



EZ-Temp™

MODEL 90200



Data sheet



Specifications

- Carlin's Model 90200AL, BL, DL and GL microprocessor-operated temperature controls are UL Listed and provided as a complete package, consisting of control, J-box, sensor and well. Model 90200A, B, D or G controls are UL Recognized, and provided as individual components, with J-box, sensor and well available separately.
- Carlin's model 90200 microprocessor-operated temperature controls are available in four configurations described below. Each model provides one limit-duty-rated contact.
- Refer to separate product listing sheets for pre-defined models, or request a control to meet your specifications within the available ranges listed below.

- **Microprocessor-operated**
(Processor coordinates limit and diagnostic functions)
- **Easy remote sense**
(Electronic sensor, wired to control)
- **Select from break-on-rise, make-on-rise or SPDT operation**
- **Self-checking program**
(Control locks out on diagnostic failure)
- **Diagnostic/status LED's**
(LED's indicate power, call for heat, and lockout)

	90200AL	Temperature limit control <ul style="list-style-type: none"> • 1 break-on-rise contact • 1 electronic sensor • lockout on diagnostic failure • reset from lockout via power cycle
	90200BL	Temperature limit control <ul style="list-style-type: none"> • 1 make-on-rise contact • 1 electronic sensor • lockout on diagnostic failure • reset from lockout via power cycle
	90200DL	Temperature limit control <ul style="list-style-type: none"> • SPDT contacts (1 break-/1 make-on-rise) • 1 electronic sensor • lockout on diagnostic failure • reset from lockout via power cycle
	90200GL	Temperature limit control <ul style="list-style-type: none"> • 1 break-on-rise isolated contact • 1 electronic sensor • lockout on diagnostic failure • reset from lockout via power cycle

Control model	AL	BL	DL	GL
Control power input (red-white wire)	120 VAC, 11 VA			
Contacts (action on temperature rise:)	1 (breaks)	1 (makes)	1 (breaks) 1 (makes)	1 (breaks)
Contact rating Full load Locked rotor	120 VAC, 10 AMPS 120 VAC, 60 AMPS			
Wires Quantity	3	3	4	4
120 vac H & Limit IN / N	red-white / white			
Break-on-rise OUT	black	NA	black	black/ green black
Make-on-rise OUT	NA	blk-white	blk-white	N/A
Adjustable oper. limit range	Any range between 50°F to 240°F			
Fixed differential (subtractive)	Any value from 5°F to 100°F			
Operating temperature limits	+32°F to +140°F			
Storage temperature limits	-40°F to +185°F			
Agencies	UL & ULC Recognized & Listed component United States & Canada			

Model 90200 diagnostic LED's

- GREEN** — OFF — ON Power on — FLASHING Lockout
- Center AMBER** — OFF — ON Call for low fire (90200GL only)
- Right AMBER** — OFF — ON Control call for heat or high fire

WARNING Electrical shock hazard: Disconnect power to appliance when wiring or servicing any electrical component.

Operation

(See wiring diagrams below for wiring connections.)

Indicator LED's

90200 controls have a green LED (power/lockout indicator) and center amber LED (Low Fire indicator only present on 90200GL) right amber LED (operation or High Fire indicator).

- Power OFF** With no power applied to the red-white wire, all lights are off.
- Power ON** When power is applied to the red-white wire, the green and center amber LED's (only present on 90200GL) turn on.
- Self-test** When power is applied, the 90200 performs a self-test, checking the sensor and microprocessor. The power-up test lasts from 3 to 5 seconds.
The 90200 continues diagnostic checking during the operating cycle as well. Any self-check failure causes a lockout (see below).
- Call for heat or high fire** When the temperature at the operating sensor is at or below setpoint minus fixed differential, the control powers the limit relay (break-on-rise contact closes; make-on-rise contact opens). The center amber LED (if present) turns off, the right amber LED turns on.
- Stand-by or low fire** When the operating sensor reaches setpoint temperature or above, the 90200 turns off the relay (break-on-rise contact opens; make-on-rise contact closes). The center amber LED (if present) turns on and the right amber LED turns off.
- Lockout** If the control detects a diagnostic failure, **lockout** occurs. During lockout, the green LED flashes.
After the temperature drops below high limit setting minus differential, reset the control by turning power off, then back on. The green LED will stop flashing.

NOTICE Power must flow through the contacts in the direction shown. Changing flow direction will cause the control to lockout or fail to operate.

Configurations

- **Mounting** — 90200AL, BL, DL, and GL controls mount to a standard 4x4 J-box, supplied with the control. Mount the box directly to a well (new or existing) with hardware supplied, or panel mount. See below for dimensions.
- **Well kits** — Wells for 90200AL, BL, DL, and GL sensors are available in the sizes shown below. Well kits include sensor mounting hardware designed to hold sensor securely in position.
- **Sensors** — Sensors are available separately for 90200A, B, D, and G only. The sensor is supplied with 90200AL, BL, DL, and GL.
- **NOTICE** — UL Listed model 90200AL, BL, DL, GL controls must be shipped complete with a sensor, well and J-box. Only UL recognized component models 90200A, B, D, and G controls can be purchased as individual components.

