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5496 POWER EXPANDER CALC FOR NAC-4

Secondary Power Source Requirements

Device Type	Standby Current (amps) Qty		Current Draw		Total	Secondary Alarm Current (amps) Qty		Current Draw		Total
Main Circuit Board										
Choose EOLR used ↓										
4.7k	1	X	0.1390	=	0.1390	1	X	0.1570	=	0.1570
5496 POWER MODULE	1	X	0.0400	=	0.0400	1	X	0.1600	=	0.1600
NAC / Output # 1	1	X	0.0000	=	0.0000	1	X	1.4400	=	1.4400
NAC / Output # 2	1	X	0.0000	=	0.0000	1	X	1.4400	=	1.4400
NAC / Output # 3	1	X	0.0000	=	0.0000	1	X	1.3200	=	1.3200
NAC / Output # 4	1	X	0.0000	=	0.0000	1	X	1.2000	=	1.2000
	0	X	0.0000	=	0.0000	0	X	0.0000	=	0.0000
			Total Standby Load		0.1790			Total Alarm Load		5.7170

5496 NAC-4 POWER CALC

Note 1: You are **fully responsible for verifying these calculations.**
Note 2: You only need to make entries in the **yellow** cells

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Standby Load Current (Amps)	0.1790 Amps	X	24	=	4.296 AH
		Required Alarm Time in Hours			
		5 Minutes			
Alarm Load Current (Amps)	5.7170 Amps	X	0.084	=	0.480 AH
			Total Current Load		4.78 AH
	*Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		5.73 AH

Recommended Batteries:	BAT-1270 - 7AH Batteries

NAC-4 Circuit Detail

NAC / Output # 1

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15CD)	5	x 0.000000	=	0.000000	5	x 0.120000	=	0.600000
SSPK24CLPW STROBE 15CD	7	x 0.000000	=	0.000000	7	x 0.120000	=	0.840000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.440000

NAC / Output # 2

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	1	x 0.000000	=	0.000000	1	x 0.120000	=	0.120000
SSPK24CLPW STROBE 15CD	11	x 0.000000	=	0.000000	11	x 0.120000	=	1.320000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.440000

NAC / Output # 3

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	7	x 0.000000	=	0.000000	7	x 0.120000	=	0.840000
SSPK24CLPW STROBE 15CD	4	x 0.000000	=	0.000000	4	x 0.120000	=	0.480000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.320000

NAC / Output # 4

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	8	x 0.000000	=	0.000000	8	x 0.120000	=	0.960000
SSPK24CLPW STROBE 15CD	2	x 0.000000	=	0.000000	2	x 0.120000	=	0.240000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.200000

5496 POWER EXPANDER CALC FOR NAC-5

Secondary Power Source Requirements

Device Type	Standby Current (amps) Qty		Current Draw		Total	Secondary Alarm Current (amps) Qty		Current Draw		Total
Main Circuit Board										
Choose EOLR used ↓										
4.7k	1	X	0.1390	=	0.1390	1	X	0.1570	=	0.1570
5496 POWER MODULE	1	X	0.0400	=	0.0400	1	X	0.1600	=	0.1600
NAC / Output # 1	1	X	0.0000	=	0.0000	1	X	1.6000	=	1.6000
NAC / Output # 2	1	X	0.0000	=	0.0000	1	X	0.7200	=	0.7200
NAC / Output # 3	1	X	0.0000	=	0.0000	1	X	1.0800	=	1.0800
NAC / Output # 4	1	X	0.0000	=	0.0000	1	X	1.0800	=	1.0800
	0	X	0.0000	=	0.0000	0	X	0.0000	=	0.0000
			Total Standby Load		0.1790			Total Alarm Load		4.7970

5496 NAC-5 POWER CALC

Note 1: You are **fully responsible for verifying these calculations.**
Note 2: You only need to make entries in the **yellow** cells

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Standby Load Current (Amps)	0.1790 Amps	X	24	=	4.296 AH
		Required Alarm Time in Hours			
		5 Minutes			
Alarm Load Current (Amps)	4.7970 Amps	X	0.084	=	0.403 AH
			Total Current Load		4.70 AH
	*Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		5.64 AH

Recommended Batteries:	BAT-1270 - 7AH Batteries

NAC-5 Circuit Detail

NAC / Output # 1

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15CD)	5	x 0.000000	=	0.000000	5	x 0.120000	=	0.600000
SSPK24CLPW STROBE 15CD	5	x 0.000000	=	0.000000	5	x 0.120000	=	0.600000
Gentex GCS24CW SPEAKER/Strobe (75CD)	2	x 0.000000	=	0.000000	2	x 0.200000	=	0.400000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.600000

NAC / Output # 2

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	2	x 0.000000	=	0.000000	2	x 0.120000	=	0.240000
SSPK24CLPW STROBE 15CD	4	x 0.000000	=	0.000000	4	x 0.120000	=	0.480000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		0.720000

NAC / Output # 3

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	3	x 0.000000	=	0.000000	3	x 0.120000	=	0.360000
SSPK24CLPW STROBE 15CD	6	x 0.000000	=	0.000000	6	x 0.120000	=	0.720000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.080000

NAC / Output # 4

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	3	x 0.000000	=	0.000000	3	x 0.120000	=	0.360000
SSPK24CLPW STROBE 15CD	6	x 0.000000	=	0.000000	6	x 0.120000	=	0.720000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.080000

5496 POWER EXPANDER CALC FOR NAC-6

Secondary Power Source Requirements

Device Type	Standby Current (amps) Qty		Current Draw		Total	Secondary Alarm Current (amps) Qty		Current Draw		Total
Main Circuit Board										
Choose EOLR used ↓										
4.7k	1	X	0.1390	=	0.1390	1	X	0.1570	=	0.1570
5496 POWER MODULE	1	X	0.0400	=	0.0400	1	X	0.1600	=	0.1600
NAC / Output # 1	1	X	0.0000	=	0.0000	1	X	1.4400	=	1.4400
NAC / Output # 2	1	X	0.0000	=	0.0000	1	X	0.6000	=	0.6000
NAC / Output # 3	1	X	0.0000	=	0.0000	1	X	0.8400	=	0.8400
	0	X	0.0000	=	0.0000	0	X	1.0800	=	0.0000
	0	X	0.0000	=	0.0000	0	X	0.0000	=	0.0000
			Total Standby Load		0.1790			Total Alarm Load		3.1970

5496 NAC-6 POWER CALC

Note 1: You are **fully responsible for verifying these calculations.**
Note 2: You only need to make entries in the **yellow** cells

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Standby Load Current (Amps)	0.1790 Amps	X	24	=	4.296 AH
		Required Alarm Time in Hours			
		5 Minutes			
Alarm Load Current (Amps)	3.1970 Amps	X	0.084	=	0.269 AH
			Total Current Load		4.56 AH
	*Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		5.48 AH

Recommended Batteries:	BAT-1270 - 7AH Batteries

NAC-6 Circuit Detail

NAC / Output # 1

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15CD)	7	x 0.000000	=	0.000000	7	x 0.120000	=	0.840000
SSPK24CLPW STROBE 15CD	5	x 0.000000	=	0.000000	5	x 0.120000	=	0.600000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		1.440000

NAC / Output # 2

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	2	x 0.000000	=	0.000000	2	x 0.120000	=	0.240000
SSPK24CLPW STROBE 15CD	3	x 0.000000	=	0.000000	3	x 0.120000	=	0.360000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		0.600000

NAC / Output # 3

Device	Qty	Non-Alarm Draw		Total	Qty	Alarm Draw		Total
Gentex GCS24CW SPEAKER/Strobe (15cd)	4	x 0.000000	=	0.000000	4	x 0.120000	=	0.480000
SSPK24CLPW STROBE 15CD	3	x 0.000000	=	0.000000	3	x 0.120000	=	0.360000
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
	0	x 0.000000	=		0	x 0.000000	=	
		Total Standby Load		0.000000		Total Alarm Load		0.840000

NOTES:
BATTERY CALCULATION WAS PREPARED BY FIRE ALARM VENDOR BASED ON EXISTING AND NEW FIRE ALARM DEVICES, CIRCUITS, MODULES, ETC.
BATTERY CALCULATION IS SHOWN ON ENGINEERS DRAWING FOR PURPOSES OF OBTAINING CONSTRUCTIONS PERMITS. FIRE ALARM VENDOR TO REVISE CALCULATION IN ACCORDANCE WITH FIELD INSTALLATION AND DEVICES SETTINGS. "AS-BUILT" DRAWINGS AND DOCUMENTS MUST BE PROVIDED AND STORED IN A CABINET NEXT TO FIRE ALARM PANEL

REV.	DATE	DESCRIPTION
	6-4-26	ISSUED FOR REVIEW

REVISIONS:

This item has been digitally signed and sealed by Alberto Jesus Flores, P.E.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MIRAGE ENGINEERING LLC
MECHANICAL, ELECTRICAL, FIRE ALARM, PLUMBING AND FIRE PROTECTION
7523 ALOMA AVE. SUITE 209
WINTER PARK, FL 32792
T: 407-960-4798
Alberto@MirageengineeringLLC.com

PROJECT:

TITLE:
FIRE ALARM BATTERY CALCULATION

STAMP:

DATE: 6-1-26
JOB #: F310
DRAWN BY: AF
SCALE: AS SHOWN

DRAWING NO:

FILE No.:

SHEET:
FA-201

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This calculator provided voltage drop calculations in three formats (Point to Point, End of Line, and Load Centering).
Make sure that you know what method is accepted by, and the results do not exceed the limits set by the respective jurisdiction

		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-4	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #1	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	1.440	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
Distance from source to 1st device	6	Notes: Wire resistance is doubled in the calculations for two wires (Positive and Negative)		
Wire Gauge for balance of circuit	14	The voltage calculated to the last device in any method must not be lower then		
		the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).		

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations					
						End of Line Method			Load Centering Method		
						Totals		Voltage	Totals		Voltage
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop
Device 1	0.120	6	20.35	0.053	0.26%						
Device 2	0.120	20	20.18	0.215	1.05%	1.440	135	**1.194**	1.440	135	**0.597**
Device 3	0.120	12	20.10	0.304	1.49%	End of Line Voltage		**19.21**	End of Line Voltage		**19.80**
Device 4	0.120	7	20.05	0.350	1.72%		Percent Drop	5.85%		Percent Drop	2.93%
Device 5	0.120	13	19.97	0.427	2.09%						
Device 6	0.120	6	19.94	0.458	2.24%	Device Manufacturer		SYSTEM SENSOR			
Device 7	0.120	10	19.90	0.502	2.46%						
Device 8	0.120	11	19.86	0.542	2.66%			Current @Rated			Current @Rated
Device 9	0.120	10	19.83	0.572	2.80%	Model #	Candela	Voltage	Model #	Candela	Voltage
Device 10	0.120	11	19.80	0.596	2.92%						
Device 11	0.120	12	19.79	0.614	3.01%						
Device 12	0.120	17	19.77	0.626	3.07%						
END	0.000	0	19.77	0.626	3.07%						
	0.000	0	19.77	0.626	3.07%						
	0.000	0	19.77	0.626	3.07%	SPEAKER STROBE	15	0.120			
	0.000	0	19.77	0.626	3.07%	SSPK24CLPW STROBE	15	0.120			
	0.000	0	19.77	0.626	3.07%						
	0.000	0	19.77	0.626	3.07%						
	0.000	0	19.77	0.626	3.07%						
	0.000	0	19.77	0.626	3.07%						
Totals	1.440	135	End of Line Voltage		**19.77**						

This calculator provided voltage drop calculations in three formats (Point to Point, End of Line, and Load Centering).
Make sure that you know what method is accepted by, and the results do not exceed the limits set by the respective jurisdiction

		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-4	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #2	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	1.440	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
Distance from source to 1st device	56	Notes: Wire resistance is doubled in the calculations for two wires (Positive and Negative)		
Wire Gauge for balance of circuit	14	The voltage calculated to the last device in any method must not be lower then		
		the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).		

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations					
						End of Line Method			Load Centering Method		
						Totals		Voltage	Totals		Voltage
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop
Device 1	0.120	56	19.90	0.495	2.43%						
Device 2	0.120	7	19.85	0.552	2.71%	1.440	129	**1.141**	1.440	129	**0.570**
Device 3	0.120	11	19.77	0.633	3.10%	End of Line Voltage		**19.26**	End of Line Voltage		**19.83**
Device 4	0.120	6	19.73	0.673	3.30%		Percent Drop	5.59%		Percent Drop	2.80%
Device 5	0.120	7	19.69	0.714	3.50%						
Device 6	0.120	4	19.67	0.735	3.60%	Device Manufacturer		SYSTEM SENSOR			
Device 7	0.120	9	19.63	0.774	3.80%						
Device 8	0.120	4	19.61	0.789	3.87%			Current @Rated			Current @Rated
Device 9	0.120	2	19.60	0.795	3.90%	Model #	Candela	Voltage	Model #	Candela	Voltage
Device 10	0.120	3	19.60	0.802	3.93%						
Device 11	0.120	10	19.58	0.816	4.00%						
Device 12	0.120	10	19.58	0.824	4.04%						
END	0.000	0	19.58	0.824	4.04%						
	0.000	0	19.58	0.824	4.04%						
	0.000	0	19.58	0.824	4.04%	SPEAKER STROBE	15	0.120			
	0.000	0	19.58	0.824	4.04%	SSPK24CLPW STROBE	15	0.120			
	0.000	0	19.58	0.824	4.04%						
	0.000	0	19.58	0.824	4.04%						
	0.000	0	19.58	0.824	4.04%						
	0.000	0	19.58	0.824	4.04%						
Totals	1.440	129	End of Line Voltage		**19.58**						

This calculator provided voltage drop calculations in three formats (Point to Point, End of Line, and Load Centering).
Make sure that you know what method is accepted by, and the results do not exceed the limits set by the respective jurisdiction

		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-5	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #1	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	1.600	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
Distance from source to 1st device	34	Notes: Wire resistance is doubled in the calculations for two wires (Positive and Negative)		
Wire Gauge for balance of circuit	14	The voltage calculated to the last device in any method must not be lower then		
		the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).		

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations					
						End of Line Method			Load Centering Method		
						Totals		Voltage	Totals		Voltage
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop
Device 1	0.200	34	20.07	0.334	1.64%						
Device 2	0.200	34	19.77	0.626	3.07%	1.600	209	**2.053**	1.600	209	**1.027**
Device 3	0.120	32	19.54	0.862	4.23%	End of Line Voltage		**18.35**	End of Line Voltage		**19.37**
Device 4	0.120	22	19.39	1.008	4.94%		Percent Drop	10.06%		Percent Drop	5.03%
Device 5	0.120	22	19.26	1.138	5.58%						
Device 6	0.120	17	19.17	1.225	6.01%	Device Manufacturer		SYSTEM SENSOR			
Device 7	0.120	7	19.14	1.256	6.16%						
Device 8	0.120	13	19.10	1.304	6.39%			Current @Rated			Current @Rated
Device 9	0.120	7	19.08	1.325	6.49%	Model #	Candela	Voltage	Model #	Candela	Voltage
Device 10	0.120	4	19.07	1.334	6.54%						
Device 11	0.120	8	19.05	1.345	6.60%						
Device 12	0.120	9	19.05	1.352	6.63%						
END	0.000	0	19.05	1.352	6.63%						
	0.000	0	19.05	1.352	6.63%						
	0.000	0	19.05	1.352	6.63%	SPEAKER STROBE	15	0.120			
	0.000	0	19.05	1.352	6.63%	SPEAKER STROBE	75	0.200			
	0.000	0	19.05	1.352	6.63%	SSPK24CLPW STROBE	15	0.120			
	0.000	0	19.05	1.352	6.63%						
	0.000	0	19.05	1.352	6.63%						
	0.000	0	19.05	1.352	6.63%						
Totals	1.600	209	End of Line Voltage		**19.05**						

This calculator provided voltage drop calculations in three formats (Point to Point, End of Line, and Load Centering).
Make sure that you know what method is accepted by, and the results do not exceed the limits set by the respective jurisdiction

		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-4	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #3	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	1.320	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
Distance from source to 1st device	69	Notes: Wire resistance is doubled in the calculations for two wires (Positive and Negative)		
Wire Gauge for balance of circuit	14	The voltage calculated to the last device in any method must not be lower then		
		the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).		

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations					
						End of Line Method			Load Centering Method		
						Totals		Voltage	Totals		Voltage
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop
Device 1	0.120	69	19.84	0.559	2.74%						
Device 2	0.120	16	19.72	0.677	3.32%	1.320	233	**1.888**	1.320	233	**0.944**
Device 3	0.120	14	19.63	0.770	3.77%	End of Line Voltage		**18.51**	End of Line Voltage		**19.46**
Device 4	0.120	18	19.52	0.876	4.29%		Percent Drop	9.26%		Percent Drop	4.63%
Device 5	0.120	26	19.39	1.010	4.95%						
Device 6	0.120	16	19.32	1.081	5.30%	Device Manufacturer		SYSTEM SENSOR			
Device 7	0.120	17	19.26	1.144	5.61%						
Device 8	0.120	21	19.19	1.205	5.91%			Current @Rated			Current @Rated
Device 9	0.120	14	19.16	1.236	6.06%	Model #	Candela	Voltage	Model #	Candela	Voltage
Device 10	0.120	9	19.15	1.250	6.13%						
Device 11	0.120	13	19.14	1.259	6.17%						
Device 12	0.120	0	19.14	1.259	6.17%						
END	0.000	0	19.14	1.259	6.17%						
	0.000	0	19.14	1.259	6.17%						
	0.000	0	19.14	1.259	6.17%						
	0.000	0	19.14	1.259	6.17%	SPEAKER STROBE	15	0.120			
	0.000	0	19.14	1.259	6.17%	SSPK24CLPW STROBE	15	0.120			
	0.000	0	19.14	1.259	6.17%						
	0.000	0	19.14	1.259	6.17%						
	0.000	0	19.14	1.259	6.17%						
	0.000	0	19.14	1.259	6.17%						
Totals	1.320	233	End of Line Voltage		**19.14**						

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		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-4	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #4	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	1.200	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
Distance from source to 1st device	32	Notes: Wire resistance is doubled in the calculations for two wires (Positive and Negative)		
Wire Gauge for balance of circuit	14	The voltage calculated to the last device in any method must not be lower then		
		the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC)		

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations					
						End of Line Method			Load Centering Method		
						Totals		Voltage	Totals		Voltage
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop
Device 1	0.120	32	20.16	0.236	1.16%						
Device 2	0.120	33	19.95	0.455	2.23%	1.200	225	**1.658**	1.200	225	**0.829**
Device 3	0.120	14	19.86	0.537	2.63%	End of Line Voltage		**18.74**	End of Line Voltage		**19.57**
Device 4	0.120	18	19.77	0.630	3.09%		Percent Drop	8.13%		Percent Drop	4.06%
Device 5	0.120	39	19.60	0.802	3.93%						
Device 6	0.120	14	19.55	0.854	4.19%	Device Manufacturer		SYSTEM SENSOR			
Device 9	0.120	35	19.44	0.957	4.69%						
Device 10	0.120	19	19.40	0.999	4.90%			Current @Rated			Current @Rated
Device 11	0.120	8	19.39	1.011	4.96%	Model #	Candela	Voltage	Model #	Candela	Voltage
Device 12	0.120	13	19.38	1.020	5.00%						
END	0.000	0	19.38	1.020	5.00%						
	0.000	0	19.38	1.020	5.00%						
	0.000	0	19.38	1.020	5.00%						
	0.000	0	19.38	1.020	5.00%						
	0.000	0	19.38	1.020	5.00%	SPEAKER STROBE	15	0.120			
	0.000	0	19.38	1.020	5.00%	SSPK24CLPW STROBE	15	0.120			
	0.000	0	19.38	1.020	5.00%						
	0.000	0	19.38	1.020	5.00%						
	0.000	0	19.38	1.020	5.00%						
	0.000	0	19.38	1.020	5.00%						
Totals	1.200	225	End of Line Voltage		**19.38**						

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		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-5	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #2	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	0.720	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
Distance from source to 1st device	31	Notes: Wire resistance is doubled in the calculations for two wires (Positive and Negative)		
Wire Gauge for balance of circuit	14	The voltage calculated to the last device in any method must not be lower then		
		the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC)		

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations					
						End of Line Method			Load Centering Method		
						Totals		Voltage	Totals		Voltage
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop
Device 1	0.120	31	20.29	0.137	0.67%						
Device 2	0.120	27	20.16	0.237	1.16%	0.720	105	**0.464**	0.720	105	**0.232**
Device 3	0.120	13	20.13	0.275	1.35%	End of Line Voltage		**19.94**	End of Line Voltage		**20.17**
Device 4	0.120	10	20.10	0.297	1.46%		Percent Drop	2.28%		Percent Drop	1.14%
Device 5	0.120	8	20.09	0.309	1.51%						
Device 6	0.120	16	20.08	0.321	1.57%	Device Manufacturer		SYSTEM SENSOR			
END			20.08	0.321	1.57%						
			20.08	0.321	1.57%			Current @Rated			Current @Rated
			20.08	0.321	1.57%	Model #	Candela	Voltage	Model #	Candela	Voltage
			20.08	0.321	1.57%						
			20.08	0.321	1.57%						
			20.08	0.321	1.57%						
			20.08	0.321	1.57%						
	0.000	0	20.08	0.321	1.57%						
	0.000	0	20.08	0.321	1.57%						
	0.000	0	20.08	0.321	1.57%	SPEAKER STROBE	15	0.120			
	0.000	0	20.08	0.321	1.57%	SSPK24CLPW STROBE	15	0.120			
	0.000	0	20.08	0.321	1.57%						
	0.000	0	20.08	0.321	1.57%						
	0.000	0	20.08	0.321	1.57%						
	0.000	0	20.08	0.321	1.57%						
Totals	0.720	105	End of Line Voltage		**20.08**						

REV.	DATE	DESCRIPTION
	6-4-26	ISSUED FOR REVIEW

REVISIONS:

This item has been digitally signed and sealed by Alberto Jesus Flores, P.E. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MIRAGE ENGINEERING LLC
MECHANICAL, ELECTRICAL, FIRE ALARM, PLUMBING AND FIRE PROTECTION
7523 ALIMA AVE. SUITE 209
WINTER PARK, FL 32792
T: 407-960-4798
Alberto@MirageengineeringLLC.com

PROJECT:

TITLE:

FIRE ALARM VOLTAGE DROP CALCULATION

STAMP:

DATE: 6-1-26
JOB #: F310
DRAWN BY: AF
SCALE: AS SHOWN

DRAWING NO:

FILE No. :

SHEET:

FA-202

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This calculator provided voltage drop calculations in three formats (Point to Point, End of Line, and Load Centering).
Make sure that you know what method is accepted by, and the results do not exceed the limits set by the respective jurisdiction

		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-5	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #3	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	1.080	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
	Wire Gauge	Ohm's Per 1000	Notes:	
Distance from source to 1st device 20	14	3.07	Wire resistance is doubled in the calculations for two wires (Positive and Negative)	
Wire Gauge for balance of circuit	14	3.07	The voltage calculated to the last device in any method must not be lower then	
			the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).	

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations							
						End of Line Method			Load Centering Method				
						Totals		Voltage	Totals		Voltage		
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop	Model #	Candela	Current @Rated Voltage
Device 1	0.120	20	20.27	0.133	0.65%	1.080	126	**0.836**	1.080	126	**0.418**			
Device 2	0.120	9	20.21	0.186	0.91%	End of Line Voltage		**19.56**	End of Line Voltage		**19.98**			
Device 3	0.120	29	20.06	0.335	1.64%		Percent Drop	4.10%		Percent Drop	2.05%			
Device 4	0.120	12	20.01	0.388	1.90%	Device Manufacturer		SYSTEM SENSOR						
Device 5	0.120	7	19.99	0.414	2.03%									
Device 6	0.120	9	19.96	0.441	2.16%									
Device 7	0.120	30	19.89	0.507	2.48%									
Device 8	0.120	4	19.89	0.513	2.51%									
Device 9	0.120	6	19.88	0.517	2.54%									
END			19.88	0.517	2.54%									
			19.88	0.517	2.54%									
			19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
	0.000	0	19.88	0.517	2.54%									
Totals	1.080	126	End of Line Voltage		**19.88**									

Model #	Candela	Current @Rated Voltage
SPEAKER STROBE	15	0.120
SSPK24CLPW STROBE	15	0.120

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		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-5	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #4	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	LOWER LEVEL			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	0.960	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
	Wire Gauge	Ohm's Per 1000	Notes:	
Distance from source to 1st device 58	14	3.07	Wire resistance is doubled in the calculations for two wires (Positive and Negative)	
Wire Gauge for balance of circuit	14	3.07	The voltage calculated to the last device in any method must not be lower then	
			the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).	

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations							
						End of Line Method			Load Centering Method				
						Totals		Voltage	Totals		Voltage		
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop	Model #	Candela	Current @Rated Voltage
Device 1	0.120	58	20.06	0.342	1.68%	0.960	113	**0.666**	0.960	113	**0.333**			
Device 2	0.120	17	19.97	0.430	2.11%	End of Line Voltage		**19.73**	End of Line Voltage		**20.07**			
Device 3	0.120	5	19.95	0.452	2.21%		Percent Drop	3.27%		Percent Drop	1.63%			
Device 4	0.120	11	19.91	0.492	2.41%	Device Manufacturer		SYSTEM SENSOR						
Device 5	0.120	10	19.88	0.522	2.56%									
Device 6	0.120	4	19.87	0.530	2.60%									
Device 7	0.120	4	19.86	0.536	2.63%									
Device 8	0.120	4	19.86	0.539	2.64%									
END			19.86	0.539	2.64%									
			19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
	0.000	0	19.86	0.539	2.64%									
Totals	0.960	113	End of Line Voltage		**19.86**									

Model #	Candela	Current @Rated Voltage
SPEAKER STROBE	15	0.120
SSPK24CLPW STROBE	15	0.120

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		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-6	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #1	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	MEZZANINE			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	1.440	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
	Wire Gauge	Ohm's Per 1000	Notes:	
Distance from source to 1st device 18	14	3.07	Wire resistance is doubled in the calculations for two wires (Positive and Negative)	
Wire Gauge for balance of circuit	14	3.07	The voltage calculated to the last device in any method must not be lower then	
			the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).	

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations							
						End of Line Method			Load Centering Method				
						Totals		Voltage	Totals		Voltage		
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop	Model #	Candela	Current @Rated Voltage
Device 1	0.120	18	20.24	0.159	0.78%	1.440	180	**1.591**	1.440	180	**0.796**			
Device 2	0.120	24	20.05	0.354	1.73%	End of Line Voltage		**18.81**	End of Line Voltage		**19.60**			
Device 3	0.120	13	19.95	0.449	2.20%		Percent Drop	7.80%		Percent Drop	3.90%			
Device 4	0.120	1	19.94	0.456	2.24%	Device Manufacturer		SYSTEM SENSOR						
Device 5	0.120	5	19.91	0.486	2.38%									
Device 6	0.120	30	19.76	0.640	3.14%									
Device 7	0.120	10	19.72	0.684	3.36%									
Device 8	0.120	22	19.63	0.766	3.75%									
Device 9	0.120	16	19.59	0.813	3.98%									
Device 10	0.120	26	19.53	0.870	4.27%									
Device 11	0.120	8	19.52	0.882	4.32%									
Device 12	0.120	7	19.51	0.887	4.35%									
END	0.000	0	19.51	0.887	4.35%									
	0.000	0	19.51	0.887	4.35%									
	0.000	0	19.51	0.887	4.35%	SPEAKER STROBE		15	0.120					
	0.000	0	19.51	0.887	4.35%	SPEAKER STROBE		75	0.200					
	0.000	0	19.51	0.887	4.35%	SSPK24CLPW STROBE		15	0.120					
	0.000	0	19.51	0.887	4.35%									
	0.000	0	19.51	0.887	4.35%									
	0.000	0	19.51	0.887	4.35%									
Totals	1.440	180	End of Line Voltage		**19.51**									

This calculator provided voltage drop calculations in three formats (Point to Point, End of Line, and Load Centering).
Make sure that you know what method is accepted by, and the results do not exceed the limits set by the respective jurisdiction

		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-6	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #2	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	MEZZANINE			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	0.600	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
	Wire Gauge	Ohm's Per 1000	Notes:	
Distance from source to 1st device 31	14	3.07	Wire resistance is doubled in the calculations for two wires (Positive and Negative)	
Wire Gauge for balance of circuit	14	3.07	The voltage calculated to the last device in any method must not be lower then	
			the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).	

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations							
						End of Line Method			Load Centering Method				
						Totals		Voltage	Totals		Voltage		
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop	Model #	Candela	Current @Rated Voltage
Device 1	0.120	31	20.29	0.114	0.56%	0.600	69	**0.254**	0.600	69	**0.127**			
Device 2	0.120	7	20.27	0.135	0.66%	End of Line Voltage		**20.15**	End of Line Voltage		**20.27**			
Device 3	0.120	8	20.25	0.153	0.75%		Percent Drop	1.25%		Percent Drop	0.62%			
Device 4	0.120	13	20.23	0.172	0.84%	Device Manufacturer		SYSTEM SENSOR						
Device 5	0.120	10	20.22	0.179	0.88%									
END			20.22	0.179	0.88%									
			20.22	0.179	0.88%									
			20.22	0.179	0.88%									
			20.22	0.179	0.88%									
			20.22	0.179	0.88%									
			20.22	0.179	0.88%									
	0.000	0	20.22	0.179	0.88%									
	0.000	0	20.22	0.179	0.88%									
	0.000	0	20.22	0.179	0.88%	SPEAKER STROBE		15	0.120					
	0.000	0	20.22	0.179	0.88%	SSPK24CLPW STROBE		15	0.120					
	0.000	0	20.22	0.179	0.88%									
	0.000	0	20.22	0.179	0.88%									
	0.000	0	20.22	0.179	0.88%									
Totals	0.600	69	End of Line Voltage		**20.22**									

This calculator provided voltage drop calculations in three formats (Point to Point, End of Line, and Load Centering).
Make sure that you know what method is accepted by, and the results do not exceed the limits set by the respective jurisdiction

		Point to Point Method	End of Line Method	Load Centering Method
Project Name	VERO BEACH CLUBHOUSE NAC-6	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS	CIRCUIT IS WITHIN LIMITS
Date	6/3/2026	PASS	PASS	PASS
Circuit Number	NAC #3	End of Line and Load Centering Methods use only the wire guage for the first device to source		
Area Covered	MEZZANINE			
Nominal System Voltage	20.4	Standard Wire Resistance in Ohms per 1000 feet.		
Minimum Device Voltage	16	18=7.77 16=4.89 14=3.07 12=1.98 10=1.24		
Total Circuit Current	0.840	18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors		
	Wire Gauge	Ohm's Per 1000	Notes:	
Distance from source to 1st device 100	14	3.07	Wire resistance is doubled in the calculations for two wires (Positive and Negative)	
Wire Gauge for balance of circuit	14	3.07	The voltage calculated to the last device in any method must not be lower then	
			the manufactures listed minimum operating voltage (IE: rated operating voltage 20-32 VDC).	

Enter current in amps. 150 = 150 ma		Distance from previous	Voltage			Alternate Calculations							
						End of Line Method			Load Centering Method				
						Totals		Voltage	Totals		Voltage		
Device Number	Device Current	device	At Device	Drop from source	Percent Drop	Current	Distance	Drop	Current	Distance	Drop	Model #	Candela	Current @Rated Voltage
Device 1	0.120	100	19.88	0.516	2.53%	0.840	180	**0.928**	0.840	180	**0.464**			
Device 2	0.120	11	19.84	0.564	2.77%	End of Line Voltage		**19.47**	End of Line Voltage		**19.94**			
Device 3	0.120	17	19.77	0.627	3.07%		Percent Drop	4.55%		Percent Drop	2.28%			
Device 4	0.120	11	19.74	0.659	3.23%	Device Manufacturer		SYSTEM SENSOR						
Device 5	0.120	19	19.70	0.701	3.44%									
Device 6	0.120	10	19.68	0.716	3.51%									
Device 7	0.120	12	19.67	0.725	3.55%									
END			19.67	0.725	3.55%									
			19.67	0.725	3.55%									
			19.67	0.725	3.55%									
			19.67	0.725	3.55%									
			19.67	0.725	3.55%									
	0.000	0	19.67	0.725	3.55%									
	0.000	0	19.67	0.725	3.55%									
	0.000	0	19.67	0.725	3.55%	SPEAKER STROBE		15	0.120					
	0.000	0	19.67	0.725	3.55%	SSPK24CLPW STROBE		15	0.120					
	0.000	0	19.67	0.725	3.55%									
	0.000	0	19.67	0.725	3.55%									
	0.000	0	19.67	0.725	3.55%									
	0.000	0	19.67	0.725	3.55%									
Totals	0.840	180	End of Line Voltage		**19.67**									

REV.	DATE	DESCRIPTION
	6-4-26	ISSUED FOR REVIEW

REVISIONS:

This item has been digitally signed and sealed by Alberto Jesus Flores, P.E. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MIRAGE ENGINEERING LLC
MECHANICAL, ELECTRICAL, FIRE ALARM, PLUMBING AND FIRE PROTECTION
7523 ALOMA AVE. SUITE 209
WINTER PARK, FL 32792
T: 407-960-4798
Alberto@MirageengineeringLLC.com

PROJECT:

TITLE:

FIRE ALARM VOLTAGE DROP CALCULATION

STAMP:

DATE: 6-1-26
JOB #: F310
DRAWN BY: AF
SCALE: AS SHOWN

DRAWING NO:

FILE No. :

SHEET:

FA-203