



Voltage Drop Analysis

MS-9200UDLS Control Panel w/XRM-24B (2.5-amp circuit)

Notification Appliances - NAC #3

Source Voltage: 19.18 VDC Terminal Voltage

Protected Premises: <u>Maine Historical Society</u>		Date: <u>2/6/14</u>	
Address: <u>1000 Riverside St</u>		City: <u>Portland</u>	
State: <u>ME</u>		Zip: <u>04103</u>	
Note: <u>Storage for MHS/PPL</u>			
Prepared By: <u>Timothy Parent</u>		Phone: <u>(207)576-9255</u>	
Address: <u>187 Washington St</u>		City: <u>Auburn</u>	
State: <u>ME</u>		Zip: <u>04211</u>	

Device #	Part Number	Current (amps)	Distance (Feet)		Circuit Voltage @ Each Device			
			Between	Total			14 AWG	
1	PC2RH150	0.2700	224	224			18.04	
2	SR15	0.0660	11	235			18.00	
3	P2R110	0.2210	15	250			17.96	
4	P2R15	0.0910	5	255			17.95	
5	P2R15	0.0910	35	290			17.91	
6	P2R15	0.0910	25	315			17.89	
Total Current:		0.8300	% Voltage Drop:				6.71	
							Go	

Strikethrough indicates a value below the device's minimum voltage at indicated location and wire gauge.

These calculations assume a worst-case source voltage as measured by UL with the batteries depleted to 20.4 volts. Under AC power and for most of the drain cycle of the batteries, the circuit voltages will be substantially higher and thus, would support a greater number of devices. A device's minimum operating voltage is derived from the UL-requirement that it operate within a Regulated Voltage Range (16VDC - 33VDC)