



Specification Data

Minneapolis - Honeywell Regulator Company

MINNEAPOLIS 8, MINNESOTA • TORONTO 17, ONTARIO

T915 & L956 TEMPERATURE CONTROLLERS

Application: The T915 and the L956 temperature controllers find application in Series 90 control systems and in controlling duct air temperatures, as well as liquid temperatures in tanks and boilers. The L956 differs from the T915 only in its control range, being employed in higher temperature control applications.

These units are generally used with Series 90 motorized valves or dampers.

Construction: A remote-bulb sensing element detects system temperature variations, and by means of a capillary and bellows, operates a wiper over potentiometer windings. Models with one or two potentiometers are available to operate one or two motors simultaneously or in sequence.

The T915M and T915P models have also a set of spdt contacts for operating a Series 20 circuit at the high or low end of the modulating range.

The L956A, C, and D models are similar to the T915A, C, and D except in control range.

Specifications:

MODELS:

T915A—One potentiometer for controlling a single Series 90 motor or relay. Non-adjustable proportioning range.

T915B—Two potentiometers for controlling two Series 90 motors in unison or in sequence. Factory set for unison control. Non-adjustable proportioning range.

T915C—One potentiometer for controlling a single Series 90 motor or relay. Adjustable proportioning range.

T915D—Two potentiometers for controlling two Series 90 motors or relays in unison. Adjustable proportioning range.

T915F—Two potentiometers for controlling two Series 90 motors or relays in sequence. Adjustable dead-spot between potentiometers. Factory adjusted dead-spot $\frac{3}{4}$ inch; can be adjusted to eliminate dead-spot for uninterrupted sequence control. Adjustable proportioning range.

T915M and T915P—One potentiometer and Series 20 contacts for controlling one Series 90 motor or relay and one Series 20 motor or relay in sequence on temperature rise. Non-adjustable proportioning range and non-adjustable differential.

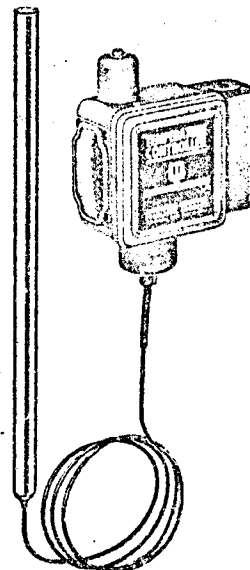
L956A—Same as T915A, except high temperature ranges.

L956C—Same as T915C, except high temperature ranges.

L956D—Same as T915D, except high temperature ranges.

ELECTRICAL RATING: Low voltage ac only.

POTENTIOMETER: Standard, 135 ohm. Available with 280 ohm potentiometer in some models (See Table 1).



MINIMUM AMBIENT TEMPERATURE: 55 F (for high range, 510-700 F, models of L956).

BULB SIZE: Low temperature, 4 x $\frac{1}{2}$ in. Cross ambient, 14 $\frac{1}{2}$ x $\frac{11}{16}$ in. on 5 ft. elements; 17 $\frac{1}{2}$ x $\frac{11}{16}$ in. on 20 ft. elements; 20 $\frac{1}{2}$ x $\frac{11}{16}$ in. on 30 ft. elements. High temperature, 4 x $\frac{1}{2}$ in.

PRESSURE FITTINGS: Furnished on all ranges above and including 65 to 140 F. Sizes— $\frac{1}{2}$ in. for $\frac{1}{2}$ in. capsules, $\frac{3}{4}$ in. for $\frac{11}{16}$ in. capsules.

BULB HOLDER (311266): Furnished with copper elements only on ranges below and including 60-100 F.

FINISH: Gray.

DIMENSIONS: See Fig. 1.

ACCESSORIES AVAILABLE:

1. Knurled adjustment knob, No. 33312.
2. Separable protecting wells—copper, mild and stainless steel, and Monel. Also available with $\frac{3}{4}$ in. extension neck. See the table for safe working pressures. See Form 90-0559 for detailed information.

SPECIAL FEATURES AVAILABLE: See Table 1.

ELEMENT LENGTH AND MATERIAL: 5 ft. copper standard; 20 and 30 ft. copper, 5 and 20 ft. mild steel, Monel, or stainless steel lengths available in certain ranges.

Pressure Ratings of Separable Wells

Material	Safe Working Pressure at	
	150 F	750 F
Copper ^a	160 psi	—
Mild Steel	300 psi	225 psi
Stainless Steel	300 psi	225 psi
Monel	300 psi	225 psi

^a Maximum temperature for $\frac{11}{16}$ in. copper wells, 275 F; for $\frac{1}{2}$ in. copper wells, 350 F.

NOTE: Do not subject wells to temperatures higher than the maximum allowable for the controller (See Table 1).

Table 1

Model	Range (F) (C on Same Scale Plate)	Adjustable Proportioning Range	Proportioning Range (F)						Maximum Allowable Temperature (F)	Type of Fillc	Special Features Available
			Low		Midscale		High				
			Min	Max	Min	Max	Min	Max			
T915A	0 to 70	no	5	—	3	—	2	—	110	CA	1
	15 to 90	no	6	—	3	—	2	—	130	CA	1
	15 to 90	no	12	—	6	—	4	—	130	CA	—
	40 to 80	no	6	—	3	—	2	—	120	CA	—
	60 to 100	no	4	—	3	—	2	—	140	CA	1
	65 to 140	no	5	—	3	—	2	—	180	CA	—
	75 to 200	no	7	—	3	—	2	—	210	HT	—
	80 to 210	no	7	—	3	—	2	—	230	HT	—
	105 to 220	no	7	—	3	—	2	—	240	HT	—
T915B	160 to 280	no	7	—	3	—	2	—	300	HT	—
	15 to 90	no	6	—	3	—	2	—	130	CA	1
	60 to 100	no	4	—	3	—	2	—	140	CA	—
T915C	65 to 140	no	5	—	3	—	2	—	180	CA	—
	160 to 280	no	7	—	3	—	2	—	300	HT	—
	—50 to +10	yes	23	116	16	91	12	74	200	LT ^a	—
T915D	—30 to +40	yes	15	65	10	50	6	40	200	LT ^a	—
	—25 to 0	yes	20	128	16	113	15	102	130	CA	—
	15 to 90	yes	11	58	7	38	4	28	130	CA	1, 2
	60 to 100	yes	7	46	6	39	5	31	140	CA	—
	65 to 140	yes	10	57	6	40	4	28	180	CA	1
	75 to 105	yes	24	111	15	96	13	89	230	HT	—
	75 to 200	yes	12	60	6	32	4	22	210	HT	—
	80 to 210	yes	12	60	6	32	4	22	230	HT	—
	80 to 250	yes	18	72	9	39	8	30	270	HT	—
	105 to 220	yes	12	60	6	32	4	22	240	HT	2
T915E	160 to 280	yes	12	60	6	32	4	22	300	HT	—
	0 to 70	yes	13	84	8	58	6	40	110	CA	1
	15 to 90	yes	11	58	7	38	4	28	130	CA	1
	60 to 100	yes	7	46	6	39	5	31	140	CA	1
	65 to 140	yes	10	57	6	40	4	28	180	CA	—
	75 to 105	yes	24	111	15	96	13	89	230	HT	—
	75 to 200	yes	10	58	6	40	4	28	210	HT	—
	80 to 210	yes	10	58	6	40	4	28	230	HT	—
	80 to 250	yes	18	72	9	39	8	30	270	HT	—
	105 to 220	yes	12	60	6	32	4	22	240	HT	—
T915Fb	160 to 280	yes	12	60	6	32	4	22	300	HT	—
	15 to 90	yes	17	87	8	52	7	38	130	CA	1
	60 to 100	yes	9	60	8	51	7	41	130	CA	—
	65 to 140	yes	12	69	8	54	6	43	180	CA	—
	80 to 210	yes	14	72	7	38	5	26	230	HT	—
T915M	160 to 280	yes	14	72	7	38	5	26	300	HT	—
	0 to 70	no	Series 20 contacts operating at high end						110	CA	—
	15 to 90	no							130	CA	—
	60 to 100	no							140	CA	—
	65 to 140	no							180	CA	—
105 to 220	no	240							HT	—	
T915P	15 to 90	no	Series 20 contacts operating at low end						130	CA	—
L955A	240 to 385	no	8	—	4	—	3	—	405	HT	—
	370 to 530	no	7	—	5	—	4	—	550	HT	—
	510 to 700	no	8	—	6	—	5	—	720	HT	—
L956C	240 to 385	yes	15	75	7	40	4	30	405	HT	—
	370 to 530	yes	13	82	9	52	6	40	550	HT	—
	510 to 700	yes	15	90	12	65	9	54	720	HT	—
L956D	240 to 385	yes	15	75	7	40	4	30	405	HT	—
	370 to 530	yes	13	82	9	52	6	40	550	HT	—

^a Fadeout temperature, 70 F.

^b Proportioning range given for these models applies only when potentiometer sliders are at factory setting.

^c CA—Cross ambient; HT—High temperature; LT—Low temperature.

SPECIAL FEATURES: available as indicated in table

1. Low-temperature fill (Max allowable temp., 200 F; fadeout temp., 120 F)
2. 280 ohm potentiometer.

WHEN SPECIFYING, INDICATE:

1. Model number.
2. Range.

3. Element length and material.
4. Special features, if required.
5. Pressure fitting, if required.

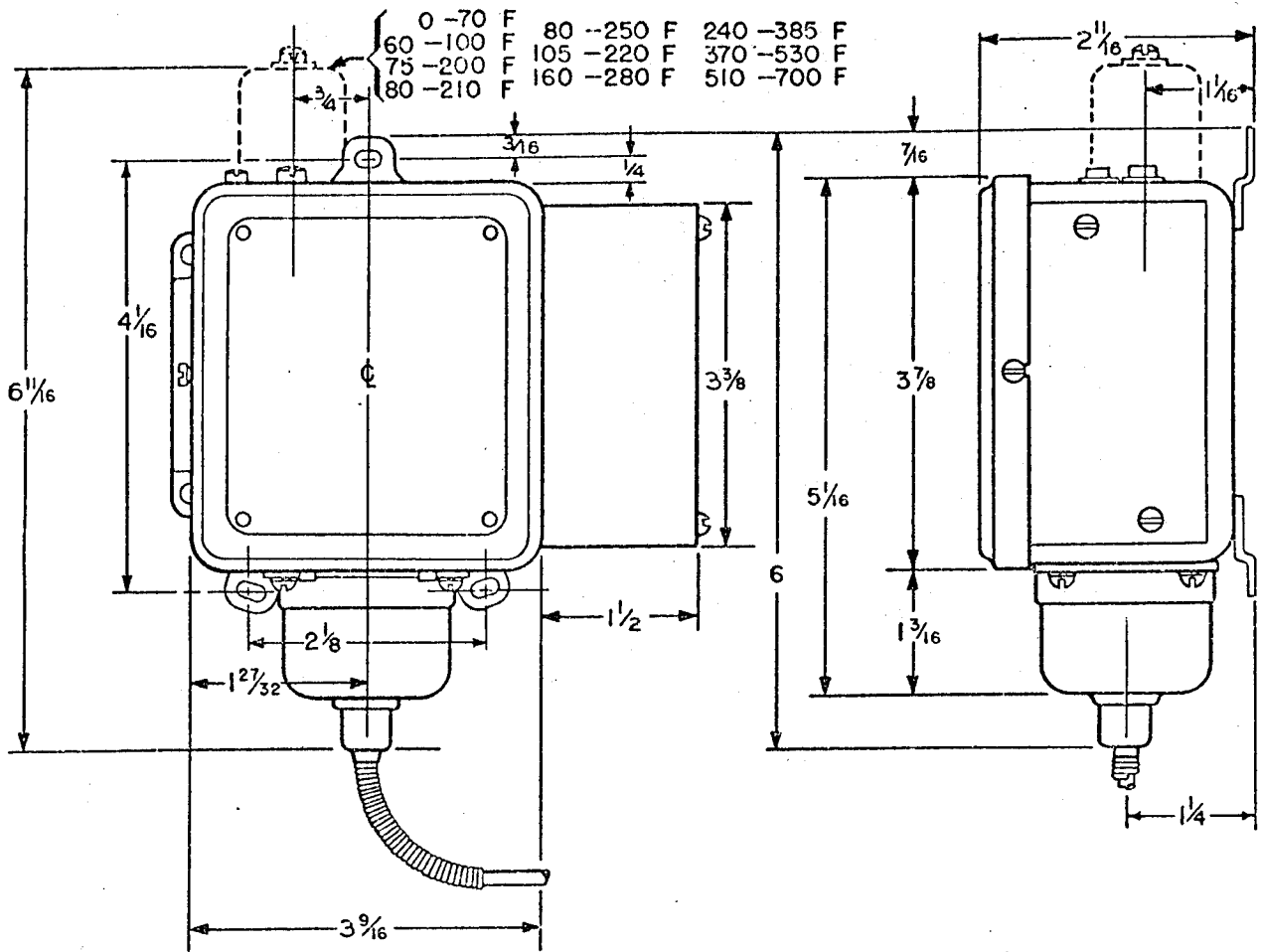


Fig. 1—Approximate Dimensions in Inches.

typical operation: A temperature change at the remote-bulb will cause a pressure change within the bulb and capillary. This pressure change is transmitted to the bellows inside the case, which operates the potentiometer wiper. When used with a Series 90 motor, proportional control of a valve or damper may be achieved.

The operation of the T915M and T915P models is the same except that at the high (or low) end of the proportioning range (depending on the model), an spdt switch is put into use to operate a Series 20 system component.

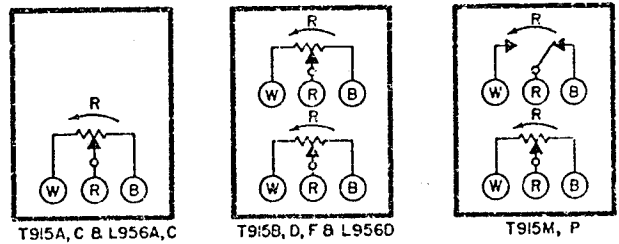


Fig. 2—Internal Schematics.