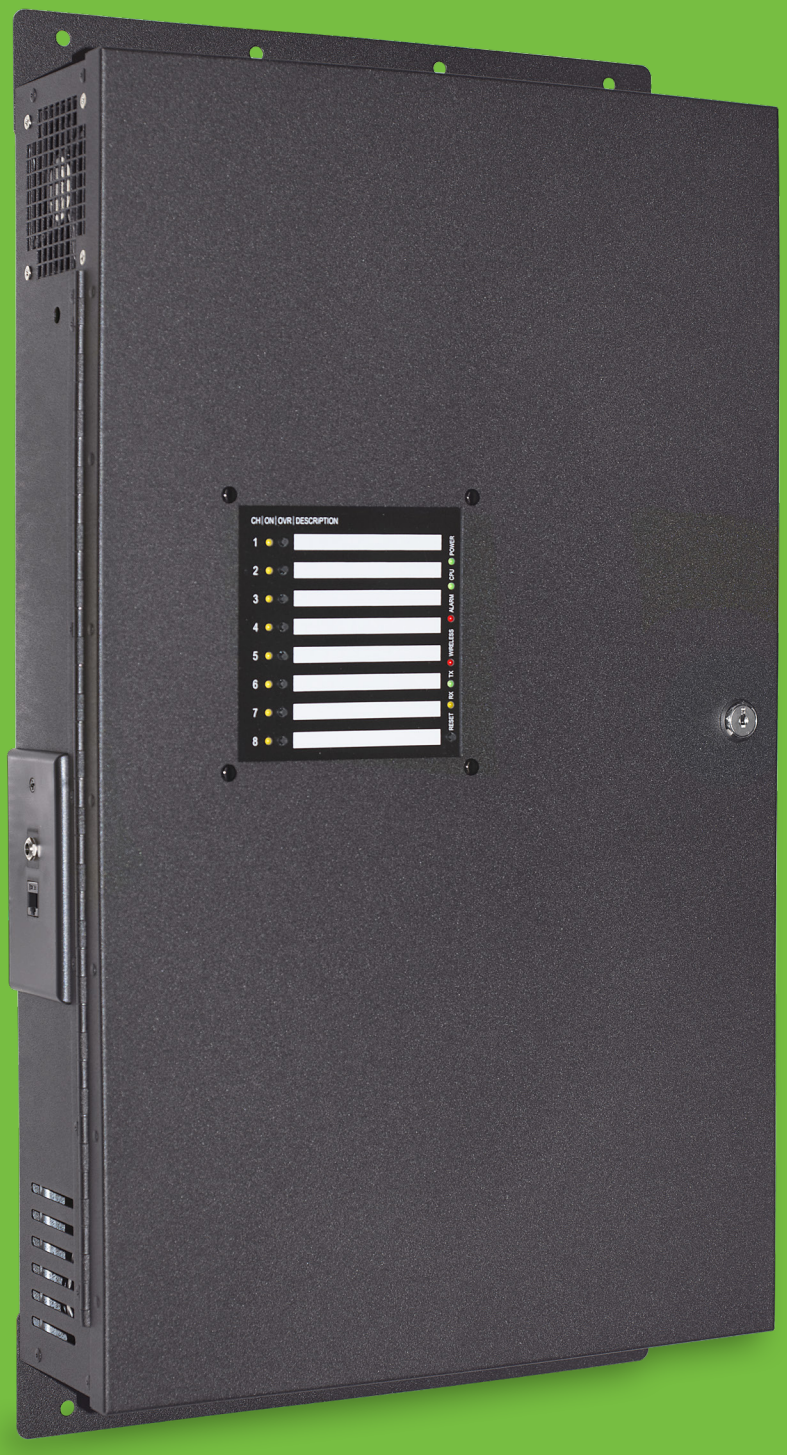
QWL2040 Panel

Integrated Building Manager



Overview

The QWL2040 Panel Integrated Building Manager is a value-engineered product, combining a Ubiquity Cloud™ Panel Gateway (equivalent to the QD2040) with an SQL218 integrated eight-channel Lighting Controller (equivalent to the SL2108) and an SEQ100 Energy Management Control Meter (equivalent to the SE1000) – all in a single, easy-to-mount cabinet.

This single-cabinet solution was developed in response to user demand for a device with self-contained power and cooling that could provide a wide range of controls and metering to service HVAC, lighting and energy needs and that could bring the power of TCS's Ubiquity Cloud servers to a building site.

Programming

The multifunction systems of the QWL2040 Panel are typically preconfigured to the customer's specifications upon ordering, which saves the user time and allows for a smoother installation. As an option, users can program settings themselves online through the Ubiquity Cloud interface upon delivery, or they can program the unit locally by downloading TCS's Insight service tool.

The QWL2040 Panel will auto-discover all networked controllers upon connection and activation. Users then manage the network settings and individual controller settings through the Ubiquity Cloud interface.

Building Controller settings include building site name, physical address, IP address, Ethernet configuration, Internet connectivity, proxy information, and other key settings.

The Lighting Controller component has eight programmable relay connections which can be scheduled for two periods per day. The controller has its own internal time funciton to operate independently if Ubiquity is not available or is offline. Additional progammable functions include astronomical scheduling based on time zone, blink prior to unoccupied change, and ambient light levels.

The Energy Management Meter Controller can be programmed for up to four meters for electrical (single-phase or three-phase) BTUs, water, or gas. It may be necessary to coordinate with local utility providers to relate signals such as pulse, or if using a current transducer for measuring eletrical usage.

Features and Benefits

Ubiquity Cloud Gateway (QD2040)

- Enables controller interoperability with Ubiquity Cloud
- Enables Ubiquity Cloud to maintain controller programming and scheduling
- Compatible with all TCS Basys- and Modbus-supported controllers
- Supervisory control routines
- Supervisory override strategy
- Auto-discovery of networked controllers saves labor when configuring networks
- Three integrated RS485 serial ports support multiple controller networks
- Additional serial ports can be added via USB ports (up to 64 networks)
- Integrated Ethernet controller with firewall capabilities
- Integrated configuration web page
- User-adjustable controller monitoring rate
- Remotely upgradable Gateway software
- Dual Ethernet ports: Port C for LAN connection, and Port L for Local Admin via laptop computer
- Local Admin Port L can be configured as a fail-over port to the primary Ethernet connection (separate Ethernet connection required)

Lighting Controller (SLQ218)

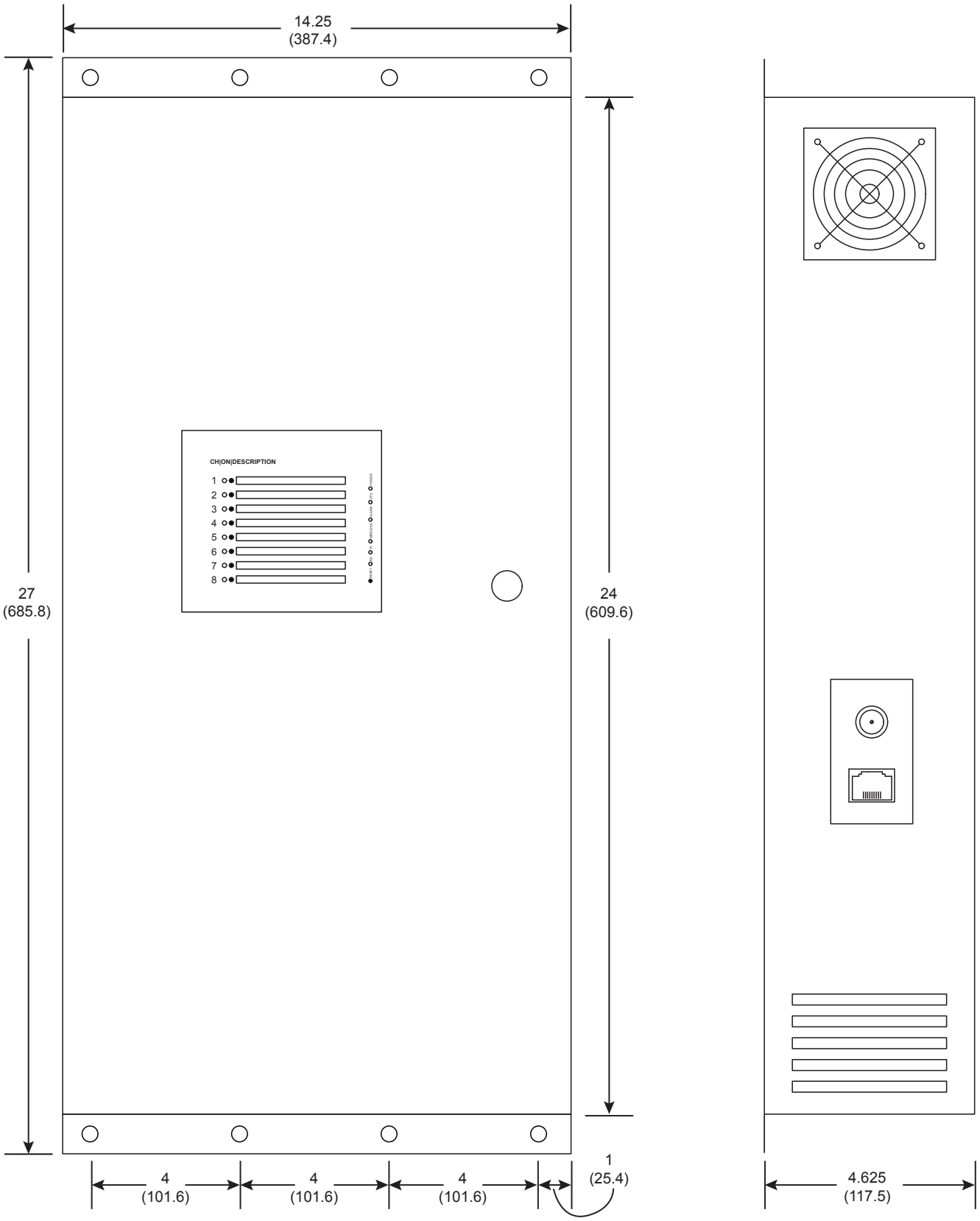
- 365-day programming for each circuit
- Analog input for photo sensor with the ability to remotely adjust sensor's sensitivity level
- Selectable power failure state
- Eight channel-lighting schedules for interior and exterior applications
- Digital photocell inputs
- Astronomical clock
- External time clock or occupancy sensor input for each channel
- Channel status LEDs provide occupants with instant feedback of system status
- Selectable normally open or normally closed relays
- Built-in 2 Amp relays with hand/off/auto (HOA) switches

Energy Meter (SEQ100)

Utility Meter Monitoring of:

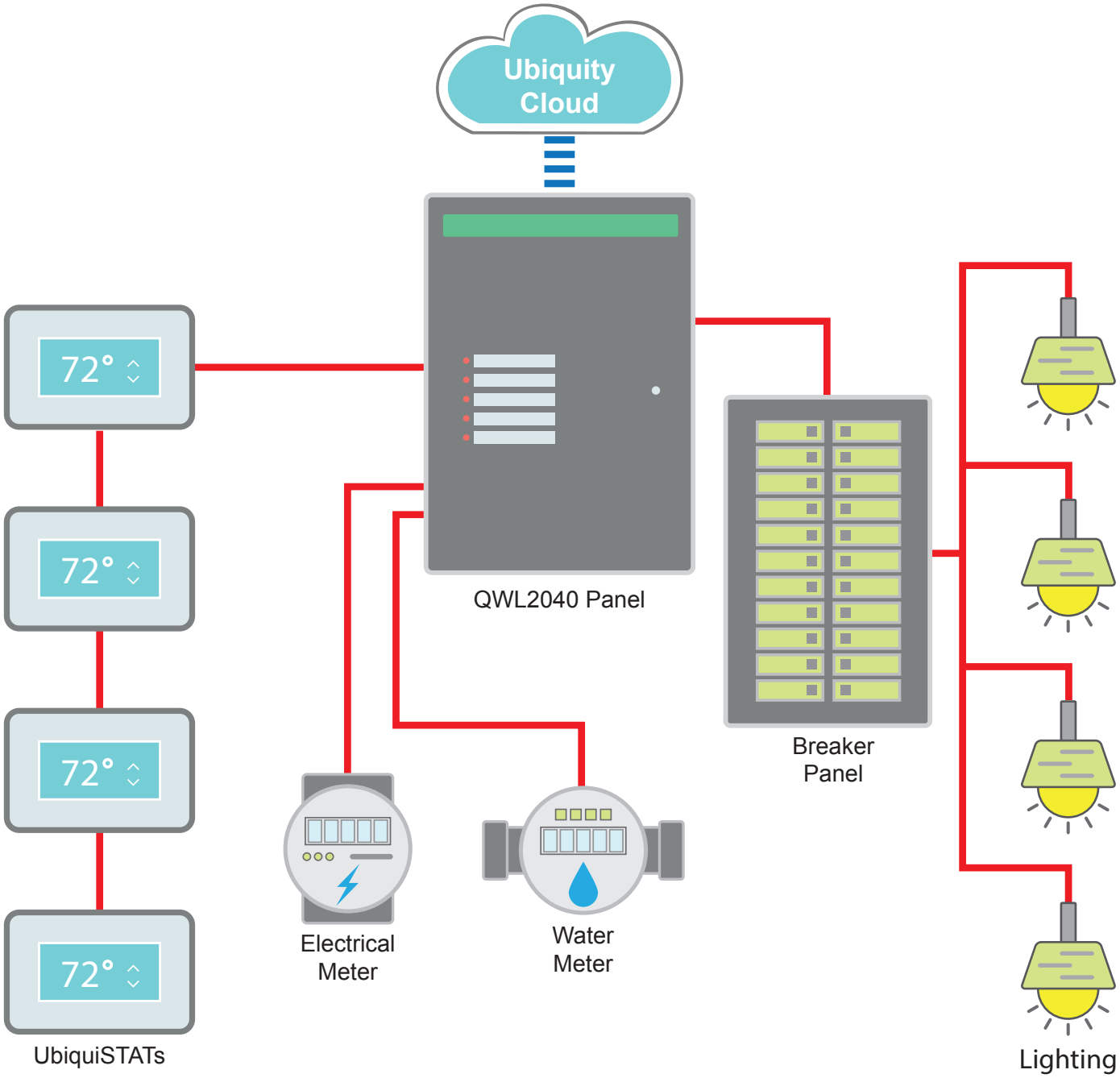
- Electric single- and three-phase kW and kWh
- Gas
- Water
- BTU

Dimensions



Units in inches (mm)

Sample Installation



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Specifications

General
Enclosure: 20-gauge steel
Indicators: Twelve status LEDs
Overrides: Eight pushbuttons for lighting

Environmental
Operating temperature: 32° to 77°F (0° to 25°C) with proper ventilation
Operating humidity: 0 to 90%, non-condensing
Storage temperature: –4° to 176°F (–20° to 70°C)

Electrical
Supply voltage: 110 – 240VAC, 165VA / 2.5A Max, UL, FCC Class A, and CE Listed

Ubiquity Cloud Gateway (QD2040)
Programming: Via embedded setup page
Communications:
- Controller network: RS485 (half-duplex)
- Modbus support
- TCSBus support
- Integrated Ethernet
- Two integrated RS485 serial ports
- Four USB Ports: USB-to-RS485 serial converter is used to connect with controllers.

Lighting Controller (SLQ218)
Inputs: Eight digital (dry contact) and two 0 – 5V light sensors
Outputs: Eight 2 Amp relays with HOA switches, capable of switching 24VAC
Analog input impedance: 10k Ohm
Programming: Via RS485 Communication
Communications: RS485, half-duplex
Memory backup: Non-volatile EEPROM, no battery required

Energy Meter (SEQ100)
Accuracy: +/– 0.5%
Programming: Via RS485 communication
Communications: RS485, half-duplex
Memory backup: Non-volatile EEPROM, no battery required

Ordering

Part #	Description
QWL2040 Panel	Integrated Building Manager Panel
QWL Bndl w/QW1010	Integrated Building Manager Panel - Wireless Network Support
QWL Series Accessories	
QD1010b (Networks)	SB to RS485 Communications Converter (only needed if more than 2 RS485 networks)
QD1011a	RS485 Communications Network Repeater
PI4000	USB Diagnostics Tool
PI6100	Cellular Modem for QD/QWL Series with Verizon Service

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