

# S7999B System Display Commercial/Industrial Combustion Controls



**Commission. Configure. Monitor. Control.**

**Honeywell**

# S7999B System Display: The Total System Solution



## Typical Applications

The Honeywell S7999B System Display can be used to [commission](#), [configure](#), [monitor](#) and [control](#) various Honeywell devices connected to the S7999B System Display through a configuration port or a Modbus® network of 1 to 99 burner/boiler systems/nodes. Compatible Honeywell devices include the ControLinks™ Fuel/Air Ratio Control System, 7800 SERIES or R7140 Burner Controls, S7830 Expanded Annunciators and Universal Digital Controllers (UDC). Honeywell Universal Digital Controllers (UDCs) are used for several burner/boiler applications, including Stack Temperature, Temperature/Pressure PID Load, Steam/Fuel Flow, Thermal Shock & Feed Pump Level Control. Applicable for single or multiple burner/boiler systems.

May be utilized for power burners, boilers, process furnaces, ovens, smelting, kilns, paint drying booths, VOC burn-off, ceramics, make-up air heaters or any burner/boiler application where commissioning, configuring, monitoring or control capability is desired. Ideal for hospitals, schools, universities, office complexes, commercial retail complexes, multi-unit housing dwellings and industrial process production facilities.

## Key Features

- System Security via Password
- Color Touch Screen with Full Screen Color Graphics
- Real-Time Trend Analysis: Trend Graphing, Totalization, Bar Graph of Key Variables
- 4 LEDs: Power / Network / COM 2 / COM 1
- Compatible with Honeywell UDC 2500/3200/3500 Controls for Burner/Boiler Applications
- Compatible with Honeywell 7800 SERIES & R7140 Burner Controls, S7830 Expanded Annunciators and ControLinks Fuel/Air Ratio Control System
- Interface with a burner/boiler network of up to 99 systems/nodes
- Modbus Master/Slave Configurations
- Off-Line ControLinks Profile Curve Configuration and S7999B Display Setup Capability
- Key Process Variable Display Capability
- Commission, Configure, Monitor and Control from 1 to 99 burner/boiler systems
- 3 Display Operational Modes: Local, Switchable or System
- Free software upgrades via the Internet

## Product Overview

Microprocessor-based system display with 3-1/2 in. x 4-5/8 in. color touch screen, full screen color graphics and a 30-second touch screen disable feature for cleaning. Display also has a screen saver, contrast control and volume control, 4 indication LEDs (Power, Network, COM 2, COM 1), system date/time stamping of faults, (2) RS-485 communication ports with built-in Modbus, one Ethernet port, password protection for various features, self diagnostics, 3 selectable operational modes (Local, Switchable, System) and factory-loaded software. A separate power supply is included with 100 – 240 Vac universal power input and 12 Vdc output to power the display. FCC approved, UL Listed and Canadian ICES-003 approved.

Allows R7999 EEPROM back-up and restore, FTP (File Transfer Protocol) to transfer stored files to a PC hard drive, floppy or CD-ROM and custom home page title. Free software upgrades available via the Internet. Provides real-time Trend Analysis in Local Mode of UDC device variables and 7800 SERIES/R7140 Burner Control flame signal. Advanced Setup Features including Ethernet Setting, Diagnostics, System Time and CPU Reset.

Compatible with Honeywell 7800 SERIES and R7140 Burner Controls, ControLinks Fuel/Air Ratio Control System, S7830 Expanded Annunciator and Honeywell Industrial Measurement and Control UDC2500/3200/3500 devices.

## Commission. Configure. Monitor. Control.

You can do it all with one S7999B System Display, providing value, flexibility and power in a single device. Now offering the enhanced capability of interfacing with Honeywell Industrial Measurement and Control UDC2500/3200/3500 devices, which may be used for Stack Temperature, Temperature/Pressure PID Load, Steam/Fuel Flow, Thermal Shock, Feed Pump Level Control in steam and hot water boiler applications. Three basic modes of operation offer flexibility of application for up to 99 burner systems. Advanced setup and options, including Ethernet Setting, Diagnostics, System Time, User Preferences, CPU Reset, Factory Default, EEPROM Maintenance and real-time Trend Analysis provide power and value — all at your fingertips.

**Commission** Honeywell's ControlLinks Fuel/Air Ratio Control without a PC (password protected feature). Off-line fuel/air profile curve building and display configuration capabilities save user setup time. In addition, up to 10 profile curves can be created, saved, edited, viewed, copied or deleted with the S7999B System Display, offering a valuable alternative to a dedicated PC.

**Configure** Honeywell's S7830 Expanded Annunciator terminal names for customer convenience. All S7830 devices connected to the network are renamed identically, due to the global nature of this feature. Configure a burner/boiler Modbus network of up to 99 nodes and assign names. The Auto Configuration Feature dynamically locates all connected burner/boiler systems and recognizes all connected Honeywell devices, saving valuable configuration and setup time.

**Monitor** device status, fault codes & history, diagnostic information and key process variables for each 7800 SERIES and R7140 Burner Control, ControlLinks Fuel/Air Ratio Control, Expanded Annunciator and/or UDC controller connected to the network. Monitor from 1 to 99 burner/boiler systems via Local, Switchable or System modes from a single S7999B, offering power and enhanced safety at your fingertips. In addition, real-time trend analysis of UDC device variables and 7800 SERIES or R7140 Burner Control flame signal strength provides useful visual feedback. Trend analysis features only available in Local Mode.

**Control** remote reset of each 7800 SERIES or R7140 Burner Control and change each UDC device security password and control, demand and alarm setpoints (if configured to the UDC control) connected to the Modbus network. Password protected features.

### Why the S7999B Is Right for You

• Value	Economical alternative to a dedicated PC to commission/monitor a burner/boiler network
• System Security	Password required for setpoint changes, ControlLinks commissioning & Burner Control reset
• Flexibility	Commission, Configure, Monitor & Control various devices on single or multiple burner/boiler network(s)
• Power	Supports from 1 to 99 burner/boiler system nodes
• Trend Analysis	Real-time Trend Graphing, Totalization, Bar Graph of Key Process Variables
• Compatibility	With Honeywell 7800 SERIES & R7140 Burner Controls, S7830, ControlLinks, UDC controllers
• Ease of Setup	Display auto-configures, dynamically locates all connected burner/boiler systems & recognizes connected Honeywell devices. Allows off-line fuel/air profile curve building & display configuration, retaining system configuration for end application installation.
• Productivity	Single vantage point from which to monitor multiple systems.
• Total System Solution	Offers an integrated burner/boiler system approach with 7800 SERIES or R7140 Burner Controls, ControlLinks Linkageless Fuel/Air Ratio Control System, S7830 Expanded Annunciators and UDC controllers. The display network can grow along with added burner/boiler nodes and controller additions.

### The Total System Solution

The Honeywell S7999B System Display offers an integrated burner/boiler system approach which enhances safety with 7800 SERIES Burner Controls with Valve Proving System capability that checks for leaking gas safety shut-off valve seats and eliminates the need for a normally open vent valve, saves fuel costs and increases efficiency with Linkageless Parallel Positioning ControlLinks controls, provides additional burner troubleshooting with Expanded Annunciators and prolongs boiler equipment life with thermal shock protection via UDC controllers. All of which add up to enhanced safety, efficiency and maintenance.

Offering system security and the ability to Commission, Configure, Monitor and Control, the Honeywell S7999B System Display is a valuable, powerful and flexible tool. It all adds up to a Total System Solution you can't afford to ignore.

## Condensed Specifications

<ul style="list-style-type: none"> <li>Application</li> </ul>	<b>Commission</b>	<ul style="list-style-type: none"> <li>Honeywell ControlLinks™ Fuel/Air Ratio Control System. Password protected.</li> </ul>
	<b>Configure</b>	<ul style="list-style-type: none"> <li>Honeywell S7830 Expanded Annunciator Terminal Names (Global Feature)</li> <li>Modbus® Network (up to 99 nodes) &amp; Assign Names</li> </ul>
	<b>Monitor</b>	<ul style="list-style-type: none"> <li>Single (Local) Burner/Boiler System or up to 99 Systems/Nodes</li> <li>Device status, fault codes &amp; history, diagnostic information and key process variables for each 7800 SERIES and R7140 Burner Control, ControlLinks Fuel/Air Ratio Control, Expanded Annunciator and/or UDC controllers.</li> </ul>
	<b>Control</b>	<ul style="list-style-type: none"> <li>Single (Local) Burner/Boiler System or up to 99 Systems/Nodes</li> <li>Remote reset for each 7800 SERIES &amp; R7140 Burner Control. UDC device security password, control, demand, and alarm setpoints. Password protected.</li> </ul>
<ul style="list-style-type: none"> <li>Operational Modes</li> </ul>	Local	<ul style="list-style-type: none"> <li>Manage a single burner/boiler system and/or Commission ControlLinks</li> </ul>
	System	<ul style="list-style-type: none"> <li>S7999B Operates as a Modbus Master, managing up to 99 Local Mode S7999B's, each managing a single burner/boiler system/node</li> </ul>
	Switchable	<ul style="list-style-type: none"> <li>S7999B Operates as a Modbus Master, managing up to 99 Modbus addresses (7800 SERIES/R7140, S7830, ControlLinks, UDC) and/or Commission ControlLinks</li> </ul>
<ul style="list-style-type: none"> <li>Communications</li> </ul>	(2) RS-485 Ports (ModBus and Commission ControlLinks) and (1) Ethernet Port	
<ul style="list-style-type: none"> <li>Password Protected</li> </ul>	Yes. Required for setpoint changes, ControlLinks commissioning & Burner Control reset.	
<ul style="list-style-type: none"> <li>LED Indicators</li> </ul>	Power / Network / COM 2 / COM 1	
<ul style="list-style-type: none"> <li>Software</li> </ul>	Future free software upgrades available via the Internet.	
<ul style="list-style-type: none"> <li>Honeywell Compatible Components</li> </ul>	ControlLinks Components: R7999A/B, ML7999A, Q7999A	
	Burner Management: 7800 SERIES, R7140, S7810M Modbus Module, S7830 EA	
	UDC2500/3200/3500 Universal Digital Controllers with Modbus	
<ul style="list-style-type: none"> <li>Voltage, Frequency</li> </ul>	100 – 240 Vac Universal Power Input to a separate Power Supply, 50/60 Hz	
<ul style="list-style-type: none"> <li>Electrical Rating</li> </ul>	+12 Vdc Input, Maximum of 500 mA current drain. Included 12 Vdc Power Supply.	
<ul style="list-style-type: none"> <li>Ambient Temperature Range</li> </ul>	+14° F to +122° F (-10° C to +50° C)	
<ul style="list-style-type: none"> <li>Operating Humidity Range</li> </ul>	95% Relative Humidity, Non-condensing	
<ul style="list-style-type: none"> <li>Dimensions</li> </ul>	9-13/32 in. W x 6-21/32 in. H x 1-9/16 in. D (239mm W x 169mm H x 40mm D)	
<ul style="list-style-type: none"> <li>Approvals</li> </ul>	FCC (Part 15, Class A digital device), UL Listed, Canadian ICES-003	

Further Information	Installation Instructions	Technical Brochure	Sell Sheet
<ul style="list-style-type: none"> <li>S7999B System Display</li> </ul>	65-0283	63-9488	63-9165
<ul style="list-style-type: none"> <li>R7999A/B Controller, Q7999A Wiring Subbase for R7999, ML7999A Parallel Positioning Actuator, 7800 SERIES and R7140 Burner Controls, S7810M Modbus Module (used with 7800 SERIES &amp; R7140 Burner Controls)</li> </ul>			
<ul style="list-style-type: none"> <li>Download from: <a href="http://customer.honeywell.com">http://customer.honeywell.com</a></li> </ul>			
<ul style="list-style-type: none"> <li>UDC2500/3200/3500 Controls</li> </ul>	<a href="http://content.honeywell.com/imc/pi/">http://content.honeywell.com/imc/pi/</a>		

### Learn More

For more information, please contact your Honeywell distributor. Or call Honeywell direct at 1-800-345-6770, ext. 423 or visit [customer.honeywell.com](http://customer.honeywell.com).

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