Control goes beyond on and off, stop and go. It’s about knowledge, response and making the right decisions. Pushbuttons, lights and indicators can do the work, but an HMI device gives you a lot more information.

Maintaining a typical control panel full of components takes time away from more important tasks. There’s one very smart solution: the HG1F, 4.6” STN Monochrome LCD Screen, the latest operator interface in the IDEC Touchscreen family.

IDEC has brought touchscreen solutions to the manufacturing environment for more than a decade, and this latest model makes advanced control a real possibility for every system. The super-bright, compact HG1F has all the features of a large touchscreen—flexible screen layout, multiple monitoring screen capabilities, PLC connectivity and more. But it’s still small enough to fit in a tight space and priced to fit a tight budget.
A smart solution = *Big-screen features on a small screen*

By the time you add up pushbuttons, indicators, meters, lights and single-function devices on your old panel, you’ll see why the HG1F is a real value. Don’t just think about cost; think about time, effort and safety. Every component is another connection you have to worry about. This HMI can do it all for less.

**Install anywhere—literally!**

The HG1F’s super-slim design has only 35.3mm in panel depth. Mount it horizontally or vertically to fit your needs; the programming software supports both orientations. It works whether you need to fit an unusual size panel or just want more choices.

**Value clarity**

Fast response, visible displays and clear instructions to operators—are the hallmarks of a smart HMI; one that surpasses every button and every old panel. The HG1F includes a high-speed CPU processor that responds to commands and changes displays almost instantly. Not to mention, looking at the HG1F, the screen really stands out. It’s easy to read, even from an angle, and you can set contrasts to create the ideal display for any lighting condition. The higher resolution screen gives you more real estate than other small screens; take as much space as you need to make the elements and text on your screen as understandable as possible.
4.6” STN monochrome LCD HG1F

- Super-bright 500cd/mm² illumination—superior visibility even in intense light or from an angle
- 300 x 100 pixel resolution—get more buttons and displays on every screen
- Analog resistive operation—place screen images wherever you want them
- 16-tone monochrome shades, adjustable contrast
- 1MB built-in memory—store up to 3,000 screens and more data than any small touchscreen
- Data can be displayed as a bar graph or level display
- Printer and barcode reader-ready
- Real-time clock
- Approvals: CE-marked; UL/c-UL Listed; Hazardous Locations Class 1 Div. 2, IP65 protection; Nema Type 13

HG1F Screen measures 111.4mm by 38.4mm
Panel mounting depth is 35.3mm; entire unit depth is only 39.3mm
Communication

The HG1F touchscreen enables complete communication all the way through your applications, from start to finish. Flexible communication gives you better information to make important decisions and create the best finished products.

1:N PLC communication

Connect a single HMI to multiple PLCs for centralized control. One HG1F can monitor and control PLCs in several different locations. The maximum number of PLCs that can be connected depends on the PLC brand.

The following PLC manufacturers are supported for 1:N communication: IDEC (Microsmart and OpenNet Controller); Automation Direct (Koyo); DirectLogic-DL205/405; and Modicon: Modbus RTU.
O/I Link communication

Create an O/I network where multiple HMIs in different locations are connected to the same PLC for convenient monitoring in particularly expansive operations. One touchscreen can serve as a master while 15 other screens can be slaves in the O/I Link, with a total maximum distance of 200 meters.

User communication

Get better component interaction by setting the HG1F’s communication protocol to the one required by your serial devices, for example a barcode reader. This function uses transmit and receive instructions to build your own protocol.

Pass Through function

Download a PLC program from a PC through the touchscreen without interrupting any operations. Only one cable is needed to program both units. The Pass Through function is applicable to the following PLCs: IDEC (MicroSmart and OpenNet Controller) and Mitsubishi (MELSEC-FX, FX3UC and Q).
A smart solution = **Programming made simple**

IDEC HG1F touchscreens are programmable with WindO/I-NV2, Version 3.12 or higher, a Windows-based software that creates screens through dragging and dropping elements. Select your model of HMI, and WindO/I-NV2 will configure a workspace with the proper dimensions to begin layout; for the HG1F, you can also choose the vertical or horizontal screen orientation.

The software intuitively works with you, walking you through an easy step-by-step configuration of your images and your workspace. Dragging and dropping makes screen creation fast, even for beginners. Debugging, previewing and editing are handled through WindO/I-NV2’s extremely user-friendly interface.

Control or modify your program at any time to stay on top of it all. Manage multiple screens in one project, and stay organized with the Workspace structure. Use the screen preview list to view or edit screens you’ve already created. Run the on/off simulation mode to confirm your operations. You can also test, monitor or troubleshoot data from a PLC within WindO/I-NV2.
WindO/I-NV2 All your information on screen

Create Recipes to conveniently set parameters for different processes
- Upload or download parameters to and from the PLC
- 1,024 available channels; store up to 8,000 parameters per channel

Set up Alarm Log function for messages and alerts
- Monitors alarm conditions from a PLC and stores historical events with a date and time stamp
- Meets ISA standards for visual alarm management
- Select size and contrast of alarm message and status
- Scroll a list of alarm messages

Create Trend Graphs to monitor critical data points
- Quickly view production information
- Collect and manage valuable data
- Up to 16 channels in a graph

Multilingual Capabilities for Worldwide Applications
- Supports text display of English, Western European and Central European languages, simplified and traditional Chinese, Korean, Baltic and Cyrillic
- Create a text database, filled with languages of your choice, that can be used later for switching text messages. For example, from English to French.

Standard Windows Fonts
- Select a wide range of text styles using Windows Fonts.

Script function
- Users with basic programming knowledge in C can combine conditional statements, mathematical operations and other functions to create simple and complex processes.
- Greatly reduces the programming required in the PLC.

Security function
- Provides different levels of security and restrictions for multiple users on editing projects or displaying screens and objects.
A smart solution = *Stand-alone operation or PLC connectivity*

The versatile HG1F touchscreen gives you the most cost effective solution for connectivity to all the major PLCs on the market today.

**Supported PLC Drivers:**
- IDEC
- Allen-Bradley
- Automation Direct (Koyo)
- GE Fanuc
- Keyence
- Mitsubishi
- Omron
- Panasonic (Aromat)
- Siemens

For a complete list visit [www.idec.com/usa/hg1f](http://www.idec.com/usa/hg1f)

### 4.6” Touchscreen Part Numbers

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Bezel Color</th>
<th>Communication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>HG1F-SB22BF-W</td>
<td>Light Gray</td>
<td>RS-232</td>
</tr>
<tr>
<td>HG1F-SB22BF-B</td>
<td>Black</td>
<td>RS-485 / RS-422</td>
</tr>
</tbody>
</table>

### Programming Cable

**Part Number**

- HG9Z-XCM1A

*Other cables for supported PLCs available. For more information, visit [www.idec.com/usa/hg1f](http://www.idec.com/usa/hg1f)*

### Software

- WindO/I-NV2 programming software HG9Y-ZSS2W

### HG1F to PLC Communication Cable Selection

<table>
<thead>
<tr>
<th>IDEC PLC Model</th>
<th>Comm. Type</th>
<th>Link Unit Used</th>
<th>Communication Cable Part Number*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsmart (FC5A &amp; FC4A)</td>
<td>RS-232</td>
<td>FC4A-PC1 or FC4A-HPC1</td>
<td>HG9Z-XC183**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Built-in Port (8 pin Mini-Din)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RS-485</td>
<td>FC4A-PC3 or FC4A-HPC3</td>
<td>HG9Z-1C131A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FC4A-PC2 or FC4A-HPC2</td>
<td>HG9Z-1C121A</td>
</tr>
<tr>
<td>OpenNet Controller</td>
<td>RS-232</td>
<td>Built-in Port (8 pin Mini-Din)</td>
<td>HG9Z-XC183</td>
</tr>
<tr>
<td>or Micro3C</td>
<td>RS-485</td>
<td>Built-in Port (Screw terminal type)</td>
<td>HG9Z-1C131A</td>
</tr>
<tr>
<td>Micro3</td>
<td>RS-485</td>
<td>Built-in Port (8 pin Mini-Din)</td>
<td>HG9Z-1C121A</td>
</tr>
</tbody>
</table>

*Cable FC4A-KC1CA can also be used*
A smart solution = More high-quality products available

HG1F Starter Kits
Get everything you need to start in one package: HG1F-SB22BF-B, WindO/I-NV2 software and a programming cable. Part number: SMARTTOUCH-1F

HG1F Solution Packages
Whether you’re new to IDEC or looking for a quick way to put together a complete system, you’ll find a great deal in our solution packages. Each package includes an HG1F touchscreen, a PLC, a 24VDC slim power supply, cables and software. It’s all you need in just one step!

For part numbers, visit www.idec.com/usa/hg1f

The IDEC SmartTouch Family
IDEC’s expanded family of touchscreens and HMI devices has your needs covered: color or monochrome, text-only, high-resolution, large or small. Each one of our screens is versatile enough to integrate with your existing equipment, including other manufacturers’ PLCs, and work with your budget.

For more information, visit www.idec.com/oi