BAXTER PLACE NAC 1 PANEL 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		0.1850
Notification Appliances						
4901-9859	24	SMARTSYNC MINI-HORN, WHITE	0.0000	0.0000	0.0190	0.4560
4906-9103	4	V/O MC NON-ADDRESS, WHT, WALL 15	0.0000	0.0000	0.0600	0.2400
4906-9129	10	A/V MC NON-ADDRESS, WHT, WALL 15	0.0000	0.0000	0.0750	0.7500
		Peripheral Totals		0.0000		1.4460
		Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices		0.0000		0.0000
		RUI Totals 0		0.0000		0.0000
		Address Totals 0 Addresses		0.0000		0.0000
		Total Standby		0.0850	Total Alarm	1.6310

Battery Set #1 (Cabinet/Charger #1)	Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:				
4009		0.0850		1.6310
	Sub Total	0.0850		1.6310
	Total	0.0850		1.6310

Standby Time = 24 Hrs x 0.0850 = 2.0400 Standby Ah
Alarm Time = 5 Min 0.08333 x 1.631 = 0.1359 Alarm Ah
2.1759
Additional Spare Battery Capacity = 0% + 0.0000
2.1759
Battery Discharge Factor = 20% + 0.4352
Minimum Battery Required 2081-9272 6.2AH (2x) 2.6111
Battery Supplied 2081-9272 6.2AH (2x)

BAXTER PLACE NAC 1 PANEL 4009 NAC VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 75 Celsius

NOTIFICATION CIRCUIT DESCRIPTION	Power Supply	Panel Circuit	Plan Ckt.	Dist. (D) Feet	Wire Gauge	Wire Res. / Ft. (R)	Total Alarm (A)	V. Drop (A*2D*R)	Volt @ End	% Volt Drop	Min Device Voltage	Max Distance	PID 4906-9103	4906-9103	4906-9103	4906-9103	4906-9129	4906-9129	4906-9129	4906-9129	4901-9859
Candela													15cd	30cd	75. Watt	110cd	15cd	30cd	75cd	110cd	
Device Type													MC V/O	MC V/O	MC V/O	MC V/O	MC A/V	MC A/V	MC A/V	MC A/V	MINI A/O
Supv. Current													0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Alarm Current													0.0600	0.0940	0.1860	0.2520	0.0750	0.1160	0.2210	0.2850	0.0190
SECOND FLOOR	4009	SIG1	NAC1:V1	293	14ga	0.0031	0.495	0.891	18.609	4.57%	16vdc	1152 Ft.	2				5				
SECOND FLOOR	4009	SIG2	NAC1:V2	503	14ga	0.0031	0.228	0.704	18.796	3.61%	16vdc	2500 Ft.									12
THIRD FLOOR	4009	SIG3	NAC1:V3	293	14ga	0.0031	0.495	0.891	18.609	4.57%	16vdc	1152 Ft.	2				5				
THIRD FLOOR	4009	SIG4	NAC1:V4	503	14ga	0.0031	0.228	0.704	18.796	3.61%	16vdc	2500 Ft.									12

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE ALLOWABLE VOLTAGE DROP. THIS METHOD ALLOWS FOR A SMALL MARGIN OF SAFETY, TAKING INTO CONSIDERATION THAT THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS SHOWN ON THE SHOP DRAWINGS. IF THE ACTUAL CIRCUIT LENGTH IS GOING TO EXCEED THE MAXIMUM ALLOWABLE CIRCUIT LENGTH, CONTACT YOUR LOCAL SIMPLEXGRINNELL DISTRICT OFFICE.

BAXTER PLACE NAC2 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
4009-9807	1	NAC CARD, 4PT, IDNET	0.0400	0.0400	0.0400	0.0400
		Panel Totals		0.1250		0.2250
Notification Appliances						
4901-9859	35	SMARTSYNC MINI-HORN, WHITE	0.0000	0.0000	0.0190	0.6650
4906-9103	4	V/O MC NON-ADDRESS, WHT, WALL 15	0.0000	0.0000	0.0600	0.2400
4906-9129	10	A/V MC NON-ADDRESS, WHT, WALL 15	0.0000	0.0000	0.0750	0.7500
		Peripheral Totals		0.0000		1.6550
		RUI Totals 0		0.0000		0.0000
		Address Totals 0 Addresses		0.0000		0.0000
		Total Standby		0.1250	Total Alarm	1.8800

Battery Set #1 (Cabinet/Charger #1)	Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:				
4009		0.1250		1.8800
	Total	0.1250		1.8800

Standby Time = 24 Hrs x 0.1250 = 3.0000 Standby Ah
Alarm Time = 5 Min 0.08333 x 1.88 = 0.1567 Alarm Ah
3.1567
Additional Spare Battery Capacity = 0% + 0.0000
3.1567
Battery Discharge Factor = 20% + 0.6313
Minimum Battery Required 2081-9272 6.2AH (2x) 3.7880
Battery Supplied 2081-9272 6.2AH (2x)

BAXTER PLACE NAC2 4009 NAC VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 75 Celsius

NOTIFICATION CIRCUIT DESCRIPTION	Power Supply	Panel Circuit	Plan Ckt.	Dist. (D) Feet	Wire Gauge	Wire Res. / Ft. (R)	Total Alarm (A)	V. Drop (A*2D*R)	Volt @ End	% Volt Drop	Min Device Voltage	Max Distance	PID 4906-9103	4906-9103	4906-9103	4906-9103	4906-9129	4906-9129	4906-9129	4906-9129	4901-9859
Candela													15cd	30cd	75cd	110cd	15cd	30cd	75cd	110cd	
Device Type													MC V/O	MC V/O	MC V/O	MC V/O	MC A/V	MC A/V	MC A/V	MC A/V	MINI A/O
Supv. Current													0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Alarm Current													0.0600	0.0940	0.1860	0.2520	0.0750	0.1160	0.2210	0.2850	0.0190
FOURTH FLOOR	4009	SIG1	NAC2:V1	291	14ga	0.0031	0.495	0.884	18.616	4.54%	16vdc	1152 Ft.	2				5				
FOURTH FLOOR	4009	SIG2	NAC2:V2	494	14ga	0.0031	0.228	0.692	18.808	3.55%	16vdc	2500 Ft.									12
FIFTH FLOOR	4009	SIG3	NAC2:V3	293	14ga	0.0031	0.495	0.891	18.609	4.57%	16vdc	1152 Ft.	2				5				
FIFTH FLOOR	4009	SIG4	NAC2:V4	490	14ga	0.0031	0.228	0.686	18.814	3.52%	16vdc	2500 Ft.									12
SIXTH FLOOR	4009	SIG5	NAC2:V5	409	14ga	0.0031	0.209	0.525	18.975	2.69%	16vdc	2727 Ft.									11
SPARE	4009	SIG6	NAC2:V6		14ga	0.0031	0.000	0.000	19.500	0.00%	16vdc	0 Ft.									
SPARE	4009	SIG7	NAC2:V7		14ga	0.0031	0.000	0.000	19.500	0.00%	16vdc	0 Ft.									
SPARE	4009	SIG8	NAC2:V8		14ga	0.0031	0.000	0.000	19.500	0.00%	16vdc	0 Ft.									

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE ALLOWABLE VOLTAGE DROP. THIS METHOD ALLOWS FOR A SMALL MARGIN OF SAFETY, TAKING INTO CONSIDERATION THAT THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS SHOWN ON THE SHOP DRAWINGS. IF THE ACTUAL CIRCUIT LENGTH IS GOING TO EXCEED THE MAXIMUM ALLOWABLE CIRCUIT LENGTH, CONTACT YOUR LOCAL SIMPLEXGRINNELL DISTRICT OFFICE.

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NO.	DATE	REVISION DESCRIPTION	CHKD BY
1	8/29/14	AS-BUILTS RECORD DRAWINGS	SK

FIRE ALARM SYSTEM
CHARTS & CALCULATIONS

BAXTER PLACE
297-309 COMMERCIAL STREET
PORTLAND, MAINE

DRAWN BY: LORION	DATE: 8/12/13
CHECKED BY: REID	DATE:
PROJECT NUMBER: 147	
SHEET TITLE: FIRE ALARM SYSTEM CHARTS & CALCULATIONS	
SHEET NUMBER: FA-602 FA-602.dwg	

LAST PRINTED:9/5/2014 10:06:21 AM LAST SAVED BY:AVEIRA FILE PATH:P:\2014\147\Baxter Place\AS-BUILTS DRAWINGS\FA-602.dwg
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