OVERHAUL MANUAL

ADDENDUM

MODEL S.218.5.14 - INDICATOR, TEMPERATURE 60/1000°C

The information contained in the main section of the Overhaul manual 31-09-01 is also applicable to this variant. Additional details, applicable to Model S.218.5.14 only, are given in this addendum.

REVISION RECORD SHEET

Revision No.	Date of Issue	Incorporated by	Date	Remarks
1	Oct. 1964	Sangamo Weston Ltd.	Oct. 1964	Revision pages 3, 4 and 5.
2	July, 1966	Sangamo Weston Ltd.	July. 1966	Revision pages 1, 3, 4 and 5.
3	Mar. 1968	" "	29.3.68 13.5.68	" " 1, 3 & 4
4				
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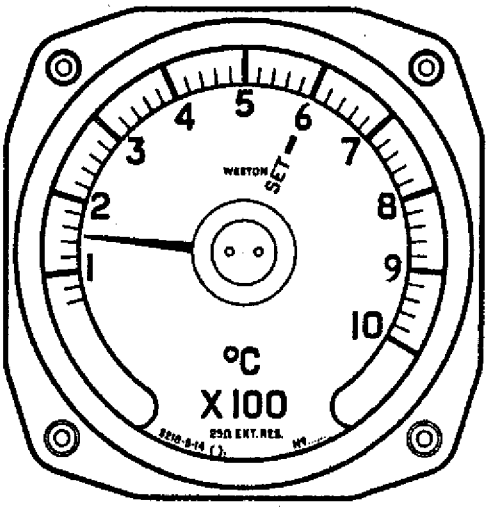
First Issued October 1961

MODEL S.218.5.14 – INDICATOR, TEMPERATURE 60/1000°C



Description

Model S.218.5.14 temperature indicator has a range of 60°C to 1000°C and is designed for use with a nickel-chromium/nickel-aluminium thermocouple which is built out to an external resistance of 25 ohms.

The scale presentation is illustrated. The caption °C X100, numerals, cardinals, division lines and wedge type pointer are finished in photogenic white; the scale background is matt black. The initial adjustment position is indicated by the word SET– printed in green adjacent to the 600°C cardinal. Connection to the indicator is made by means of two shrouded, 4 B.A. screw terminals with captive washers, fitted in a terminal block secured to the base. The positive terminal is of brass and is identified by a red spot and a figure 2; the other terminal is of copper-nickel alloy.

Data

Resistance of moving element		18.5–25.0 ohms at 20°C
Resistance of spools		
A (if required)		1.5 ohms ±0.10 ohm
B		12.0 ohms ±0.12 ohm [If moving element resistance (with Spool A) is 19–21 ohms at 20°C]
	or	14.0 ohms ±0.14 ohm [If moving element resistance is greater than 21 ohms (25 ohms max.) at 20°C]
C		8.0 ohms +5% –0 (unadjusted)
Thermistor Type K.S.2		14.0 ohms nominal at 20°C

NOTE: The terminal resistance of the indicator is 33 ohms ±10% at 20°C.

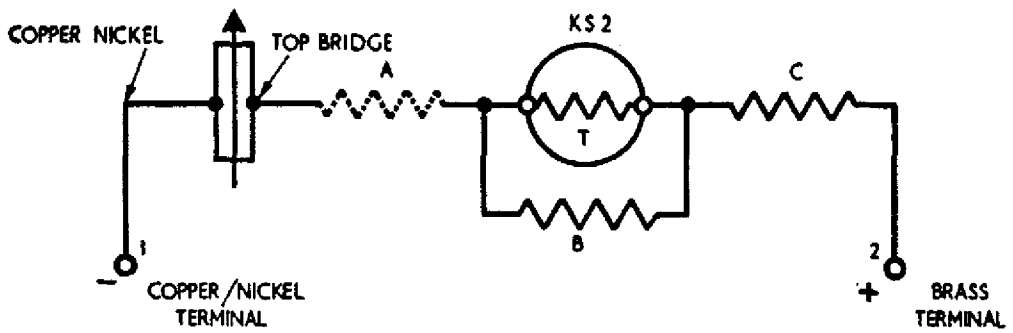


Fig. 7 Circuit diagram

Calibration

(1) Connect the indicator into the circuit given in Fig. 3.

(2) With 24.91 millivolts applied to the test circuit, adjust the pointer to the SET position of 600°C by means of the pointer adjuster.

(3) Check the calibration as detailed in paragraph 8 (Testing) of the main section of the Overhaul manual, using the millivolt input values given in the accompanying Calibration table.

Calibration Table

°C		mV
100		4.10
200		8.13
300		12.21
400		16.40
500		20.65
600	SET (Initial adjustment position)	24.91
700		29.14
800		33.30
900		37.36
1000		41.31

NOTE: The minimum temperature adjustment position (paragraph 8C (3) and (7) of the main section of the Overhaul manual) is 400°C. The maximum temperature adjustment position is 800°C.

Accuracy

The accuracy of the indicator is as follows:

Within the effective range (400°C to 800°C)	±10°C	(Except for the initial adjustment (SET) position 600°C. The repeatability of the setting adjustment is ±3°C.)
At other cardinals	±40°C	

This list to be used with Common Parts List for Model S.218 Form 5

VARIANT PARTS LIST

S.218.5.14

	Fig. and Index No.	Nomenclature	Part No.	Units per Assy.
	Fig. 6	Indicator, Temperature 60/1000°C	S.218.5.14	
	4	Cover Assembly	173449	1
	6	Glass	173352	1
	7	Screw, 10 B.A. x 0.19 in Special Head	156396	2
R	8	Lockwasher, 10 B.A.	159306	2
	9	Scale and Clip Assembly (Lower)	172033	1
	12	Screw, 12 B.A. x 5/32 in C' sk.	172042	2
	13	Scale and Clip Assembly (Upper)	172035	1
R	18	Movement Complete (Pre.Mod.T)	18/S.218.5.14	1
R or	18	Movement Complete (Mod.T)	18/S.218.5.14(T)	1
R	28	Screw, 10 B.A. x 3/16 in	150330	3
	29	Lockwasher, 10 B.A.	153367	3
	30	Spools	30A/S.218.5.14	1
			30B/S.218.5.14	1
			30C/S.218.5.14	1
	33	Plate, Sub Mounting	168899	1
	36	Pillar, Sub Mounting	166965	3
R	39	Screw and Washer Assembly	157703	2
	41	Base	166929	1

Sangamo Weston Code appears on front of Scale