

CU

Battery Monitoring

CONTROL UNIT

01 APPLICATIONS: The Control Unit (CU) is ideal for applications that require:

- System-level management of battery monitoring at the string level
- Flexible integration with multiple DCMs across large installations
- Coordinated alarm and relay control for complex power systems

02 KEY FEATURES:

- Provides five configurable relay outputs for alarms and controls
- Supports both RS-485 and fiber communication
- Interfaces with multiple DCMs for scalable monitoring
- Includes built-in protection against surges and polarity errors
- Offers reliable performance in harsh electrical environments
- Designed for easy installation and setup

03

WHAT SETS THE CONTROL UNIT (CU) APART?

- Coordinates alarms and data from multiple DCMs at the string level
- Provides relay outputs to integrate with facility management systems
- Acts as the communication bridge between DCMs and the iBMU

04 RELIABLE SIGNAL CONVERSION AND CONTROL: The **Control Unit (CU)** manages communication, alarms, and integration across the entire Cellwatch system. With flexible interfaces and proven reliability, the Control Unit provides the foundation for large-scale battery deployments.



05 CU: Battery Monitoring Control Unit

Product Codes

721004	Control Unit
721022	Control Unit IP

06 Technical Specifications

Operating Specifications	
Ambient operating temperature	Voltage readings 0°C to 50°C Storage temperature: -10C to 80C
Maximum Relative Humidity	95% non-condensing
Maximum Altitude	2,000 meters (6,000ft)
Pollution category	Dry and non-conductive pollution with temporary conductivity due to condensation
Power supply	Required to be fed from UPS
Permitted mains supply variations	110 - 240 V AC +/-10%
Transient over-voltage category	Category II

06

Technical Specifications	
Operating Specifications Power supply Frequency Power supply power rating Fuse rating	50 Hz to 60 Hz 20 Watts 240 volt 250 mA Slo-Blo
Communications RS-485 interface Max range Fiber optic range (can be extended with Fiber Optic extender Kit) Maximum CUs per RS-485 bus Cable Type Interface for generator extender kit	Input and output with optional jumper for bus termination. Signal not regenerated 2,000 ft (600 meters) total bus length Min: 150 mm (6") Max: 45 m (150 ft) (No radius sharper than 130 mm (5 in)) 31 Belden 8102 or equivalent RJ45
Alarm Outputs Output Relays Electrical characteristics Electrical isolation	5 relays, each single contact, volts free change over. 10 relays for Thermal Runaway Controller 30 VDC @ 5 amps max. 1500 VAC
Sensing inputs Temperature sensor Resolution Accuracy Range Mounting Current Sensor Resolution Useful range Communication rate Maximum Cable distance	Solid state probe 0.05 °C +/- 1 °C 2 - 80 °C 8 mm (5/16 in) lug fitted to adhesive pad (removable) Solid state, magnetic core sprung clamp. 2 in (50 mm) capacity (1,000 amp) or 4.5 in (112 mm) 2,500 lamp 0.5 amp +/- 10 to maximum amps of clamp 9600 baud 150 ft (45 m)
Protection Sensing Inputs Insulation resistance	Short circuit proof 600 volts DC
Physical Characteristics Dimensions Mounting centers Mounting hole size	302 mm x 298 mm x 121 mm (11 7/8 in x 11 3/4 in x 4 3/4 in) 4 corner mounting holes, 260 mm x 260 mm (10 7/32 in x 10 7/32 in) centers 8 mm (5/16 in) diameter