

ViewJet

Programmable Touch Panel



GC SERIES



Programmable Touch Panel



GC-56LC2

There are 4 models available for your HMI applications. Koyo Touch Panel makes your job simple and easy by offering many useful objects provided in the screen design software.

Product models

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GC-53LC3

5.7 inch STN color
(320 x 240 dot)
Flash memory:1M bytes



GC-53LM3

5.7 inch Monochrome
(320 x 240 dot)
Flash memory:1M bytes



GC-56LC2

10.4 inch TFT color
(640 x 480 dot)
Flash memory:3M bytes



GC-55EM2

8.9 inch Monochrome (EL)
(640 x 400 dot)
Flash memor:3M bytes



Color

Monochrome

There are a few reasons that machine operators will like to use Koyo Touch Panel.

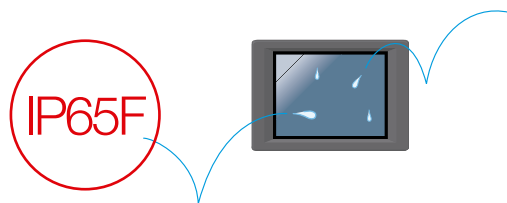
We offer some key features;

Features

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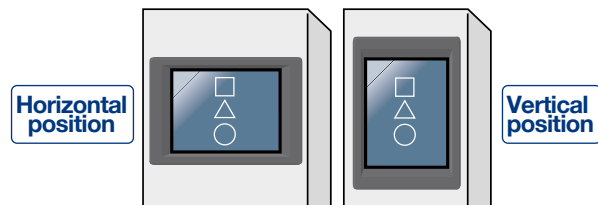
Resist to water, oil and dust

Complying with **IP65F** offers the highest level of protection (only on the front surface) when it is installed. You feel comfortable installing Koyo panels even in the place where you expect some water, oil or a lot of dust.



Installing touch panel in horizontal or vertical position

It can be installed either in horizontal or vertical position.



Multiple language

We offer English as its standard language. But It can also supports Chinese (Simplified and Traditional) and Korean hangeol.

Agency approval

CE marking and UL



※Only UL for GC55EM2

Replacing Back-light without removing enclosure

You can replace the Back-light on the factory floor. This reduces the down-time when it is required to replace. (This feature is available on GC-56LC2 only)



PLC serial drivers supported

Koyo touch panel supports the serial drive for many PLCs from the other manufacturers.

Refer to "Table of PLC Driver" on page 6.

You also can connect to the other controllers, measuring and testing devices by configuring K-Basic.

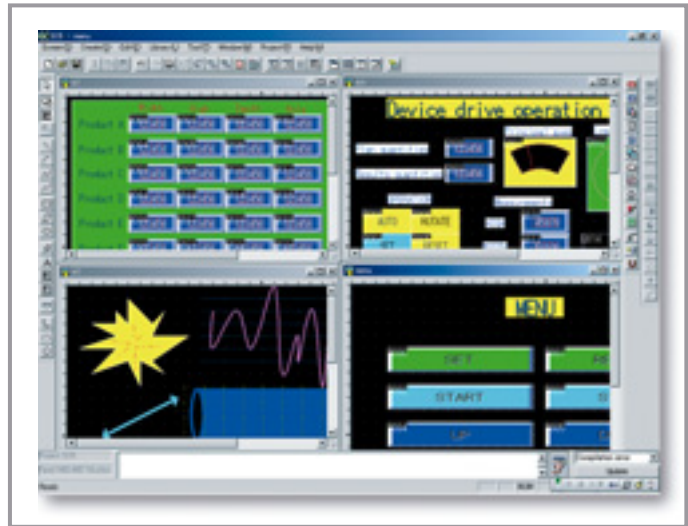
Control devices

- Proprietary control board
- Motion controller
- Programmable CAM switches
- NC

Measuring and testing devices

- Temperature controllers
- Length measuring devices
- GP-IB interface devices

SCREEN CREATOR 5



Features

SCREEN CREATOR 5

If you already have screen data designed by old screen design software SCREEN CREATOR 3 (GC-SGP3)

Don't worry, you can read the screen data designed by GC-SGP3 into SCREEN CREATOR 5 (GC-SGP5). You will not lose your asset.

Upload and Edit

This new feature allows you to upload your screen data from the Touch Panel to SCREEN CREATOR 5 and re-design the data.

HELP function

This is very helpful when you need any assist in designing the screen data.

Compact flash memory card (Option)

You can copy the screen data from PC by using a compact flash memory card. (Upto 5 screen data can be stored.) This means that, you can change the screen without having PC around the touch panel.

Required environment for SCREEN CREATOR 5

SCREEN CREATOR 5

| | |
|----------------------|--|
| Personal computer | Microsoft Windows based PC |
| OS | Windows 95/98/NT4.0□ |
| Memory | 8M bytes or more for Windows 95/98 (recommended to have 16M bytes or more) □ 16M bytes or more for Windows NT4.0 (recommended to have 32M byte or more) □ |
| Available disk space | 80M byte or more |
| Mouse | Required |
| Printer | Not required |
| IME | Not required(English) / Required(Chinese and Korean) |
| Serial port | RS-232C or RS-485 |

Table of available standard objects

SCREEN CREATOR 5

| Icon | Category | Description | Object |
|------|---|---|--------|
| | Numerals displays | <ul style="list-style-type: none"> ● Numeral display ● Input numeral display (word) ● Input numeral display (double words) | |
| | Character displays | <ul style="list-style-type: none"> ● Registered text display ● ASCII text display ● Input text display ● Registered text display with scroll ● Bar-code display ● Input bar-code display ● Dedicated to byte devices | |
| | Lamps | <ul style="list-style-type: none"> ● LED ● Mark lamp ● Name plate lamp ● Name plate setup lamp ● Piping lamp ● For each bit of a word device | |
| | Switches | <ul style="list-style-type: none"> ● Mark switch ● Mark switch with monitor ● Name plate switch ● Name plate switch with monitor ● Toggle/selector | |
| | Ten-key pads/ keyboards | <ul style="list-style-type: none"> ● Ten-key pad (for input numeral display) ● Keyboard (for input text display) ● Ten-key pad/volume (direct write) | |
| | Screen select parts | <ul style="list-style-type: none"> ● Screen select switch ● Screen select switch (notice type) ● Screen select control part | |
| | Meters | <ul style="list-style-type: none"> ● Analog meter ● Bar meter ● Slide meter ● Free meter | |
| | Graphs | <ul style="list-style-type: none"> ● Trend graph ● Trend graph (data storing type) ● Bar/line graph ● Zone/circle graph ● Pareto chart | |
| | Clocks/calendars | <ul style="list-style-type: none"> ● Clock ● Calendar ● Clock/calendar setup | |
| | Alarms | <ul style="list-style-type: none"> ● Error display (ERRPTS) ● Warning display (bit devices) ● Warning display (word devices) | |
| | Texture displays | | |
| | Special parts | <ul style="list-style-type: none"> ● Screen print ● Parts control ● Brightness adjustment ● Back-light control ● Interlock control ● Heat regulator ● Non-protocol communication | |
| | Host command communication parts | <ul style="list-style-type: none"> ● Numeral display (host commands) ● Character display (host commands) ● Lamp (host commands) ● Switch (host commands) | |
| | User parts | <ul style="list-style-type: none"> ● User can create its own object and stored in the library. | |

Specifications

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| Item | | GC-56LC2 | GC-55EM2 | GC-53LC3 | GC-53LM3 |
|-----------|-------------------------|---|---------------|-------------------|----------------|
| Display | Display type | TFT Color | EL display | STN Color | Monochrome LCD |
| | Display color | 16 color-palette | Light-orange | 16 color-palette | Blue |
| | Screen pixel | 640 x 480 | 640 x 400 | 320 x 240 | |
| | Display size | 10.4 " | 8.9 " | 5.7" | |
| | Display area (UNIT:mm) | 211.2 x 158.4 | 191.9 x 119.9 | 115.2 x 86.4 | |
| | Brightness | Brightness adjustment : 8 levels | | | |
| Input | Switching | Electro-Inductive touch switch | | | |
| | No. of Touch SW | 32×24 | 32×20 | 16×12 | |
| | Switch type | Momentary, Alternate, Auto-repeat | | | |
| Beeper | Beeper | On, Off or One-shot | | | |
| Clock | Calendar | Calendar IC (battery back up) , Accuracy : < +/- 30 sec. At Ta 25 degree C) | | | |
| Screen | No. of retentive screen | 1024 screens, maximum | | | |
| | Memory size for screen | 3M bytes | | 1M bytes | |
| | System memory | 512K bytes + 256K bytes with battery back up | | | |
| Interface | Serial port | RS-232C, 2channels (1 ch. for option) RS-485, 1 channel | | RS-232C, 1channel | |
| | RAS output | 12VDC/24VDC, 200mA (Open-collector, isolated) | | — | |
| | External reset | 12VDC/24VDC, 2.5/5mA (Isolated) | | — | |
| | Printer | Comply with serial, centronics (14-pin) | | — | |
| | Host computer | Host commnad, Memory link, Non Protocol | | | |

General Specifications

ViewJet

| Item | Specifications | | | |
|---------------------------------------|---|------------------------------|--|----------|
| | GC-56LC2 | GC-55EM2 | GC-53LC3 | GC-53LM3 |
| Vibration | JIS-C0911 compliant (5 to 55 Hz, 19.6m/s ² for two hours in the X, Y and Z axes) | | | |
| Shock | JIS-C0912 compliant (98m/s ² for under 12 ms in the X, Y and Z axes) | | | |
| Operational ambient temperature range | 0 to 50°C□ | | | |
| Operational ambient humidity range | 45 to 85 % RH (non-condensing) | | | |
| Storage ambient temperature range | -10 to 60°C□ | | | |
| Operational ambient atmosphere | No corrosive gases | | | |
| Operating voltage | 85 to 264 VAC | | 20.5 to 28.8 VDC□ | |
| Rated Frequency | 50 / 60 Hz | | □ — | |
| Current consumption | Under 0.6 to 0.2 A (85 to 264 VAC) | | □ — | |
| Power consumption | Under 52.8VA□ | | Under 14 W□ | |
| Static resistance (power supply) | 1500 Vpp pulse width, 100 ns and 1000 ns common mode □ | | 1000 Vpp pulse width, 100 ns and 1000 ns common mode□ | |
| Static resistance (communications) | 1000 Vpp pulse width, 100 ns and 1000 ns capacity coupling | | 500 Vpp pulse width, 100 ns and 1000 ns capacity coupling | |
| Voltage resistance | 1500 VAC (one minute), between power supply input terminal □ and protective grounding | | 1000 VDC (one minute), between power supply input terminal □ and protective grounding□ | |
| Insulation resistance | Over 50 MΩ at 500 VDC, between power supply input □ terminal and protective grounding | | Over 20 MΩ at 500 VDC, between power supply input □ terminal and protective grounding□ | |
| Grounding method | Class D □ | | | |
| Structure | For building into panels (only to be installed in the front panel).□ Can be installed vertically or horizontally. | | | |
| Cooling method | Natural air cooling | | | |
| Protection (IP Value) | IP65F (front panel section when using packing) A protective cover is required when coming into regular contact with water or oil. | | | |
| Weight | Under 2700 g | Under 2500 g □ | Under 850 g□ | |
| External dimensions (UNIT:mm) | 296 (W) × 209 (H) × 77.5 (D) | 296 (W) × 202 (H) × 77.5 (D) | 197 (W) × 152 (H) × 47 (D) □ | |

Table of accessory, replacement part and programming software

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| Part Number | Description | GC-56LC2 | GC-55EM2 | GC-53LC3 | GC-53LM3 |
|-------------|---|----------|----------|----------|----------|
| GC-S1C1-DEE | 3m cable with D-sub 9P at Touch panel side and D-sub 9P at PC | Yes | Yes | Yes | Yes |
| GC-S1C3-DEB | 5m cable with D-sub 9P at Touch panel side and D-sub 25 at Koyo PLC | Yes | Yes | Yes | Yes |
| GC-S1C3-DEM | 5m cable with D-sub 9P at Touch panel side and modular 6P at Koyo PLC | Yes | Yes | Yes | Yes |
| GC-S1C3-DEA | 5m cable with D-sub 9P at Touch panel side and D-sub 15P at Koyo PLC | Yes | Yes | Yes | Yes |
| GC-S1C3-DEE | 5m cable with D-sub 9P at Touch panel side and high density D-sub 15P at Koyo PLC | Yes | Yes | Yes | Yes |
| GC-S1C4-DEE | 5m cable with D-sub 9P at Touch panel side and D-sub 9P at Mitsubishi PLC | Yes | Yes | Yes | Yes |
| GC-S1C4-DEB | 5m cable with D-sub 9P at Touch panel side and D-sub 25P at Mitsubishi PLC | Yes | Yes | Yes | Yes |
| GC-S1C5-DEE | 5m cable with D-sub 9P at Touch panel side and D-sub 9P at Omron PLC | Yes | Yes | Yes | Yes |
| GC-S1C4-D3 | 3m cable with D-sub 9P at Touch panel side and D-sub 25P at Mitsubishi PLC (Direct connection) | Yes | Yes | Yes | Yes |
| GC-S1C4-D15 | 15m cable with D-sub 9P at Touch panel side and D-sub 25P at Mitsubishi PLC (Direct connection) | Yes | Yes | Yes | Yes |
| GC-S1C1-DAN | 10m cable with D-sub 15P (RS-422/485) at Touch panel side and open at PLC side | Yes | Yes | —□ | —□ |
| GC-S5C1-1 | D-sub 9P connector for RS-232C | Yes | Yes | —□ | —□ |
| GC-S1CA | 15m cable with D-sub 9P at Touch panel side and D-sub 9P for multi-panel unit | Yes | Yes | Yes | Yes |
| GC-S1CC | 0.6m cable with D-sub 25P at Touch panel side and D-sub 25P for cascade connection | Yes | Yes | Yes | Yes |
| GC-S1NW-1 | Multi-panel unit | Yes | Yes | Yes | Yes |
| GC-S5NT-2 | Input(5 pts.) & Ouput(8 pts.) expansion unit with slot for compact flash memory card | Yes | Yes | —□ | —□ |
| GC-S3NT-2 | Input(5 pts.), Ouput(8 pts.) & RS-232C expansion unit with slot for compact flash memory card | — | — | Yes | Yes |
| GC-S6SH-2 | Non-glare sheet for 10.4" panel (3 sheets in a package) | Yes | — | —□ | —□ |
| GC-S5SH-1 | Touch panel protection sheet for 8.9" panel (transparent 3 sheet in a package) | — | Yes | —□ | —□ |
| GC-S5SH-2 | Touch panel protection sheet for 8.9" panel (Deflective 3 sheet in a package) | — | Yes | — | — |
| GC-S3SH-2 | Touch panel protection sheet for 5.7" panel (transparent 3 sheet in a package) | — | — | Yes | Yes |
| GC-S6SH-3 | Protection cover for 10.4" panel | Yes | — | —□ | —□ |
| GC-S5SH-3 | Protection cover for 8.9" panel | — | Yes | —□ | —□ |
| GC-S3SH-32 | Protection cover for 5.7" panel | — | — | Yes | Yes |
| GC-S6BL-1 | Back-light for replacement | Yes | — | —□ | —□ |
| CR2025 | Battery for GC-53LC3 & GC-53LM3 | — | — | Yes | Yes |
| CR2450 | Batthey for GC-56LC2 & GC-55EM2 | Yes | Yes | —□ | —□ |
| GC-SGP5/E | Screen design programming tool (SCREEN CREATOR5) | Yes | Yes | Yes | Yes |

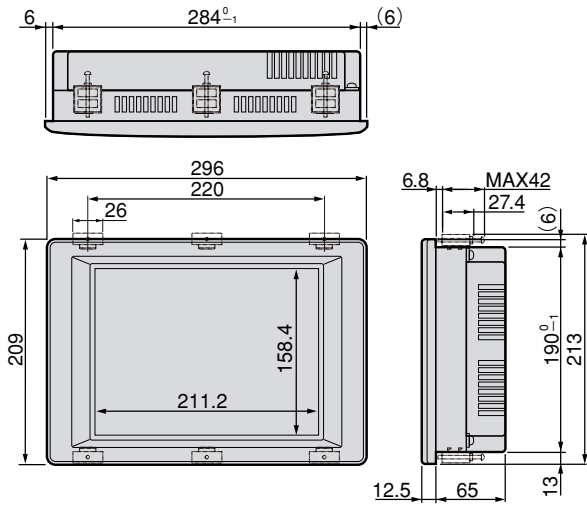
Table of PLC dreiver supported

| PLC Manufacturer□ | PLC Sereis□ |
|--------------------|---------------------------------------|
| Koyo□ | S, DL, SA, and SR□ |
| Mitsubishi□ | Q, QnA, A, and FX□ |
| Omron□ | C, CQM1, CMP1, Alpha, CV, CS1 and Cj□ |
| Hitachi□ | H□ |
| Sharp□ | New satellite JW □ |
| Matsushita (NAIS)□ | FP□ |
| Panasonic □ | Panadoc 7000□ |
| Yokogawa□ | FA and UT□ |
| Yamatake□ | MA500□ |
| Yaskawa□ | GL, U84 and Inverter (VS-616G5)□ |
| Fuji□ | FREX-PC and MICLEX-F□ |
| Toshiba□ | EX, T2 and T3□ |
| Toyota koki□ | TOYOPUC PC1, PC2 and PC3□ |
| A-B□ | SLC-500□ |
| Keyence□ | KZ-300, KZ-A500 and KZ-700□ |
| Toyo Denki□ | u-GPCH□ |
| SEIMENS | S7-200 |

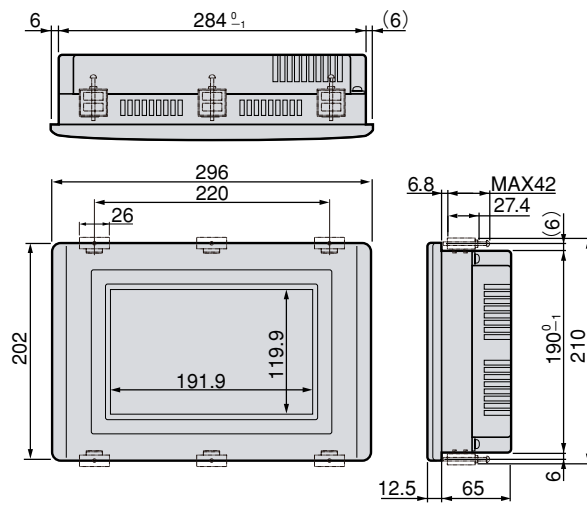
Dimensions & Cutout dimensions

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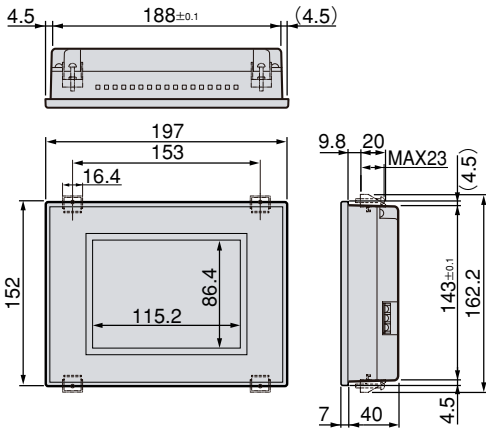
●GC-56LC2



●GC-55EM2

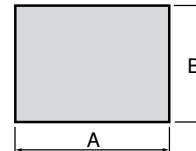


●GC-53LC3 ●GC-53LM3



(UNIT:mm)

Cutout dimension



| | A | B |
|----------|-----------|-----------|
| GC-56LC2 | 285±0.5 | 191±0.5 |
| GC-55EM2 | 285±0.5 | 191±0.5 |
| GC-53LC3 | 188.5±0.3 | 143.5±0.3 |
| GC-53LM3 | 188.5±0.3 | 143.5±0.3 |

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