

cMT X Series HMI Delivers Rugged, Connectivity that Simplifies Operations and Accelerates Performance.

Rugged Performance

The cMT X Series HMI delivers reliable, industrial-grade touchscreen interfaces in 4.3", 7", 10.1", and 15" sizes—ideal for demanding environments and tight panel spaces.

Connect to What Matters

With Ethernet and serial communication, USB host, email alerts, and data logging, the cMT X integrates easily with multiple controllers to keep your operation informed and connected.

Secure, Scalable, Global

Flexible password protection and multi-language support help standardize your systems across teams, sites, and regions.

Fast to Design and Easy to Deploy

Powerful, license-free EasyBuilder Pro™ software reduces engineering time with intuitive configuration, reusable libraries, and advanced interface features.

Test with Confidence, Launch Faster

Built-in simulation plus Ethernet and USB download capabilities streamline development and startup.

Optimized for Watlow Systems

Paired with Watlow® controllers, the cMT X HMI provides a fully integrated, high-performance solution for industrial process and machine control applications.

Features and Benefits

Display & Operator Interface

- **High-resolution, color touchscreen**
Delivers clear, dynamic visuals that highlight critical process data and improve operator awareness - even from a distance
- **Rich graphics & animation tools**
Create modern, dynamic interfaces using built-in libraries, custom graphics, animations, and popup windows.
- **Intuitive touch gestures**
Provides tablet-like operation with swipe, pinch, and multi touch control for faster navigation (2430-8886 model only).
- **Guided operator control**
Object visibility and interlock settings help prevent mistakes by guiding users through correct operation.



- **Flexible portrait or landscape mounting**
Adapts to tight panel spaces without compromising usability.
- **Audible alerts**
Built-in buzzer ensures critical alarms are heard immediately.

Connectivity, Protocols & Remote Access

- **Comprehensive connectivity (Ethernet, serial, USB)**
Connects to a wide range of devices and networks for flexible system integration.
- **Broad protocol support (100+ including MQTT & OPC UA)**
Connects diverse devices and supports IIoT and cloud integration for scalable, future ready systems.
- **Remote monitoring via VNC & web access**
Enables real time visibility and control from a PC or web browser for faster response and flexible operation.
- **Email alerts**
Instantly notifies operators of alarms and events to reduce downtime and speed corrective action.
- **EasyAccess 2.0 Remote Connectivity (Optional)**
Securely access your HMI from anywhere via phone, tablet, or PC—and receive real-time push notifications for faster troubleshooting and reduced downtime.

Data, Events & Automation

- **Advanced data logging & trending**
Automates time stamped data collection, supports live and historical trending, and exports easily to Excel® for analysis and reporting.
- **Alarm & event management**
Organizes, prioritizes, and records alarms with detailed history to streamline troubleshooting.

- **Event-triggered automation**

Automatically executes control, logging, and notification actions based on real-time process conditions.

- **User programmable macros**

Automate complex logic and calculations to extend system capability without additional hardware.

- **Database integration (SQL support)**

Enables centralized data logging, reporting, label printing, and enterprise system connectivity (models: 2430-8855 and 2430-8886).

Production & Workflow Tools

- **Recipe management**

Automates parameter changes to reduce operator error and improve batch consistency.

- **Barcode scanning support**

Improves speed and accuracy for recipe selection, part tracking, and user authentication.

- **Simulation tools (online & offline)**

Accelerates development and commissioning with faster testing and interface refinement.

Security, Users & Global Deployment

- **Advanced user & object-level security**

Protects critical functions with role-based access, object-level permissions, and secure upload/download controls to prevent errors and tampering.

- **Flexible user management**

Supports up to 127 users and 12 access classes, with USB key login for fast, secure authentication.

- **Multi language & Unicode support**

Improves global usability with up to 24 selectable languages and clear, customizable text formatting.

Reliability & Compliance

- **Industrial grade certifications (UL®, NEMA 4, CE, RoHS)**

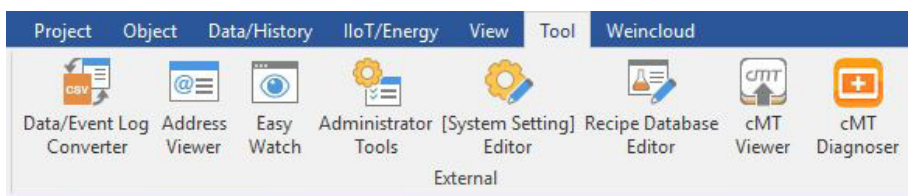
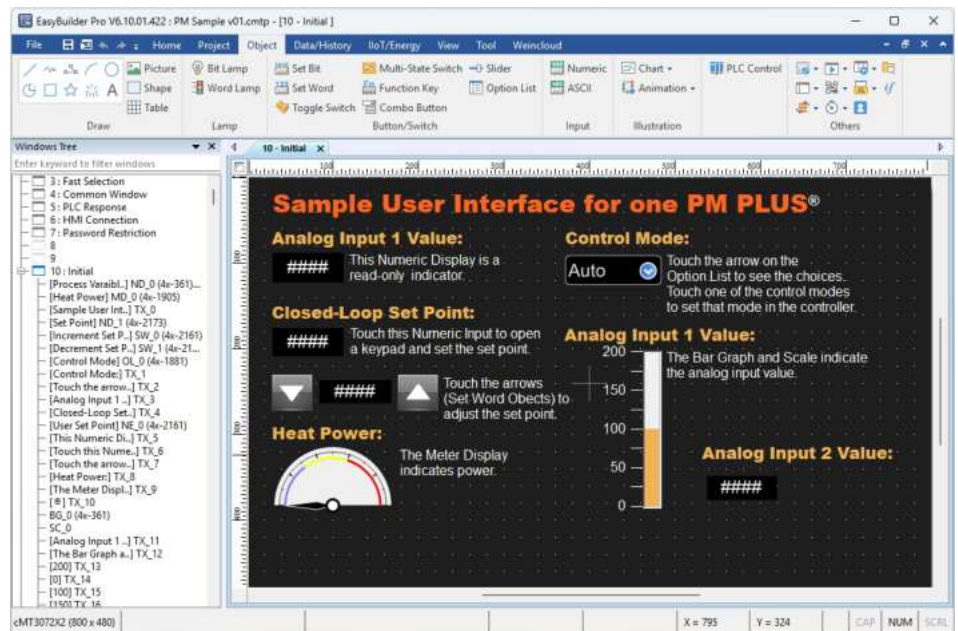
Ensures reliable performance in harsh environments and simplifies global compliance and approval.

- **Two-year warranty**

Backed by reliable product support for long term confidence.

EasyBuilder Pro Software Suite

EasyBuilder Pro provides a simple to use interface and tools for creating a custom user interface for your equipment or process.



EasyBuilder Pro suite of tools simplifies setting up the HMI and validating the application.

Recipe/Memory Editor configures memory files for use with **cMT X Series HMIs** and allows offline creation of recipes.

ID	ADDRESS	Recipe_Name	Set_Point_1	High_Proess_Alarm_1	Set_Point_2	High_Process_Alarm_2	Cont
0	0	Standard Process	450.1	500	487	525	
1	29	Spec for Alpha Lab	235	250	215	250	
2	58	Mil Spec	425.1	450	375	425	
3	87	FDA Test	140.3	175	150.7	180	
4	116	CE Test	50	65	75	100	

```

"Date","Time","Millisecond"
"2011/12/14","00:00:22","820","65.734","67.168","73.200","73.353","88.820","61.820","2491.213","80.198"
"2011/12/14","00:01:22","920","65.909","68.476","74.474","74.088","88.937","62.009","82.046","79.539"
"2011/12/14","00:02:22","930","65.887","68.052","74.495","74.116","88.485","61.595","2491.178","78.822"
"2011/12/14","00:03:22","820","65.697","68.045","74.087","73.679","88.759","61.654","2491.142","79.325"
"2011/12/14","00:04:22","820","65.870","67.629","74.304","74.041","88.478","61.666","2491.159","78.775"
"2011/12/14","00:05:22","820","65.844","67.914","73.604","73.561","88.559","61.730","250.847","79.431"
"2011/12/14","00:06:22","920","65.661","67.673","73.113","73.263","88.806","61.951","245.911","80.364"
"2011/12/14","00:07:22","820","65.794","67.682","74.077","73.992","88.623","61.321","2491.129","78.470"
"2011/12/14","00:08:22","820","65.786","66.497","73.222","73.516","87.471","61.442","78.311","80.414"
"2011/12/14","00:09:22","820","65.721","67.416","73.632","73.768","88.181","61.750","226.257","79.706"
"2011/12/14","00:10:22","820","65.857","66.780","72.890","73.139","88.136","62.170","2491.102","80.928"
"2011/12/14","00:11:22","840","65.851","67.264","73.605","73.371","88.167","61.836","202.653","79.956"
"2011/12/14","00:12:22","840","65.761","67.513","73.763","73.810","88.
  
```

EasyConverter converts log files saved by the **cMT X Series HMIs** to file formats used by popular Windows® software such as Microsoft® Excel.

Diagnoser is a remote diagnostic tool for monitoring HMI system health, communications status, and network performance to simplify commissioning and troubleshooting.

Name	Address	Type	Length	Value
Global Objects				
General UAC (0,...				
Local HMI	LB-9050	Bit	1	false
Local HMI	LB-9061	Bit	1	false
Local HMI	LW-9220	32-bit Uns...	1	0
PLC Control (0, 5)				
Local HMI	LB-550	Bit	1	false
Window 4: Commo...				
Window 10: Initial				
Numeric (1)				
Modbus RTU...	4x-361	32-bit Float	1	15.258187294006348
Meter Display (2)				
Modbus RTU...	4x-2245	32-bit Float	1	70.87005615234375
Numeric (4)				
Modbus RTU...	4x-2513	32-bit Float	1	21.888893127441406
Set Word (5)				
Modbus RTU...	4x-2501	32-bit Float	1	21.888893127441406
Set Word (6)				
Modbus RTU...	4x-2501	32-bit Float	1	21.888893127441406
Option List (7)				



cMT Viewer – Remote monitoring and control application for accessing HMI screens from PC, tablet, or mobile device over Ethernet or secure EasyAccess connection.

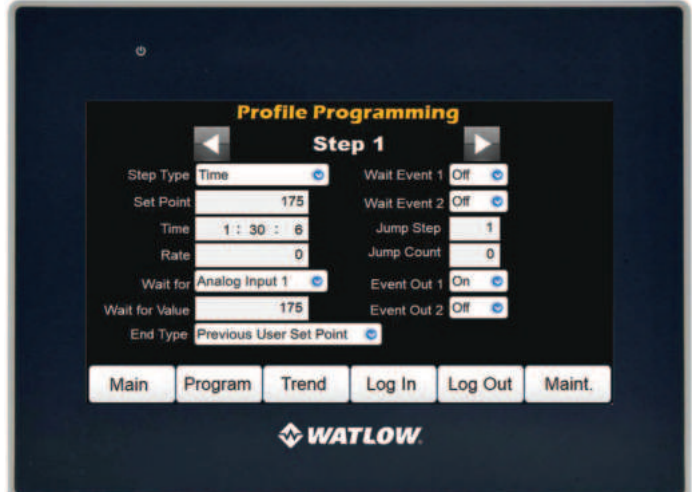
Application Examples



Integrate multiple devices to simplify operation of complex systems.



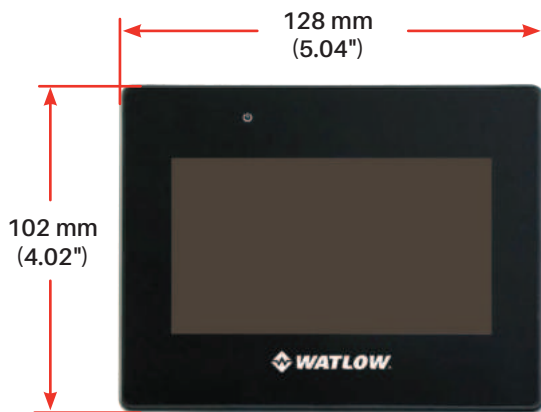
Include the types of displays users understand such as gauges, sliders and bar graphs to make screens intuitive.



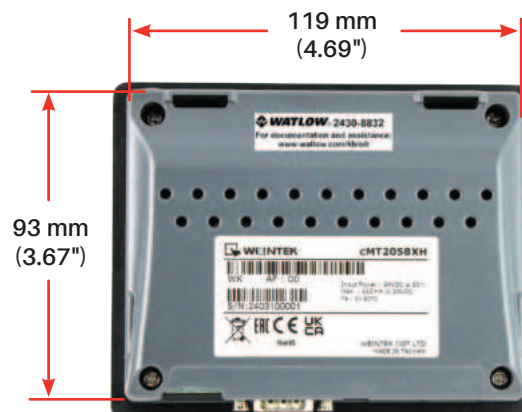
Log and graph process data for quality records and better process control.

Create screens that guide workflow.

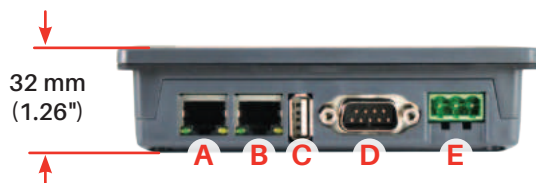
Dimension and Connection Diagrams Model 2430-8832



Overall dimensions



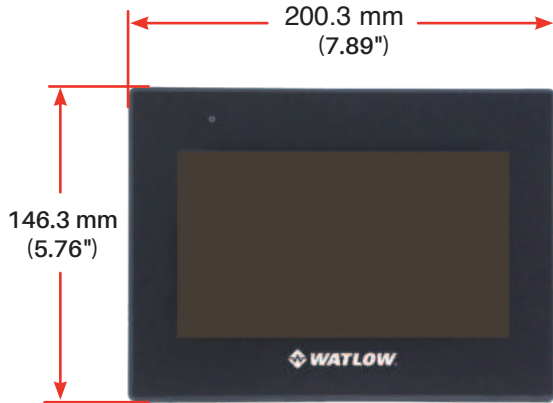
Panel cut-out dimensions



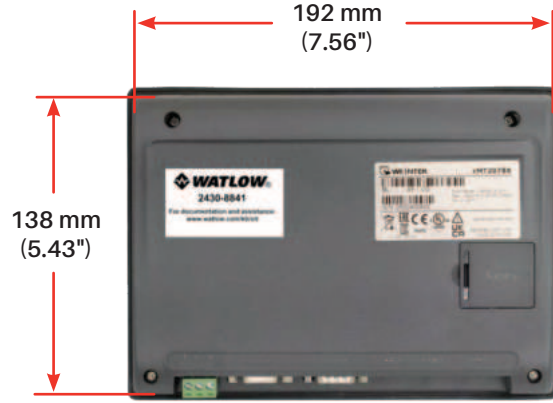
- A. Gigabit Ethernet port
- B. Ethernet port
- C. USB host port
- D. Serial communication ports
- E. Power connector

Dimension and Connection Diagrams

Model 2430-8841



Overall dimensions



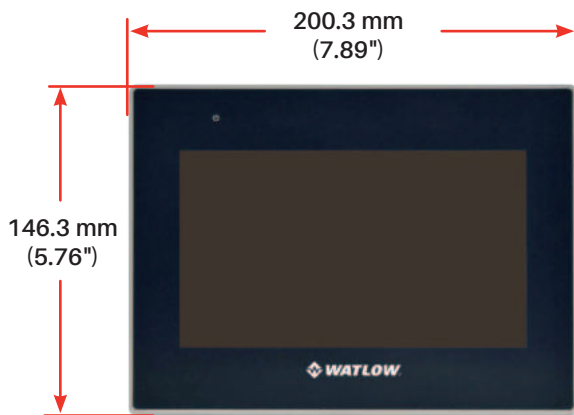
Panel cut-out dimensions



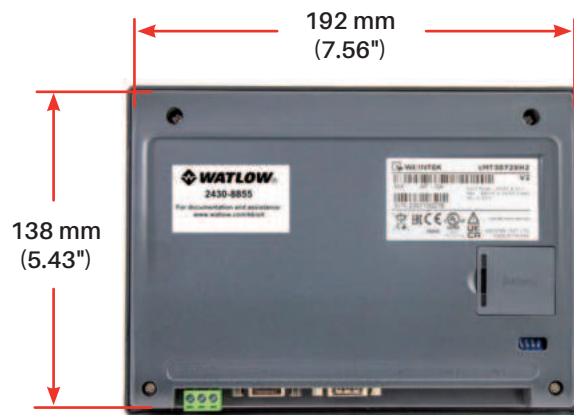
- A. Ethernet port
- B. Ethernet port
- C. USB host port
- D. Serial communication ports
- E. Serial communication ports
- F. Power connector

Dimension and Connection Diagrams

Model 2430-8855



Overall dimensions



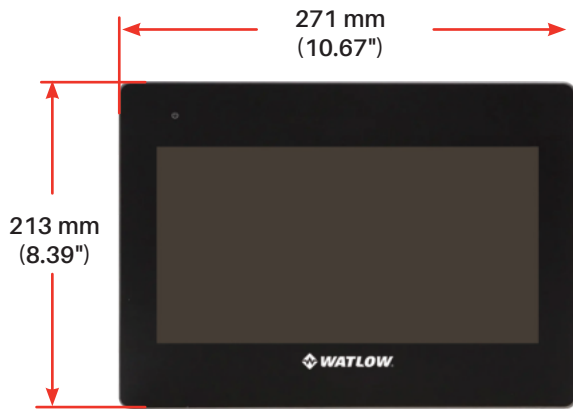
Panel cut-out dimensions



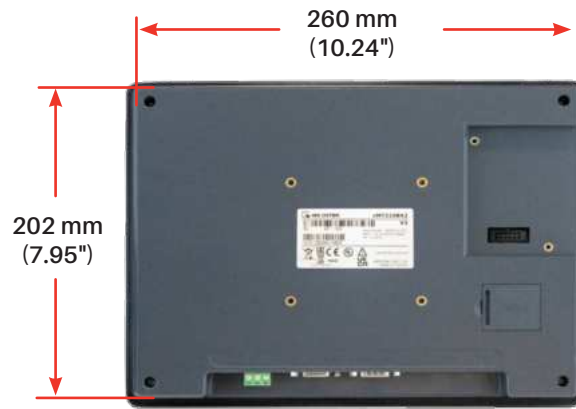
- A. Ethernet port
- B. Ethernet port
- C. USB host port
- D. Serial communication ports
- E. Serial communication ports
- F. Power connector

Dimension and Connection Diagrams

Model 2430-8864



Overall dimensions



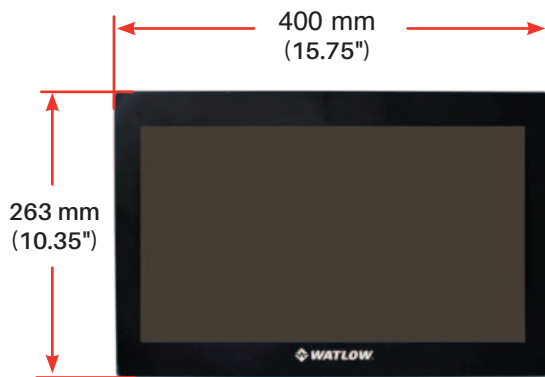
Panel cut-out dimensions



- A. Ethernet port
- B. Ethernet port
- C. USB host port
- D. Serial communication ports
- E. Serial communication ports
- F. Power connector

Dimension and Connection Diagrams

Model 2430-8886



Overall dimensions



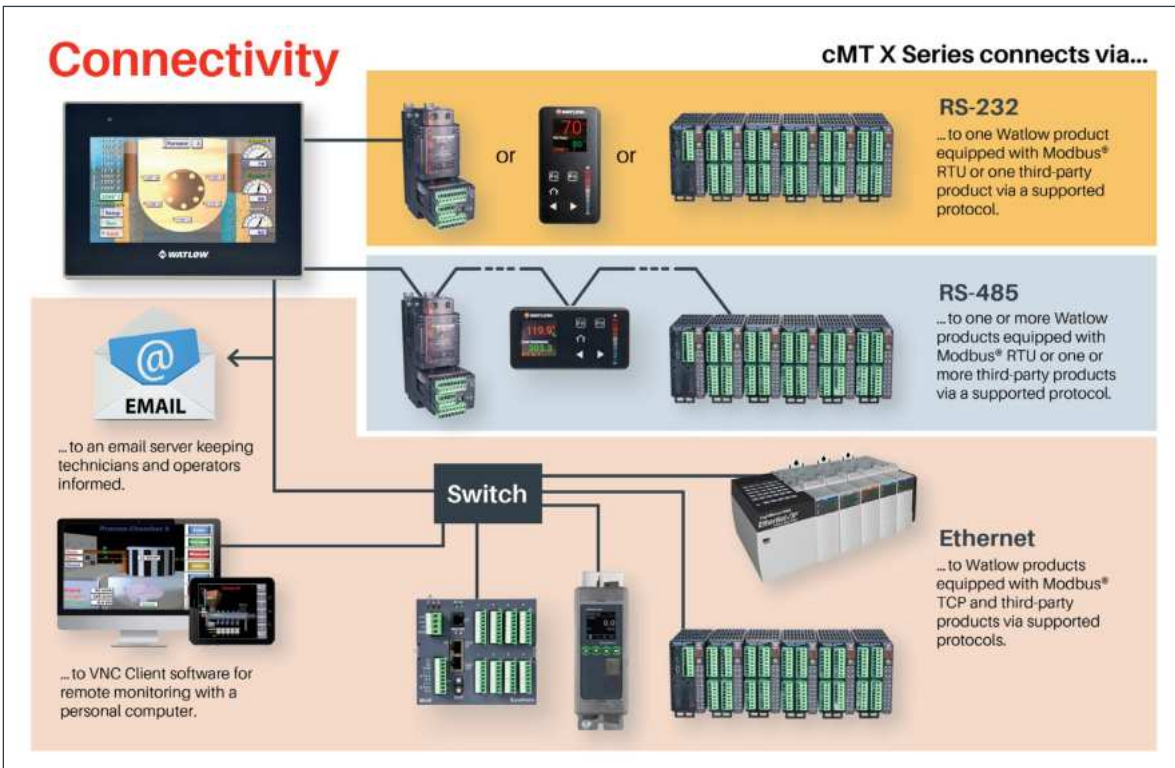
Panel cut-out dimensions



- A. Power connector
- B. Serial communication ports
- C. Serial communication ports
- D. USB host port
- E. Ethernet port
- F. Gigabit Ethernet port

Specifications

Watlow P/N	2430-8832	2430-8841	2430-8855	2430-8864	2430-8886
CPU	Quad-Core RISC				
Memory	1 GB (RAM) 4 GB System (Flash)				
Real Time Clock	Built-In				
Serial	RS-232, RS-485 2-wire and RS-485 4-wire				
Ethernet (10/100 Base-T)	1	2	2	2	1
Ethernet (GbE RJ-45)	1				1
USB Host	1 x USB 2.0				
Audio	Piezoelectric buzzer Audible Alarm and Key Chirp				Built-in speaker
Size (diagonal)	4.3 in.	7 in.	7 in.	10.1 in.	15.6 in.
Display Type	WVA LCD	TFT LCD	WVA LCD	TFT LCD	WVA LCD
Max. Resolution	800 x 480	800 x 480	1024 x 600	1024 x 600	1920 x 1080 (1080P)
Max. Color	16.7 M	16.7 M	16.7 M	16.7 M	16.2 M
Luminance (cd/m ²)	530	400	450	350	300
View Angle (H°/V°)	160/160	160/140	170/170	160/140	178/178
Contrast Ratio	800:1			500:1	800:1
Backlight Lifetime (Hours)	30,000+			50,000+	30,000+
Type	4-wire resistive touch				Capacitive Touch
Input Voltage	24 ± 20% VDC				
Input Current @ 24 VDC	510mA	820mA	820mA	1 Amp	1.3 A
Input Power	12.2 W	19.7 W	19.7 W	24 W	31.2 W
Power Isolation	Yes				
Isolation Resistance	Exceeds 50 MΩ at 500 VDC				
Mounting	Panel	Panel	Panel	Panel, VESA 75 x 75 mm	Panel, VESA 100 x 100 mm
Enclosure Rear	Plastic	Aluminum	Plastic	Aluminum	Aluminum
Enclosure Front	Plastic				
Color	Charcoal Grey				
PCB Coating	Yes				
Operating Temperature	32° to 122°F (0° to 50°C)	32° to 131°F (0° to 55°C)	32° to 131°F (0° to 55°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° ~ 50°C)
Storage Temperature	-4° to 140°F (-20° to 60°C)				
Relative Humidity	10% to 90% (non-condensing)				
Altitude (Air Pressure)	Below 3,000 meters (70.1kPa)				
Vibration Endurance	10 to 25 Hz (X, Y, Z direction, 2G, 30 minutes)				
Rating	NEMA 4, IP66 compliant front panel				
Additional Testing	N/A	UL Type 4X (indoor use only)			N/A
Certifications	cULus, CE, RoHS				



Ordering Information

- **2430-8832:** 4.3 in. (800 x 480) color WVA LCD touch screen; USB host; two serial ports and two Ethernet ports
- **2430-8841:** 7 in. (800 x 480) color TFT LCD touch screen; USB host; two serial ports and two Ethernet ports
- **2430-8855:** 7 in. (1024 x 600) color WVA LCD touch screen; USB host; two serial ports and two Ethernet ports
- **2430-8864:** 10.1 in. (1024 x 600) color TFT LCD touch screen; USB host; two serial ports and two Ethernet ports
- **2430-8886:** 15.6 in. (1920 x 1080) color WVA LCD touch screen; USB host; two serial ports and two Ethernet ports

WVA = Wide Viewing Angle

Accessories

EasyBuilder Pro Configuration Software

<https://www.watlow.com/products/controllers/Software/EZ-Ware-Controller-Software>

Serial Cables (2-wire 485)

- 0219-0388-0000: 4.3 in. unit
- 0219-0374-0000: 7 in. 10 in. and 15 in. units

24VDC Power Supply

- 0847-0299-0000: UL® Class 2, 90-263VAC input, 24VDC output, 1.30A, 31W

Screen Protectors (package of 1 ea. protective screen cover)

- 2201-1869: 4.3 in.
- 2201-1875: 7.0 in.
- 2201-1891: 10 in.
- 2441-9686: 15 in.

Accessories and Replacement Parts

- 2441-9693: EasyAccess 2.0 Upgrade remote web-based viewer option
- 0830-0819-0001: Power Terminal Strip
- 0830-0818-0000: Mounting bracket kit

Watlow, W & Design (W in Diamond) , ADAPTIVE THERMAL SYSTEMS, ASPYRE, ASSURANT, ATS and Design (Signaling Pulse), COMPOSER, Chessell, DIN-A-MITE, Eurotherm, EurothermSuite, EFit, EPack, EPower, Eycon, ECO-HEAT, EHG, E-SAFE, EXACTSENSE, EXSTREAM, EZ-ZONE, EZ-LINK, F4T, FIREBAR, FIREROD, FLUENT, FREEFLEX, HELIMAX, HYDROSAFE, MINICHEF, MULTICELL, Mini8, nanodac, OPTIMAX, , piccolo, PM LEGACY, PM PLUS, POWERED BY POSSIBILITY, POWERGLIDE, POWERSAFE, RAYMAX, SELECT, SERV-RITE, SERIES EHG, STREAMLINE, STRETCH-TO-LENGTH, SURETEMP, TRU-TUNE, ULTRAMIC, versadac, VISUAL DESIGNER, WATCONNECT, Watlow.com, XACTPAK, are all trademarks and property of Watlow Electric Manufacturing Company, its subsidiaries and affiliated companies. All other trademarks are the property of their respective owners.

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