

## Chapter 1-2

## INDICATOR, TYPE S196.1.15

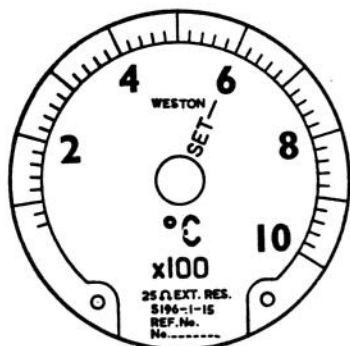


Fig. 1. Indicator, Type S196.1.15

**Dial presentation**

1. This indicator, fig. 1 is calibrated in °C from 0 to 1000; the indicator is controlled by variation of temperature in a thermocouple which applies a millivolt input to the terminals. The external circuit consists of a chromel/alumel thermocouple and incorporates a resistance of 25 ohms.

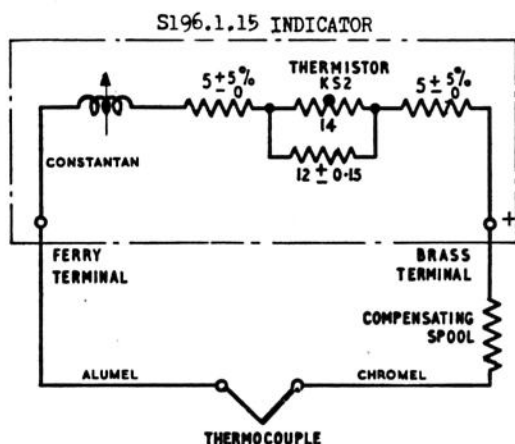


Fig. 2. Circuit diagram

**Circuit and connections**

2. The circuit diagram is shown in fig. 2 and connection to the indicator is by means of two terminal screws; the positive terminal, constructed of brass, connects to the chromel end of the thermocouple and the negative terminal, constructed of ferry, connects to the alumel end.

**Testing**

3. When testing these indicators for serviceability the Standard Serviceability Test given in Chapter 1-1 must be used. Indicator test points are shown in Table 1 of this sub-chapter.

**External resistance**

4. The external resistance required for this indicator is  $25 \pm 0.1$  ohms, this value to be selected from the range of plug-in resistances or set on switch B on the test set.

TABLE 1 CALIBRATION VALUES

SCALE READING (DEG C)	INPUT (mV) FOR VARIATION IN INSTRUMENT CASE TEMPERATURE (DEG C)														ACCURACY (DEG C)
	15 DEG C	16 DEG C	17 DEG C	18 DEG C	19 DEG C	20 DEG C	21 DEG C	22 DEG C	23 DEG C	24 DEG C	25 DEG C	26 DEG C	27 DEG C	28 DEG C	
100	3.47	3.43	3.39	3.35	3.31	3.27	3.22	3.18	3.14	3.10	3.06	3.02	2.97	2.93	±35
200	7.54	7.50	7.46	7.42	7.38	7.34	7.30	7.26	7.22	7.18	7.14	7.10	7.06	7.02	±35
300	11.59	11.55	11.50	11.46	11.42	11.38	11.34	11.30	11.26	11.22	11.17	11.13	11.09	11.05	±35
400	15.76	15.72	15.68	15.64	15.59	15.55	15.51	15.47	15.43	15.38	15.34	15.30	15.26	15.22	±15
500	20.00	19.96	19.92	19.87	19.83	19.79	19.75	19.70	19.66	19.62	19.58	19.53	19.49	19.45	±15
600	24.26	24.22	24.18	24.14	24.09	24.05	24.01	23.96	23.92	23.88	23.84	23.79	23.75	23.71	0 SET
700	28.50	28.46	28.41	28.37	28.33	28.29	28.25	28.20	28.16	28.12	28.08	28.03	27.99	27.95	±15
800	32.66	32.62	32.58	32.54	32.50	32.45	32.41	32.37	32.33	32.29	32.25	32.21	32.17	32.12	±15
900	36.72	36.68	36.64	36.60	36.56	36.52	36.48	36.44	36.40	36.36	36.32	36.28	36.24	36.20	±35
1000	40.68	40.64	40.60	40.57	40.53	40.49	40.45	40.41	40.37	40.33	40.29	40.25	40.21	40.17	±35