

UNUM NAC PANEL #5 - SECOND FLOOR (2.2.W.909) 4009 NAC						
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4009-9201	1	4009 IDNET NAC EXTENDER 120 VAC	0.0850	0.0850	0.1850	0.1850
Panel Totals			0.0850	0.0850	0.1850	0.1850
Notification Appliances						
<i>Setting</i>						
4906-9104	9	V/O MC NON-ADDRESS, WHIT, CEILING	15	0.0000	0.0000	0.6750
4906-9104	7	V/O MC NON-ADDRESS, WHIT, CEILING	30	0.0000	0.0000	0.1250
4906-9104	3	V/O MC NON-ADDRESS, WHIT, CEILING	75	0.0000	0.0000	0.2330
4906-9130	10	A/V MC NON-ADDRESS, WHIT, CEILING	110	0.0000	0.0000	3.3200
4906-9130	5	A/V MC NON-ADDRESS, WHIT, CEILING	15	0.0000	0.0000	0.4300
4906-9130	5	A/V MC NON-ADDRESS, WHIT, CEILING	30	0.0000	0.0000	0.6600
4906-9130	2	A/V MC NON-ADDRESS, WHIT, CEILING	75	0.0000	0.0000	0.2500
Peripheral Totals			0.0000	0.0000	0.0000	7.0390
Added Current for EPS Conversion of 24 to 29 Volt IDNet Devices			0.0000	0.0000	0.0000	0.0000
RUI Totals			0	0.0000	0.0000	0.0000
Address Totals			0	0.0000	0.0000	0.0000
System Totals*			0.0850	0.0850	0.1850	0.1850

VOLTAGE DROP SUMMARY				
Plan Circuit	Description	Load	% Drop	
V1	FLP CENTER MIDDLE A/V's	51611.8564	18.02%	
V2	FLP CENTER SOUTH A/V's	51621.8144	13.44%	
V3	FLP SOUTHWEST A/V's	51631.7394	18.24%	
V4	FLP NORTHEAST A/V's	51641.5774	19.28%	
Totals		7.0394		

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

Distributed Load Voltage Drop						
Allowable % Drop: 21.6% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 20.4vdc % Voltage Drop: 18.02%						
Ckt Capacity: 2A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
V1-1	4906-9104	75cd	108	0.233	1.208	18.19
V1-2	4906-9104	15cd	36	0.075	1.507	18.81
V1-3	4906-9130	30cd	29	0.132	1.833	18.57
V1-4	4906-9104	75cd	23	0.233	2.033	18.37
V1-5	4906-9104	75cd	27	0.233	2.229	18.17
V1-6	4906-9130	30cd	31	0.132	2.410	17.98
V1-7	4906-9104	30cd	23	0.125	2.325	17.87
V1-8	4906-9104	30cd	27	0.125	2.640	17.76
V1-9	4906-9104	30cd	21	0.125	2.713	17.69
V1-10	4906-9104	15cd	24	0.075	2.779	17.62
V1-11	4906-9130	15cd	18	0.075	2.819	17.58
V1-12	4906-9104	15cd	16	0.075	2.848	17.55
V1-13	4906-9130	15cd	24	0.086	2.880	17.52
V1-14	4906-9130	30cd	23	0.132	2.899	17.50
Totals: 471 Ft. 1.8564						

Distributed Load Voltage Drop						
Allowable % Drop: 21.6% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 20.4vdc % Voltage Drop: 13.44%						
Ckt Capacity: 2A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
V2-1	4906-9130	30cd	66	0.132	0.735	19.66
V2-2	4906-9104	15cd	17	0.075	0.911	19.49
V2-3	4906-9104	15cd	21	0.075	1.118	19.38
V2-4	4906-9104	15cd	18	0.075	1.287	19.11
V2-5	4906-9130	15cd	20	0.086	1.466	18.93
V2-6	4906-9130	110cd	46	0.320	1.853	18.55
V2-7	4906-9130	75cd	45	0.250	2.144	18.26
V2-8	4906-9104	15cd	27	0.075	2.277	18.12
V2-9	4906-9130	15cd	41	0.086	2.459	17.94
V2-10	4906-9130	110cd	44	0.320	2.632	17.77
V2-11	4906-9130	110cd	56	0.320	2.742	17.66
Totals: 401 Ft. 1.8144						

Distributed Load Voltage Drop						
Allowable % Drop: 21.6% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 20.4vdc % Voltage Drop: 18.24%						
Ckt Capacity: 2A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
V3-1	4906-9130	110cd	210	0.320	2.311	18.09
V3-2	4906-9130	75cd	61	0.250	2.862	17.54
V3-3	4906-9130	110cd	32	0.320	3.102	17.30
V3-4	4906-9130	110cd	52	0.320	3.390	17.01
V3-5	4906-9130	30cd	37	0.132	3.522	16.88
V3-6	4906-9104	30cd	34	0.125	3.616	16.78
V3-7	4906-9104	30cd	33	0.125	3.682	16.72
V3-8	4906-9104	30cd	22	0.125	3.709	16.69
V3-9	4906-9104	15cd	26	0.075	3.721	16.68
Totals: 507 Ft. 1.7924						

Distributed Load Voltage Drop						
Allowable % Drop: 21.6% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 20.4vdc % Voltage Drop: 19.28%						
Ckt Capacity: 2A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
V4-1	4906-9130	110cd	312	0.320	3.021	17.38
V4-2	4906-9130	110cd	48	0.320	3.391	17.01
V4-3	4906-9130	110cd	42	0.320	3.633	16.77
V4-4	4906-9130	110cd	42	0.320	3.792	16.61
V4-5	4906-9130	15cd	50	0.086	3.883	16.52
V4-6	4906-9104	30cd	25	0.125	3.916	16.48
V4-7	4906-9130	15cd	31	0.086	3.932	16.47
Totals: 550 Ft. 1.5774						

UNUM NAC PANEL #6 - SECOND FLOOR (2.2.W.909) 4009 NAC						
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4009-9201	1	4009 IDNET NAC EXTENDER 120 VAC	0.0850	0.0850	0.1850	0.1850
Panel Totals			0.0850	0.0850	0.1850	0.1850
Notification Appliances						
<i>Setting</i>						
4906-9104	12	V/O MC NON-ADDRESS, WHIT, CEILING	15	0.0000	0.0000	0.6750
4906-9104	8	V/O MC NON-ADDRESS, WHIT, CEILING	30	0.0000	0.0000	0.1250
4906-9104	2	V/O MC NON-ADDRESS, WHIT, CEILING	75	0.0000	0.0000	0.2330
4906-9130	5	A/V MC NON-ADDRESS, WHIT, CEILING	110	0.0000	0.0000	3.3200
4906-9130	2	A/V MC NON-ADDRESS, WHIT, CEILING	15	0.0000	0.0000	0.4300
4906-9130	2	A/V MC NON-ADDRESS, WHIT, CEILING	30	0.0000	0.0000	0.6600
4906-9130	1	A/V MC NON-ADDRESS, WHIT, CEILING	75	0.0000	0.0000	0.2500
Peripheral Totals			0.0000	0.0000	0.0000	4.6520
Added Current for EPS Conversion of 24 to 29 Volt IDNet Devices			0.0000	0.0000	0.0000	0.0000
RUI Totals			0	0.0000	0.0000	0.0000
Address Totals			0	0.0000	0.0000	0.0000
System Totals*			0.0850	0.0850	0.1850	0.1850

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

Distributed Load Voltage Drop						
Allowable % Drop: 21.6% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 20.4vdc % Voltage Drop: 19.82%						
Ckt Capacity: 2A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
V1-1	4906-9130	110cd	317	0.320	2.900	17.50
V1-2	4906-9104	30cd	47	0.125	3.238	17.16
V1-3	4906-9130	15cd	32	0.086	3.443	16.96
V1-4	4906-9130	15cd	39	0.086	3.673	16.73
V1-5	4906-9104	75cd	31	0.233	3.839	16.56
V1-6	4906-9104	75cd	27	0.233	3.945	16.46
V1-7	4906-9130	30cd	24	0.132	4.008	16.40
V1-8	4906-9104	30cd	21	0.125	4.040	16.36
V1-9	4906-9104	15cd	31	0.075	4.069	16.33
V1-10	4906-9104	15cd	18	0.075	4.077	16.32
Totals: 587 Ft. 1.4904						

Additional Spare Battery Capacity = 0% + 2.4431 = 2.4431

Battery Discharge Factor = 20% + 0.4886 = 0.4886

Minimum Battery Required 2081-9272 6.2AH (2x) + 2.9317 = 2.9317

Battery Supplied 2081-9272 6.2AH (2x)

Standby Time = 24 Hrs x 0.0850 = 2.0400 Standby Ah

Alarm Time = 5 Min 0.08333 x 7.224 = 0.6020 Alarm Ah

System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

VOLTAGE DROP SUMMARY				
Plan Circuit	Description	Load	% Drop	
V1	FLI EAST CENTER A/V's	51611.4904	19.90%	
V2	FLI SOUTHWEST A/V's	51621.3724	19.82%	
V3	FLI NORTHEAST A/V's	51631.1504	18.30%	
V4	FLI NORTHEAST A/V's	51641.6404	9.34%	
Totals		4.6524		

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

Distributed Load Voltage Drop						
Allowable % Drop: 21.6% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 20.4vdc % Voltage Drop: 19.82%						
Ckt Capacity: 2A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
V2-1	4906-9130	110cd	375	0.320	3.159	17.24
V2-2	4906-9130	110cd	48	0.320	3.469	16.93
V2-3	4906-9130	30cd	41	0.132	3.653	16.75
V2-4	4906-9104	15cd	35	0.075	3.782	16.62
V2-5	4906-9104	15cd	22	0.075	3.853	16.55
V2-6	4906-9104	15cd	22	0.075	3.914	16.49
V2-7	4906-9104	30cd	34	0.125	3.992	16.41
V2-8	4906-9104	30cd	23	0.125	4.028	16.37
V2-9	4906-9104	30cd	20	0.125	4.043	16.36
Totals: 620 Ft. 1.3724						

Additional Spare Battery Capacity = 0% + 2.4431 = 2.4431

Battery Discharge Factor = 20% + 0.4886 = 0.4886

Minimum Battery Required 2081-9272 6.2AH (2x) + 2.9317 = 2.9317

Battery Supplied 2081-9272 6.2AH (2x)

Standby Time = 24 Hrs x 0.0850 = 2.0400 Standby Ah

Alarm Time = 5 Min 0.08333 x 7.224 = 0.6020 Alarm Ah

System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

Distributed Load Voltage Drop						
Allowable % Drop: 21.6% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 20.4vdc % Voltage Drop: 18.30%						
Ckt Capacity: 2A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
V3-1	4906-9104	15cd	411	0.075	2.902	17.50
V3-2	4906-9104	15cd	18	0.075	3.021	17.38
V3-3	4906-9104	30cd	35	0.125	3.236	17.16
V3-4	4906-9104	30cd	20	0.125	3.343	17.06
V3-5	4906-9104	30cd	25	0.125	3.458	16.94
V3-6	4906-9130	75cd	29	0.250	3.570	16.83
V3-7	4906-9104	15cd	25	0.075	3.627	16.77
V3-8	4906-9104	15cd	23	0.075	3.670	1