



# Troubleshooting Suggestions for Cables and Thermostats

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Problem	Possible Cause	Suggested Correction
Display is blank / Illegible / Unwanted characters showing	No power to thermostat	Restore power supply
	FG and FGS models:  The pins are not aligned and not properly inserted. (see Figure 2 on page 4)	FG and FGS models:  Align the thermostat power base; Hook the Front Panel unit to the top of the Power Base unit, swing down and press the Front Panel into the Power Base unit slightly. Tighten the screw at the bottom of the unit. (See Figure 3 on page 4)
	Power disturbance / interruption	See Step 1 on page 2.
Can't adjust the temperature setting / time	Power disturbance / interruption	See Step 1 on page 2.
	Button Failure	Replace thermostat
ER 02 on display	Program cannot run with time setting proposed due to conflict of time (e.g. Leave time occurs after Return time)	Adjust program time to eliminate conflict
Test button won't cause thermostat to trip	Thermostat is in "Standby" mode. (Heating Symbol icon flashing slowly)	Wait 3 minutes, until Heating Symbol icon stops flashing and is on continuously
GFI flashing on LCD display	Ground Fault detected by thermostat	Press reset button on thermostat. If fault does not clear, switch to OFF mode, call service technician or Contact Easy Heat Technical Support.
Cold/Hot floor	Floor temp set too low/high. <span style="float: right;">2017-06-08</span>	Increase/decrease floor temp setting.
	Clock not set properly	Check Time of Day settings, watch for AM/PM
Floor temp won't reach set level	Program Set Time may be off.	Check program settings, watch for AM/PM.
	Heat up time may be longer than one hour.	Set cables to come on earlier than current program
	Cables may not be able to reach set level due to room heat loss	Reduce source of heat loss such as open windows, insulate floor directly under cables
	Cable problem	Cables must be checked - see additional suggestions below
Floor heating doesn't turn on	Thermostat is in OFF mode	Switch to ON, or Manual or Auto Mode.
	Power supply problem	Check breaker panel and wiring
	Problem with sensor wire, "Sensor" flashing on LCD display	Sensor and/or connections to thermostat must be checked. See also Step 3 on Page 2.  For FG and FGS models: Ensure pins are aligned and properly inserted. (see Figure 2)
	Cable problem	Cables must be checked - see additional suggestions on next page



**Note: A qualified Electrician, Digital Multimeter and Mega ohmmeter will be needed for Steps 2 through 5.**

### Step 1

To reset the Warm Tiles thermostat to factory default settings, turn off the circuit breaker in the electrical panel that supplies the Warm Tiles installation. **Leave the circuit breaker off for 20 to 30 minutes.** This will restore the Warm Tiles thermostat to the factory default settings. Then turn the circuit breaker back on and reset the thermostat custom temperature setting. Observe the thermostat operation to see if the thermostat is working properly. You should be able to adjust the thermostat setting and observe the floor temperature change.

### Step 2

If Step 1 does not correct the problem, measure the supply voltage at the Warm Tiles thermostat. The supply voltage should be within 5% of the thermostat rated voltage. Also, the output voltage of the Warm Tiles thermostat should be measured and be within 5% of the thermostat rated voltage. **Output voltage should match input voltage.** To do this, turn off the circuit breaker in the electrical panel that supplies the Warm Tiles installation. Then remove the Warm Tiles heater cable leads from the Warm Tiles thermostat. Turn the circuit breaker back on and switch the thermostat to the manual position or the ON position for a nonprogrammable thermostat. When the thermostat heating symbol (Three wavy lines) appears on the LCD screen of the thermostat without flashing, measure the thermostat input and output voltage. If the heating symbol is flashing on the LCD screen, wait a few minutes for it to stop flashing then conduct the voltage tests. Please refer to Figure 1 on page 3 for thermostat wiring. An alternate method of testing the thermostat is to change out the questionable thermostat with a properly functioning thermostat. If the properly functioning thermostat operates correctly and the floor temperature change is observed, the questionable thermostat should be replaced with a new Warm Tiles thermostat.

### Step 3

Check the thermostat floor temperature sensor cable by disconnecting the floor sensor cable from the thermostat, measure the sensor cable resistance in ohms using a digital multimeter. With the digital multimeter scale set at 20K-ohms, the ohms reading of the **sensor wire should be between 7,000 ohms to 14,000 ohms.** If the sensor cable measurement is outside the resistance range, the sensor cable should be replaced. When replacing the sensor cable, position the sensor bulb equally between two Warm Tiles heater cables.

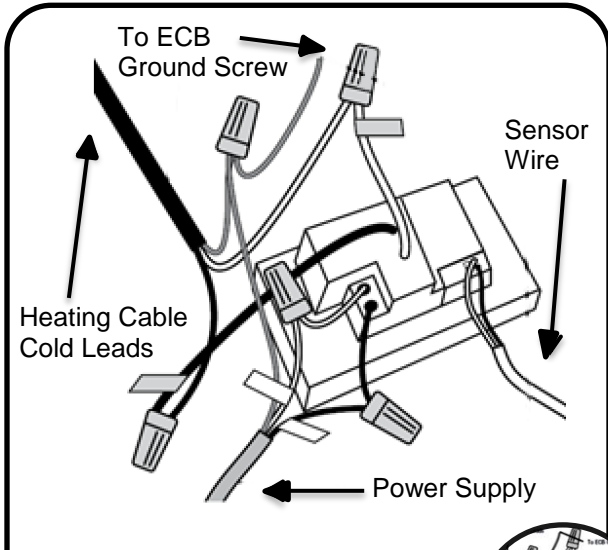
### Step 4

To identify the model number of the cable/mat that is installed in the existing floor, check the factory identification tag attached to the cold lead of the Warm Tiles cable/mat, retained within the junction box or electrical connection box, behind the thermostat. The factory identification tag lists the model number of the cable/mat and its resistance value. If the factory identification tag is missing, measure the resistance (in ohms) of the heating cable/mat using a digital multimeter and compare the measured resistance to the Warm Tiles tables on the following pages. Also, the Warm Tiles tables list the cable/mat total length, recommended heated square footage and electrical specifications. This information can be used to identify the cable/mat installed in the floor and evaluate the condition of the Warm Tiles system.

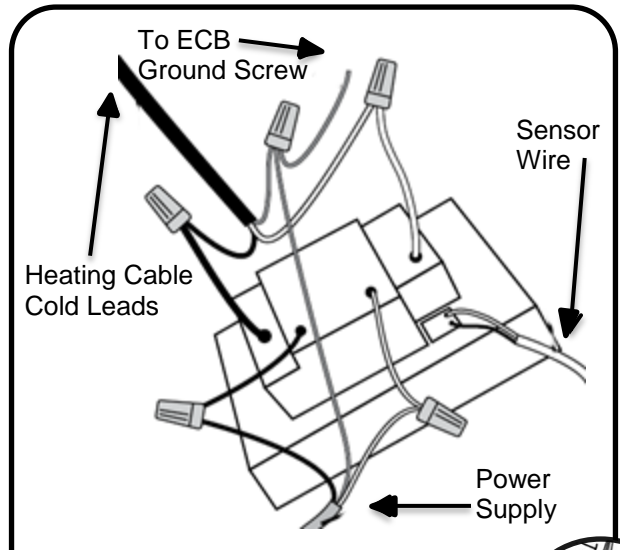
### Step 5

To check the Warm Tiles cable/mat for ground fault conditions, measure the insulation value of each cable conductor to the ground braid using a mega-ohmmeter at 500 VDC. **The Warm Tiles cable/mat conductor insulation measurement should be 10 mega-ohms or higher.** A low mega-ohmmeter reading may indicate physical damage to the Warm Tiles cable/mat during installation.

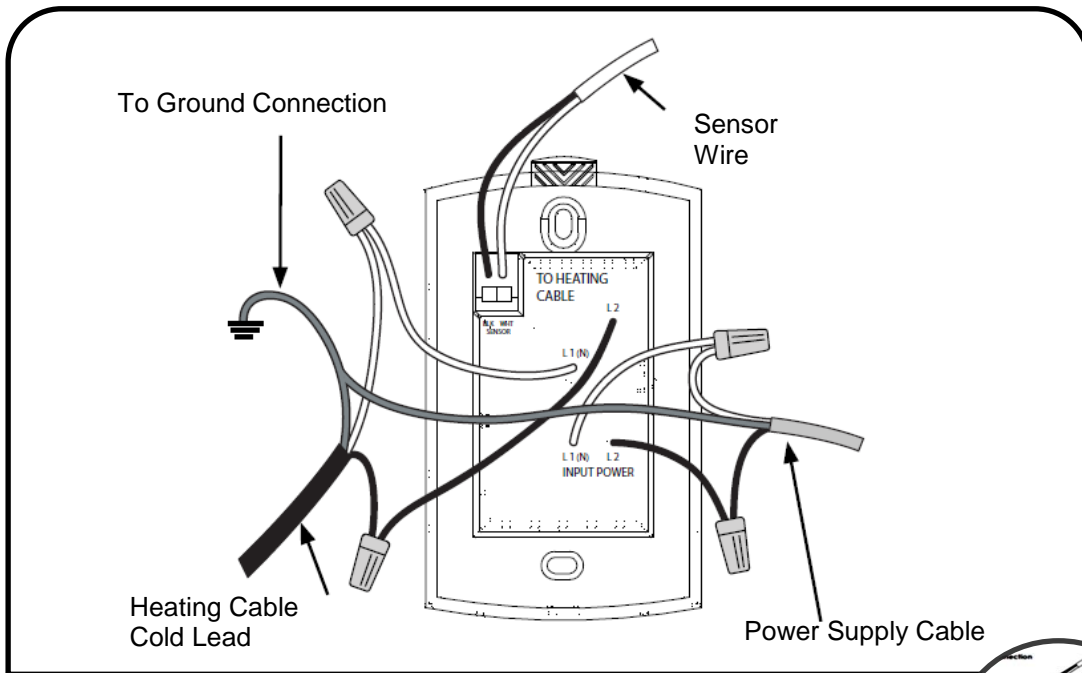
## Figure 1: Warm Tiles Thermostats



(a) ET and FTS



(b) GT and GTS



(c) FG and FGS

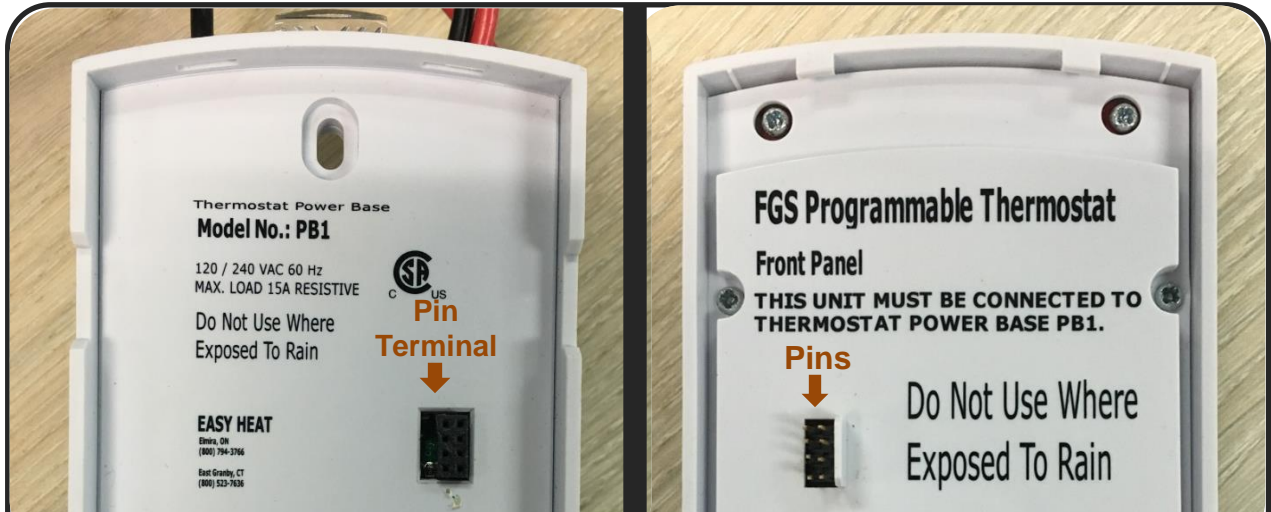


Figure 2: FGS Thermostat Power Base (PB1) and Front Panel



Figure 3



DFT	Heated Area				Cable Length		Electrical					
	Standard (12 W/Ft <sup>2</sup> )		Alternating (18 W/Ft <sup>2</sup> )				Watts	Volt	Amp	Resistance (Ohms)		
	Model Number	Ft <sup>2</sup>	(m <sup>2</sup> )	Ft <sup>2</sup>	(m <sup>2</sup> )	Ft				m	Min (-5%)	Normal
DFT 1011 BLUE	9-13	(0.84-1.21)	7-9	(0.65-0.84)	42	12.8	132	120	1.1	103.6	109	119.9
DFT 1016 RED	14-18	(1.30-1.67)	10-13	(0.93-1.21)	62	18.9	192	120	1.6	71.3	75	82.5
DFT 1022 GREEN	19-26	(1.77-2.42)	14-19	(1.30-1.77)	86	26.2	262	120	2.2	52.3	55	60.5
DFT 1030 YELLOW	27-34	(2.51-3.16)	20-26	(1.86-2.42)	121	36.9	360	120	3.0	38.0	40	44.0
DFT 1039 PURPLE	35-42	(3.25-3.90)	27-33	(2.51-3.07)	155	47.2	480	120	4.0	28.5	30	33.0
DFT 1048 ORANGE	43-54	(3.99-5.02)	34-39	(3.16-3.62)	190	57.9	600	120	5.1	22.8	24	26.4
DFT 1059 BROWN	55-65	(5.11-6.04)	40-48	(3.72-4.46)	235	71.6	758	120	6.4	18.1	19	20.9
DFT 1069 BEIGE	66-72	(6.13-6.69)	49-54	(4.55-5.02)	275	83.8	900	120	7.5	15.2	16	17.6
DFT 1079 WHITE	73-82	(6.78-7.62)	55-62	(5.11-5.76)	313	95.4	1,029	120	8.5	13.3	14	15.4
DFT 1088 PINK	83-92	(7.71-8.55)	63-69	(5.85-6.41)	350	106.7	1,108	120	8.8	12.4	13	14.3
DFT 1098 SILVER	93-102	(8.64-9.48)	70-76	(6.50-7.06)	390	118.9	1,200	120	9.6	11.4	12	13.2
DFT 1108 BLACK	103-113	(9.57-10.50)	77-85	(7.15-7.90)	430	131.0	1,309	120	10.7	10.5	11	12.1
DFT 2021	18-25	(1.67-2.32)	13-19	(1.21-1.77)	84	25.6	264	240	1.1	207.1	218	239.8
DFT 2031	26-35	(2.42-3.25)	20-27	(1.86-2.51)	124	37.8	387	240	1.6	141.6	149	163.9
DFT 2053	48-55	(4.46-5.11)	35-44	(3.25-4.09)	210	64.0	626	240	2.6	87.4	92	101.2
DFT 2065	60-70	(5.57-6.50)	45-54	(4.18-5.02)	258	78.6	778	240	3.3	70.3	74	81.4
DFT 2078	71-83	(6.60-7.71)	55-63	(5.11-5.85)	310	94.5	960	240	4.0	57.0	60	66.0
DFT 2095	90-100	(8.36-9.29)	64-75	(5.95-6.97)	380	115.8	1,226	240	5.1	44.7	47	51.7
DFT 2118	110-130	(10.22-12.08)	84-94	(7.80-8.73)	473	144.2	1,516	240	6.3	36.1	38	41.8
DFT 2137	131-145	(12.17-13.47)	95-108	(8.83-10.03)	549	167.3	1,800	240	7.5	30.4	32	35.2
DFT 2157	146-165	(13.56-15.33)	109-125	(10.13-11.61)	626	190.8	2,057	240	8.4	26.6	28	30.8
DFT 2175	166-184	(15.42-17.09)	126-138	(11.71-12.82)	700	213.3	2,133	240	8.8	25.7	27	29.7
DFT 2195	185-204	(17.19-18.95)	139-153	(12.91-14.21)	780	237.7	2,304	240	9.6	23.8	25	27.5
DFT 2215	205-225	(19.50-20.90)	154-169	(14.31-15.70)	860	262.1	2,618	240	10.7	20.9	22	24.2

SAM	Heated Area (12 W/Ft <sup>2</sup> )		Mat Length	Cable Length		Electrical					
	Model Number	Ft <sup>2</sup>		(m <sup>2</sup> )	Ft	m	Watts	Volt	Amp	Resistance (Ohms)	
		Min (-5%)	Normal	Max (+10%)							
SAM 1010	12-15	(1.12 - 1.39)	6.7	42.00	12.8	152	120	1.3	90.0	94.7	104.2
SAM 1013	16-19	(1.49 - 1.77)	8.7	59.00	18.0	200	120	1.7	68.3	71.9	79.1
SAM 1017	20-22	(1.86 - 2.04)	11.3	76.00	23.2	267	120	2.2	51.3	54.0	59.4
SAM 1020	23-28	(2.14 - 2.60)	13.3	89.00	27.1	301	120	2.5	45.5	47.9	52.7
SAM 1025	29-36	(2.70 - 3.35)	16.7	109.00	33.2	375	120	3.1	36.5	38.4	42.2
SAM 1033	37-46	(3.44 - 4.28)	22	147.00	44.8	500	120	4.2	27.4	28.8	31.7
SAM 1042	47-54	(4.37 - 5.02)	28	184.00	56.1	637	120	5.3	21.5	22.6	24.9
SAM 1050	55-66	(5.11 - 6.13)	33.3	219.00	66.7	783	120	6.5	17.5	18.4	20.2
SAM 1062	67-80	(6.23 - 7.44)	41.3	276.00	84.1	973	120	8.1	14.1	14.8	16.3
SAM 1075	81-94	(7.53 - 8.74)	50	335.00	102.1	1,161	120	9.7	11.8	12.4	13.6
SAM 1087	95-106	(8.83 - 9.85)	58	383.00	116.7	1,385	120	11.5	9.9	10.4	11.4
SAM 1100	107-120	(9.95 - 11.15)	66.7	446.00	135.9	1,565	120	13.1	8.7	9.2	10.1
SAM 2010	12-15	(1.12 - 1.39)	6.7	42.00	12.8	155	240	0.6	352.7	371.3	408.4
SAM 2013	16-19	(1.49 - 1.77)	8.7	59.00	18.0	201	240	0.8	272.4	286.7	315.4
SAM 2017	20-22	(1.86 - 2.04)	11.3	76.00	23.2	256	240	1.1	213.6	224.8	247.3
SAM 2020	23-28	(2.14 - 2.60)	13.3	89.00	27.1	304	240	1.3	179.7	189.2	208.1
SAM 2025	29-36	(2.70 - 3.35)	16.7	109.00	33.2	374	240	1.6	146.3	154.0	169.4
SAM 2033	37-46	(3.44 - 4.28)	22	147.00	44.8	500	240	2.1	109.4	115.2	126.7
SAM 2042	47-54	(4.37 - 5.02)	28	184.00	56.1	664	240	2.8	82.5	86.8	95.5
SAM 2050	55-66	(5.11 - 6.13)	33.3	219.00	66.7	751	240	3.1	72.9	76.7	84.4
SAM 2062	67-80	(6.23 - 7.44)	41.3	276.00	84.1	991	240	4.1	55.2	58.1	63.9
SAM 2075	81-94	(7.53 - 8.74)	50	335.00	102.1	1,161	240	4.8	47.1	49.6	54.6
SAM 2087	95-106	(8.83 - 9.85)	58	383.00	116.7	1,358	240	5.7	40.3	42.4	46.6
SAM 2100	107-120	(9.95 - 11.15)	66.7	446.00	135.9	1,569	240	6.5	34.9	36.7	40.4



**WTE (Warm Tiles Elite)**

WTE Model Number	Heated Area (12 W/Ft <sup>2</sup> )		Dimension		Cable Length		Electrical					
	Ft <sup>2</sup>	(m <sup>2</sup> )	Length (in)	Width (in)	Ft	m	Watts	Volt	Amps*	Resistance (Ohms)		
										Min (-5%)	Normal	Max (+10%)
WTE0400271	7.5	0.697	40	27	37.8	11.52	105	120	0.9	134.0	141.0	155.0
WTE0400321	8.9	0.83	40	32	50.3	15.33	124	120	1.0	115.0	121.0	133.0
WTE0400401	11.1	1.03	40	40	52.7	16.06	160	120	1.3	89.2	93.9	103.0
WTE0400481	13.3	1.24	40	48	75.7	23.07	187	120	1.6	74.1	78.0	85.8
WTE0480241	8.0	0.74	48	24	37.9	11.55	115	120	1.0	117.0	124.0	136.0
WTE0480301	10.0	0.93	48	30	39.3	11.98	140	120	1.2	105.0	110.0	121.0
WTE0480361	12.0	1.11	48	36	47.3	14.42	168	120	1.4	80.0	84.2	92.6
WTE0480481	16.0	1.49	48	48	61.0	18.59	230	120	1.9	59.7	62.8	69.1
WTE0600241	10.0	0.93	60	24	57.2	17.43	140	120	1.2	96.7	102.0	112.0
WTE0600301	12.5	1.16	60	30	49.3	15.03	175	120	1.5	76.8	80.9	88.9
WTE0600361	15.0	1.39	60	26	59.3	18.07	210	120	1.8	64.2	67.6	74.4
WTE0600421	17.5	1.63	60	42	78.5	23.93	255	120	2.1	58.7	61.7	67.9
WTE0600481	20.0	1.86	60	48	116.0	35.36	280	120	2.2	50.7	53.4	58.7
WTE0600601	25.0	2.32	60	60	109.0	33.22	348	120	2.9	39.3	41.1	45.5
WTE0720241	12.0	1.11	72	24	46.4	14.14	175	120	1.5	78.4	82.5	90.8
WTE0720301	15.0	1.39	72	30	58.0	17.68	220	120	1.8	62.8	66.1	72.7
WTE0720361	18.0	1.67	72	36	71.3	21.73	252	120	2.1	53.2	56.0	61.6
WTE0720421	21.0	1.95	72	42	103.7	31.61	300	120	2.5	45.3	47.7	52.5
WTE0720481	24.0	2.23	72	48	94.7	28.86	336	120	2.7	41.4	43.6	47.9
WTE0720601	30.0	2.79	72	60	131.0	39.93	421	120	3.5	32.5	34.2	37.6
WTE0840241	14.0	1.30	84	24	54.4	16.58	205	120	1.7	67.2	70.7	77.8
WTE0840301	17.5	1.63	84	30	68.0	20.73	245	120	2.0	50.7	53.4	58.7
WTE0840361	21.0	1.95	84	36	81.7	24.9	300	120	2.4	46.7	49.2	54.1
WTE0840601	35.0	3.25	84	60	136.4	41.6	485	120	4.0	28.2	29.7	32.7
WTE0960241	16.0	1.49	96	24	77.5	23.6	235	120	2.0	57.9	60.9	67.0
WTE0960301	20.0	1.86	96	30	78.0	23.8	280	120	2.4	44.7	47.0	51.7
WTE0960361	24.0	2.23	96	36	93.7	28.6	335	120	2.8	40.9	43.1	47.4
WTE0960421	28.0	2.60	96	42	157.7	48.1	390	120	3.3	32.7	34.4	37.8
WTE0960481	32.0	2.97	96	48	186.8	56.9	460	120	3.8	29.6	31.2	34.3
WTE0960601	40.0	3.72	96	60	156.4	47.7	550	120	4.6	24.8	26.1	28.7
WTE1080241	18.0	1.67	108	24	87.9	26.8	270	120	2.3	50.3	52.9	58.2
WTE1080301	22.5	2.09	108	30	177.1	54.0	310	120	2.6	43.9	46.2	50.8
WTE1080361	27.0	2.51	108	36	175.8	53.6	375	120	3.1	36.4	38.3	42.1
WTE1080421	31.5	2.93	108	42	123.4	37.6	445	120	3.7	30.6	32.2	35.4
WTE1080481	36.0	3.34	108	48	175.4	53.5	490	120	4.1	27.8	29.3	32.2
WTE1080601	45.0	4.18	108	60	197.0	60.0	665	120	5.5	20.6	21.7	23.8
WTE1180241	19.7	1.83	118	24	134.5	41.0	280	120	2.3	48.5	51.1	56.2
WTE1180301	24.6	2.29	118	30	174.6	53.2	344	120	2.8	36.2	38.1	41.9
WTE1180361	29.5	2.74	118	36	136.5	41.6	404	120	3.4	33.9	35.6	39.2
WTE1180421	34.4	3.20	118	42	172.7	52.6	500	120	4.2	27.4	28.8	31.7
WTE1180481	39.3	3.65	118	48	154.4	47.1	560	120	4.7	24.5	25.8	28.4
WTE1180601	49.20	4.57	118	60	193.0	58.8	680	120	5.7	20.1	21.2	23.3
WTE0400272	7.5	0.70	40	27	44.9	13.7	115.0	240	0.5	486.0	512.0	563.0
WTE0400322	8.9	0.83	40	32	62.8	19.1	130.0	240	0.5	418.0	440.0	484.0
WTE0400402	11.0	1.03	40	40	64.7	19.7	160.0	240	0.7	339.0	357.0	392.0
WTE0400482	13.0	1.24	40	48	86.8	26.5	180.0	240	0.7	307.0	323.0	355.0
WTE0480242	8.0	0.74	48	24	45.5	13.9	110.0	240	0.5	493.0	519.0	571.0
WTE0480302	10.0	0.93	48	30	73.9	22.5	140.0	240	0.6	387.0	407.0	448.0
WTE0480362	12.0	1.11	48	36	90.5	27.6	170.0	240	0.7	321.0	338.0	371.0
WTE0480482	16.0	1.49	48	48	91.5	27.9	225.0	240	0.9	243.0	256.0	282.0
WTE0600242	10.0	0.93	60	24	76.1	23.2	140.0	240	0.6	393.0	413.0	455.0
WTE0600302	12.5	1.16	60	30	57.2	17.4	185.0	240	0.7	299.0	315.0	347.0
WTE0600362	15.0	1.39	60	36	86.5	26.4	205.0	240	0.9	268.0	282.0	310.0
WTE0600422	17.5	1.63	60	42	67.4	20.5	260.0	240	1.1	209.0	220.0	242.0
WTE0600482	20.0	1.86	60	48	114.8	45.0	280.0	240	1.2	194.0	204.0	225.0
WTE0600602	25.0	2.32	60	60	96.4	29.4	265.0	340	1.5	150.0	158.0	174.0
WTE0720242	12.0	1.11	72	24	57.9	17.6	180.0	240	0.8	303.0	319.0	351.0
WTE0720302	15.0	1.39	72	30	69.2	21.1	225.0	240	0.9	245.0	258.0	284.0
WTE0720362	18.0	1.67	72	36	69.7	21.2	255.0	240	1.1	216.0	227.0	250.0

# Warm Teles®

WTE0720422	21.0	1.95	72	42	103.7	31.6	310.0	240	1.3	175.0	185.0	203.0
WTE0720482	24.0	2.23	72	48	93.0	28.3	350.0	240	1.4	157.0	166.0	182.0
WTE0720602	30.0	2.79	72	60	116.4	35.5	435.0	240	1.8	126.0	133.0	146.0
WTE0840242	14.0	1.30	84	24	80.7	24.6	150.0	240	0.8	286.0	301.0	331.0
WTE0840302	17.5	1.63	84	30	81.2	24.7	255.0	240	1.1	216.0	227.0	250.0
WTE0840362	21.0	1.95	84	36	81.7	24.9	295.0	240	1.2	186.0	296.0	216.0
WTE0840422	24.5	2.28	84	42	95.4	29.1	368.0	240	1.5	149.0	157.0	172.0
WTE0840482	28.0	2.60	84	48	109.0	33.2	405.0	240	1.7	315.0	142.0	156.0
WTE0840602	35.0	3.25	84	60	136.4	41.6	490.0	240	2.0	102.0	107.0	118.0
WTE0960242	16.0	1.49	96	24	93.2	28.4	220.0	240	0.9	248.0	261.0	287.0
WTE0960302	20.0	1.86	96	30	109.9	33.5	295.0	240	1.2	185.8	195.6	215.1
WTE0960362	24.0	2.23	96	36	93.7	28.6	345.0	240	1.4	158.0	167.0	182.0
WTE0960422	28.0	2.60	96	42	109.4	33.3	405.0	240	1.7	135.0	142.0	156.0
WTE0960482	32.0	2.97	96	48	155.4	47.4	470.0	240	2.0	116.0	122.0	134.0
WTE0960602	40.0	3.72	96	60	157.8	48.1	560.0	240	2.3	90.3	95.0	105.0
WTE1080242	18.0	1.67	108	24	70.4	21.5	250.0	240	1.0	218.0	229.0	252.0
WTE1080302	22.5	2.09	108	30	105.2	32.1	310.0	240	1.3	178.0	187.0	206.0
WTE1080362	27.0	2.51	108	36	142.7	43.5	390.0	240	1.6	140.0	147.0	162.0
WTE1080422	31.5	2.93	108	42	123.4	37.6	450.0	240	1.9	121.0	127.0	140.0
WTE1080482	36.0	3.34	108	48	141.0	43.0	520.0	240	2.2	105.0	111.0	122.0
WTE1080602	45.0	4.18	108	60	232.2	70.8	650.0	240	2.7	83.8	88.2	97.0
WTE1180242	19.7	1.83	118	24	115.2	35.1	280.0	240	1.2	195.0	205.0	226.0
WTE1180302	24.6	2.29	118	30	96.4	29.4	365.0	240	1.5	150.0	158.0	174.0
WTE1180362	29.5	2.74	118	36	115.7	35.3	435.0	240	1.8	125.0	132.0	145.0
WTE1180422	34.4	3.20	118	42	194.4	59.3	490.0	240	2.1	111.0	117.0	129.0
WTE1180482	39.3	3.65	118	48	175.9	53.6	544.0	240	2.3	100.6	105.9	116.5
WTE1180602	49.2	4.57	118	60	215.3	65.6	704.0	240	2.9	77.7	81.8	90.0

## DMC (De-coupling Membrane Cable)

Model Number	Subfloor Coverage (Sq. Ft)		Cable Length		Electrical					
	Plywood (3.6" spacing)	Concrete (2.4" Spacing)	Ft	m	Watts	Volt	Amps	Resistance (Ohms)		
								Min (-5%)	Normal	Max (+10%)
DMC1012	12	8	44.1	13.4	159	120	1.3	86.2	90.8	95.3
DMC1016	16	11	57.6	17.6	208	120	1.7	65.9	69.4	72.9
DMC1021	21	14	76.0	23.2	274	120	2.3	50.0	52.6	55.2
DMC1025	25	17	87.5	26.7	315	120	2.6	43.4	45.7	48.0
DMC1031	31	21	109.4	33.4	394	120	3.3	34.7	36.6	38.4
DMC1042	42	28	145.1	44.2	522	120	4.4	26.2	27.6	28.9
DMC1053	53	36	184.7	56.3	665	120	5.5	20.6	21.7	22.7
DMC1065	65	43	223.6	68.2	805	120	6.7	17.0	17.9	18.8
DMC1081	81	54	277.4	84.5	998	120	8.3	13.7	14.4	15.1
DMC1097	97	66	333.3	101.6	1200	120	10.0	11.4	12.0	12.6
DMC1114	114	77	392.2	119.6	1412	120	11.8	9.7	10.2	10.7
DMC2021	21	14	74.5	22.7	268	240	1.1	203.9	214.7	225.4
DMC2025	25	17	88.1	26.9	317	240	1.3	172.5	181.5	190.6
DMC2031	31	21	109.2	33.3	393	240	1.6	139.2	146.5	153.9
DMC2042	42	28	145.1	44.2	522	240	2.2	104.8	110.3	115.8
DMC2054	54	37	188.6	57.5	679	240	2.8	80.6	84.9	89.1
DMC2063	63	42	218.9	66.7	788	240	3.3	69.4	73.1	76.8
DMC2081	81	56	280.1	85.4	1008	240	4.2	54.3	57.1	60.0
DMC2097	97	66	333.3	101.6	1200	240	5.0	45.6	48.0	50.4
DMS2113	113	76	288.5	118.4	1399	240	5.80	39.1	41.2	43.2
DMC2131	131	88	447.2	136.3	1610	240	6.70	34.0	35.8	37.6
DMC2163	163	109	554.7	169.1	1997	240	8.30	27.4	28.8	30.2
DMC2196	195	131	666.7	203.2	2400	240	10.00	22.8	24.0	25.2
DMC2231	231	154	784.5	239.1	2824	240	11.80	19.4	20.4	21.4