# High Performance Touchscreens





#### **TOUCHSCREEN PART NUMBERS**

| Display Screen | Part Number     | Description   |
|----------------|-----------------|---|
| 15"            | HG5G-VFXT22MF-B | 15 inch Color TFT LCD display<br>Black Bezel with<br>multimedia function        |
| 12.1"          | HG4G-VCXT22MF-B | 12.1 inch Color TFT LCD display<br>Black Bezel with<br>multimedia function      |
| 10.4"          | HG3G-VAXT22MF-W | 10.4 inch Color TFT LCD display<br>Light Gray Bezel with<br>multimedia function |
|                | HG3G-VAXT22MF-B | 10.4 inch Color TFT LCD display<br>Black Bezel with<br>multimedia function      |
| 8.4"           | HG3G-V8XT22MF-W | 8.4 inch Color TFT LCD display<br>Light Gray Bezel with<br>multimedia function  |
|                | HG3G-V8XT22MF-B | 8.4 inch Color TFT LCD display<br>Black Bezel with<br>multimedia function       |
| 5.7"           | HG2G-V5FT22TF-W | 5.7 inch Color TFT LCD display<br>Light Gray Bezel                              |
|                | HG2G-V5FT22TF-B | 5.7 inch Color TFT LCD display<br>Black Bezel                                   |

#### PRODUCT DESCRIPTION

## **New Enhanced High Performance Series:** 5.7" to 15" displays

IDEC touchscreens are redefining Human Machine Interaction. Our new High Performance 5.7", 8.4", 10.4" and 12.1" HMIs offer upgraded features and with the addition of a new 15" model, users have options for applications on any size equipment.

Featuring up to 800 cd/m<sup>2</sup> brightness, 1024 x 768 pixels high resolution displays, and over 100,000 hours of backlight life, they are the brightest, longest-lasting displays on the market.

An exceptionally wide operating temperature range of -20°C to +60°C as well as IP66F, IP67F, Type 4X, 12, 13, and Class I Div 2 approval ratings, assures reliable operation in the toughest environments. These touchscreens are built for endurance and are backed by an industry leading three-year warranty.

#### **KEY FEATURES**

- High Resolution Display: 1024 x 768 pixels (8.4", 10.4", 12.1", 15"), 640 x 480 pixels (5.7")
- Backlight light of 100,000 hours with up to 800 cd/m<sup>2</sup> brightness
- Wide range of Operating Temperature: -20°C to +60°C
- Multiple Protocols up to 4 protocols simultaneously
- Remote Access, Monitor and Control **Function**
- FTP, Email, Mobile App and Custom Web Page
- Audio and Video Interface (8.4", 10.4", 12.1", 15")
- Supports Analog and Discrete I/O Expansion Modules
- IP66F/67F, Type 4X, 12 and 13, Class I Div 2
- 3 Year Warranty







### **GENERAL SPECIFICATIONS**

|  | 5.7"  | 8.4"  | 10.4"                                    | 12.1"                  | 15"   |  |  |
|--|---|---|--|------------------------|---|--|--|
| Model  | HG2G-V5FT22TF   | HG3G-V8XT22MF   | HG3G-VAXT22MF                            | HG4G-VCXT22MF          | HG5G-VFXT22MF   |  |  |
| Rated Power<br>Voltage                       | 24V DC  |   |  |                        |   |  |  |
| Power Voltage Range                          | 20.4 to 28.8V DC  |   |  |                        |   |  |  |
| Power<br>Consumption                         | 18W maximum<br>8W maximum when not using USB2<br>or EXT 4W maximum when<br>Backlight OFF  | 25W maximum<br>15W maximum when not using USB2<br>or EXT 7W maximum when<br>Backlight OFF |  |                        | 25W maximum<br>20W maximum when not using USB2<br>or EXT 7W maximum when<br>Backlight OFF |  |  |
| Allowable<br>Momentary<br>Power Interruption | 10 ms maximum   |   |  |                        |   |  |  |
| Inrush Current                               |   |   | 30A maxim                                | num                    |   |  |  |
| Dielectric Strength                          |   |   | 1,000V AC, 10 mA<br>between power and    |                        |   |  |  |
| Operating<br>Temperature                     |   |   | -20 to +60°C (no                         | freezing)              |   |  |  |
| Operating<br>Humidity                        | 10 to 90% RH (no condensation)  |   |  |                        |   |  |  |
| Storage<br>Temperature                       | -20 to +70°C (no freezing)  |   |  |                        |   |  |  |
| Storage Humidity                             |   |   | 10 to 90% RH (no co                      | ondensation)           |   |  |  |
| Pollution Degree                             |   |   | 2  |                        |   |  |  |
| Vibration<br>Resistance                      | 5 to 8.4 Hz amplitude 3.5 mm, 8.4 to 150 Hz acceleration 9.8 m/s <sup>2</sup> 10 cycles (100 minutes) on each of three mutually perpendicular axes  |   |  |                        |   |  |  |
| Shock Resistance                             |   | 5 shoo  | 147 m/s², 1<br>cks on each of three mutu |                        |   |  |  |
| Noise Immunity                               | Fast transient/burst test, Power terminals: ±2 kV, Communication line: ±1 kV (IEC/EN61131-2)  |   |  |                        |   |  |  |
| Electrostatic<br>Discharge                   | Contact ±6 kV, air ±8 kV<br>(IEC/EN61131-2)   |   |  |                        |   |  |  |
| Corrosion Immunity                           | Free from corrosive gases   |   |  |                        |   |  |  |
| Degree of<br>Protection *1                   | IP66F/IP67F (IEC 60529) (front part when mounted) Type 4X, 12, and 13   |   |  |                        |   |  |  |
| Switching Element                            |   |   | Analog resistive r                       | membrane               |   |  |  |
| Operating Force                              |   |   | 3N maxim                                 | um                     |   |  |  |
| Mechanical Life                              |   |   | 1,000,000 ope                            | rations                |   |  |  |
| Sound<br>Acknowledgement                     | Electronic buzzer   |   | Electronic buzzer or sp                  | peaker output          |   |  |  |
| Dimensions                                   | 167.2W x 134.7H x 54.4D mm  | 231W x 176H x<br>54.4D mm   | 270W x 212H x<br>52.7D mm                | 314W x 240H x 54.1D mm | 364.5W x 291.5H x 54.8D mm  |  |  |
| Weight (approx.)                             | 0.65 kg   | 1.25 kg   | 1.65 kg                                  | 2.1 kg                 | 3.2 kg  |  |  |
| Approvals                                    | Safety Standards: UL61010-1, UL61010-2-201, UL12.12.01  CSA C22.2 No.61010-1-12  CSA C22.2 No.61010-2-201  CSA C22.2 No.213  Class I Div 2  Ship Classification Standards (pending):  ABS, LR, NK, DNV GL |   |  |                        |   |  |  |

Do not use the touchscreen in an environment subject to strong ultaviolet rays, otherwise the LCD quality will deteriorate.

<sup>\*1</sup> Protection degree of the front surface after mounting. Operation not guaranteed in certain environments.

# DISPLAY SPECIFICATIONS

|   | 5.7"  | 8.4"                              | 10.4"                 | 12.1"                 | 15"                   |  |
|---|---|-----------------------------------|-----------------------|-----------------------|-----------------------|--|
| Model                                     | HG2G-V5FT22TF-B or W                            | HG3G-V8XT22MF-B or W              | HG3G-VAXT22MF-B or W  | HG4G-VCXT22MF-B       | HG5G-VFXT22MF-B       |  |
| Display Type                              | Color TFT LCD                                   |                                   |                       |                       |                       |  |
| Color Depth                               | 65,536  |                                   |                       |                       |                       |  |
| User Memory                               | 56 MB   |                                   |                       |                       |                       |  |
| Display Resolution                        | 640W x 480H pixels                              | 1024W x 768H pixels               |                       |                       |                       |  |
| Backlight                                 | White LED                                       |                                   |                       |                       |                       |  |
| Backlight Life *1                         | 100,000 hours min.                              |                                   |                       |                       |                       |  |
| Brightness *2                             | 800 cd/m <sup>2</sup>                           |                                   | 700 cd/m <sup>2</sup> | 600 cd/m <sup>2</sup> | 650 cd/m <sup>2</sup> |  |
| Brightness Adjustment                     | 48 scales                                       |                                   |                       |                       |                       |  |
| SD Card Slot                              | ✓   |                                   |                       |                       |                       |  |
| FC6A Analog & Digital I/O Cards Supported | 2   | 4                                 |                       |                       |                       |  |
| Ethernet Port                             | 1 RJ-45   |                                   |                       |                       |                       |  |
| USB Ports                                 | 1 Type A & 1 MiniB                              |                                   |                       |                       |                       |  |
| Serial Ports                              | 2 (RS-232, RS-485, RS-422 configurable)         |                                   |                       |                       |                       |  |
| Video In                                  | — 2 Composite Video RCA connector (NTSC or PAL) |                                   |                       |                       |                       |  |
| Audio Out                                 | _   | — 3.5 mm audio mini-jack (stereo) |                       |                       |                       |  |

<sup>\*1</sup> The backlight life refers to the time until the surface brightness reduces by half after continuous use at 25°C. \*2 Brightness of the LCD only.

#### **ACCESSORIES**

|                                    | Part Number  | Quantity | Description  | 5.7" | 8.4"/10.4" | 12.1" | 15" |
|------------------------------------|--------------|----------|--|------|------------|-------|-----|
| Programming Software               | SW1A-W1C     | 1        | Automation Organizer   |      | ✓          | ✓     | 1   |
| USB Maintenance Cable              | HG9Z-XCM2A   | 1        | USB Programming Cable USB-MiniB (2 m)  |      | ✓          | ✓     | 1   |
| Mounting Clip                      | SLD-K02      | 1        | Replacement clip (4pcs are supplied with HMI)                                      | 1    | _          | _     | _   |
|                                    | HG9Z-4K2PN04 | 4        | Replacement clips (4pcs are supplied with HMI)                                     | _    | ✓          | ✓     | _   |
|                                    | HG9Z-4K2PN06 | 6        | Replacement clips (6pcs are supplied with HMI)                                     |      |            |       | ✓   |
| Host Communication Plug            | HG9Z-XT09V   | 1        | Replacement terminal block plug (1 is supplied with HMI)                           | 1    | _          | _     | _   |
|                                    | HG9Z-XT09    | 1        | Replacement terminal block plug (1 is supplied with HMI)                           | _    | 1          | ✓     | ✓   |
| Replacement Battery                | HG9Z-XR2     | 1        | Lithium battery CR2032 (one battery is supplied with HMI)                          |      | ✓          | ✓     | ✓   |
| USB Cable Lock Pin                 | HG9Z-XU1PN05 | 5        | Used to lock USB cable (for USB2)  | 1    | 1          | ✓     | ✓   |
| USB Panel-Mount<br>Extension Cable | HG9Z-XCE11   | 1        | For USB-A port (1 m)   | 1    | ✓          | ✓     | ✓   |
|                                    | HG9Z-XCE21   | 1        | For USB-mini B port (1 m)  | 1    | 1          | ✓     | ✓   |
| Memory Card                        | HG9Z-XMS2    | 1        | SD Memory Card (2 GB)  | 1    | ✓          | ✓     | ✓   |
| Protective Cover                   | HG9Z-2E2     | 1        | Use with 5.7" HMI (Covers entire front of HMI)                                     |      | _          | _     | _   |
| Protective Sheet *1                | HG9Z-2D5     | 1        | Use with 5.7" HMI (Sheet lays over LCD area)                                       | 1    | _          | _     | _   |
|                                    | HG9Z-3D8     | 1        | Use with 8.4" HMI (Sheet lays over LCD area)                                       | _    | 1          | _     | _   |
|                                    | HG9Z-3DA2    | 1        | Use with 10.4" HMI (Sheet lays over LCD area)                                      | _    | ✓          | _     | _   |
|                                    | HG9Z-4DC     | 1        | Use with 12.1" HMI (Sheet lays over LCD area)                                      | _    | _          | ✓     | _   |
|                                    | HG9Z-5DFPN01 | 1        | Use with 15" HMI (Sheet lays over LCD area)  | _    | _          | _     | 1   |
| Expansion Module<br>Clamp *2       | HG9Z-XJ3     | 1        | Short type for installing expansion I/O modules (Total width 17.6 to 41.1 mm)      | 1    | ✓          | 1     | 1   |
|                                    | HG9Z-XJ4     | 1        | Long type for installing expansion I/O modules (Total width 47 to 68.8 mm)         | 1    | ✓          | 1     | 1   |
|                                    | HG9Z-XJ5     | 1        | Extra-Long type for installing expansion I/O modules (Total width 70.1 to 93.9 mm) | 1    | ✓          | 1     | 1   |

<sup>\*1</sup> The protective sheet is UV resistant, however, resistance against diret sunlight in outdoor usage is not guaranteed.

<sup>\*2</sup> 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 expansion modules to the HMI's, note the limits shown below:

<sup>-</sup>Output Current flow rate at 5V: 130 mA max. (HG2G/3G/4G/5G)

<sup>-</sup>Output Current flow rate at 24V: 50 mA max. (HG5G);24V: 150 mA max. (HG2G/3G/4G)

### **DIMENSIONS** (All dimensions in mm)

# HG3G-V8 8.4" **HG2G-V5 5.7"** 152.5 134.7 176.0 Panel Thickness 1.6 to 5.0 mm 153.0 +2.0 121.0 +2.0 219.0 % 54.4 164.0 🕏 Panel Cut-Out Panel Cut-Out **HG3G-VA 10.4**" **HG4G-VC 12.1"** 314.0 44.4 240.0 Panel Thick 2.0 to 5.0 m 258.0 +2.0 301.5 % 200.0 😤 Panel Cut-Out Panel Cut-Out **HG5G-VF 15**" 33.0 \*1 351.5 Panel Cut-Out 352.0 +2 364.5 69.5 291.5 279.0 +2 Panel Thickness: 2.0 to 5.0 mm

6.0 48.8

Note 1: Dimensions in blue show the mounting dimensions of the cable. Note 2: The tightening torque of HG2G-V5 is 0.2 to 0.3Nm and HG3G/4G/5G-V is 0.5 to 0.6Nm. Note 3: Do not tighten with excessive force, otherwise the HG\*G-V and screen may become distorted and waterproof characteristics may be lost.



<sup>\*1)</sup> Depth from the expansion module mounting surface.