

# Modulating Reset Temperature Controller

## T678B; T991B Outdoor Reset Dual Bulb Temperature Controller



**Application:** Automatic reset based on outdoor temperature  
**Analog Output: T991B (only):** One 135 Ohm Potentiometer  
**Type:** Remote bulb  
**Reset Ratio:** 1.0 to 1.0  
**Number of Sensors:** 2  
**Voltage:** 120 Vac  
**Frequency:** 50 Hz, 60 Hz  
**Maximum Operating Temperature:** 125 F (52 C)  
**Sensor Element:** Copper bulb  
**Approvals:**  
**Canadian Standards Association:** Listed  
**Underwriters Laboratories, Inc:** UL Listed: E4436, Vol. 4, Sec. 11,  
 Guide XAPX  
**Contact Ratings:**

### Automatic outdoor reset controllers for air or liquid.

- Raises heating medium control point automatically as outdoor temperature falls.
- One remote element senses heating medium, the other senses outdoor air temperature.
- T991 has 135 ohm potentiometer for proportional heating control.

	120 Vac	240 Vac
<b>T678B</b>	8.0 AFL, 48.0 ALR	5.1 AFL, 30.6 ALR
<b>T991B</b>	—	—

**Replacement Parts:**  
**See table on page 801**

Product Number	Bulb Size		Capillary Length		Differential Temperature		Setpoint Temperature Range		Output	Comments
	(inch)	(mm)	(ft)	(m)	(F)	(C)	(F)	(C)		
<b>T678B1006</b>	1/2 in. x 4 in.	13 mm dia., 102 mm long	Indoor: 10 ft., Outdoor: 30 ft.	Indoor: 3 m, Outdoor: 9.1 m	Switch: 6 F fixed Interstage: 3 F to 10 F adjustable	Interstage: 1.7 C to 5.5 C adjustable Switch: 3.3 C fixed	70 F to 140 F	21 C to 60 C	2 SPDT switch contacts	Indoor bulb temperature plus outdoor bulb temperature must not exceed 265 F (129 C).
<b>T678B1014</b>	1/2 in. x 4 in.	13 mm dia., 102 mm long	Indoor: 10 ft., Outdoor: 30 ft.	Indoor: 3 m, Outdoor: 9.1 m	Switch: 6 F fixed Interstage: 3 F to 10 F adjustable	Interstage: 1.7 C to 5.5 C adjustable Switch: 3.3 C fixed	70 F to 140 F	21 C to 60 C	2 SPDT switch contacts	Indoor bulb temperature plus 1.5 times outdoor bulb temperature must not exceed 312 F (156 C).
<b>T678B1022</b>	1/2 in. x 4 in.	13 mm dia., 102 mm long	Indoor: 10 ft., Outdoor: 30 ft.	Indoor: 3 m, Outdoor: 9.1 m	Switch: 6 F fixed Interstage: 3 F to 10 F adjustable	Interstage: 1.7 C to 5.5 C adjustable Switch: 3.3 C fixed	70 F to 140 F	21 C to 60 C	2 SPDT switch contacts	Indoor bulb temperature plus 0.67 times outdoor bulb temperature must not exceed 312 F (156 C)
<b>T678B1030</b>	1/2 in. x 4 in.	13 mm dia., 102 mm long	Indoor: 18 ft., Outdoor: 20 ft.	Indoor: 5.5 m, Outdoor: 6.1 m	Switch: 6 F fixed Interstage: 3 F to 10 F adjustable	Interstage: 1.7 C to 5.5 C adjustable Switch: 3.3 C fixed	70 F to 140 F	21 C to 60 C	2 SPDT switch contacts	Indoor bulb temperature plus outdoor bulb temperature must not exceed 265 F (129 C).
<b>T991B1003</b>	1/2 in. diameter, 4 in. long	13 mm dia., 102 mm long	Indoor: 10 ft., Outdoor: 30 ft.	Indoor: 3 m, Outdoor: 9.1 m	—	—	70 F to 140 F	21 C to 60 C	—	Indoor bulb temperature plus outdoor bulb temperature must not exceed 265 F (129 C).
<b>T991B1011</b>	1/2 in. diameter, 4 in. long	13 mm diameter, 102 mm long	Indoor: 10 ft., Outdoor: 30 ft.	Indoor: 3 m, Outdoor: 9.1 m	—	—	70 F to 140 F	21 C to 60 C	—	Indoor bulb temperature plus 1.5 times outdoor bulb temperature must not exceed 312 F (156 C).
<b>T991B1029</b>	1/2 in. diameter, 4 in. long	13 mm diameter, 102 mm long	Indoor: 10 ft., Outdoor: 30 ft.	Indoor: 3 m, Outdoor: 9.1 m	—	—	70 F to 140 F	21 C to 60 C	—	Indoor bulb temperature plus 2/3 times outdoor bulb temperature must not exceed 242 F (117 C).
<b>T991B1037</b>	1/8 in. diameter, 12 ft. long	3 mm diameter, 3 m long	Indoor: 6 ft., Outdoor: 20 ft.	Indoor: 1.8 m, Outdoor: 6.1 m	—	—	70 F to 140 F	21 C to 60 C	—	Indoor bulb temperature plus outdoor bulb temperature must not exceed 265 F (129 C).
<b>T991B1060</b>	1/8 in. diameter, 12 ft. long	3 mm diameter, 3 m long	Indoor: 20 ft., Outdoor: 30 ft.	Indoor: 6.1 m, Outdoor: 9.1 m	—	—	50 F to 120 F	10 C to 49 C	—	Indoor bulb temperature plus 0.29 times outdoor bulb temperature must not exceed 206 F (97 C).