IDEC HG1G 4.3” Touchscreen
Bright displays. Enhanced functions.
Bright Display, Long Lifespan, Enhanced Functions!

All the capabilities of a larger screen!

With a 4.3” LCD screen size first popularized by gamers, the new HG1G TFT color LCD display delivers technologically-advanced features including the industry’s leading brightness and a best-in-class LED backlight lifespan all at an amazing value. With remote monitoring and control, an FTP function and support for multiple communications, HG1G is flexible and small enough to fit a tight space, and priced to fit a tight budget!

At 800cd/m² the HG1G is the brightest on the market

A 65,536-color TFT LCD display offers a high resolution of 480 x 272 pixels, providing realistic image quality. When it comes to pixel resolution, more is better! A super-bright LCD display provides a brightness of 800cd/m².

Readable even in direct sunlight, HG1G ensures excellent visibility whether your application is located indoors or outdoors.

Flexible connectivity (multiple protocols)

Designed to meet all your communication requirements, the compact 4.3” HG1G series supports multiple protocols—up to four PLC protocols simultaneously. Using one HMI to communicate with different brands (or manufacturers) of PLCs in a system saves time and money. The HG1G acts as a communication gateway between multiple devices allowing data to easily pass between devices. IDEC supports over 100 Serial and Networking drivers, including Modbus RTU Master/Slave and Modbus TCP/IP.

Remote access monitoring and control

With this function, you can remotely control and monitor your IDEC HG1G anytime, anywhere using a PC, PDA or smartphone. No additional software tools or modules are needed to use the Remote Monitor and Control function.

FTP communication

Support for industry-standard FTP communications allows users to transfer projects, data log, picture, sound and movie files between the HG1G HMI and a PC without having to load the IDEC software on the PC. This greatly simplifies HMI and PLC program updates as it’s no longer necessary to have the IDEC software installed on multiple PCs throughout a facility or a company.

Long LED backlight life

An LED backlight life of over 70,000 hours provides many years of operation, extended by the fact the backlight can be automatically switched off when the HMI is not in use.

Easy data transfer

Project files can be transferred between a USB memory stick and the HMI. It is a quick and convenient way for an OEM to program multiple units and for users to quickly update both ladder and HMI programs. Data Logging, Alarm Log, Recipe and Screen Capture data can be stored in the USB flash drive as well.
Excellent Environmental Resistance

The HG1G 4.3” screen is built with outstanding environmental tolerance and a wide range of operating temperatures from -20 to 56 degrees C. This HMI also comes with new approval ratings, including the addition of UL 558, IP66/IP67F ratings, Type 4K and Type 13 approvals (on the front panel) to allow for installation outdoors or indoors in wash-down areas. This makes HG1G unit suitable for installation in Class 1, Division 2, hazardous locations and for applications in harsher environmental conditions (see images).

Software

It’s as easy as 1, 2, 3!

1. **Create**
   - Creating a project is simple. Just name a project file and select your parameters (PLC Type and model, protocol type, and optional settings).
   - Once your project is ready to be downloaded to the touchscreen, select “Online” and then allow you to change image, color, or add more parameters.

2. **Configure**
   - Select a functional part and assign a device address. The other tabs parameters (OI Type and model, protocol type, and optional settings).
   - Creating a project is simple! Just name a project file and select your Application and Programming environments.

3. **Download**
   - Drag and Drop Screen Design
   - Easy step-by-step configuration
   - USB 2

4.3-inch Operator Interface HG1G Series

OPERATOR INTERFACE PART NUMBERS

<table>
<thead>
<tr>
<th>Display screen</th>
<th>Operation Style</th>
<th>Communication</th>
<th>Bezel color</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3-inch TFT color LCD</td>
<td>Touchscreen (analog resistive)</td>
<td>COM LAN USB 1 USB 2</td>
<td>Black</td>
<td>Silver</td>
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<tr>
<td>65,536 colors</td>
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<td></td>
<td>HG1G-4VT22TF-B</td>
<td>HG1G-4VT22TF-S</td>
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</table>

SPECIFICATIONS

**General Specifications**

- **Rated Power Voltage**: 10-24V DC
- **Power Voltage Range**: 10.2 to 28.8V DC
- **Power Consumption**: 100 maximum
- **Power Consumption (max. when using USB interface USB2)**: 100 maximum
- **Allowable Momentary Power Interruption**: 10 to 5000W (time 1-10 minutes)
- **Power Interruption (max. when using USB interface USB2)**: 10 to 5000W (time 1-10 minutes)
- **Inrush Current**: 3000A
- **Distortion Strength**: 8/18 gasoline, 1 minute between power and FG terminals
- **Operating Temperature**: -20°C to 55°C (no freezing)
- **Operating Humidity**: 10 to 90% RH (no condensation)
- **Operating Humidity (max. when using USB interface USB2)**: 10 to 90% RH (no condensation)
- **Storage Temperature**: -40°C to +70°C (no freezing)
- **Storage Humidity**: 10 to 90% RH (no condensation)
- **Storage Humidity (max. when using USB interface USB2)**: 10 to 90% RH (no condensation)
- **Pollution Degree**: 2

**Electrical Specifications**

- **Power Interruption Limit**: 3.5 mm
- **Vibration Resistance**: 1.0 up to 5,000,000, acceleration 3 m/s²
- **Temperature Range**: 10°C to 120°C, humid 44% to 95%
- **Humidity Range**: 10°C to 120°C, humid 44% to 95%
- **Shock Resistance**: 1.0 up to 5,000,000, acceleration 3 m/s²
- **Temperature Range**: 10°C to 120°C, humid 44% to 95%
- **Humidity Range**: 10°C to 120°C, humid 44% to 95%
- **Electrostatic Discharge**: ±12kV, ±12kV
- **Ripple/Noise**: ±1000V, ±1000V
- **Communication lines**: ±1kV

**Operational Specifications**

- **Weight (approx.)**: 34g
- **Dimensions**: 128 x 192 x 21.8 mm
- **Ethernet port**: 10/100 Mbps
- **LAN**: 10/100 Mbps
- **COM**: 10/100 Mbps

**Physical Specifications**

- **Front Panel**: 40A maximum
- **Power Consumption**: 4W maximum when not using USB interface (USB2)
- **Power Interruption**: 1ms maximum (voltage 10.2 to 20.4V DC)
- **Power Interruption**: 10ms maximum (voltage 20.4 to 28.8V DC)
- **Inrush Current**: 40A maximum
- **Power Interruption**: 4W maximum when not using USB interface (USB2)

**Remote Operations**

- **Remote Monitor and Control**: Up to 1000V AC, 10mA, 1 minute between power and FG terminals
- **Remote Monitor and Control**: Momentary
- **Remote Monitor and Control**: Allowable

**Weight (approx.)**: 34g

**Dimensions**: 128 x 192 x 21.8 mm

**Ethernet port**: 10/100 Mbps

**LAN**: 10/100 Mbps

**COM**: 10/100 Mbps

**Product Description**

The super-bright, compact 4.3-inch HG1G has most of the features and functionalities found in a larger screen, including monitoring and control via PC, tablet, or smartphone. It supports multiple protocols simultaneously, FTP Server function and best-in-class LED backlight life of 70,000 hours. HG1G can be mounted in portrait or landscape to fit your needs. It also supports a wide range of operating temperatures from -20 to 56 degrees C, and is rated IP66F/IP67F, Type 4K & Type 13, and Class 1 Div 2. It’s flexible and small enough to fit in a tight space, and priced to fit a tight budget.

**Key Features**

- **Supports up to four protocols simultaneously**
- **Remote monitor and control**
- **FTP Server Function**
- **Operating temperatures: -20°C to 55°C**
- **65,536 colors with 800cd/m²**
- **180 x 272 Pixel Resolution**
- **LED backlight lifespan: >70,000 hours**
- **Port and landscape mounting**
- **Rated power voltage: 12-24V DC**
- **Two Serial ports, 2 USB ports and an Ethernet port**
- **IP66F/IP67F, Type 4K, Type 13, Class 1 Div 2**

**4.3-inch Operator Interface HG1G Series**

PRODUCT DESCRIPTION

The super-bright, compact 4.3-inch HG1G has most of the features and functionalities found in a larger screen, including monitoring and control via PC, tablet, or smartphone. It supports multiple protocols simultaneously, FTP Server function and best-in-class LED backlight life of 70,000 hours. HG1G can be mounted in portrait or landscape to fit your needs. It also supports a wide range of operating temperatures from -20 to 56 degrees C, and is rated IP66F/IP67F, Type 4K & Type 13, and Class 1 Div 2. It’s flexible and small enough to fit in a tight space, and priced to fit a tight budget.

**Key Features**

- **Supports up to four protocols simultaneously**
- **Remote monitor and control**
- **FTP Server Function**
- **Operating temperatures: -20°C to 55°C**
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- **180 x 272 Pixel Resolution**
- **LED backlight lifespan: >70,000 hours**
- **Port and landscape mounting**
- **Rated power voltage: 12-24V DC**
- **Two Serial ports, 2 USB ports and an Ethernet port**
- **IP66F/IP67F, Type 4K, Type 13, Class 1 Div 2**

**4.3-inch Operator Interface HG1G Series**

PRODUCT DESCRIPTION

The super-bright, compact 4.3-inch HG1G has most of the features and functionalities found in a larger screen, including monitoring and control via PC, tablet, or smartphone. It supports multiple protocols simultaneously, FTP Server function and best-in-class LED backlight life of 70,000 hours. HG1G can be mounted in portrait or landscape to fit your needs. It also supports a wide range of operating temperatures from -20 to 56 degrees C, and is rated IP66F/IP67F, Type 4K & Type 13, and Class 1 Div 2. It’s flexible and small enough to fit in a tight space, and priced to fit a tight budget.

**Key Features**

- **Supports up to four protocols simultaneously**
- **Remote monitor and control**
- **FTP Server Function**
- **Operating temperatures: -20°C to 55°C**
- **65,536 colors with 800cd/m²**
- **180 x 272 Pixel Resolution**
- **LED backlight lifespan: >70,000 hours**
- **Port and landscape mounting**
- **Rated power voltage: 12-24V DC**
- **Two Serial ports, 2 USB ports and an Ethernet port**
- **IP66F/IP67F, Type 4K, Type 13, Class 1 Div 2**

**4.3-inch Operator Interface HG1G Series**

PRODUCT DESCRIPTION

The super-bright, compact 4.3-inch HG1G has most of the features and functionalities found in a larger screen, including monitoring and control via PC, tablet, or smartphone. It supports multiple protocols simultaneously, FTP Server function and best-in-class LED backlight life of 70,000 hours. HG1G can be mounted in portrait or landscape to fit your needs. It also supports a wide range of operating temperatures from -20 to 56 degrees C, and is rated IP66F/IP67F, Type 4K & Type 13, and Class 1 Div 2. It’s flexible and small enough to fit in a tight space, and priced to fit a tight budget.

**Key Features**

- **Supports up to four protocols simultaneously**
- **Remote monitor and control**
- **FTP Server Function**
- **Operating temperatures: -20°C to 55°C**
- **65,536 colors with 800cd/m²**
- **180 x 272 Pixel Resolution**
- **LED backlight lifespan: >70,000 hours**
- **Port and landscape mounting**
- **Rated power voltage: 12-24V DC**
- **Two Serial ports, 2 USB ports and an Ethernet port**
- **IP66F/IP67F, Type 4K, Type 13, Class 1 Div 2**
Compact HG1G Specifications

**Display Specifications**
- TFT color LCD
- Color: 16.7M colors

**Effective Display Area**
- 96.44 W × 53.89 H mm

**Display Resolution**
- 480 H × 272 H pixels

**View Angle**
- Right and left: ±80°, up and down: 65°

**Backlight**
- White LED

**Backlight Life**
- 70,000 hours (1)

**Brightness**
- 500±10cd/m²

**Brightness Adjustment**
- 32 levels

**Brightness Replacement**
- 800cd/m²

**Recommended replacement time:** every 5 years (at +25°C)

**Battery**
- Lithium battery CR2032

**Backup Data**
- Calendar, log data, keep internal relay, keep internal register

**Parts**
- 12MB (including expansion fonts)

**User Memory**
- No. of Screens:
  - Base screen: 3,000 max.
  - Popup screen: 3,015 max.

**Screen Types**
- Base screen, popup screen, system screen

**Display Resolution**
- 480 W × 272 H pixels

**Effective Display Area**
- 95.04 W × 53.836 H mm

**Display**
- TFT color LCD

**Interface Specifications**
- **Serial Interface Terminal Arrangement**

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<th>I/O</th>
<th>Function</th>
<th>Communication Type</th>
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<td>SD OUT</td>
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<td>Send Data</td>
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<tr>
<td>PO IN</td>
<td></td>
<td>Receive Data</td>
<td></td>
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<td>PI OUT</td>
<td></td>
<td>Pre-event to Send</td>
<td>RS232C</td>
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<tr>
<td>CS IN</td>
<td></td>
<td>Close to Send</td>
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<tr>
<td>SG —</td>
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<td>Signal Ground</td>
<td>RS232C, RS422/485</td>
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<tr>
<td>SOA OUT</td>
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<td>Send Data (a)</td>
<td>RS422/485</td>
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<tr>
<td>SOB OUT</td>
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<td>Send Data (b)</td>
<td>RS422/485</td>
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<td>POA IN</td>
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<td>Receive Data (a)</td>
<td>RS422/485</td>
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<tr>
<td>POB IN</td>
<td></td>
<td>Receive Data (b)</td>
<td>RS422/485</td>
</tr>
</tbody>
</table>

**Software and Cable Part Numbers**

**Application Software**
- SWA-AWC

**USB Maintenance Cable**
- USB-AW-MA

**PLC Connection Cable**
- FPGA-AW-CA*

**Connector**
- USB Type Mini-A connector

**Remote Power Supply Terminal**
- Modular connector (RJ45)

**Dimensions**
- All dimensions in mm.
  - Panel thickness: 1.0 to 5.0mm

**STARTER KITS**

- **KIT-FC6A-24-RC-HG1G**
  - PLC/HMI Kit - FC6A 24IO 24V DC Relay Output, and HG1G TFT LCD black bezel, Power Supply, Software and cables

- **KIT-FC6A-HG2-HG1S**
  - PLC/HMI Kit - FC6A 240V DC Relay Output, and HG1S TFT LCD black bezel, Power Supply, Software and cables

- **KIT-FC6A-HG24-HG1S**
  - PLC/HMI Kit - FC6A 240V DC Relay Output, and HG1S TFT LCD black bezel, Power Supply, Software and cables

**ACCESSORIES**

**Serial Interface**
- **COM 1 (RS232)**

**Serial Interface**
- **COM 2 (RS422/485)**

**Ethernet Interface**
- **LAN**

**USB Interface**
- **USB1**

**USB Interface**
- **USB2**

**HARDWARE**

**Dimensions**

- +1

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## COMPATIBLE PLCS

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<td>SmartAXIS Pro/Lite</td>
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<td>MICROSmart (Ethernet)</td>
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<td>MELSEC-A (link unit)</td>
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