

# TRM MI Heating Cable Testing Procedures



#### **Insulation Resistance Test**

- Make sure the cable is clean and dry before testing
- Cable should be insulation tested before, during and after installation
- Results of the testing should be noted for future reference in the tables included within this section





### Apparatus Required

•Megohmmeter capable of supplying 500 Vdc

•Heating cable with both tail ends accessible for testing





Set the megohmmeter voltage to 0 Vdc





Connect the positive lead to the copper sheath of the heating cable





Connect the negative lead to one of the heating cable tails





How the completed circuit should look before testing





Turn on the megohmmeter and set the voltage to 500Vdc





Apply voltage to the cable and allow time for the reading to settle





A good cable will have greater than 200  $M\Omega$  of insulation resistance at all stages of testing





If the insulation resistance rating is lower than 200 Mohms cable may have been damaged. If the cable ends are wet, and / or the atmosphere is wet/humid, the IR readings can be lower - If so, dry the ends of the cable and the leads of the megger completely, and retest.



	Insulation Resistance Reading (Ohms)
Before installation	
During installation	
Post installation	

Record the insulation resistance value in the table



### **Continuity Resistance Test**

- Make sure the cable is clean and dry before testing
- Cable should be insulation tested before, during and after installation
- Results of the testing should be noted for future reference in the table at the end of this section





## **Apparatus Required**

•Multimeter

•Heating cable with both tail ends accessible for testing





Turn on the multimeter for resistance measurement





Connect the positive lead to one of the heating cable tails





Connect the negative lead to the other heating cable tail





Note continuity between the two cable ends.

(Recorded Value)



	REFER TO INSTALLATION INSTRUCTIONS
	MODEL No.         CABLE REF.         LENGTH         CL LENGTH         DESIGN TYPE           MI-HEAT 1100-120         HCH1M630CH         68         7         B           WATT/VOLT         FEET/PIED         DESSIN
	DATE OF MANUFACTURE MM         SERIAL/JOB NO.         HTG CABLE RESISTANCE/ft         Volt Amps Watts           04         2009         0782/280409 - 1         0.192 Ω
	MAX. OPERATING TEMPERATURE OF CABLE SHEATH SURFACE LA SURFACE DE CE CABLE CHAUFFANT PEUT ATTEINDRE UNE TEMP. DE MAX. CONTINUOUS EXPOSURE TEMPERATURE OF CABLE (POWER OFF) SET DESIGNATIONS 1B, 2B SERIES ELECTRIC HEATING CABLE
	APROPORTI APROPORTION
る表記	
32	

To check if the resistance you have measured is correct for this cable, refer to the cable information tag.





By multiplying the cable length by the Resistance/ft you can calculate the expected total cable resistance.



## EXAMPLE

(from previous page)

0.192 x 68 = 13.06Ω (Calculated Value)

Note that there will normally be a slight differential between the calculated and recorded values. The value recorded from the multimeter should lie within +/- 10% of the calculated value

A close similarity in resistance values confirms the cable is functioning properly





A damaged cable will read a low resistance. A broken cable would show an open circuit reading



	Continuity Resistance Reading (Ohms)
Before installation	
During installation	
Post installation	

Record the continuity resistance value in the table



Ramp Heating Cable Report:	Job Number:
Date:	Controllers used:
Job Name / Address:	Status of Controls:
Client:	Voltage:
Inspected By:	Ramp surface/Topping:

						If a fault is located, please fill in this information			
Cable # and Model	Cable Length (Ft)	Cable Watts	Amps	Continuity / Ohms	IR MOhms	S1 Ohms/Grnd	S2 Ohms/Grnd	Start Dist. To Fault	Return Dist. To Fault