



System 450 C450CCU Application-Specific Controller

Ideal for Walk-In Coolers/Freezers and Large Display Cases



The C450CCU controller combines the functions of a space temperature control, defrost time clock, defrost temperature termination control, fan delay switch, and pump-down control.

This provides refrigeration equipment OEMs and service contractors with an affordable alternative to electromechanical controls with the added benefit of System 450's accurate temperature sensing and control, fail-safe modes, and alarm functions.

System 450 power and expansion modules can be used in conjunction with the C450CCU controller to build a variety of custom commercial refrigeration control solutions.

C450CCU features

- Refrigerated space temperature control
- Passive/Off-cycle defrost or Active/Electric heat defrost
- Evaporator fan delay
- Defrost termination based on time and/or temperature
- Pump-down control
- Single- or two-speed evaporator fan control
- Compressor anti-short cycle delay
- Evaporator drip-time adjustment
- Sensor failure default setting
- Alarm notifications for sensor failure, high space temperature, System 450 communications bus failure, defrost termination failure, and defrost cycle error

The power behind **your mission**





| Technical Specifications | |
|---|---|
| Specification | Description |
| Product | System 450 Series C450CCU condensing unit control module |
| Sensors | <ul style="list-style-type: none"> Two A99BB-500C temperature sensors with 5 m (16-3/8 ft.) cable length included with the C450CCU-4C controller Sensor temperature range: -40°C to 120°C (-40°F to 250°F) Cable jacket temperature range: -40°C to 100°C (-40°F to 212°F) Controller accepts up to three sensor inputs; two temperature sensor inputs (one for sensing space temperature and the other for sensing evaporator temperature) and one pressure input (for pump-down control by sensing system suction pressure) |
| Power supply | <p>Use one of the following power supplies:</p> <ul style="list-style-type: none"> C450YNN power supply module 24 (20-30) VAC safety extra-low voltage (SELV) (Europe) Class 2 (North America), 50/60 Hz, 10 VA minimum 20 VDC-30 VDC, 2 Watts minimum for control, then 1 Watt additional for each output attached <p>Note: Connect a System 450 control module to only one power source.</p> |
| Expansion Modules | <ul style="list-style-type: none"> C450SCN-4C relay expansion module with two (2) relay outputs C450SBN-4C relay expansion module with one (1) relay outputs <p>Note: The C450CCU controller will accept two (2) additional C450SCN-4C expansion modules or four (4) additional C450SBN-4C expansion modules for a total of six (6) relay outputs</p> |
| Ambient operating conditions | <p>Temperature: -40°C to 66°C (-40°F to 150°F)</p> <p>Humidity: Up to 95% RH noncondensing; maximum dew point 29°C (85°F)</p> |
| Ambient shipping and storage conditions | <p>Temperature: -40°C to 80°C (-40°F to 176°F)</p> <p>Humidity: Up to 95% RH noncondensing; maximum dew point 29°C (85°F)</p> |
| Output relay contacts | <p>General: 1/2 HP at 120/240 VAC, SPDT</p> <p>120 VAC:</p> <ul style="list-style-type: none"> AC full-load amperes: 9.8 A AC locked-rotor amperes: 58.8 A <p>208/240 VAC:</p> <ul style="list-style-type: none"> AC full-load amperes: 4.9 A AC locked-rotor amperes: 29.4 A <p>10 amperes AC non-inductive at 24/240 VAC</p> <p>Pilot duty: 125 VA at 24/240 VAC</p> |
| Enclosure | Type 1 (NEMA), IP20 high-impact thermoplastic |
| Dimensions (H x W x D) | 127 mm x 61 mm x 61 mm (5 in. x 2 3/8 in. x 2 3/8 in.) |
| Weight | C450CCU: 222 gm (0.49 lb) |
| Compliance | <p>United States: cULus Listed; UL 60730-1, File E27734; FCC Compliant to CFR47, Part 15, Subpart B, Class B</p> <p>Canada: cULus Listed; CAN/CSA-E60730-1, File E27734; Industry Canada (IC) Compliant to Canadian ICES-003, Class B limit</p> |
| CE | Europe: CE Mark – Johnson Controls declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC and RoHS Directives. |
| | Australia and New Zealand: RCM mark, Australia/NZ emissions compliant |

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products.

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