Honeywell

900 Control Station Specifications

## 51-52-03-46, September 2013

Introduction

The 900 Control Station operator interface from Honeywell compliments the HC900 Process & Safety Controller with a unique combination of predefined display features and custom display development tools to deliver ease of use and high flexibility in an efficient and affordable package. The color display and finger touch user interface enhances process monitoring while simplifying online controller changes. The Station Designer software used to configure the interface works in conjunction with the HC900 Process Controller configuration software to automatically build a Control Station database that exactly matches the unique, user configured, controller database. This highly integrated operation eliminates the time consuming task of assigning controller communication register addresses to the operator interface parameters used to build displays. The standard database of the Control Station allows all available controller tags to be imported without restriction or costly price adders, eliminating the risk of running out of tag resources in the middle of your project.

The hardware of the 900 Control Station is designed to handle tough industrial environments with a full metal case design and water tight, type 4X, front bezel assembly. Hardware pushbuttons on the front panel supplement touch screen software buttons for common interface tasks such as user log-off, display last screen and main menu access. A Home button is also provided to allow the user to specify a common starting point for his application. LED indicators provide power status, indication of flash memory access and active alarm status.

The 900 Control Station is available with either a 10.4 inch or 15 inch display size. Both models are configured using Station Designer PC configuration software.

900 Control Station 10.4" model
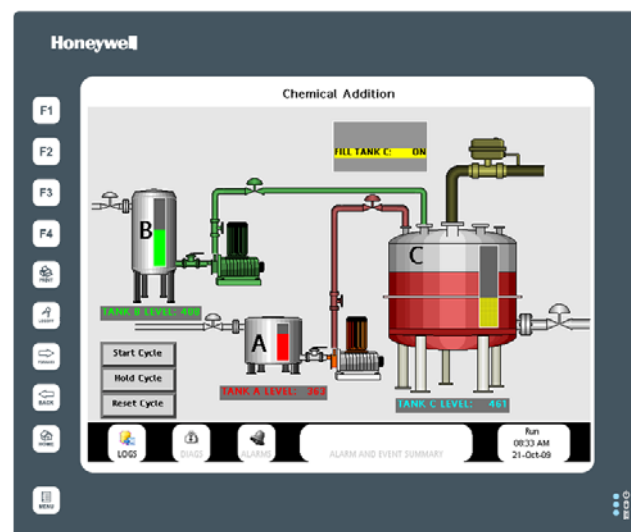
900 Control Station 15" model

Connecting the 900 Control Station to the controller can be via Ethernet using CAT 5 cable and RJ45 connectors or via RS485 serial communications. Ethernet is recommended for new installations while RS485 connections may be used with pre-existing HC900 controller installations. Two USB host ports and one USB device port are also provided to extend data export functions, automate data entry via bar code, transfer controller configurations and recipes and to support configuration upload/download and maintenance functions. A Flash memory socket is provided so that a Flash card can be used to collect your trending and data logging information, accept screen print files, as well as to store larger configuration files.

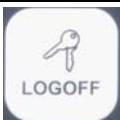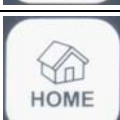| Models		
Model number	900CS10-xx	10.4" Control Station
	900CS15-xx	15" Control Station
Model number	900SDS-xx-xx-xx	Station Designer Software
	xx = revision numbers	

Highlights

- Hardened industrial platform may be mounted close to the process for greater operator efficiency.

- Resistive analog touch screen allows simplified operation

- Dedicated keypad buttons for frequently accessed functions

- Two sizes: 10.4 inch, 32K color VGA (640x480 pixel) and 15 inch 32K color XGA (1024x768) LCD displays for bright, clear screen presentations

- Three front panel LED status indicators confirm operation

- Expandable memory with Flash Memory socket for record keeping and configuration transfer

- Configuration stored in non-volatile memory for secure operation

- 10 Base T/100 Base-TX Ethernet communications for optimum performance

- RS485 communications allows updating existing HC900 installations

- Station Designer configuration software automatically builds communication paths and completes parameter identifications

- Web access to view and manage your process from anywhere

- Large assortment of prebuilt displays, display widgets and tag binding feature

- Fully manage HC900 controller function blocks such as PID, setpoint programmers, etc.

- Integrate HC900 controller alarms/events or build them into the interface

- Prebuilt recipe management functions

- Create custom displays using the graphic editing tools of Station Designer software

- Build custom displays using a large assortment of prebuilt industrial graphic objects (valves, tanks, vessels etc.)

- Extend interface functions with robust scripting functions (if-then-else)

- Prebuilt display navigation features and pre-assigned function buttons to get on-line quickly

- Improve status monitoring and system troubleshooting with more than 70 standard controller screens - (no setup required)

- Maintain records of process performance with flexible data logging and trending

- Math and Scripting for your more demanding applications

- Multiple languages for global applications

- Generate batch reports to track the processing of production lots

- Wirelessly access station contents with an optional WIFI interface

- Transfer controller configurations and recipes via portable USB memory

- Visually track programmed setpoint status with a unique Ramp/Soak profile display

- Transfer user security profiles from station to station via portable USB memory

- Pre-built summary displays to monitor controller I/O and signals

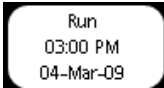- Verify action before operate touch screen function

Master Template and Buttons

The 900 Control Station uses membrane buttons to access common operator functions and a status tray at the bottom of the screen to indicate system operating status. The combination of display buttons and screen status buttons create a master template that serves as the default navigation structure and basic framework for all operator displays. The status indicators of the screen also provide button access to summary displays for additional detail.

Membrane buttons (left of display)

F1	User-specified action
F2	User-specified action
PRINT	Print Screen
LOGOFF	Security Log ON/OFF
FORWARD	Next Screen
BACK	Previous Screen
HOME	Home (user specified home display)
MENU	Main menu

Display buttons (bottom of screen)

Run 03:00 PM 04-Mar-09	Time and date, controller mode
LOGS	Data logging, data export function access
DIAGS	Diagnostic indication, diagnostic status access
ALARMS	Active alarm indication, alarm summary access
ALARM AND EVENT SUMMARY	Event messages, alarm and event summary access
	Local language indication

Controller Displays

Controller status displays are a standard feature of the 900 Control Station and may be used to verify controller setup parameters and/or troubleshoot controller diagnostics. Accessed via the main menu key, these displays require no pre-configuration and become available when a database is downloaded and an operator interface is connected to a controller. Examples of status displays include controller Ethernet port setup, local and expansion rack diagnostics, host communications connections, peer connections, redundant system status, Modbus slave status, I/O status and others.

Operate Displays

Displays used by the operator are developed by selecting from a predefined list of displays, creating custom displays with function block widgets (predefined graphic objects designed to interface with HC900 function blocks) or ground up custom development using a combination of drawing tools, predefined graphic objects, imported graphic objects, action and navigation buttons. The quantity of displays supported is not artificially limited. Typical uses can have 50 or more user defined displays, depending on complexity.
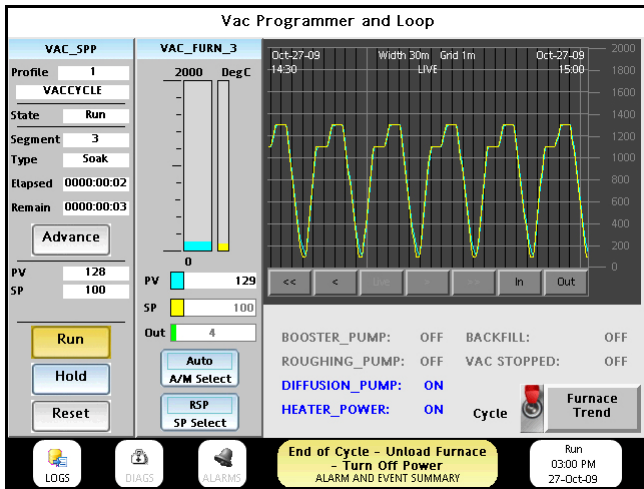
A Check-Before-Operate prompt may be added to any touch screen action to request verification of the selected action before it is executed. This verification is useful in preventing inadvertent actuations of touch screen features during process operation.

Languages

The 900 Control Station supports multiple languages that may be switched directly from the station's operating displays. With Station Designer software the user may include English, German, French, Spanish and Italian from the languages that are included with the software, or other languages may be added by expanding its lexicon library. The software also supports accessing the translation libraries of Microsoft ® and/or Google® for any un-translated text strings used in the product during configuration.

Alarm/Events

Alarms and Events in the 900 Control Station are an integral part of the setup of analog and digital signal tags in the interface. Two alarms or events per signal tag are standard and additional levels may be added when needed. Alarms and Events configured in the HC900 using Process Controller Designer software are also accommodated in the station. Automatic or manual acknowledgement, delay action, and emailing of alarm status are standard user selections. Alarm detections may be on a high value condition, low value condition, deviation above or below a setpoint, value within a band, value equal to a setpoint, value not equal a setpoint, raising value, falling value or changing value. HC900 controller alarms may be presented in groups as defined in the controller or they may be fully integrated with the station alarms without grouping.

Active alarm notification is provided with an indicator button that is present on all user displays. Pressing the button allows viewing alarm groups or viewing alarm detail, including time of occurrence, and allow for user acknowledgement when the option is enabled. A selectable pulsing display action is also available to call an operator's attention to a high priority alarm condition.

Events configured in the controller or assigning event action to digital signals in the station causes the event description data to be annunciated in the display tray of the interface. This feature allows for prompting operators to perform specific tasks when action is needed.

An Alarm and Event Summary display is provided to indicate the time and sequence in which alarms and events occurred, when they were acknowledged and when the alarm condition cleared. The active event message may also be cleared from the display tray from this display.
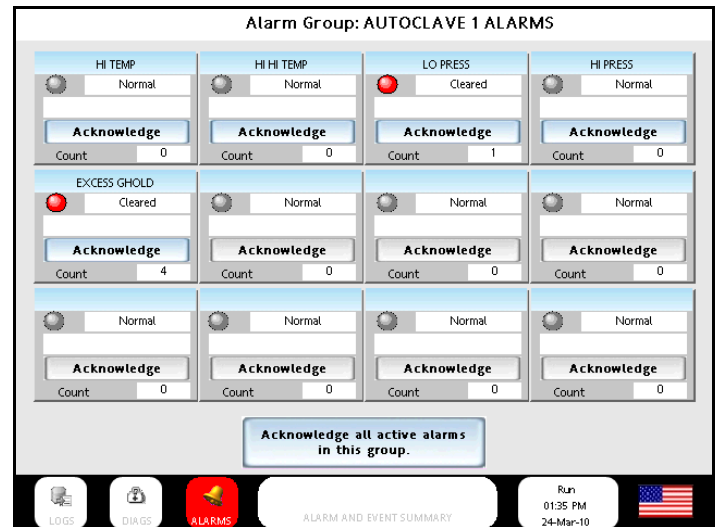
Standard Displays

Standard displays are provided to allow the 900 Control Station to read and present HC900 controller setup parameters, monitor controller performance, view communications status of the various controller communication ports, perform I/O calibrations, diagnose problems and more. See the following examples.

In addition to detailed controller displays, a number of graphic display templates, interactive function block graphic widgets and predefined navigation buttons and tools are provided to accelerate interface setup and configuration. See the following examples.
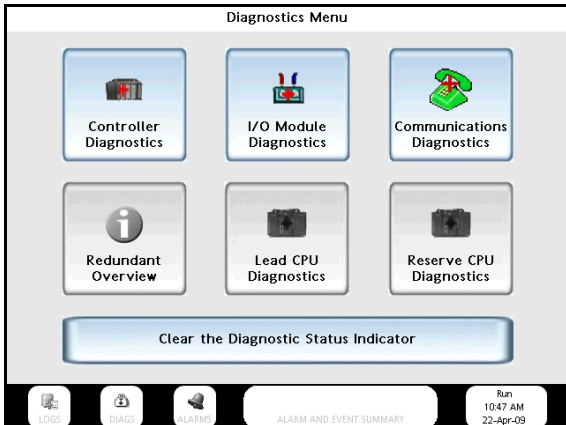
Example of Standard display
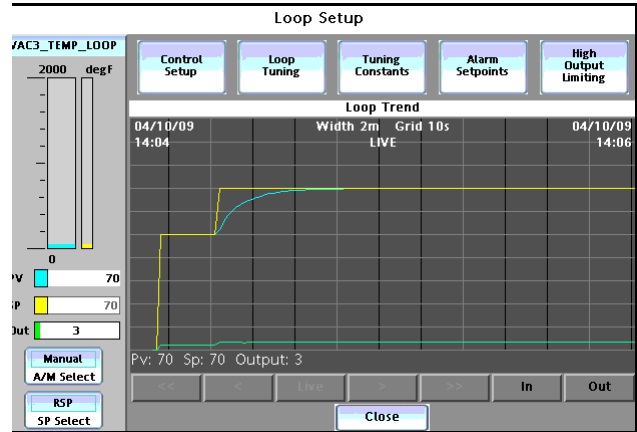
E**xample of Loop tuning trend**
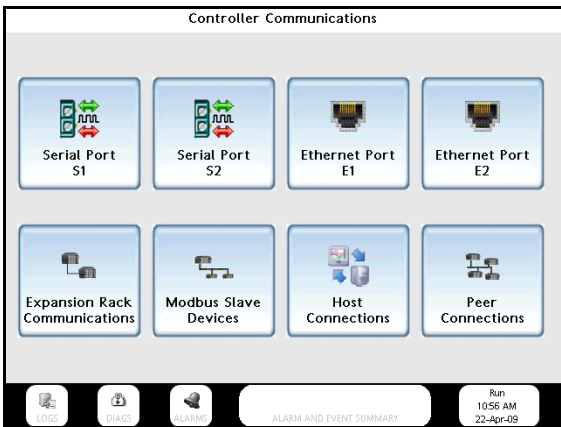
Example of Standard display
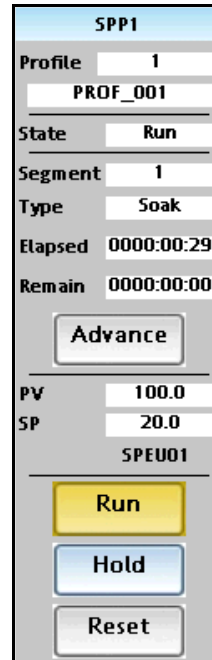
Example of Setpoint Programmer and HOA Block widgets
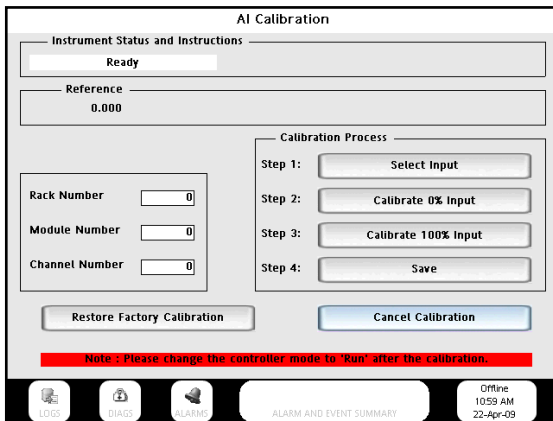
Example of Standard display

Station Designer Software makes available more than 70 standard displays for controller operation, status and maintenance, including display widgets to allow users to quickly build semi-custom displays for interaction with the controller's principle function blocks. Recipe selection of setpoint profiles, setpoint schedules, sequences and variables stored in the controller is also supported.

Setpoint Programmer Pre-plot Display

This unique display supports graphically viewing the entire Ramp/Soak profile of a setpoint programmer function block on a single trend object. Prior to starting the setpoint programmer the operator can view the profile the setpoint will follow during the operation of the setpoint programmer function block. Once the program is started, the actual setpoint value is highlighted on the trend profile, as well as the process variable under control. A touch button on the display provides access to a similar display for the Auxiliary Setpoint value, which dynamically tracks the auxiliary setpoint and its associated process variable under control. The display also includes the on/off status of the 16 setpoint programmer event outputs and provides touch buttons to start, hold, advance and reset the program.

Example of custom display

Symbol Library

The 900 Station Designer Software contains over 4000 industrial graphic objects in over 60 different categories to provide realistic graphic images for your application. Detailed images of various types of pumps, valves, tanks may be overlaid one on top of another and have actions assigned. Animation is supported with objects moving within a specified display field. Graphic images of Motors, blowers, pumps and other process equipment make creating accurate process views a fast and easy operation. Images support color selection, may be sized, oriented on the display and inserted in a predefined animation area having multiple positions linked to values in the database.

Custom Displays

In addition to standard displays, the 900 Control Station supports a full array of custom graphic displays that may be created using objects drawn with basic drawing tools, an assortment of object primitives, pre-defined widgets matching controller functions, graphic symbols selected from an extensive assortment of objects in the standard image library and/or imported JPEG, bitmap or WMF files. Visibility controls allow the user to hide or make objects visible as determined by the state or value of a parameter in the controller or station. Animation is supported to add movement and dynamic features to custom displays to improve operator visibility.

Symbol library

Emulator

Station Designer software provides an emulator mode to allow testing 900 Control Station configurations on your PC without downloading them to the 900 Control Station. By allowing your PC to communicate directly with the HC900 controller, and using the configuration for the 900 Control Station running in the PC, the engineer can see how the displays would appear to the operator, and how the display navigation would work without having the 900 Control Station connected. Emulator function is not currently supported on Microsoft 64bit OS (for both 900CS10, 900CS15)

Recipes

The 900 Control Station provides standard displays to allow operators to select from the recipes stored in the internal memory of the HC900 controller for fast and easy product changeover.

Recipes may be, a setpoint profile used with the setpoint programmer function block, setpoint schedules, or sequences used with the Sequencer function block or Variable recipes with of up 50 Variables each. Recipes of the specific type are selected from a list, by name, from a list read from the controller. Recipes are created using Designer Software or Utilities Software and are stored in the HC900 controller. Recipes added to the HC900 controller after the database import operation during operator interface configuration will also be accessible from the Control Station recipe list.

Data Logging

The 900 Control Station will log tagged data at user-specified rates and automatically apply a time/date stamp. The information is stored in CSV (Comma-Separated Variable) file format, allowing easy access from almost any PC application program, such as Microsoft Excel®. Data logs may be stored in volatile RAM memory for short term, non-critical data viewing or they may be stored on more secure archiving media such as Flash memory module or USB memory modules. The number of concurrent log files supported is dependent on the available storage memory, data sample rates and file size allocations.

Data logging is stored to a Flash memory module in the industry standard CSV format. The number of data logs in the Station and the number of controller tags in a Log file are not limited. Before data is sent to the Flash module, it is held in a History Buffer in RAM memory where it may be viewed as short term history using a Trend Viewer object.

The validity of stored data may be secured by the addition of cryptographic signatures on the samples of stored data. The signature is a unique 32 bit value that is included with the data samples, adding one more parameter to the log record. The signature value is derived using an algorithm that uniquely identifies the values within a dataset, similar to a checksum on a software program. Changing any value within the dataset causes a signature mismatch between the data and the signature. A utility application is provided with Station Designer software to allow users to validate if a CSV file has been altered or not. Any value that is changed will invalidate all records in the file following the changed value.

Data Validated via Signatures

Altered Data Detected via Signatures

Concurrent Batch Reports

Up to 8 batch reports may be established and run concurrently in the 900 Control Station. Each report contains a header area with up to 8 user defined parameters to identify the batch. Digital signals from the controller start and stop the batch. Data may include analog signals gathered on a time schedule, alarms and events that are being monitored, and user entered comments.

	A	B	C	D	E	F	G
1	Date	Time	Type	PV	SP	PV	SP	E
2	3/16/2010	13:32:07	Header	8 Character ID=GLASSLAM			
3	3/16/2010	13:32:07	Header	Product Code=GLASS LAMINATION			
4	3/16/2010	13:32:07	Header	Product Type=SAFETY GLASS			
5	3/16/2010	13:32:07	Header	Operator Name/No=WILLIAM SHATTER			
6	3/16/2010	13:32:07	Header	Equipment ID=AUTOCLAVE 1			
7	3/16/2010	13:32:07	Header	Recipe No=001			
8	3/16/2010	13:32:07	Header	Customer=HONEYWELL SECURITY			
9	3/16/2010	13:32:07	Header	Order No=PO TYG1239675DF6390W43701			
10	3/16/2010	13:46:05	Data	-10	0	0	100
11	3/16/2010	13:46:10	Data	-10	0	10	100
12	3/16/2010	13:46:15	Data	-10	0	26	100
13	3/16/2010	13:46:20	Data	-10	0	42	100
14	3/16/2010	13:46:25	Data	-10	0	55	100
15	3/16/2010	13:46:30	Data	-10	0	66	100
16	3/16/2010	13:46:35	Data	-10	0	74	100

Sample Batch Report

Data Access

There are 6 methods available to access data stored on the Flash memory module.

1. Transfer data from Flash memory to a removable USB memory module.

2. Use the FTP server to allow remote clients to connect to the station and upload the log files.

3. Use a Synchronization Manager to push log files to an FTP server on a periodic basis.

4. Use a Web server to access log files over the station's Ethernet port using a Web browser such as Microsoft Internet Explorer.

5. Mount the flash memory module as a drive on a PC and allow logs to be copied via Windows® Explorer.

6. Access log files via the optional WIFI wireless interface.

Web Access

The 900 Control Station supports Web access to data and displays from remote locations.

CS Web Server

Option	Description
View Data	Display a list showing available data pages.
View Batch Logs	Download batch files from the data logger.
View Continuous Logs	Download continuous files from the data logger.
Remote View	Display a view of the HMI's display and keyboard.

- The *Data Log Access* property is used to enable or disable Web access to the files created by the Data Logger.

- The *Remote Viewing* property is used to enable or disable a facility by which a Web browser can be used to view the current contents of a Control Station display.

- The *Remote Control* property is used to enable or disable an option by which the remote viewing facility is extended to allow a Web browser to be used to simulate the pressing of keys on the operator panel, thereby allowing remote control of the panel or the HC900 Controller it controls.

- The *Custom Site* property is used to enable or disable a facility by which files stored in the WEB directory of the Flash memory card are exposed via the Web server.

- The *Security* properties are used to restrict Web server access to hosts whose IP address matches the mask and data indicated.

- The *Authentication* properties are used to restrict access to any user connecting onto the Web server when Authenticated Users is selected. Upon connection, the user will be required to enter the Username and Password defined under Logon Username (Max 31 characters) and Logon Password (Max 15 characters). Both are case sensitive.

You may thus use the Control Station's custom site facility to create a completely custom Web site using your favorite third-party HTML editor, and—by inserting certain sequences and storing the resulting files on the station's flash memory card and expose this site using the station's Web server.

Bar Code Data Entry

The USB port supports keyboard and bar code reader inputs for entry of ASCII data into English text and numeric fields for items such as batch report header information, comment fields on displays or recipe selection.

Email Notification

Alarms that are configured in the station may be configured to send an email notification to specified addresses when the alarm is present. Event messaging is also supported to announce other events in the system. You can choose to email alarm messages to one person or to several people simultaneously. The Email server provides support for a device name to identify the source of email data and a name used for SMTP Authentication.

FTP Server

The 900 Control Station's FTP server provides a method to exchange files between the station and a remote computer running an FTP client application. The station will act as a server, waiting for the client application to connect and upload or download files.

The FTP Server may be set to Disabled (restricting all remote access), Enabled for anonymous Read-only access, or anonymous read and write access.

Typical types of files exchanged via FTP include data log files of process performance history and print screen files generated using the print screen key of the station.

A log file is also available to track remote interactions via FTP with the flash memory module of the station, useful in debugging FTP operations.

Wireless Access

An optional GSM/GPRS Cellular modem may be used via a Cellular Network Provider's wireless network for the following applications:

- Send SMS text messages for alarm conditions or status reports

- Send email

- Remote access the Control Station's Web Server

- Access data logs

- Remote viewing and remote control

- View data logs via the FTP Server

- Download an SDS database from Station Designer to Control Station

The optional modem kit supports field installation and resides in the station enclosure.

Security

Station Designer contains powerful features that allow you to define which operators have access to which display pages, and limit those operators ability to make changes to specific data using a user profile with password protected access and object based controls. The number of user profiles permitted is not limited.

When enabled by Station Designer, the station also provides a security logging facility that can be used to record changes to data values, indicating when the change occurred and by whom it was performed.

Web access security is also provided to limit remote user's access to control and edit functions and/or all remote access.

The security credentials setup for all operators within a Station may be exported to a USB memory device and loaded into another station to duplicate security access rights.

Math & Formulas

Values within the 900 Control Station may be the result of mathematical expressions created during configuration with Station Designer. Expressions may be performed using signal tag data and constants in Decimal, Binary, Octal or Hexadecimal format and operations performed using integer or floating point math. Expressions may also include comparisons (comparing one value to another) with operator (<, >, =, etc.) to generate a 0 (false) or 1 (true) output value.

Programs

When actions become too complex to fit on a single line of an expression, or they demand more complex decision making logic, Station Designer provides a facility to create and manipulate user developed programs. If, then, else decision statements, switch statements, loop and while loop constructs, do loop statements and other instructions are available for users to develop their own custom programs. User programs may be set to run when referenced or be scheduled to run in the background.

Database Import

HC900 Controller configuration files created with HC900 Process Control Designer software may be imported into Station Designer to automatically construct a station database that exactly matches the controller's configuration.

A database mismatch between the controller's database and the station's database is automatically detected when
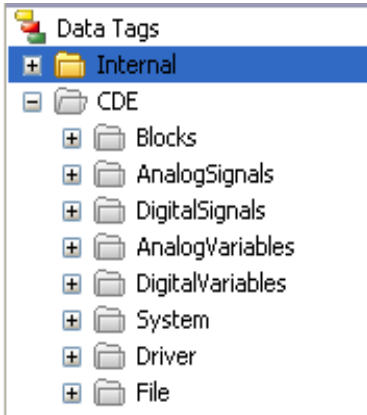
the station is communicating with the controller, eliminating any possibility of erroneous data exchanges.

Transporting Controller Configurations and Recipes

HC900 controller configuration files and recipe files developed using Process Control Designer software or Process Control Utilities software may be placed on a USB memory device and transferred to the controller using pre-built displays in the station. Controller configurations and 900 Control Station configuration images may also be copied from the controller or station onto a USB device for performing maintenance, record keeping or transferring from one system to another.

Database Capacity

900 Control Stations support up to 30,568 signal tags in a users configuration database. Each internal or controller designated tag assigned by the user consumes one of these tags. In addition, each function block imported from a controller's .database (.cde file) will consume a quantity of signal tags. The table below indicates the number of tags consumed by each instance of a function block, by type, in a user's controller configuration.

Block Type	Tags
AGA - Details	81
AGA - Gross	38
Alternator	125
Calendar Event	440
Device Control	10
Four Selector Switch	8
HOA(Hand Off Auto) Switch	6
AMB Loop	25
CARBON Loop	76
ONOFF Loop	36
PID Loop	70
TPSC Loop	55
PPO	15
Pushbutton - Ananlog	6
Pushbutton - Digital	6
Ramp	37
Sequencer	83
Setpoint Programmer	67
Setpoint Scheduler	148
Stage	49
XYR5000 Base	3
XYR5000 Transmitter	21
XYR6000 Transmitter	30
Ananlog Signal	5
Analog Variable	3
Digital Signal	2
Digital Variable	2

Specifications – apply to all models unless noted

Power	900CS10-00: +24 VDC ±20% @ 29 W maximum. 900CS15-00: +24 VDC ±20% @ 46 W maximum. Without options. Requires Class 2 or SELV rated power supply Front panel LED indication of power on
Power Connections	Connection via removable three position terminal block Compression cage-clamp terminal block. Wire Gage: 12-30 AWG copper wire Torque: 5-7 inch-pounds (56-79 N-cm)
LCD Display	**900CS10-00** **900CS15-00** Size: 10.4-Inch 15 Inch Pixels: 640 X 480 1024 X 768 Type: Color active matrix thin film transistor (TFT); 32,000 colors Backlight* 50,000 Hr life typical (field replaceable in non-hazardous locations) *Lifetime at room temperature

Touch screen and Keypad	Analog resistive
	Protective layer - Optional protective layer over touch panel
	Keypad:
	   900CS10-00: 8 button keypad on front, six (6) dedicated and two (2) user defined keys
	   900CS15-00: 10 button keypad on front, six (6) dedicated and four (4) user defined keys

Remote Keyboard, Barcode Reader input	Interface via USB Data format: ASCII, United States and United Kingdom layouts supported
Memory	On Board User Memory: 32 Mbyte non-volatile Flash memory. Optional Memory Card: CompactFlash Type II slot for Type I and Type II CompactFlash cards (behind panel) Note: The flash memory card must be a UL approved component to maintain UL station approval when installed. (FAT formatted) Front panel LED indication of activity
Battery	Lithium coin cell, UL recognized type CR2025. Typical lifetime of 10 years.
Clock	Real Time Clock: Yes Supports alarms, events, displays, trends, and data logging Synchronization to controller: within 1 second

Specifications – apply to all models unless noted

Ports and Communications	USB Ports:
	One (1) Type B Device Port
	Two (2) Type A host ports
	Adhere to USB specification 2.0.
	RS232 Serial Ports: (RJ12 connectors)
	One (1) Communication port
	One (1) Programming/Communication Port
	Format and Baud Rates individually software programmable up to 115,200 baud
	Max. Distance: 50 ft.
	Protocol: Modbus Master
	RS485 Comm. Port (RJ45 connector)
	Max. Distance: 2000 ft max.
	Protocols: HC900, Modbus Master
	900CS15-00: Two (2) RS485 Ports
	Ethernet Port: (RJ45 connector) -wired as a NIC (Network Interface Card)
	10 BASE-T / 100 BASE-TX
	Max. Distance 100M
	Protocols: HC900, Modbus TCP
	900CS15-00: Two (2) Ethernet Ports – Automatic fail-over when used with C70 and C70R controllers
	Configuration support for virtual network ports to allow Ethernet communications to serial devices
GSM/GPRS Modem Option	Installation: Field Installed option kit
	Power Requirements: 24VDC, =/-20%, 0.25mA typical (independent from host 900 Control Station) – Class2 or SELV rated power supply required.
	Environmental Conditions:
	Operating Temperature: 0 to 50 degC,
	Storage Temperature: -20 to 80 degC
	Operating & Storage Humidity 80% maximum relative humidity (non-condensing) from 0 to 50 degC.
	Altitude: Up to 2000 meters
	Antenna Connector: SMA Female connector requires:
	50 Ohm antenna with SMA male connector
	Quad-band (850/1900/1800/1900 MHz) for Global support supplied
	Certifications and Cpmpliance:IEC-61010-1, EN 61010-1 Safety for electrical equipment for measurement, control and laboratory use, Part 1
	Electromagnetic Compatibility: Emissions and Immunity to EN61326: Electrical Equipment for measurement, control and laboratory use.
	Construction: Installation Category 1, Pollution Degree 2

Specifications – apply to all models unless noted

Environmental	Operating Temperature Range: 0 to 50 °C (32 to 122 F)
	Storage Temperature Range: -20 to 70 °C (-4 to 158 °F)
	Operating and Storage Humidity: 80% maximum relative humidity (non-condensing) from 0 to 50°C.
	Vibration According to IEC 68-2-6: 5 to 150 Hz, in X, Y, Z direction for 1.5 hours, 2 g.
	Shock According to IEC 68-2-27: Operational 35 g, 9 msec in 3 directions.
	Type 4X Indoor use only Enclosure rating (face only), UL50.
	IP66 Enclosure rating (face only), IEC529.
	Altitude: Up to 2000 meters.
Safety	EN 61010-1 – 2001. CE Mark requirements for General Purpose (Ordinary Location) Safety.
	900CS10-00, 900CS15-00
	ANSI/UL 61010-1 – 2005, Second Edition. General Purpose (Ordinary Location) Safety.
	UL evaluated to CSA C22.2 No. 61010-1-2004- Second Edition. General Purpose (Ordinary Location) Safety.
	UL, CSA and FM Class I, Div 2 Groups A,B,C and D - Hazardous (Classified) Location Safety for USA and Canada
Electromagnetic Compatibility	IEC61326 - 2005 CE Mark EMC requirements for electrical equipment for measurement, control and laboratory use.

Immunity to Industrial Locations:

ESD	IEC 61000-4-2	Criterion A 4kV contact discharge 8kV air discharge
EM field	IEC 61000-4-3	Criterion A 10 V/m (80 MHz to 1 GHz) 3 V/m (1.4 GHz to 2 GHz) 1 V/m (2.0 GHz to 2.7 GHz)
Electrical Fast Transient/Burst	IEC 61000-4-4	Criterion A 2kV power 1kV I/O signal/control, including functional earth lines
Surge	IEC 61000-4-5	Criterion B 1kV L-L, 2kV L-Gnd power 1kV I/O signal/control, including functional earth lines
Conducted RF	IEC 61000-4-6	Criterion A 3Vrms Power and all I/O
Magnetic field	IEC 61000-4-8	Criterion A 30A/m

Emissions:

Emissions	EN 55011 (CISPR11)	Class A

Construction	Steel rear metal enclosure with NEMA 4X/IP66 aluminum front plate when correctly fitted with the gasket provided. Installation Category II, Pollution Degree 2.

Specifications – apply to all models unless noted

Mounting	Panel Mount with gasket using #8-32 studs (14 for 900CS10-00 and 22 for 900CS15-00)
	Maximum panel thickness: 0.25" (6.3 mm).
	For NEMA 4X/IP66 sealing, a steel panel with minimum thickness of 0.125" (3.17 mm) is recommended.
	Maximum Mounting Stud Torque: 17 inch-pounds (1.92 N-m)

	Depth behind panel:
	      900CS10-00: 2.35 inches (59.6 mm)
	      900CS15-00: 2.8 inches (71.5 mm)

	Front bezel Thickness:
	      900CS10-00: 0.2 inches (5.08mm)
	      900CS15-00: 0.28 inches (7.1mm)

Weight	900CS10-00: 5.7 lbs (2.59 Kg)
	900CS15-00: 11.41 lbs (5.17 Kg)
Functions	
Security	Log-on and log-off via user name and password
	Remote Web interface and local log-on via user name and password
	Up to 50 users
	Different groups of users and permissions
	Audit trail records

Display Capabilities	Graphic objects:
	      Industrial automation graphic objects (tanks, pipes, pumps)
	      Industrial gadgets (buttons, switches, lamps)
	      Navigation buttons
	      Drawing objects (circles, lines, etc)
	      Importing of images (bmp, tiff, jpg)
	      Dictionary text objects
	      Widgets (Predefined for controller function blocks)
	Animation:
	      Visible / not visible, flashing, background color change, foreground color change
	Display capacity:
	      Number of screens limited by available memory >50 typical
	Master Display:
	      Sets common attributes for all displays
	Data entry:
	      Numeric entry including decimal point and scientific notation
	      Time and date entry
	      Audible feedback on data entry / touch
	Scripting:
	      If-then-else statements
	      Multiple levels (trigger display actions and parameter writes)

Data Logging	Media: Volatile RAM memory, optional non-volatile flash card memory or removable USB memory module
	Data Types: Process history, alarms, events, diagnostics, user changes
	Export format: CSV

Station Designer Software Specifications

WYSIWYG (what-you-see-is-what-you-get)	For displays from PC to operator interface
Tag Limits	Software tag limits not imposed
Controller database Integration	Import utility for Process Controller Designer .cde files to Station Designer .sds files for database transfer
PC Operating Systems supported	Windows 2000, XP, Vista and Windows™ 7

Languages	Station Designer – English only
	900 Control Station – English, French, German, Italian and Spanish Languages provided, other language support
	      Import Export via lexicon library for additional Languages
	      Auto Translate using Microsoft® and Google® web facilities

Quick Toolbar	Toolbar on demand for quick editing of display content
Editing highlights	Image and Font Manager allows global substitution "Copy From" allows properties to be copied from one primitive object to other primitive objects. Create new tags and pages while writing expressions Universal Search Architecture - Find command, navigation lists, display page editor, program editor Setup data logs from Trend Viewer primitive Import and Export multi-state tag formats and coloring
Data Entry Selections and Features	Alphanumeric, digital, scientific notation. Selectable Check Before Operate (Are you sure?) for tags and object actions

Dimensions

900CS10-00
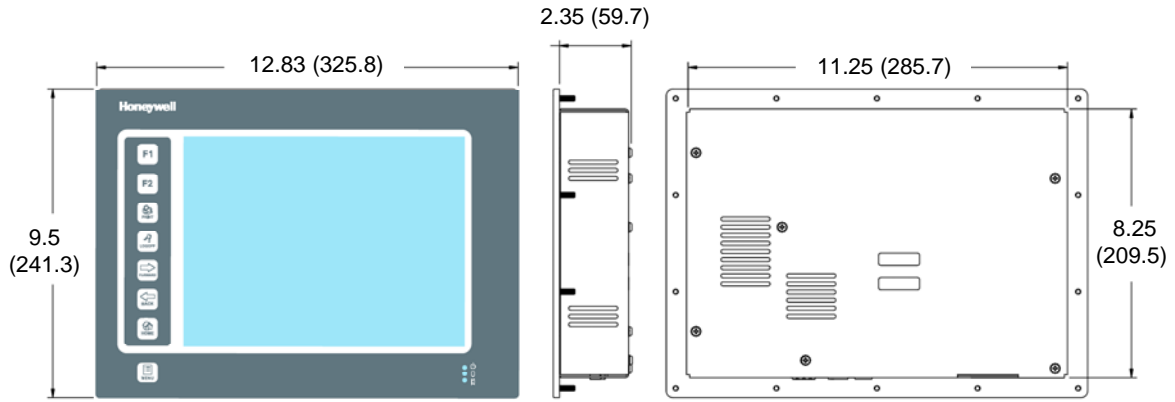
900CS15-00
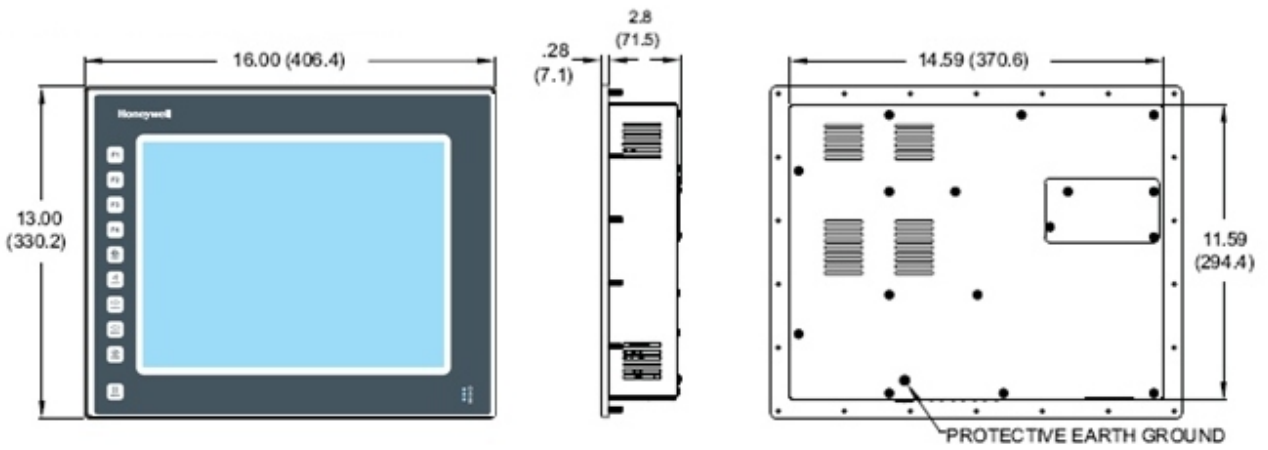
Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose**. Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications are subject to change without notice.

Sales and Service

For application assistance, current specifications, pricing, or name of the nearest Authorized Distributor, contact one of the offices below.

ASIA PACIFIC

Honeywell Process Solutions,
(TAC) **hfs-tac-support@honeywell.com**

Australia
Honeywell Limited
Phone: +(61) 7-3846 1255
FAX: +(61) 7-3840 6481
Toll Free 1300-36-39-36
Toll Free Fax:
1300-36-04-70

China – PRC - Shanghai
Honeywell China Inc.
Phone: (86-21) 5257-4568
Fax: (86-21) 6237-2826

Singapore
Honeywell Pte Ltd.
Phone: +(65) 6580 3278
Fax: +(65) 6445-3033

South Korea
Honeywell Korea Co Ltd
Phone: +(822) 799 6114
Fax: +(822) 792 9015

EMEA

Honeywell Process Solutions,
Phone: + 80012026455 or
+44 (0)1344 656000

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC)
hfs-tac-support@honeywell.com

AMERICA'S

Honeywell Process Solutions,
Phone: (TAC) 1-800-423-9883 or
215/641-3610
(Sales) 1-800-343-0228

Email: (Sales)
FP-Sales-Apps@Honeywell.com
or
(TAC)
hfs-tac-support@honeywell.com

Distributed by:

888.858.3647 | relevantsolutions.com

For more information
To learn more about HC 900 Process Controller,
visit **www.honeywellprocess.com**
Or contact your Honeywell Account Manager

Process Solutions
Honeywell

1250 W Sam Houston Pkwy S
Houston, TX 77042

Honeywell Control Systems Ltd
Honeywell House, Skimped Hill Lane
Bracknell, England, RG12 1EB

Shanghai City Centre, 100 Jungi Road
Shanghai, China 20061

Honeywell

51-52-03-46
September 2013
©2013 Honeywell International Inc.

www.honeywellprocess.com