iBMU

DCM Managing

CONTROL UNIT

V1

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

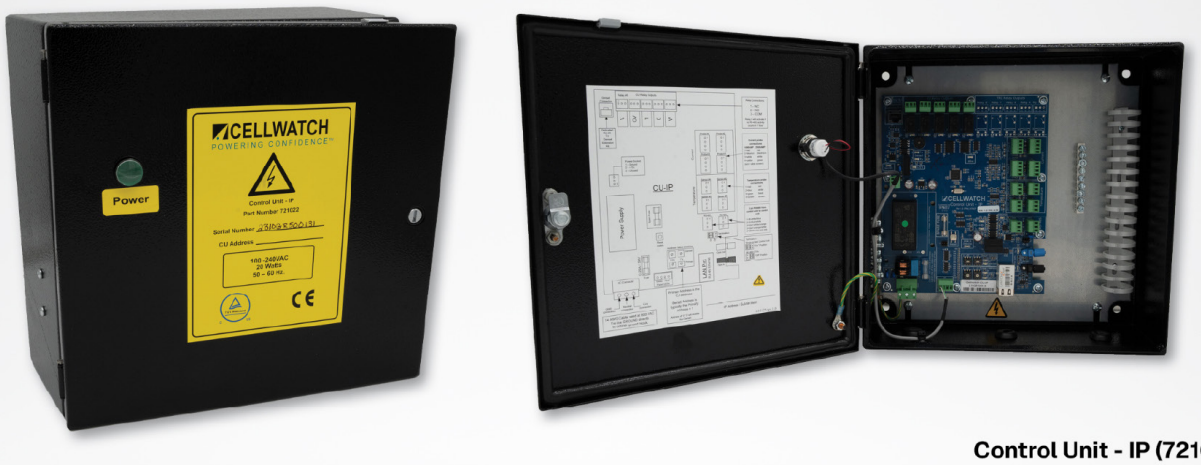
03

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.



Control Unit - IP (721022)

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	50 Hz to 60 Hz
Power supply power rating	20 Watts
Fuse rating	240 volt 250 mA Slo-Blo
Communications	
RS-485 interface	Input and output with optional jumper for bus termination. Signal not regenerated
Max range	2,000 ft (600 meters) total bus length
Fiber optic range (can be extended with Fiber Optic extender Kit)	Min: 150 mm (6”) Max: 45 m (150 ft) (No radius sharper than 130 mm (5 in))
Maximum CUs per RS-485 bus	31
Cable Type	Belden 8102 or equivalent
Interface for generator extender kit	RJ45
Alarm Outputs	
Output Relays	5 relays, each single contact, volts free change over. 10 relays for Thermal Runaway Controller
Electrical characteristics	30 VDC @ 5 amps max.
Electrical isolation	1500 VAC
Sensing inputs	
Temperature sensor	Solid state probe
Resolution	0.05 °C
Accuracy	+/- 1 °C
Range	2 - 80 °C
Mounting	8 mm (5/16 in) lug fitted to adhesive pad (removable)
Current Sensor	Solid state, magnetic core sprung clamp. 2 in (50 mm) capacity (1,000 amp) or 4.5 in (112 mm) 2,500 lamp
Resolution	0.5 amp
Useful range	+/- 10 to maximum amps of clamp
Communication rate	9600 baud
Maximum Cable distance	150 ft (45 m)
Protection	
Sensing Inputs	Short circuit proof
Insulation resistance	600 volts DC
Physical Characteristics	
Dimensions	302 mm x 298 mm x 121 mm (11 ⅞ in x 11 ¾ in x 4 ¾ in)
Mounting centers	4 corner mounting holes, 260 mm x 260 mm (10 7/32 in x 10 7/32 in) centers
Mounting hole size	8 mm (5/16 in) diameter