



Adjustment Factors for SX Cables

Thermon North American SR cable specification sheets are based on 240 Vac and International/Europe specification sheets are based on 230 Vac. Therefore, all the published power output values and maximum circuit lengths are based on 240 Vac or 230 Vac respectively. The questions arises, "What to do if the system voltage is 208 V, 220 V, or 277 V?". Thermon recommends using CompuTrace when performing all designs. Power output and maximum circuit length will be automatically determined based on the input voltage.

However, for those cases where you want to make an estimate of power or length at one of these voltages using a published specification sheet, you can use the Adjustment Factors in the Table below. The North American specification sheet based on 240 V should be used for BSX, HTSX and VSX with the exception of KSX. For KSX use the Intl/Europe specification sheet. Here is how to apply the adjustment factors. For example you want to make a rough estimate of cable number of circuits needed for a BSX 10-2 design operating at 208 Vac. From the Table you will find the power output and circuit length adjustment factors for BSX 10-2 are 0.85 and 0.97 respectively. Thus, the power output needs to be multiplied by 0.85. At 240 V and a pipe temperature of 10 C (50 F) the power output of BSX 10-2 is 33.8 W/m (10.0 W/ft), so the power output at 208 V would be 27.9 W/m (8.5 W/ft). Maximum circuit length is multiplied by 0.97 so maximum length will be approximately 3% less than the published values.

S/R Cable Adjustment Factors ¹

	BSX	Power	Ckt Length		HTSX	Power	Ckt Length
208 V	BSX 3-2	0.77	1.06	208 V	HTSX 3-2	0.80	1.14
	BSX 5-2	0.80	1.02		HTSX 6-2	0.78	1.13
	BSX 8-2	0.83	0.99		HTSX 9-2	0.82	1.07
	BSX 10-2	0.85	0.97		HTSX 12-2	0.84	1.03
					HTSX 15-2	0.88	0.99
				HTSX 20-2	0.94	0.94	
220 V	BSX 3-2	0.83	1.04	220 V	HTSX 3-2	0.87	1.08
	BSX 5-2	0.88	1.00		HTSX 6-2	0.87	1.07
	BSX 8-2	0.90	0.99		HTSX 9-2	0.89	1.03
	BSX 10-2	0.91	0.97		HTSX 12-2	0.90	1.02
					HTSX 15-2	0.93	0.99
				HTSX 20-2	0.97	0.97	
277 V	BSX 3-2	1.27	0.97	277 V	HTSX 3-2	1.26	0.89
	BSX 5-2	1.22	1.01		HTSX 6-2	1.25	0.90
	BSX 8-2	1.18	1.03		HTSX 9-2	1.18	0.97
	BSX 10-2	1.15	1.04		HTSX 12-2	1.14	1.00
					HTSX 15-2	1.11	1.03
				HTSX 20-2	1.05	1.11	

	VSX	Power	Ckt Length		KSX	Power	Ckt Length
208 V	VSX 5-2	0.82	0.99	220 V	KSX 5-2	0.95	1.04
	VSX 10-2	0.86	0.94		KSX 10-2	0.95	1.01
	VSX 15-2	0.90	0.93		KSX 15-2	0.95	0.98
	VSX 20-2	0.92	0.94		KSX 20-2	0.99	0.97
220 V	VSX 5-2	0.88	0.99	240 V	KSX 5-2	1.09	0.97
	VSX 10-2	0.92	0.97		KSX 10-2	1.06	0.99
	VSX 15-2	0.94	0.96		KSX 15-2	1.03	1.00
	VSX 20-2	0.96	0.97		KSX 20-2	1.03	1.03
277 V	VSX 5-2	1.22	1.04	277 V	KSX 5-2	1.37	0.88
	VSX 10-2	1.14	1.08		KSX 10-2	1.25	0.96
	VSX 15-2	1.09	1.07		KSX 15-2	1.14	1.04
	VSX 20-2	1.07	1.08		KSX 20-2	1.07	1.17

Note:

1. All adjustment factors, with the exception of KSX are based on North American product specification sheets with a power output rating at 240 Vac. The KSX adjustment factors are based on power output at 230 Vac as indicated on the international KSX product specification sheet.