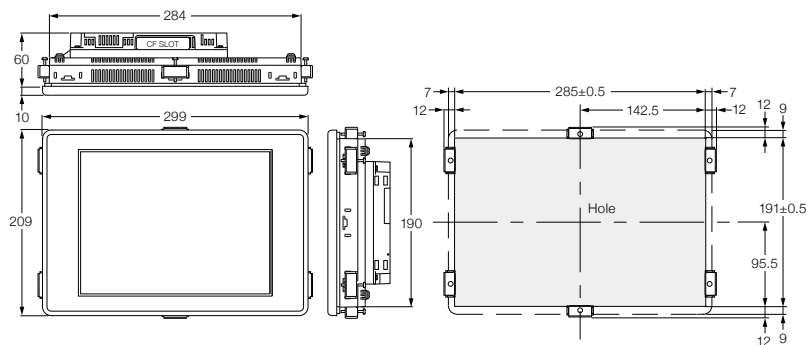
Dimensions

Dimensions

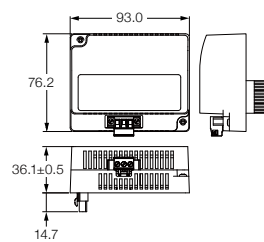
GC-73L□-R



GC-76LC



EA-AC



- HMI Lineup
- Programmable Touch Panel
- HMI Software

- GC-A
- GC-7
- EA7

Compatibility with the GC50 Series

Items	5.7-inch Monochrome		5.7-inch Color				
	Compatibility	GC-53LM3	GC-73LM-R	Compatibility	GC-53LC3	GC-73LCL-R	
Appearance	△	Light gray	Gray	△	Light gray	Gray	
Dimensions (mm)	△	197.0 W x 152.0 H x 47.0 D	197.0 W x 152.0 H x 54.1 D *Slightly thick	△	197.0 W x 152.0 H x 47.0 D	197.0 W x 152.0 H x 54.1 D *Slightly thick	
Panel Cutout Dimensions (mm)	○	188.5±0.3 W x 143.5±0.3 H		○	188.5±0.3 W x 143.5±0.3 H		
Mounting Brackets	×	Both the position and shape are different.		×	Both the position and shape are different.		
Power Supply	○	24 V DC		○	24 V DC		
	Connector	×	Terminal block	Connector	×	Terminal block	
LCD Panel	△	5.7" (Blue, single gradation)	5.7" (Black-and-white mode, 15 gradations)	○	5.7" color	5.7" color	
	View Angle	△	30° (up/down) 30° (left/right) Room temperature (25°C)	20° (up)40° (down) 45° (left/right) Room temperature (25°C)	△	25° (up)70° (down) 35° (left/right) Room temperature (25°C)	20° (up)35° (down) 50° (left/right) Room temperature (25°C)
	Brightness	△	300 cd/m ²	150 cd/m ²	△	250 cd/m ²	200 cd/m ²
	Life	○	50,000 hours		○	30,000 hours	50,000 hours
Touch Panel	×	Matrix (16 x 12 pieces)	Analog type	×	Matrix (16 x 12 pieces)	Analog type	
Serial Port 1	△	D-sub 9-pin (Female)	D-sub 15-pin (Female)	△	D-sub 9-pin (Female)	D-sub 15-pin (Female)	
Serial Port 2	×	Terminal block (RS-422/485)	None	×	Connector (RS-422/485)	None	
Screen Data Transfer	△	Serial Port 1	USB (B)	△	Serial Port 1	USB (B)	
CF Card	△	The option is required.	None Can be substituted with a USB memory There is no data compatibility with conventional models.	△	The option is required.	None Can be substituted with a USB memory There is no data compatibility with conventional models.	
Digital Input/Output	×	The option is required.	None	×	The option is required.	None	
Drawing Software	△	ScreenCreator5	ScreenCreator5 Ver3.0 or later	△	ScreenCreator5	ScreenCreator5 Ver3.0 or later	
Items	10.4-inch Color						
	Compatibility	GC-56LC2	GC-76LC				
Appearance		Gray	Gray				
Dimensions (mm)	△	296.0 W x 209.0 H x 77.5 D	299.0 W x 209.0 H x 70.0 D				
Panel Cutout Dimensions (mm)	○	285.0±0.5 W x 191.0±0.5 H					
Mounting Brackets	×	Both the position and shape are different.					
Power Supply	△	100 V/200 V AC	24 V DC *When used with 100 V/ 200 V AC, the optional EA-AC is required.				
	Connector	×	Terminal block	Connector			
LCD Panel	○	10.4" color					
	View Angle	○	30° (up)20° (down) 45° (left/right) Room temperature (25°C)	65° (up)45° (down) 65° (left/right) Room temperature (25°C)			
	Brightness	○	200 cd/m ²	270 cd/m ²			
	Life	○	25000 hours	50000 hours			
Touch Panel	×	Matrix (32 x 24 pieces)	Analog type				
Serial Port 1	△	D-sub 9-pin (Female)	D-sub 15-pin (Female)				
Serial Port 2	×	Terminal block (RS-422/485)	None				
Serial Port 3	×	The option is required.	None				
Screen Data Transfer	△	Serial Port 1	USB (B)				
CF Card	△	The option is required.	Available Can be substituted with a USB memory There is no data compatibility with conventional models.				
Digital Input/Output	×	The option is required.	None				
Parallel Ports	×	Available	None				
RAS Output	×	Available	None				
Reset Input							
Drawing Software	△	ScreenCreator5	ScreenCreator5 Ver3.0 or later				

PLC

HMI

SENSOR

ENCODER

COUNTER

INFORMATION

EA7

Features

Programmable Touch Panel

- Full line-up of TFT models from 5.7-inch to 15.0-inch
The 5.7-inch type has a STN black-and-white model.
- Screen transfer: Ethernet / USB
- PLC connection: Ethernet / Serial
- Screen storage media: Built-in memory / Expansion CF
- Sound output: Equipped as a standard
(Excluding the EA7-S6M-RS, EA7-S6M-RS)
- Protection level: IP65



[Common to all model number]
- Touch panel
- Analog resistive type
- CE marking compliant



Features

Various Files Can be Used.

Since various files such as image files (bmp) and audio files (wav) can be used, you can create more realistic screens.

Abundant Components

Various components can be graphically expressed.

Easy Downloads / Uploads

With no wasteful settings, you can immediately upload/download data by selecting a button. Owing to the USB and Ethernet connections, a long transfer time is not required.

Large-size Screen Display

The 15-inch screen can display large characters that are easily visible.

Simulation on Computer

Screen operation can be checked from a computer without the actual equipment. It is not necessary to prepare and connect the actual equipment to perform the simulation on the computer.

Password Setting

All patterns of password settings can be performed on one screen. Since the password can be set on eight levels, it is easy to create screens such as one that can be operated only by the administrator.

Multilingual Utilization

A combination of up to nine languages or fonts can be registered.*1 The characters displayed on the screen can be switched according to patterns. Since characters are only changed on the same screen, the number of screens can be minimized.

Supported languages: Japanese, Chinese, Taiwanese, English, Korean, Spanish and Thai

*1 When one language will be additionally used, the CF card needs to be added. (Example: Japanese and Chinese)

Use of Memory Cards

The data can be exchanged using a memory card. Since no computer is needed for the operation, the operator can work under reduced burden.

Use of CSV Files

Since the data managed by ViewJetCmore (tag, message, alarm, and language) can be stored and edited in CSV format, you can edit the data in a familiar environment.

View of the Display Screen

The screen data installed in the display can be viewed on computers and PDAs from a remote place. Other than the screen currently displayed, the backside screen can also be viewed.

Setting Up Connected Devices

The connections of ViewJetCmore or PLCs can be visually checked and set. The connected devices can be easily set without wondering what to do.

Software Outline

① 3 Step Bar

You can select what to do now from the start of a project to the mounting to displays by pressing the Step1 Start, Step2 Simulation, and Step3 Send buttons.

② Navigation Window

This window shows details of the screen, important menus of the ViewJetCmore software, etc.

③ Configuration Window

The components can be selected by pushing one button and can even be overlap. Enjoy the free space.

④ List Window

You can select from various components at a glance. By dragging components to the drawing window, you can create screens as you wish.

⑤ Parts List Window

This window shows parts design that corresponds to the list of objects.



GC-A

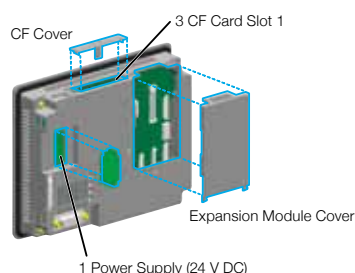
GC-7

EA7



Each Part Names and Descriptions

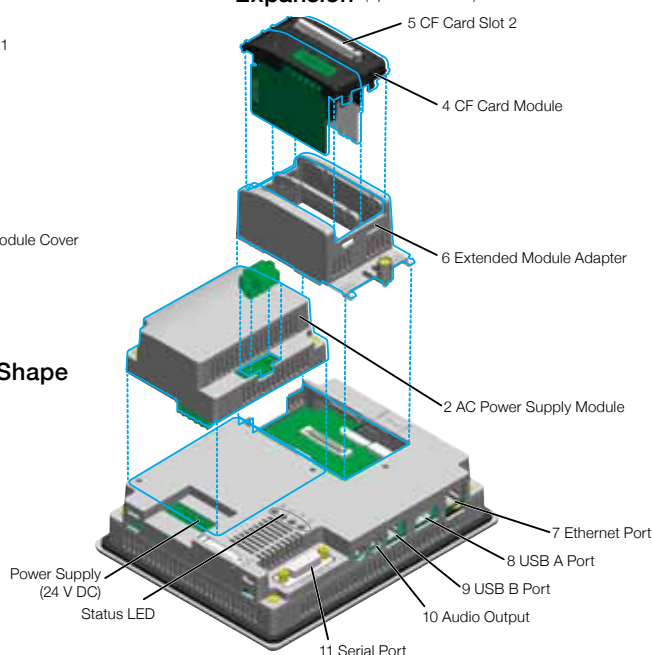
Standard Shape



Maximum Expansion Shape



Expansion (Option is installed)



- | | | |
|----|-------------------------|---|
| 1 | Power supply (24 V DC) | The slim body drives the display. |
| 2 | AC power supply module | Can drive the display around the world according to the environment. |
| 3 | CF card slot 1 | Used for uploading/downloading screen data and saving measured data. |
| 4 | CF card module | For saving larger-capacity data. (Option) |
| 5 | CF card slot 2 | Used for saving measured data. |
| 6 | Extended module adapter | Expansion-adapter for 4CF card modules. |
| 7 | Ethernet port | Enables screen data uploads/downloads, uploading of measured data, and connections with PLCs at high speed. |
| 8 | USB A port | Measured data can be saved in a USB memory that is convenient to carry around. |
| 9 | USB B port | Screen data can be uploaded/downloaded. The data can be exchanged comfortably at high speed. |
| 10 | Audio output | Notified not only by displayed alarms but also by sound. |
| 11 | Serial port | Makes connection with the PLC possible. |

Example of the Utility

- | | | |
|---|----------------|--|
| 3 | CF card slot 1 | [Example of data that can be used in CF cards] Screen data, Logging data |
| 5 | CF card slot 2 | [Example of data that can be used in CF cards] Logging data |
| 9 | USB A port | [Example of data that can be used in USB memories] Logging data |

Option

Name	Model Number	
AC Power Supply Module	EA-AC	
Extended Module Adapter	EA-EXP-OPT	
CF Card Module	EA-CF-IF	
D-sub Terminal Block Conversion Adaptor (For RS-422/485)	EA-COMCON-3	
D-sub Angle Conversion Adaptor	EA-ADPTR-4	
Surface Protection Sheet (Nonglare)	For 5.7-inch Type	EA-6-COV2
	For 8.4-inch Type	EA-8-COV2
	For 10.4-inch Type	EA-10-COV2
	For 12.1-inch Type	EA-12-COV2
	For 15.0-inch Type	EA-15-COV2
Anti-oil Cover	For 5.7-inch Type	EA-6-COV3-S
	For 8.4-inch Type	EA-8-COV3-S
	For 10.4-inch Type	EA-10-COV3-SG
	For 12.1-inch Type	EA-12-COV3
	For 15.0-inch Type	EA-15-COV3-S
Compact Flash	EA-CF-CARD	

Maintenance Product

(Provided with the Main Body When Purchased)

Name	Model Number	
Packing	For 5.7-inch Type	EA-6-GSK-S
	For 8.4-inch Type	EA-8-GSK-S
	For 10.4-inch Type	EA-10-GSK-SG
	For 12.1-inch Type	EA-12-GSK
	For 15.0-inch Type	EA-15-GSK-S
Battery	D2-BAT-1	
Plug for Main Body Power Supply	EA-DC-CON	
Plug for AC Power Supply	EA-AC-CON	
Mounting brackets for 5.7-inch (2 units)	EA-BRK-1	
Mounting brackets for 8.4-inch, 12.1-inch, and 15.0-inch type (8 units)	EA-BRK-2	

EA7

Specifications

Main Body Specifications

Model Number	EA7-S6M-RS	EA7-T6CL-RS	EA7-S6M-S	EA7-T6CL-S	EA7-T8C-S	
Display	Device Size	5.7-inch				8.4-inch
	Display Device	STN monochrome LCD	TFT color LCD	STN monochrome LCD	TFT color LCD	
	Display Color/Gradation	15 gray gradations	65,536 color	15 gray gradations	65,536 color	
	Number of Dots	320 x 240 (QVGA)				640 x 480 (VGA)
	Brightness Control	Set from the configuration screen of the main body display. (Setting components can be arranged from the drawing software.)				
	Backlight* ¹	Cold-cathode tube	LED	Cold-cathode tube	LED	
	Replacement of Backlight	Impossible				Possible
	Automatic Turn-off Function	Set from the configuration screen of the main body display. (Can be set from the drawing software.)				
	Touch Panel	Analog resistive type, resolution: 1,024 W x 1,024 H				
Interfaces	For PLC Connection	Serial	Start-stop synchronization, RS-232C, RS-422/485 (2/4-wire system), D-sub 15-pin (Female) x 1* ² Data length: 7/8 bit, parity: None/Odd/Even, stop bit: 1/2 bit Transmission speed (bps): 2,400/4,800/9,600/19,200/38,400			
		Ethernet	No	Ethernet 10BASE-T/100BASE-TX (RJ-45, Category 5) x 1* ³		
	Screen Data Transfer	USB	USB (B) 1.1 x 1			
		Ethernet	No	Ethernet 10BASE-T/100BASE-TX (RJ-45, Category 5) x 1* ³		
	For Printer Connection	No				
	CF Card Slot 1	No	Compact Flash (Limited to 3.3 V) TYPE I/II x 1			
	CF Card Slot 2	No	Compact Flash (Limited to 3.3 V) TYPE I/II x 1 (Option)			
	Ethernet	No	Ethernet 10BASE-T/100BASE-TX (RJ-45, Category 5) x 1* ³			
	USB	USB (A) 1.1 x 1* ⁴				
	Line Output	No	Stereo output: Pin-jack x 1			
General Specifications	Supply Voltage	24 V DC (100/200 V AC power supply module is available as an option: EA-AC)				
	Allowable Power Range	20.4 to 28.8 V DC, allowable ripple, within 100 mVp-p, allowable instantaneous power failure time, within 5 ms				
	Allowable Instantaneous Power Failure Time	Within 5 ms				
	Power Consumption	9 W or lower	10 W or lower	10 W or lower	13 W or lower	15 W or lower
	Use Ambient Temperature	0 to 50°C* ⁵				
	Storage Ambient Temperature	-20 to 60°C				
	Use / Storage Ambient Humidity	10 to 85% RH (No condensation)				
	Noise Resistance	1000 V AC p-p, pulse width 1 μs, rise time 1 ns, between DC power supply input terminal and FG terminal (Cased on noise simulator)				
	Withstand Voltage	1000 V AC, 1 min, between DC power supply input terminal and FG terminal				
	Insulation Resistance	20 MΩ or higher (500 V DC), between DC power supply input terminal and FG terminal				
	Vibration Resistance	Comply with IEC61131-2, 10 to 57 Hz: 0.075 mm, 57 to 150 Hz: 9.8 m/s ² (10 times each for the X, Y, and Z direction)				
	Impact Resistance	Maximum 147 m/s ² , 11 ms (2 times each for the X, Y, and Z direction)				
	Electrostatic Discharge Resistance	Compliant with IEC61000-4-2, contact: 4 kV, air: 8 kV				
	Surrounding Atmosphere in Place of Use	No corrosive gases				
	Grounding	D-class grounding				
	Protective Structure	Equivalent to IP65 (Surface part)				
	Dimensions (mm)	191.0 W x 152.0 H x 43.1 D				258.5 W x 203.4 H x 52.1 D
	Weight (g)	630	600	650	650	1,090
	Panel Cutout Dimensions (mm)* ⁷	179.0 W x 140.0 H				235.0 W x 179.7 H
	Cooling System	Natural air-cooling				
Compliant Standards	UL508, EMC directive (CE marking; Self-declared), CE EN61131-2, EMI CISPR11 Class A, unnecessary radiation measurement, field intensity measurement, magnetic field strength measurement (EN55011) EMS susceptibility immunity measurement Class A EN61000-4-2 Electrostatic discharge immunity test, EN61000-4-3 Radiation magnetic field immunity test, EN61000-4-4 First transient burst immunity test, EN61000-4-5 Surge immunity test, EN61000-4-6 Conductivity immunity test					
Accessories	QSG (Quick Start Guide) manual Mounting brackets (2 units) Power plug				QSG (Quick Start Guide) manual Mounting brackets (6 units) Power plug	

Software Requirements

Personal Computer	Models for which Windows normally operates (PC/AT compatibles), Pentium II 333 MHz or higher are recommended.
OS	Japanese/English Microsoft Windows 2000 with Service Pack 4 (SP4) or Windows XP(Home Edition/Professional Edition), Windows Vista (32-bit version)/Windows 7 (32-bit version)
Resolution	XGA 1,024 x 768 or higher is recommended
HD disc free space	Free space of 300 MB or more (600 MB or more is recommended.)
Memory	Equipped with 128 MB (512 MB or more is recommended.)
Disc Drive	CD-ROM drive
Network Environment	TCP/IP protocol

* The computer must have a USB (A) port or Ethernet port.

EA7

Specifications

List of Connected Devices

Device	Manufacturer	PLC Series	CPU Direct Connection	Serial Module	Ethernet Module	
PLC	Koyo	DL05/06/205 (Ethernet requires an ECOM module.)	○	○	○	
		KOSTAC D4 series (Ethernet requires an ECOM module.)	○	○	○	
		PZ series, SJ series	○	—	—	
		KOSTAC D3 series	—	○	—	
	Mitsubishi	FX series, Q series*1	CPU direct connection	○	—	—
		FX series, A series, Q series, QnA series	Computer link	—	○	—
		A series, Q series, QnA series	Ethernet interface unit	—	—	○
	Omron	C series	HostLink	—	○	—
		CS series, CJ series	CPU unit built-in port	○	—	—
		CS series	Link unit	—	○	—
		C series	PC card unit	—	—	○
		CS series	Ethernet unit	—	—	○
	Panasonic	FP series		—	○	—
		FP series	ET-LAN unit	—	—	○
	Yokogawa	FA-M3 series	Serial communication module, CPU port	—	○	—
		FA-M3 series	Ethernet	—	—	○
	Keyence	KZ series, KV series	Link unit, CPU direct connection	○	○	—
		KV series (KV-700/1000)	CPU direct connection	○	—	—
		KV series (KV-3000/5000)		○	○	○
	JTEKT	TOYOPUC PC2/PC3 series	Serial	—	○	—
		TOYOPUC PC2/PC3 series	Ethernet	—	—	○
		TOYOPUC PC10G series		○	—	—
	Sharp	JW-20 JW-30 JW-50/70/100 series	Communication module	—	○	—
		JW-20 JW-30 JW-50/70/100 series	Ethernet module	—	—	○
	Toshiba	Prosec T, V series	Serial	—	○	—
		Prosec T, V series	Ethernet	—	—	○
	Toshiba Machine	TCmini, TC200		—	○	—
	Yaskawa	GL, MP, CP series	Serial	—	○	—
		GL, MP, CP series	Ethernet	—	—	○
	AB	MicroLogix 1000/1200/1500, SLC 500, 5/01, /02, /03	(DH485)	—	○	—
		MicroLogix 1000, 1200, 1500	(DF1)	—	○	—
		SLC 5/03, /04, /05, PLC-5	(w/DF1)	—	○	—
	Entivity (Think&Do)	H2-WinPLC	(Modbus, Ethernet)	—	○	○
	GE	90/30, 90/70		—	○	—
	Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series		—	○	—
		110 CPU: 311-xx, 411-xx, 512-xx, 612-xx		—	○	—
	Siemens	S7-200PPI, S7-300MPI		—	○	○
		Modbus TCP/IP	Modbus TCP/IP devices	—	—	○
		Generic EtherNet/IP	EtherNet/IP (AB ENET IP)	—	—	○
	CNC	FANUC	18i-LNB series (CNC)	○	—	—
Temperature Control	Azbil Corporation	SDC36/26 (Temperature controller)	—	○	—	
	RKC INSTRUMENT INC.	CB100 (Temperature controller)	—	○	—	

For the details about supported PLCs, contact our customer support center.

*1 The Q00CPU, Q00JCPU, and Q01CPU are not supported.

Barcode Reader

Only barcode readers with a USB keyboard interface can be used. The following barcode reader was already tested by Koyo Electronics.

Manufacturer	Model Number
Symbol Technology	LS2208



EA7

Dimensions

HMI



SENSOR



ENCODER



COUNTER



INFORMATION

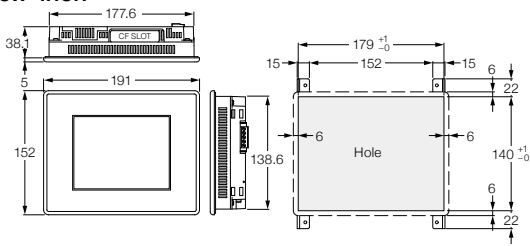


- HMI Lineup
- Programmable Touch Panel
- HMI Software

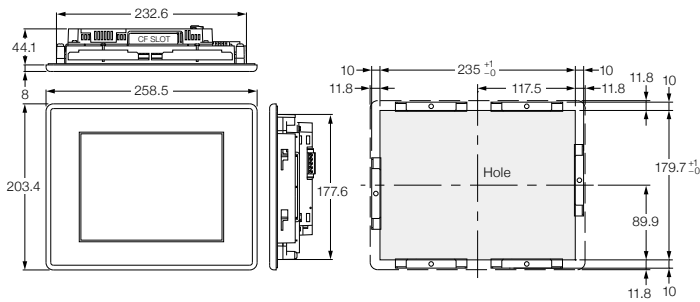
- GC-A
- GC-7
- EA7

Dimensions

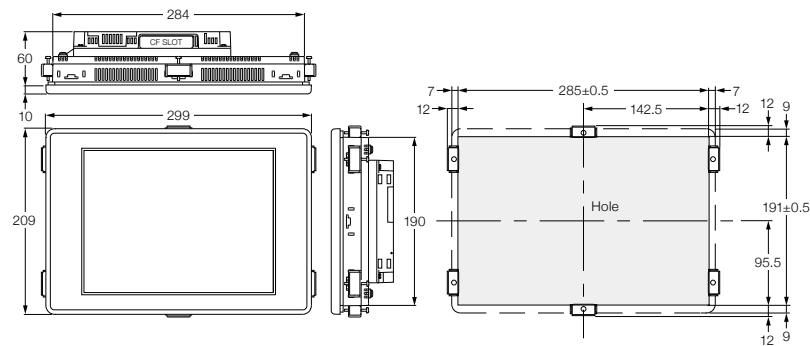
5.7-inch



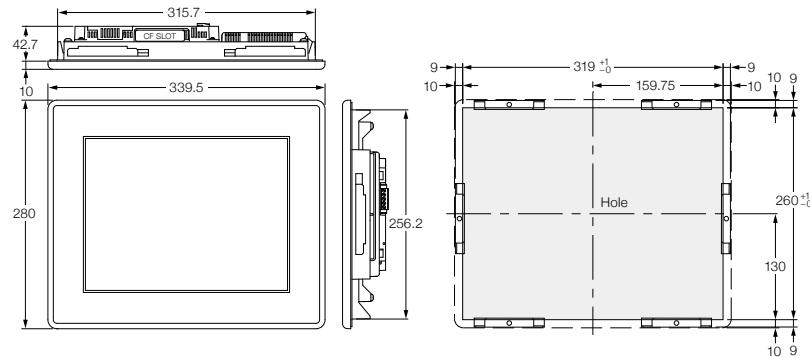
8.4-inch



10.4-inch



12.1-inch



15.0-inch

