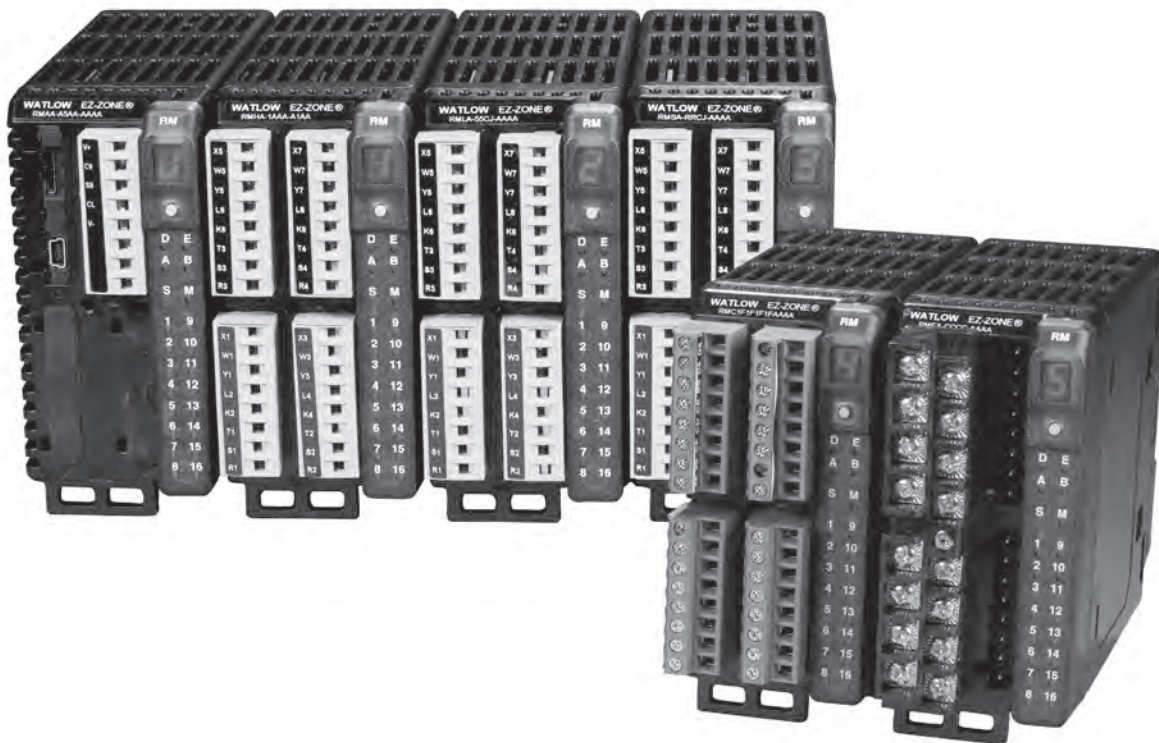


Data Loggers

Product	Description	Supported Controllers	Operating Requirements	Page
EZ-ZONE® RM System with Access Module	Multi-loop controller with data logging ability	EZ-ZONE RM	None	363
SpecView HMI Software	Human machine interface for Watlow controllers	See catalog page 366	Windows® 7 32-bit and 64-bit, Vista 32-bit and 64-bit, XP (home and professional), 2000, NT 4.0, ME, 98, 95	364
Silver Series	Rugged, touchscreen operator interface terminal	EZ-ZONE and many others	EZware-5000: Windows® 7 32-bit and 64-bit, Vista 32-bit and 64-bit, XP	369
WATVIEW	Human machine interface for older Watlow controllers	See catalog page 371	Windows® XP	370





Data Loggers

EZ-ZONE® RM System with Access Module

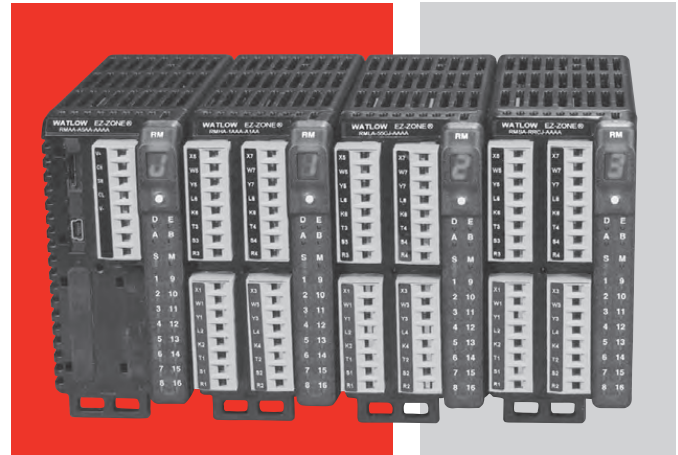
The EZ-ZONE® RM controller simplifies thermal system management. The EZ-ZONE RM controller family is comprised of six module types: an integrated on-off or PID control, monitoring and over/under temperature limit module, a high-density on-off or PID control module, a high-density limit only module, an input/output (I/O) expansion module, a high-density monitor/scanner module and a data logging and field communications access module. A system is configured by connecting any combination of module types to address specific application needs. The EZ-ZONE RM is extremely flexible and scalable allowing mixing and matching of I/O to configure one to 152 control loops and up to 256 monitor points.

Optional integrated controller functions can be combined or ordered in different quantities:

- PID control loops
- Over/under temperature limit control loops
- 10 and 15 ampere power output/heater driver options
- On-board data logging
- Current measurement input
- Sequencer start up and control function
- Programmable timer and counter functions
- Programmable math and logic options
- Multiple communication protocol options
- Mobile configuration with removable secure digital (SD) flash card

Benefits of using an integrated controller solution:

- Reduces wiring time and termination complexity compared with connecting multiple discrete products
- Improves system reliability
- Reduces termination and installation cost
- Eliminates compatibility issues often encountered with using various discrete components and brands
- Reduces troubleshooting time and downtime costs because the system can specifically identify any problems with a sensor, controller, solid state relay (SSR) power output or heater load
- Complete thermal solution saves engineering time and labor costs while shortening project schedules



Features and Benefits

Multiple inputs; from one to 152 PID loops of control or monitor up to 256 analog inputs

- Mix and match I/O to fit any application; from one input with two outputs to 152 analog inputs with 152 outputs, or monitor up to as many as 256 analog inputs all in one system
- Reduces cost because only required loops are purchased
- Allows a common controller platform across many design applications as both loops and outputs can be ordered in single increments

Advanced PID control algorithm

- Offers TRU-TUNE®+ adaptive control to provide tighter control for demanding applications
- Enables auto-tune for fast, efficient start-up

Communication capabilities

- Provides a range of protocol options including universal serial bus (USB) device port, Modbus® RTU, EtherNet/IP™, Modbus® TCP, DeviceNet™ and PROFIBUS

USB Port

- Provides data log retrieval

SPLIT-RAIL control

- Enables modules mounted in separate high-voltage and low-voltage cabinets to function as an integrated system
- Minimizes the length and cost of wire runs and improves system reliability by locating inputs closer to sensors and outputs closer to loads

For detailed product and ordering information, see the full EZ-ZONE RM product section located on pages 209 through 226.

Data Loggers

SpecView HMI Software

SpecView software from Watlow is an easy-to-use Human Machine Interface (HMI) to Watlow controllers, including EZ-ZONE integrated controllers and third-party products. Watlow's single point of support for hardware, software and application needs ensures knowledgeable and expedient response to questions or concerns.

SpecView from Watlow is commercially accepted and price competitive compared with third-party options. Throughout its history, field-proven features and functions have been added based on customer suggestions. SpecView's built-in support and auto-detect for Watlow controllers is an advantage compared to tag-based systems. Since there is no need to learn intricate details about communication protocols, setup is quick and simple.

Process adjustments and machine troubleshooting are easily accomplished using graphed data on trend charts. SpecView from Watlow is designed for industrial needs, including built-in compatibility with bar code readers and touch screens. Customizing displays for specific applications reduces process errors. Flexible features include data logging, an historical replay option, easy-to-use recipes and remote access options.

To try before purchase, SpecView from Watlow is available to download and run in the time-limited demo mode.

Features and Benefits

Watlow EZ-ZONE® Standard Bus communications protocol

- Communicates with any EZ-ZONE product without requiring purchase of a communications option

Built-in support and auto-detect for controllers

- Saves set-up time
- Eliminates the need to learn communications protocols
- Integrates devices from multiple vendors

Flexible data logging and report generator

- Helps users comply with regulatory requirements including AMS 2750D NADCAP
- Reduces labor and increases accuracy by automating data collection for chosen parameters
- Adds data acquisition to existing processes
- Saves time by exporting data to Excel®-compatible spreadsheet files
- Allows data to be grouped in user-defined batches
- Incorporates measurements, operator comments and other information into report formats
- Records operator actions



Easy-to-build, customizable screens

- Allows simple custom screen editing
- Simplifies monitoring and adjusting controller parameters
- Reduces errors by making displays application-specific
- Decreases training time
- Integrates sophisticated third-party elements with an ActiveX container option
- Automates many tasks with user-defined buttons
- Calls attention to specific parameter values with user-set color dynamics
- Allows touch screen compatibility
- Provides bar graphs for 'at-a-glance' monitoring
- Limits access with passwords, if desired

Alarm manager

- Simplifies understanding alarms with customizable, plain-text messages
- Aids in troubleshooting by time stamping and logging alarms

Easy-to-use recipe manager

- Saves a snapshot of current parameter settings
- Reproduces previous machine setups exactly
- Reviews and edits complex programmer profiles
- Eliminates operator error in setting machine parameters

Remote access option

- Allows multiple operator stations with identical interfaces for convenient access
- Provides multiple password-protection levels
- Improves access over LAN, modem or Internet
- Reduces maintenance and repair downtime
- Increases utilization

Data Loggers

SpecView HMI Software

System Requirements

Compatible Operating Systems:

- Windows® 7 (all versions)
- Windows® Vista (all versions)
- Windows® Server 2003
- Windows® XP (Home and Professional)
- Windows® 2000 (Workstation and Professional)
- Windows® NT 4.0
- Windows® ME
- Windows® 98
- Windows® 95 (help not supported)

Minimum System:

- Pentium® processor or equivalent Celeron® or AMD
- 64MB RAM (128MB or more recommended)
- 30MB hard disk space to install SpecView from Watlow
- Additional disk space for data logging
- Instrument connection: serial port or Ethernet
- USB port for the key

Ideal System:

- Pentium® 4 (or Celeron® or AMD equivalent) 2.0Ghz
- 256MB RAM
- 80GB hard disk

How to Choose the Correct SpecView from Watlow Options

Order this option...	If you want to...
Mini Version	Operate a system with data from one or two simple instruments. This option includes historical replay and allows up to two instruments. Note that in some cases, devices such as profiling and multi-loop controllers are represented by more than one instrument, the mini version may not be appropriate.
Standard Version	Be free to expand configurations beyond the two instrument limit of the mini version.
Single Port	Communicate with instruments on only one serial communications port or only via Ethernet only.
Multiple Port	Communicate with instruments on more than one serial communications port and via Ethernet.
Historical Replay	Replay logged data on screens in trends, bar graphs and numeric fields. Without the option, replay is limited to the last four hours of data.
Strategy Controller	Configure SpecView from Watlow to respond automatically to events such as specific parameter values with actions such as printing the screen, starting logging or download a recipe. Events can also be time or calendar based. Without the strategy controller option there is a two event limit.
DDE	Integrate SpecView from Watlow with other Windows® programs.
OPC Client	Connect SpecView from Watlow to instruments via a third-party OPC server.
ActiveX Container	Integrate third-party or customer-written ActiveX controls into SpecView from Watlow.
Remote Users	Monitor instruments from multiple computers simultaneously. Order the number of remote users corresponding to the maximum number of additional computers needed to connect simultaneously.
SERIES F4 Programmer Driver	Use the computer to manage profiles: program profiles in the computer, save profiles on the computer, or download profiles that are saved on the computer to the SERIES F4.
Allen-Bradley® DF1 Driver	Connect to Allen-Bradley® PLCs (process logic controllers) that support the DF1 protocol

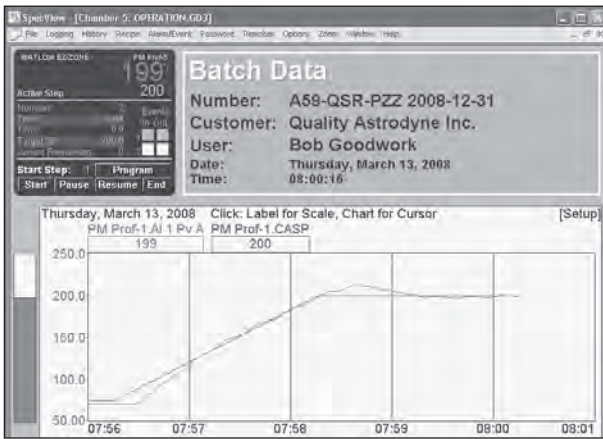
Data Loggers

SpecView HMI Software

Supported Controllers and Protocols

Controller	Controller's Communication Protocol	Standard Bus	Modbus® RTU	Modbus® TCP
EZ-ZONE PM		✓	✓ ^①	✓ ^①
EZ-ZONE RM		✓	✓ ^①	✓ ^①
EZ-ZONE ST		✓	✓ ^①	✓ ^①
SERIES F4 Ramping		N/A	✓	N/A
SERIES 96, 97, SD		N/A	✓	N/A
POWER SERIES		N/A	✓	N/A
MICRODIN		N/A	✓	N/A
SERIES 986, 987, 988, 989		N/A	✓	N/A
CLS200 (standard or ramp/soak)		N/A	✓	N/A
MLS300 (standard or ramp/soak)		N/A	✓	N/A

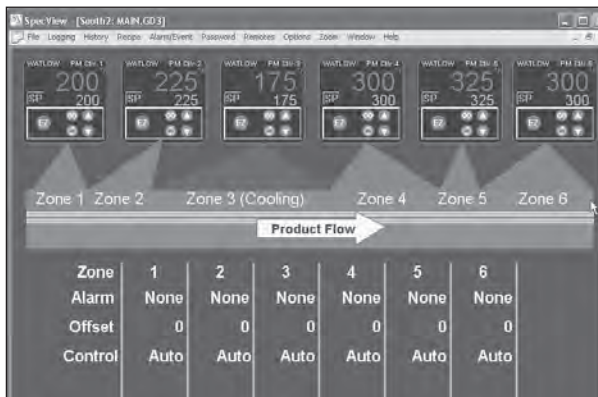
① Modbus® support for basic operation parameters is included. Automatic detection of EZ-ZONE instruments is not available via Modbus® so configurations must be set up manually. EZ-ZONE ST controllers versions 1 to 3 are supported via Modbus® with an RUI Gateway only.



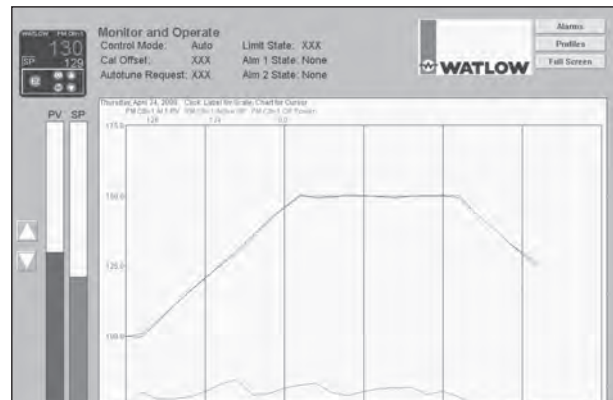
Track and report batch-specific processing data.



Make screens with most often used parameters. Enable recipe management to reduce operator errors when setting values.



Create application-specific screens that depict process data so users can relate.



Graph and log process data. Replay data that may have been missed while a user was away. For playback of data older than four hours, get the historical replay option.

Data Loggers

SpecView HMI Software

Ordering Information - Standard

Part Number

① ②	③	④	⑤	⑥	⑦	⑧ ⑨	⑩	⑪	⑫ ⑬
SV	Version S	Ports	Historical Replay & Strategy Cont.	DDE and OPC	ActiveX Container	Remote Users	Special Watlow Drivers	Third Party Drivers	00

③ Version	
S =	Standard

④ Ports	
S =	Single
M =	Multiple

⑤ Historical Replay and Strategy Controller	
0 =	None
H =	Historical replay
S =	Strategy controller
B =	Both

⑥ DDE and OPC	
0 =	None
D =	DDE
C =	OPC client
B =	Both

⑦ ActiveX Container	
0 =	None
A =	ActiveX container

⑧ ⑨ Remote Users	
00 =	None
XX =	Number of simultaneous remote users (01 to 99)

⑩ Special Watlow Drivers	
0 =	None
1 =	SERIES F4 programmer

⑪ Third Party Drivers	
0 =	None
1 =	Allen-Bradley® DF1

Note: Special drivers for other third-party products (Honeywell, Eurotherm, Mitsubishi, Yokogawa and Marathon) are available directly from SpecView.

Ordering Information - Mini

Part Number

① ②	③	④	⑤	⑥	⑦	⑧ ⑨	⑩	⑪	⑫ ⑬
SV	Version M	Ports	Historical Replay & Strategy Cont.	DDE and OPC	ActiveX Container	Remote Users	Special Watlow Drivers	Third Party Drivers	00

③ Version	
M =	Mini (limited to two instrument views)
Note: The mini version is limited to two instrument views and may not be appropriate for use with some devices such as profiling and multi-loop controllers where a single device appears as multiple instruments in SpecView.	

④ Ports	
S =	Single
M =	Multiple

⑤ Historical Replay and Strategy Controller	
H =	Historical replay
B =	Historical replay and strategy controller

⑥ DDE and OPC	
0 =	None
D =	DDE
C =	OPC client
B =	Both

⑦ ActiveX Container	
0 =	None
A =	ActiveX container

⑧ ⑨ Remote Users	
00 =	None
XX =	Number of simultaneous remote users (01 to 99)

⑩ Special Watlow Drivers	
0 =	None
1 =	SERIES F4 programmer

⑪ Third Party Drivers	
0 =	None
1 =	Allen-Bradley® DF1

Note: Special drivers for other third-party products (Honeywell, Eurotherm, Mitsubishi, Yokogawa and Marathon) are available directly from SpecView.

Data Loggers

SpecView HMI Software

Ordering Information - Upgrade

Part Number

① ②	③	④	⑤	⑥	⑦	⑧ ⑨	⑩	⑪	⑫ ⑬
SV	Version	Ports	Historical Replay & Strategy Cont.	DDE and OPC	ActiveX Container	Remote Users	Special Watlow Drivers	Third Party Drivers	00

③ Version	
U =	No version change; upgrade options only
N =	Upgrade mini to standard

④ Ports	
0 =	No upgrade
M =	Multiple

⑤ Historical Replay and Strategy Controller	
0 =	No upgrade
H =	Historical replay (already included with SpecView Mini)
S =	Strategy controller
B =	Both (do not order this option with SpecView Mini)

⑥ DDE and OPC	
0 =	No upgrade
D =	DDE
C =	OPC client
B =	Both

⑦ ActiveX Container	
0 =	No upgrade
A =	ActiveX container

⑧ ⑨ Remote Users	
00 =	No upgrade
XX =	Number of simultaneous remote users (01 to 99)

⑩ Special Watlow Drivers	
0 =	No upgrade
1 =	SERIES F4 programmer

⑪ Third Party Drivers	
0 =	No upgrade
1 =	Allen-Bradley® DF1
Note: Special drivers for other third-party products (Honeywell, Eurotherm, Mitsubishi, Yokogawa and Marathon) are available directly from SpecView.	

Note: Your upgrade order must be accompanied by the Step 1 code from the Upgrade screen in SpecView from Watlow. Use the upgrade order form available at www.watlow.com or upon request from Watlow or your authorized distributor.

Data Loggers

Silver Series

The Silver Series is a rugged, touchscreen operator interface terminal (OIT). Available in three sizes (4.3, 7 and 10.2 inch diagonal display sizes), the OIT's feature serial and Ethernet communications with multiple controllers, universal serial bus (USB), secure digital (SD) card, data logging, flexible password security and multiple languages. The small bezel size and two-inch depth make mounting in tight spots easy.

The Silver Series programming software, EasyBuilder5000, is easy to use and features a large variety of built-in screen objects that makes it powerful. When creating screens, the user can call upon extensive graphics libraries, import custom graphics and add numeric displays, entry fields, analog meters, bar graphs and trend graphs with just a few mouse clicks. Screen objects are highly customizable, and the user can create libraries of their own objects for repeat use. The online simulator, Ethernet and USB support make testing and downloading fast. EasyBuilder5000 is part of the EZware-5000 software suite and is available as a FREE download on www.watlow.com and on the DVD-ROM found in the accessories list on page 350.

The Silver Series OIT paired with Watlow® controllers is the perfect solution for your industrial process or machine control application.

Features and Benefits

Bright, 65,536 color, high resolution, graphic, touchscreen, thin film transistor (TFT) display

- Maximizes display space in the OIT footprint
- Allows application specific interface design
- Allows viewing from a distance and at an angle
- Highlights important process information with color and animation

User selectable portrait or landscape operation

- Fits in tight spots

Ethernet, serial, USB and SD Card ports[®]

- Allows options for connecting to controllers
- Provides options for downloading projects
- Expands memory for additional recipe and data log storage
- Supports external keyboard, mouse and printers
- Supports monitoring from a personal computer (PC) with free virtual network computing (VNC) client software



Supports dozens of serial and Ethernet protocols and up to four simultaneously

- Connects to a wide range of industrial controllers and devices
- Integrates a variety of devices to simplify complex operation tasks

Data logging, display and trending

- Helps operators monitor processes
- Reduces labor and increases accuracy by automating time-stamped data collection
- Stores captured data for future retrieval in multiple files
- Saves time by exporting data to Excel®-compatible comma separated value (CSV) files
- Improves process understanding by allowing live and historical data to be viewed on the OIT

Alarm and event monitoring and recording

- Reduces downtime by helping troubleshoot equipment and processes
- Simplifies troubleshooting by recording time and date-stamped alarm and event history
- Organizes and prioritizes alarms and events in up to 255 categories and four priority levels

Recipe management

- Reduces errors by automating process setting changes

For detailed product and ordering information, see the full Silver Series OIT product section located on pages 345 through 350.

Data Loggers

WATVIEW™ HMI Software

Note: WATVIEW™ is not compatible with Windows® Vista or Windows® 7 and does not support Watlow EZ-ZONE® controllers. Please consider SpecView for your HMI software needs.

WATVIEW is Watlow's Human/Machine Interface (HMI) software for older Watlow controllers. WATVIEW features easy controller setup, recipe and alarm managers, data-logging and trend plot graphing

WATVIEW is available in three editions:

- **Run-Time Edition**—for operating controllers
- **Developer Edition**—creates custom screens
- **Configurator Edition**—available free of charge for setting up controllers at www.watlow.com

Note: See the Edition Comparison Table on the next page for details about which features are in each edition.

Features and Benefits

Easy program setup

- Scans all available communications ports and baud rates for supported controllers
- Detects which controllers are connected to the computer
- Automatically configures with appropriate setup screens and help files for detected controllers

Controller specific setup and spreadsheet overview screens

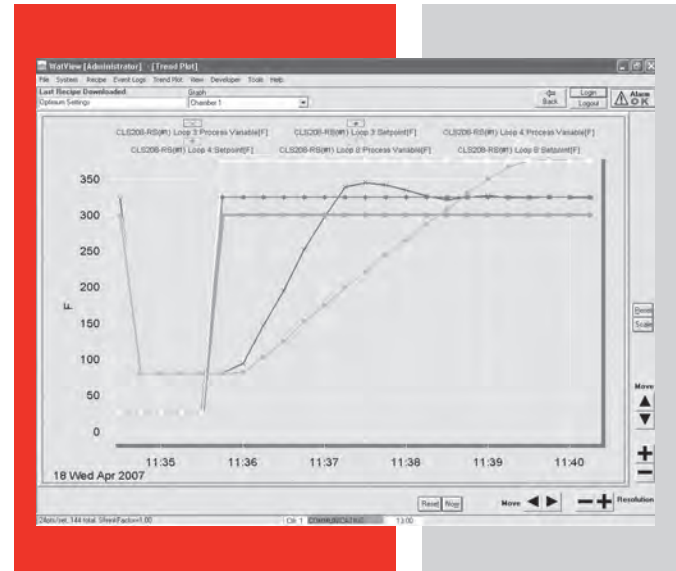
- Simplify monitoring and adjusting controller parameters
- Display settings for multiple channels and controllers
- Present parameters according to controller's menus

Recipe manager

- Stores commonly used controller settings
- Speeds up repetitive controller setups
- Backs up "snapshot" of your settings against data loss

Calendar-start function

- Automates processes by downloading recipes automatically in a one-time or repeating schedule



Alarm manager

- Makes alarms easier to understand with customizable, plain text messages
- Aids in troubleshooting by time stamping and logging alarms
- Streamlines alarm management by allowing monitoring, acknowledging and clearing alarms for multiple controllers

Data-logging and trend plot graphs

- Reduce labor and increase accuracy by automating data collection for the parameters you choose
- Save time by exporting data to Excel®-compatible spreadsheet files
- Simplify process adjustments and troubleshooting by graphing up to 20 data items together on a graph
- Provide flexibility by allowing users to name, save and choose for display from any number of graphs

Data Loggers

WATVIEW™ HMI Software

Specifications

Windows® XP System Requirements:

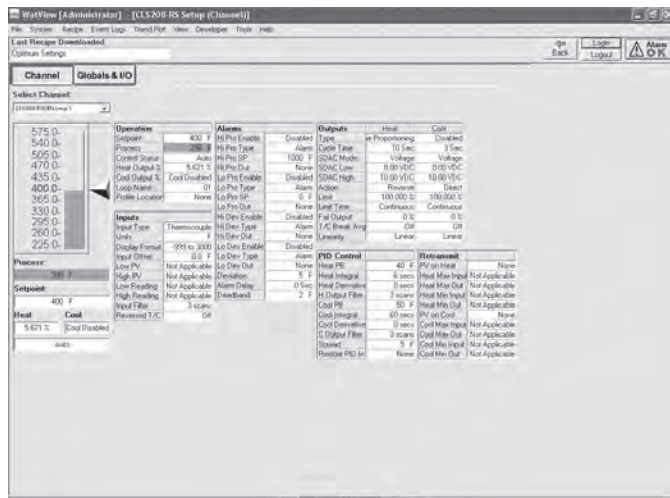
- RAM: 128 MB
- 800 x 600 screen resolution
- 16-bit or higher color palette (“High Color”)
- Serial communications (COM) or Ethernet port
- Microsoft® compatible pointing device (mouse or trackball)
- Parallel or USB port
- 200 MB hard drive space
- CD-ROM drive or Internet connection (for installation only)

Controllers Supported:

WATVIEW supports the following controllers when equipped with the listed firmware revision or later:

- CAS200 (Rev. 2.0)
- CLS200 SERIES standard, enhanced, and extruder (Rev. 3.31), ramp and soak (Rev. 3.40)
- CPC400 SERIES (Rev. 1.00)
- F4S/F4D (Rev. 2.06), F4P (3.00)
- MICRODIN™ (Rev. 1.01)
- MLS300 SERIES standard, enhanced, and extruder (Rev. 3.31), ramp and soak (Rev. 3.40)
- POWER SERIES (Rev. 1.00)
- SERIES 96 (Rev. 1.20)
- SERIES 96 with ramping (Rev. 1.05)
- SERIES 97 (Rev. 1.10)
- SERIES SD controller (Rev. 4.00), profiling (Rev. 1.00), single-display controller (Rev. 2.00), limit (Rev. 2.00)

Note: See www.watlow.com/products/software/watview.cfm to download the latest version or get a free copy of the WATVIEW Configurator edition.



Setup screens make it easy to configure controllers.

Edition Comparison Table

	Developer	Runtime	Configurator
Process Monitoring Features			
Spreadsheet overview	Yes	Yes	Yes
Controller setup screens	Yes	Yes	Yes
Viewing custom screens	Yes	Yes	Yes
Alarm management	Yes	Yes	
Creating and editing custom screens	Yes		
Editing user variables	Yes		
Process Management and Documenting Features			
Editing and downloading recipes	Yes	Yes	Yes
Calendar-based, automatic recipe start	Yes	Yes	
Event logging	Yes	Yes	
Data logging	Yes	Yes	
Trend plot graphing	Yes	Yes	
Utility Features			
Multiple-controller support	Yes	Yes	Yes
Communications diagnostics	Yes	Yes	Yes
Password security	Yes	Yes	Yes
Customizable parameter names	Yes	Yes	Yes
Online help	Yes	Yes	Yes
Active X (OLE 2.0) support	Yes	Yes	Yes
Personal webserver compatibility	Yes	Yes	Yes

Ordering Information

Part Number

①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
WV00				-	0	Key Type	0	-	0000		

⑤ Edition	
D =	Developer
R =	Runtime

⑦ Key Type	
P =	Parallel Port (LPT)
U =	USB