

# Watlow's New WATCONNECT® Large and Extra-Large Panels Maximize Process Uptime with Small Footprint

Watlow's new WATCONNECT® large and extra-large control panels are designed to maximize process uptime with a small footprint.

Unlike most control panels installed in the field, WATCONNECT large and extra-large control panels permit safe access to control compartments allowing users to troubleshoot without shutting down the process.

In addition, the large and extra-large panels only require 50% of the space of competitive panels, which frees up areas for other critical equipment needed in the process.

As an additional option, the Data Insights Package offers remote monitoring to the cloud of thermal system analytics such as power and control health, failed element detection, process continuity and more.

All WATCONNECT control panels are pre-designed for a proven, high-quality solution.



Large, hazardous area



Extra-large, indoors

## Features and Benefits

### Advanced thermal design

- Offers high reliability
- Includes solid copper internal power interconnect for less expansion and contraction
- Provides environmental and field connection health monitoring for identifying issues before shutdown

### Easy access to control compartment

- Allows for panel troubleshooting without process shutdown

### Resettable components

- Reduces maintenance time
- Eliminates need for spare parts

### Small footprint

- Utilizes up to 50% less control room space than other panels

### Data Insights Package (optional) - Industry 4.0

- Allows for remote review and analysis of the data collected by a data scientist and thermal system expert
- Includes comprehensive quarterly thermal system report including insights and recommendations for system improvement
- Offers collaborative touchpoints: Engineer-to-engineer data review
- Enables preventative maintenance or factory assistance

## Specifications

### Agency approvals

- North America:
  - UL® / cUL® 508A Listed (non-hazardous area)
  - NNNY Class I, Div II, Groups B/C/D (hazardous areas)
  - NNNY Class I, Zone 2, Groups IIA, IIB, IIC
- Europe: Self-declared CE Safe Area to EN 602024 or EN 61439 directives without type testing

### Models / Current Rating

- Large single bay – up to 720A Full Load Amps (800 mm wide)
- XL two bay / two disconnect – up to 1440A FLA (1600 mm wide)
- XL 3-7 bays / single disconnect – up to 4,320A FLA (2400 – 5800 mm wide)

### Voltage Ratings (Three Phase)

- 230/240V, 380/400/415V, 440/460/480V, 575/600V, 690V (50 or 60 Hz)

### Enclosures

- Powder coated RAL 7035 or SS316 brush finish
- Each bay: 2000H x 800W x 600D (mm) + 200 mm plinth (indoors) or +300 mm leg kit (outdoors)

### Environmental UL® (CE)

- Type 1 (IP42), Type 4 (IP65) or Type 4X (IP65)
- Ambient up to 0°C to 40°C operating (without space heater)
- Ambient up to -18°C to 40°C (with space heater)
- Altitude <= 1000 mm without derate

### Accessibility During Runtime

- Control compartment (allow access to components <= 120V)
- Fan compartment (allow access to components <= 120V)
- Hinged windows for branch MCCBs

### Main Disconnect

- MCCB (300 – 1600A) or ACB (2500 – 5000A)

### Feeder Field Wiring

- Wire sizes shown on quote schematic

### Branch Protection

- MCCB (1-6 circuits per bay) or fuse (1-12 circuits per bay)

### Load Field Wiring

- Wire sizes shown on quote and schematic

### Internal Power Interconnect

- Insulated, stacked solid copper laminar bar (minimizes expansion / contraction versus wire) for high reliability

### Power Controllers

- Watlow ASPYRE® SCR 2 leg or 3 leg
- E-Power custom for load management and load shading

### Process Controllers

- Watlow F4T® controller, PM4 controller or none (with 4-20mA power level input from DCS)

## Safety Shutdowns

- Heater upset (primary) – Watlow PM6 limit controller(s); disconnects: Safety contactor
- Heater upset (secondary) – Limit controller communicates status to process controller and DCS
- Remote DCS shutdown
- E-stop
- SCR overtemp, enclosure overtemp (optional), GFCI fault (optional)

## Cooling Options

- High reliability EC inlet and outlet fans
- N+1 variable speed high reliability EC fans with advanced monitoring: Local and remote status, test button – 50% longer lifetime rating than industry standard fans (60,000 hours)
- Air conditioner – powered internally or by others

## Local Pilots

- Illumination:
  - Control on/off
  - Heater on/off
  - E-Stop: With reset button for CE panels
  - Over-temp: Push to reset
  - Common alarm
  - SCR fault: Push to reset (optional)
  - GFCI fault: Push to reset (optional)
  - Environmental fault: Push to reset (optional)
- Local / remote set point

## DCS I/O

- Remote permissive / shutdown
- High limit alarm
- Common alarm
- Environmental failure (with monitoring option)
- Analog – remote set point
- Analog – process temperature re-transmit

## Data Insights Package - Remote Diagnostics to the Cloud

- Power and temperature controller health
  - Minimum data set: Current, voltage, power, leg balance, SCR / controller alarms
- Field element detection
  - Minimum data set: Current, voltage, power, leg balance, SCR / controller alarms
- Process continuity (process drift)
  - Minimum data set: Panel ambient temp, (if cooling) fan control signal, fan RPM, fan life hours, (if heating) space heater on/off, SCR internal temp, controller internal temp
- Optically decoupled monitoring of field wiring
  - Minimum data set: Ambient temp, terminal temp, kW

## Commercial Comparison

Control compartments and branch protection thru door

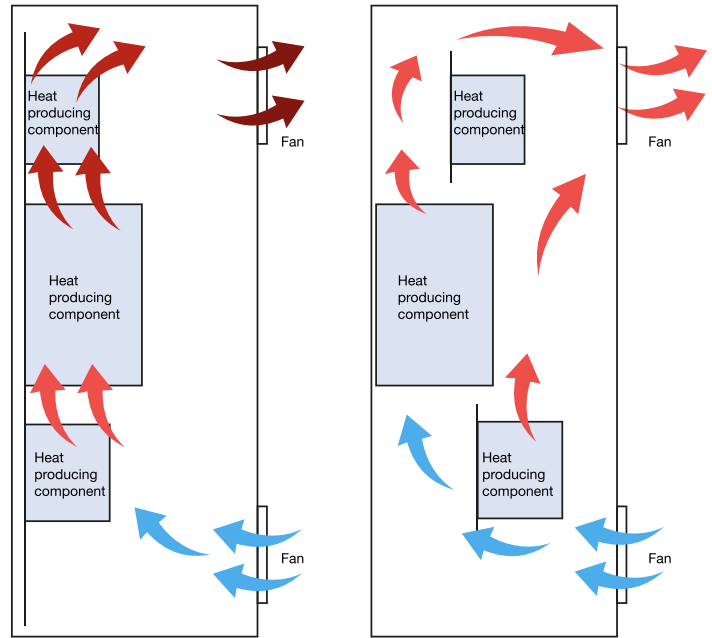


Industry Standard Single Door Panel



WATCONNECT L / XL High Reliability and Uptime

Enables heat dissipation and faster cooldown



Industry Typical

Watlow Multiple Depths for High Reliability and Longevity

## Configurations

Safe Area WATCONNECT Configurations  
(Non-hazardous Area)

Height = 2200 mm with plinth

Depth = 675 mm with disconnect handle

Qty Bays	Full Load Amps (max)*	Width (mm)
1	720	800
2	1440**	1600
3	1440***	2400
4	2160	3200
5	2880	4000
6	3600	5000
7	4320	5800

\* Based on +5%, -10% voltage tolerance, 30°C max ambient, and <=1000 meter elevation

\* Current de-rate applies for higher max voltage, max ambient or elevation

\*\* Two disconnect and power feeds

\*\*\* Single disconnect and power feed

Hazardous Area WATCONNECT Configurations

Height = 2300 mm with legs

Depth = 675 mm with disconnect handle

Qty Bays	Full Load Amps (max)*	Width (mm)
1	720	1159
2	1440**	2318

\* Based on +5%, -10% voltage tolerance, 40°C max ambient, and <=1000 meter elevation

\* Current de-rate applies for higher max voltage, max ambient or elevation

\*\* Two disconnect and power feeds

Powered by Possibility

To be automatically connected to the nearest North American Technical Sales Office:

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