

Operating Instructions

For GT Series Grounding Assembly Tester

1. Make sure the current control knob is turned fully counter clockwise to zero.
2. Install the test studs into the threaded terminals provided on the sides of the tester.
3. Plug the power cord into any 120 V AC outlet rated at 20 amperes or higher.
4. Measure the grounding jumper. For lengths not shown on the chart, round to the nearest length.
5. Clamp the grounding jumper to the test studs, making sure clamps are properly tightened. See diagram on face plate for proper cable configuration.
6. Turn the power switch to the "on" position.
7. While observing the digital ammeter, slowly turn the current control knob clockwise until the current in the test cable reaches its rated value. See table in lid of tester.
8. Observe the voltage reading on the digital volt meter. Compare this reading to the voltage values in the lid for the length and size of cable being tested.
9. If the voltage reading is equal to or less than that specified in the table, the grounding jumper passes the test.
10. Rotate the current control knob full counter clockwise to the zero position before removing clamps.
11. Grounding jumpers failing the test must be disassembled for inspection, cleaning, tightening, and/or terminal replacement. If the grounding jumper fails the retest after maintenance is performed, the grounding jumper should be removed from service and disposed of to prevent further use.

IF THE DUTY CYCLE IS EXCEEDED, THE UNIT WILL AUTOMATICALLY SHUT DOWN AND WILL NOT RESTART UNTIL THE TRANSFORMERS COOL DOWN. CONSISTENTLY EXCEEDING THE DUTY CYCLE MAY RESULT IN DAMAGE TO THE GROUNDING ASSEMBLY TESTER.

WARNING

If the grounding jumper being tested has defects, the defective area can get hot in a matter of seconds and could cause burns if touched. The operator of the tester should wear proper hand protection when handling grounding jumpers during testing.

Testing with Volt Meter Leads

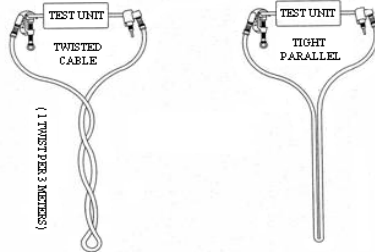
GT400HDXLVMA

1. Follow steps 1 thru 9 in the operating instructions to test the entire ground jumper assembly.
2. Plug the volt meter leads into the receptacles on the face plate of the unit.
3. Move the voltmeter toggle switch on the face plate to the EXT position.
4. From the bottom of the volt drop table find the C&F value for the cable gauge being tested, i.e. 2/0 cable = 0.051 volts
5. With the volt meter leads, measure between the test electrode and the cable stranding just below the ferrule connector (requires puncturing the cable jacket/heat shrink).
6. If the voltage drop shown is equal to or less than the C&F value shown in the volt drop chart, this C&F section passes the test.
7. Repeat step 5 on other C&F section.
8. For C&F sections that do not pass the test, disassemble for inspection, cleaning, tightening, and/or ferrule/clamp replacement.
9. Retest after maintenance or repairs are made.
10. If C&F section fails the retest after maintenance is performed, the grounding jumper should be removed from service and disposed of to prevent further use.

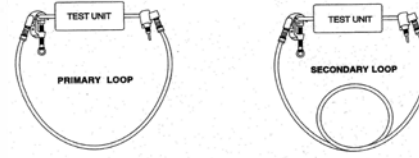
Note: INT is for the use of the internal voltmeter measuring the voltage drop of the entire assembly.

EXT is the external meter leads used to measure the individual components of the cable assembly.

PREFERRED CONFIGURATIONS



AVOID THESE CONFIGURATIONS



Technical & Service

Bierer & Associates Inc.
Manufacturing & Repair
10730 Farrow Road
Blythewood SC 29016
Tel: (803) 786-4839
Fax: (803) 786-5457

WARNING

Bierer & Associates Inc. has established guidelines for the maximum voltage drop allotted a grounding assembly based on ASTM F2249-03. It is up to each utility to review and determine if these guidelines follow their criteria for providing personal protection for their workers.

ASTM F2249-03

Cable Size and Applied Amperage

GT600 only

Model Max Length Tested	Cable Length (Feet)	#2 165 A	1/0 250 A	2/0 300 A	4/0 400 A	250MCM 450 A
	GT400	4.0	0.18	0.22	0.24	0.28
4.5		0.20	0.24	0.26	0.30	0.32
5.0		0.21	0.25	0.27	0.31	0.33
5.5		0.22	0.26	0.28	0.32	0.35
6.0		0.24	0.28	0.30	0.34	0.36
6.5		0.25	0.29	0.31	0.35	0.37
7.0		0.26	0.30	0.32	0.36	0.39
7.5		0.28	0.32	0.34	0.37	0.40
8.0		0.29	0.33	0.35	0.39	0.41
8.5		0.31	0.34	0.36	0.40	0.42
9.0		0.32	0.36	0.38	0.41	0.44
9.5		0.33	0.37	0.39	0.42	0.45
10		0.35	0.38	0.40	0.44	0.46
11		0.37	0.41	0.43	0.46	0.49
12		0.40	0.44	0.46	0.49	0.52
13		0.43	0.47	0.49	0.51	0.54
14		0.46	0.49	0.51	0.54	0.57
15		0.48	0.52	0.54	0.57	0.59
16		0.51	0.55	0.57	0.59	0.62
17		0.54	0.58	0.59	0.62	0.65
18	0.57	0.60	0.62	0.64	0.67	
19	0.60	0.63	0.65	0.67	0.70	
20	0.62	0.66	0.67	0.69	0.72	
22	0.68	0.71	0.73	0.74	0.78	
24	0.73	0.77	0.78	0.80	0.83	
26	0.79	0.82	0.84	0.85	0.88	
28	0.84	0.88	0.89	0.90	0.93	
30	0.90	0.93	0.94	0.95	0.99	
32	0.96	0.99	1.00	1.00	1.04	
34	1.01	1.04	1.05	1.05	1.09	
36	1.07	1.10	1.11	1.10	1.14	
38	1.12	1.15	1.16	1.15	1.19	
40	1.18	1.21	1.21	1.20	1.25	
42	1.23	1.26	1.27	1.26	1.30	
44	1.29	1.32	1.32	1.31	1.35	
46	1.34	1.37	1.38	1.36	1.40	
48	1.40	1.43	1.43	1.41	1.45	
50	1.46	1.48	1.48	1.46	1.51	
55	1.59	1.62	1.62	1.59	1.64	
60	1.73	1.76	1.75	1.72	1.77	
65	1.87	1.89	1.89	1.84	1.90	
70	2.01	2.03	2.03	1.97	2.03	
75	2.15	2.17	2.16	2.10	2.16	
80	2.29	2.31	2.30	2.23	2.29	
85	2.43	2.44	2.43	2.36	2.42	
90	2.57	2.58	2.57	2.48	2.55	
95	2.71	2.72	2.70	2.61	2.68	
100	2.85	2.86	2.84	2.74	2.81	
GT400HDXL						
	* C & F	0.028	0.042	0.051	0.068	0.076
	*Volt Drop/Ft	0.028	0.027	0.027	0.026	0.026

*For use with optional voltmeter leads, C & F = clamp and ferrule