

Models 559 and 1042 Operator Interface

Specification

OPERATOR INTERFACE OVERVIEW

Model 1042

The 1042 Operator Interface (OI) for the HC900 Hybrid Control System provides a graphic LCD display and a monoplaner keyboard to allow operator access to all controller functions. The operator interface has a 10.4", active matrix, color LCD display and is front panel rated as Type 4X.

A 3.5" floppy disk drive (or optional ZIP drive) and process data archiving feature allows recording of analog values, alarm actions, and digital events.

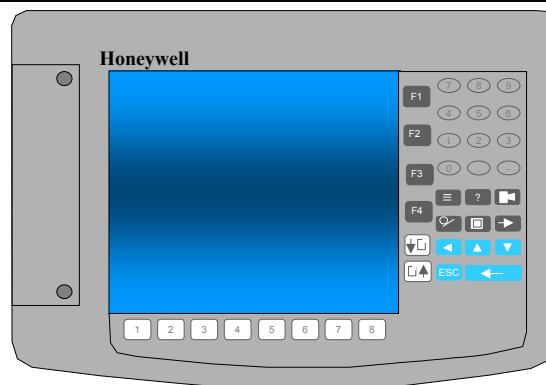


Figure 1—Model 1042 Operator Interface

Model 559-T12 and 559-T4

The Model 559-T12 and 559-T4 operator interfaces also provide comprehensive process monitoring, data entry, and historical data archiving for the HC900 Hybrid Controller. Both models come with a vibrant 5½ inch color liquid crystal display, full-function 22 key membrane keypad, a 1.44 MB floppy disk drive, and communication interface to the HC900 Controller

The **OI 559-T12** is packaged in a TYPE 12 enclosure ready to use on your plant floor. The OI 559-T12 provides front-panel access to the floppy disk drive and can be panel or wall mounted.

The **OI 559-T4** is packaged in a TYPE 4X enclosure to withstand wash-down at the front panel. The panel-mounted OI 559-T4 provides rear access to the floppy disk drive to protect the drive and your valuable data on its disk during wash-down operations.

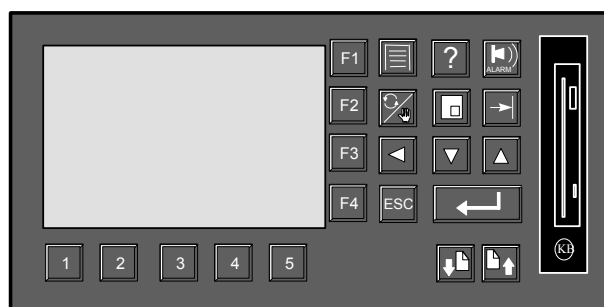


Figure 2—Model 559-T12 Operator Interface

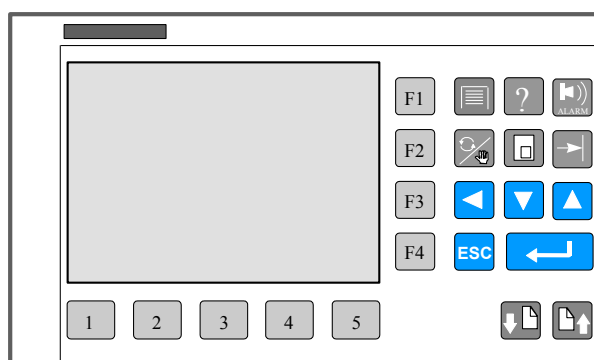


Figure 3—Model 559-T4 Operator Interface

OPERATOR INTERFACE OVERVIEW, CONTINUED

The operator interface becomes operational once a valid database is configured in the controller.

Modification and customization of the operator interface is performed using HC900 Hybrid Control (HC) Designer software. With the software, data points can be identified (tagged) using eight character names.

Once named, these data points may be accessed by the operator interface using a standard set of display formats, a predefined menu hierarchy, and selected security.

Customized display access and the assignment of selected display screens to keyboard buttons may be developed using the HC Designer software.

Selected screens such as bargraphs, trends, panel meter and overview displays will only require the user to select the format, select tags from a list to define a data group, then apply to the format. Control loops, SP programmers, and other principal functions are all interactive using their respective screen formats.

A 3.5" floppy disk drive (or optional ZIP drive-Model 1042 only) and process data archiving feature allows recording of analog values, alarm actions, and digital events. Data storage parameters are established for the operator interface using the HC Designer software.







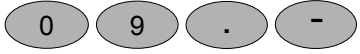


Archived data files require Honeywell Software for Data Analysis (SDA) to view and analyze records. Conversion of archived files from a Honeywell compressed data format to other formats, such as Data Interchange Format (DIF) or Comma Separated Variable (CSV) requires SDA software.



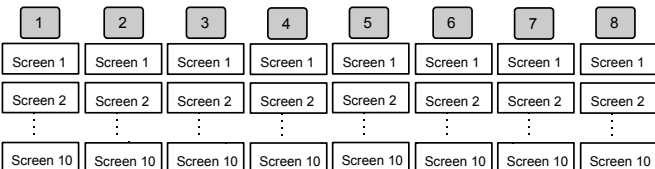
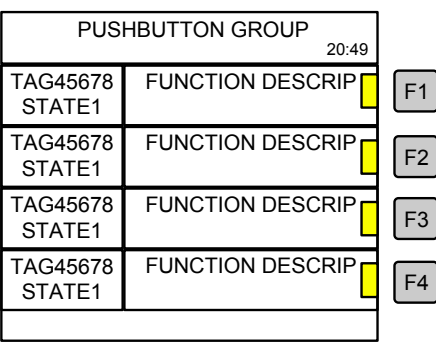
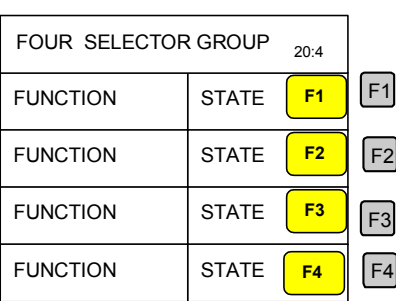
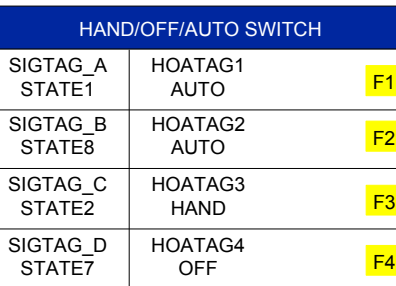
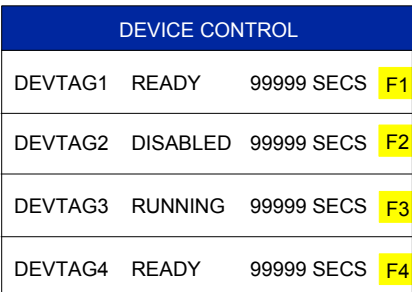
The storage device can be used to archive process data, store and transfer controller and operator interface configurations, setpoint programs, and recipes.

The OI 559-T12 and OI 559-T4 allow you to do all of this using its 1.44 MB floppy disk drive and standard disk utilities and data storage screens.

On Model 1042, the floppy or ZIP drive is located at the left front of the panel, accessed via a swingout door secured by two ¼ turn tool accessible fasteners. A numeric keypad allows optional, direct numeric entry including control loop setpoints and a QWERTY keyboard connector is available via a rear panel connector.

TABLE 1 – Operator Interface Keyboard Functions

Key	Description
	Digit Select, Increment, and Decrement keys change analog values, including setpoints if desired and to toggle between ON and OFF states of digital parameters.
	Enter key enters a value, selects a menu item, or selects a parameter to be altered.
	Escape key cancels an entry, exits a menu, or aborts an operation.
	Auto/Manual key changes the operating mode of control loops between automatic and manual.
	Detail key navigates vertically on selected display fields for detail access and data entry or for trend scroll/zoom access.
	Tab key navigates within certain screens to specific major areas for user interaction such as to a specific control loop on a multi-loop screen or on an alarm display to a specific alarm to obtain more detail.
	Number keys (Model 1042 only) let you enter numerical data, including control setpoint and output values on operator displays if desired.
	Main Menu key accesses the main menu of functions for the controller and OI.
	Help key accesses user-defined help screens for process operation.

	<p>Alarm Access/Acknowledge key displays active alarm information and acknowledges active alarms.</p>
	<p>Page Up and Page Down keys sequence through multiple pages of specific screen types.</p>
	<p>The screen access keys (1-8 Model 1042, 1-5 Model 559) are configured by the user with HC Designer configuration software. Each screen access button can be configured with up to ten screens in a screen group. The keys contain key legends 1 through 8 or 1 through 5 on a plastic insert. This insert can be removed and replaced with application-specific legends that identify the specific screen group assigned to each key. The Page Up and Page Down keys are used to page through the screens assigned to each key after first selection.</p>
	<p>The Pushbutton Group display is directly associated with a pushbutton function block. Pushbuttons F1 through F4 cause a single pulse output of the output pin of the associated function block.</p> <p>A digital status indication is available for each button. This indication may be assigned to a digital element in the program by the user during configuration to indicate the ON and OFF state confirmation of the digital action being controlled by the button.</p> <p>Up to 8 screens (32 digital tags) may be configured, assigned to any screen access key.</p>
	<p>The Four Selector Switch Group display is directly associated with a Four Selector Switch Function block. Pressing buttons F1 through F4 calls up a dialog box to allow changes to the output selection for the associated block.</p> <p>Each button supports up to 4 state outputs. Only one state output can be selected at a time. Selecting one state (ON output) turns OFF the other 3 state outputs.</p> <p>Up to 8 Four Selector switches may be configured.</p>
	<p>The Hand/Off/Auto Switch Group display is directly associated with the Hand/Off/Auto Switch function block.</p> <p>Pressing buttons F1 through F4 calls up a dialog box to allow changes to the output selection for the associated block.</p> <p>Each button supports one function block and its dialog box displays current state and allows Hand/Off/Auto output to be selected.</p> <p>Up to 16 HOA blocks may be configured.</p>
	<p>The Device Control Display Group display is directly associated with the Device Control function block.</p> <p>Pressing F1 through F4 calls up a display box to allow changes to the associated block</p> <p>Each button supports one function block and its dialog box allows delay times to be entered.</p> <p>Up to 16 Device Control blocks may be configured.</p>

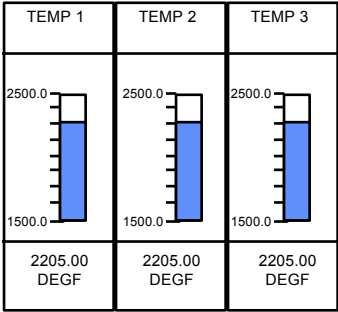
Screens

The following are examples of typical display screens included in the operator interface.

Data Viewing Screens

OVERVIEW GROUP 1	
TAGNAME1	0.00 DEGF
TAGNAME2	1000.00 DEGF
TAGNAME3	0.00 DEGF
TAGNAME4	ON
TAGNAME5	OFF
TAGNAME6	0.00 DEGF
TAGNAME7	0.00 DEGF
TAGNAME8	0.00 DEGF
TAGNAME9	0.00 DEGF
TAGNAME10	0.00 DEGF
TAGNAME11	0.00 DEGF
TAGNAME12	0.00 DEGF

Overview(with data entry)



Vertical Bars

PANEL GROUP 1		11:30
TAGNAME1	2205.0	DEGF
TAGNAME2	2000.0	DEGF
TAGNAME3	ON	
TAGNAME4	205.0	DEGF
TAGNAME5	OFF	
TAGNAME6	83.5	DEGF
TAGNAME7	ON	

Multipoint Panel

FURNACE TEMP	MAY06 11:30
TIC101 1500.0 DEGF	

Single Point Panel

PANEL METER TITLE		
TAG45678 STATE1	TAG45678 1234.56	TAG45678 STATE2
TAG45678 1234.56	TAG45678 STATE2	TAG45678 1234.56
TAG45678 STATE2	TAG45678 STATE1	TAG45678 STATE1
TAG45678 1234.56	TAG45678 1234.56	TAG45678 1234.56

Panel Meter Group

ALARM GROUP 1			11:30
TAG5678 STATE1	TAG5678 STATE2	TAG5678 STATE1	
TAG5678 STATE2	TAG5678 STATE1	TAG5678 STATE1	
TAG5678 STATE1	TAG5678 STATE1	TAG5678 STATE1	
TAG5678 STATE1	TAG5678 STATE1	TAG5678 STATE1	

Alarm Group

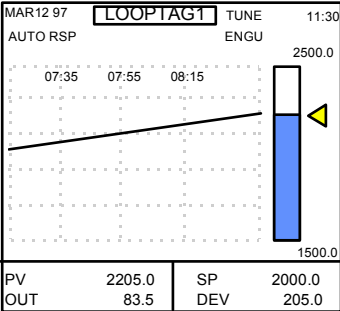
Control Loop Screens

	<div>LOOPTAG1</div> <div>AUTO LSP TUNE</div> <div>AL1 AL2</div> <div>PV</div> <div>2205.0</div> <div>ENGU</div> <div>SP 2000.0</div> <div>OUT 83.5 %</div>
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Single Loop Numeric

LOOPTAG1	LOOPTAG2	LOOPTAG3	LOOPTAG4
PV 2205.0 SP 2000.0 OUT 83.5	PV 2205.0 SP 2000.0 OUT 83.5	PV 2205.0 SP 2000.0 OUT 83.5	PV 2205.0 SP 2000.0 OUT 83.5
MAN LSP	MAN LSP	MAN LSP	MAN LSP

Multi-loop Bar



Tuning Trend

Setpoint Program, Recipe, Setpoint Scheduler Displays

SP PROGRAMMER SPTAG1				MAY 05 11:30	
STATE	PROFILE	SEGMENT	RAMP		
RUN	3	2	<input checked="" type="checkbox"/>		
PRIMARY AUX LABEL				F1	RUN
PV	1450.0	ENGU	31.0	ENGU	
SP	1449.0	ENGU	31.1	ENGU	
ELAPSED SEGMENT TIME 0001:30:00				F2	HOLD
ELAPSED PGM TIME 0006:00:00				F3	RESET
SEG TIME REMAIN 0000:10:00				F4	ADV
PV2	0				
PV3	0				
LOAD					
CLEAR					
EDIT					
SAVE					
ALARM	D	MESSAGE TEXT		S	H Z RUN

SPP Overview (1 Programmer)

EDIT RECIPE 1	
PAGE 1 OF 5	RECNAME1
TAGNAME1	= 0.00 DEGF
TAGNAME2	= 1000.00 DEGF
TAGNAME3	= 0.00 DEGF
TAGNAME4	= ON
TAGNAME5	= OFF
TAGNAME6	= 0.00 DEGF
TAGNAME7	= 0.00 DEGF
TAGNAME8	= 0.00 DEGF
TAGNAME9	= 0.00 DEGF
TAGNAME10	= 0.00 DEGF

Edit Recipe

SP SCHEDULER SPTAG1				MAY 05 11:30	
STATE	SCHED	SEGMENT	RECYCLES REMAIN		
RUN	3	2	0		
SEG REMAIN 0000:00:00			TOTAL 0000:00:00	F1	RUN
SP			PV	F2	HOLD
SP1	USERLBL1	123456.7	123456.7	ENGU	
SP1	USERLBL1	123456.7	123456.7	ENGU	
SP1	USERLBL1	123456.7	123456.7	ENGU	
SP1	USERLBL1	123456.7	123456.7	ENGU	
SP1	USERLBL1	123456.7	123456.7	ENGU	
SP1	USERLBL1	123456.7	123456.7	ENGU	
SP1	USERLBL1	123456.7	123456.7	ENGU	
LOAD				F4	ADV
CLEAR					
EDIT					
SAVE					
ALARM	D	MESSAGE TEXT		S	H Z RUN

Setpoint Schedule Overview

Sequencer Displays

SEQUENCE 1 - LABEL		MAY06 11:30	
PAGE 1 OF 4	CURRENT STEP - 11		
OUTPUTS		NEXT STEP	
STEP PHASE	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	TIMER	EV1 EV2 ADV
1 PHASE001LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
2 PHASE002LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
3 PHASE003LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
4 PHASE004LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
5 PHASE005LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
6 PHASE006LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
7 PHASE007LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
8 PHASE008LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
9 PHASE009LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
10 PHASE010LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
11 PHASE011LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
12 PHASE012LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
13 PHASE013LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
14 PHASE014LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
15 PHASE015LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
16 PHASE016LABL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	3 4 2
VIEW STEP DETAILS			
EDIT STEP DETAILS			
ALARM	D	MESSAGE TEXT	S H Z RUN

Sequencer

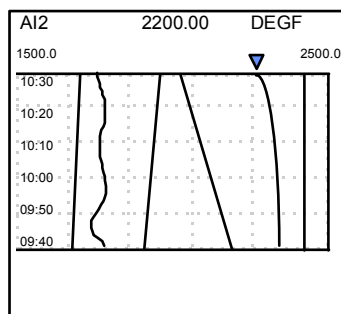
SEQUENCER		12:30	
SEQUENCE 20 COGS			
STATE	HEATING	F1	RUN
STEP 1	MODE RUN	F2	HOLD
STEP ELAPSED TIME 0000:00:00	STEP TIME REMAINING 0000:00:00	SEQUENCE ELAPSED TIME 0000:00:00	
AUX OUTPUT - 124.6		F3	RESET
F4 ADVANCES TO STEP 60		F4	ADV
VIEW/EDIT SEQUENCE			
LOAD SEQUENCE			
EDIT SEQUENCE			
SAVE SEQUENCE			
CLEAR SEQUENCE			

Sequencer Operation

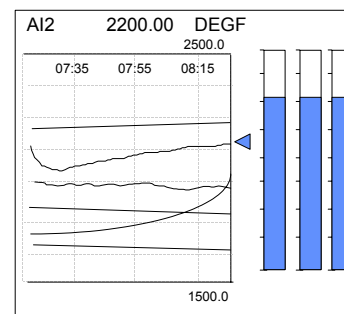
Other Screens

YOUR NAME
HERE
SUPPORTING TEXT LINE 1
SUPPORTING TEXT LINE 2
SUPPORTING TEXT LINE 3
SUPPORTING TEXT LINE 4

Start-up



Vertical Trend



Horizontal Trend w/Bar

MESSAGES
START-UP NOTES:
USE RECIPE #1 AFTER SHUTDOWN.
CHANGE SETPT TO 450.
SHUT OFF PUMP#1.
TURN ON WATER VALVE.
RESET LIMIT CONTROL.
VERIFY WATER LEVEL ON TANK#1.

Text Messages

ALTRNTR1				12:30	
STATE	STATUS	DEMAND	STYLE		
RUN	OK	8	ROTARY		
IN # 1 - 8				F1	ADV
9 - 16				F2	EDIT
OUT	OUT	DMND	OUT	DMND	OUT
1	9	1	1	9	0
2	10	2	2	10	0
3	11	3	3	11	0
4	12	4	4	12	0
5	13	5	5	13	0
6	14	6	6	14	0
7	15	7	7	15	0
8	16	8	8	16	0

Alternator

ALTRNTR1				12:30	
STATE	STATUS	DEMAND	STYLE		
RUN	OK	8	DIRECT		
IN # 1 - 8				F1	ADV
9 - 16				F2	EDIT
OUT	OUT	IN #	OUT	IN #	OUT
1	9	1	2	9	0
2	10	2	4	10	0
3	11	3	6	11	0
4	12	4	1	12	0
5	13	5	3	13	0
6	14	6	5	14	0
7	15	7	7	15	0
8	16	8	8	16	0

Alternator

ANALOG INPUT SUMMARY						
PAGE 1 OF 17						
ADDRESS		TAG	DESCRIPTION	VALUE	DEGF	STATUS
R	S					
1	1	Z1-TEMP	ZONE 1 TEMP	12345.00	DEGF	FORCED
1	1	Z2-TEMP	ZONE 2 TEMP	123456.7	DEGF	TC FAILED

ALARM

D

MESSAGE TEXT

S

H Z

RUN

Analog Input Summary

DIGITAL OUTPUT SUMMARY						
PAGE 1 OF 5						
ADDRESS		TYPE	TAG	DESCRIPTION	STATE	STATUS
R	S					
1	4	DO	PMP-STRT	PUMP START	ON	FORCED
1	4	2	TPO		0	GOOD
1	4	3	3P-F		1	GOOD
1	4	4	3P-R		0	GOOD
2	1	1	DO	FAN-3	EXHAUST FAN	OFF
						FAILED

ALARM

D

MESSAGE TEXT

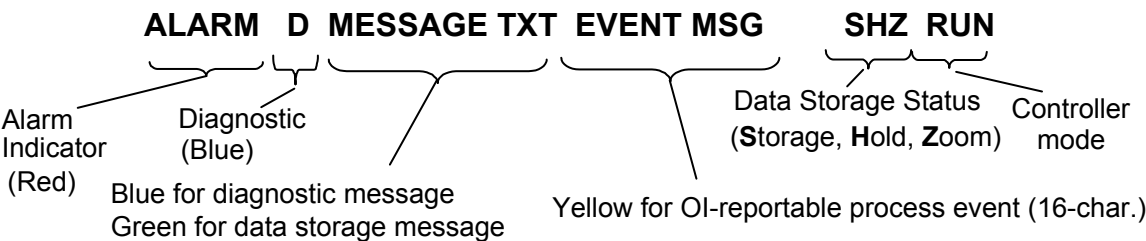
S

H Z

RUN

Digital Output Summary

Each display of the operator interface has a reserved area at the bottom to indicate status information. The indications are as follows:



Screen Access

The operator interface has pushbutton type actions in 5 categories to access display screens. These are:

- **User-defined screen buttons 1 through [5] 8**—Each user-defined screen button supports a sequence of up to ten screens. Screens assigned to these buttons may be Monitor Screens (view data only) or Operate Screens (take actions). The type of screen and the data presented on the screen is defined by the user during configuration.
- **Menu button**—This button provides access to the menu items supported by over 100 displays to set up, tune, manage, diagnose, and maintain the system.
- **Pushbutton Group and Four Selector Group F1 through F4**—These buttons provide input to discrete on-off actions.

- **“?” user-defined Help**—This button provides access to up to ten user text screens. These screens may include user notes, operator instructions, or other information defined by the user.
- **Alarm view/Acknowledge**—This button is used to access alarm group screens and to acknowledge alarms.

Display Formats

There are 36 display formats for accessing control loops, viewing process data, or for operator entry. Overview screens (12 parameter), for example, may be used for viewing data and/or entering data or changing digital status. Control loop screens, single or multi-loop, allow operator interaction. There is also a loop trend that collects data at a 1 sec. data rate for tuning. Other displays specific to block functions are interactive and may have several associated displays.

SP Programmer, SP Scheduler, and Recipe Displays

These screens allow operator interaction for ramp/soak programs and recipe selection. Edits can also be made. Profiles (for SP programmers) and Schedules (for SP Schedulers) are selectable by name or number. Recipes, which include fixed parameters and can include profile or schedule numbers, are selected by name from standard recipe screens.

Trend Displays

This feature allows real-time trending of up to 24 tagged values assigned to 4 screens of up to 6 trend points each, analog or digital. Each trend point has its own color and engineering unit range. The time range may be 0.5 hr. to 24 hr./screen. The trend tools include zoom and scrolling back in time to extend the time range from 1.5 to 5 times dependent on the number of points per screen, and cursor panning to view actual digital values at a specific point.

TABLE 2 – Summary of Operator Interface Display Screens

Button	Display Type	Description
1 to 5 (Models 559) 1 to 8 (Model 1042)	Monitor Analog or Digital	<p>User assigns data to predefined locations within each screen format.</p> <ul style="list-style-type: none"> • <i>Single Point Panel Screen</i> provides a single point alphanumeric readout that consists of the tag and current value. The display sequences through a list of up to 12 analog or digital signals. Up to 2 groups can be configured. • <i>Bargraph Screen</i> provides graphic representation of multiple analog or digital points using horizontal or vertical bargraph orientation. Bargraph screens are available in 3-point and 6-point format. (Up to 8 groups maximum) • <i>Trend Graph Screen</i> has four types available: horizontal, vertical, horizontal with bars, horizontal with digital values. Up to six analog or digital points may be included on each trend graph. Scrolling moves the trend graph backward or forward in time. Up to 4 screens can be configured for a total of 24 trend points. • <i>Multipoint Panel Screen</i> presents the current value/state for up to seven analog or digital tagged points in the controller. Up to 8 groups can be configured. • <i>Panel Meter Screen</i> presents a 3-row by 4-column array of analog values and digital statuses similar to an annunciator panel format. Up to 20 panel groups can be defined.
N/A	Other	<ul style="list-style-type: none"> • <i>Start-up Screen</i> contains user-specified text and is the first screen displayed during start-up. Not available during normal operation.
1 to 5 (Models 559) 1 to 8 (Model 1042)	Operate Screens Loops	<ul style="list-style-type: none"> • <i>Single Loop Numeric Screen</i> provides an overview of a single control loop in alphanumeric form. • <i>Eight Loop Bar Screen</i> provides an overview of loops 1-8, 9-16, 17-24, 25-32. • <i>Multi-loop Bar Screen</i> provides an overview of two, three, or four control loops as traditional loop faceplates. • <i>Single Loop Trend</i> provides an overview of a single control loop in alphanumeric form with a trend of the controlled variable. • <i>Sixteen-loop Summary Screen</i> provides an overview of 16 control loops in tabular form. • <i>Loop Control Screen</i> provides access to setpoint source selection and tuning parameters. This screen may be accessed from any loop operate screen. All control loop screens allow Auto/Manual selection, setpoint, and output adjustments. Remote/local SP selection, autotuning and other specific loop functions are available through menu-selected screens.
1 to 5 (Models 559) 1 to 8 (Model 1042)	Overview	<ul style="list-style-type: none"> • <i>Overview Screen</i> presents the current status/state for up to twelve analog or digital tagged points. Allows editing variables within the group. Up to 30 groups may be configured.
1 to 5 (Models 559) 1 to 8 (Model 1042)	Operate Screens Setpoint Program	<ul style="list-style-type: none"> • <i>Setpoint Program Overview Screen</i> presents data in tabular format for a setpoint profile and event status (16 events). Provides operational control of the profile. • <i>Setpoint Program Details Screen</i> provides a view of program details. • The operator can edit, load, and save setpoint programs.
1 to 5 (Models 559) 1 to 8 (Model 1042)	Operate Screens Setpoint Scheduler	<ul style="list-style-type: none"> • Master Setpoint Scheduler Screen presents data in tabular format for up to 8 setpoint outputs and associated controlled variables. Scheduler Auxiliary setpoints and events are accessed from the master scheduler display. • The operator can edit, load and save setpoint schedules.
1 to 5 (Models 559) 1 to 8 (Model 1042)	Digital Start/Stop and Status (F1–F4)	<ul style="list-style-type: none"> • <i>Pushbutton Function Screen</i> provides the interface to the four logic operator keypad keys (F1 through F4). Eight screens maximum.
Alarm	Alarms	<ul style="list-style-type: none"> • <i>Alarm Group Screen</i> provides a list of alarm groups and alarm conditions. Selection of alarm on screen allows access to alarm details (date/time, text)
?	User Notes	<ul style="list-style-type: none"> • User-generated (via HC Designer) text screens. Allows entry of title and 11 lines of text, 32 characters max. per line for each screen (10 screens maximum)

TABLE 2 – Summary of Operator Interface Display Screens (continued)

Button	Display Type	Description
Menu	Alarms/Events/ Diagnostics	<ul style="list-style-type: none"> Access Alarm summary for individual alarm groups Access Alarm groups Access Event summary for the last 150 events, time-stamped Access Diagnostic summary. Provides status of System, CPU, Memory, Real-time clock, I/O (lists I/O type configured in each slot plus status in racks 1-5), Comm Ports (lists details and status for RS-232 Configuration port, RS-485 OI port, Ethernet network port and Expansion I/O port)
Menu And 1 to [5] 8	Recipes	<ul style="list-style-type: none"> Allows selection and loading of recipes. Recipe list shows 8-character tag and 16-character descriptor for each recipe, numbered 1 through 50 recipes at 25 recipes per screen.
Menu	Summary Displays	<ul style="list-style-type: none"> Provides view of current value or state and error status for all I/O configured using separate displays - Analog Input Summary, Analog Output Summary, Digital Input Summary, Digital Output Summary, and Variable List. All parameters are shown with their 8-character tag and 16-character descriptor.
Menu	Loops	<ul style="list-style-type: none"> <i>Loop Trend Screen</i> provides an overview of a single control loop for viewing loop tuning performance in a combination of a 5-minute span trend graph and alphanumeric format. <i>Loop Control Setup Screen</i> presents loop status and allows the operator to edit selected loop parameters from this screen. <i>Loop Tuning Screen</i> allows the user to set up and start the loop tuning function. <i>Autotune screen</i> provides access to autotune enable settings. <i>Loop Alarms</i> screen provides access to loop alarm setpoints. <i>Limits</i> screen allows access to setpoint, PV, and output limits. <i>Alarm Setpoints</i> screen allows alarm type (Dev, Hi, Lo), setpoints, and hysteresis to be entered for Alarms 1 and 2 for each control loop <i>High Output Limiting</i> allows control loop output ramp rate and delay time to be set up (soft start feature) to prevent excessive output drive after a power up.
Menu	Setpoint Programmers	<ul style="list-style-type: none"> Provides access to setpoint program segment and event edit screens and saving program to a profile number.
Menu	Setpoint Scheduler	<ul style="list-style-type: none"> Provides access to setpoint schedule segment and event edit screens and saving schedules.
Menu	Sequencers	<ul style="list-style-type: none"> Provides access to sequencer data for editing steps, time and event actuations. Allows storing sequences to controller memory.
Menu	Unit Setup	<ul style="list-style-type: none"> Selections under this menu support controller status indications, unit setup functions, controller mode changes, engineer and operator security, AI and AO calibration, file name assignments, self-test routines, and display brightness changes
Menu	Disk Utilities	<ul style="list-style-type: none"> Selections under this menu support disk formatting and file management. Recipes, profiles, sequences loading/storing configurations
Menu	Data Storage	<ul style="list-style-type: none"> View storage status View storage settings Storage controls Initialize storage disk Load storage settings Store storage settings
Menu	Log Off	<ul style="list-style-type: none"> Allows the user to disable the operator interface operation until activated by security code entry.

Operator Interface Specifications

Specifications apply to all models unless listed under a specific model.			
	Model 559-T12	Model 559-T4	Model 1042
Display			
Type	Passive Color LCD		TFT Active Matrix Color LCD
Number of Pixels	320 x 240 pixels (1/4 VGA)		640 x 480 (Std VGA)
Viewing Area (Width x Height)	119 mm x 90 mm 4.7 inches x 3.5 inches		211 mm x 158 mm 8.3 inches x 6.2 inches
Performance	Screen Update Rate: 1.0 seconds Average Data Entry Response Time: 1.5 seconds Average Screen Call-up Time: 1.5 seconds		
User Input	Front panel membrane keypad. 22 keys. Front accessible AT keyboard port (keyboard not included)	Front panel membrane keypad. 22 keys. Front or rear accessible AT keyboard port (keyboard not included)	Front panel membrane keypad. 37 keys. Rear accessible AT keyboard port (keyboard not included)
Enclosure Rating	DIN compatible panel mounted Type 12.	Type 4X Panel Mounted indoor only	Type 4X Panel Mounted
Dimensions			
Depth behind panel	136 mm 5.4 inches	136 mm 5.4 inches	183 mm 7.2 inches
Front face dimensions (Width x Height x Depth)	289 mm x 144 mm x 48mm 11.3 inches x 5.7 inches x 1.9 inches	240 mm x 159 mm x 4 mm 9.4 inches x 6.25 inches x 0.15 inches	400 mm x 248 mm x 27 mm 15.8 inches x 9.8 inches x 1.1 inches
Rear dimensions (Width x Height x Depth)	269 mm x 131 mm x 136 mm 10.6 inches x 5.2 inches x 5.4 inches	254 mm (door open) x 133.3 mm x 148 mm 10.0 inches (door open) x 5.25 inches x 5.5 inches clearance for Plug and cable	403 mm x 233 mm x 183 mm 15.9 inches x 9.2 inches x 7.2 inches Dimensions include mounting brackets
Panel cutout (Width x height)	269.9 ± 0.8 mm x 131.8 ± 0.8 mm 10.63 ± .03 inches x 5.19 ± .03 inches	213.4 ± 0.8 mm x 101.6 ± 0.8 mm 8.4 ± .03 inches x 4.0 ± .03 inches	377 ± 0.8 mm x 207 ± 0.8 mm 14.9 ± 0.03 inches x 8.2 ± .03 inches
Connection to controller			
Physical link	RS422, 2 conductor, shielded		
Terminations	Controller: screw type terminal strip Operator Interface: screw type terminal strip		
Maximum distance between controller and operator interface	601 meters (2000 feet)		
Power	External 24 Vdc +/- 10% @ 1.0 amp		
Weight	6.25 lbs.	6 lbs.	11.72 lbs.
Approvals and Safety Protection	CE Conformity EN61326 EN61010-1 Installation Category II Pollution Degree 2 <i>Planned:</i> UL1092 (draft)/UL916 CSA C22.2 No. 1010-1 FM Class I, Div. 2 Groups A, B, C, D	CE Conformity EN61326 EN61010-1 Installation Category II Pollution Degree 2 <i>Planned:</i> UL1092 (draft)/UL916 CSA C22.2 No. 1010-1 FM Class I, Div. 2 Groups A, B, C, D	CE Conformity EN61326 EN61010-1 Installation Category II Pollution Degree 2 UL3121-1 CSA C22.2 No. 1010-1 FM Class I, Div. 2 Groups A, B, C, D
Language	English, German, Italian, French, Spanish		
Security	A user-specified numerical code that provides secured access to parameter groups. Log-off security is also available to allow disabling all operator keys except those needed to log on with a security code.		

Operator Interface Specifications

Specifications apply to all models unless listed under a specific model.			
	Model 559-T12	Model 559-T4	Model 1042
Environmental Conditions			
Ambient Operating Temperature	32°F to 122°F 0°C to 50°C	32°F to 122°F 0°C to 50°C	32°F to 113°F 0°C to 45°C
Ambient Storage Temperature	–4°F to 140°F –20°C to 60°C	–4°F to 140°F –20°C to 60°C	–4°F to 140°F –20°C to 60°C
Ambient Operating Relative Humidity	10 to 90% RH non-condensing	10 to 90% RH non-condensing	20 to 80% RH non-condensing
Ambient Storage Relative Humidity	5 to 95% RH non-condensing	5 to 95% RH non-condensing	5 to 90% RH non-condensing
Data Archiving			
Media	3.5 inch 1.44MB floppy	3.5 inch 1.44MB floppy	3.5 inch 1.44MB floppy or 100 MB Zip
Data Types	Tagged analog and digital parameters, alarms and events		
Data Format	Honeywell Binary Encoded Format		
Trends	<i>Number of Files:</i> 2 maximum <i>Points per Trend:</i> 12 maximum, analog or digital <i>Modes:</i> Off, batch, continuous <i>Rates:</i> 2, 5, 10, 20, 30, 40, 50 seconds 1, 2, 5, 10, 20, 30 minutes <i>External Control:</i> Digital tagged signal—start/stop storage to both trend files		
Point Log	<i>Number of Files:</i> 1 <i>Points per File:</i> 12 points maximum, analog or digital points <i>Modes:</i> Off, Batch, Continuous, On Command <i>Sample Rates:</i> 1 to 60 minute samples, one minute increments 1-24 hours, one hour increments 1 month—same day of each month <i>Number of Records:</i> 2000 per file (up to 12 points per record) <i>External Control:</i> Digital tagged signal—start/stop storage to file Digital tagged signal—on-demand sampling		
Alarms	<i>Number of Files:</i> 1 <i>Records per File:</i> 150 to 1500 maximum, time/date, On and Off <i>Storage Modes:</i> Off, continuous, batch <i>External Control:</i> Digital tagged signal—start/stop storage to file		
Events	<i>Number of Files:</i> 1 <i>Records per File:</i> 150 to 1500 maximum <i>Storage Modes:</i> Off, continuous, batch <i>External Control:</i> Digital tagged signal—start/stop storage to file		
Circular Files (Roll-over)	<i>File Types:</i> Trends, Point Log, Alarms, Events EN6132		
File Management	File upload (from controller to diskette) and download (from diskette to controller) of: <i>Setpoint Profiles</i> <i>Setpoint Schedules</i> <i>Recipes</i> <i>Controller Configurations</i>		

Operator Interface Specifications

Specifications apply to all models unless listed under a specific model.							
	Model 559-T12		Model 559-T4			Model 1042	
Estimated Floppy Disk Capacity with Alarm/Event Storage Active <i>Point log active will reduce time by approximately 12%.</i>	Sample Rates		Estimated Floppy Disk Capacity				
	Number of Trends	Total Number of Points	2 Sec.	10 Sec.	30 Sec.	2 Min.	5 Min.
	1	6	17.2 hours	3.58 days	10.75 days	43 days	107.5 days
		12	9.4 hours	1.95 days	5.86 days	23.45 days	58.62 days
	2	18	6.1 hours	30.3 hours	3.75 days	15.15 days	37.87 days
		24	4.7 hours	23.4 hours	2.93 days	11.7 days	29.25 days
Estimated Zip drive capacity (Model 1042 only)	Sample Rates		Estimated Zip Drive Capacity Per Trend File				
	Number of Trends	Total Number of Points	2 Sec.	10 Sec.	30 Sec.	2 Min.	5 Min.
	1 or 2	6	11.9 days	59.5 days	178 days	714 days	1785 days
		12	6.5 days	32.5 days	97 days	388 days	970 days
	Note: On a Zip drive each trend is allocated 24 megabytes						

Specifications are subject to change without notice.

Dimensions

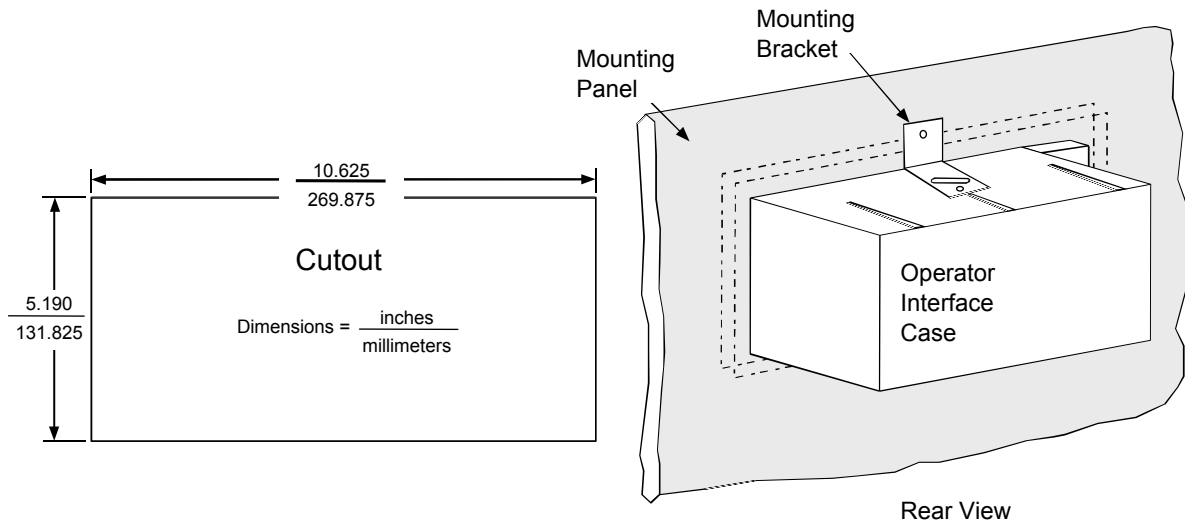


Figure 4—Cutout Dimensions for Operator Interface DIN Panel Mounting, Model 559-Type 12

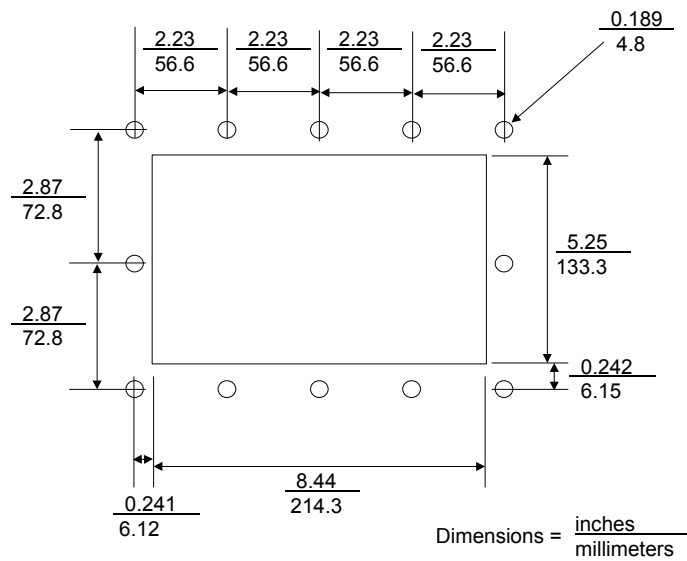
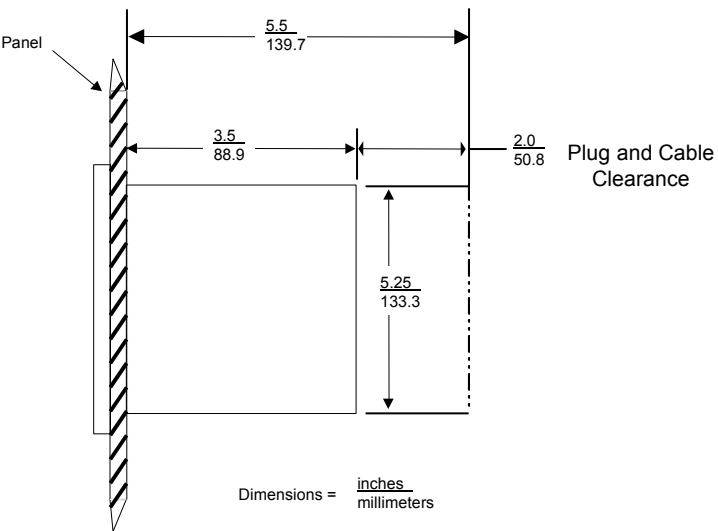
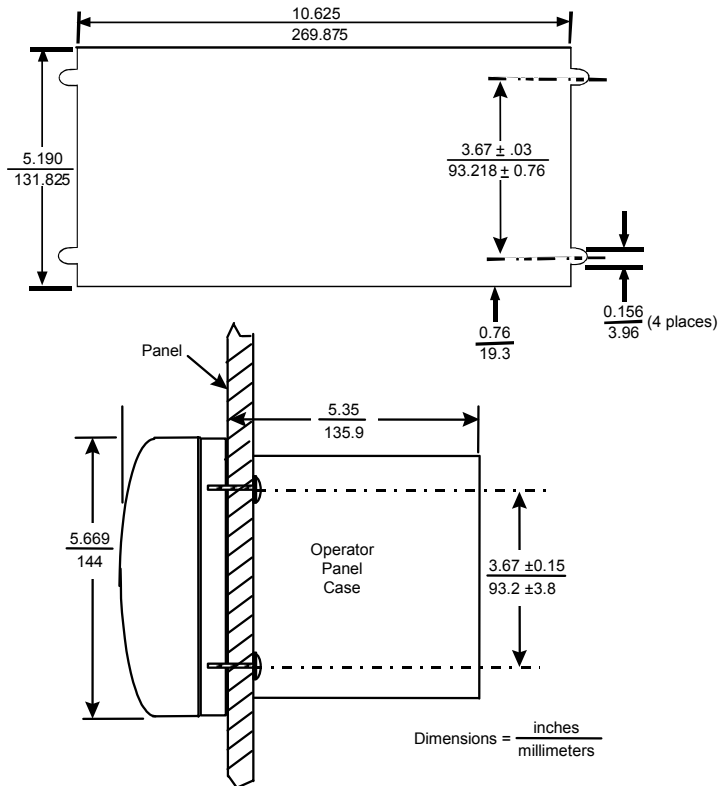


Figure 5—Cutout Dimensions for Operator Interface DIN Panel Mounting, Model 559-Type 4X

Dimensions (continued)



Dimensions (continued)

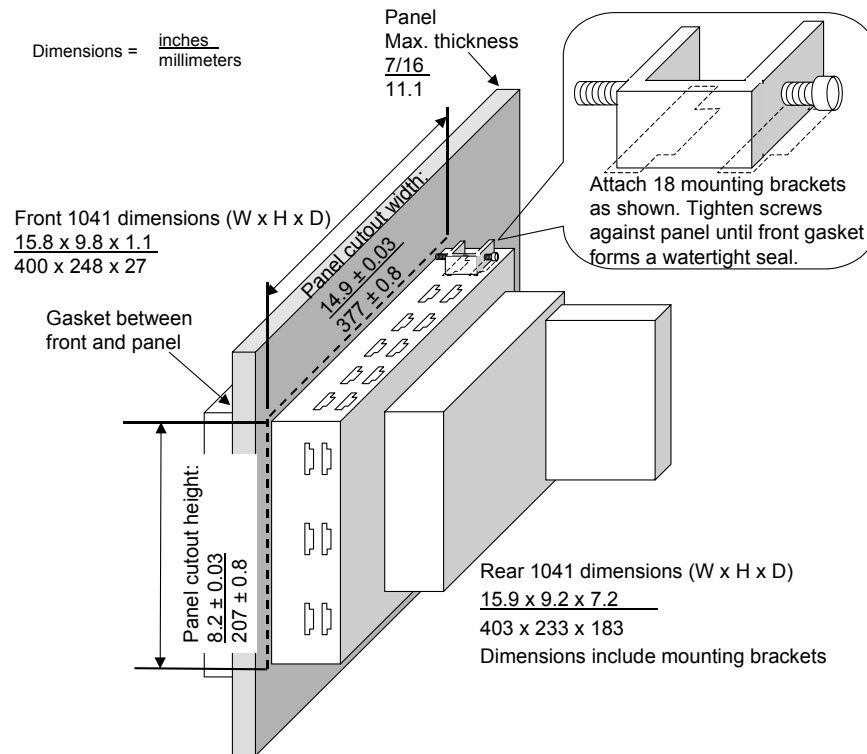


Figure 8—Operator Interface Panel Mounting Dimensions, Model 1042

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.

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