

VTS II/T/M TYPE C

CALIBRATION AND TEST PROCEDURE

TEST	MIN	MAX	NOM	ACTUAL	UNIT
1. Test Equipment Required: (a) Programmable current source. (b) AC Auxiliary supply. (c) Operate time measuring equipment. (d) Current transformer - Email L2274.					
2. Insulation Test - 2KV RMS: Join terminals 1-8 inclusive together and 9-16 inclusive together. Apply 2KV 50Hz for 1 minute between the two terminal groups.				<input type="text"/>	
3. Calibration Procedure: (i) Set the 'TRIP' setting switch to 0.5 Amps and the 'OPERATE TIME' setting switch to instantaneous. Connect 240V AC to the appropriate input terminal as shown on the connection label affixed to the side of the relay. Connect an input current of 0.45 Amps through the primary of the toroidal current transformer. Adjust trimpot R2 until the 'TRIP' relay picks up. The relay is reset by operating the reset pushbutton. The relay is now calibrated provided the other switch settings are within the stated tolerance. (ii) With the auxiliary supply set to 240V AC, check the pickup of the 'TRIP' circuit (relay RL1) for the five values of 'TRIP' switch settings and check that they are within tolerance as below:					
SETTINGS					
0.40A	0.30	0.40	0.35	<input type="text"/>	A
0.50A	0.40	0.50	0.45	<input type="text"/>	A
0.60A	0.50	0.60	0.55	<input type="text"/>	A
0.80A	0.68	0.80	0.74	<input type="text"/>	A
1.00A	0.88	1.00	0.94	<input type="text"/>	A

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(ii) cont'd/ If any are out of tolerance, adjust R2 until they are all within tolerance. After RL1 has picked up, the relay can be reset by operating the reset pushbutton. This will reset the flag from ORANGE (picked up) to BLACK (reset). Check that the flag may be reset by short circuiting terminals 3 and 4 using a 2.7 Ohm resistor.				<input type="text"/>	
(iii) Check that the 'TRIP' circuit changeover contacts are operating correctly.				<input type="text"/>	
(iv) Check the calibration of the 'TRIP' circuit at 204V (85%) auxiliary supply, and also check that the 'TEST' pushbutton causes a trip output at each setting. Note that the calibration current must be zero when the 'TEST' function is checked.					
0.40A trip test	0.30	0.40	0.35	<input type="text"/>	A
0.50A trip test	0.40	0.50	0.45	<input type="text"/>	A
0.60A trip test	0.50	0.60	0.55	<input type="text"/>	A
0.80A trip test	0.68	0.80	0.74	<input type="text"/>	A
1.00A trip test	0.88	1.00	0.94	<input type="text"/>	A
(v) Time Delay. Set the 'TRIP' switch to 0.5A and the OPERATE TIME' switch to instantaneous. Set auxiliary supply to 240V AC. Connect the timer and controller circuitry so that the time delay between input current tripping and actual output relay contact operation can be measured. Set input current to 10% more than 0.5A (ie, .55A), and check that the relay conforms to the following table for the TRIP' circuit:					
	.01	.04	INST	<input type="text"/>	s
	.35	.45	.4	<input type="text"/>	s
	.6	1.0	.8	<input type="text"/>	s
	.95	1.45	1.2	<input type="text"/>	s
	1.3	1.9	1.6	<input type="text"/>	s

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<p>(v) cont'd/ If any setting is outside the above range, the corresponding timing resistor must be changed. A larger resistor increases the time while a smaller resistor decreases the time. The capacitor C7 should not be changed as this will affect all the time settings.</p> <p>(vi) Set the auxiliary supply to 204V (85%). With 'TRIP' circuit reset (and the OPERATE TIME' switch set to 1.6 secs, press the 'TEST' pushbutton. The 'TRIP' circuit should operate and the flag should change from BLACK to ORANGE. The circuit can be reset by operating the reset pushbutton.</p>				<input data-bbox="1257 907 1366 943" type="text"/>	
<p>4. Check that unit is electrically and mechanically robust, as per Standard Inspection and Test Schedule 903-000-026.</p>				<input data-bbox="1257 1077 1366 1113" type="text"/>	